AUMSVILLE CITY COUNCIL

STAFF REPORT

HEARING DATE:	July 22nd, 2024
REPORT DATE:	July 15th, 2024
FILE NUMBER:	2023-07 CU-SDR 9757 Gordon Lane
APPLICANT:	Aaron Hillman Red Moon Development 6588 S. Kings Ranch Road, Suite 103J Gold Canyon, AZ 85118
APPLICANT'S REPRESENTATIVE:	Hillman Workshop Landscape Architecture. 2901 E Highland Ave Phoenix, AZ, 85016
REQUEST:	Develop a retail and industrial office center in the Interchange Development Zone
SITE:	9757 Gordon Lane (Interchange Property) Map/Tax Lot Acres 081W30 TL 2000 15.33 081W30 TL 1800 16.70 081W30 TL 2100 1.60 081W30 TL 2200 1.70 Total Acres: 35.33
ZONE:	Interchange Development Zone
REVIEW CRITERIA:	Aumsville Development Ordinance (ADO) • Section 10.00 Interchange Development Zone • Section 14.05 Criteria for Granting a Conditional Use • Section 21.06 Site Development Review- Approval Criteria • Section 22.11.(F) Transportation Impacts Review Policy and Procedure • Section 18.00 Off Street Parking and Loading • Section 23.00 Landscape Design • Section 19.00 Signs • Section 20.21 Subdivision Requirements

REVIEW PROCEDURE:	As required by ADO Section 12 Administrative Procedures, conditional use and site development proposals are reviewed by the Planning Commission as a Type II quasi-judicial procedure. Subdivision proposals are reviewed by City Council (with Planning Commission in an advisory role) as a Type III quasi-judicial procedure. However, according to ADO 12.01.(G) the City can consolidate proceedings so that one approval authority shall decide all applications. This application adheres to Type III quasi-judicial procedure. Public notices and public hearings before the Commission and Council are required. Public notice was provided: • May 29, 2024 - 21 days before the first public hearing before the Planning Commission; and • July 1, 2024 – 21 days before the first public hearing before the City Council.

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Figures

Commonly Used Abbreviations

- **ADA:** Americans with Disabilities Act
- **ADC**: Aumsville Development Code
- **Hwy**: Hwy
- **IAMP:** Interchange Area [Transportation] Management Zone
- **IDZ**: Interchange Development Zone
- **ODOT:** Oregon Department of Transportation
- **PWDS**: City of Aumsville Public Works Design Standards
- **TSP**: City of Aumsville Transportation System Plan

Attachments

- Exhibit 1: Proposed Conditions of Approval
- Exhibit 2: City Engineer Comments
- Exhibit 3: Agency Comments
- Exhibit 4: Land Use Application Submission Package

PROPOSAL

This application is for a regional retail center and business park on a 35-acre site at 9757 Gordon Lane. The proposed development includes a four-story hotel, five retail buildings, six eating and drinking establishments, and a fuel station with a car wash (all of which are single-story). The business park includes seven buildings for office and light manufacturing use. The site plan includes:

- retail center parking lot with 600 spaces, 34 of which are accessible spaces
- business park parking lot with 356 spaces, 14 of which are accessible spaces
- street improvements- landscaping, curbs, sidewalks, drive aisles on N 1st Street and Gordon Lane
- Internal circulation via a private road and system of sidewalks
- Stormwater management via a stormwater detention pond and drainage ditch

The applications required for the proposed development include Type II Conditional Use, Type II Site Development Review, and Type III Subdivision.[1] The applicant has the burden of proof to show compliance with:

- Section 10.00 Interchange Development Zone
- Section 14.00 Conditional Uses
- Section 18.00 Off-Street Parking and Loading
- Section 19.00 Signs
- Section 20.21 Subdivision Requirements.
- Section 21.00 Site Development Review
- Section 22.11 Transportation Impacts
- Section 23.00 Landscaping Design

ZONING

The site is in the Interchange Development Zone (IDZ). This area has been identified as a key entry point into the city, located at the State Hwy 22 interchange. The intent of this zone is to emphasize quality site design to attract industrial and commercial users.

SITE DESCRIPTION

The site is 35.33 acres which consist of four tax lots. It is bound by Hwy 22 to the north, Shaw Hwy SE/N First Street to the west, Gordon Lane to the south, and two tax lots with existing houses to the east.

[1] The applicant applied for a partition and lot line adjustments; however, because the site is of a size that can be further divided, the application must be processed as a subdivision per ADC 20.13: "*If a partition results in the creation of a large parcel that can be subsequently divided so that there is the potential to create more than three parcels from the original parcel that meet minimum lot area requirements, the request shall be processed as a subdivision and subject to the design and improvement standards for a subdivision.*"

- Tax lot 1800 is 16.70 acres and mostly vacant. The northern portion of the site contains wetlands identified in the Statewide Wetlands Inventory. Demolition is proposed for the three buildings on the eastern portion of the site.
- TL 2000 is 15.33 acres and is mostly vacant. There are some trees and vegetation in the east and southeast portions. The developer has identified a small inclusion of wetlands at the northeast portion of the site.
- TL 2100 is 1.60 acres and vacant with some trees and vegetation at the perimeter of the site.
- TL 2200 is 1.70 acres. The developer has identified wetlands on the site. Demolition is proposed for the two buildings on the east side of this parcel.

There is an existing storm culvert adjacent to the west side of the site along First Street and easements along Gordon Lane for sanitary sewer and access.

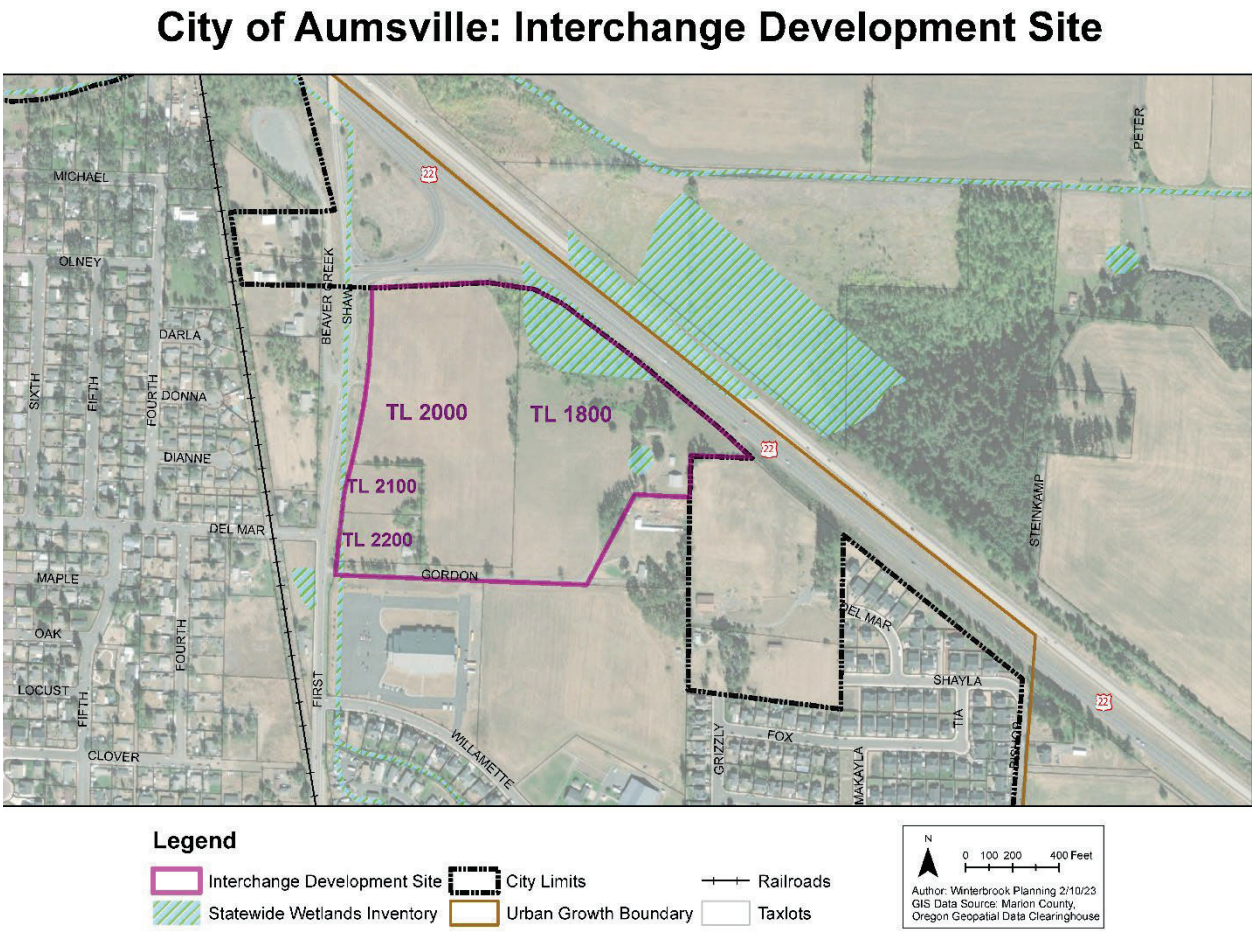

Figure 1: Project Site and Surrounding Area

SURROUNDING LAND USES

- North: The site is at the edge of the Aumsville Urban Growth Boundary, bordered by Hwy 22, or N. Santiam Hwy SE. Land to the north of Hwy 22 is vacant farmland zoned Special Agriculture and is under Marion County jurisdiction.
- South: The site abuts Gordon Lane SE to the south. The Willamette Valley Baptist Church & School owns two tax lots to the south that are zoned Residential Multi-Family.
- East: There are two abutting properties to the east. The two tax lots are zoned IDZ and each has a single-story residence with accessory agricultural structures.
- West: The site abuts Shaw Hwy/1st Street to the west. Land between the currently unused rail line and Shaw Hwy is zoned IDZ. A single-family residence within this area lies at the northwest corner of Shaw Hwy and Del Mar Drive, adjacent to the west of the southwest portion of the subject site. Beaver Creek Drive separates other residences to the north; these should not be considered adjacent to the subject site. Further to the west, across the currently unused rail line, lies a residential neighborhood of single-family residences within Residential Single-Family zoning.

PUBLIC COMMENTS

Public comments to date have not been directed at specific approval criteria. Concerns raised included:

- Traffic
  - The transportation system is a primary consideration of the application and reviewed by ODOT, Marion County, and Aumsville. Several conditions of approval are included to ensure the application meets state, county and city transportation requirements.
- Adequate public facilities
  - The proposal has been reviewed by city engineers, who have provided conditions of approval to ensure the project meets city engineering requirements.
- Whether the community wants growth
  - This is not an approval criterion; the site is within the city and zoned for development.
- Use of the site for employment rather than residential
  - The site is zoned for employment and cannot be developed for residential uses.
- Retention of access and mail service to properties to the east of the site during and after construction
  - Retaining neighboring property access during construction will be a requirement of development permits;
  - Mail service is not under control of the city or the developer. Location of mail boxes and delivery is regulated by the post office.

STAFF AND PLANNING COMMISSION RECOMMENDATION

Based on the analysis below, staff finds the submitted application, with recommended conditions of approval, can meet all applicable requirements of the Aumsville Development Code.

The Planning Commission reviewed the application and staff report and held a public hearing on May 29, 2024. The **Planning Commission supported approval of the application with conditions as identified in Exhibit 1**.

Staff's proposed conditions of approval are referenced throughout the staff report and compiled for clarity in Exhibit 1 to the staff report. **Options for City Council motions are found at the end of this staff report.**

APPLICABLE ADO CRITERIA AND STANDARDS

SECTION 10.00 – INTERCHANGE DEVELOPMENT (ID) ZONE

ID – Interchange Development Zone

10.1 Purpose. To provide for industrial, commercial, and office uses on property located at the State Hwy 22 interchange. The transportation amenities offered by Hwy 22 will be a factor in attracting industrial and commercial users. However, the community views the interchange area as the key entry point into the City. For this reason, the quality of the site design will be emphasized. In providing for the development of the interchange area, it is essential that the principal function of the intersection be preserved.

Finding: The proposal includes commercial and office uses. The proposal is subject to design standards discussed in further detail in Section 20.34 Design Standards. Marion County and ODOT have commented on the transportation impacts of the proposal.

10.2 Permitted Use: The following uses are permitted, subject to a site development review and conformance with the provisions in this Section. In interpreting this Section, following uses are permitted, subject to a site development review and conformance with the provisions of the Aumsville Development Ordinance:

(A) Industrial-Related Activities

1. *Manufacturing: Light manufacturing, assembly, processing, packaging, treatment, fabrication of goods or merchandise, and similar uses. […]*

(B) Retail and Services

1. *Offices.*
2. *Restaurants, delicatessens, snack shops, and other types of eating and drinking establishments, including entertainment facilities accessory to the establishment. […]*
3. *Traveler accommodations, including hotels and motels; but excluding camping and recreational vehicle parks.*
4. *Business services, such as photocopy and mailing centers.*
5. *Traveler accommodations, including hotels and motels; but excluding camping and recreational vehicle parks.*
6. *Professional offices including, but not limited to, medical, dental, veterinary, engineering, and legal services. Veterinary clinics shall not provide on-site services for farm animals.*
7. *Services, such as cleaning and maintenance services provided to dwellings and other buildings.*
8. *Mobile Food Services (See also Section 27).*

(C) Other Uses: Other uses, which the City may find to be similar to those listed as permitted in this zone that are consistent with its purpose.

10.3 Conditional Uses: The following activities are conditionally allowed in the ID zone:

(A) Convenience stores.
(B) Service stations; but excluding repair facilities.
(C) Towing services; but excluding storage of vehicles.
(D) Retail activities that are designed to serve the community or region
(E) Establishments serving liquor.
(F) House of worship
(G) Gymnasium
(H) Other uses determined by the Commission to be of similar character or to have similar impacts as those specified above.

Finding: The proposal is for a large-scale development with a proposed hotel, major retail, restaurants, and a fuel station. Hotel, eating and drinking establishments, office, and light manufacturing uses are permitted outright.

However, fuel stations and retail activities that are designed to serve the region are conditional uses and are reviewed in this application as such. The fuel stations and retail proposal must meet the criteria in Section 14.00 Conditional Uses.

Conditionally permitted uses shall not be approved unless the proposal satisfies the following criteria: […]

Finding: These criteria are repeated in Section 14.00 Conditional Use. Criteria and findings are provided in Section 14.00 responses below.

10.5 Performance Standards: The discharge of solids, liquids, or gases which are detrimental to the public health, safety, and welfare causing injury to human, plant, or animal life or to property is prohibited in the ID Zone. Further, no land or structure shall be used or occupied unless therein continuing compliance with the following standards:

(A) Heat, glare, and light: All operations and facilities producing heat, glare, or light, including exterior lighting, shall be so directed or shielded by walls, fences, evergreen plantings, that such heat, glare, or light is not reflected onto adjacent properties or streets.

Finding: A lighting plan has been provided on Exhibit 4, Sheet E100; lighting is shielded to prevent light from trespassing on adjacent properties. The landscape plan depicts a 15' wide planting buffer along the east side of the development. Trees surrounding the development to the south, west, and north and are shown throughout the proposed development. The applicant has submitted lighting specs that depict downward facing LED lighting that is typical of commercial applications.

Due to the presence of a residential use to the west of the proposed fuel station use at the southwest corner of the site (Shown as "Pad E" on Exhibit 4, Sheet L1.0), staff proposes Condition of Approval XIV-2 which would require screening (consistent with buffering

requirements of ADC Section 23.05(B)) between the proposed fuel station and the house to the west.

With proposed conditions of approval, potential heat, glare and light can be sufficiently screened and buffered to meet this standard.

(B) Noise: No noise or sound shall be of a nature, which will constitute a nuisance as documented by the chief of police.

Finding: Nuisances are regulated by Aumsville Ordinance No. 686; nuisance noise is defined in Ord. 686 Section 5.

Local-serving retail, office, light manufacturing, hotel, eating and drinking establishments are permitted uses in the IDZ and expected development for this area. These uses do not typically produce nuisance-level noise, and staff have not identified any relevant nuisance noise categories relating to permitted uses on the site.

However, community or regional-serving retail and service station uses are identified as conditional uses in the IDZ. This means these uses should receive additional evaluation for their potential impacts, including noise. This additional impact evaluation is provided in findings under Section 14 (Conditional Uses).

In short, the proposed site layout contains both separation and landscaping between activity centers and neighboring properties. The closest proposed buildings are approximately 300 feet from the church to the south, 250 feet from the nearest neighboring house to the east and 250 feet from the nearest house to the west. An evergreen hedge is shown on the landscaping plan along the eastern property line. Driveways and roads are situated between the proposed development and the existing worship facility to the south.

To meet this CU criterion, proposed Condition of Approval XIV-2 will add a screening between the proposed fuel station and residential uses to the west.

Staff finds that the proposed conditional uses are not typically associated with nuisance noise categories and are adequately separated from neighboring properties and uses. With proposed conditions of approval, this standard can be met.

(C) Sewage: No categorical wastewater discharges are allowed. Adequate provisions shall be in place for the disposal of sewage and waste materials and such provisions shall meet the requirements of the City of Aumsville sewage disposal system.

Finding*:* No categorical wastewater discharges are proposed. Proposed sanitary sewer lines are shown on Exhibit 4, page G-08 of the Civil Plan Set. The sanitary sewer lines would connect to an existing sanitary sewer manhole at the intersection of Del Mar Dr and N. 4th St. . Compliance with City of Aumsville Public Works Design Standards (PWDS) is necessary to meet this standard. Aumsville's City Engineer provided Conditions of Approval II-1-8 to ensure wastewater management consistent with city PWDS.

(D) Vibration: No vibration other than that caused by highway vehicles and trains shall be permitted which is discernible without instruments at or beyond the property line for the use concerned.

Finding: The proposed uses contain no heavy machinery and do not emit discernible vibrations.

10.6 Minimum Lot Area and Dimensions: None.

10.7 Maximum Height of Structure: 50 feet.

Finding: The maximum height of structures is 50 feet. Except for the hotel, the tallest structure shown in the submitted elevations is 32 feet. The narrative states that all proposed retail center buildings will be below 35 feet in height with the exception of the 4-story hotel that will stay below 50'. Elevations of the hotel were not provided; a rendering of the hotel was provided that does not specify the height. Staff proposes condition of approval VII-3 limiting building height to 50 feet.

10.8 Setbacks:
(A) Hwy 22: 30 feet

Finding: The setback standard from Hwy 22 is 30 feet. Landscaping is proposed within the 30-foot setback area. No parking is proposed within the setback area. The closest proposed building to the property line along Hwy 22 to the north is 141 feet away. Refer to Exhibit 4, Sheet A100. This standard is met.

(B) Designated arterial or collector: 20 feet

Finding: The setback standard from a designated arterial is 20 feet. The proposed site abuts Shaw Hwy/N 1st Street to the west and is identified in the Aumsville TSP as an urban arterial. This 20-foot setback area will be landscaped; no parking or buildings are proposed within the setback. This standard is met.

(C) Local Street: 15 feet

Finding: The setback standard from local street is 15 feet. The proposed site abuts Gordon Lane to the south which is identified in the Aumsville TSP as a local street. Setbacks and landscaping meeting this standard are shown on Exhibit 4, Sheet A100. The closest proposed building to the property line along Gordon Lane is 81 feet away. This standard is met.

(D) Side yard: 15 feet
(E) Rear yard: 15 feet

Finding: Setbacks consistent with these standards are demonstrated on Exhibit 4, Sheet A100.

The closest proposed building to the property line to the east is 30 feet and will be landscaped; therefore, this standard is met.

> *(F) Setback Exceptions: […] Notwithstanding the requirements set forth in this subsection, the following exceptions apply:*
> 1. *Setbacks from any street may be reduced by 5 feet when landscaping, screening material, or other mitigation techniques are provided, to a degree greater than that called for in this section, which effectively screen the parking areas and building service areas from the street.*
> 2. *Setbacks of up to zero feet along all local designated streets and property lines may be provided in commonly planned projects which exhibit characteristics of an urban village which includes extensive amenity areas, strong pedestrian, transit, and bicycle orientation, varied and high quality building materials, complex and interesting building massing, and extensive landscaping.*

Finding: The proposed development meets all the setback and landscaping requirements as noted above. The proposal does not seek an exception. This standard does not apply.

> *10.9 Design Requirements: Building design shall be subject to the following:*
> *(A) Building material should be of high quality and attractive appearance using matte texture earth tones. Masonry, brick, and stone in their natural state are preferred as principal cladding materials. Textured concrete, architectural block, stucco, modulated in jointed patterns, and pre-cast concrete with appropriate detailing are also acceptable materials. Materials, detailing, and colors should be repeated on all building facades.*

Finding: This standard contains two elements: subjective “attractive appearance”and “appropriate detailing’; and objective colors and materials guidance.

Application materials provided elevations, materials sheets, and renderings:

- The buildings labeled Major A, Major B, and Shops A are shown on submitted elevations, Exhibit 4, Sheets A300B, A301B, and A302B.
- The building labeled Shops B is shown on submitted elevations, Exhibit 4, Sheet A300A and Sheet A301A.
- Office buildings are shown on submitted elevations Exhibit 4, Sheet A300D_Office and Sheet A301D_Office.
- While a rendering of the hotel was provided (Exhibit 4, A300_Hotel), no elevation for the hotel was submitted with this application.
- Elevations include notes on finish materials and the applicant provided a color material board.

The applicant states in their narrative “The proposed architecture is a mix of modern elements of stone, wood, steel, stucco and glass in a clean contemporary color palette that accentuates

the buildings and provides a fresh aesthetic. The low sloping and varying roof lines with steel canopies and parapets, create a dramatic statement at a scale that compliments the neighboring communities."

Regarding the subjective standards of "attractive appearance" and "appropriate detailing", Staff has no objection to the applicant's description or the project design.

Staff finds the submitted elevations depict matte texture earth tones and utilize stone as a primary façade material. Materials, detailing and colors are repeated on shown building facades. Objective elements of this standard are met.

(B) Unpainted or un-textured concrete or masonry, metal buildings, and unpainted metal are prohibited.

Finding: No unpainted or untextured masonry or metal is proposed. This standard is met.

(C) The use of roof or facade offsets or breaks is encouraged. Roof planes should be varied. Facade lines should be broken at least every 40 feet on all building sides.

Finding: Roof or façade offsets are shown on the following sheets:

- The buildings labeled Major A, Major B, and Shops A are shown on submitted elevations, Exhibit 4, Sheets A300B, A301B, and A302B.
- The building labeled Shops B is shown on submitted elevations, Exhibit 4, Sheet A300A and Sheet A301A.
- Office buildings are shown on submitted elevations Exhibit 4, Sheet A300D_Office and Sheet A301D_Office.

The submitted elevations show varied roof planes and both roof and façade offsets and breaks. In submitted elevations, the façade lines are broken at least 40' on all building sides.

While a rendering of the hotel was provided (Exhibit 4, A300_Hotel), no elevation for the hotel was submitted with this application. In the rendering the roof line is varied, and it appears as though the façade line is broken at least every 40'. Staff proposes Condition of Approval VII-4 requiring façade lines to be broken every 40'; with the proposed condition, this standard can be met.

(D) All mechanical equipment to be screened from view in a manner consistent with the design of the structure and site.

Finding: In response to the above criteria, the applicant's narrative states "all mechanicals will be screened with the use of parapets and/or metal screening panels". There is no visible mechanical equipment shown on elevations. Staff proposes Condition of Approval VII-5 to screen all mechanical equipment from view; with the proposed condition, this standard can be met.

(E) The color palette should be simple and consistent within projects. Colors should be compatible with neighboring development. Bright or primary colors shall be limited to accent elements.

Finding: A color material board was submitted that shows matte texture earth tones. Colors included in the material board and on elevations appear simple and consistent across the development. There are no bright or primary colors proposed. Materials include stone cladding and wood siding. The applicant's narrative states "A clean contemporary color palette utilizing neutral and natural colors are proposed on the architectural elevations in order to blend with the natural surroundings of the area and the regional colors/material on adjacent homes and businesses". The proposed development is not close to any buildings that would be considered "neighboring development". The closest proposed buildings are approximately 300' from the church, 250' from the neighboring house to the east and 250' from the house to the west. Within the proposed development, buildings have similar design and color palette. Staff finds this standard met.

10.10 Landscaping. All rights-of-way and setbacks are to be landscaped and maintained by property owners as follows: (See also Section 23, Landscaping Design)

(A) Sites shall include landscaped areas, hard surface landscapes, public plazas, walks, and sidewalks.

Finding: As seen on Exhibit 4, Sheet L.1 Landscape Plan, the site includes landscaping within setback areas and parking lots. The proposal includes a plaza adjacent to Shop B, at the southern portion of the site. Within the project site, there are pedestrian walks in the parking lot areas and around the buildings in the retail and industrial center. Sidewalks are proposed along the site adjacent to Hwy 22, N 1st Street, and Gordon Lane. This standard is met.

(B) All setback areas shall be landscaped; parking or other physical improvements shall be prohibited within required setback areas.

Finding: All setbacks are required to be landscaped. As seen on Exhibit 4, Sheet L.1, the proposed development meets the following setbacks from:

Hwy 22: 30'

N 1st Street/Shaw Hwy: 20'

Gordon Lane 15'

East Yard: 15'

As shown on Exhibit 4, Sheet L.1 the required setbacks are landscaped. The proposed parking and other physical improvements are not within the setback area. This standard is met.

(C) Street trees: At least one tree per 40 lineal feet shall be provided between the sidewalk and back of curb. An additional tree and 10 shrubs per 40 lineal feet

must be provided within 10 feet of the sidewalk.

Finding: As shown on Exhibit 4, Sheet L.1 Landscape Plan, there is 1,042 lineal feet of sidewalk; therefore 54 street trees are required. The proposed number of street trees is 54. Shrubs along the sidewalk are not shown on the landscaping plan. Staff proposes Condition of Approval XIV-4 requiring 10 shrubs per 40 lineal feet to be provided within 10 feet of the sidewalk. With the proposed condition, this standard can be met.

10.11 Signs: Signs shall be subject to the provisions in Section 19. The following additional provisions shall apply to development within the ID zone. Where conflicts occur, the more restrictive regulations shall apply.

(A) A sign plan is required for all development. All signs shall be architecturally integrated with the overall project design.

(B) Permitted freestanding signs are limited to monument signs. Monument signs shall not exceed 32 square feet per face nor shall the sign area exceed 4 feet in height or 6 feet total for the sign structure, and the horizontal length shall not exceed 8 feet. A sign not complying with these provisions may be established through a Conditional Use Permit pursuant to provisions in Section 14.

(C) Wall signs may not extend above roof line and shall be consistent throughout the project.

Finding: Signs are shown on the plans for reference only and all sign design and performance standards will be reviewed and approved separately via a comprehensive sign plan permit. Staff proposes Condition of Approval VII-6 requiring signs to be reviewed and approved separately; with the proposed condition, this standard can be met.

10.12 Parking and Loading: See the Parking and Loading section of this ordinance (Section 18). In addition to compliance with the provisions in Section 18, all lots exceeding 50 spaces shall include the following landscaping provisions:

(A) At least 5% of the parking area shall be landscaped. The landscaping improvements may count toward the minimum landscaping requirements.

Finding: As shown on Exhibit 4, Sheets A100 and L.1, the proposed design utilizes defined vehicular routes with landscape buffers between the internal drives and the parking fields. Exhibit 4, Sheet L.1 shows 102,568 square feet of landscaping within the 516,562 square foot parking area, which is 19.8% of the parking area. This standard is met.

(B) The ends of parking rows must have 6-foot-wide planting islands with a minimum of 2 shade trees and 8 shrubs.

Finding: Exhibit 4, Sheet L.1 shows proposed parking landscaping. Each parking row has a 6-foot-wide planting island with 2 shade trees and 8 shrubs. This standard is met.

(C) Landscaped medians shall be required between every fourth parking row with at least 1 shade tree and 8 shrubs for every 30 lineal feet of median.

Finding: Exhibit 4, Sheet L.1 shows proposed parking landscaping and a landscaped median between every fourth parking row with a note that there will be at least 1 tree and 8 shrubs for every 30 lineal feet of median. This standard is met.

10.13 Transportation Impact Analysis. In addition to the site development review provisions in Section 21, the City may request a transportation impact analysis for development within the ID zone. This study shall be based on the requirements of the Oregon Department of Transportation.

Finding: A TIA has been prepared and submitted for review by the city and forwarded to the necessary agencies for review. ODOT, Marion County, and City engineering comments are incorporated into proposed Conditions of Approval. City and County comments are consistent with those required by ODOT and the IAMP (see below). Specifically, Conditions of Approval Sections III and VIII address street and transportation improvement requirements consistent with ODOT and IAMP criteria.

10.14 Site Development Review Required. All new structures and change in use and any expansion of existing structures or uses shall be subject to a site development review.

Finding: The proposal is subject to a Site Development Review. Proposals for future development may require additional Site Development Review if there are new structures, uses or expansion of existing structures or uses.

10.15 IAMP Compliance Required. A new or expanded uses or structure is subject to the applicable provisions, if any, of an Interchange Area Management Plan. Notice of any proposed development in an area subject to an Interchange Area Management Plan

Finding: IAMP compliance is required. Notice has been sent to ODOT and Marion County, who have reviewed and recommended conditions of approval based on the IAMP. See Conditions of Approval Sections III and VIII.

SECTION 14.00 – CONDITIONAL USES

14.05 Criteria for Granting a Conditional Use.

(A) The proposal will be consistent with the provisions of the Development Ordinance, the underlying land use zone, and other applicable policies of the city.

Finding: The proposed development's base zone is the Interchange Development Zone. Staff has prepared findings in response to the criteria in Section 10.00- Interchange Development Zone, Section 14.00- Conditional Uses, Section 21.00- Site Development Review, Section 18.00 Off-Street Parking and Loading, Section 19.00 Signs, Section 22.11 Transportation Impacts, 23.00 Landscaping Design, and Section 20.21 Subdivision Requirements.

(B) Taking into account location, size, design, and operation characteristics, the proposal will have minimal adverse impact on the livability, value, and appropriate development of abutting properties and the surrounding area compared to the impact of development that is permitted outright.

Finding: The conditional use criteria apply to proposed region-serving retail – specifically the central shopping center – and the proposed service station use, both proposed on the west side of the site. The analysis in this response will compare (1) proposed retail activities designed to serve the community or region and service station uses to (2) uses permitted outright, which include industrial related activities, light manufacturing, offices, hotels, eating and drinking establishments.

ID Zone Use	Permitted Outright	Conditional
Manufacturing: Light manufacturing, assembly, processing, packaging, treatment, fabrication of goods or merchandise, and similar uses.	X	
Hotel	X	
Offices	X	
Eating and drinking establishments	X	
Service stations; but excluding repair facilities		X
Retail activities that are designed to serve the community or region.		X

This criterion requires an evaluation of whether the proposed shopping center and service station create greater impacts than light manufacturing, hotel, office, and restaurant uses on uses that are sensitive to these impacts. Residential and institutional land uses (as opposed to commercial and industrial uses) are sensitive to these potential impacts.

The application did not include an analysis of conditional use impacts beyond transportation. Transportation impacts are a separate issue and addressed specifically by the TIA and related findings in Section 22.11.

Staff provides the required analysis below.

- Potential impacts include noise, vibration, light, and odor from proposed conditional uses.
- Existing land uses that could be sensitive to these impacts include residential and institutional uses, as opposed to commercial and industrial uses.
- Staff finds no reason to believe that the proposed regional retail uses will have any more impact on sensitive residential and institutional uses than permitted manufacturing and hotel uses.

However, the fuel station could have adverse impacts on these sensitive residential and institutional uses. Impacts typically associated with fuel stations are noise, light, odor, dust, and vibration. Therefore, the analysis below focuses on the impact of the fuel station on sensitive residential and institutional uses.

Physical Barriers

Physical barriers effectively limit potential impacts on nearby residential and institutional uses from the proposed fuel station. The following analysis (1) identifies physical barriers between the proposed fuel station and nearby residential and institutional uses that effectively mitigate most potential impacts, and (2) recommends conditions of approval necessary to mitigate such impacts where physical barriers are insufficient to do so.

- North**:** The development is bordered to the north by Hwy 22, which is raised above the level of the subject site, creates ambient noise impacts from highway traffic, and serves as an effective barrier to noise, light, odor, dust, vibration, or any other anticipated impact of proposed uses on the subject site. Uses to the north and northeast of the proposed development will not be adversely affected by the proposed retail or fuel station uses.

- West**:** Properties immediately to the west of the proposed development site are zoned IDZ and separated from the site by Shaw Hwy and, in most cases, a frontage road (Beaver Creek Drive) to the west of Shaw Hwy. Shaw Hwy is an effective buffer between the site and development to the west, due to existing ambient noise and activity of the highway itself. Staff does not anticipate development impacts would extend beyond both Shaw Hwy and Beaver Creek Drive.
  However, one property is developed for residential use immediately across Shaw Hwy from the proposed fuel station (Proposed "Pad E" on Exhibit 4, Sheet L1.0). This property is not buffered by Beaver Creek Drive. To mitigate potential noise and light impacts from the conditional fuel station use, staff recommends Condition of Approval XIV-2, which requires screening between the proposed fuel station and the residential property to the west.

- East**:** There are two abutting properties to the east. The two tax lots are zoned IDZ and each have a single-story residence with accessory agricultural structures. The proposed site and the adjacent lots to the east allow various industrial-related activities, retail and service use outright, as mentioned above. The application proposes industrial office adjacent to these properties, which is permitted outright in the zone. The applicant

proposes screening between the industrial office use and properties to the east, consistent with code requirements.

- South: Two tax lots are adjacent to the proposed development to the south; both are zoned Residential Multi-Family and are separated from the fuel station by Gordon Lane SE.

  The western tax lot is developed as the Willamette Valley Babtist Church and School. The eastern tax lot is also owned by the church but is currently undeveloped. Staff recommends Condition of Approval XIV-3 to provide screening between the proposed fuel station and the church / school, as well as between commercial and industrial areas and the undeveloped residential lot.

In conclusion, to meet this criterion, staff propose conditions of approval to provide screening between the proposed fuel station at the southwest corner of the site and neighboring properties. Proposed Conditions of Approval XIV-2 and XIV-3 will mitigate impacts on neighboring properties to the west and south through screening. With these conditions of approval, this criterion can be met.

(C) The location and design of the site and structures for the proposal will be as attractive as the nature of the use and its setting warrants.

Finding: Criterion (C) acknowledges the subjectivity inherent in assessing the attractiveness of the location and design of the proposed site and structures, granting the Planning Commission and City Council considerable discretion in their evaluation. The applicant provided the following response to this criterion in their narrative:

> *"Given the location of the land bordering both Shaw and Hwy 22, the proposed land utilizes these corridors to its benefit as it is most aptly fit for the proposed mixed-use development. By creating a local commerce center it will act as a gateway to Aumsville and provide many of the needs in the community for business, jobs, and office components from the economic plan. The proposed site plan aims to create a commerce hub and act as a gateway at the exit of Hwy 22 to the City of Aumsville. The size and scale of the proposed buildings create a "neighborhood style" mixed use development that utilizes modern architecture and low sloping roof lines to preserve the neighborhood scale aesthetic. This style of layout and architecture will more seamlessly blend with the community as opposed to the large "big box" retail developments."*

Staff analysis of Criterion (C) follows:
One of the purposes of the IDZ is to provide for industrial, commercial and office uses. A retail center and business park are proposed. Retail uses designed to serve the community or region are allowed conditionally.

The location of the site abutting Hwy 22 and Shaw Hwy complements the proposed uses and provides employment and retail opportunities in a convenient location. Buildings are dispersed throughout the site and amongst parking, with the largest buildings in the center of the site.

The proposed hotel, the largest structure at 4 stories, will be closest to the intersection of Shaw Hwy and the Hwy 22 on-ramp. Other proposed single-story retail buildings are roughly 20-30' tall.

Figure 2: Street View looking east from Shaw Hwy

The proposal includes exterior and interior street, sidewalk, and bike path improvements with five egress and ingress access points to provide adequate pedestrian and vehicular flow. A multi-use path is proposed along the west side of the site. Additionally, required street trees line the exterior of the proposed development. Landscaping meets, or can be conditioned to meet, Aumsville's code and is interspersed throughout parking areas. The wetlands to the northeast are preserved as open space.

The applicant has met the minimum parking requirements and included nearly the maximum amount of parking allowed for the proposed uses. Buildings are generally dispersed throughout the site and surrounded by parking.

The most visible elements of the proposal are a regional shopping center with associated hotel, retail/restaurant opportunities, and a service station adjacent to a highway interchange. No "big box" retail is proposed. Staff's perspective is this proposal is consistent with planned expectations for the site, scaled appropriately for Aumsville, designed appropriately for the uses and scale, and can accommodate parking for residents of Aumsville as well as regional visitors.

The proposed materials include hillcrest stone, wood siding, and synthetic stucco with earth tones. Staff find the materials and earth tones consistent with retail center and industrial office park uses and resembles colors of properties west and east of the site. See Sheet A100 Site Plan, Sheet L1.0 Landscape plans, Elevations, and the Color Material Board for further information.

Staff's conclusion is the proposed location and design elements align with the intended use and setting, and meet the guidelines provided in code.

(D) The proposal will preserve assets of particular interest to the community.

Finding: The applicant provided the following response:

> *"The proposed site is a mix of declining housing structures, barns, and agricultural fields. The existing assets on site that are as follows:*
>
> *• Existing vegetated tree buffer along Hwy 22*
>
> *• Vegetated drainage swale along Shaw Hwy*
>
> *The proposed design retains the existing tree buffer along Hwy 22 that creates a noise and view break from the Hwy 22 traffic and noise into the Aumsville community. This buffer will be retained and continue to serve for the benefit of the community. Additionally, the drainage swale along Shaw will remain to provide the movement of excess storm water along with providing a green buffer between the road and the proposed development. With the preservation of the above proposed assets above the improvements that are being made by the developer to the roadway, signalized intersection, and offsite sewer capacity will provide an enhanced benefit to improve the existing infrastructure for the community of Aumsville."*

The IDZ reflects the city's intent to preserve the principal function of the intersection as a key entry point to Aumsville while attracting industrial and commercial users. As one of the first points of entry into Aumsville from Hwy 22, the proposed development holds significance in shaping visitors' first impressions of the city.

The retail center's proposed uses include hotel, eating and drinking establishments, and a fuel station. The retail activities, scale, and proximity to transportation amenities is positioned to attract commercial users. The business park's proposed uses include office and light manufacturing. The proposal's scale and proximity to transportation amenities are designed to attract office and light manufacturing users.

The inclusion of improvements to Shaw Hwy, such as new paving, striping, a new signalized intersection at Gordon Lane, and landscape enhancements with street trees, enhances the overall infrastructure and aesthetics of the area. The provision of a multimodal path further promotes pedestrian and bicycle connectivity along Shaw Hwy, contributing to the community's livability. The proposal retains wetlands in the NE area of the site.

For the reasons stated above, this proposal preserves the planned function of the site for employment uses, preserves and improves the pedestrian and vehicular transportation system, and preserves and improves landscaping and natural resources on the site. Staff concludes that the proposal is consistent with this standard.

14.06 Permit Conditions. The Commission when permitting a new conditional use or the alteration of an existing conditional use, may impose those conditions it finds necessary to avoid detrimental impact and to otherwise protect the best interest of the surrounding area and the city as a whole (See Section 12). These conditions may include, but are not limited to, the following […]

Finding: Staff have proposed conditions of approval, referenced throughout the staff report and listed in full in Exhibit 1. If, based on code review criteria, the Council determines it necessary to avoid detrimental impact and to otherwise protect the best interest of the surrounding area and city, it may modify staff's proposed conditions or impose additional conditions.

14.07 Existing Conditional Uses. […]

Finding: The proposed site does not contain any existing conditional uses. This standard does not apply.

SECTION 18.00 – OFF-STREET PARKING AND LOADING

18.01 New and Existing Facilities to Provide Parking and Loading. Off-street vehicular parking areas, off-street loading areas, and bicycle parking facilities shall be provided and maintained:

(A) For any new building or structure erected.

Finding: The proposal includes the construction of 13 new buildings in the retail area and 7 buildings in the industrial office area. The proposal does include the provision and maintenance of off-street parking areas, off-street loading areas, and bicycle facilities. This standard is met.

(B) For additional seating capacity, floor area, guestrooms, or dwelling units added to any existing building or structure.

Finding: The proposal does not include the modification of any existing buildings or structures. This standard does not apply.

(C) When the use of the building or structure is changed and would require additional parking areas under the provisions of this ordinance. This change in parking shall only apply if the required increase exceeds 25% of the existing number of spaces.

Finding: The proposed does not include changing the use of any existing buildings. This standard does not apply.

(D) For handicapped: One parking space at each area of public access.

Finding: Parking Calculations are shown on Exhibit 4, Sheet A100. Forty-eight ADA parking spaces at each area of public access are shown on Sheet A100. This standard is met.

18.03 Parking Location, Shared Parking, and Driveways. Off-street parking and loading areas shall be provided on the same lot with the main building or structure or use, except that in any non-residential zone, parking areas may be located off the site of the main building, structure, or use if it is within 500 feet of such site on an adjacent parcel, provided the adjacent parcel is not a residential use in the commercial zone.

(A) Off-Site Parking. Except for single-family dwellings, the vehicle parking spaces required by this section may be located on another parcel of land, provided the parcel is within a reasonable walking distance of the use it serves. The distance from the parking area to the use shall be measured from the nearest parking space to a building entrance, following a sidewalk or other pedestrian route. The right to use the off-site parking must be evidenced by a recorded deed, lease, easement, or similar written instrument.

Finding: The proposal does not include any parking spaces on another parcel of land. This standard does not apply.

(B) Mixed Uses. If more than one type of land use occupies a single structure or parcel of land, the total requirements for off-street automobile parking shall be the sum of the requirements for all uses, unless it can be shown that the peak parking demands are actually less (e.g., the uses operate on different days or at different times of the day). In that case, the total requirements shall be reduced accordingly.

Finding: Parking Calculations are shown on Exhibit 4, Sheet A100. Parking required for the retail center (including the Hotel) is 568 spaces and 600 spaces are provided. For the industrial office, 187 spaces are required and 356 spaces are provided. No reduction in the required number of parking spaces is requested. ADA parking is provided at each public access. This standard is met.

18.04 Off-Street Vehicular Parking Requirements.

(A) If several uses occupy a single structure or parcel of land, the total requirements for off-street parking shall be the sum of the requirements for the several uses computed separately.

Finding: Parking Calculations are shown on Exhibit 4, Sheet A100. Parking required for the retail center (including the Hotel) is 568 spaces and 600 spaces are provided. For the industrial office, 187 spaces are required and 356 spaces are provided. ADA parking is provided at each public access. This standard is met.

(B) Required parking shall be available for parking of operable passenger vehicles of residents, customers, and employees only, and shall not be used for the storage or display of vehicles or materials.

18.05 Off-Street Automobile and Bicycle Parking Requirements.

(A) Criteria Used in Determining Parking Requirements. The criteria used include the following:

1. *Number of equivalent dwelling units.*
2. *Square Footage of a Facility or Building. Unless otherwise noted, when square feet are specified, the area measured shall be the net floor area of the building's primary use, but shall exclude any space within a building used for off-street parking, loading, or service functions not primary to the use. For example, net floor area for a restaurant is limited to the dining area.*
3. *Capacity or Number of Persons. When the requirements are based on the number of: (a) Employees — it shall be determined on the basis of the number of persons working on the premises during the largest shift at peak season; (b) Sleeping facilities or beds provided — it shall be determined on the basis of the maximum number of persons to be accommodated or beds available.*
4. *Persons at Maximum Occupancy. The number used shall be determined on the basis of the maximum occupancy for the shift.*

(B) Parking Requirements Off-street parking for vehicles and bicycles shall be provided based on the following table. Vehicle parking space improvements shall comply with provisions in Section 18.03 and bicycle parking improvements shall comply with provisions in Section 18.11.

VEHICLE AND BICYCLE PARKING SPACE REQUIREMENTS

(*See full table on p.92 of Development Regulations)*

	Land Use Activity	*Vehicle Spaces*	*Bicycle Spaces*	*Measurement*
D.	*Hotel, motel, boarding house*	*1 space per guest room plus 1 space for the owner or manager*	*1*	*Per 20 guest rooms*
K.	*Retail store, except as provided in "L"*	*1 space per 400 sq. ft. plus 1 space per 2 employees*	*1*	*spaces*
L.	*Service or repair shop, retail store handling exclusively bulky merchandise, such as automobiles or furniture*	*1 space per 800 sq. ft. of gross floor area, plus 1 space per 2 employees*	*1*	*Per 30 vehicle spaces*
M.	*Bank; office buildings; medical and dental clinic*	*1 space per 300 sq. ft. of gross floor area, plus 1 space per 2 employees*	*1*	*Per 20 vehicle spaces*

N.	*Eating and drinking establishment except a Mobile Food Vendor. See 18.05(S)*	*1 space per 4 seats or every 8 feet of bench length, plus 1 space per 2 employees*	*1*	*Per 20 vehicle spaces*
O.	*Wholesale establishment*	*1 space per 1,000 sq. ft. of gross floor area, plus 1 space per 700 sq. ft. of retail area*	*1*	*Per 30 vehicle spaces*
Q.	*Manufacturing and processing:*			
	1. 0-24,900 sq. ft.	*1 space per 700 sq. ft.*	*3*	*Per 30 vehicle spaces*
	2. 25,000-49,999 sq. ft.	*1 space per 800 sq. ft.*	*3*	*Per 30 vehicle spaces*
	3. 50,000-79,999 sq. ft.	*1 space per 1,000 sq. ft.*	*3*	*Per 30 vehicle spaces*
	4. 80,000-199,999 sq. ft.	*1 space per 2,000 sq. ft.*	*5*	*Per 30 vehicle spaces*
	5. 200,000 sq. ft. and over	*1 space per 3,000 sq. ft.*	*8*	*Per 30 vehicle spaces*

Finding: Parking Calculations are shown on Exhibit 4, Sheet A100. Parking required for the retail center (including the Hotel) is 568 spaces, 600 spaces are provided. For the industrial office, 187 spaces are required, 356 spaces are provided. ADA parking is provided at each public access. 28 bicycle parking spaces are required for the retail center (including the Hotel), 28 spaces are provided. Eighteen bicycle parking spaces are required for the industrial office area, 28 spaces are provided. Bicycle parking is shown on Exhibit 4, Sheet A100. This standard is met.

18.06 Off-Street Loading Requirements. Off-street loading spaces for commercial and industrial buildings shall require a minimum loading space size of 10 feet wide, 25 feet long, and 14 feet high, in the following manner:

1. *Up to 20,000 square feet of gross floor area* *250 square feet*
2. *20,000 to 50,000 square feet of gross floor area* *500 square feet*
3. *Over 50,000 square feet of gross floor area* *750 square feet*

Finding: Off street loading spaces are shown on Exhibit 4, Sheet A100 for Major A and Major B Buildings, the only commercial buildings proposed that exceed 20,000 square feet. This standard is met.

18.07 Exceptions to Loading Requirements. The Commission may waive the off-street loading requirements for any commercial or industrial building or use when it has been determined that the building or use is of a kind not requiring the loading or unloading or delivery of merchandise or other property by commercial trucks or delivery vehicles.

Finding. No waiver has been requested; off-street loading requirements have been met.

18.08 Parking and Loading Development Standards. All parking areas shall be developed and maintained as follows:

(A) Location. The required yard areas adjacent to a street shall not be used for parking or loading areas, except a residential driveway. The interior yards, other than those adjacent to a street, may be used for parking and loading areas when such yard areas have been developed for that purpose and are not at variance with this ordinance.

(B) Surfacing. All driveways, parking, and loading areas shall be paved with asphalt or concrete surfacing and shall be adequately designed, graded, and drained.

Finding: Parking or loading areas are not within required yard areas, as shown on Exhibit 4, Sheet A100. Driveways and loading areas are shown with concrete surfacing. Conditions of Approval IV-1-5 are proposed to ensure adequate drainage consistent with city PWDS.

(C) Surfacing for Residential Uses. […]

Finding: The proposal includes a retail center with retail and service use; no residential uses are proposed.

(D) Size of parking spaces and driveways:

1. *A driveway for residential use shall be a minimum width of 10 feet.*
2. *One-way drives shall have a minimum improved width of at least 12 feet, exclusive of parking spaces.*
3. *Two-way drives shall have a minimum improved width of at least 20 feet, exclusive of parking spaces.*
4. *The minimum width of any parking space shall be 10 feet, exclusive of driveways.*
5. *The minimum length of any parking space shall be 20 feet, exclusive of driveways.*

Finding: All proposed parking spaces shown are 10’ wide and 20’ deep. Drives (private roads) shown on the site plan are 26’ wide. This standard is met.

(E) Screening. When any parking or loading area is within or adjacent to any residential zone, such parking or loading area shall be screened from all residential properties within an ornamental fence, wall, hedge, or other form of landscaping of at least 4 feet in height, but not more than 6 feet in height. Screening shall not encroach into vision clearance areas as required and screening shall be continuously maintained and protected from damage from vehicles using the parking areas. (See Sections 7 and 22)

Finding: There is residential zoning to the south of the proposed development. Condition of Approval XIV-3 requires installation of screening between the site and residentially-zoned land to the south. The residences to the southeast of the proposed development area are within the IDZ zone and separated by 15' wide buffer plantings as shown on Exhibit 4, Sheet L1.0. This standard is met.

(F) Lighting. Any illumination of a parking or loading area shall be so arranged as to be directed entirely onto the loading or parking area and shall be deflected away from residential use, and shall not cast a glare or reflection onto moving vehicles or a public right-of-way.

Finding: A photometric site plan is provided on Exhibit 4, Sheet E100; lighting details are found on Exhibit 4, E Light Cut Sheet attachment. The demonstrated light at the property lines does not exceed .7 foot-candle, and average .1 foot-candle. A foot candle is roughly the amount of light that falls on a surface one foot away from a singular candle. Lighting fixtures proposed direct light downwards and are sufficiently remote from residential uses and public rights of ways to meet this standard.

(G) Maximum Parking Allowed. With the exception of properties with single-family homes and duplexes, no site shall be permitted to provide more than thirty% in excess of the minimum off-street vehicle parking required by Section 18.05.

Finding: Parking Calculations are shown on Exhibit 4, Sheet A100. Vehicle parking required for the entire site is 755 spaces and cannot exceed 981 spaces; 956 spaces are provided. This standard is met.

18.09 Parking and Loading Plan Required. Applications for hearing before the Commission for development permits shall submit a parking and/or loading plan, drawn to scale, and showing:

(A) Access to street(s), both ingress and egress.
(B) Location of individual parking spaces.
(C) Location of existing and proposed buildings.
(D) Proposed screening.
(E) Proposed lighting.
(F) Surface markings and/or signs for traffic flow and space designations.
(G) Vehicles leaving the property from a parking area shall enter the street in a forward motion.
(H) Proposed bicycle parking plan.

Finding: The proposed site plan Exhibit 4, Sheet A100 shows site access, the location of individual parking spaces, the location of proposed buildings, and the bicycle parking plan. The proposed circulation plan shows two-way streets; vehicles can leave the property in a forward motion. The location of existing buildings is shown on Exhibit 4, Sheet G-05. Proposed lighting is shown on Exhibit 4, Sheet E100 and E. Light Cut Sheet. This standard is met.

18.10 Construction. It shall be required that all approved parking, loading, and bicycle parking areas shall be completed and available for use at the time of final inspection or issuance of an occupancy permit.

Finding: Staff proposes Condition of Approval VII-7 requiring all approved parking, loading and bicycle parking areas to be completed and available for use at the time of final inspection or issuance of an occupancy permit.

18.11 Bicycle Parking. At a minimum, bicycle parking facilities shall be consistent with the following design guidelines:

- *(A) Bicycle parking shall be convenient and easy to find. Where necessary, a sign shall be used to direct users to the parking facility.*
- *(B) Each bicycle parking space shall be at least 2 feet by 6 feet with a vertical clearance of 7 feet.*
- *(C) An access aisle of at least 5 feet between bicycle spaces shall be provided in each bicycle parking facility.*
- *(D) Bicycle parking facilities shall offer security in the form of either a lockable enclosure in which the bicycle can be stored or a stationary object, i.e., a "rack", upon which the bicycle can be locked. Structures that require a user-supplied lock shall accommodate both cables and U-shaped locks and shall permit the frame and both wheels to be secured (removing the front wheel may be necessary). Note: businesses may provide long-term, employee parking by allowing access to a secure room within a building, although additional short-term customer parking may also be required.*
- *(E) The rack shall support the bicycle in a stable position without damage.*
- *(F) Rows of bicycle racks shall not exceed 20 feet in length. Rows shall be separated at least 5 feet.*

Finding: Bicycle parking details are found on Exhibit 4, Sheet A100. Bicycle parking is found near entrances to buildings and the applicant states a sign shall be used to direct users to the parking facility. The bicycle parking details and notes show that the bicycle parking spaces shall be at least 2’ by 6’ with a vertical clearance of 7’, and an access aisle of at least 5’ between bicycle spaces shall be provided. The notes state the proposed facility shall offer security consistent with this standard above, that the rack shall support the bicycle in a stable position without damage, and that rows shall not exceed 20’ in length and that rows shall be separated at least 5’. Staff proposes Condition of Approval VII.7 to ensure that this standard is met.

SECTION 19.00 – SIGNS

19.03 General Provisions:

- *(A) Conflicting Standards. Signs shall be allowed subject to the provisions of this section, except when these provisions conflict with the specific standards for signs in the subject zone.*
- *(B) Uniform Sign Code. All signs shall comply with the provisions of the Uniform Sign Code of the Uniform Building Code.*

(C) Sign Clearances. A minimum of 8 feet above sidewalks and 15 feet above driveways shall be provided under freestanding or wall-mounted signs that project over a sidewalk.

Finding: The applicant proposes no signs as a part of this permit application. Therefore, this standard is not applicable. The applicant will be required to meet this standard when signs are proposed in the future.

SECTION 20.12 PARTITION REQUIREMENTS

20.13 Partition. A partition is the creation of three or fewer parcel lots from one parent lot or parcel within a calendar year. It is recommended that the applicant confer with the City regarding application requirements. If a partition results in the creation of a large parcel that can be subsequently divided so that there is the potential to create more than three parcels from the original parcel that meet minimum lot area requirements, the request shall be processed as a subdivision and subject to the design and improvement standards for a subdivision.

Finding: The proposal includes a partition, shown in Exhibit 4, PLA_1 Exhibit Sketch and four lot line adjustments are shown in Exhibit 4, PLA_2 Exhibit Sketch. The tentative plan is shown on Exhibit 4, Sheet G-03 of the Civil Plan Set. The partition would result in the creation of a large parcel that could be subsequently divided so that there is potential to create more than three parcels from the original parcel that meet minimum lot area requirements. Therefore, the request must be processed as a subdivision and is subject to the design and improvement standards for a subdivision.

SECTION 20.21 SUBDIVISION REQUIREMENTS

20.22 Subdivision. A subdivision is the creation of four or more lots from one parent lot or parcel within a calendar year. It is recommended that the applicant confer with the City regarding application requirements.

20.24 Public Hearing. Subdivisions shall be processed as a Type III application. Upon a determination that the application is complete, a public hearing shall be scheduled before the Commission and Council.

Finding: The proposed partition shall be processed as a subdivision and therefore is processed as a Type III application; the application includes a public hearing before the Commission and Council.

20.26 Decision Criteria. Approval of a subdivision application requires compliance with the following criteria:

(A) The overall dwelling density shall be consistent with policies contained in the Comprehensive Plan.

Finding: The proposal is not a residential land division; therefore, dwelling density does not apply.

(B) Each lot shall satisfy the dimension standards of the applicable zoning district, with the exception of the following:

(A) The applicant may submit a variance as a part of the subdivision request to modify dimension requirements.

(B) For subdivisions exceeding 10 lots, up to 20% of the lots may be reduced in area by a maximum of 10%, provided, the average lot size for the entire subdivision meets or exceeds the minimum lot size required in the underlying zone.

Finding: There are no lot dimension requirements in the IDZ. This standard is met.

(C) Adequate public facilities including sewer, water, transportation, parks, and telecommunications shall be available to serve the newly created lots and transportation shall be coordinated with the school district. The subdivision shall comply with applicable requirements of Section 22.

Finding: Consistent with City Engineer findings attached as Exhibit 2, staff propose Conditions of Approval Sections I-VII to ensure that adequate public facilities are available to serve the newly created lots.

(D) The subdivision shall comply with the applicable design criteria in Section 20.

Finding: The design criteria are reviewed in Section 20.34 Design Standards below.

(E) The application complies with the city's adopted public works design standards for any public improvement required by the development. For example, where streets are required, the application shall comply with Division 2, Streets; for storm water improvements, the application shall comply with Division 3, Stormwater Management.

Finding: City Engineer recommendations are included in Exhibit 2. Conditions of Approval Sections I-VII are proposed to ensure that the application complies with the city's Public Works Design Standards (PWDS).

(F) The application complies with the most recent version of the Oregon Fire Code, including Appendix C and Appendix D.

Finding: Conditions of Approval I-2, I-7, and I-8 are proposed to ensure the application complies with the most recent version of the Oregon Fire Code.

20.29 <u>General Provisions:</u>

(A) Subdivisions that are not phased subdivisions may require modification to comply with changes in the Comprehensive Plan, Development Ordinance, or other implementing

regulations if construction is not complete after one year from the recording of the final plat.

Finding*:* The proposal includes a partition and multiple lot line adjustments and is being reviewed as a subdivision per ADO 20.13. Staff proposes Condition of Approval V-2 to ensure compliance with this criterion.

(B) Improvements/Bonding: Prior to issuance of a building permit, all improvements required by the conditions of approval shall be constructed or the construction shall be guaranteed through a performance bond or other instrument acceptable to the city attorney. Phasing of the improvements and development costs shall be permitted.

Finding*:* Staff proposes Condition of Approval VII-9 to ensure compliance with this standard.

SECTION 20.34 DESIGN STANDARDS

20.35 Design Standards for Lot and Block:

(A) Development shall provide for the continuation or projection of existing public streets in surrounding areas or conform with the plan for the neighborhood or any development plan adopted by the Commission.

Finding: There are no neighborhood plans applicable to the area. The proposed lot configuration does not affect the continuation or projection of Gordon Lane. This standard is met.

(B) Lot arrangement shall be such that there will be no foreseeable difficulties, for reason of topography or other conditions, in securing building permits to build on all lots in compliance with the requirements of this ordinance with the exception of lots designed for open space.

Finding: Conditions of approval I.3, II.7, and VI.1 are proposed. With the conditioned easements, the proposed lot arrangement does not create foreseeable difficulties in securing building permits to build on all lots in compliance with the requirements in this ordinance.

(C) Lot dimensions shall comply with the minimum standards of this ordinance. When lots are more than double the minimum area designated by the district, the approval authority shall require that such lots be arranged so as to allow further subdivision and the opening of future streets where it would be necessary to serve such potential lots.

Finding: There are no minimum lot standards for the IDZ; therefore, this standard is met.

(D) Double frontage lots shall be avoided except where necessary to provide separation of residential developments from streets of collector and arterial street status or to overcome

specific disadvantages of topography and/or orientation. When driveway access from arterials is necessary for several adjoining lots, the Commission shall require that such lots be served by a combined access driveway in order to limit possible traffic hazards on such streets. The driveway should be designed and arranged so as to avoid requiring vehicles to back into traffic on arterials.

Finding: The proposed partition does not create double frontage lots. No driveway access from arterials is proposed. This standard is met.

(E) The side property lines of a lot shall, as far as practical, run at right angles to the street upon which it faces, except that on a curved street the side property line shall be radial to the curve.

Finding: Proposed property lines generally run at right angles to the street, except where abutting the adjusted Gordon Lane curve. This standard is met.

(F) Blocks shall not exceed 600 feet between street lines unless the adjacent layout or special conditions justify greater length. Except where topography or other physical features make it otherwise, block widths shall not be less than 200 feet or more than 400 feet.

Finding: The proposed lot line adjustment and partition creates blocks that exceed 600' between private street lines, the largest block measures approximately 750' across the longest span. The nature of the proposed development is a consolidated retail center and office park; staff considers this to be consistent with a "special condition" justifying the greater length.

(G) Cul-de-sacs shall be as short as possible and shall have a maximum length of 400 feet. In any residential division, no more than 5 lots shall have access on a cul-de-sac bulb except that additional lots may be permitted where one additional off-street parking space is created for each lot which has access on the bulb. The minimum frontage of a lot on a cul-de-sac shall be 20 feet as measured perpendicular to the radius. Cul-de-sacs and dead-end streets shall have turn-arounds with a radius of not less than 45 feet to the curb line.

Finding: No cul-de- sacs are proposed. This standard is not applicable.

(H) Lots are required to have frontage on a public right-of-way. A private access easement does not fulfill this requirement.

Finding: All lots have frontage on a public right-of-way. This standard is met.

SECTION 21.00 – SITE DEVELOPMENT REVIEW

21.04 Site Development Review – Application Review Procedure. Site development review shall be conducted as a Type II procedure, using the procedures in Section 12, and using the approval criteria contained in Section 21.06.

21.06 Site Development Review – Approval Criteria. The review authority shall make written findings with respect to all of the following criteria when approving, approving with conditions, or denying an application:

(A) The application is complete, as determined in accordance with Section 12 and Section 21.05;

Finding: The application has been deemed complete on April 4, 2024.

(B) The application complies with all of the applicable provisions of the underlying land use zone, including: building and yard setbacks, lot area and dimensions, lot coverage, and other special standards as may be required for certain land uses;

Finding: Finding demonstrating compliance with applicable provisions of the ID zone are found in previous sections.

(C) Characteristics of adjoining and surrounding uses;

Findings: The site is zoned for Interchange Development and is expected to develop for highway-dependent uses that generate substantial amounts of traffic and related noise and visual impacts. As discussed under conditional use findings above, physical barriers buffer the site from most sensitive uses. This analysis focuses on adjacent and surrounding uses that are sensitive to and could be adversely impacted by noise, fumes and the appearance of the proposed development. As noted in the conditional use discussion above, the proposed fuel station has the greatest potential impact on sensitive residential and institutional uses.

Physical barriers effectively limit potential impacts on nearby residential and institutional uses. The following analysis identifies physical barriers between the proposed fuel station and nearby residential and institutional uses.

- North**:** The development is bordered to the north by Hwy 22, which is raised above the level of the subject site, creates ambient noise impacts from highway traffic, and serves as an effective barrier to noise, light, odor, dust, vibration, or any other anticipated impact of proposed uses on the subject site. Uses to the north and northeast of the proposed development will be adversely affected by the proposed retail or fuel station uses.
- West**:** Properties immediately to the west of the proposed development site are zoned IDZ and separated from the site by Shaw Hwy and, in most cases, a frontage road (Beaver Creek Drive) to the west of Shaw Hwy. Shaw Hwy is an effective buffer between the site and development to the west, due to existing ambient noise and activity of the highway itself. Staff does not anticipate development impacts would extend beyond both Shaw Hwy and Beaver Creek Drive.
  However, one property is developed for residential use immediately across Shaw Hwy from the proposed fuel station (Proposed "Pad E" on Exhibit 4, Sheet L1.0). This property is not buffered by Beaver Creek Drive. To mitigate potential noise and light

impacts from the conditional fuel station use, staff recommends Condition of Approval XIV-2, which requires screening between the proposed fuel station and the residential property to the west.

- East**:** There are two abutting properties to the east. The two tax lots are zoned IDZ and each have a single-story residence with accessory agricultural structures. The proposed site and the adjacent lots to the east allow various industrial-related activities, retail and service use outright, as mentioned above. The application proposes industrial office adjacent to these properties, which is permitted outright in the zone. The application proposes screening between the industrial office use and properties to the east, consistent with code requirements.

With proposed conditions of approval, potential impacts on sensitive adjoining and surrounding uses will be effectively mitigated. This standard is met.

(D) *The application complies with the supplementary zone regulations contained in Sections 18, 19, and 22;*

Findings: Findings demonstrating compliance with applicable provisions of Section 18, 19 and 22 are found in their respective sections of this narrative.

(E) Conditions required as part of a land division (Section 20), conditional uses (Section 14), or other approval shall be met;

Findings*:* No existing conditions of approval exist on the proposal site. This land division and conditional use permit will create conditions of approval on the site.

(F) Provision for adequate noise and/or visual buffering from non-compatible uses;

Findings The proposed parcel borders Shaw Hwy (east), Hwy 22 (north), two residential/agricultural parcels (east), a Church and vacant residential land (south). As shown in findings for Section 10, and Exhibit 4, Sheet A100 proposed setbacks and landscaping are generally consistent with ADZ standards. The application proposes screening through sight-obscuring plant materials in the vegetated buffer along Hwy 22 and a vegetated evergreen hedge along the eastern property line. The application proposes walls to screen loading areas and service areas and facilities.

Staff recommend Conditions of Approval to provide screening to the west and south consistent with the requirements of Sections 14 and 23. With proposed conditions of approval, this criterion can be met.

(G) Drainage and erosion control needs;

Findings: The applicant includes the following statement in their narrative;

"The existing land utilizes both natural contours and drainage areas to convey

the water onsite. The proposed development will utilize the existing drainage patterns to collect and treat all stormwater onsite and will follow all state and local laws to ensure that no stormwater will impede any of the surrounding roads, highways, or neighboring parcels.

As the City Engineer states in Exhibit 2, storm drain facilities are available in Shaw Hwy and Santiam Hwy. The applicant proposes detention and water quality facilities on the east side and west side of the development. Staff proposes Conditions of Approval IV.1-5 to ensure adequate drainage and erosion control.

(H) Public health and safety factors;

Findings The applicant provided the following response in their narrative:

"The implementation of design elements such as fire protection equipment, visual camera security, and management representation will provide the necessary safety concerns. In addition by providing a clean facility with a vetted group of tenants/uses the commercial development will retain pride of ownership and community presence".

Future development will be required to comply with DEQ regulations, fire safety standards, building codes, and public facility standards. Conditions of Approval I-IV are proposed to ensure compliance with these regulations.

(I) Problems that may arise due to development within potential hazard area;

Findings No known hazards are currently known or anticipated for the site.

(J) Retention of existing natural features on site; and

Findings: Most of the site is currently farmed. Grading will generally follow the gentle existing topography of the site. Areas of existing vegetation to be retained are:

- The existing drainage channel along Shaw Hwy
- The wooded wetland areas that buffer the site to the north and northeast between the proposed shopping center and the North Santiam Hwy.
- The existing trees and wetland area at the southwest corner of the site that buffers the new 10' multi-use trail to the neighboring church to the south.

The applicant proposes to fill and remove the small wetland areas in the middle. DSL approval is required for this action. Staff propose Condition of Approval VI.2 to ensure required permits are obtained by DSL. This standard can be met.

(K) The application complies with the city's adopted public works design standards for any public improvement required by the development. For example, where streets are

required the application shall comply with Division 2, Streets; for storm water improvements, the application shall comply with Division 3, Stormwater Management.

Finding: City Engineer comments are attached as Exhibit 2. Conditions of Approval I-VII are proposed to ensure the application complies with the city's PWDS. Physical barriers effectively limit potential impacts on nearby residential and institutional uses.

(L) The application complies with the most recent Oregon Fire Code, including Appendix C and Appendix D. […]

Finding: All building construction types will require compliance with both state and local fire codes as well as thresholds for fire sprinkler implementation. Staff proposes Conditions of Approval I-2, I-7, and I-8 to ensure the application complies with the most recent version of the Oregon Fire Code. Applicant states they will coordinate with the fire department to determine the configuration of the hammerhead turnaround. Staff proposes Condition of Approval VI-8 to ensure this outcome. With this condition of approval, this standard can be met.

21.09 Development in Accordance with Permit Approval:

(A) Developments shall not commence until the applicant has received all of the appropriate land use and development approvals (i.e., site development review approval) and building permits. Construction of public improvements shall not commence until the City has approved all required public improvement plans (e.g., utilities, streets, public land dedication, etc.). The City may require the applicant to enter into a development agreement (e.g., for phased developments and developments with required off-site public improvements), and may require bonding or other assurances for improvements, in accordance with Section 21.08. Site development review approvals shall be subject to the standards and limitations of (B) and (C), below.

Finding: Staff proposes Condition of Approval VI-10 to ensure compliance with the above provision.

(B) Modifications to Approved Plans and Developments. Minor modifications of an approved plan or existing development shall be processed as a Type I procedure (See also Section 21.09(C)(3)(d)). Major modifications, as defined in Section 1, shall be processed as a Type II procedure and shall require site development review.

Finding: Staff propose Condition of Approval VI-11 to ensure compliance with the above provision.

(C) Phased Development. Phasing of development may be approved with the site development review application, subject to the following standards and procedures:

1. A phasing plan shall be submitted with the site development review application.

2. *The Commission shall approve a time schedule for developing a site in phases, but in no case shall the total time period for all phases be greater than 3 years without reapplying for site development review.*
3. *Approval of a phased site development review proposal requires satisfaction of all of the following criteria:*
    (a) The public facilities required to serve each phase are constructed in conjunction with or prior to each phase;
    (b) The development and occupancy of any phase dependent on the use of temporary public facilities shall require Council approval. Temporary facilities shall be approved only upon City receipt of bonding or other assurances to cover the cost of required public improvements, in accordance with Section 21.05. A temporary public facility is any facility not constructed to the applicable city standard, subject to review by the city engineer.
    (c) The phased development shall not result in requiring the City or other property owners to construct public facilities that were required as part of the approved development proposal; and
    (d) An application for phasing may be approved after site development review approval as a minor modification to the approved plan.

Finding: No phased development is currently proposed. Future phasing would need to demonstrate compliance with these criteria. Proposed Conditions of Approval I-10, II-7, III-11 require City approval of any future phasing.

SECTION 22.11 – TRANSPORTATION IMPACTS

22.11 Transportation Impacts […]

(A) When a Transportation Impact Analysis is Required. A TIA shall be required when:

1. *The development generates 25 or more peak-hour trips or 250 or more daily trips, or*
2. *An access spacing exception is required for the site access driveway(s) and the development generates 10 or more peak-hour trips or 100 or more daily trips, or*
3. *The development is expected to impact intersections that are currently operating at the upper limits of the acceptable range of level of service during the peak operating hour, or*
4. *The development is expected to significantly impact adjacent roadways and intersections that have previously been identified as high crash locations, areas that may have other operational or safety concerns, or areas that contain a high concentration of pedestrians or bicyclists such as a school, or*
5. *Based on the engineering judgment of the city engineer, the development or land use action would significantly affect the adjacent transportation system. Examples include, but are not limited to, proposals for non single-family development in single family residential areas, proposals adding traffic to or creating known or anticipated safety or neighborhood traffic concerns, or*

proposals that would generate a high percentage of truck traffic (more than 5% of site traffic).

6. *A zone change will increase the development capacity of the affected real property.*

Finding: The proposed development triggers a TIA per Section 22.11 (A)(1). A TIA has been submitted.

(B) When a Transportation Assessment Letter is Required. If a TIA is not required, the applicant's traffic engineer shall submit a transportation assessment letter to the City indicating the proposed development or land use action is exempt. This letter shall outline the trip-generating characteristics of the proposed land use and verify that the site-access driveways or roadways meet City visual clearance requirements and roadway design standards.
The City may waive the requirement for a transportation assessment letter if a clear finding can be made that the proposed land use action does not generate 25 or more peak hour trips or 250 or more daily trips.

Finding: This standard applies when a TIA is not required. The proposed development triggers a TIA per Section 22.11 (A)(1). The transportation assessment letter standard does not apply.

(C) Traffic Impact Analysis Preparation. A TIA shall be prepared by a professional engineer registered in the State of Oregon in accordance with the requirements of the road authority. In addition, the preparer should have extensive experience in the methods and concepts associated with transportation impact analysis. If the road authority is the Oregon Department of Transportation (ODOT), consult ODOT's regional development review planner and OAR 734- 051-180.

Finding: A TIA was prepared by a professional engineer registered in the State of Oregon (Sandow Engineering), with consultation with ODOT and Marion County.

(A) Review Policy and Procedure. The following criteria should be used in reviewing a TIA as part of a subdivision or site development review.

1. *The road system is designed to meet the projected traffic demand at full build-out in terms of safety, adequacy of property access, connectivity, width, right-of-way, and capacity based on the mobility standards in Section 22.11.*

Finding: The TIA addresses projected traffic demand at full buildout. Shaw Hwy is under Marion County's jurisdiction. Marion County has reviewed the TIA and concurs with Conditions of Approval VIII-1-4 to meet Marion County transportation requirements.

The proposal impacts Hwy 22; ODOT has reviewed the TIA and requested condition of approval VII-1 to address the potential impacts to the OR-22 EB ramp.

Del Mar Drive crosses a currently unused rail line approximately 250' to the west of the proposed development. Bob Stolle from ODOT Rail reviewed the application and confirmed that ODOT would not require a Crossing Order and the associated upgrades to the crossing at Del Mar Drive. (See Exhibit 3.) ODOT Rail provided the crossing identification information below for future reference:

frmKeyDataForCrossing													
Street Name	County	Crossing ID	Active	Latitude	Longitude	USDOT_NO	Line No	Milepost	ROW Owner	Track Owner	Operator	Segment Name	Milepost Text
Del Mar Drive	Marion	CC-712.50	0	44.847148	-122.866895	760195L	CC	712.5	Union Pacific Railroad Co	Union Pacific	Willamette Valley Ry	Mainline	712.5

With the proposed conditions, the roadway is designed to meet the projected traffic demand at full buildout. This standard is met.

2. *Proposed driveways do not adversely affect the functional character of the surrounding roadways.*

Finding: Gordon Lane is a local street. There are two proposed driveways off Gordon Lane. The parcel currently has one driveway to serve the existing house. Since the primary function of local streets is to provide access to to immediately adjacent land, the two proposed driveways will not adversely affect the functional character of the surrounding roadways.

3. *Adequate intersection and stopping sight distance is available at all driveways.*

Finding: Staff proposes Condition of Approval III-13 to ensure unobstructured vision in accordance with city PWDS. The applicant has not provided evidence of adequate sight distance in their narrative or TIA; therefore, staff proposes Condition of Approval III-14 to ensure adequate sight distance is provided.

4. *Proposed driveways meet the City's access spacing standard or sufficient justification is provided to allow a deviation from the spacing standard.*

Finding: City of Aumsville Public Works Design Standards do not have prescriptive access spacing standards and proposed driveways are not anticipated to create access problems. This criterion is met.

5. *Opportunities for providing joint or crossover access have been pursued.*

Finding: The site plans show how access is provided to all development spaces via a system of private roads / drives. There are no adjacent development sites that would benefit from providing joint or crossover access.

6. *The site does not rely upon the surrounding roadway network for internal vehicular circulation.*

Finding: The application proposes an internal private street / drive system that provides access to the proposed buildings and does not rely upon the surrounding roadway network for internal vehicular circulation.

7. *The road system provides adequate access to buildings for residents, visitors, deliveries, emergency vehicles, and garbage collection.*

Finding: The proposed road system and system of sidewalks provides adequate access to buildings for residents, visitors and deliveries. A service area/loading dock is proposed behind the large retail buildings. Staff proposes condition of approval VII.2 to ensure adequate access for emergency vehicles and garbage collection.

8. *Bicycle and pedestrian circulation is provided per Section 18.*

Finding: As shown on Exhibit 4, Sheet A100, bicycle and pedestrian circulation is provided internally per Section 18. Adequate bicycle parking is provided. A multi-modal path is provided on the western side of the site. This standard is met.

(B) Conditions of Approval. The City of Aumsville, Marion County (if access to a County roadway is proposed), and ODOT (if access within the IAMP boundary is proposed) will be required to identify conditions of approval needed to meet operations and safety standards and provide the necessary right-of-way and improvements to develop the future planned transportation system. Conditions of Approval that should be evaluated as part of subdivision and site development reviews include the criteria identified above in Section (F)(1) and include but not be limited to the following:

1. *Consideration of joint and cross access and joint use driveways for developments that do not meet the designated access spacing policy.*
2. *Right-of-way dedications for future planned roadway improvements.*
3. *Half or three-quarter street improvements along site frontages that do not have full build-out improvements in place at the time of development.*

Finding: ODOT and Marion County have requested condition of approval VII-1 relating to Hwy 22 intersection improvements. City staff propose Condition of Approval III-9 to enable phased funding of Hwy 22 intersection improvements. City staff coordinated with Marion County, and ODOT to prepare conditions of approval addressing right-of-way dedications and street improvements along Shaw Hwy and Gordon Lane.

22.12 Interchange Area Management Plan Boundary

Within the Interchange Area Management Plan Boundary identified on the Official Zoning Map, the following conditions shall apply:

(A) Transportation Impact Analyses shall be prepared in accordance with the requirements of Section 22.11.

(B) ODOT shall be consulted and provided with an opportunity to review all land development applications, zoning and/or comprehensive plan modifications, and applications for urban growth boundary expansions.

(C) The access spacing requirements of OAR 734, Division 51, as amended, shall be applied to Shaw Hwy/1st Street, except where deviations are approved by ODOT.

Finding: The proposal is within the Interchange Area Management Plan Boundary. ODOT was consulted and provided with an opportunity to review the land use application. A TIA was prepared in accordance with the requirements of Section 22.11. The proposal meets the access spacing requirements of OAR 734, Division 51, as amended. The three conditions listed above are met.

SECTION 23.00 – LANDSCAPING DESIGN

23.02 Scope. All construction, expansion, or redevelopment of structures or parking lots for commercial, institutional, or industrial uses shall be subject to the landscaping requirements of this section. Landscaping plans shall be processed as follows:

(A) Landscape plans shall be included in all required Type II Site Development Reviews, and where applicable, Conditional Use, Variance, and Land Division requests.

(B) Request to modify the landscaping provisions contained in Section 23.04, shall be processed as a Type II Site Development Review.

(C) Otherwise, new or replacement landscape plans shall be processed as a Type I application.

Finding: The application includes a Type II Site Development Review; therefore, a landscape plan is required. A Landscape Plan and Landscape Maintenance plan was provided in the applicant's plan set (Exhibit 4, Sheets L1.0, L2.0). This standard is met.

23.03 Minimum Area Requirements.

(A) The following area requirements shall be the minimum areas devoted to landscaping as listed below:

1. Commercial Developments. A minimum of 5% of the gross land area shall be devoted to landscaping in commercial developments. Landscaping located in rights-of-way shall be included in the minimum requirement, and shall include the use of streets, tree insets within sidewalks, or sidewalk planters. Landscaping located in rights-of-way shall be maintained by the property owner.

2. Industrial Developments. A minimum of 10% of the gross land area shall be devoted to landscaping in industrial developments.

3. *Interchange Development. A minimum of 15% of the gross land area shall be devoted to landscaping in interchange development.*
4. *Multi-family Residential Development and Public Use […]*

Finding: The proposal includes commercial and industrial development in the Interchange Development zone. This standard requires a minimum of 15% of the gross land area to be landscaped. The total square footage of the proposed project site is 1,538,975 square feet. As shown on Exhibit 4, Sheet L1.0 the landscaped area of the proposed site is 585,338 square feet – which amounts to 38% of the site. This standard is met.

(B) For the expansion of existing developments and parking lots, or a change of use, requirements in this section shall only apply whenever a site development review or other land use application is required to complete the expansion or stablish the change in use. Such expansion or change of use shall be subject to the landscaping provisions in this section.

Finding: The proposed site has two existing structures with no parking lots. The proposal does not include a change of use or an expansion of the two existing structures. This standard does not apply.

(C) Landscaped areas may include landscaping:
1. *Around buildings;*
2. *In open spaces and outdoor recreation areas;*
3. *In islands and perimeter planting areas in parking and loading areas;*
4. *Along street frontages; and*
5. *In areas devoted to buffering and screening as required in this section and elsewhere in this ordinance.*

Finding: The proposal includes 585,338 square feet of landscaping which includes areas around buildings, in islands and perimeter areas in parking and loading areas, along street frontages, and in areas devoted to buffering and screening. This standard is met.

23.04 General Provisions.

(A) For purposes of satisfying the minimum requirements of this ordinance, a "landscaped area" is any combination of mature living plants, such as trees, shrubs, plants, vegetative ground cover, or natural or artificial turf; and may include structural features such as walkways, fences, benches, plazas, works of art, reflective pools, fountains, or the like. Also includes irrigation systems, mulches, decorative rock ground cover, topsoil, and re-vegetation or the preservation, protection, and replacement of trees.

Finding: Exhibit 4, Sheet L1.0, shows landscaped areas including trees, shrubs, vegetative ground cover, walkways, mulch, an irrigation system, preservation of existing wetlands and trees and a pedestrian plaza.

(B) Landscaping shall be designed, developed, and maintained to satisfy the specific functional and aesthetic objectives appropriate to the development, considering the following:

1. *Type, variety, scale, and number of plants used;*
2. *Placement and spacing of plants;*
3. *Size and location of landscaped areas;*
4. *Contouring, shaping, and preparation of landscaped areas;*
5. *Use and placement of non-plant elements within the landscaping;*
6. *Use of root barrier planting techniques to prevent root infiltration of utility lines and limit possible surface cover damage.*

Finding:

The applicant included the following response to the criteria in their narrative:

"1. Type, variety, scale, and number of plants used;

Response: The proposed plant palette contains a right variety of plant material appropriate for a commercial shopping center that will provide a mix of mature sizes, varying textures of plant species, and an array of blooming cycles to provide year-round interest.

2. Placement and spacing of plants;

Response: The placement and spacing has been laid out to provide an enhanced pedestrian and vehicular experience. By placing the trees throughout the parking lot and pedestrian corridors, shade and vehicular separation will offer a pleasant pedestrian scale. Vegetation will also be used to buffer the proposed buildings and lessen the scale of the architecture to achieve a fully integrated aesthetic between the built and natural environment.

3. Size and location of landscaped areas;

Response: Wide medians of landscape are proposed between uses to break up the paving and create a boulevard aesthetic wrapping through the site.

4. Contouring, shaping, and preparation of landscaped areas;

Response: The proposed design retains many of the existing topographic features of the site. Most notably is the existing drainage channel along Shaw and the undulating wooded wetland areas that buffer the site to the north and northeast. By retaining these existing features the development will have a 'natural' aesthetic around the perimeter that will transition into the proposed development.

5. Use and placement of non-plant elements within the landscaping;

Response: The internal circulation of the site utilizes plaza spaces consisting of seating areas, drop-off and pick up points for visitors, bicycle parking and circulation, and enhanced hardscape areas that are key to providing the proposed high end mixed use development.

6. Use of root barrier planting techniques to prevent root infiltration of utility lines and limit possible surface cover damage.

Response: Root barriers will be utilized where necessary to provide protection of utility lines."

A commercial retail center and office park requires large areas of parking that must meet parking lot landscaping standards. Planted medians are spread out throughout the development and perimeter landscaping provides buffering from adjoining properties. There are a variety of plants and trees proposed that also meet spacing standards. The site plan shows a pedestrian plaza near the bus drop-off space and plaza spaces with seating areas. Staff finds the landscape plan satisfies the specific functional and aesthetic objectives appropriate to the proposed development.

(C) The landscape design shall incorporate existing significant trees and vegetation preserved on the site.

Finding: Most of the site is farmed and has no trees. Aerials of the site show trees lining the existing Tax Lots 081W300000220 and 110, along the eastern edge of Tax Lot 081W3000002000, and along Gordon Lane SE. The areas of landscaping to be retained are:

- The existing drainage channel along Shaw Hwy.
- The wooded wetland areas that buffer the site to the north and northeast between the proposed shopping center and the North Santiam Hwy.
- The existing trees and wetland area at the southwest corner of the site that buffers the new 10' multi-use trail to the neighboring church to the south.

The small wetland area near the center of the site is proposed for development. The Department of State Lands must approve any proposed wetland fill or removal permit. DSL has been notified of the application. Proposed Condition of Approval VII.2 ensures that DSL permits are in effect before grading may occur on this site.

(D) Specific Landscape Requirements. The following provisions shall apply for all landscaping improvements:

1. Total landscaped area (percentages) shall comply with provisions in Section 23.03.

Finding: The proposal includes 585,338 square feet of landscaping around , or38% of the site – which is more than twice the 15% landscaping requirement.

2. Walkways, drives, parking areas, and buildings shall be excluded from the landscaping calculation.

Finding: Walkways, drives, parking areas, and buildings were excluded from the landscaping calculation.

3. *All street facing yard areas shall be landscaped. This requirement recognizes the landscaped area may exceed minimum percentage requirements in Section 23.03.*

Finding: Street facing yard areas in this case are along Gordon Lane, along Shaw highway, and along North Santiam Hwy. Exhibit 4, Sheet L1.0 shows yard area landscaping within the 15' setback on Gordon Lane, the 20' setback along Shaw highway, and the 30' setback along Hwy 22. Therefore, this standard is met.

4. *At least 25% - but no more than 50% - of the required landscaped area shall be planted in shrubs and trees. The area for trees shall be based on their accepted mature canopy. Regardless of the mix of shrubs and trees, at least one tree shall be included in the landscaping plan. For the purpose of this section, the minimum requirement for a tree upon maturity shall be 8 feet in height. See additional requirements under Street Tree Species 23.09.*

Finding: The applicant notes that the proposed shrubs and tree mix is approximately 34% of the landscaped area, within the acceptable range of 25-50%. Trees proposed are typically above 8 feet in height upon maturity.

5. *The remaining landscaped area shall be planted with suitable living ground cover, lawn, flowers, and other plantings exclusive of decorative design elements such as walkways, fountains, benches, sculptures, and similar elements placed within the required landscaping area. Fountains, walkways sculptures cannot be more than 5% of the overall landscaping.*

Finding: Landscaping for the proposed development includes lawn areas and groundcover. Fountains, walkways, and sculptures are not proposed. The pedestrian plaza indicated on the site plan does not appear to exceed 29,267 square feet, or 5% of the overall landscaping.

6. *No more than 20% of the area identified in 23.03, shall contain rocks, bark, or other decorative ground cover.*

Finding: Mulch is proposed to be utilized in planting beds identified on the plans; rock will only be used as needed for spillways or erosion areas around downspouts and spillways. The applicant has indicated the areas that contain rock, bark, or other decorative ground cover are approximately 12%; therefore, this standard is met.

7. *Modifications to these requirements shall be processed per provisions in Section 23.02*

Finding: No modifications are requested.

(E) Landscape Completion. Required landscaping, tree plantings, buffering, screening, and fencing shall be installed prior to building occupancy. Occupancy shall be permitted prior to the complete installation of all required landscaping if security equal to 150% of the cost of materials and labor, as determined by the City Administrator, is filed with the City assuring such installation within nine months of issuance of the Occupancy Permit. An extension of three months may be granted by the City Administrator when circumstances beyond the control of the owner prevent completion. If the installation of the landscaping is not completed within the required period, the security may be used by the City to either complete the installation, or the security may be held by the City and other enforcement actions taken to ensure the improvements are completed.

Finding: Staff proposes condition of approval XIV-1 to ensure that this standard is met.

23.05 Screening and Buffering.

(A) Screening shall be used to eliminate or reduce the visual impacts of the following uses and are two separate issues for the purpose of meeting the requirements:

1. Commercial and industrial uses when abutting residential uses.

Finding: The development abuts residential uses to the west and south, as well as residential zoning to the south, therefore screening is required to eliminate or reduce visual impacts of the proposed commercial and industrial uses. A site-obscuring evergreen hedge is proposed along the eastern property line to protect the views of the existing residential/agricultural properties.

Due to the presence of a residential use to the west of the proposed fuel station use at the southwest corner of the site (Shown as "Pad E" on Exhibit 4, Sheet L1.0), and residential zoning to the south of the site, staff proposes Condition of Approval XIV-2 which would require screening to the west and south consistent with this buffering requirement. With the proposed condition of approval, this standard can be met.

2. Industrial uses when abutting commercial uses.

Finding: The proposed development is a retail center with commercial use and an industrial center with industrial use. The proposed commercial use on the west side of the site abuts the proposed industrial use on the east side of the site. Screening is required between these proposed uses. Staff proposes Condition of Approval XIV-5, requiring buffering consistent with this requirement between proposed uses. With the proposed condition of approval, this standard can be met.

3. Service areas and facilities, including garbage and waste disposal containers, recycling bins, and loading areas.

Finding: As shown on the site plan, the service area, loading docks and waste disposal areas will be screened by walls or vegetation. Waste disposal areas are shown on Exhibit 4, Sheet G-07, with drawings showing trash and recycle enclosures on Exhibit 4, Sheet G-09.

4. *Outdoor storage areas.*

Finding: No outdoor storage areas are proposed.

5. *At and above-grade electrical and mechanical equipment, such as transformers, heat pumps, and air conditioners.*

Finding: The applicant's narrative states that all mechanical equipment will be screened with the use of parapets and/or metal screening panels. Staff proposes Condition of Approval VII-5 to ensure this standard is met.

6. *Any other area or use as required by this ordinance.*

(B) Screening may be accomplished by the use of sight-obscuring plant materials (generally evergreens), earth berms, walls, fences, building parapets, building placement, or other design techniques.

Finding: In the proposed development screening includes an evergreen hedge along the eastern property line. Proposed walls screen loading areas and service areas and facilities. Buildings meet or exceed setback requirements and are separated from most surrounding developments by roads. With the required conditions of approval, this standard can be met.

(C) Buffering shall be used to mitigate adverse visual impacts, dust, noise, or pollution, and to provide for compatibility between dissimilar adjoining uses. Where buffering is determined to be necessary, one of the following buffering alternatives shall be employed:

1. *Planting Area. Width not less than 15 feet, planted with the following materials:*
   - *(a) At least 1 row of deciduous or evergreen trees staggered and spaced not more than 15 feet apart.*
   - *(b) At least 1 row of evergreen shrubs which will grow to form a continuous hedge at least 5 feet in height within 1 year of planting.*
   - *(c) Lawn, low-growing evergreen shrubs or evergreen groundcover covering the balance of the area.*
2. *Berm Plus Planting Area. Width not less than 10 feet, developed in accordance with the following standards:*
   - *(a) Berm form should not slope more than 40% (1:2.5) on the side away from the area screened from view. The slope for the other side (screened area) may vary,*
   - *(b) A dense evergreen hedge shall be located so as to most effectively buffer the proposed use.*

3. *Wall Plus Planting Area. Width must not be less than 5 feet developed in accordance with the following standards:*
    (a) A masonry wall or fence or similar materials not less than 5 feet in height. Wall plus planting shall not be allowed in the Commercial District.
    (b) Lawn, low-growing evergreen shrubs, and evergreen groundcover covering the balance of the area.
4. *Other methods which produce an adequate buffer considering the nature of the impacts to be mitigated as approved by the planning commission.*

Finding: The landscape plan shows a buffer along the eastern property line that meets the buffer alternative in 23.05(C)(1). The buffer includes evergreen shrubs spaced 5' apart (Arctostaphylos 'Sunset') and staggered trees spaced 15 apart (Cupressus glabra 'Blue Ice') planted in an area that is 15' in width minimum. Additionally, lawn and low evergreen shrubs and groundcover cover the area.

23.06 Commercial, Industrial, Institutional Streetscapes. In addition to the General Requirements in Section 23.04, trees shall be installed at street frontages as follows:

(A) Types of trees. Street trees shall be limited to a City recommended list in Section 23.09
(B) Minimum installation size. Street trees shall be a minimum caliper of 2 inches when measured 4 feet in height at the time of installation, with a clearance of 7 feet from the ground to the first foliage.
(C) Spacing. The spacing of street trees by mature tree size shall be 25 feet, unless otherwise modified based on placement approval.
(D) Placement. The placement of trees is subject to the site development review process. Tree placement shall not interfere with utility poles, light standards, power lines, utility services, visual clearance areas, or sidewalk access.

Finding: The applicant's landscape plan shows street trees along street frontages. There are 1,042 lineal feet of frontage; therefore 27 street trees are required. A total of 54 street trees are shown on the landscape plan and appear to be spaced at least 25' apart. The street trees proposed are a minimum caliper of 2 inches. The following approved street trees are proposed:

- Acer platanoides 'Columnare'-Columnar Norway Maple
- Carpinus betulus 'Fastigiata'-Pyramidal European Hornbeam
- Pyrus calleryana 'Bradford'-Bradford Pear
- Fraxinus americana 'Autumn Purple'-Autumn Purple Ash

A clear vision area near entrances is indicated on the landscape plan. Trees are planted so as not interfere with utility poles and lines, sidewalk access, or light standards. This standard is met.

23.07 Planting and Maintenance:

(A) No sight-obscuring plantings exceeding 36 inches in height shall be located within any required clear-vision area as defined in Section 22 of this ordinance.

Finding: A clear vision area near drive locations along Gordon Lane and at the intersection of Shaw and Gordon Lane is indicated on the landscape plan. This area has no trees or shrubs. This standard is met.

(B) A recommended maintenance plan shall be included with the application and planting plan. Approved landscaping shall continually be maintained. Failure to maintain approved landscaping plan shall be considered a violation of the Development Ordinance.

Finding: A maintenance plan has been submitted as Exhibit 4, Sheet L2.0. Maintenance specifications are based on Oregon Landscape Contractors Association Landscape Guidelines. Staff proposes Condition of Approval XIV-3 to meet this standard.

23.08 Revegetation in Unlandscaped or Natural Landscaped Areas:

(A) Areas where natural vegetation has been removed or damaged through grading or construction activity in areas not affected by the landscaping requirements and that are not to be occupied by structures or other improvements shall be replanted.

(B) Plant material shall be watered at intervals sufficient to assure survival and growth.

(C) The use of native plant materials or plants acclimated to the Pacific Northwest is encouraged to reduce irrigation and maintenance demands.

Finding: The applicant's narrative says the following:

"Understood, based on the proposed area utilized for this project it is not anticipated that excessive grading will be necessary in existing natural area. Once a final grading plan has been generated during the permit construction document phase any revegetation areas (possibly adjacent to the existing wetland areas) will be revegetated to meet the required standards"

Staff proposes Condition of Approval XIV-7 to meet this standard.

23.09 Street Trees Species. The City shall maintain a list of approved and prohibited street trees. All street tree plantings shall comply with the City's approved list. Alternate selections may be approved by the City Administrator following written request.

Finding: The following Aumsville-approved street trees are proposed:

- Acer platanoides 'Columnare'- Columnar Norway Maple
- Carpinus betulus 'Fastigiata'- Pyramidal European Hornbeam
- Pyrus calleryana 'Bradford'- Bradford Pear
- Fraxinus americana 'Autumn Purple'- Autumn Purple Ash

This standard is met.

23.10 Exceptions. At the City's discretion it may accept a fee in lieu of some or all of the landscaping requirements of this section, if it is feasible to do so. Fees the City collects in lieu of

landscaping will be used for purposes consistent with those described in Section 23.01, and may include acquiring, placing, and maintaining public art and or landscaping. If the City accepts a fee in lieu, it applies only in the context of the application under consideration and will not excuse compliance with the landscaping standards for any subsequent applications or changes in use for the same location.

Finding: The applicant proposed to meet landscaping requirements; no fee in lieu of landscaping is necessary or proposed.

PROPOSED MOTION

As noted at the beginning of the Staff Report, **Staff and Planning Commission recommend approval of the application with conditions listed as in Exhibit 1, consistent with the findings of this Staff Report**. The City Council may make motions to:

- Approve the application with conditions recommended by Staff in Exhibit 1.
- Approve the application with conditions recommended by Staff in Exhibit 1, as modified by the City Council. [Add or remove conditions; relate to code requirements.]
- Deny the application due to inconsistency with [add code requirement(s)] that cannot be resolved through additional conditions of approval.

File No. 2023-08 CU-SDR 9757 Gordon Lane

The following conditions are necessary to support approval of the proposed retail and industrial office center. The applicant's submission did not fully address state and local review criteria and standards. However, rather than recommend denial of this project, planning staff have worked closely with ODOT and the City Engineer to prepare conditions of approval that ensure that the proposal can meet all appliable review standards.

Exhibit 1: Proposed Conditions of Approval

I Water

The following conditions were prepared in coordination with the city engineer and fire marshal and are necessary to ensure adequate domestic water and fire protection for the proposed center. See Exhibits 2 and 3.

1. All public water improvements necessary to serve the site shall be designed, permitted and constructed to the City's Public Works Design Standards (PWDS).
2. Prior to approval of building permits, the developer shall complete a fire flow test of the existing water system and calculate the available fire flow at the far reaches of the development. The water system be upsized and/or looped to connect with the water in Del Mar to ensure adequate fire flow to serve the entire development.
3. Prior to approval of occupancy permits, a new 10" public water main shall be looped through the site and stubbed to the east; the final location shall be approved by the City prior to approval of building permits. Easements necessary for public water facilities shall be approved by the City.
4. Prior to approval of occupancy permits, a new minimum 10" water main shall be extended in the Shaw Highway right-of-way to connect with the Beaver Creek Road alignment.
5. Prior to approval of occupancy permits, the water main in Gordon Lane (AKA Del-Mar East) shall be stubbed to the end of the street extension.
6. Any construction work in the Shaw Highway right-of-way must obtain permits from Marion County.
7. Prior to approval of occupancy permits, the placement of fire hydrants shall be approved by the City and Fire District.
8. Prior to approval of occupancy permits, water meter and fire vault placement shall be placed as approved by the City and Fire District.
9. Prior to approval of occupancy permits, backflow devices shall be provided for both domestic and fire water lines approved by the City and Fire District.
10. Prior to approval of building permits, any proposed development phasing is subject to City approval. The public water system may need to be extended and looped outside any proposed phase to ensure a stand-alone phase.

II Sanitary Sewer

The following conditions were prepared in coordination with the city engineer and are necessary to ensure adequate domestic wastewater facilities for the proposed center. See Exhibits 2 and 3.

1. All new public sewer improvements required to serve the site to be designed, permitted and constructed to the City's Public Works Design Standards (PWDS).
2. All new private sewer improvements necessary to serve the site to be designed and constructed in accordance with the Uniform Plumbing Code and Permitted by Marion County.
3. Prior to approval of occupancy permits, private sewer connections to the public sewer shall be via a monitoring manhole located prior to discharge into the public sewer, as approved by the City.
4. Prior to approval of occupancy permits, a new 12" public sewer shall be extended in Del Mar from 4th street to the site and extend easterly to the east end of Gordon Lane AKA Del Mar East with the first phase of the development.
5. Prior to approval of occupancy permits, the Developer shall reconnect the existing public sewer at the northwest corner of the Willamette Valley Baptist Church with the new sewer in Gordon Lane AKA Del-Mar East. The existing public sewer from the church to 4th shall be abandoned in accordance with the Public Works Design Standards.
6. Any work in the Shaw Highway right of way must obtain permits from Marion County.
7. Prior to approval of building permits, any phasing is subject to City approval. The public sewer needs to be extended to adequately serve future phases.
8. Prior to final plat approval, CC & R's for operation and maintenance of the private sewers shall be reviewed and approved by the City.

III Streets/Access

1. All new City streets required to serve the site to be designed, permitted and constructed to the City's Public Works Design Standards (PWDS).
2. Prior to approval of occupancy permits, public and private improvements shall be in conformance with the final TIA. The final TIA is subject to review and approval by Marion County and ODOT.
3. Prior to approval of occupancy permits, all private improvements shall conform to the City's Public Works Design Standards.
4. Prior to approval of occupancy permits, Gordon Lane AKA Del-Mar East shall be realigned in accordance with the City's TSP. Right of way shall be dedicated to the City for the realigned Street. Gordon Lane AKA Del-Mar East shall be fully improved for the property frontage with the first phase of the development.
5. Prior to approval of occupancy permits, Shaw Highway shall be widened and improved with a 3/4 urban street cross section consisting of a total of two (2) 12-ft.travel lanes, min. 12 ft. Gordon Lane intersection SB left turn lane, and a 6' bike lane with curb and gutter and 5' sidewalk per Marion County's Standards on the east side with the first phase of the development from a point approximately 300' south of Del Mar to the north property line

with appropriate street transitions. The western paved shoulder width shall be maintained. As part of the east side improvement, the Shaw Highway north field access shall be closed as per plan. The termination of the sidewalk on the north end shall be coordinated with ODOT, Marion County, and the City to ensure safe pedestrian access and connectivity to the interchange. See Exhibit 4, Sheet G-09 for representative cross section.

6. Prior to approval of occupancy permits, internal pedestrian ways shall be in accordance with the submitted preliminary plans. Walkways shall be provided adjacent to all private streets/drives as proposed within the application.
7. Prior to final plat approval, a pedestrian easement shall be provided for the multiuser path along the west side of the property
8. Prior to approval of occupancy permits, signalization of Shaw Highway and Del Mar shall be in conformance with Marion County and ODOT Standards and approved by Marion County and ODOT.
9. No building permits will be issued until the developer completes an approved Study of the Santiam Highway interchange with an Engineers Cost Estimate for any improvements. The Study and Cost Estimate must be approved by ODOT and Marion County. Once the Study and Cost Estimate are approved by ODOT and Marion County, the Developer shall enter into an Agreement with the City to fund the developer's proportionate share of the highway improvements. Developer's proportionate share will be provided with each phase to ensure the developer's portion of the project is fully funded when the highway improvements are required as per ODOT's and Marion County's final approval of the Study of the Santiam Highway Interchange.
10. Prior to approval of building permits, any phasing is subject to City approval. The private streets may need to be extended to adequately serve each phase for both public and emergency access.
11. Prior to final plat approval, CC & R's for maintenance of the private streets/drives shall be reviewed and approved by the City.
12. A clear vision area in accordance with Aumsville Public Works Design Standards shall be maintained at each driveway access to Gordon Lane AKA Del-Mar East.
13. Adequate sight distance in accordance with the City's Public Works Design Standards for each driveway access to Gordon Lane shall be demonstrated prior to issuance of building permits.
14. Developer shall maintain PCI rating of Shaw Highway. Damage attributable to construction activities may necessitate road repairs at contractor's expense.

IV Drainage

1. All public storm drain improvements draining to Shaw Highway required to serve the site to be designed, permitted and constructed to the City's Public Works Design Standards (PWDS).
2. The detention/water quality facility draining to Santiam Highway shall be designed and permitted to ODOT Standards.
3. Both detention/water quality facilities shall be operated and maintained by the development.
4. Prior to approval of occupancy permits, both detention/water quality facilities shall be fully constructed and landscaped with the first phase of the development, unless otherwise

approved by the City.

5. Prior to final plat approval, CC & R's for maintenance of the private drainage facilities shall be reviewed and approved by the City.

V Proposed Partition

1. Prior to final plat approval, access easements shall be approved by the City to ensure access to all proposed parcels.
2. If construction is not complete after one year from the recording of the final plat, the proposed partition may require modification to comply with changes in the Comprehensive Plan, Development Ordinance or other implementing regulations per ADO 20.29.

VI Private Utilities

1. In accordance with the City's Design Standards, all private utilities must be located underground.

VII General

1. The proposed improvements shall be constructed in substantial conformance with the preliminary plan submitted by the applicant, except as modified by these conditions of approval and in conformance with the Aumsville Development Code and Public Works Design Standards (PWDS).
2. All applicable permits from state and federal agencies, such as the Oregon Division of State Lands (DSL), U.S. Army Corps of Engineers, and Oregon Department of Fish and Wildlife (ODFW) must be obtained by the land owner prior to commencing site clearing or development activities.
3. Prior to issuance of building permits, the applicant shall provide evidence that proposed structures are within the maximum height of 50'.
4. Prior to issuance of building permits, applicant shall provide evidence that façade lines along all proposed building sides are broken at least every 40'.
5. All mechanical equipment shall be screened from view with the use of parapets and/or metal screening panels.
6. An approved sign plan is required for all proposed development prior to issuance of building permits.
7. All approved parking, loading, and bicycle parking areas for each phase shall be completed and available for use at the time of final inspection or issuance of an occupancy permit. Each bicycle parking space shall be at least 2 feet by 6 feet with a vertical clearance of 7 feet. An access aisle of at least 5 feet between bicycle spaces shall be provided in each bicycle parking facility. Rows of bicycle rack shall not exceed 20 feet in length.
8. Prior to approval of building permits, applicant shall obtain approval from the Aumsville Fire District for the configuration of the hammerhead turnaround.
9. Prior to approval of building permits, all improvements required by the conditions of approval shall be constructed or the construction shall be guaranteed through a performance bond or other instrument acceptable to the city attorney. Phasing of the improvements and development costs shall be permitted.

10. Developments shall not commence until the applicant has received all of the appropriate land use and development approvals (i.e., site development review approval) and building permits. Construction of public improvements shall not commence until the City has approved all required public improvement plans (e.g., utilities, streets, public land dedication, etc.). The City may require the applicant to enter into a development agreement (e.g., for phased developments and developments with required off-site public improvements), and may require bonding or other assurances for improvements, in accordance with Section 21.08.
11. Minor modifications of an approved plan or existing development shall be processed as a Type I procedure (See ADO Section 21.09(C)(3)(d)). Major modifications shall be processed as a Type II procedure and shall require site development review.
12. Prior to approval of building permits, the applicant shall prepare a Final Erosion Control Plan (ECP) in compliance with City regulations and approved by the City.
13. This Conditional Use permit for a service station and for retail activities designed to serve the community or region shall remain valid for three (3) years from the date of the final decision. Each permit shall become void, unless the use is established in conformance with all conditions and restrictions established herein within the three-year validity period. Extensions of time may be granted by the Commission in accordance with ADO 21.07.
14. This Site Development Review permit shall remain valid for two (2) years from the date of the final decision. This permit shall become void, unless the proposal has commenced in conformance with all conditions and restrictions established herein within the two-year validity period. Extensions of time may be granted by the Commission in accordance with ADO 21.07.
15. The exterior of the Trash/Garbage/Recycling enclosures shall use colors and materials from the approved Color Material Board included in Exhibit 4.

VIII. Transportation

1. The applicant shall perform an Intersection Control Evaluation for the OR-22 EB ramp terminal, including a plan and timeline for mitigation. The Control Evaluation must be approved by ODOT and Marion County prior to issuance of any grading or building permits on the property.
2. Adequate access shall be provided for emergency vehicles and garbage collection. Evidence of approval from the Aumsville Fire Protection District and Republic Service shall be provided prior to issuance of building permits.
3. Prior to issuance of building permits, Trip Generation and TIA shall be approved by Marion County for Intersection Control Evaluation for the OR-22 EB ramp terminal, including a plan and timeline for mitigation.
4. Prior to issuance of building permits, Applicant shall provide queue length calculations for turn lanes at Shaw Hwy and Del Mar Dr/ Gordon Lane SE for approval by Marion County.

XIV Landscaping

1. Required landscaping, tree plantings, buffering, screening, and fencing shall be installed prior to building occupancy. Occupancy shall be permitted prior to the complete installation of all required landscaping if security equal to 150% of the cost of materials and labor, as determined by the City Administrator, is filed with the City assuring such installation within nine months of issuance of the Occupancy Permit. An extension of three months may be granted by the City Administrator when circumstances beyond the control of the owner prevent completion. If the installation of the landscaping is not completed within the required period, the security may be used by the City to either complete the installation, or the security may be held by the City and other enforcement actions taken to ensure the improvements are completed.
2. Landscaping final permit drawings shall include screening consistent with ADC 23.05(B) between proposed "Pad E" on Exhibit 4, Sheet L1.0 and residential development to the west.
3. Landscaping final permit drawings shall include screening consistent with ADC 23.05(B) between the project site and residentially-zoned land to the south.
4. 10 shrubs per 40 lineal feet shall be provided within 10 feet of the sidewalk along rights of way.
5. Landscaping final permit drawings shall include screening consistent with ADC 23.05(B) between proposed commercial and proposed industrial uses on the site.
6. Landscaping shall continually be maintained in compliance with the submitted maintenance plan found on Exhibit 4, Sheet L2.
7. Areas where natural vegetation has been removed or damaged through grading or construction activity in areas not affected by the landscaping requirements and that are not to be occupied by structures or other improvements shall be replanted. Plant material shall be watered at intervals sufficient to assure survival and growth.
8. Landscaping final permit drawing shall be in substantial conformance with the approved Landscape Plan, conditions of approval, and ADC Sections 10 and 23, as determined by the City prior to the issuance of building permits.

March 26, 2024

Ms. Grace Coffey
Winterbrook Planning
610 SW Alder Street
Suite 110
Portland, OR 97205

RE: Red Moon Mixed Use Development, Shaw Highway, Aumsville, Oregon

Dear Grace:

Public Works has reviewed the application for the proposed Red Moon Mixed Use Development located in the SE Corner of Shaw Highway and Santiam Highway in Aumsville, Oregon as submitted by Hillman Workshop. Per your request, below are Public Works written comments for the proposed development.

The property is located east of Shaw Highway and south of Santiam Highway (Highway 22). The development includes four parcels totaling 35.33 acres. The developer proposed a mixed use development including a hotel, office retail and seven pads which are typically fast food, coffee, banks etc. No phasing is proposed, but we anticipate such a large development will be phased.

I Water

Water service is available via an existing 10" public main in Gordon Lane south of the development. The capacity of the existing water main is unknown at this time. The developer is proposing to extend public water through the development which is acceptable to Public Works. Public Works recommends the following water Conditions of Approval.

1. All public water improvements required to serve the site to be designed, permitted and constructed to the City's Public Works Design Standards (PWDS).
2. The developer shall complete a fire flow test of the existing water system and calculate the available fire flow at the far reaches of the development. Final sizing of the water system may need to be upsized or looped into the water in Del Mar in order to provide adequate fire flow to serve the development.
3. A new 10" public water main shall be looped through the site and stubbed to the east with the final location as approved by the City Engineer. The final easement for the public water is subject to the City Engineers approval.
4. A new 10" water main shall be extended in Shaw Highway to the northerly terminus of the property.
5. The water main in Gordon Lane shall be stubbed to the end of the street extension.
6. Any work in the Shaw Highway right of way shall be permitted by Marion County.
7. Fire hydrants shall be placed as approved by the City Engineer and Fire District.

8. Water meter and fire vault placement shall be placed as approved by the City Engineer.
9. Both domestic and fire services shall be protected with an approved backflow device.
10. Any phasing is subject to the City Engineer's approval. The public water system may need to be extended and looped outside any proposed phase to insure a stand-alone phase.

II Sanitary Sewer

Sanitary sewer is available via an existing 8" sanitary sewer at the intersection of 4th and Del Mar. The existing sewer south of Gordon Lane is not deep enough to serve the property. The developer proposes a private sewer system throughout the development which is recommended by Public Works. Public Works recommends the following sanitary sewer Conditions of Approval.

1. All new public sewer improvements required to serve the site to be designed, permitted and constructed to the City's Public Works Design Standards (PWDS).
2. All new private sewer improvements required to serve the site to be designed and constructed in accordance with the Uniform Plumbing Code and Permitted by Marion County.
3. Private sewer connections to the public sewer shall be via a monitoring manhole located at the property line.
4. A new 12" public sewer shall be extended in Del Mar from 4th street to the site and extend easterly to the east end of Gordon Lane with the first phase of the development.
5. The Developer shall reconnect the existing public sewer at the northwest corner of the NW corner of the Willamette Valley Baptist Church with the new sewer in Gordon Lane. The existing public sewer from the church to 4th shall be abandoned in accordance with the Public Works Design Standards.
6. Any work in the Shaw Highway right of way shall be permitted by Marion County.
7. Any phasing is subject to the City Engineers approval. The public sewer will need to be extended to adequately serve future phases.
8. CC & R's for operation and maintenance of the private sewers shall be reviewed and approved by the City prior to recording with Marion County.

III Streets/Access

Shaw Highway is under Marion County jurisdiction. Santiam Highway is under ODOT jurisdiction. In accordance with the City's TSP, the development is proposing to realign Gordon Lane with Del Mar. The development proposes one access off of Shaw Highway and two access points off of realigned Gordon Lane. All access points as proposed are acceptable to Public works. Public Works recommends the following Street/Access Conditions of Approval.

1. All new City streets required to serve the site to be designed, permitted and constructed to the City's Public Works Design Standards (PWDS).
2. Public and private improvements shall be in conformance with the submitted TIA. The final TIA is subject to review and approval by Marion County and ODOT.
3. All private improvements shall conform to the City's Public Works Design Standards.
4. Gordon Lane shall be realigned in accordance with the City's TSP. Right of way shall be dedicated to the City for the realigned Street. Gordon Lane shall be fully improved for the property frontage with the first phase of the development.
5. Shaw Highway shall be fully improved per Marion County's Standards with curb, gutter and sidewalks with the first phased of the development from a point approximately 300' south of Del Mar to the north property line with appropriate street transitions. .
6. Internal pedestrian ways shall be in accordance with the submitted preliminary plans. Walkways shall be provided adjacent to all private streets as proposed within the application.
7. A pedestrian easement shall be provide for the multiuser path along the west side of the development site
8. Signalization of Shaw Highway and Del Mar shall be in conformance with Marion County's Standards.
9. The Del Mar Railroad crossing shall be improved to ODOT Rail requirements if ODOT Rail determines the crossing is required to be improved with the development. Phasing of the rail improvements is subject to ODOT Rail requirements.
10. No building permits shall be issued until the developer completes an approved Study of the Santiam Highway interchange with an Engineers Estimate. Once the Study and Engineers Estimate is approved by ODOT, the Developer shall enter into an Agreement with the City to fund the highway improvements. Funding will be provided with each phase to insure the project is fully funded when the highway improvements are required due to trips generated by the development.
11. Any phasing is subject to the City Engineers approval. The private streets may need to be extended to adequately serve each phase for both public and emergency access.
12. CC & R's for maintenance of the private streets shall be reviewed and approved by the City prior to recording with Marion County.

IV Drainage

Storm drain facilities are available in Shaw Highway and Santiam Highway. The development is proposing detention and water quality facilities on the east and west side of the development. Public Works recommends the following drainage Conditions of Approval.

1. All public storm drain improvements draining to Shaw Highway required to serve the site to be designed, permitted and constructed to the City's Public Works Design Standards (PWDS).
2. The detention/water quality facility draining to Santiam Highway shall be designed and permitted to ODOT Standards.
3. Both detention/water quality facilities shall be operated and maintained by the development.
4. Both detention/water quality facilities shall be full constructed and landscaped with the first phase of the development.
5. CC & R's for maintenance of the private drainage facilities shall be reviewed and approved by the City prior to recording with Marion County.

VI Proposed Partition

Public Works recommends the following Conditions of Approval for the proposed partition.

1. Access easements shall be approved by the City Engineer to ensure access to all proposed parcels.
2. See **III 10** above for CC & R requirements.

VII Private Utilities

In accordance with the City's Design Standards, all private utilities must be located underground.

VII General

The proposed improvements shall be constructed in substantial conformance with the preliminary plan submitted by the applicant, except as modified by this letter and in conformance with the Aumsville Development Code and Public Works Design Standards (PWDS).

The development and use of this site shall meet all of the requirements of Federal, State County and City laws, regulations and standards unless explicitly waived in this approval. Omission of any such requirement from this approval does not constitute a waiver of that requirement. It is the Applicant/Developers responsibility to determine if there are any jurisdictional wetlands on the property.

Please call if you have any questions regarding this letter.

Sincerely,

WESTECH ENGINEERING, INC.

_____

Steven A. Ward, P.E.

CC: Ron Harding
Steve Oslie
Matt Etzel

Wetland Land Use Notice Response

Response Page

Department of State Lands (DSL) WN# *

WN2024-0003

Responsible Jurisdiction

Staff Contact	Jurisdiction Type	Municipality
Grace Coffey	City	Aumsville

Local case file #	County
2023-8CU-SDR	Marion

Activity Location

Township	Range	Section	QQ section	Tax Lot(s)
08S	01W	30		1800,2000,2100,2200

Street Address

Surrounding area of 9757 Gordon Ln

Address Line 2

City	State / Province / Region
Aumsville	OR

Postal / Zip Code	Country
97325	Marion

Latitude	Longitude
44.848071	-122.862996

Wetland/Waterway/Other Water Features

- [x] There are/may be wetlands, waterways or other water features on the property that are subject to the State Removal-Fill Law based upon a review of wetland maps, the county soil survey and other available information.
- [x] The National Wetlands Inventory shows wetland, waterway or other water features on the property
- [x] The county soil survey shows hydric (wet) soils on the property. Hydric soils indicate that there may be wetlands.

Your Activity

- [x] It appears that the proposed project **will** impact wetlands and **requires** a State Permit.

☑ An onsite inspection by a qualified wetland consultant is recommended prior to site development to determine if the site has wetlands or other waters that may be regulated. The determination or delineation report should be submitted to DSL for review and approval. Approved maps will have a DSL stamp with approval date and expiration date.

Applicable Oregon Removal-Fill Permit Requirement(s)

☑ A state permit is required for 50 cubic yards or more of fill removal or other ground alteration in wetlands, below ordinary high water of waterways, within other waters of the state, or below highest measured tide.

Closing Information

Additional Comments

DSL previously reviewed this subdivision development as local case file 203-7CU-SDR and DSL # WN2023-0884. There is no change in response. This project is proposing development through wetlands. A formal wetland delineation prepared by a consultant and submitted to DSL for review and approval is required for wetland removal-fill permit evaluation. The wetlands shown on the applicant's plan set have not been reviewed and are not suitable for use in a Wetland Land Use Notice review.. If those boundaries have been taken by a consultant, they remain informal and unapproved until submitted to DSL and then reviewed/approved as part of OAR 141-090.

This is a preliminary jurisdictional determination and is advisory only.

This report is for the State Removal-Fill law only. City or County permits may be required for the proposed activity.

Contact Information

- For information on permitting, use of a state-owned water, wetland determination or delineation report requirements please contact the respective DSL Aquatic Resource, Proprietary or Jurisdiction Coordinator for the site county. The current list is found at: http://www.oregon.gov/dsl/ww/pages/wwstaff.aspx
- The current Removal-Fill permit and/or Wetland Delineation report fee schedule is found at: https://www.oregon.gov/dsl/WW/Documents/Removal-FillFees.pdf

Response Date

1/31/2024

Response by:

Daniel Evans

Response Phone:

503-428-8188

Wetland Land Use Notification

OREGON DEPARTMENT OF STATE LANDS
775 Summer Street NE, Suite 100, Salem, OR 97301-1279
Phone: (503) 986-5200

This form is to be completed by planning department staff for mapped wetlands and waterways.

* Required Field (?) Tool Tips

Responsible Jurisdiction

*
(●) City of ( ) County of

Municipality *
Aumsville

Date *
1/3/2024

Staff Contact

First Name *
Grace

Last Name *
Coffey

Phone * (?)
503-784-4846

Email *
grace@winterbrookplanning.com

Applicant

First Name *
Aaaron

Last Name *
Hillman

Applicant Organization Name
(if applicable)

Mailing Address *
Street Address
6588 S. Kings Ranch Road, Suite 103J
Address Line 2

City
Gold Canyon

State
AZ

Postal / Zip Code
85118

Country
United States

Phone (?)
480-686-2001

Email (?)
aaron@hillmanworkshop.com

Is the Property Owner name and address the same as the Applicant? *
( ) No (●) Yes

Activity Location

Township * (?)
08S

Range * (?)
01W

Section * (?)
30

Quarter-quarter Section (?)

Tax Lot(s) *
1800,2000,2100,2200
You can enter multiple tax lot numbers within this field. i.e. 100, 200, 300, etc.

To add additional tax map and lot information, please click the "add" button below.

Address

Street Address
Surrounding area of 9757 Gordon Ln

Address Line 2

City
Aumsville

State
OR

Postal / Zip Code
97325

Country
Marion

County *
Marion

Adjacent Waterbody

Proposed Activity

Prior to submitting, please ensure proposed activity will involve physical alterations to the land and/or new construction or expansion of footprint of existing structures.

Local Case File # * (?)
2023-8CU-SDR

Zoning

Proposed

- [ ] Building Permit (new structures)
- [ ] Grading Permit
- [x] Site Plan Approval
- [ ] Other (please describe)
- [x] Conditional use Permit
- [ ] Planned Unit Development
- [ ] Subdivision

Applicant's Project Description and Planner's Comments: *
Business and office park

Required attachments with site marked: Tax map and legible, scaled site plan map. (?)

A100.pdf	514.29KB
Civil Plans.pdf	22.9MB
ORMAP_081w30.pdf	826.54KB

Additional Attachments

Date
1/3/2024

Oregon
Tina Kotek, Governor

Department of Transportation
Region 2 Tech Center
455 Airport Road SE, Building B
Salem, Oregon 97301-5397
Telephone (503) 986-2990
Fax (503) 986-2839

DATE: January 29, 2024

TO: Casey Knecht, PE
Development Review Coordinator

FROM: Arielle Ferber, PE
Traffic Analysis Engineer

SUBJECT: Aumsville Commercial Center Development (Aumsville, OR) – Outright Use
TIA Review Comments

ODOT Region 2 Traffic has completed our review of the submitted traffic impact analysis (dated December 20, 2023) to address traffic impacts due to development on the northeast quadrant of 1st Street and Gordon Lane in the city of Aumsville, with respect to consistency and compliance with ODOT's Analysis Procedures Manual, Version 2 (APM). The APM was most recently updated in November 2023. The current version is published online at: http://www.oregon.gov/ODOT/TD/TP/Pages/APM.aspx. As a result, we submit the following comments for the City's consideration:

Analysis items to note:

- The development proposal includes 56 ksf of industrial office space and Land Use Code (LUC) 130 (Industrial Park) was used to estimate trips. This results in 19 AM peak hour trips, 19 PM peak hour trips, and 189 daily trips. The concept plan shows approximately 350 parking spaces surrounding the industrial office space. It appears that the estimated trips may be incongruent with the anticipated vehicle use for the buildings and a different land use code (such as LUC 710 [General Office Building]) may be more appropriate.

Proposed mitigation comments:

1. ODOT maintains jurisdiction of the North Santiam Highway No. 162 (OR 22) and ODOT approval shall be required for all proposed mitigation measures to this facility.
2. The study proposes traffic control changes to the OR 22 EB Ramp Terminal at Shaw Highway intersection, which appears to be an appropriate mitigation. As noted in the study, at the time mitigation is needed at the intersection an intersection control evaluation (ICE) will be required to determine the most appropriate traffic control and laneage. The ICE shall review for a roundabout, all-way stop-control, and signalization (see ODOT's Traffic Manual Section 400.0, https://www.oregon.gov/odot/Engineering/Docs_TrafficEng/Traffic-Manual-2024.pdf).

3. ODOT approval is required for proposed changes to state highway intersections. Both the City and the applicant shall be aware no approval has been issued at this time and proposed mitigation shall not be considered approved for installation until formal written approval has been issued. Approval request will need to be submitted to Region 2 Traffic and be accompanied by the appropriate analysis justifying such request. The approval process takes time and any approval could possibly have added features required to obtain such approval.

Thank you for the opportunity to review this traffic impact analysis. As the analysis software files were not provided, Region 2 Traffic has only reviewed the submitted report.

This traffic impact study has been prepared in accordance with ODOT analysis procedures and methodologies. The mitigation measures recommended within this study may be expected to acceptably mitigate traffic effects of the proposed development. Additional work is required to accompany approval requests for proposed mitigation measures (i.e. ICE analysis, etc.).

If there are any questions regarding these comments, please contact me at (971) 208-1290 or Arielle.Childress@ODOT.oregon.gov.

From: STOLLE Bob L
To: Grace Coffey
Cc: Jesse Winterowd; PRICE Ruth E
Subject: RE: Aumsville Interchange Property Application
Date: Thursday, April 4, 2024 6:22:46 AM

Grace,
I have completed my review and confirmed we will not require a Crossing Order and the associated upgrades to the crossing at Del Mar Drive. I have added the crossing identification information below for future reference. Basically the signal at Del Mar and Shaw Highway would not need to be interconnect which also means that the existing crossing devices do not need to be updated to gates and lights and would remain passive.

frmKeyDataForCrossing													
Street Name	County	Crossing ID	Active	Latitude	Longitude	USDOT_NO	Line No	Milepost	ROW Owner	Track Owner	Operator	Segment Name	Milepost Text
Del Mar Drive	Marion	CC-712.50	0	44.847148	-122.866895	760195L	CC	712.5	Union Pacific Railroad Co	Union Pacific	Willamette Valley Ry	Mainline	712.5

Bob.

From: Grace Coffey <grace@winterbrookplanning.com>
Sent: Tuesday, March 26, 2024 6:56 AM
To: STOLLE Bob L <Bob.Stolle@odot.oregon.gov>
Cc: Jesse Winterowd <jesse@winterbrookplanning.com>
Subject: RE: Aumsville Interchange Property Application

Hi Bob,
That's fine, there is no urgency.
Thank you!
-Grace

From: STOLLE Bob L <Bob.Stolle@odot.oregon.gov>
Sent: Tuesday, March 26, 2024 5:51 AM
To: Grace Coffey <grace@winterbrookplanning.com>
Cc: Jesse Winterowd <jesse@winterbrookplanning.com>
Subject: RE: Aumsville Interchange Property Application

Grace,
I am working on this. I do want to talk to one other person but that will likely push into next week. Let me know if this cause timeline issues and I will accelerate if I can.

Bob.

From: Grace Coffey <grace@winterbrookplanning.com>
Sent: Thursday, March 21, 2024 10:51 AM
To: STOLLE Bob L <Bob.Stolle@odot.oregon.gov>
Cc: Jesse Winterowd <jesse@winterbrookplanning.com>
Subject: Aumsville Interchange Property Application

Hi Bob,
This is Grace Coffey from Winterbrook Planning, acting as contract planning staff for Aumsville. We've received a conditional use, partition, and site development application from Aaron Hillman with Red Moon Development for the Interchange Site in Aumsville, 9757 Gordon Lane. You participated in the preapplication conference last February. Can you review the application and let us know if there are any comments or concerns from an ODOT Rail perspective? We've also been coordinating with Casey Knecht with ODOT for regular transportation items. I have attached updated materials but if you need any of the other information from prior submissions, please let me know.
Thanks,
Grace

Grace Coffey, AICP | Associate Planner | (She/Her)
610 SW Alder St. | Suite 810 | Portland, OR, 97205
503.827.4422 Ext.106 | winterbrookplanning.com

Exhibit 4 Applicant Submission Cover

2023-07 CU-SDR 9757 Gordon Lane Application Submission List

Site Plan Application

Conditional Use Application

Aumsville Site Plan Narrative (Hillman Workshop, 3.10.24)

Aumsville Review Responses (Hillman, 12.19.23)

Aumsville TIA (Sandow, 12.20.23)

Aumsville Trip Estimate (Sandow, 2.7.24)

Architectural Plans (PHNX Design, Hillman Workshop, 3.11.24)

- CM 1.0: Context Map
- A100: Site Plan
- A300: Proposed Hotel Rendering
- A300A: Colored Elevation Retail
- A300B: Colored Elevation Retail
- A300D: Colored Elevation Office
- A301A: Colored Elevation Retail
- A301B: Colored Elevation Retail
- A301D: Colored Elevation Office
- A302B: Colored Elevation Business Park
- L1.0 Landscape Plan
- L2.0: Landscape Maintenance Notes
- E100: Photometric Site Plan
- Color Material Board
- Light Cut Sheet

Civil Plans (Flagline Engineering, 3.11.24)

- G-01: General Overview
- G-02: Site Analysis Map – Taxlot Information
- G-03: Tentative Preliminary Plat
- G-04: Site Analysis Map – Lease Lot Map
- G-05: Site Analysis Map – Existing Features
- G-06: Site Analysis Map – Resource Areas and Stormwater Analysis Map
- G-07: Proposed Site Plan – Civil Site Layout
- G-08: Proposed Site Plan – Proposed Utilities Layout
- G-09: Proposed Site Plan – Details I
- G-10: Proposed Site Plan – Stormwater Analysis
- G-11: Preliminary Grading Plan

Surveyor Exhibits (S&F Land Services, 12.6.23)

- Partition Exhibit Sketch
- PLA_1 Exhibit Sketch
- PLA_2 Exhibit Sketch
- ROW Dedication Exhibit Sketch

595 Main St. Aumsville, Oregon 97325
(503) 749-2030•TTY 711•Fax (503) 749-1852
www.aumsville.us

I acknowledge that if the actual cost to process and review the application by contracted or full-time staff exceeds the application fee, the applicant will be responsible for the excess charges. The fee would be considered a deposit toward the actual cost.

FOR OFFICE USE ONLY	
Filing fee: $1250	
Date Rec'd/Fee Pd	
Receipt No.	

SITE DEVELOPMENT REVIEW APPLICATION
TYPE II ACTION

Site Address/Location: SW corner of Santiam HWY and N 1st Street North of Gordon Lane, in Aumsville Oregon

Applicant: Red Moon Development and Construction

Address: 6588 S. Kings Ranch Road, Suite 103J Gold Canyon, AZ 85118

Phone: 480-686-2001 Cell: _____

Contact Email: aaron@hillmanworkshop.com

Property Owner (if different than applicant): Red Moon Development and Construction

Address: Same as above

Phone: _____ Cell: _____

Contact Email: _____

We, the undersigned property owner(s) or authorized agent(s), request a Site Development Review to allow the construction/expansion of (short description):
Proposed Commercial/Office Development

_____ as permitted by Section No._____ of the **Aumsville Development Ordinance** for property legally described as: ID - INTERCHANGE DEVELOPMENT

For the following reason: Interchange Development Zone

1. **Current Information**

a) Address and general location of the property: SW corner of Santiam HWY and N 1st Street North of Gordon Lane

b) Current zoning: ID - INTERCHANGE DEVELOPMENT

c) Total current area (square feet): 1,473,116 Sq Ft (33.8 Acres)

d) Dimensions of the current property: Approx 1,861 ft x 1,359 ft (Irregular Shape)

e) Current use of the property: Agricultural/Vacant

f) Number of existing structures and general description: Agricultural barns and structures

g) Is this area served by curbs and sidewalks? YES☐ NO☑

h) Total number of employees: 0 Current Employees

2. **Additional Comments and Explanations**

Proposed Commercial/Office Development on ID-Interchange Development zoned land.

3. **Attachments**

a) A certified list obtained from Marion County, or a title company, of the names of the owners of all property and their mailing addresses within 100 feet of the boundary of the subject property proposed for a site review and a page of labels. Property owned by the City of Aumsville shall not be included as part of the affected area. Please include the name and address of the applicant and property owners of the subject property. (See attached sample mailing list format)

PLEASE SUBMIT AN ORIGINAL AND 3 COPIES OF THE APPLICATION WITH ATTACHMENTS. IN ADDITION, PLEASE SUBMIT A COPY OF ALL DOCUMENTS AS A PDF.
Email: rharding@aumsville.us

The following information shall be submitted as part of a complete application for Site Design Review:

1. **Site Analysis Map.**

a) Containing the applicant's entire property and the surrounding property to a distance sufficient to determine the location of the development in the city, and the relationship between the proposed development site and adjacent property and development. The property boundaries, dimensions, and gross area shall be identified;
b) Topographic contour lines at intervals determined by the city;
c) Identification of slopes greater than 10%;
d) Location and width of all public and private streets, drives, sidewalks, pathways, rights-of-way, and easements on site and adjoining the site;
e) Potential natural hazard areas, including any areas identified as subject to a 100-year flood, areas subject to high water table, and areas mapped by the city, county, or state as having a potential for geologic hazards;
f) Resource areas, including marsh and wetland areas, streams, wildlife habitat identified by the city or

any natural resource regulatory agencies as requiring protection;
g) Site features, including existing structures, pavement, drainage ways, and ditches;
h) Locally or federally designated historic and cultural resources on the site and adjacent parcels or lots;
i) The location, size and species of trees and other vegetation having a caliper (diameter) of 4 inches or greater at four feet above grade;
j) North arrow, scale, names and addresses of all persons listed as owners on the most recently recorded deed;
k) Name and address of project designer, engineer, surveyor, and/or planner, if applicable;
l) Other information, as determined by the city administrator. The city may require studies or exhibits prepared by qualified professionals to address specific site features.

2. **Proposed Site Plan.** The site plan shall contain the following information, if applicable:
a) The proposed development site, including boundaries, dimensions, and gross area;
b) Features identified on the existing site analysis map which are proposed to remain on the site;
c) Features identified on the existing site map, if any, which are proposed to be removed or modified by the development;
d) The location and dimensions of all proposed public and private streets, drives, rights-of-way, and easements;
e) The location and dimensions of all existing and proposed structures, utilities, pavement and other improvements on the site. Setback dimensions for all existing and proposed buildings shall be provided on the site plan;
f) A calculation of the total impervious surface before development and the total effective impervious surface after development;
g) The location and dimensions of all stormwater or water quality treatment, infiltration and/or retention facilities;
h) The location and dimensions of entrances and exits to the site for vehicular, pedestrian, and bicycle access;
i) The location and dimensions of all parking and vehicle circulation areas (show striping for parking stalls and wheel stops, as applicable);
j) Pedestrian and bicycle circulation areas, including sidewalks, internal pathways, pathway connections to adjacent properties, and any bicycle lanes or trails;
k) Loading and service areas for waste disposal, loading and delivery;
l) Outdoor recreation spaces, common areas, plazas, outdoor seating, street furniture, and similar improvements, as applicable;
m) Location, type, and height of outdoor lighting;
n) Name and address of project designer, if applicable; Locations, sizes, and types of signs;
o) Other information determined by the city administrator. The city may require studies or exhibits prepared by qualified professionals to address specific site features (e.g., traffic, noise, environmental features, natural hazards, etc.) in conformance with this code.

3. **Architectural Drawings.** Architectural drawings shall be submitted showing:
a) Building elevations with building height and width dimensions;
b) Building materials, color and type;
c) The name of the architect or designer.

4. **Preliminary Grading Plan.** A preliminary grading plan prepared by a registered engineer shall be required for developments which would result in the grading (cut or fill) of 1,000 cubic yards or greater. The preliminary grading plan shall show the location and extent to which grading will take place, indicating general changes to contour lines, slope ratios, slope stabilization proposals, and location and height of retaining walls, if proposed. Surface water detention and treatment plans may also be required.

5. **Landscape Plan.** A landscape plan is required and shall show the following:
a) The location and height of existing and proposed fences and other buffering or screening material;
b) The location of existing and proposed terraces, retaining walls, decks, patios, shelters, and play areas;

c) The location, size, and species of the existing and proposed plant materials (at time of planting);
d) Existing and proposed building and pavement outlines;
e) Specifications for soil at time of planting, irrigation if plantings are not drought tolerant (may be automatic or other approved method or irrigation) and anticipated planting schedule.

6. **Sign drawings shall be required in conformance with the city's sign ordinance (Section 19.00).**

7. **Copies of all existing and proposed restrictions and covenants.**

4. **Site Design Review – Approval Criteria:**

a) Does the application comply with all of the applicable provisions of the underlying land use zone, including: building and yard setbacks, lot area and dimensions, lot coverage, and other special standards as may be required for certain land uses?

YES ☑ NO ☐ Please explain: Complies with ID Zoning

b) Does the proposal upgrade any existing development that does not comply with the applicable land use zone standards, in conformance with Sections 4.10 through 4.12, *Nonconforming Uses and Development*?

YES ☑ NO ☐ Please explain: Existing farm land developed for the inention of the zoning of ID Zone.

c) Does the proposal match the characteristics of adjoining surrounding uses?

YES ☑ NO ☑ Please explain: First development for the zoning, existing neighboring uses reflect older zoning designations.

d) Does the application comply with the supplementary zone regulations contained in Sections 18.00, 19.00, and 22.00?

YES ☑ NO ☐ Please explain: Parking is in conformance, signage will be designed and permitted with permit documents, and onsite development will comply with 22.00

e) Will the application increase the parcels' or the structures' use of the public improvements facilities?

YES ☑ NO ☐ Please explain: Per preapplication comments this development will be required to provide offsite improvements to meet the needs of the proposed development.

f) Does the application address noise and/or visual buffering from non-compatible uses, drainage and erosion control needs, and public health factors?

YES ☑ NO ☐ Please explain: Yes, setbacks meet the requirement and large vegetation to the north will remain to buffer development and neighbors from the freeway.

g) Does the application address problems that may arise due to development within potential hazard area and retention of existing natural features on the site?

YES ☑ NO ☑ Please explain: Existing drainage along Shaw will remain and natrual drainage areas along the north will also remain in place.

5. **This application must be signed by the applicant and all owners of the applicable property. (Prepare and attach additional signatures, if necessary.)**

Applicant Signature: _____ **Date:** 12.11.23

Applicant Signature: _____ **Date:** _____

Property Owner Name (please print): BRAD WOODRUFF

Property Owner Signature: _____

Mailing Address: 6588 S. KINGS RANCH ROAD SUITE 103 J GOLD CANYON AZ 85118

Property Owner Name (please print): _____

Property Owner Signature: _____

Mailing Address: _____

595 Main St. Aumsville, Oregon 97325
(503) 749-2030•TTY 711•Fax (503) 749-1852
www.aumsville.us

I acknowledge that if the actual cost to process and review the application by contracted or full-time staff exceeds the application fee, the applicant will be responsible for the excess charges. The fee would be considered a deposit toward the actual cost.

FOR OFFICE USE ONLY	
Filing fee: $1000	
Date Rec'd/Fee Pd	
Receipt No.	

CONDITIONAL USE APPLICATION
TYPE II ACTION

Site Address/Location: SW corner of Santiam HWY and N 1st Street North of Gordon Lane, in Aumsville Oregon

Applicant: Red Moon Development and Construction

Address: 6588 S. Kings Ranch Road, Suite 103J Gold Canyon, AZ 85118

Email: aaron@hillmanworkshop.com

Phone: 480-686-2001

Cell:

Property Owner (if different than applicant): Same as above

Address:

Email:

Phone/Cell:

Fax.:

We, the undersigned property owner(s) or authorized agent(s), request a conditional use under the Aumsville Development Ordinance as permitted by Section No. 14.00 for property legally described as:

ID - INTERCHANGE DEVELOPMENT

For the following reason: Interchange Development Zone

1. Current Information

Address and general location of the property: SW corner of Santiam HWY and N 1st Street North of Gordon Lane

a) Current zoning: ID - INTERCHANGE DEVELOPMENT

b) Total current area (square feet): 1,473,116 Sq Ft (33.8 Acres)

c) Dimensions of the current property: Approx 1,861 ft x 1,359 ft (Irregular Shape)

d) Current use of the property: Agricultural/Vacant

e) Number of existing structures and general description: Agricultural barns and structures

f) Is this area served by curbs and sidewalks? YES ☐ NO ☑

g) Total number of employees: 0 Current Employees

2. Additional Comments and Explanations

Proposed Commercial/Office Development on ID-Interchange Development zoned land.

3. Attachments

a. Certified list and one page of labels obtained from Marion County, or a title company, of the names of the owners of all property within 100 feet of the boundary of the property proposed for a conditional use, the mailing addresses as they appear on the most recent assessment and tax roll of Marion County shall be attached. Property owned by the City of Aumsville shall not be deemed as part of the affected area. Please include the name and address of the applicant and property owners of the subject property in your list.

b. Provide original 3 copies and a pdf (on flash drive or via email) of a scale drawing showing the boundary of the property with dimensions, the location of existing structures, and the location of the structure for which the conditional use is requested. The plan shall be drawn on good quality paper no smaller than 11.5" x 17", nor larger than 18" x 24". Provide PDF of the document(s). Email to rharding@aumsville.us.

c. Applications for hearing before the planning commission for development permits shall include a parking and/or loading plan, drawn to scale, and conforming with Section 18.00 of the development ordinance.

d. Signs to be used as part of any development proposal shall be considered at a public hearing held for the purpose of obtaining approval of the entire project. Therefore, said signs and their associated applications shall be submitted as part of the evidence for the application (Sign Permit and Section 19.00 of the development ordinance).

e. Under Section 23.00, a landscape plan is required and shall show the following:
   1. The location and height of existing and proposed fences and other buffering or screening material;
   2. The location of existing and proposed terraces, retaining walls, decks, patios, shelters, and play areas;
   3. The location, size, and species of the existing and proposed plant materials (at time of planting);
   4. Existing and proposed building and pavement outlines;
   5. Specifications for soil at time of planting, irrigation if plantings are not drought tolerant (may be automatic or other approved method or irrigation) and anticipated planting schedule.

AUMSVILLE DEVELOPMENT ORDINANCE 14.00 – CONDITIONAL USES

14.05 Criteria for Granting a Conditional Use:

(A) The proposal will be consistent with the provisions of the Development Ordinance, the underlying land use zone, and other applicable policies of the city.

(B) Taking into account location, size, design and operation characteristics, the proposal will have minimal adverse impact on the livability, value, and appropriate development of abutting properties and the surrounding area compared to the impact of development that is permitted outright.

(C) The location and design of the site and structures for the proposal will be as attractive as the nature of the use and its setting warrants.

(D) The proposal will preserve assets of particular interest to the community.

4. Does your application meet the Criteria for a Conditional Uses, Section 14.00 (give complete explanations - the more information you provide, will expedite and/or smooth the hearing process)

a. Is the proposal consistent with the Comprehensive Plan and the objectives of the zoning ordinance and other applicable policies of the City?

Yes ☑ No ☐ Please explain: Complies with ID Zoning

b. Taking into account location, size, design and operation characteristics, does the proposal have minimal adverse impact on the livability, value, and appropriate development of abutting properties and the surrounding area compared to the impact of development that is permitted outright?

Yes ☑ No ☐ Please explain: Location adjacent to highway is consistant with providing retail/commercial/office with ID zoning and will provide a commerce gateway to the Town of Aumsville.

c. Will the location and design of the site and structures for the proposal be as attractive as the nature of the use and its setting warrants?

Yes ☑ No ☐ Please explain: Modern architectural elevations/layout with clean vehicular and pedestrian access points have been proposed.

d. Will the proposal preserve assets of particular interest to the community?

Yes ☑ No ☐ Please explain: The proposed commercial development will provide a commercial element consistant with exisiting zoning and be a gateway to the town.

e. Does the applicant have bona fide intent and capability to develop and use the land as proposed, as well as an appropriate purpose for submitting the proposal?

Yes ☑ No ☐ Please explain: Yes, the owner/developer has a national presence with many large scale developments in commercial, industrial and hospitality projects. An extreme interest has already been expressed by tenants looking to locate at this location.

f. Does the applicant have some appropriate purpose for submitting the proposal?

Yes ☑ No ☐ Please explain: The purpose will afford the securing of both regional and national tenants and be a stepping stone to completion of the proposed development.

5. The application must be signed by the applicant and all owners of the applicable property.

Applicant Signature: _____ Date: 12.11.23

Applicant Signature: _____ Date: _____

Property Owner Name: (please print) BRAD WOODRUFF

Property Owner Signature: _____

Mailing Address: 6588 S. KINGS RANCH ROAD SUITE 103 J GOLD CANYON AZ, 85118

Property Owner Name: (please print) _____

Property Owner Signature: _____

Mailing Address: _____

March 10, 2024

Site Plan Narrative and Use Report

For

Proposed Mixed-Use Retail and Industrial Office Development
Shaw Highway and Gordon Lane

Submitted To:
Ron Harding
City Administrator
City of Aumsville
595 Main Street
Aumsville, OR
97325

Submitted By:
Aaron Hillman
2901 E. Highland Ave
Phoenix, AZ 85016

Project Description:
We are pleased to present the proposed mixed-use development at the southeast corner of Shaw and Highway 22. The site is comprised of four (4) parcels totaling 35.33 acres that are being developed into one unified mixed-use development. The combination of parcels that are currently zoned ID (Interchange Development Zone) will act as a gateway from the Town of Aumsville off Highway 22, and provide residents, visitors, and travelers convenient access to shopping, hospitality, and industrial office services/uses. The proposed mixed-use development will contain a mix of commercial (retail, hotel, restaurant, and fuel station) and office/light industrial uses.

The retail portion of the site is comprised of a 124-room hotel, two (2) major retail tenants, a mini-major tenant, two (2) retail shops buildings, and six (6) pad eating establishments, and one (1) fuel station with car wash. The total retail center building area square footage is 97,400 square feet.

The industrial office portion of the project (on the eastern end of the parcels) will be comprised of seven (7) buildings configured in an industrial office park configuration with a total building area of 56,000 square feet.

Existing Parcels:

Parcel ID	Acres	Existing Zoning
TAXLOT #: 081W300002200	1.7	Interchange Development Zone (ID)
TAXLOT #: 081W300002100	1.6	Interchange Development Zone (ID)
TAXLOT #: 081W300002000	15.33	Interchange Development Zone (ID)
TAXLOT #: 081W300001800	16.70	Interchange Development Zone (ID)

Total Acreage Approximately 35.33 Acres

Existing Land Use:
The existing land for the above parcels is utilized for agricultural purposes and is comprised of two houses that are in various states of disrepair. The existing structures onsite will be demolished, and no future use of agriculture is proposed with the new development plan.

Site Access and Internal Circulation:
The site is located bordering both Highway 22 and Shaw, which provides great visibility and ease of access for residents and visitors to Aumsville. A proposed traffic light will now be provided at the four-way intersection of Shaw and the new Del Mar Drive and Gordon Lane realignment. This will allow visitors to the site from the highway to travel south on Shaw and enter the site from the south after turning left at the new four-way intersection. For vehicles traveling from the south, an additional right-in/right-out porkchop entry/exit will be provided across from the Beaver Creek Drive to allow many of the highway travelers to exit the site and access the Highway 22 ramps more efficiently. Visitors accessing the site on foot or via bicycles will have access points along the new bike lane on Shaw as well as a sidewalk connection from the south end of the project all the way to the north property line along the east side of the existing drainage canal.
Once onsite, vehicular circulation is provided by dedicated onsite drive lanes to navigate through the development and between the retail and industrial office uses. Along with the vehicular circulation, a network of pedestrian pathways is designed to encourage users to connect between uses/establishments within the development.

Amenities and Community Enhancements:
Below is a list of enhancements provided within the development that provide a local community-based environment and unified mixed-use theme.

- Commercial Plaza Space- Common area south of Shops B provides a shaded ramada, benches, bike racks, and lawn area. The proposed space will provide a convenient pick-up and drop-off location as well as an open space for special events.

- Internal Bus Stop- Space has been provided for a loading bay at the Commercial Plaza Space to allow for a bus stop if Aumsville should provide this as part of the public service route. This could also be utilized by larger group travel and commercial ride share services such as Uber or Lyft.
- Office/Industrial Plaza Space- By grouping the central four (4) buildings B, C D, & E into a quadrant configuration a central plaza space with seating, a central raised planter, and lawn areas provides tenants and the public with a space to be utilized for outdoor meetings, lunch breaks, or special events.
- Enhanced Landscape- Tree lined boulevards, open grass areas, utility screening, and mixture of flowering trees/shrubs will provide a year-round interest and aesthetic beauty to the site.
- Modern Architectural Theme- The proposed architecture is a mix of modern elements of stone, wood, steel, stucco and glass in a clean contemporary color palette that accentuates the buildings and provides a fresh aesthetic. The low sloping and varying roof lines with steel canopies and parapets, create a dramatic statement at a scale that compliments the neighboring communities.

Aumsville Comprehensive Plan:
The most current 1999 Aumsville Comprehensive Plan identifies a need for more employment land needs and was expanded on in the 2011 Aumsville Economic Opportunity Analysis. Based on these documents/reports the population estimates for Aumsville are 5,706 people by the year 2030 and are currently at a population of 4,234 per the 2020 census.

To better service the growing Aumsville and neighboring Marion County communities, the Aumsville Economic Opportunity Analysis includes these objectives:

- *Provide greater opportunity for local jobs available to Aumsville residents assuming continued moderate rates of residential and population growth over the next 20 years.*
- *Provide adequate lands for industrial use to facilitate expansion of existing industries, allow for new industries, and better assure sustained opportunities for family-wage local jobs.*
- *Develop the interchange district along State Highway 22 to provide better access and visibility to Aumsville and improve opportunities for commercial businesses serving both area resident and visitor needs.*
- *Encourage downtown recovery and redevelopment for smaller scale service and retail business together with supportive civic, residential, and recreational uses.*
- *Assure continued and improved options for home-based business and mixed-use development supportive of Aumsville's employment and residential districts.*

Based on the above objectives the proposed development will provide "opportunities for commercial businesses serving both area resident and visitor needs" along with providing "options for home-based business and mixed-use development supportive of Aumsville's employment and residential districts".

Aumsville Commercial Comprehensive Plan Goals and Policies
The below excerpts define the goals and polices for commercial development within the comprehensive plan. Responses have been provided to demonstrate how the proposed development fits the needs identified.

Goals

1. *To maintain existing businesses and encourage a variety of new business activities to locate in the city.*
   Response: The proposed development would provide ample opportunities for hospitality, office, and retail from local, regional, and national businesses to locate in Aumsville.
2. *To develop a business center that is easily accessible, convenient and a pleasant place in which to shop.*
   Response: From the onset of the proposed project, the design has focused on implementing a unified facility at an appropriate scale to enhance the vehicular and pedestrian connections within the site and the neighboring communities. The result will be a development that creates a pleasant commerce hub for the community.

Policies

1. *The City shall avoid "strip" commercial development along Aumsville's major streets.*
   Response: The proposed design is in no way a "strip" commercial development, but instead a modern mixed-use development with pedestrian amenities throughout.
2. *The City shall designate commercial land area around city hall, post office and major intersecting streets to serve as a focal point for "clustering" of new and expanding commercial activities.*
   Response: N/A
3. *New and expanding businesses should first develop around the city hall and post office as a means to concentrate business activity and create a convenient and accessible business center.*
   Response: N/A

- *The City should encourage the development of commercial activities on sites large enough to provide landscaping and off-street parking.*
  Response: The proposed development is the first proposal that was able to acquire all four (4) parcels of land needed to achieve a development of this scale and fulfill the needs and intent of the ID Zoning Development.
- *The City shall encourage commercial activities to share off-street parking spaces.*
  Response: The proposed parking and circulation routes through the site allow for a variety of uses to share parking. Although calculations were provided for the site plan and are in compliance, the mixed-use development operates as a central hub where users can park and walk to multiple establishments.
- *Commercial development outside the existing commercial core shall be oriented to serve neighborhood needs.*
  Response: Off-street improvements and connections to both the existing communities and Highway 22 will provide a safe means of ingress/egress for the site. Additionally, by providing a mixture of fuel, restaurant, shopping, and service industries the neighboring communities will experience a new level of service and options to enhance the quality of life for the community.

Compliance With Aumsville Section 10 of the Development Ordinance (ID- Interchange Development Zone.

The below excerpts define the ID-Interchange Development Zone within the Aumsville Development Ordinance. Responses have been provided to demonstrate how the proposed development complies with each of the sections below.

10.01 Purpose:

To provide for industrial, commercial, and office uses on property located at the State Highway 22 interchange. The transportation amenities offered by Highway 22 will be a factor in attracting industrial and commercial users. However, the community views the interchange area as the key entry point into the City. For this reason, the quality of the site design will be emphasized. In providing for the development of the interchange area, it is essential that the principal function of the intersection be preserved.

Response: The proposed development at the intersection of Shaw and Highway 22 has been designed to provide a local mixed-use development with emphasis on servicing the neighboring community of Aumsville while still attracting visitors and traffic from the Highway 22 frontage. What has been provided with the proposed project plan utilizes the above ID definition and provides the following items within it plan to meet the requirements of the ID designations:

- Location adjacent to Highway 22
- Provides a prominent land mass of commercial, industrial and office uses at the corner of the Highway 22 and Shaw.
- Entry point to the City of Aumsville will now have a mixed-use commercial center for visitors and residents who utilize the Highway 22 as the main entry access point to downtown Aumsville.
- "The principal function of the interchange" will be improved to allow for safer and enhanced entry to Aumsville by providing:
  - Widening of the Shaw (half street) with new paving and striping.
  - New signalized intersection at Gordon Lane and Shaw providing a vehicular and pedestrian node as a transition from Highway 22 to the Shaw connection into Aumsville.

10.02 Permitted Use.

The following uses are permitted, subject to a site development review and conformance with the provisions in this Section. In interpreting this Section, following uses are permitted, subject to a site development review and conformance with the provisions of the Aumsville Development Ordinance:

A. *Industrial-Related Activities*
   1. *Manufacturing: Light manufacturing, assembly, processing, packaging,*
   2. *treatment, fabrication of goods or merchandise, and similar uses.*
   3. *Research centers and laboratories.*
   4. *Telecommunication centers, including call centers.*

B. *Retail and Services*
   1. *Offices.*
   2. *Restaurants, delicatessens, snack shops, and other types of eating and drinking establishments, including entertainment facilities accessory to the establishment.*
   3. *Banks and other financial institutions.*
   4. *Business services, such as photocopy and mailing centers.*
   5. *Traveler accommodations, including hotels and motels; but excluding camping and recreational vehicle parks.*
   6. *Professional offices including, but not limited to, medical, dental, veterinary, engineering, and legal services. Veterinary clinics shall not provide on-site services for farm animals.*
   7. *Services, such as cleaning and maintenance services provided to*

dwellings and other buildings.

8. *Mobile Food Services (See also Section 27).*

C. *Other Uses: Other uses, which the City may find to be similar to those listed as permitted in this zone that are consistent with its purpose.*

Response: The above uses were utilized for the basis of the design of the project and are intended for the site.

10.03 Conditional Uses.

The following activities are conditionally allowed in the ID zone:

A. *Convenience stores.*
B. *Service stations; but excluding repair facilities.*
C. *Towing services; but excluding storage of vehicles.*
D. *Retail activities that are designed to serve the community or region.*
E. *Establishments serving liquor.*
F. *House of worship*
G. *Gymnasium*
H. *(H) Other uses determined by the Commission to be of similar character or to have similar impacts as those specified above.*

Conditionally permitted uses shall not be approved unless the proposal satisfies the following criteria:

1. *The proposal will be consistent with the provisions of the Development Ordinance, the underlying land use zone, and other applicable policies of the city.*
2. *Taking into account location, size, design, and operation characteristics, the proposal will have minimal adverse impact on the livability, value, and appropriate development of abutting properties and the surrounding area compared to the impact of development that is permitted outright.*
3. *The location and design of the site and structures for the proposal will be as attractive as the nature of the use and meet the design standards.*
4. *The proposal will preserve assets of particular interest to the community.*

Response: It is understood that if any proposed user wishes to develop any of these conditional uses that they will have to be approved prior to moving forward. Currently a gas station and car wash are utilized on the plans, but no service station component will be utilized with that use. Additionally with the amount of dining and restaurant uses it may be possible that some may wish to serve liquor and it is understood that approval will be needed to do so.

10.04 Prohibited Activities.

The following uses are prohibited in the ID Zone.

A. *Agriculture and Forestry:*
    1. *Agriculture production crops;*
    2. *Forest nurseries and tree seed gathering and extracting.*
B. *Tanneries.*
C. *Energy plant.*
D. *Rendering plants.*
E. *Wrecking, demolition, junk yards, including recycling firms.*
F. *Waste transfer stations.*
G. *Chemical manufacturing plants*
H. *Cement, concrete, lime, or gypsum manufacturing.*
I. *Asphalt plants; aggregate plants.*
J. *Fertilizer manufacturing or distribution.*
K. *Manufacturing activities involving primary metal industries such as foundries/forge shops, smelters, blast furnaces, boiler-works, and rolling mills; manufacture of flammable, hazardous, or explosive materials; creosote and related products; coal tar and related products.*

L. *Storage warehouses. Storage rooms or buildings except as needed to support an approved use.*
M. *Manufacture or storage of oil, gasoline, or petroleum products for distribution, not including service stations.*
N. *Commercial outdoor recreational uses, amusement parks, or sports arenas, not including golf courses or country clubs.*
O. *Truck, trailer, heavy machinery, or farm equipment storage.*
P. *Any other use which is or can be operated in such a manner as to create a dangerous, injurious, noxious, or otherwise objectionable fire, explosive, or other hazard; noise or vibration, smoke, dust, dirt, or other forms of air pollution; electrical or other disturbance; glare; or other substance, condition, or element in such amount as to adversely affect the surrounding area or premises, as may be determined by the Commission.*

Response: None of the prohibited uses are intended to be utilized for this site.

10.05 Performance Standards.
The discharge of solids, liquids, or gases which are detrimental to the public health, safety, and welfare causing injury to human, plant, or animal life or to property is prohibited in the ID Zone. Further, no land or structure shall be used or occupied unless therein continuing compliance with the following standards:

A. *Heat, glare, and light: All operations and facilities producing heat, glare, or light, including exterior lighting, shall be so directed or shielded by walls, fences, evergreen plantings, that such heat, glare, or light is not reflected onto adjacent properties or streets.*
Response: All lighting proposed will be to create a safe development and all lights will be shielded to prevent light trespass to the adjacent properties. Additionally, an evergreen tree buffer has been proposed along the rear of the project (east property line) to enhance the screening to the existing residential/agricultural properties to the east.

B. *Noise: No noise or sound shall be of a nature, which will constitute a nuisance as documented by the chief of police.*
Response: Noise Buffering is provided to surrounding uses via the following:

- The existing vegetated buffer along Highway 22 will remain.
- A fully vegetated evergreen hedge has been proposed along the eastern property line to protect the views of the existing residential/agricultural properties.
- Driveways and entrances to the site are situated between the proposed development and the existing worship facility to the south.
- Loading docks for the larger retail centrally located to the site to and walled to minimize noise trespass beyond the property lines.

C. *Sewage: No categorical wastewater discharges are allowed. Adequate provisions shall be in place for the disposal of sewage and waste materials and such provisions shall meet the requirements of the City of Aumsville sewage disposal system.*
Response: the proposed routing and wastewater improvements have been designed and will be fully engineered to meet the requirements of the City of Aumsville. In addition to the onsite improvements, we will be improving the offsite connection along Del Mar to allow more capacity and improve the community wastewater system.

D. *Vibration: No vibration other than that caused by highway vehicles and trains shall be permitted which is discernible without instruments at or beyond the property line for the use concerned.*
Response: The uses proposed will not produce vibration that will be a nuisance to the community. Traffic onsite will be at minimal speeds through the parking lot and loading for retail and commercial spaces will be in designed screened locations.

10.06 Minimum Lot Area and Dimensions: None.
Response: Although no minimum dimensions are required an adequate amount of land has been purchased to create the proposed development and provide 24.6% open space.

10.07 Maximum Height of Structure: 50 feet.
Response: The maximum height of the proposed retail center buildings will be below 35' in height with exception of the 4-story hotel that will stay below the required 50' maximum.

10.08 Setbacks:

A. *Highway 22: 30 feet*
B. *Designated arterial or collector: 20 feet*
C. *Local Street: 15 feet*
D. *Side yard: 15 feet*
E. *Rear yard: 15 feet*
F. *Setback Exceptions: Notwithstanding the requirements set forth in this subsection, the following exceptions apply:*
    1. *Setbacks from any street may be reduced by 5 feet when landscaping, screening material, or other mitigation techniques are provided, to a degree greater than that called for in this section, which effectively screen the parking areas and building service areas from the street.*
    2. *Setbacks of up to zero feet along all local designated streets and property lines may be provided in commonly planned projects which exhibit characteristics of an urban village which includes extensive amenity areas, strong pedestrian, transit, and bicycle orientation, varied and high quality building materials, complex and interesting building massing, and extensive landscaping.*

Response: The required setbacks will be adhered to or exceeded, additionally the required and provided dimensions have been added to the plans to show compliance.

10.09 Design Requirements.
Building design shall be subject to the following:

A. *Building material should be of high quality and attractive appearance using matte texture earth tones. Masonry, brick, and stone in their natural state are preferred as principal cladding materials. Textured concrete, architectural block, stucco, modulated in jointed patterns, and pre-cast concrete with appropriate detailing are also acceptable materials. Materials, detailing, and colors should be repeated on all building facades.*

Response: The proposed architecture is a modern style comprised of modern elements of stone, wood, steel, stucco and glass in a clean contemporary color palette that accentuates the buildings and provides a fresh aesthetic. The low sloping and varying roof lines with steel canopies and parapets, create a dramatic statement at a scale that compliments the neighboring communities.

B. *Unpainted or un-textured concrete or masonry, metal buildings, and unpainted metal are prohibited.*

Response: Understood, no unpainted or un-textured masonry or metal is proposed.

C. *The use of roof or facade offsets or breaks is encouraged. Roof planes should be varied. Facade lines should be broken at least every 40 feet on all building sides.*

Response: Understood, the proposed architecture creates variation along the facades and roof planes to provide a clean line modern aesthetic with a mix of stone, wood, steel, stucco, and glass.

D. *All mechanical equipment to be screened from view in a manner consistent with the design of the structure and site.*

Response: Understood, all mechanicals will be screened with the use of parapets and/or metal screening panels.

E. *The color palette should be simple and consistent within projects. Colors should be compatible with neighboring development. Bright or primary colors shall be limited to accent elements.*

Response: A clean contemporary color palette utilizing neutral and natural colors are proposed on the architectural elevations in order to blend with the natural surroundings of the area and the regional colors/material on adjacent homes and businesses.

10.10 Landscaping

All rights-of-way and setbacks are to be landscaped and maintained by property owners as follows: (See also Section 23, Landscaping Design)

A. *Sites shall include landscaped areas, hard surface landscapes, public plazas, walks, and sidewalks.*
B. *All setback areas shall be landscaped; parking or other physical improvements shall be prohibited within required setback areas.*
C. *Street trees: At least one tree per 40 lineal feet shall be provided between the sidewalk and back of curb. An additional tree and 10 shrubs per 40 lineal feet must be provided within 10 feet of the sidewalk.*

Response: Tree lined boulevards, open grass areas, utility screening, and mixture of flowering trees/shrubs will provide a year-round interest and aesthetic beauty to the site. Street trees have been provided along the Shaw frontage and placed on the west side of the public sidewalk to promote shade for pedestrians.

10.11 Signs.

Signs shall be subject to the provisions in Section 19. The following additional provisions shall apply to development within the ID zone. Where conflicts occur, the more restrictive regulations shall apply.

A. *A sign plan is required for all development. All signs shall be architecturally integrated with the overall project design.*
B. *Permitted freestanding signs are limited to monument signs. Monument signs shall not exceed 32 square feet per face nor shall the sign area exceed 4 feet in height or 6 feet total for the sign structure, and the horizontal length shall not exceed 8 feet. A sign not complying with these provisions may be established through a Conditional Use Permit pursuant to provisions in Section 14.*
C. *Wall signs may not extend above roof line and shall be consistent throughout the project.*

Response: Signs are shown on the plans for reference only and all sign design and performance standards will be handled separately and approved separately via a comprehensive sign plan.

10.12 Parking and Loading.

See the Parking and Loading section of this ordinance (Section 18). In addition to compliance with the provisions in Section 18, all lots exceeding 50 spaces shall include the following landscaping provisions:

A. *At least 5% of the parking area shall be landscaped. The landscaping improvements may count toward the minimum landscaping requirements.*
B. *The ends of parking rows must have 6-foot-wide planting islands with a minimum of 2 shade trees and 8 shrubs.*
C. *Landscaped medians shall be required between every fourth parking row with at least 1 shade tree and 8 shrubs for every 30 lineal feet of median.*

Response: The proposed design utilizes defined vehicular routes with landscape buffers between the internal drives and the parking fields. Within the parking fields larger areas of landscape has been provided to accommodate enhanced landscape throughout the site. The proposed layout exceeds the required 5% by providing almost 20% landscape area within the parking fields.

10.13 Transportation Impact Analysis.

In addition to the site development review provisions in Section 21, the City may request a transportation impact analysis for development within the ID zone. This study shall be based on the requirements of the Oregon Department of Transportation.

Response: An updated TIA has been prepared and submitted for review. Additionally, the report has been forwarded to the necessary agencies for review.

10.14 Site Development Review Required.
All new structures and change in use and any expansion of existing structures or uses shall be subject to a site development review.
Response: Understood, we realize that while these layouts have been vetted prior to this point certain unique proposals may be requested from proposed tenants and would require a site development review to show compliance.

10.15 IAMP Compliance Required.
A new or expanded uses or structure is subject to the applicable provisions, if any, of an Interchange Area Management Plan. Notice of any proposed development in an area subject to an Interchange Area Management Plan.
Response: Understood

Compliance With Aumsville Section 14 Conditional Uses.
The below excerpts define the Conditional Use Criteria within the Aumsville Development Ordinance. Responses have been provided to demonstrate how the proposed development complies with each of the sections below.

Conditional Uses
14.01 Commission.
The Commission is authorized to conduct public hearings on an application for a conditional use. In addition to conditions imposed to ensure compliance with the standards, criteria and requirements expressly required by this ordinance, the Commission may impose additional conditions the Commission considers necessary to protect the best interest of the affected zone and the city as a whole.
Response: Understood

14.02 Administrative Official.
The Administrative Official is authorized to set for public hearing before the Commission those written applications for a conditional use permit.
Response: Understood

14.03 Application. A property owner may initiate a request for a conditional use permit by filing with the Administrative Official on forms provided and paying the appropriate posted fee.
Response: Understood

14.04 Public Hearing.
Public hearings before the Commission shall be in accordance with the procedures in Section 12, Administrative Procedures.
Response: Understood

14.05 Criteria for Granting a Conditional Use.

A. *The proposal will be consistent with the provisions of the Development Ordinance, the underlying land use zone, and other applicable policies of the city.*
Response: The proposed development follows the guidelines for the land set forth for the ID zone considering proposed uses, location adjacent to Highway 22, and development ordinance conditions for utilities and access. ID zone is defined as follows: *To provide for industrial, commercial, and office uses on property located at the State Highway 22 interchange. The transportation amenities offered by Highway 22 will be a factor in attracting industrial and commercial users. However, the community views the interchange area as the key entry point into the City. For this reason, the quality of the site design will be emphasized. In providing for the development of the interchange area, it is essential that the principal function of the intersection be preserved.*
What has been provided with the proposed project plan utilizes the above ID definition and provides the following items within it plan to meet the requirements of the ID designations:
    - Location adjacent to Highway 22
    - Provides a prominent land mass of commercial, industrial and office uses at the corner of the Highway 22 and Shaw.
    - Entry point to the City of Aumsville will now have a mixed-use commercial center for visitors and residents who utilize the Highway 22 as the main entry access point to downtown Aumsville.
    - "The principal function of the interchange" will be improved to allow for safer and enhanced entry to Aumsville by providing:
        - Widening of the Shaw (half street) with new paving and striping.
        - New signalized intersection at Gordon Lane and Shaw providing a vehicular and pedestrian node as a transition from Highway 22 to the Shaw connection into Aumsville.

- Landscape improvements along Shaw to provide street trees and pedestrian connections.

In conclusion, the proposed development utilizes the characteristics of the ID zone to provide a development that improves the vehicular entry access to Aumsville, beautifies the existing site, creates a safe signalized interstation at Shaw and Gordon, and provides uses consistent with the ID zone with no variance from the permitted uses.

B. *Considering location, size, design, and operation characteristics, the proposal will have minimal adverse impact on the livability, value, and appropriate development of abutting properties and the surrounding area compared to the impact of development that is permitted outright.*

Response: Based on the ID zoning characteristics and the ID zoning overlay in the City of Aumsville Zoning Map the development follows those guidelines in conjunction with the Interchange Area Management Plan to provide a mixed-use commercial center at the proposed location. As discussed with staff the above requirement of "permitted outright" is what is being proposed. All uses intended for the project are following the ID zone designation for commerce, hospitality, and office.

Given the existing rural nature of the existing farmland on the proposed sites, and its geographic location at the corner of Shaw and Highway 22 there is a limited number of adjacent properties to the site. The below table identifies the neighboring properties to the proposed site, existing land use descriptions, and the zoning.

Properties Directly East of Proposed Site (sharing common property lines)

Parcel 081W300001700

Address:	9728 Gordon Lane SE
Planning Jurisdiction:	City of Aumsville
Size:	3.01 Acres
Existing Use:	Residential/Agriculture
Existing Buildings:	2,868 SF residence and various agriculture structures
Land Use Description:	The existing property at 9782 Gordon Lane SE contains a residential domicile and associated agricultural structures that are in current use. The home as constructed in 1989 and is currently occupied.
Setback to Proposed Site:	Minimum 15' buffer is required per code.
Provided Setback to Site:	60' minimum to buildings and 29' to parking/internal drives.
Zoning:	ID (Interchange District)
Use/Zoning Comment:	While the site is currently utilized as residential/agricultural the City of Aumsville Zoning of ID suggests that this property will at some point be developed for the intent and recommended uses of the ID zoning.

Parcel 081W300001600

Address:	9777 Gordon Lane SE
Planning Jurisdiction:	Marion County
Size:	39.84 Acres
Existing Use:	Residential/Agriculture
Existing Buildings:	11,718 SF residence and various agriculture structures
Land Use Description:	The existing property at 9777 Gordon Lane SE contains a residential domicile and associated agricultural structures that are in current use. The home as constructed in 1978 and is currently occupied.
Setback to Proposed Site:	Minimum 15' buffer is required per code.
Provided Setback to Site:	34' minimum to buildings and 104' to parking/internal drives.
Zoning:	UT-20

Use/Zoning Comment:	The subject property is not located in the City of Aumsville zoning jurisdiction and has a Marion County zoning designation. The site is not part of the ID zoning overlay. The parcels north property line abuts Highway 22 and existing structures are located at the south end of the site. Given the location of the existing structures there is an excess of 500 feet of distance from the existing structures to the closest proposed Industrial/Office 'Building G'

Properties Directly South of Proposed Site (across Gordon Lane)

Parcel 081W300002300

Address:	650 N. 1st Street
Planning Jurisdiction:	City of Aumsville
Size:	8.67 Acres
Existing Use:	Willamette Valley Baptist Church & School
Existing Buildings:	Church Worship Building and Classrooms
Land Use Description:	The existing property at 650 N 1st Street contains a worship building, restrooms, educational facilities, and a gymnasium with associated parking.
Setback to Proposed Site:	No direct setback to proposed, the development is sited across Gordon Lane. 15' minimum setback required along north side of Gordon Lane.
Provided Setback to Site:	15' minimum setback provided on proposed site along the north side of Gordon Lane.
Zoning:	RM- Residential Multi-Family
Use/Zoning Comment:	While the site is zoned for multi-family residential the existing use is for workshop, education, and recreational facility. The existing structure was completed in 2007.

Parcel 081W300002306

Address:	9691 Willamette Street
Planning Jurisdiction:	City of Aumsville
Size:	15.60 Acres
Existing Use:	Vacant- Owned by Willamette Valley Baptist Church & School
Existing Buildings:	None
Land Use Description:	The existing property at 9691 Willamette Street is vacant and currently contains no buildings or site improvements.
Setback to Proposed Site:	No direct setback to proposed, the development is sited across Gordon Lane. 15' minimum setback required along north side of Gordon Lane.
Provided Setback to Site:	15' minimum setback provided on proposed site along the north side of Gordon Lane.
Zoning:	RM- Residential Multi-Family
Use/Zoning Comment:	While the site is zoned for multi-family residential the parcel is vacant and is owned by the adjacent worship facility.

Properties Directly West of Proposed Site (across Shaw Hwy)

Parcel 082W25AA01300

Address:	941 Beaver Creek Road SE
Planning Jurisdiction:	City of Aumsville
Size:	1.80 Acres
Existing Use:	Residential with Commercial/Industrial Use
Existing Buildings:	1,804 SF residential, construction in 1977.
Land Use Description:	The existing property at 941 Beaver Creek Road SE contains a residential building along with a

	commercial/industrial workshop structure with associated parking.
Setback to Proposed Site:	No direct setback to proposed, the development is sited across Shaw Highway. 20' minimum setback required along east side of Shaw Highway.
Provided Setback to Site:	20' minimum setback required along east side of Shaw Highway.
Zoning:	ID (Interchange District)
Use/Zoning Comment:	While the site is currently utilized as residential/commercial the City of Aumsville Zoning of ID suggests that this property will at some point be developed for the intent and recommended uses of the ID zoning.

Parcel 082W25AD00100

Address:	887 Beaver Creek Road SE
Planning Jurisdiction:	City of Aumsville
Size:	3.39 Acres
Existing Use:	Residential/Agricultural
Existing Buildings:	Existing Manufactured Home (detail unavailable)
Land Use Description:	The existing property at 887 Beaver Creek Road SE contains a large area of open space with an existing manufactured home.
Setback to Proposed Site:	No direct setback to proposed, the development is sited across Shaw Highway. 20' minimum setback required along east side of Shaw Highway.
Provided Setback to Site:	20' minimum setback required along east side of Shaw Highway.
Zoning:	ID (Interchange District)
Use/Zoning Comment:	While the site is currently utilized as residential/commercial the City of Aumsville Zoning of ID suggests that this property will at some point be developed for the intent and recommended uses of the ID zoning.

Parcel 082W25AD15600

Address:	805 N. 1st Street SE
Planning Jurisdiction:	City of Aumsville
Size:	0.62 Acres
Existing Use:	Residential
Existing Buildings:	3,069 SF residential and barn structure, constructed 1949.
Land Use Description:	The existing property at 805 N. 1st Street SE contains a residential building along with a barn structure with associated parking.
Setback to Proposed Site:	No direct setback to proposed, the development is sited across Shaw Highway. 20' minimum setback required along east side of Shaw Highway.
Provided Setback to Site:	20' minimum setback required along east side of Shaw Highway.
Zoning:	ID (Interchange District)
Use/Zoning Comment:	While the site is currently utilized as residential the City of Aumsville Zoning of ID suggests that this property will at some point be developed for the intent and recommended uses of the ID zoning.

C. *The location and design of the site and structures for the proposal will be as attractive as the nature of the use and its setting warrants.*
Response: Given the location of the land bordering both Shaw and Highway 22, the proposed land utilizes these corridors to its benefit as it is most aptly fit for the proposed mixed-use development. By creating a local commerce center it will act as a gateway to Aumsville and provide many of the needs in the community for business, jobs, and office components from the economic plan.
The proposed site plan aims to create a commerce hub and act as a gateway at the exit of Highway 22 to the City of Aumsville. The size and scale of the proposed buildings create a "neighborhood style" mixed use development that utilizes modern architecture and low sloping roof lines to preserve the neighborhood scale aesthetic. This style of layout and architecture will more seamlessly blend with the community as opposed to the large "big-box" retail developments.

D. *The proposal will preserve assets of particular interest to the community.*
Response: The proposed site is a mix of declining housing structures, barns, and agricultural fields. The existing assets on site that are as follows:
- Existing vegetated tree buffer along Highway 22
- Vegetated drainage swale along Shaw Highway

The proposed design retains the existing tree buffer along Highway 22 that creates a noise and view break from the Highway 22 traffic and noise into the Aumsville community. This buffer will be retained and continue to serve for the benefit of the community. Additionally, the drainage swale along Shaw will remain to provide the movement of excess storm water along with providing a green buffer between the road and the proposed development.

With the preservation of the above proposed assets above the improvements that are being made by the developer to the roadway, signalized intersection, and offsite sewer capacity will provide an enhanced benefit to improve the existing infrastructure for the community of Aumsville.

14.06 Permit Conditions.
The Commission when permitting a new conditional use or the alteration of an existing conditional use, may impose those conditions it finds necessary to avoid detrimental impact and to otherwise protect the best interest of the surrounding area and the city as a whole (See Section 12). These conditions may include, but are not limited to, the following:

A. *Limiting the manner in which the use is conducted, including restricting the time an activity may take place and restraints to minimize such environmental effects as noise, vibration, air pollution, glare, and odor.*
B. *Establishing a special yard or other open space, lot area, or dimension.*
C. *Limiting the height, size, or location of a building or other structure.*
D. *Designating the size, number, location, and nature of vehicle access points.*
E. *Increasing the amount of street dedication, roadway width, or improvements within the street right-of-way.*
F. *Designating the size, location, screening, drainage, surfacing, or other improvements of a parking area or truck loading area.*
G. *Limiting or otherwise designating the number, size, location, height, and lighting of signs.*
H. *Limiting the location and intensity of outdoor lighting and requiring its shielding.*
I. *Requiring diking, screening, landscaping, or another facility to protect adjacent or nearby property and designating standards for its installation and maintenance.*
J. *Designating the size, height, location, and materials for a fence.*
K. *Protecting and preserving existing trees, vegetation, water resources, wildlife habitat or other significant natural resources.*
L. *Other conditions to permit the development of the city in conformity with the intent and purpose of the conditional classification of uses.*

Response: It is understood that certain conditions may be imposed, and it is expected that these are discussed during the public hearing with input from Aumsville and the community at large.

14.07 Existing Conditional Uses.
In the case of a use existing prior to the effective date of this ordinance and classified in this ordinance as a conditional use, a change in the use or in lot area or an alteration of structure shall conform with the requirements for a conditional use development permit.
Response: N/A there are no known conditional uses onsite.

14.08 Conditional Use and Concurrent Variances.
Variances may be processed concurrently and in conjunction with a conditional use application and when so processed will not require an additional public hearing or additional filing fee.
Response: Understood.

14.09 Notice.
Within 10 days after a decision has been rendered with reference to a conditional use permit, the Administrative Official shall provide the applicant with written notice of the decision of the Commission.
Response: Understood.

14.10 Appeals.
Appeals from the decision of the Commission shall be in accordance with the procedures in Section 12, Administrative Procedures.
Response: Understood.

14.11 Time Limit of a Conditional Use Permit.
The term of an approved conditional use development permit is 2 years. The Commission may extend such term for a period not to exceed 1 additional year, if upon written application, justification can be found and approved by the Commission.
Response: Understood.

14.12 Resubmission of Conditional Use Application.
An application that was denied wholly or in part by the Commission may not be resubmitted for a period of 1 year from such denial, unless approved by the Administrative Official upon showing of good cause.
Response: Understood.

Compliance With Aumsville Section 21 Site Development Review.
The below excerpts define the Site Development Review Criteria within the Aumsville Development Ordinance. Responses have been provided to demonstrate how the proposed development complies with each of the sections below.

21.06 Site Development Review – Approval Criteria.

The review authority shall make written findings with respect to all of the following criteria when approving, approving with conditions, or denying an application:

A. *The application is complete, as determined in accordance with Section 12 and Section 21.05;*
Response: The development team has been coordinating with Aumsville on providing all necessary documents and will provide any other information required during the completeness review.

B. *The application complies with all of the applicable provisions of the underlying land use zone, including: building and yard setbacks, lot area and dimensions, lot coverage, and other special standards as may be required for certain land uses;*
Response: All open space and setback requirements have been met or exceeded and demonstrated on the plan submittals. The proposed development has utilized the ID zoning requirements as the basis for the design on the project and indents to develop the site in the nature and classification it was intended when the zoning was applied to the parcels by the City of Aumsville.

C. *Characteristics of adjoining and surrounding uses;*
Response: The proposed development has been adjusted to seamless blend with both the existing land uses and the proposed future land uses for the adjacent parcels as part of the ID zoning.
As defined in the above 14.05 (B) the surrounding uses adjacent to the site contain a mix of residential, commercial, agricultural, and worship uses. Of these uses below is a list of existing uses and relationships to the proposed parcel.
    - 4 of the 7 adjacent parcels identified have an ID zoning designation that are assumed to be developed in the future for commercial, industrial, or office uses.
    - 2 of the 7 adjacent parcels belong to the Willamette Valley Baptist Church & School and act as a buffer between the housing communities south of the existing church and the proposed development.
    - 1 of the 7 adjacent parcels (along Highway 22 east of the proposed site) is not part of the Aumsville jurisdiction and is a Marion County zoning designated parcel.
    - Minimum buffers are identified in the ID zoning and the proposed development meets and/or exceeds these requirements.
    - The proposed buildings have been arranged in way to keep the largest masses of architecture at the center of the site with smaller and shorter masses at the east, south, and west perimeters. The tallest architectural mass is the proposed hotel structure and it located closest to Highway 22 to provide a visual and noise break between the site and the Highway 22 traffic. By arranging the buildings with the large masses in the center of the site and along the Highway 22 frontage, the impact visually to the surrounding community is minimized.

D. *The application complies with the supplementary zone regulations contained in Sections 18, 19, and 22;*
Response: The sections 18 (Off-Street Parking and Loading), 19 (Signs), and 20 (Land Divisions). Have been coordinated per the following:
    - *Off-Street Parking and Loading- has been designed to provide the most user friendly and logical layout for the proposed development. In additional to providing a layout compliant with the ordinance, added landscape has been provided within*

the parking layout to provide for a more pleasant local-commercial center as opposed to large barren parking fields.

- *Signs- At this time all signs shown are conceptual for layout only and the full sign package will be deferred at this time and submitted as a separate review for approval by Aumsville.*
- *Land Divisions- The existing site is comprised of four (4) parcels that are intended to be redefined per the proposed preliminary plat. This will allow for the proposed development to retain the same land division status that currently exists onsite as opposed to a subdivision plat.*

E. *Conditions required as part of a land division (Section 20), conditional uses (Section 14), or other approval shall be met;*
Land Divisions- The existing site is comprised of four (4) parcels that are intended to be redefined per the proposed preliminary plat. This will allow for the proposed development to retain the same land division status that currently exists onsite as opposed to a subdivision plat.

F. *Provision for adequate noise and/or visual buffering from non-compatible uses;*
Response: The proposed parcel borders Shaw Highway (east), Highway 22 (north), 2 residential/agricultural parcels (east), and Church (south). In compliance with the ID zoning the adequate setbacks have been provided and landscape buffering has been identified to ensure privacy for the neighboring developments.

Visual Buffering is provided to surrounding uses via the following:

- The proposed buildings have been arranged in way to keep the largest masses of architecture at the center of the site with smaller and shorter masses at the east, south, and west perimeters. The tallest architectural mass is the proposed hotel structure and it located closest to Highway 22 to provide a visual and noise break between the site and the Highway 22 traffic. By arranging the buildings with the large masses in the center of the site and along the Highway 22 frontage, the impact visually to the surrounding community is minimized.
- A fully vegetated evergreen hedge has been proposed along the eastern property line to protect the views of the existing residential/agricultural properties.
- The largest concentration of housing in the broader vicinity resides to the south and southeast of the proposed development. These consist of 0.25 (quarter) acre housing lots with a mix of single and two-story homes. The existing separation from the proposed development to these homes are enhanced by the existing +/- 24-acre Willamette Valley Baptist Church & School properties.

Noise Buffering is provided to surrounding uses via the following:

- The existing vegetated buffer along Highway 22 will remain.
- A fully vegetated evergreen hedge has been proposed along the eastern property line to protect the views of the existing residential/agricultural properties.
- Driveways and entrances to the site are situated between the proposed development and the existing worship facility to the south.
- Loading docks for the larger retail centrally located to the site to and walled to minimize noise trespass beyond the property lines.

G. *Drainage and erosion control needs;*
Response: The existing land utilizes both natural contours and drainage areas to convey the water onsite. The proposed development will utilize the existing drainage patterns to collect and treat all stormwater onsite and will follow all state and local laws to ensure that no stormwater will impede any of the surrounding roads, highways, or neighboring parcels.

H. *Public health and safety factors;*
Response: Providing a pleasant and safe place for users and tenants is at the forefront of the proposed design, layout, and implementation of the mixed-use center. The

implementation of design elements such as fire protection equipment, visual camera security, and management representation will provide the necessary safety concerns. In addition, by providing a clean facility with a vetted group of tenants/uses the commercial development will retain pride of ownership and community presence.

I. *Problems that may arise due to development within potential hazard area;*
Response: No known hazards are currently known or anticipated for the site. Additionally, per the use regulations of the ID zone the potential hazards from tenants (i.e hazardous manufacturing or chemicals) is clearly defined and will be adhered to.

J. *Retention of existing natural features on site*
Response: The proposed site is a mix of declining housing structures, barns, and agricultural fields. The existing assets on site that are as follows:

- Existing vegetated tree buffer along Highway 22
- Vegetated drainage swale along Shaw Highway

The proposed design retains the existing tree buffer along Highway 22 that creates a noise and view break from the Highway 22 traffic and noise into the Aumsville community. This buffer will be retained and continue to serve for the benefit of the community. Additionally, the drainage swale along Shaw will remain to provide the movement of excess storm water along with providing a green buffer between the road and the proposed development.

With the preservation of the above proposed assets above the improvements that are being made by the developer to the roadway, signalized intersection, and offsite sewer capacity will provide an enhanced benefit to improve the existing infrastructure for the community of Aumsville.

K. *The application complies with the city's adopted public works design standards for any public improvement required by the development. For example, where streets are required the application shall comply with Division 2, Streets; for storm water improvements, the application shall comply with Division 3, Stormwater Management.*
Response: The development team has worked with the Aumsville staff to fine tune the design to meet the needs of the staff and provide adequate onsite routing and facilities to comply. The proposed development will address the following coordination items identified by staff in the coordination of this application:

- Realignment of Gordon Lane to the Del Mar Drive alignment at Shaw Hwy.
- New signalized intersection at Del Mar Drive and Shaw Hwy.
- Offsite sewer improvements to provide more capacity to existing infrastructure on Del Mar.
- Shaw Hwy half street widening per the transportation plan standards.
- Construction of bike lane and sidewalk along Shaw Hwy
- Rail crossing signaled (should the rail become functional)

L. *The application complies with the most recent Oregon Fire Code, including Appendix C and Appendix D.*
Response: All building construction types will comply with both state and local fire codes as well as thresholds for fire sprinkler implementation.

Compliance With Aumsville Section 23 Landscaping Design

23.03 Minimum Area Requirements.

A. *The following area requirements shall be the minimum areas devoted to landscaping as listed below:*
   1. *Commercial Developments. A minimum of 5 percent of the gross land area shall be devoted to landscaping in commercial developments. Landscaping located in rights-of-way shall be included in the minimum requirement, and shall include the use of streets, tree insets within sidewalks, or sidewalk planters. Landscaping located in rights-of-way shall be maintained by the property owner.*
   2. *Industrial Developments. A minimum of 10 percent of the gross land area shall be devoted to landscaping in industrial developments.*
   3. *Interchange Development. A minimum of 15 percent of the gross land area shall be devoted to landscaping in interchange development.*
   4. *Multi-family Residential Development and Public Use. A minimum of 20 percent of the gross land area shall be devoted to landscaping in multifamily developments and public uses such as schools and churches.*
   5. *Residential Development. All required street side yards, exclusive of accessways, shall be devoted to landscaped area for all other development in residential zones.*

   Response: Per the above standards this develop would adhere to the minimum 15 percent of the gross land area for the Interchange Development. Per the calculations provided on the landscape plans, the minimum 15% has been exceeded and a total of 38% landscape area has been provided for the proposed site plan layout.

B. *For the expansion of existing developments and parking lots, or a change of use, requirements in this section shall only apply whenever a site development review or other land use application is required to complete the expansion or stablish the change in use. Such expansion or change of use shall be subject to the landscaping provisions in this section.*

   Response: Understood, and the above section will only apply to the development once it has been constructed.

C. *Landscaped areas may include landscaping:*
   1. *Around buildings;*
   2. *In open spaces and outdoor recreation areas;*
   3. *In islands and perimeter planting areas in parking and loading areas;*
   4. *Along street frontages; and*
   5. *In areas devoted to buffering and screening as required in this section and elsewhere in this ordinance.*

   Response: The areas listed above have been factored into the calculations provided to meet the minimum requirements of the proposed design for to meet the landscape standards.

23.04 General Provisions.

A. *For purposes of satisfying the minimum requirements of this ordinance, a "landscaped area" is any combination of mature living plants, such as trees, shrubs, plants, vegetative ground cover, or natural or artificial turf; and may include structural features such as walkways, fences, benches, plazas, works of art, reflective pools, fountains, or the like. Also includes irrigation systems, mulches, decorative rock ground cover, topsoil, and re-vegetation or the preservation, protection, and replacement of trees.*

   Response: The proposed landscape has been designed to create a harmonious transition between the proposed architecture and the surrounding environment. The sections to

follow will provide an analysis to how this has been provided to create the proposed plaza spaces, natural perimeter, buffering of neighboring developments, urban streetscape, tree lined pedestrian corridors and shaded parking area.

B. *Landscaping shall be designed, developed, and maintained to satisfy the specific functional and aesthetic objectives appropriate to the development, considering the following:*
   1. *Type, variety, scale, and number of plants used;*
      Response: The proposed plant palette contains a right variety of plant material appropriate for a commercial shopping center that will provide a mix of mature sizes, varying textures of plant species, and an array of blooming cycles to provide year-round interest.
   2. *Placement and spacing of plants;*
      Response: The placement and spacing has been laid out to provide an enhanced pedestrian and vehicular experience. By placing the trees throughout the parking lot and pedestrian corridors, shade and vehicular separation will offer a pleasant pedestrian scale. Vegetation will also be used to buffer the proposed buildings and lessen the scale of the architecture to achieve a fully integrated aesthetic between the built and natural environment.
   3. *Size and location of landscaped areas;*
      Response: Wide medians of landscape are proposed between uses to break up the paving and create a boulevard aesthetic wrapping through the site.
   4. *Contouring, shaping, and preparation of landscaped areas;*
      Response: The proposed design retains many of the existing topographic features of the site. Most notably is the existing drainage channel along Shaw and the undulating wooded wetland areas that buffer the site to the north and northeast. By retaining these existing features the development will have a 'natural' aesthetic around the perimeter that will transition into the proposed development.
   5. *Use and placement of non-plant elements within the landscaping;*
      Response: The internal circulation of the site utilizes plaza spaces consisting of seating areas, drop-off and pick up points for visitors, bicycle parking and circulation, and enhanced hardscape areas that are key to providing the proposed high end mixed use development.
   6. *Use of root barrier planting techniques to prevent root infiltration of utility lines and limit possible surface cover damage.*
      Response: Root barriers will be utilized where necessary to provide protection of utility lines.

C. *The landscape design shall incorporate existing significant trees and vegetation preserved on the site.*
   Response: The existing site is comprised of farmland that is mostly devoid of significant vegetation in the middle (or center) of the proposed development. However, the current property does have several large expanses of natural contouring and vegetation that is proposed to remain onsite and have been designed around to retain these features. These areas of existing landscape are as follows:
   - The existing drainage channel along Shaw Hwy
   - The wooded wetland areas that buffer the site to the north and northeast between the proposed shopping center and the North Santiam Hwy.
   - The existing trees and wetland area at the southwest corner of the site that buffers the new 10' multi-use trail to the neighboring church to the south.

D. *Specific Landscape Requirements. The following provisions shall apply for all landscaping improvements:*
   1. *Total landscaped area (percentages) shall comply with provisions in Section 23.03.*
      Response: Per the calculations provided on the landscape plans, the minimum 15% has been exceeded and a total of 38% landscape area has been provided for the proposed site plan layout.

2. *Walkways, drives, parking areas, and buildings shall be excluded from the landscaping calculation.*
   Response: Hardscape areas have not been included in the landscape calculations.
3. *All street facing yard areas shall be landscaped. This requirement recognizes the landscaped area may exceed minimum percentage requirements in Section 23.03.*
   Response: All street facing yards have been landscaped to meet these requirements.
4. *At least 25% - but no more than 50% - of the required landscaped area shall be planted in shrubs and trees. The area for trees shall be based on their accepted mature canopy. Regardless of the mix of shrubs and trees, at least one tree shall be included in the landscaping plan. For the purpose of this section, the minimum requirement for a tree upon maturity shall be 8 feet in height. See additional requirements under Street Tree Species 23.09.*
   Response: The landscape areas have been designed to provide this mix of materials and adequate spacing has been provided for the landscape species to reach maturity. The proposed shrubs and tree mix on the attached landscape plan is approximately 34% which is well within the acceptable range of 25%min-50% max
5. *The remaining landscaped area shall be planted with suitable living ground cover, lawn, flowers, and other plantings exclusive of decorative design elements such as walkways, fountains, benches, sculptures, and similar elements placed within the required landscaping area. Fountains, walkways sculptures cannot be more than 5% of the overall landscaping.*
   Response: The proposed design utilizes lawn areas to help with erosion around the perimeter transitions and drainage facilities. There are currently no fountains, but the use of ramadas, seating, and plaza spaces are provided for pedestrian gathering spaces.
6. *No more than 20% of the area identified in 23.03, shall contain rocks, bark, or other decorative ground cover.*
   Response: Mulch will be utilized in all planting beds identified on the plans and rock will only be used as needed to for any spillways or erosion areas around downspouts or spillways etc.… Per the areas identified in 23.03 the mulch areas provided are approximately 12%.
7. *Modifications to these requirements shall be processed per provisions in Section 23.02*
   Response: Understood.

E. *Landscape Completion. Required landscaping, tree plantings, buffering, screening, and fencing shall be installed prior to building occupancy. Occupancy shall be permitted prior to the complete installation of all required landscaping if security equal to 150% of the cost of materials and labor, as determined by the City Administrator, is filed with the City assuring such installation within nine months of issuance of the Occupancy Permit. An extension of three months may be granted by the City Administrator when circumstances beyond the control of the owner prevent completion. If the installation of the landscaping is not completed within the required period, the security may be used by the City to either complete the installation, or the security may be held by the City and other enforcement actions taken to ensure the improvements are completed.*
   Response: The success of the proposed development relies on getting the landscape installed with the development at the opening. However, due to timing and weather when the site is completed it may be necessary to possibly stagger the installation of landscape. Per the note on the landscape plans "It is anticipated that all planting onsite will be done between March 1st to October 31 to avoid winter season", if the completion of the buildings is done outside this time frame the landscape security may be used to delay the timing to comply with the time frame of the landscape security window.

23.05 Screening and Buffering.

A. *Screening shall be used to eliminate or reduce the visual impacts of the following uses and are two separate issues for the purpose of meeting the requirements:*
   1. *Commercial and industrial uses when abutting residential uses.*
   2. *Industrial uses when abutting commercial uses.*

3. *Service areas and facilities, including garbage and waste disposal containers, recycling bins, and loading areas.*
4. *Outdoor storage areas.*
5. *At and above-grade electrical and mechanical equipment, such as transformers, heat pumps, and air conditioners.*
6. *Any other area or use as required by this ordinance.*

Response: Buffering is provided to surrounding uses via the following:

- The existing vegetated buffer along Highway 22 will remain.
- A fully vegetated evergreen hedge has been proposed along the eastern property line to protect the views of the existing residential/agricultural properties.
- Driveways and entrances to the site are situated between the proposed development and the existing worship facility to the south.
- Loading docks for the larger retail centrally located to the site to and walled to minimize noise trespass beyond the property lines.

B. *Screening may be accomplished by the use of sight-obscuring plant materials (generally evergreens), earth berms, walls, fences, building parapets, building placement, or other design techniques.*

Response: Per the above and below responses the requirements have been met and/or exceeded to screen the adjacent properties. See below for "C" regarding the current dissimilar uses.

C. *Buffering shall be used to mitigate adverse visual impacts, dust, noise, or pollution, and to provide for compatibility between dissimilar adjoining uses. Where buffering is determined to be necessary, one of the following buffering alternatives shall be employed:*
   1. *Planting Area. Width not less than 15 feet, planted with the following materials:*
      a) *At least 1 row of deciduous or evergreen trees staggered and spaced not more than 15 feet apart.*
      b) *At least 1 row of evergreen shrubs which will grow to form a continuous hedge at least 5 feet in height within 1 year of planting.*
      c) *Lawn, low-growing evergreen shrubs or evergreen groundcover covering the balance of the area.*
   2. *Berm Plus Planting Area. Width not less than 10 feet, developed in accordance with the following standards:*
      a) *Berm form should not slope more than 40 percent (1:2.5) on the side away from the area screened from view. The slope for the other side (screened area) may vary,*
      b) *A dense evergreen hedge shall be located so as to most effectively buffer the proposed use.*
   3. *Wall Plus Planting Area. Width must not be less than 5 feet developed in accordance with the following standards:*
      a) *A masonry wall or fence or similar materials not less than 5 feet in height. Wall plus planting shall not be allowed in the Commercial District.*
      b) *Lawn, low-growing evergreen shrubs, and evergreen groundcover covering the balance of the area.*
   4. *Other methods which produce an adequate buffer considering the nature of the impacts to be mitigated as approved by the planning commission.*

Response: The site has been designed to provide the required buffer along the eastern property line to meet the requirement of option #1 above with evergreen shrubs spaced 5' apart (Arctostaphylos 'Sunset') and staggered trees spaced 15 apart (Cupressus glabra 'Blue Ice') planted in an area that is 15' in width minimum. Additionally, there will be lawn and low growing evergreen shrubs and groundcover comprising of the balance of the landscape in this area. This will provide the necessary buffer required for between the proposed development and the existing agricultural/residential uses to the east.

Additionally, it should be noted that the parcel to the east has the ID zoning overlay so the future land use will be comparable to the proposed development.

23.06 Commercial, Industrial, Institutional Streetscapes. In addition to the General Requirements in Section 23.04, trees shall be installed at street frontages as follows:

A. *Types of trees. Street trees shall be limited to a City recommended list in Section 23.09*
B. *Minimum installation size. Street trees shall be a minimum caliper of 2 inches 158 when measured 4 feet in height at the time of installation, with a clearance of 7 feet from the ground to the first foliage.*
C. *Spacing. The spacing of street trees by mature tree size shall be 25 feet, unless otherwise modified based on placement approval.*
D. *Placement. The placement of trees is subject to the site development review process. Tree placement shall not interfere with utility poles, light standards, power lines, utility services, visual clearance areas, or sidewalk access.*
   Response: The applicant has coordinated the location, type, and spacing of the required street trees for the project along Shaw and Gordon Lane. Per the Aumsville Approved Street Tree List the following species are keyed with a "*" on the landscape plan and consist of:
   - *Acer platanoides 'Columnare'*
   - *Carpinus betulus 'Fastigiata'*
   - *Pyrus calleryana 'Bradford'*
   - *Fraxinus americana 'Autumn Purple'*

23.07 Planting and Maintenance:

A. *No sight-obscuring plantings exceeding 36 inches in height shall be located within any required clear-vision area as defined in Section 22 of this ordinance.*
B. *A recommended maintenance plan shall be included with the application and planting plan. Approved landscaping shall continually be maintained. Failure to maintain approved landscaping plan shall be considered a violation of the Development Ordinance.*
   Response: Understood, the clear vision areas have been defined per Section 22 at the drive locations along Gordon Lane and the intersection of Shaw and Gordon Lane. The area is shown void of any trees or shrubs to comply with the standard.

23.08 Revegetation in Unlandscaped or Natural Landscaped Areas:

A. *Areas where natural vegetation has been removed or damaged through grading or construction activity in areas not affected by the landscaping requirements and that are not to be occupied by structures or other improvements shall be replanted.*
B. *Plant material shall be watered at intervals sufficient to assure survival and growth.*
C. *The use of native plant materials or plants acclimated to the Pacific Northwest is encouraged to reduce irrigation and maintenance demands.*
   Response: Understood, based on the proposed area utilized for this project it is not anticipated that excessive grading will be necessary in existing natural area. Once a final grading plan has been generated during the permit construction document phase any revegetation areas (possibly adjacent to the existing wetland areas) will be revegetated to meet the required standards.

23.09 Street Trees Species.

The City shall maintain a list of approved and prohibited street trees. All street tree plantings shall comply with the City's approved list. Alternate selections may be approved by the City Administrator following written request.

Response: The applicant has coordinated the location, type, and spacing of the required street trees for the project along Shaw and Gordon Lane. Per the Aumsville Approved Street Tree List the following species are keyed with a "*" on the landscape plan and consist of:

- *Acer platanoides 'Columnare'*
- *Carpinus betulus 'Fastigiata'*
- *Pyrus calleryana 'Bradford'*
- *Fraxinus americana 'Autumn Purple'*

23.10 Exceptions.
At the City's discretion it may accept a fee in lieu of some or all of the landscaping requirements of this section, if it is feasible to do so. Fees the City collects in lieu of landscaping will be used for purposes consistent with those described in Section 23.01, and may include acquiring, placing, and maintaining public art and or landscaping. If the City accepts a fee in lieu, it applies only in the context of the application under consideration and will not excuse compliance with the landscaping standards for any subsequent applications or changes in use for the same location.

Response: Understood.

In conclusion, we want to thank the Aumsville staff and community for the opportunity to present this project. We are very excited about the project and look forward to discussing it with staff and the community at large in the near future.

Thank you,

A. Hillman.

Aaron Hillman, RLA
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December 19th, 2023

Jesse Winterowd
Winter Brook Planning
610 SW Alder St.
Suite 810
Portland, OR, 97205

Project: **2023-7 CU-SDR 9757 Gordon Lane**
Subject: **Completeness Review Comment Responses**

The following revisions were made with regards to the completeness review comments for the above-mentioned project:

Comments:

- **Section 10 and Section 14 Narrative**

A land use narrative addressing approval criteria is required. While a land use narrative addressing approval criteria was provided, numerous responses provided inadequate detail to respond to approval criteria. For a project of this scale, we highly recommend detailed findings prepared by a land use planner. Supplemental responses to the following criteria in particular are recommended:

- *14.05 (A)*Include relevant findings to demonstrate the proposal is consistent with applicable criteria in Section 10.00, 14.00, 21.00, 18.00, 22.00, 23.00, and 20.21.

Response: The narrative has been updated to show proposal is consistent with the above sections.

- *14.05(B)* Please discuss the impact on abutting properties and the surrounding area and compare the impact of the proposed development to development permitted outright.

Response: As discussed the proposed development is "permitted outright" and we are not requesting a rezoning of the property. However, the abutting properties and surrounds areas have been defined on the revised narrative and how the proposed development will integrate into the surrounding community.

- *14.05 (C)* Please discuss the design of the site and structures and why they would meet this standard.

Response: This has been provided in the revised narrative.

- *14.05 (D)* Please discuss assets of particular interests to the community preserved in the proposal.

Response: This has been provided in the revised narrative.

- **Transportation Impact Analysis**
  - ODOT Comments:
    - The site is adjacent to OR-22 (North Santiam Hwy. No. 162) and the associated ramps and connections to Shaw Highway, which are subject to state laws administered by ODOT.
    - The TIA provided by the applicant was reviewed by ODOT staff and the detailed review comments are attached.

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- One specific takeaway from the TIA review is that any traffic control change proposed for the OR-22 EB ramp terminal at Shaw Highway intersection will require an Intersection Control Evaluation (ICE). Further analysis will be needed for changes at that intersection.
- The proposed right-in right-out site access across from Beaver Creek Road is not supported by ODOT since it does not meet the standards in the OR-22/Shaw Highway Interchange Area Management Plan (IAMP). Marion County has jurisdiction over that portion of Shaw Highway and they have the ultimate approval authority for any proposed or modified approaches.

Response: The TIA has been updated to remove the site access across from Beaver Creek Road. See revised report and site plan.

- Marion County Comments:
  - The ADT was not provided, which under County TIA standards (can be found on County website) determines the horizon year. A horizon year of 5 years was presented in the TIA, but per county standards, I think it will be 20 years –the ADT generation will determine.
  - As ODOT also mentioned, the proposed access across from Beaver Creek Rd doesn't meet the standards of the IAMP, and the county does not support. Any proposals that do not align with the IAMP need to be discussed with the County's Traffic Engineer, Carl Lund. The County do not find that "pork chops'" are effective to prevent left turns from occurring.
  - The IAMP also calls for a signal and additional turn lane at the EB Ramp, which is not included or addressed in the TIA.
  - Shaw highway, will be required to be improved with frontage improvements that match the city's street cross section for an urban arterial in their TSP.

Response: The TIA has been updated to comply with the above comments.

- **Narrative**
  - *21.06(C)* Please describe characteristics of adjoining and surrounding uses

Response: The narrative has been updated to add descriptions and characteristics of the surrounding land uses.

  - *21.06(D)* Demonstrate how application complies with the supplementary zone regulations contained in Sections 18 (Off-Street Parking and Loading), and 22 (Supplementary Zone Regulations). While these items can be clearly demonstrated on site plans, it's helpful to have accompanying narrative describing how relevant standards are met.

Response: The narrative has been updated to show compliance.

  - *21.06(J)* Please describe how the proposed development retains existing natural features on site.

Response: The narrative has been updated to list the existing features retained onsite

- **Proposed Site Plan**
  - Completeness items:

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- Demonstrate landscaped setback areas on site plans.

Response: The landscape setback areas dimensions have been added to the plans.

- Demonstrate street tree calculations in accordance with 10.10(C).

Response: The street tree calculation has been added to the site plan data.

- Describe or demonstrate required shrubs on parking medians.

Response: A detail enlargement has been added to the landscape plan showing compliance.

- Distinguish all public vs private streets.

Response: Street designations have been added to the 2 public streets on the project (Shaw and Gordon).

- Include all setback dimensions, building dimensions (including light industrial offices) The required setback from HWY 22 is 30 feet, the required setback from Shaw highway is 20 feet. The required setback from Gordon lane is 15 feet.
- Describe or demonstrate required shrubs on parking medians.

Response: Setbacks and building dimensions have been added to the site plan along with the provided building to property line dimensions.

- A recommended maintenance plan shall be included with the application and planting plan per Section 23.07 (B).

Response: The maintenance plan for the landscape has been added to the landscape plan see added sheet L2.0.

- No bicycle circulation areas shown. Provide dimensions of proposed bicycle parking spaces. See Section 18.11 for bicycle parking design guidelines.

Response: The pedestrian and bicycle circulation areas are shown on the site plan and an enlarged detail of the bicycle parking spaces has been added to the site plan.

- Code Compliance items:
  - Landscaped medians are required every fourth parking row (10.11(C)), an example of the standard is depicted on the image on the right.

Response: The medians have been added to the revised layout.

- Street trees shall be a minimum caliper of 2 inches per Section 23.06(B)

Response: This has been revised on the updated landscape plan.

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- **Architectural Drawings**
  - Completeness items:
    - Building elevations and renderings are required for every proposed building type (including offices and/or hotel)

Response: The elevations for each building type have been added to the architectural set (hotel and offices have been completed and added).

Replat Application Requirements (Incomplete)

Per Section 20.13, the replat request shall be processed as a Type III Subdivision. Application procedures and requirements are provided in ADO Section 12 and 20.

- Completeness Items
  - A Subdivision Application form is required.

Response: Per our conversation we are adjusting the existing 4 parcels and not providing a subdivision plat.

  - A preliminary plat with the items identified in Section 20.25 is required and has not been provided.

Response: The preliminary plat has been provided to show the proposed modifications to the existing 4 parcels.

  - Relevant findings to demonstrate the proposal is consistent with applicable subdivision criteria in 20.26 should be demonstrated in the conditional use application narrative per *14.05 (A)*

Response: The preliminary plat has been provided to show the proposed modifications to the existing 4 parcels.

  - Code Compliance Items:
  - The property to the southwest of the dedicated ROW for future Gordon Lane Alignment should be a separate tract.

Response: See preliminary plat, this can be split by the ROW.

  - Lots are required to have frontage on a public right-of-way. A private access easement does not fill this requirement (Section 20.35(H)).

Response: See preliminary plat, this has been adjusted to comply.

Please let me know if you have any questions on the above responses or revised plans.

Thank you,

A. Hillman.

Aaron Hillman, RLA
Hillman Workshop

TRAFFIC IMPACT ANALYS

AUMSVILLE COMMERCIAL CENTER

AUMSVILLE, OREGON

December 20, 2023

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SANDOW ENGINEERING

Transportation Impact Analysis

Aumsville Commercial Center

Aumsville, Oregon

December 20, 2023

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project # 5937

EXECUTIVE SUMMARY

This report provides the Traffic Impact Analysis and findings prepared for the proposed commercial center located in Aumsville, Oregon. The planned development includes a 124-room hotel, 97,400 sf of retail, and 56,000 sf of industrial office space. The proposed use of the site is allowed within the current zoning. Therefore, the evaluation is for the impacts associated with the development proposal.

The analysis evaluates the transportation impacts as per the City of Aumsville, Marion County, and ODOT criteria, evaluating adjacent roadway and intersection operation with the addition of development traffic for the year of completion, a 5-year future analysis consistent with ODOT criteria, and a 20-year future analysis consistent with Marion County Criteria.

The following report recommendations are based on the information and analysis documented in this report.

FINDINGS

- All studied intersections operate within the mobility standards with and without the development traffic, with the exception of the westbound left turn at the intersection of Shaw Highway and the EB Ramps.
- The addition of development traffic does not substantially increase queuing conditions, with the exception of the westbound left turn at the intersection of Shaw Highway and the EB Ramps.
- The v/c standard for the westbound left turn at EB ramps is met until the development generates 450 or more trips during the PM peak hour. Once the development generates 450 or more trips, mitigation will be triggered. The options of an all-way stop control, traffic signal, and roundabout, were evaluated as possible mitigation scenarios. With any mitigation option, the v/c standard would be met, and queuing would not be negatively impacted. It is recommended that the site trips be monitored as the site is developed, and once the site generates more than 450 trips, the intersection is reevaluated for the appropriate mitigation scenario, and the mitigation is constructed at that time.
- The intersection of 1ST St at Del Mar Drive was evaluated with the proposed realignment of Gordon Lane, the installation of a traffic signal, separate left turn pockets on all 4 approaches and a westbound right turn pocket. The traffic signal will operate at LOS B and v/c 0.58 through the year 2050 with full build-out. Queuing from the traffic signal will not adversely impact the nearby intersections. Additionally, the traffic signal can be connected to, and coordinated, to a future railroad crossing signal when needed.
- The applicant will be widening Shaw Road to provide a northbound bicycle lane.

CONTENTS

LIST OF APPENDICES

1.0 BACKGROUND

This report provides the Traffic Impact Analysis and findings prepared for the proposed commercial center located in Aumsville, Oregon. The development proposal includes a 124-room hotel, 97,400 sf of commercial space, and 56,000 sf of industrial office space. Appendix A contains the site plan.

The development proposal includes realigning Gordon Lane along the southern boundary of the site to align with Del Mar Drive. A traffic signal will be installed at this intersection. Access to the site will be via Gordon Lane.

1.1 SITE INFORMATION

The site is located along the eastern edge of 1ST St/Shaw Highway south of Santiam Highway, at Tax Lots 1800, 2000, 2100, and 2200 of Assessor's Map 08-1W-30. Figure 1 contains the vicinity map. The site is approximately 35.33 acres, is currently vacant, and is zoned ID-Interchange Development. The proposed development is allowed within the current zoning.

1.2 ANALYSIS SCOPE

The traffic study is performed in accordance with the City of Aumsville, Marion County, and ODOT standards and criteria. An intersection analysis was performed for the following adjacent intersections.

- Shaw Highway at Santiam Highway westbound ramps
- Shaw Highway at Santiam Highway eastbound ramps
- Shaw Highway/1ST Street at Access/Beaver Creek Drive
- 1ST Street at Del Mar Drive/Gordon Lane
- 1ST Street at Main Street

The operational analysis was performed at the study area intersections for the weekday AM and PM peak hours. The operational analysis is performed for the following conditions:

- Existing conditions, year 2023
- Anticipated Year of completion, year 2030, with and without the proposed development
- Five-year planning horizon, year 2035, with and without the proposed development
- Twenty-year planning horizon, year 2050, with and without the proposed development

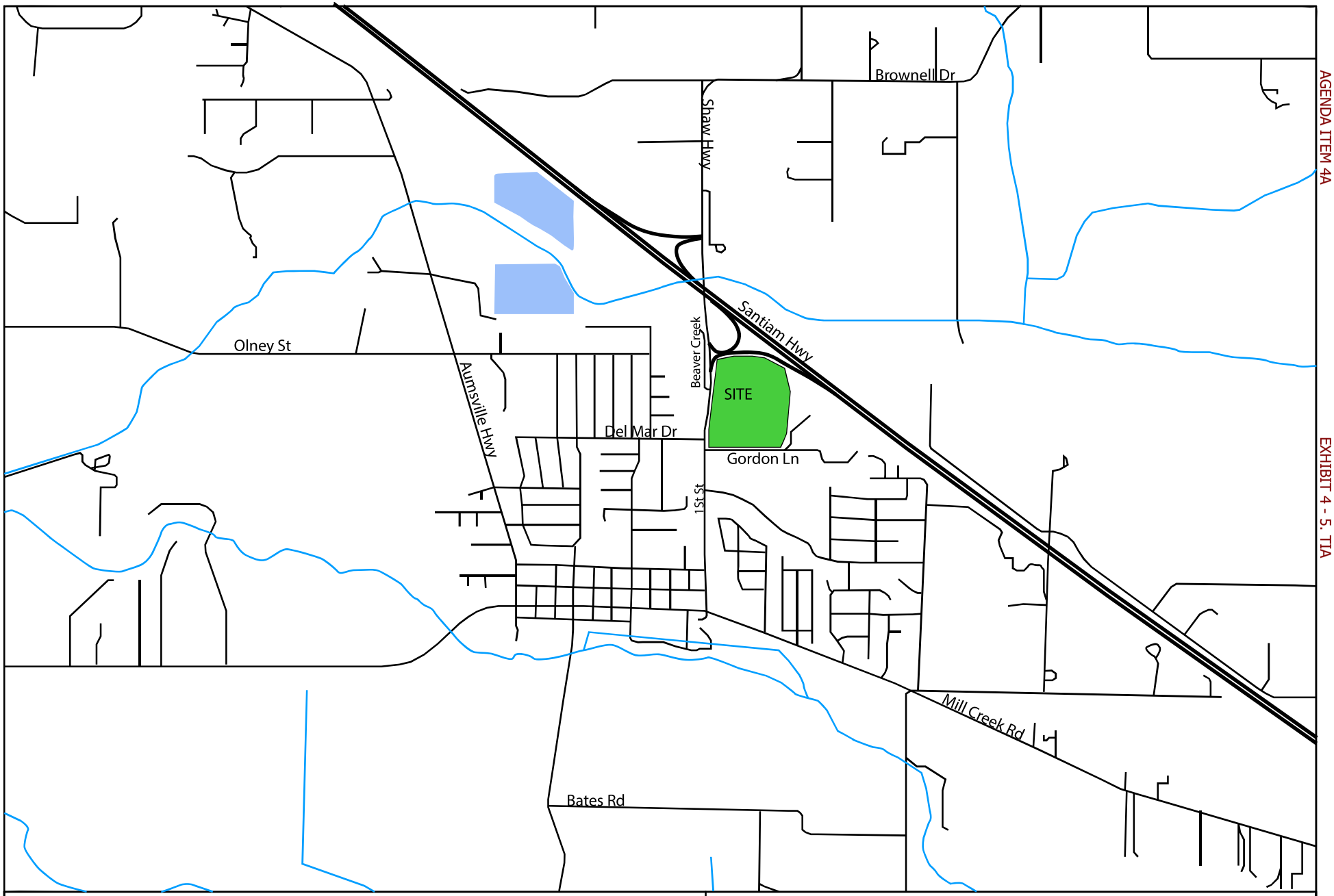

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Figure 1: Vicinity Map and Site Location

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2.0 EXISTING ROADWAY CONDITIONS

2.1 STREET NETWORK

Streets included within the study are Shaw Highway, Del Mar Drive, Gordon Lane, 1ST Street, and Main Street. The roadway characteristics within the study area are included in Table 1. Figure 2 illustrates the street classifications, intersection geometry, and intersection control within the study area.

TABLE 1: ROADWAY CHARACTERISTICS WITHIN STUDY AREA

Characteristic	Shaw Hwy	Del Mar Dr	Gordon Ln	1ST St	Main Street
Jurisdiction	Marion County	Aumsville	Aumsville	Marion County	Marion County
Functional Classification	Rural Major Collector	Urban Collector	Urban Collector	Urban Arterial	Urban Arterial
Posted Speed	55	25	Not Posted	45	
Lanes per Direction	1	1	1	1	1
Center Left Turn Lane	None	None	None	None	None
Restrictions in the Median	None	None	None	None	None
Bikes Lanes Present	Shoulders	None	None	Yes	Yes
Sidewalks Present	None	None	None	South of Del Mar	Yes
Transit Route	None	None	None	None	Yes
On-Street Parking	None	Yes	None	None	Yes

2.2 EXISTING INTERSECTION CONFIGURATION

The Study area intersection geometry and control for existing conditions is described in the following:

- **Shaw Highway at Santiam Highway Westbound Ramps:** This is a stop-controlled T-Intersection. The ramp has the stop control, and Shaw Highway is the free movement. There is one lane in each direction and no turn pockets.
- **Shaw Highway /1ST Street at Santiam Highway Eastbound Ramps:** This is a stop-controlled T-intersection. The ramp has the stop control, and 1ST Street is the free movement. There is one lane in each direction and a separate right turn lane on the ramp approach.
- **1ST Street at Del Mar Drive:** This is a stop-controlled T-Intersection. Del Mar Drive approach has the stop control, and 1ST Street is the free movement. The intersection is one lane in each direction with no turn pockets. There is an inactive railroad line approximately 200 feet west of the intersection. Gordon Lane is located approximately 160 feet to the south.

- **1ST Street at Main Street:** This is a 4-legged stop-controlled intersection with the north/south approaches as the stop control and the east/west approaches as the free movement. There is one lane in each direction with a separate left turn pocket for the eastbound approach. The south approach is a private driveway.

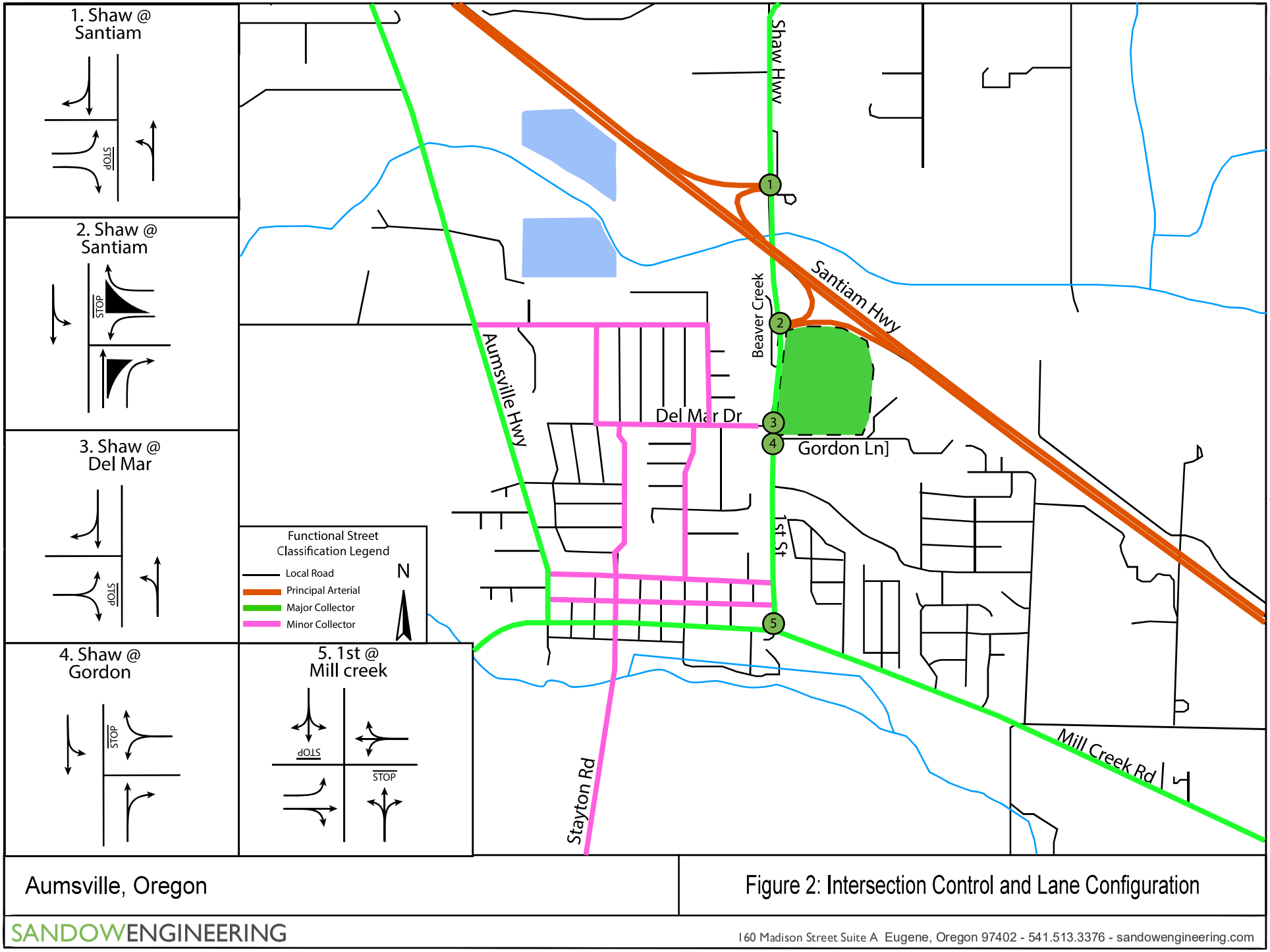

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Figure 2: Intersection Control and Lane Configuration

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3.0 PLANNED ROADWAY IMPROVEMENTS

The following planned roadway improvements are considered when evaluating the site access connection and any future improvements identified for this project.

3.1 DEL MAR DR AND GORDON LN AT 1ST ST

The development will realign the western section of Gordon Road to the north to align with Del Mar Drive at 1ST Street. A traffic signal will be installed at this intersection. The intersection is assumed to be constructed with one lane in the northbound direction, one lane in the southbound direction, left turn pockets on all approaches, and a separate right turn pocket on the Gordon Lane approach (westbound approach). The intersection was evaluated with the traffic signal and this lane configuration for the build analysis within this study. Section 6.0 provides the results of the analysis, and Section 9.0 further discusses the results of the evaluation and further recommendations.

3.2 IAMP IMPROVEMENTS

ODOT has identified future improvements to the Santiam Highway EB and WB ramp intersections as part of the OR22/Shaw Highway Interchange Management Plan. The improvements include:

- **Shaw Highway at EB Ramps:** Signalize, add SB left and 2nd WB left turn lane, widen 1ST Street to add 2nd northbound and 2nd southbound through lanes.
- **1ST Street at Del Mar Drive:** Install traffic signal, add 2nd northbound and 2nd southbound through lanes, align new road to east of 1ST St, add left turn lanes for all approaches, add WB right turn lane, improve railroad crossing.
- **1ST Street at Willamette Street:** Install a southbound left turn lane, construct a cross-section with tapers, bike lanes, and 2 lanes, and improve railroad gates.
- **1ST Street at Main Street:** Install a traffic signal, add bike lanes and sidewalk enhancements, and install automatic railroad gates.

3.3 TSP IMPROVEMENTS

The TSP has adopted the improvements identified within the IAMP. In addition to the IAMP improvements, the City has identified the following project:

- ST-3: Develop a Multi-use path on the east side of 1ST Street east of the drainage ditch from Willamette Street North.

4.0 CRASH ANALYSIS

A crash evaluation was performed for the study area intersections. The analysis investigates crash data available for the most recent 5 years, 1/1/2017-12/31/2021, to determine the crash rate in crashes per million entering vehicles and the type of crashes that occurred. The crash analysis

follows the Critical Crash Rate methodology outlined in ODOT's Analysis Procedures Manual. The calculated intersection crash rates are compared to the critical crash rates. The crash data is provided in Appendix B. The critical Crash Rate is illustrated in Table 2. Table 3 summarizes the crash data.

TABLE 2: INTERSECTION CRASH PATTERNS

Location	Intersection Type	Number of Crashes	AADT	MEV	Crash Rate*	Critical Crash Rate*	
Shaw at WB Ramps	Stop Control	3	3,650	6.66	0.45	0.88	Under
Shaw at EB Ramps	Stop Control	3	6,780	12.37	0.24	0.74	Under
1ST at Del Mar	Stop Control	5	6,470	11.81	0.42	0.75	Under
1ST at Main	Stop Control	7	7,710	14.07	0.50	0.71	Under
1ST at Gordon	Stop Control	0	5,190	9.47	0.00	0.00	Under

***(crashes/million entering vehicles)**

TABLE 3: INTERSECTION CRASH PATTERNS

Location	Number of Crashes	Types of Crashes					
		Head	Rear	Side	Turn	Other	Pedestrian/ Bike
Shaw at WB Ramps	3	0	0	1	2	0	0
Shaw at EB Ramps	3	0	1	0	2	0	0
1ST at Del Mar	5	0	3	0	1	1	0
1ST at Main	7	0	1	0	3	2	1
1ST at Gordon	0	0	0	0	0	2	0

The critical crash rates are not exceeded for any of the study area intersections.

There were no reported crashes at the intersection of 1ST Street at Gordon Lane during the past 5 years.

There was one crash reported involving a bicycle. This crash occurred on November 15, 2018, between 3 PM and 4 PM. The crash involved a vehicle traveling eastbound and a bicycle crossing Main Street. The error was assigned to the driver for failure to yield to a bicyclist.

There are no improvements recommended concerning crash rates or patterns.

5.0 DEVELOPMENT TRIP GENERATION AND DISTRIBUTION

The trips to this site are estimated using The ITE Trip Generation Manual 11th edition. Table 4 provides the AM peak hour trip generation for this site, Table 5 provides the PM peak hour trip generation, and Table 6 provides the daily trip generation.

ITE Land Use 310- Hotel is used for the proposed hotel. For this land use, the independent variable is the total number of rooms. Following the methodology, the fitted curve equation is the appropriate choice for estimating trips for this land use.

ITE Land Use 821- Shopping Plaza (40k-150k) is used to estimate the trips for the retail center. This land use is described as "an integrated group of commercial establishments." The retail plaza typically has a mix of commercial uses, including larger anchor stores, offices, restaurants, drive-through restaurants, movie theaters, banks, and health clubs as examples. The trips are estimated based on the total square footage.

ITE Land Use 130- Industrial Park is used to estimate the trips for industrial office use. This land use is described as having multiple small businesses with a mix of office, manufacturing, warehousing, and service. The trips are estimated based on the total square footage.

TABLE 4: TRIP GENERATION- AM PEAK HOUR

Land Use	Size	Rate	Trips	In	Out
310- Hotel	124 Rooms	0.5(x)-7.45	55	(56%) 31	(44%) 24
821- Shopping Plaza	97.4 ksf	1.73	169	(62%) 105	(38%) 64
130- Industrial Park	56 ksf	0.34	19	(81%) 15	(19%) 4
		TOTAL:	**242**	**151**	**92**

TABLE 5: TRIP GENERATION- PM PEAK HOUR

Land Use	Size	Rate	Trips	In	Out
310- Hotel	124 Rooms	0.74(x)-27.89	64	(51%) 33	(49%) 31
821- Shopping Plaza	97.4 ksf	5.19	506	(49%) 248	(51%) 258
130- Industrial Park	56 Ksf	0.34	19	(22%) 4	(78%) 15
		TOTAL:	**589**	**285**	**304**

TABLE 6: TRIP GENERATION- DAILY TRIPS

Land Use	Size	Rate	Trips	In	Out
310- Hotel	124 Rooms	7.99	991	(50%) 496	(50%) 495
821- Shopping Plaza	97.4 ksf	67.52	6,576	(50%) 3,288	(50%) 3,288
130- Industrial Park	56 ksf	3.37	189	(50%) 94	(50%) 95
		TOTAL:	**7,756**	**3,878**	**3,878**

The existing travel patterns from the traffic counts are used to estimate how the development trips will use the surrounding transportation system to access the site. The trips are distributed through the study area based on existing travel patterns with modifications for reasonable origins/destinations.

- 45% west on Santiam Highway
- 10% east on Santiam Highway
- 15% west on Del Mar
- 20% south on 1ST south of Del Mar
- 10% north on Shaw north of Santiam Highway

The traffic volumes were distributed within the study area according to the percentages above and are illustrated in Figure 3 for the AM peak hour and Figure 4 for the PM peak hour.

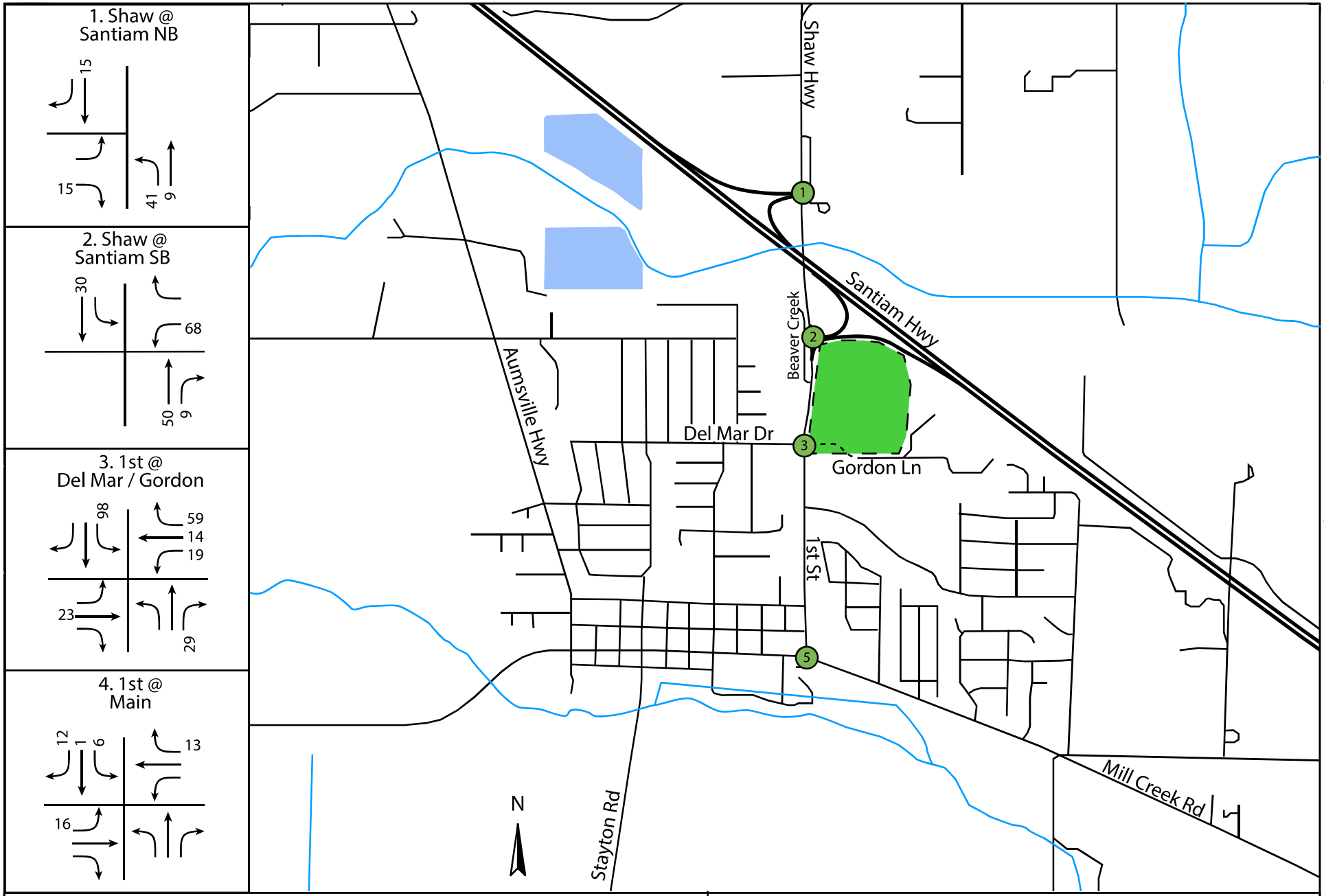

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Figure 3: AM Development Trip Distribution

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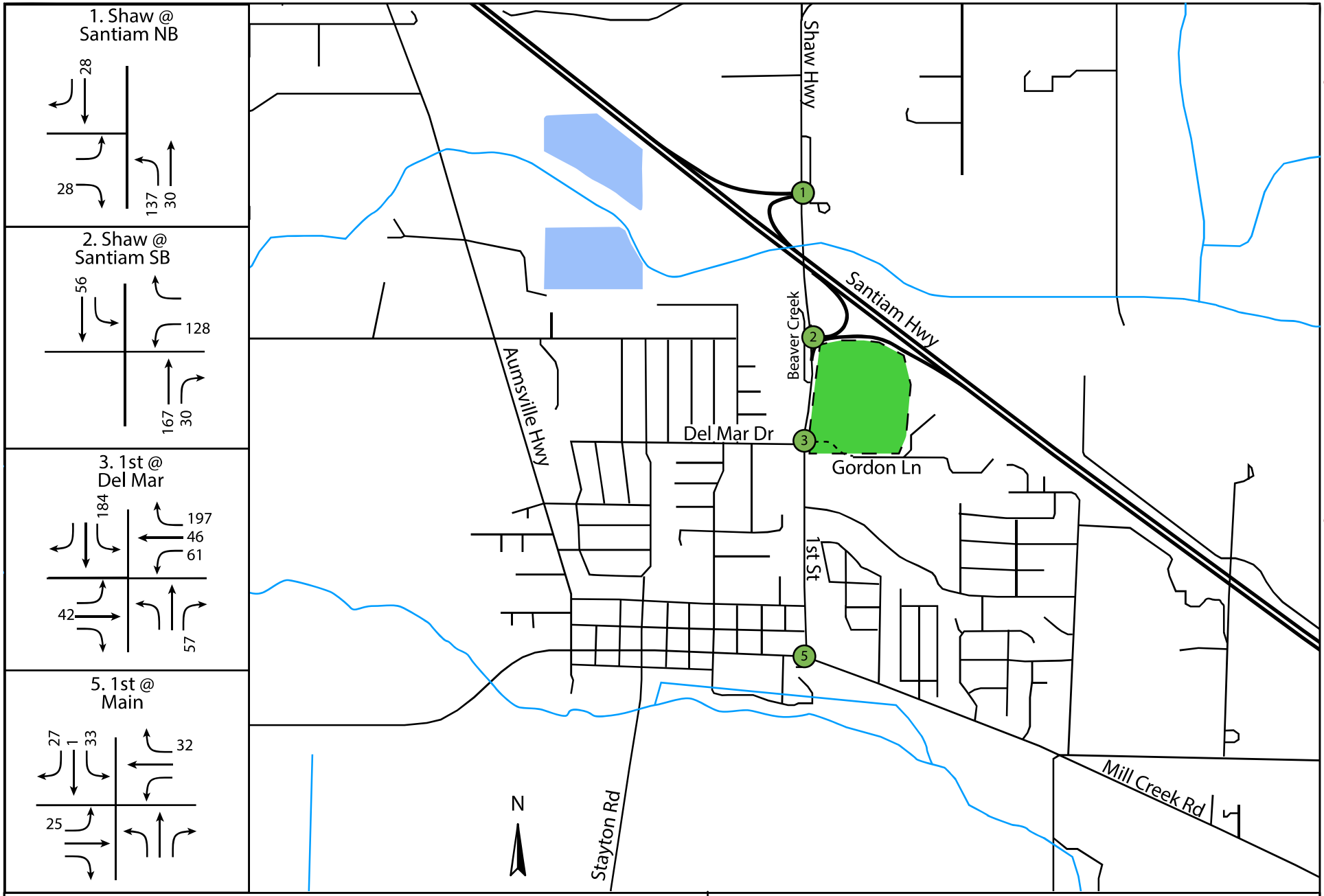

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Figure 4: PM Development Trip Distribution

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6.0 BACKGROUND TRAFFIC VOLUMES

6.1 INTERSECTION COUNTS

Traffic volumes were collected during August 2023 and December 2022. Counts were collected during the AM peak period of 7:00-9:00 AM and the PM peak period of 4:00-6:00 PM. The AM peak hour occurs from 7:00-8:00 AM, and the PM peak hour occurs from 4:30-5:30 PM.

The traffic volumes are included in Appendix C.

6.2 SEASONAL ADJUSTMENT

The application of seasonal adjustment factors account for the fact that traffic volumes fluctuate from month to month due to changes in recreational, commuter, and tourist behavior, etc. The design hour traffic volumes are adjusted to reflect traffic conditions on roadways during the peak month of the year using a seasonal adjustment factor.

The seasonal adjustment was determined using the methodology outlined by ODOT's *ANALYSIS PROCEDURES MANUAL (APM)*. There is an Automated Traffic Recorder (ATR 24-005) located on Santiam Hwy, approximately 1 mile east of the interchange. The ATR data is used to calculate the seasonal adjustment factor. The seasonal adjustment factor for the December count is 1.22 and 1.0 for the August count. The seasonal adjustment calculation is included in Appendix C.

6.3 FUTURE YEAR BACKGROUND VOLUMES

The proposed site development is projected to be completed by the year 2030. Consistent with the traffic impact analysis criteria, the intersections were evaluated for the existing year-year 2023, the year of completion-year 2030, a 5-year planning horizon-year 2035 consistent with ODOT criteria, and a 20-year planning horizon-year 2050 consistent with Marion County criteria. To account for naturally occurring traffic increases between the count year and the future analysis year, an annual growth rate was applied. The Transportation System Plan estimates a growth rate of 4-7% per year between the year 2008 and year 2030. However, this growth rate includes the development of this parcel. If this growth rate is used, it would result in a "double counting" of vehicle trips when the development trips are added to the background trips. Therefore, the growth rate is estimated using historical growth patterns. The growth rate is calculated by comparing the 2008 traffic volumes from the TSP to the recent 2023 collected counts. The resulting growth rate is less than 1%. To be conservative, a 1% growth rate is applied.

6.4 FINAL TRAFFIC VOLUMES

The existing traffic volumes were adjusted according to the methodology described above. Appendix C provides the traffic volume calculations. The development trips are added to the background traffic to volume to represent the build conditions. The traffic volumes are provided in the following figures:

- Figure 5 illustrates the year 2023 AM peak hour background traffic volumes.

- Figure 6 illustrates the year 2023 PM peak hour background traffic volumes.
- Figure 7 illustrates the year 2030 AM peak hour background traffic volumes.
- Figure 8 illustrates the year 2030 PM peak hour background traffic volumes.
- Figure 9 illustrates the year 2035 AM peak hour background traffic volumes.
- Figure 10 illustrates the year 2035 PM peak hour background traffic volumes.
- Figure 11 illustrates the year 2050 AM peak hour background traffic volumes.
- Figure 12 illustrates the year 2050 PM peak hour background traffic volumes.
- Figure 13 illustrates the year 2030 AM peak hour traffic volumes with development.
- Figure 14 illustrates the year 2030 PM peak hour traffic volumes with development.
- Figure 15 illustrates the year 2035 AM peak hour traffic volumes with development.
- Figure 16 illustrates the year 2035 PM peak hour traffic volumes with development.
- Figure 17 illustrates the year 2050 AM peak hour traffic volumes with development.
- Figure 16 illustrates the year 2050 PM peak hour traffic volumes with development.

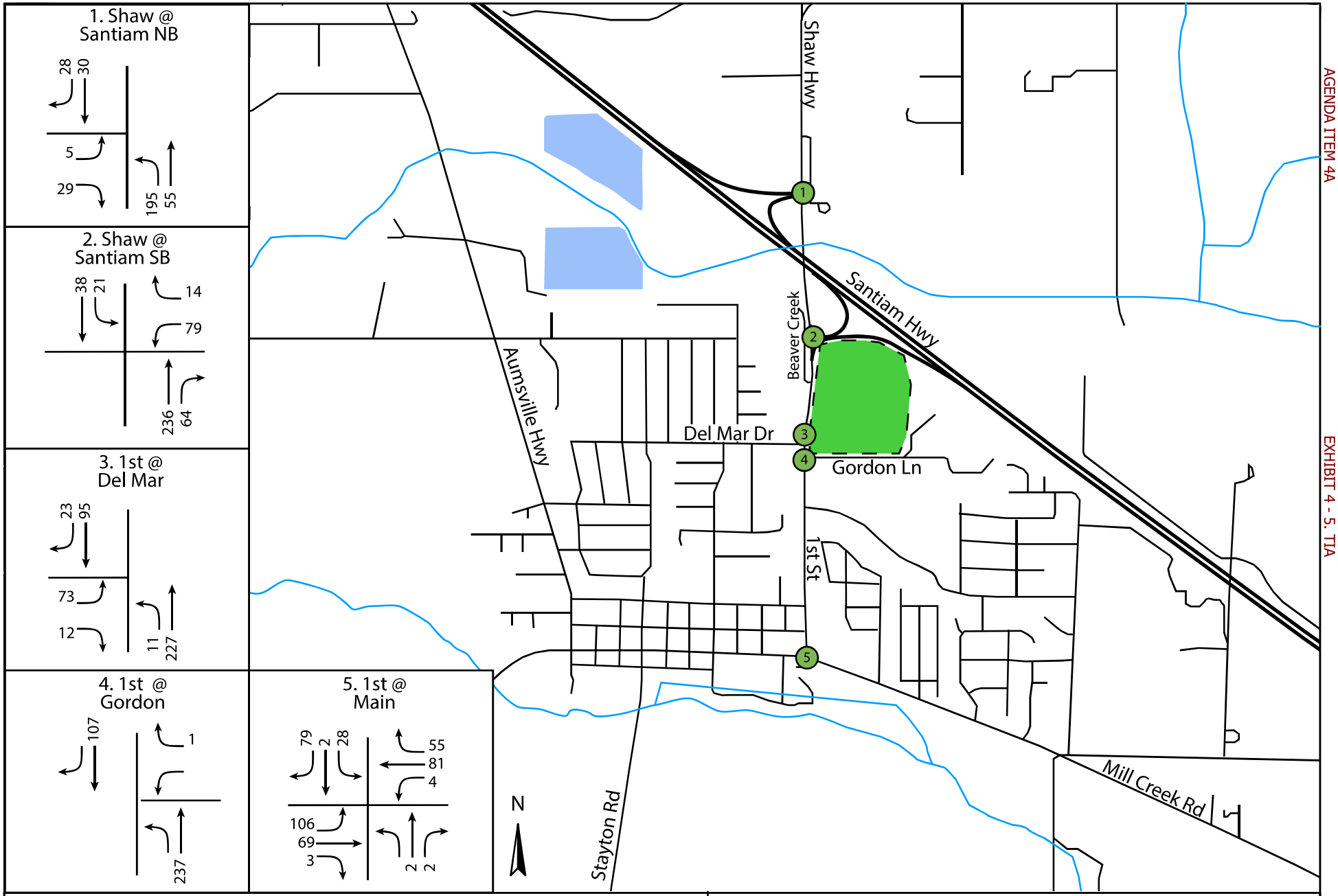

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Figure 5: Year 2023 AM Peak Hour Background Traffic Volumes

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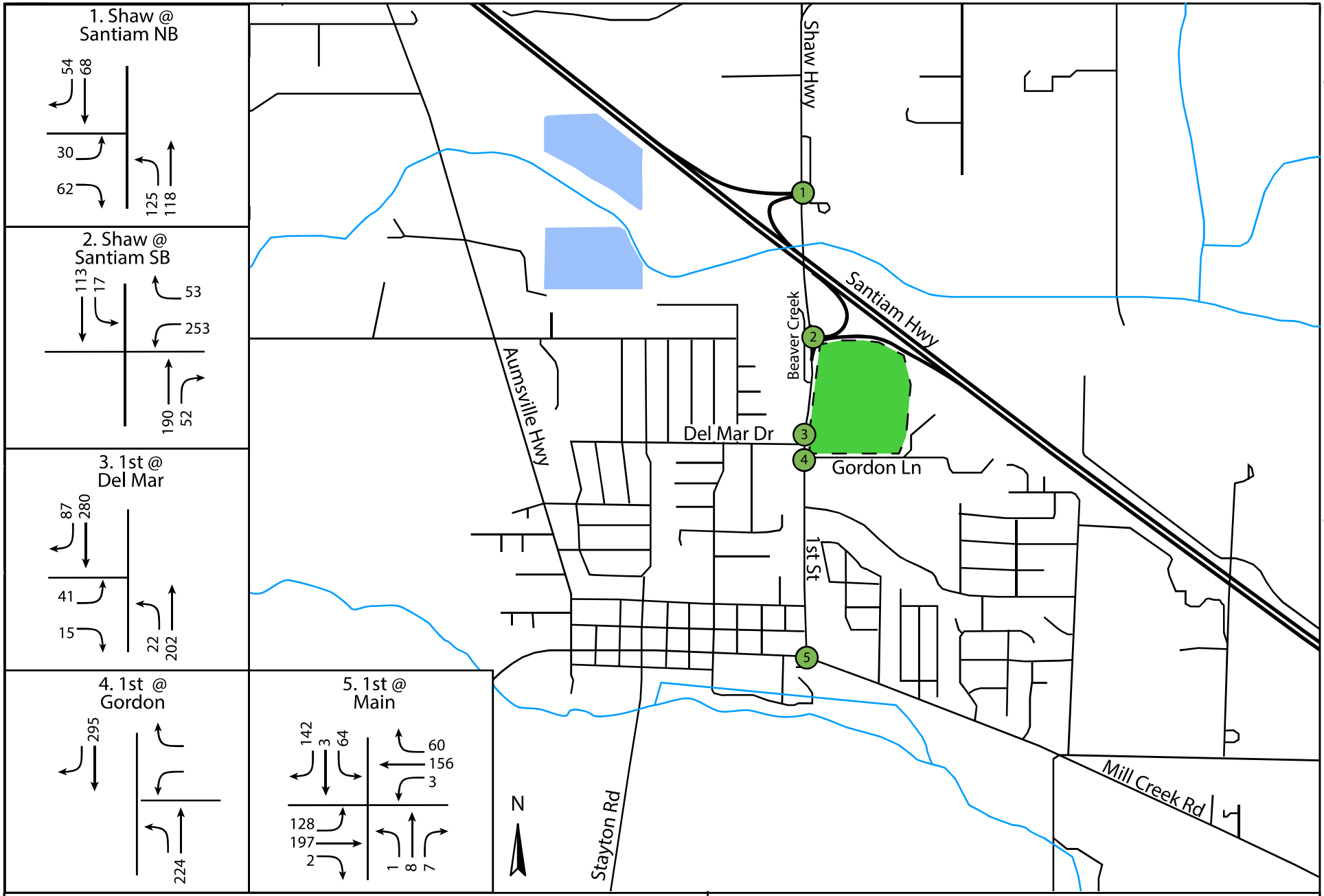

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Figure 6: Year 2023 PM Background Traffic Volumes

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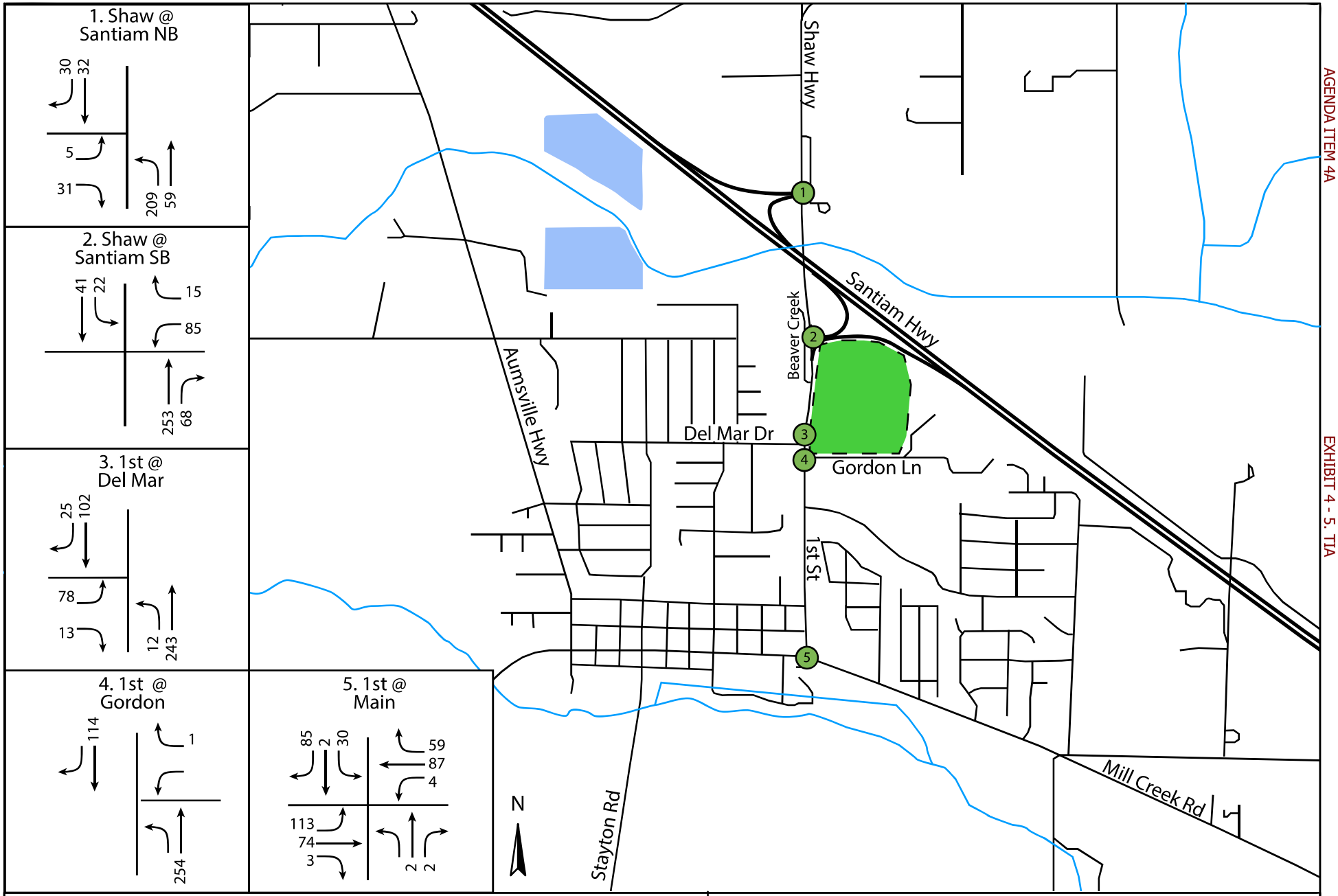

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Figure 7: Year 2030 AM Peak Hour Background Traffic Volumes

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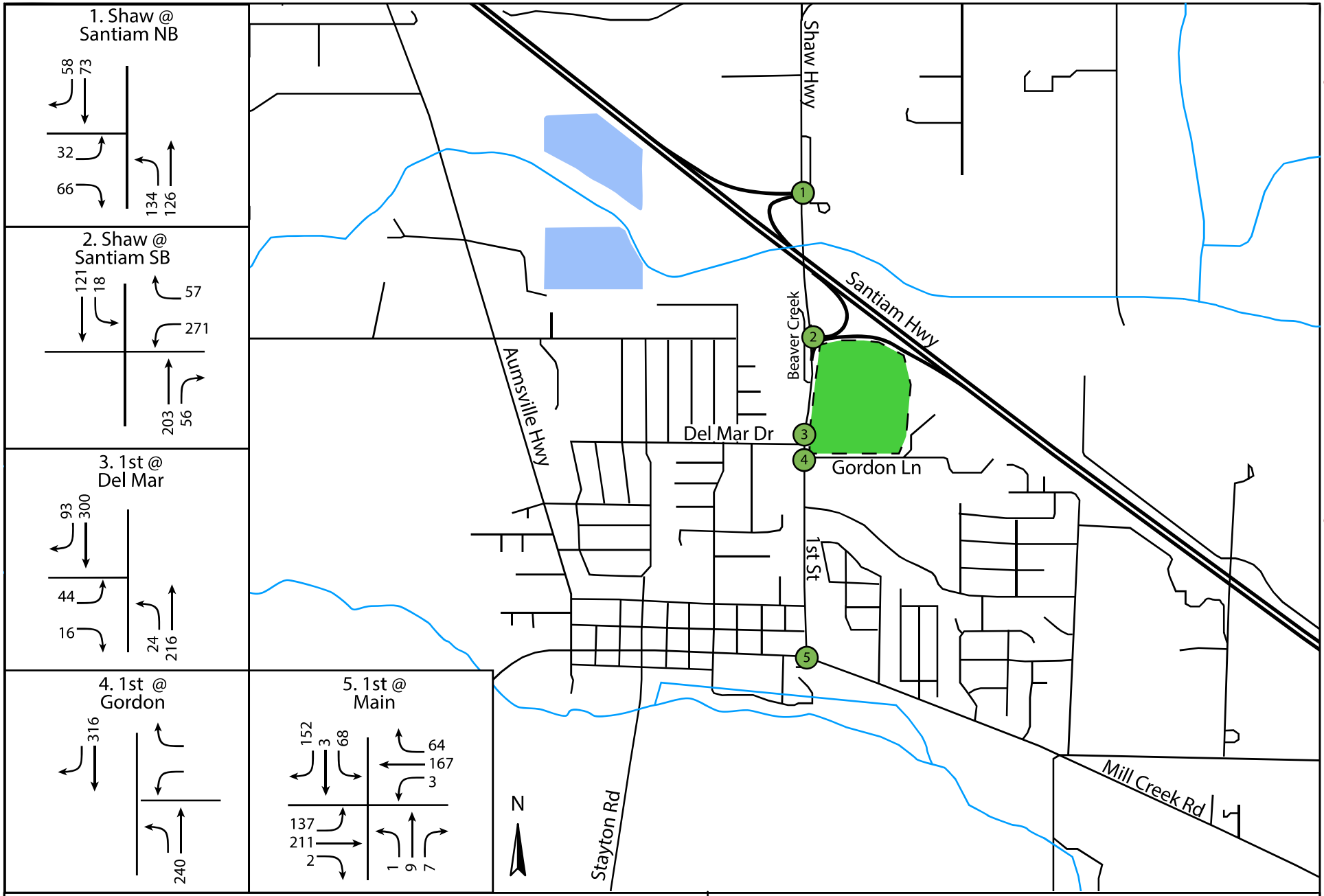

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Figure 8: Year 2030 PM Background Traffic Volumes

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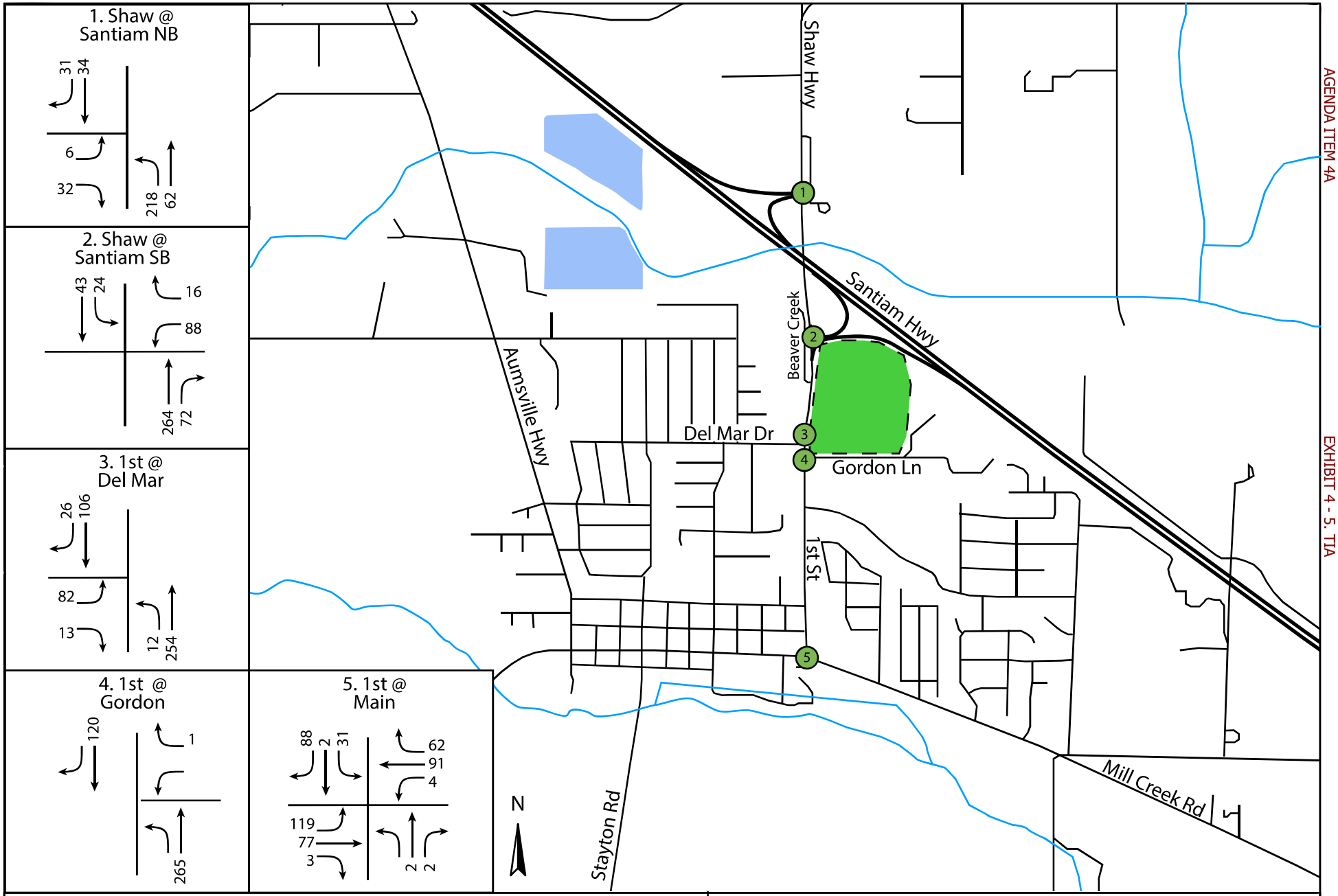

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Figure 9: Year 2035 AM Peak Hour Background Traffic Volumes

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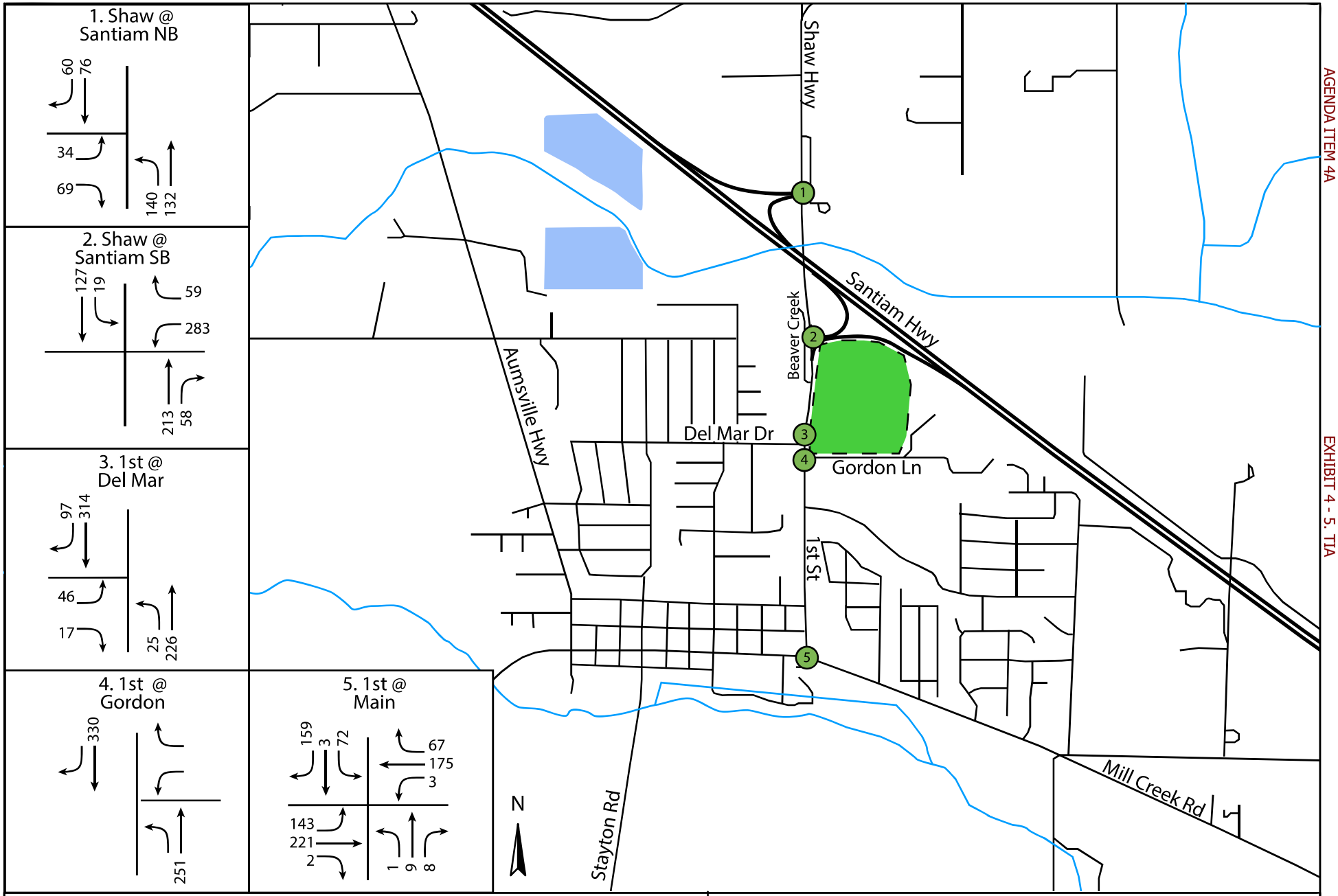

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Figure 10: Year 2035 PM Background Traffic Volumes

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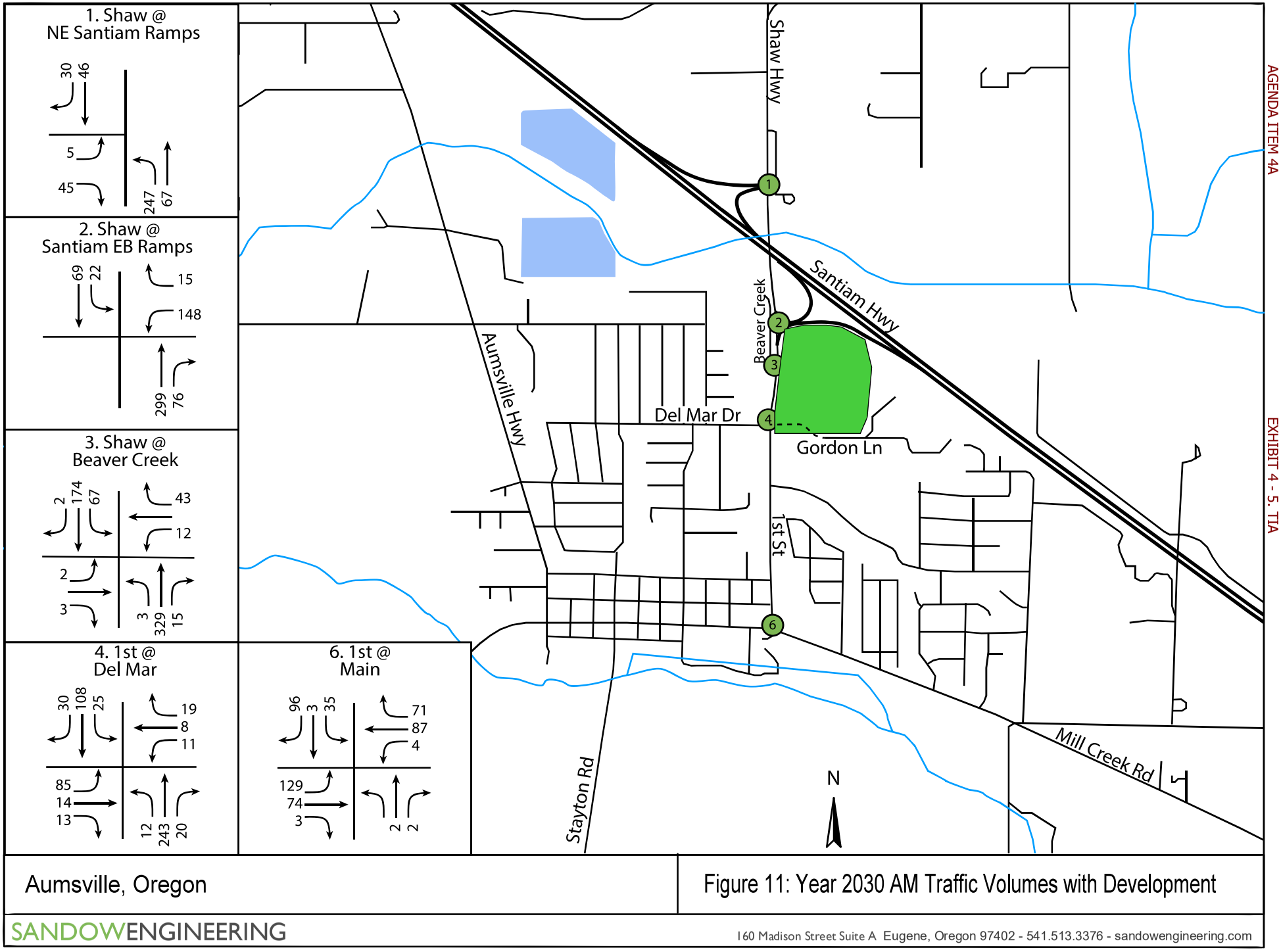

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Figure 11: Year 2030 AM Traffic Volumes with Development

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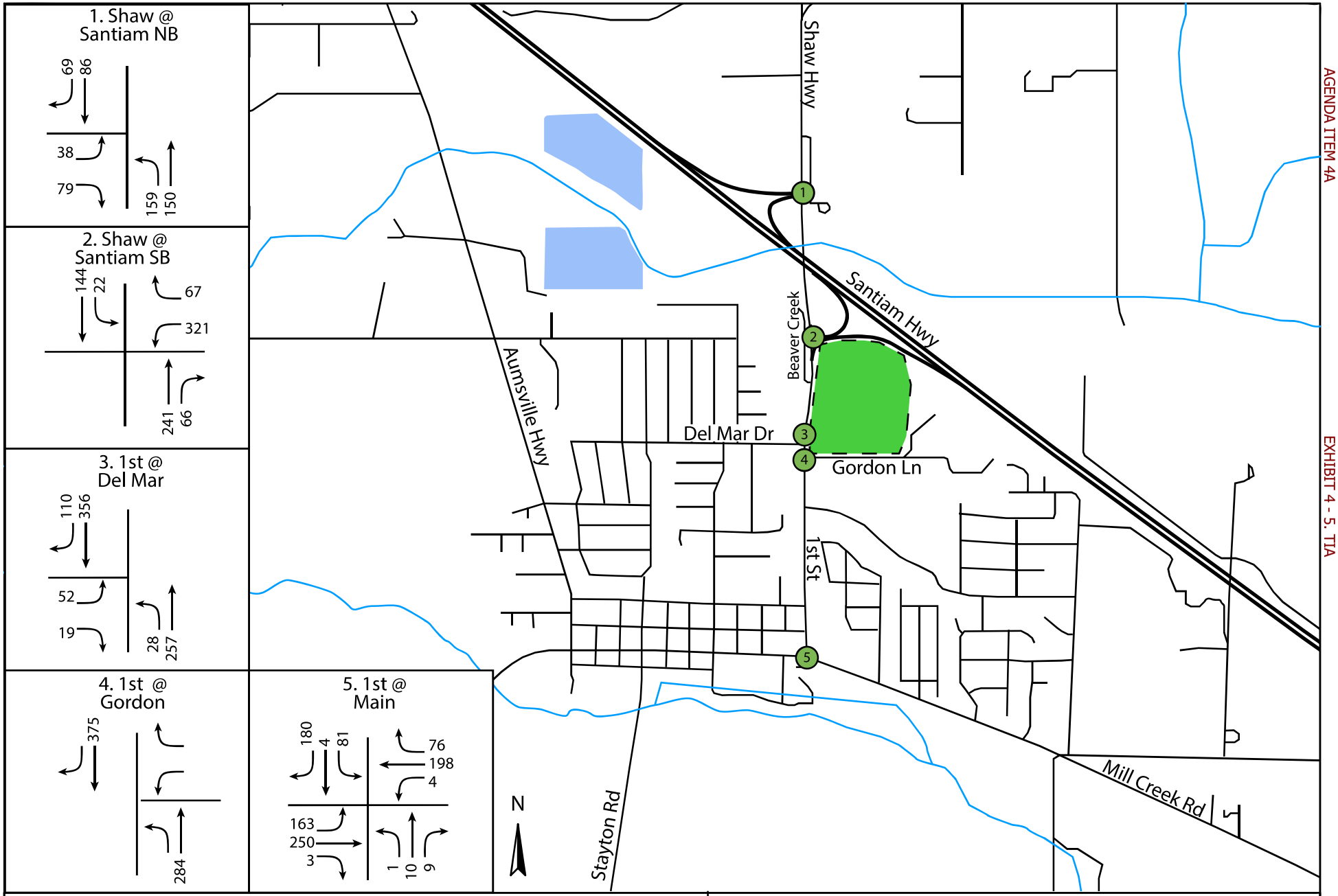

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Figure 12: Year 2050 PM Background Traffic Volumes

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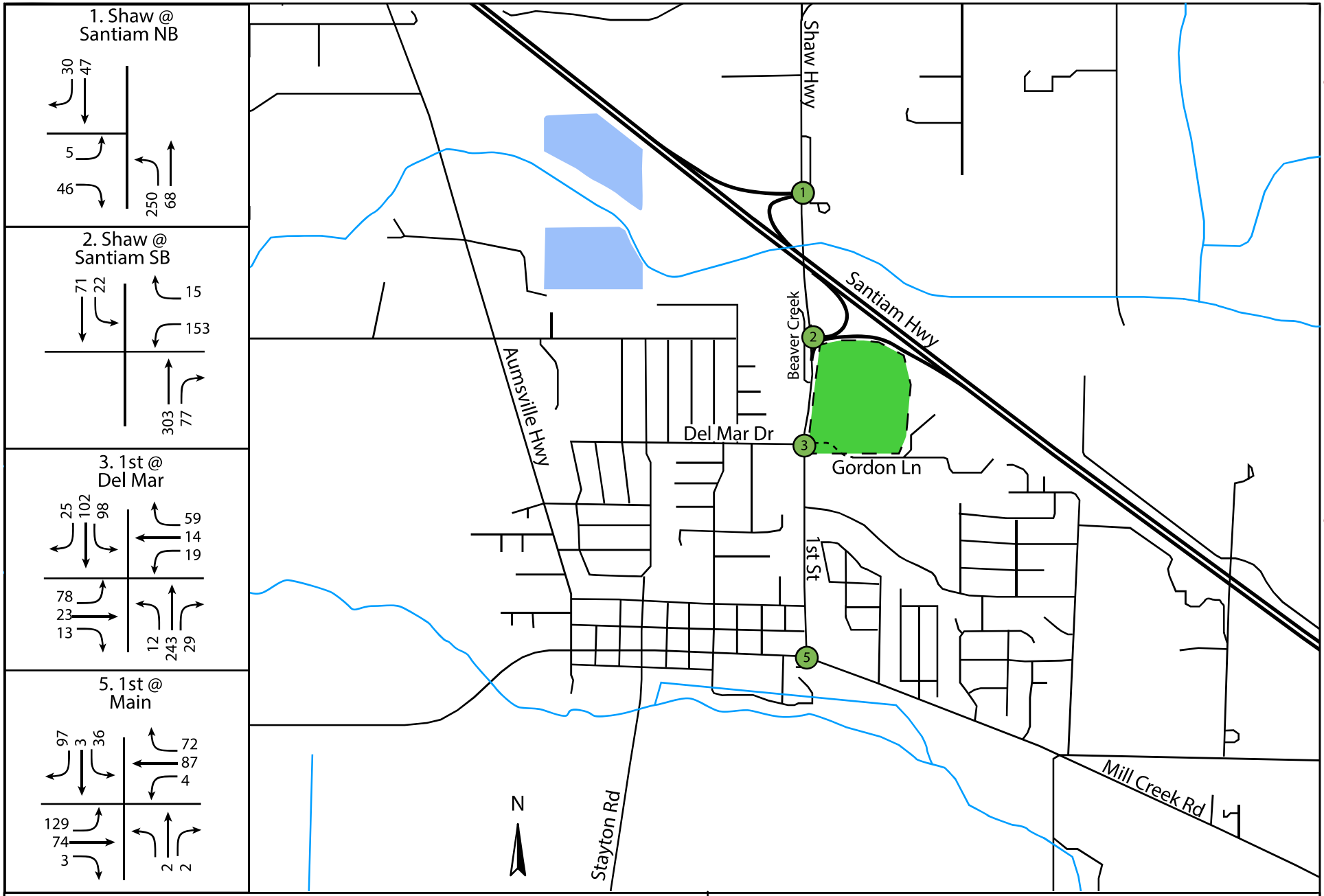

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Figure 13 :Year 2030 AM Traffic Volumes with Development

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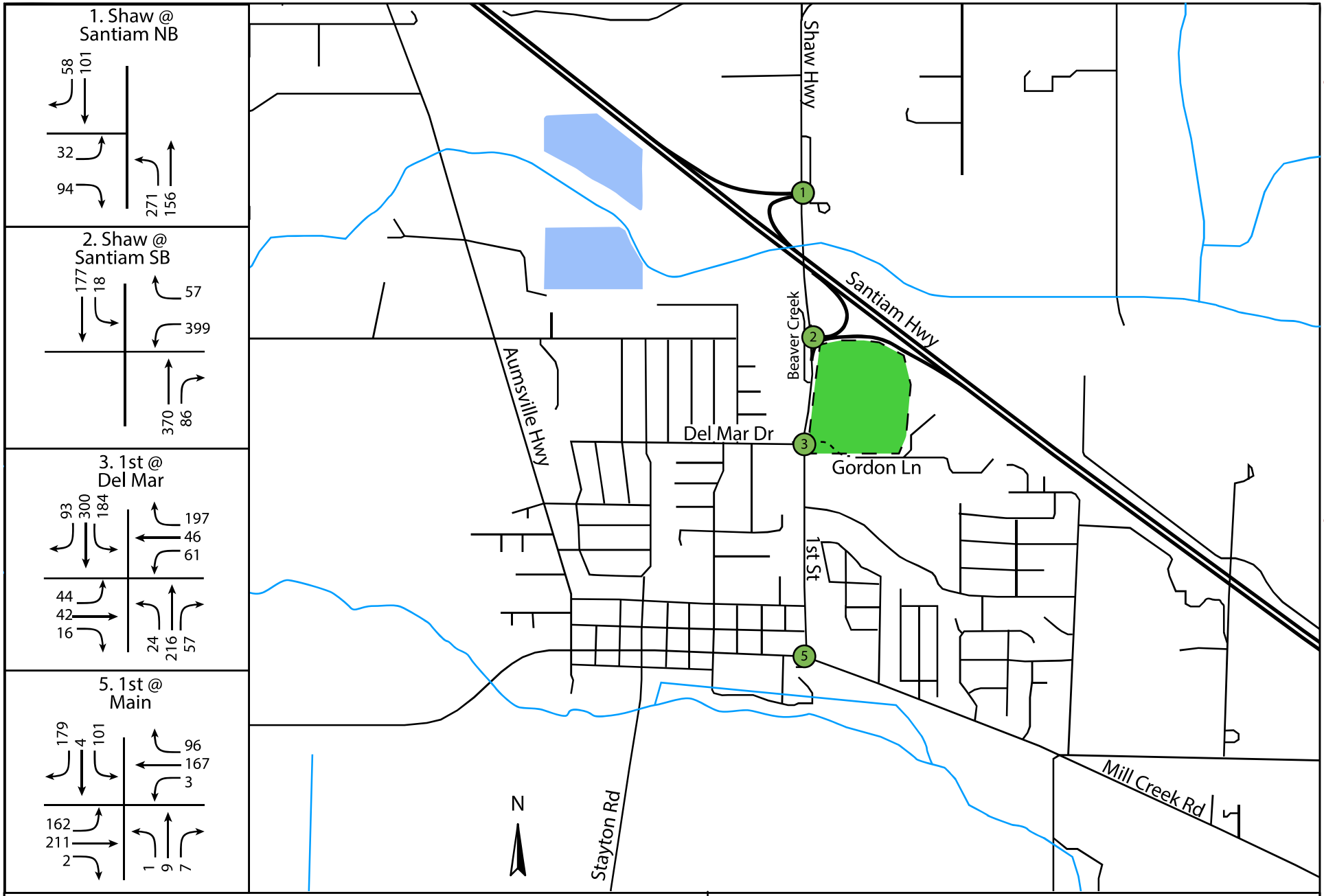

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Figure 14: Year 2030 PM Traffic Volumes with Development

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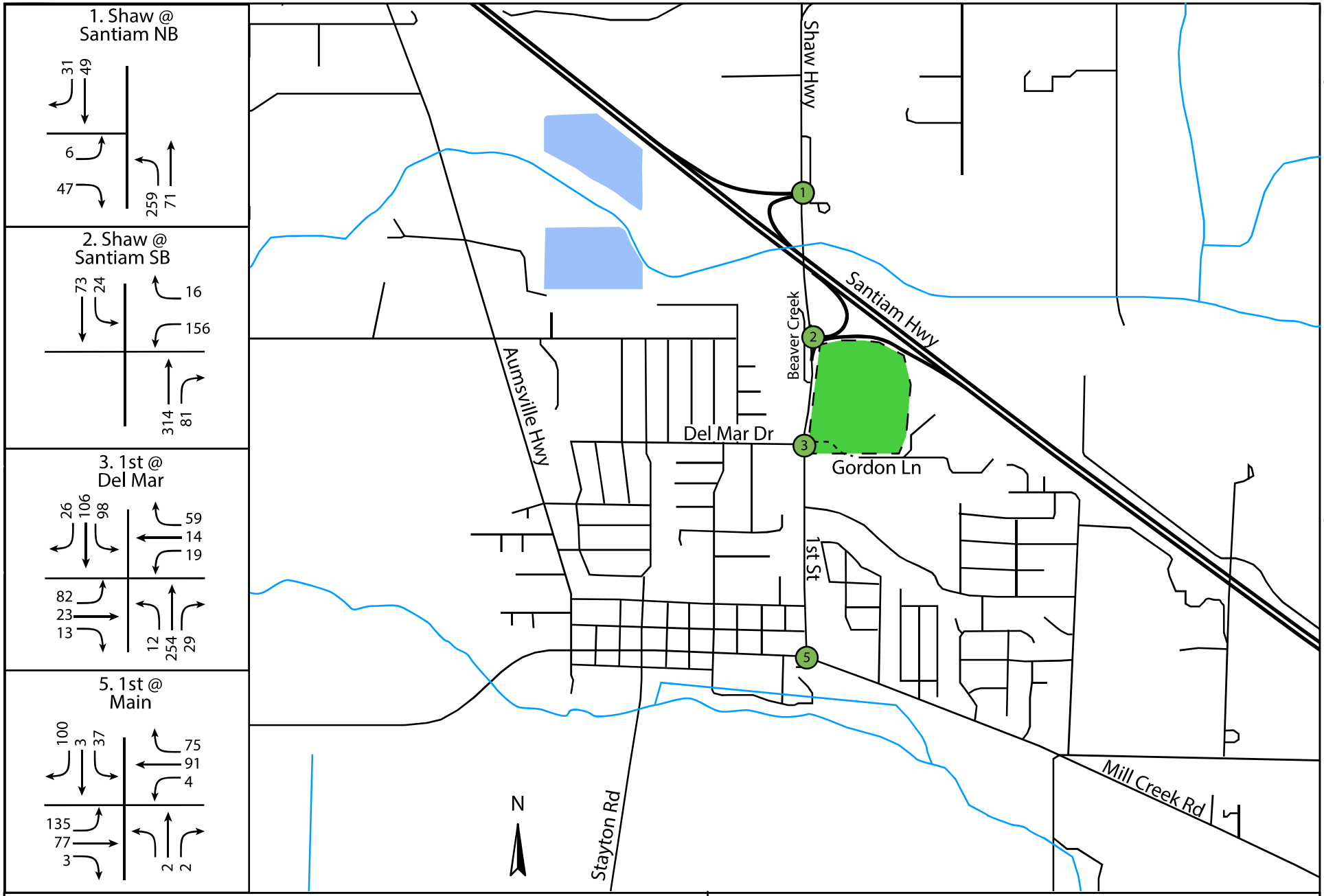

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Figure 15: Year 2035 AM Traffic Volumes with Development

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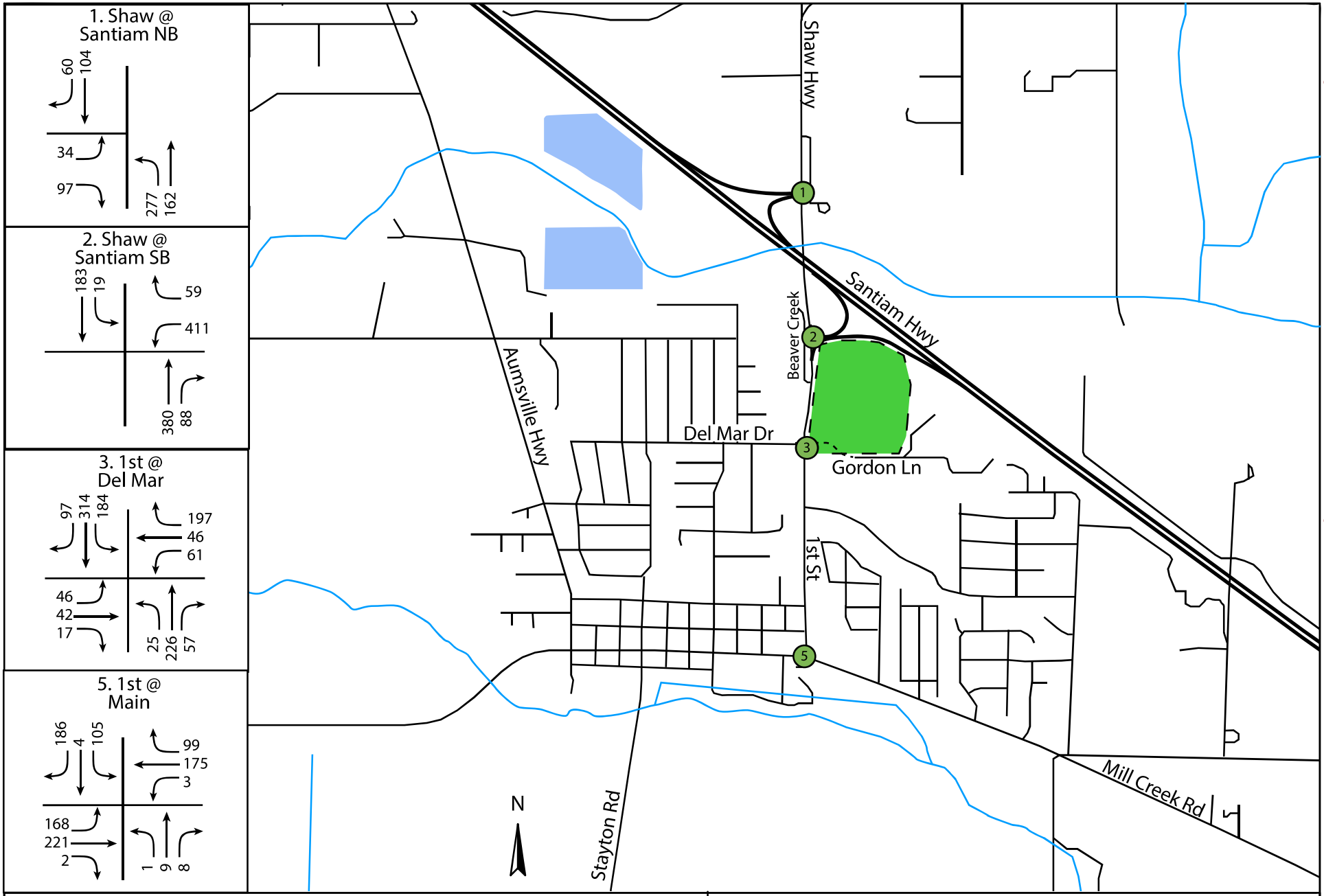

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Figure 16: Year 2035 PM Traffic Volumes with Development

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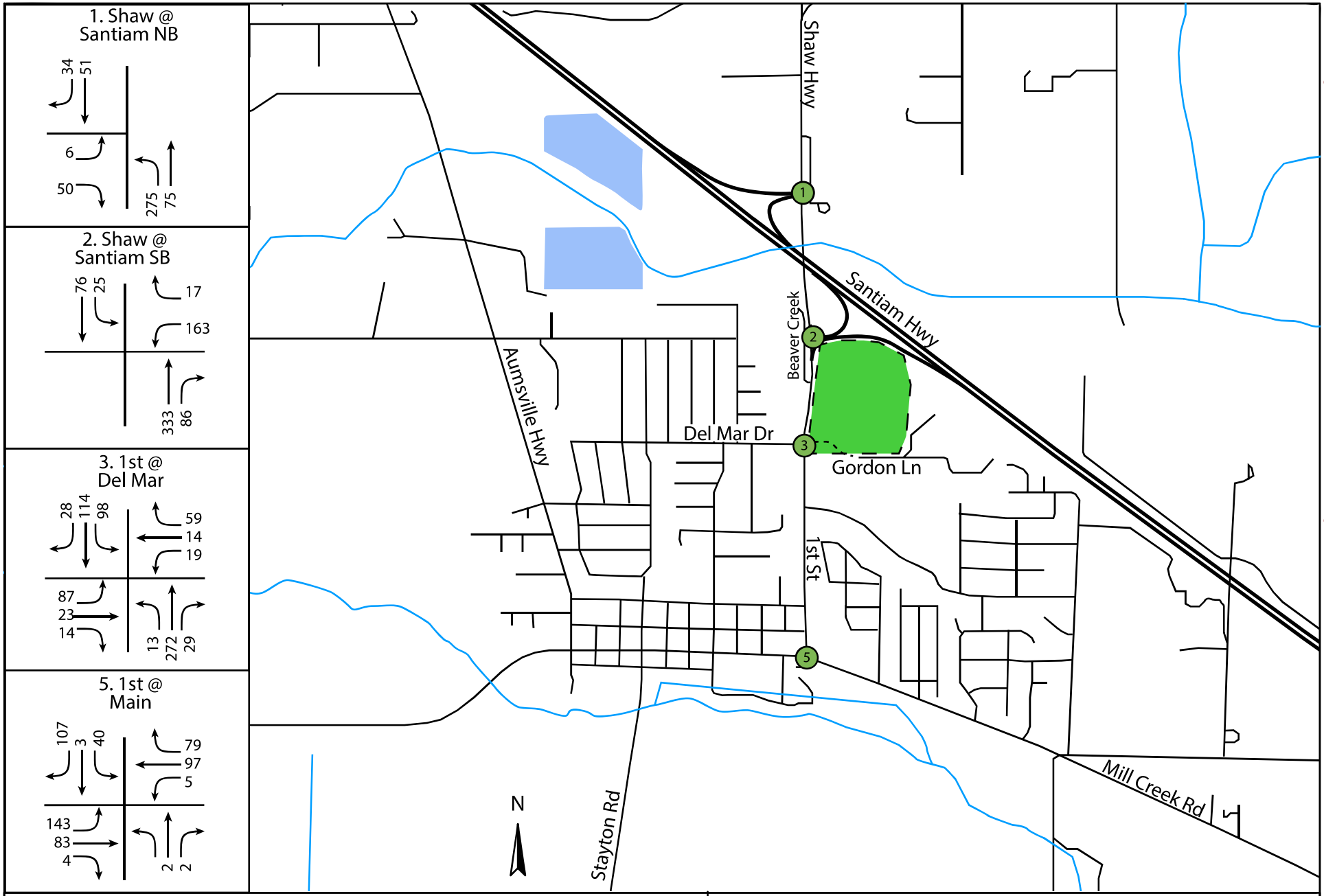

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Figure 17: Year 2050 AM Traffic Volumes with Development

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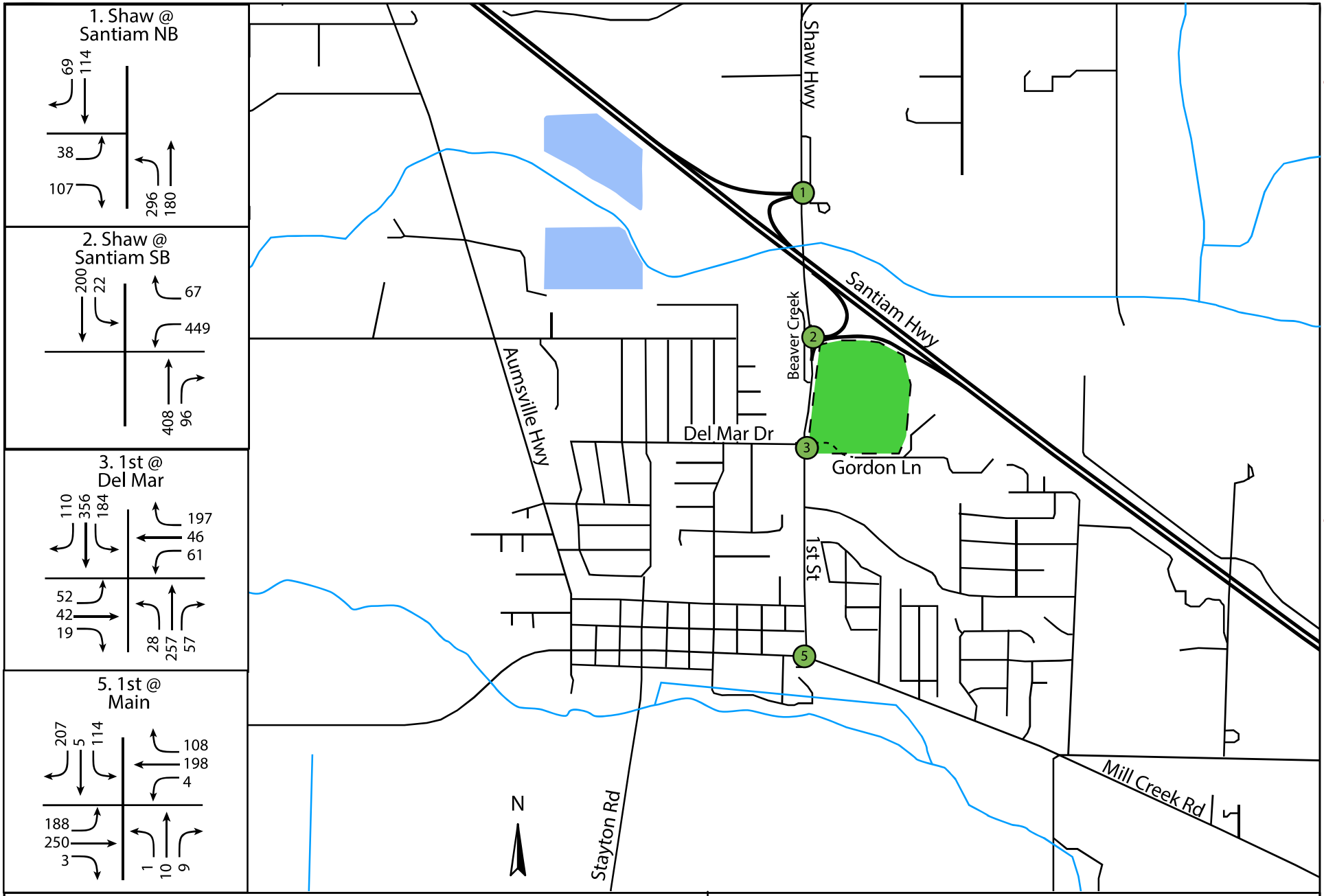

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Figure 18: Year 2050 PM Traffic Volumes with Development

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7.0 INTERSECTION ANALYSIS

7.1 PERFORMANCE MEASURES

The Santiam Hwy Ramps intersections are under the jurisdiction of ODOT. The primary measure of performance for intersections under ODOT's jurisdiction is volume-to-capacity ratio (v/c). The volume-to-capacity ratio describes the capability of an intersection to meet volume demand based on the maximum number of vehicles that could be served in an hour. The ODOT v/c standards are defined by the *1999 Oregon Highway Plan* and are based on roadway classification and speed.

Marion Country has a v/c standard of 0.85 for signalized and all-way stop controlled intersections.

The City of Aumsville and Marion County use a Level of Service (LOS) standard for intersections under their jurisdiction. The LOS standard is based on the Highway Capacity Manual (HCM) defined level of service (LOS). LOS is a concept developed to quantify the degree of comfort (including such elements as travel time, number of stops, total amount of stopped delay, and impediments caused by other vehicles) afforded to drivers as they travel through an intersection or along a roadway segment. It was developed to quantify the quality of service of transportation facilities.

LOS is based on average delay, defined as the average total elapsed time from when a vehicle stops at the end of a queue until the vehicle departs from the stop line. Average delay is measured in seconds per vehicle per hour and is then translated into a grade or "level of service" for each intersection. LOS ranges from A to F, with A indicating the most desirable condition and F indicating the most unsatisfactory condition. The minimum LOS standard is D for signalized intersections, and LOS E for stop-controlled intersections.

The LOS criteria, as defined by the Highway Capacity Manual, for intersections, are provided in Table 7.

TABLE 7: HCM LEVEL OF SERVICE FOR INTERSECTIONS

	Stopped Delay Per Vehicle (Seconds per Vehicle)	
	Unsignalized Intersections	**Signalized Intersections**
A	≤ 10.0	≤ 10
B	> 10.0 and ≤ 15.0	> 10 and ≤ 20
C	> 15.0 and ≤ 25.0	> 20 and ≤ 35
D	> 25.0 and ≤ 35.0	> 35 and ≤ 55
E	> 35.0 and ≤ 50.0	> 55 and ≤ 80
F	> 50.0	> 80

7.2 INTERSECTION ANALYSIS RESULTS

A performance analysis was conducted for the studied intersections for the Years 2023, 2030, and 2035 conditions during the AM and PM peak hours. The intersection evaluation was performed using Synchro 10 utilizing HCM 6 Methodology. The results are shown in Table 8 for the AM peak hour and Table 9 for the PM peak hour. The SYNCHRO outputs are provided in Appendix D.

TABLE 8: INTERSECTION PERFORMANCE: WEEKDAY AM PEAK HOUR

Intersection	Mobility Standard v/c	2023 Background	2030 Background	2030 Build	2035 Background	2035 Build	2050 Background	2050 Build
Shaw at WB Ramps	0.85	0.16	0.17	0.21	0.18	0.22	0.20	0.23
Shaw at EB Ramps	0.85	0.14	0.15	0.31	0.16	0.32	0.18	0.35
1ST at Del Mar/Gordon	D* 0.85	B	B	B 0.48	B	B 0.49	B	B 0.52
1ST at Main	E	B	B	B	B	B	B	B

Results reported for critical movement at stopped controlled intersections

*v/c standard applies in the build conditions with a signal.

As illustrated in Table 8, the intersection will meet the applicable mobility standards with the addition of development trips for the AM Peak Hour.

The intersection of 1st Street at Del Mar was analyzed with Gordon Lane realigned to 1st Street and a traffic signal during the build conditions. During the background condition, the intersection was analyzed under the existing layout and stop control. With a traffic signal, the intersection will operate at LOS B.

TABLE 9: INTERSECTION PERFORMANCE: WEEKDAY PM PEAK HOUR

Intersection	Mobility Standard v/c	2023 Background	2030 Background	2030 Build	2035 Background	2035 Build	2050 Background	2050 Build
Shaw at WB Ramps	0.85	0.14	0.16	0.27	0.17	0.29	0.20	0.35
Shaw at EB Ramps	0.85	0.41	0.45	**0.90**	0.48	**0.95**	0.59	**1.12**
1ST at Del Mar/Gordon	D* 0.85	B	B	B 0.54	B	B 0.55	C	B 0.58
1ST at Main	E	C	C	C	C	D	C	E

Results reported for critical movement at stopped controlled intersections

*v/c standard applies in the Build conditions with a signal.

As illustrated in Table 9, the intersections will meet the applicable mobility standards with the addition of development trips, with the exception of the intersection of Shaw at the EB Ramps.

The intersection of Shaw Highway at the EB Ramps is projected to have a v/c for the westbound left turn lane that exceeds the allowed standard of 0.85. Mitigation for this intersection is further discussed in Section 10.0.

As stated previously, the intersection of 1ST Street at Del Mar was analyzed with Gordon Lane realigned to 1ST Street and a traffic signal during the build conditions. During the background conditions, the intersection was analyzed under the existing layout and stop control. With a traffic signal, the intersection will operate at a LOS B.

8.0 QUEUE ANALYSIS

A queuing analysis was conducted for the studied intersections. The analysis was performed using SimTraffic, a microsimulation software tool that uses the HCM-defined criteria to estimate the queuing of vehicles within the study area. The average and 95th percentile queuing results are illustrated in Tables 10 and 11 for the AM Peak Hour and Table 12 and 13 for the PM peak hour. The SimTraffic outputs are provided in Appendix E.

TABLE 10: INTERSECTION QUEUING: AM PEAK HOUR

Intersection			Available Storage (Feet)	2023 Background (Feet)		2030 Background (Feet)		2030 Build (Feet)		2035 Background (Feet)		2035 Build (Feet)	
				95th	Average	95th	Average	95th	Average	95th	Average	95th	Average
Shaw at Westbound ramps	EB	LR	500	50	25	50	25	50	25	50	25	50	50
	NB	LT	500	50	25	50	25	50	25	50	25	75	25
	SB	TR	1300	0	0	25	0	25	25	0	0	25	0
Shaw at Eastbound ramps	WB	L	1000	75	50	75	50	100	50	75	50	125	75
	WB	R	100	0	0	0	0	0	0	25	25	25	25
	NB	TR	400	0	0	25	0	25	25	0	0	0	0
	SB	LT	1000+	25	25	25	25	50	25	25	25	25	25
1ST at Del Mar	EB	LR	535	75	50	75	50	N/A	N/A	75	50	N/A	N/A
	NB	LT	110	25	25	25	25	N/A	N/A	25	25	N/A	N/A
	SB	TR	600	0	0	0	0	N/A	N/A	0	0	N/A	N/A
1ST at Del Mar build	EB	L	535	N/A	N/A	N/A	N/A	75	50	N/A	N/A	75	50
	EB	TR	75	N/A	N/A	N/A	N/A	50	25	N/A	N/A	50	25
	WB	L	100	N/A	N/A	N/A	N/A	50	25	N/A	N/A	50	25
	WB	T	150	N/A	N/A	N/A	N/A	25	25	N/A	N/A	50	25
	WB	R	75	N/A	N/A	N/A	N/A	75	25	N/A	N/A	50	25
	NB	L	125	N/A	N/A	N/A	N/A	25	25	N/A	N/A	50	25
	NB	TR	650	N/A	N/A	N/A	N/A	100	50	N/A	N/A	125	50
	SB	L	100	N/A	N/A	N/A	N/A	50	25	N/A	N/A	50	25
	SB	TR	600	N/A	N/A	N/A	N/A	50	25	N/A	N/A	50	25
Main at 1ST	EB	L	110	50	25	50	25	50	25	50	25	50	25
	WB	LTR	770	25	0	25	25	25	25	25	25	25	25
	NB	LTR	50	25	25	25	25	25	25	25	25	25	25
	SB	LTR	220	50	50	50	50	75	50	75	50	75	50

TABLE 11: INTERSECTION QUEUING: AM PEAK HOUR

Intersection			Available Storage (Feet)	2050 Background (Feet)		2050 Build (Feet)	
				95th	Average	95th	Average
Shaw at Westbound ramps	EB	LR	500	50	25	50	25
	NB	LT	500	50	25	50	25
	SB	TR	1300	0	0	25	0
Shaw at Eastbound ramps	WB	L	1000	75	50	125	75
	WB	R	100	0	0	25	25
	NB	TR	400	25	0	25	0
	SB	LT	1000+	50	25	50	25
1ST at Del Mar	EB	LR	535	75	50	N/A	N/A
	NB	LT	110	25	25	N/A	N/A
1st at Del Mar build	EB	L	535	N/A	N/A	75	0
	EB	TR	75	N/A	N/A	50	25
	WB	L	100	N/A	N/A	50	25
	WB	T	150	N/A	N/A	50	25
	WB	R	75	N/A	N/A	50	25
	NB	L	125	N/A	N/A	25	25
	NB	TR	650	N/A	N/A	125	75
	SB	L	100	N/A	N/A	50	25
	SB	TR	600	N/A	N/A	50	25
Main at 1st	EB	L	110	75	25	50	25
	WB	LTR	770	25	25	25	25
	NB	LTR	50	25	25	25	25
	SB	LTR	220	75	50	75	50

As illustrated in Tables 10 and 11, during the AM peak hour, the addition of development traffic does not substantially increase the queuing over background conditions at the studied intersections.

The intersection of 1ST at Del Mar/Gordon was modeled with a traffic signal and left turn pockets on all 4 approaches. The queue lengths at the signal will not impact any adjacent intersections. The queue length for the eastbound approach is estimated at 75 feet (3 car lengths). The railroad crossing is approximately 180 feet from the stop bar for this approach. There is sufficient room for the anticipated queuing.

TABLE 12: INTERSECTION QUEUING: WEEKDAY PM PEAK HOUR

Intersection			Available Storage (Feet)	2023 Background (Feet)		2030 Background (Feet)		2030 Build (Feet)		2035 Background (Feet)		2035 Build (Feet)	
				95th	Average	95th	Average	95th	Average	95th	Average	95th	Average
Shaw at Westbound ramps	EB	LR	500	50	75	75	50	100	50	75	50	100	50
	NB	LT	500	50	25	50	25	75	50	50	25	100	50
	SB	TR	1300	25	0	0	0	25	25	25	0	25	0
Shaw at Eastbound ramps	WB	L	1000	125	75	100	75	350	200	125	75	500	250
	WB	R	100	25	25	25	25	150	50	50	25	150	75
	NB	TR	320	0	0	0	0	25	0	0	0	25	0
	SB	LT	1000+	25	25	25	25	50	25	25	25	50	25
1ST at Del Mar	EB	LR	535	75	50	75	50	N/A	N/A	75	50	N/A	N/A
	NB	LT	110	50	25	50	25	N/A	N/A	50	25	N/A	N/A
	SB	TR	600	25	0	0	0	N/A	N/A	25	0	N/A	N/A
1ST at Del Mar build	EB	L	535	N/A	N/A	N/A	N/A	75	25	N/A	N/A	50	25
	EB	TR	75	N/A	N/A	N/A	N/A	75	50	N/A	N/A	75	50
	WB	L	100	N/A	N/A	N/A	N/A	75	50	N/A	N/A	75	50
	WB	T	150	N/A	N/A	N/A	N/A	75	25	N/A	N/A	75	25
	WB	R	75	N/A	N/A	N/A	N/A	100	50	N/A	N/A	100	50
	NB	L	125	N/A	N/A	N/A	N/A	50	25	N/A	N/A	50	25
	NB	TR	650	N/A	N/A	N/A	N/A	125	75	N/A	N/A	150	75
	SB	L	100	N/A	N/A	N/A	N/A	75	50	N/A	N/A	100	50
	SB	TR	600	N/A	N/A	N/A	N/A	125	75	N/A	N/A	150	75
Main at 1st	EB	L	110	75	25	50	25	75	50	75	25	75	50
	WB	LTR	770	25	25	25	25	25	25	25	25	25	25
	NB	LTR	50	50	25	50	25	50	25	50	25	50	25
	SB	LTR	220	100	50	100	75	150	100	125	75	175	100

TABLE 13: INTERSECTION QUEUING: WEEKDAY PM PEAK HOUR

Intersection			Available Storage (Feet)	2050 Background (Feet)		2050 Build (Feet)	
				95th	Average	95th	Average
Shaw at Westbound ramps	EB	LR	500	75	50	100	75
	NB	LT	500	50	25	100	50
	SB	TR	1300	25	0	25	25
Shaw at Eastbound ramps	WB	L	1000	175	100	750	550
	WB	R	100	50	25	175	100
	SB	LT	1000+	50	25	50	25
1ST at Del Mar	EB	LR	535	75	50	N/A	N/A
	NB	LT	110	75	25	N/A	N/A
	SB	TR	600	25	0	N/A	N/A
1ST at Del Mar build	EB	L	535	N/A	N/A	75	25
	EB	TR	75	N/A	N/A	75	50
	WB	L	100	N/A	N/A	75	50
	WB	T	150	N/A	N/A	75	50
	WB	R	75	N/A	N/A	100	50
	NB	L	125	N/A	N/A	50	25
	NB	TR	650	N/A	N/A	150	75
	SB	L	100	N/A	N/A	100	50
	SB	TR	600	N/A	N/A	175	100
Main at 1st	EB	L	110	75	50	75	50
	WB	LTR	770	25	25	25	25
	NB	LTR	50	50	25	50	25
	SB	LTR	220	125	75	225	125

As demonstrated in Tables 12 and 13, the addition of development traffic does not substantially increase the queuing conditions at the studied intersections, with the exception of Shaw Highway at the eastbound ramp left turn lane.

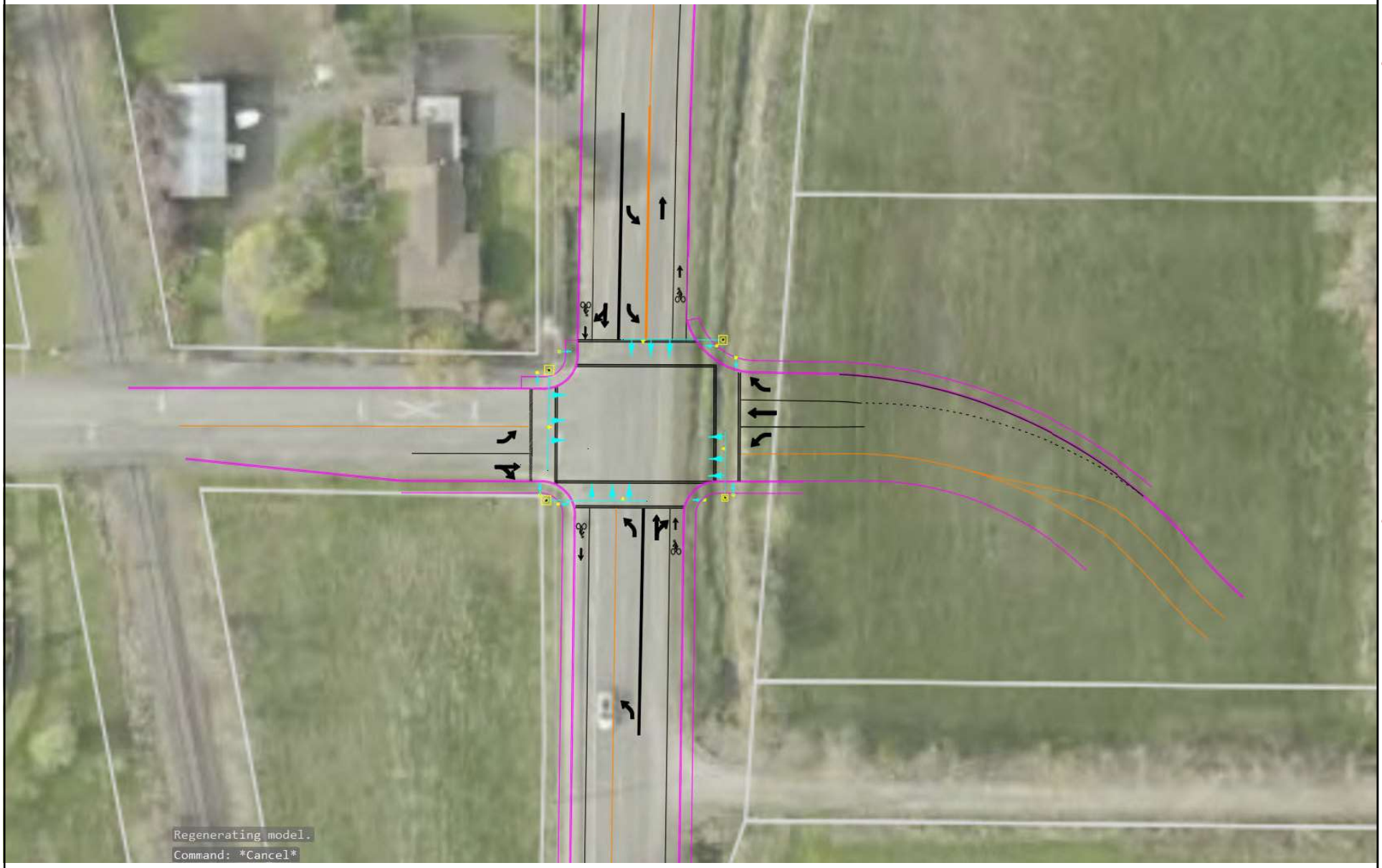
The intersection of 1ST St at Del Mar/Gordon was modeled with a traffic signal and left turn pockets on all 4 approaches. The queue lengths at the signal will not impact any adjacent intersections. The queue length for eastbound approach is estimated at 75 feet (3 car lengths). The railroad crossing is approximately 180 feet from the stop bar for this approach. There is sufficient room for the anticipated queuing.

9.0 1ST ST AT DEL MAR DRIVE/GORDON LANE

The intersection of 1ST Street at Del Mar Drive/ Gordon Lane will be signalized as part of the development proposal. The intersection includes the realignment of Gordon Lane, left turn pockets on all 4 approaches, and a westbound right turn pocket. The signal schematic is included in Figure 19. The signal will fit entirely within the existing right of way.

In the event that the railroad line, located approximately 200 feet to the west of the signal, becomes fully operational the traffic signal, as designed, can accommodate the railroad operation. The modifications to the signal in the event that the railroad becomes operative would include:

- Placement of underground conduit and interconnect wiring from the traffic signal controller to the railroad signal controller.
- Modification of signal timing. The traffic signal will be retimed to provide coordination between the railroad signal and the traffic signal. The modifications will be finalized at the design phase of the railroad signal but will typically include the following operation:
    - Step 1: Call to the Railroad Signal
    - Step 2: Turn all movements at the traffic signal red
    - Step 3: Turn eastbound only movements green. All other movements remain red
    - Step 4: Gate arms close. Green is held for eastbound approach to ensure clear out.
    - Step 5: While train is in crossing
        - Option 1: Return to normal signal operation while gate arms are down.
        - Option 2: Allow green phases to movements not adding westbound traffic only, i.e., Northbound through green, northbound left red, westbound left and right green, westbound through red, southbound left green. Run this phase option while gate arms are down.
    - Step 6: Gate arms go up and signal resumes the normal operation.



Aumsville, Oregon

Figure 19: Traffic Signal Design Schematic

SANDOWENGINEERING

160 Madison Street Suite A Eugene, Oregon 97402 - 541.513.3376 - sandowengineering.com

10.0 OFF SITE MITIGATION

SHAW HIGHWAY AT EASTBOUND RAMPS

The eastbound left turn at the eastbound ramps/Shaw intersection is anticipated to not meet the v/c standard in the year 2030 PM peak hour with the full development in place. The v/c will meet the 0.85 standard until the level of trips generated by the site are 450 trips. Therefore, when the site trip generation has reached a level of 450 PM peak hour trips, mitigation will be triggered to improve the v/c to meet the standard of v/c 0.85.

Options for mitigation when the site generates 450 or more PM peak hour trips are:

All-Way Stop Control: An all-way stop control was evaluated as a possible mitigation scenario. This scenario would provide stop control for all 3 approaches, allowing the northbound right turn and westbound right turn to operate as a yield movement. There is no recommendation to modify any lane alignment.

For the year 2035, PM Peak hour conditions, with an all-way stop control, the highest v/c is 0.78, meeting the standard of 0.85. The 95th percentile queuing under all-way stop control is estimated at 175 feet for the westbound left movement, 100 feet for the southbound approach, and 175 feet for the northbound approach. The queuing would not back up to the highway (500+ of storage) or back up to block the WB ramps. The mitigation outputs are included in Appendix F.

For the year 2050, with an all-way stop control, the highest v/c is 0.87 which does not meet the standard of 0.85. An all-way stop-control could be an interim improvement. However, it will not operate within the v/c standard through the year 2050. Therefore, it is not a long-term improvement.

Traffic Signal: A traffic signal was evaluated as a mitigation scenario. The mitigation would be signalization only and would not include modification to the lane configuration.

For the year 2035 PM Peak hour conditions with a traffic signal, the intersection will operate at a v/c 0.58. The 95th percentile queuing with a traffic signal is anticipated to be 200 feet for the westbound left movement, 100 feet for the southbound approach, and 175 feet for the northbound approach. The queuing would not back up to the highway (500+ of storage) or back up to block the WB ramps. Appendix F contains the mitigation outputs.

For the year 2050, with a traffic signal, the intersection will operate at v/c 0.63 meeting the standards of 0.95. The 95th percentile queue with a traffic signal is anticipated to be 250 for the westbound left movement, 100 feet for the southbound approach, and 175 feet for the northbound approach. The queuing would not back up to the highway or back up not block the WB ramps. Appendix F contains the mitigation outputs.

Roundabout: This intersection was evaluated for a roundabout. For the year 2035 the v/c is 0.38 for a single lane roundabout. The queuing is anticipated at 50 feet. For the year 2050 the v/c is 0.42 for a single lane roundabout. The longest queue is anticipated at 75 feet.

11.0 BICYCLE IMPROVEMENTS

The applicant will be widening Shaw Road to provide a northbound bicycle lane.

12.0 CONCLUSION

This report provides the Traffic Impact Analysis and findings prepared for the proposed commercial center located in Aumsville, Oregon. The analysis evaluates the transportation impacts on the adjacent roadway and intersection operation with the addition of development traffic for the year of completion and 5 years into the future.

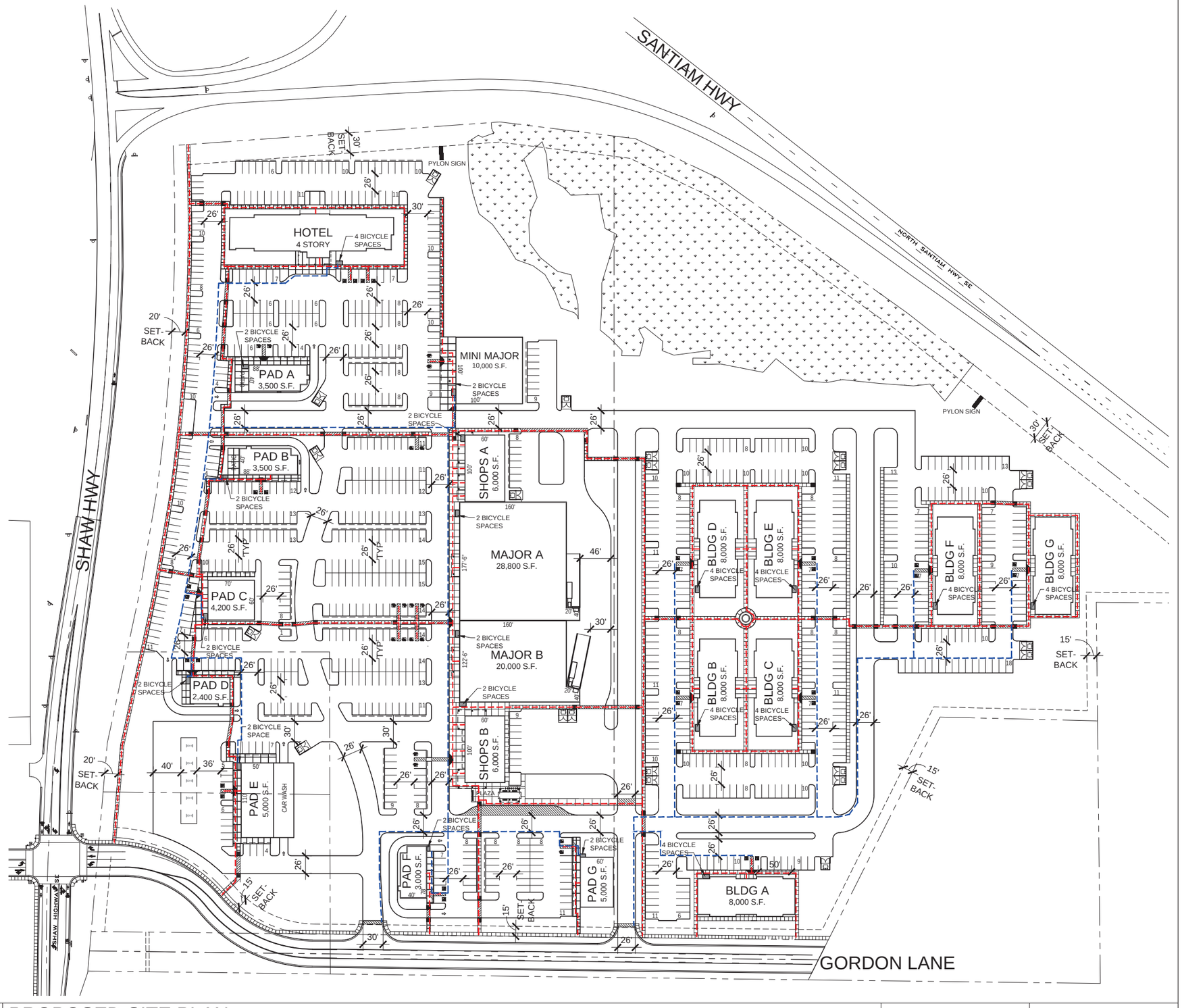
FINDINGS

- All studied intersections operate within the mobility standards with and without the development traffic, with the exception of the westbound left turn at the intersection of Shaw Highway and the EB Ramps.
- The addition of development traffic does not substantially increase queuing conditions, with the exception of the westbound left turn at the intersection of Shaw Highway and the EB Ramps.
- The v/c standard for the westbound left turn at EB ramps is met until the development generates 450 or more trips during the PM peak hour. Once the development generates 450 or more trips, mitigation will be triggered. The options of an all-way stop control, traffic signal, and roundabout were evaluated as possible mitigation scenarios. With any of these mitigation options, the v/c standard would be met, and queuing would not be negatively impacted. It is recommended that the site trips be monitored as the site is developed, and once the site generates more than 450 trips, the intersection is reevaluated for the appropriate mitigation scenario, and the mitigation is constructed at that time.
- The intersection of 1ST St at Del Mar Drive was evaluated with the proposed realignment of Gordon Lane, the installation of a traffic signal, separate left turn pockets on all 4 approaches, and a separate westbound right lane. The traffic signal will operate at LOS B and v/c 0.58 through the year 2050 with full build-out. Queuing from the traffic signal will not adversely impact the nearby intersections. Additionally, the traffic signal can be connected to a future railroad crossing signal when needed and run coordinated.
- The applicant will be widening Shaw Road to provide a northbound bicycle lane.

APPENDIX A:

SITE PLAN

Aumsville Commercial Center



1 PROPOSED SITE PLAN | DATE: 12.12.2023 | SCALE: 1" = 70'-0"

PROJECT TEAM:

ARCHITECT:
PHNX DESIGN, LLC

1855 EAST SOUTHERN AVE, SUITE 204
MESA, ARIZONA 85204
CONTACT: MIKE HILLS
PH: (602) 762.7354
EMAIL: MIKEH@PHNX-DESIGN.COM

LANDSCAPE:
HILLMAN WORKSHOP

2901 E. HIGHLAND AVE
PHOENIX, AZ 85016
CONTACT: AARON HILLMAN
PH: (480) 686.2001

CIVIL:
FLAGLINE ENGINDERRING

686 NW YORK DR, STE #100
BEND, OR 97703
CONTACT: JIM PEX, PE
PH: (541) 797.6781

RETAIL CENTER

EXISTING ZONING:		ID - INTERCHANGE DEVELOPMENT
PROPOSED USE:		MIXED USE CENTER
NET SITE AREA:		843,223 S.F. (19.36 AC)
BUILDING AREA:		
HOTEL:	(124 ROOMS)	
MAJOR A:	(RETAIL)	28,800 S.F
MAJOR B:	(RETAIL)	20,000 S.F.
MINI MAJOR:	(RETAIL)	10,000 S.F.
SHOPS A:	(RETAIL)	6,000 S.F.
SHOPS B:	(RETAIL)	6,000 S.F.
PAD A:	(EATING EST.)	3,500 S.F.
PAD B:	(EATING EST.)	3,500 S.F.
PAD C:	(EATING EST.)	4,200 S.F.
PAD D:	(EATING EST.)	2,400 S.F.
PAD E:	(FUEL STATION)	5,000 S.F.
PAD F:	(EATING EST.)	3,000 S.F.
PAD G:	(EATING EST.)	5,000 S.F.
TOTAL BUILDING AREA:		97,400 S.F.
OCCUPANCY:		M (MERCANTILE)
CONSTRUCTION TYPE:		V-B SPRINKLERED (NFPA 13)
LOT COVERAGE:		97,400 / 843,223 X 100 = 11.55%
BUILDING HEIGHT:		35 FT 50FT FOR PROPOSED 4-STORY HOTEL
TOTAL PARKING REQUIRED:		
HOTEL	1 SPACE PER GUEST ROOM PLUS 1 SPACE FOR OWNER (124 RMS + 1 OWNER)	125 SPACES
RETAIL	1 SP PER 400 S.F. (70,800 / 400)	177 SPACES
FOOD	1 SP PER 100 S.F. (26,600 / 100)	266 SPACES
TOTAL PARKING REQUIRED:		568 SPACES
TOTAL PARKING PROVIDED:		600 SPACES 10'x20' = 125 SPACES 9'x19' = 450 SPACES
ADA PARKING REQUIRED:		13 SPACES
ADA PARKING PROVIDED:		34 SPACES
BICYCLE PARKING REQUIRED:		28 SPACES
BICYCLE PARKING PROVIDED:		28 SPACES

INDUSTRIAL OFFICE

EXISTING ZONING:		ID - INTERCHANGE DEVELOPMENT
PROPOSED USE:		MIXED USE CENTER
NET SITE AREA:		665,860 S.F. (15.29 AC)
BUILDING AREA:		
BUILDING A		8,000 S.F.
BUILDING B		8,000 S.F.
BUILDING C		8,000 S.F.
BUILDING D		6,600 S.F.
BUILDING E		8,000 S.F.
BUILDING F		8,000 S.F.
BUILDING G		8,000 S.F.
TOTAL BUILDING AREA:		56,000 S.F.
OCCUPANCY:		(OFFICE)
CONSTRUCTION TYPE:		V-B SPRINKLERED (NFPA 13)
LOT COVERAGE:		56,500 / 665,860 X 100 = 8.49%
BUILDING HEIGHT:		30 FT
TOTAL PARKING REQUIRED:		
OFFICE BUILDINGS (1 SP PER 300 SQ. FT.) 56,000 / 300 =		187 SPACES
TOTAL PARKING PROVIDED:		356 SPACES 10'x20' = 89 SPACES 9'x19' = 267 SPACES
ADA PARKING REQUIRED:		8 SPACES
ADA PARKING PROVIDED:		14 SPACES
BICYCLE PARKING REQUIRED:		18 SPACES
BICYCLE PARKING PROVIDED:		28 SPACES

REFERENCE CODES:
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
2018 INTERNATIONAL FIRE CODE
2017 NATIONAL ELECTRIC CODE
AMERICANS WITH DISABILITY ACT ACCESSIBILITY GUIDELINES

LEGEND

RED DASHED LINE INDICATES ACCESSIBLE PEDESTRIAN PATHWAY TO PUBLIC WAY

BLUE DASHED LINE INDICATES BICYCLE PATH

PHNX DESIGN
1855 EAST SOUTHERN AVE, SUITE 204
MESA, ARIZONA 85204
PHONE: 602.762.7354

PROPOSED
SHAW HIGHWAY AND SANTIAM HIGHWAY
AUMSVILLE, OREGON

△	DATE	REVISION
1		
2		
3		
4		
5		

PROPOSED SITE PLAN

A100

PHNX JOB NUMBER: 22-379

APPENDIX B:

CRASH ANALYSIS

Aumsville Commercial Center

CRASH DATA SUMMARY 5973 Aumsville

1 St @ Main St											
YEAR	PDO	INJURY	FATAL	HEAD	REAR	SIDE	TURN	OTHER	PED	BIKE	TOTAL
2017	1							1			1
2018	1	2					2			1	3
2019	1	1					1	1			2
2020	1				1						1
2021											0
											0
TOTALS:	4	3	0	0	1	0	3	2	0	1	7

CHECK
OK
OK
OK
OK
OK
OK

P.M. PEAK HOUR	Number of Years, n	ADT	AVG. ANNUAL MILES (MILLIONS)	AVG. YEARLY CRASHES	CRASH RATE/ MILLION MILES
771	5	7710	2814150.000	1400000.0	0.50

REAR	W-E / W-E		
TURN	N-E / E-W	N-E / W-E	S-N / E-W
BIKE	W-E / N-S		
OTHER	E-N	N-S / W-E	

Shaw Highway @ EB Ramps											
YEAR	PDO	INJURY	FATAL	HEAD	REAR	SIDE	TURN	OTHER	PED	BIKE	TOTAL
2017	1				1						1
2018											0
2019	1	1					2				2
2020											0
2021											0
											0
TOTALS:	2	1	0	0	1	0	2	0	0	0	3

CHECK
OK
OK
OK
OK
OK
OK

P.M. PEAK HOUR	Number of Years, n	ADT	AVG. ANNUAL MILES (MILLIONS)	AVG. YEARLY CRASHES	CRASH RATE/ MILLION MILES
678	5	6780	2474700.000	600000.0	0.24

REAR	N-S / N-E	
TURN	E-S / S-N	S-N / N-E

Shaw Highway @ WB Ramps											
YEAR	PDO	INJURY	FATAL	HEAD	REAR	SIDE	TURN	OTHER	PED	BIKE	TOTAL
2017											0
2018											0
2019	1	1				1	1				2
2020											0
2021		1					1				1
											0
TOTALS:	1	2	0	0	0	1	2	0	0	0	3

CHECK
OK
OK
OK
OK
OK
OK

P.M. PEAK HOUR	Number of Years, n	ADT	AVG. ANNUAL MILES (MILLIONS)	AVG. YEARLY CRASHES	CRASH RATE/ MILLION MILES
365	5	3650	1332250.000	600000.0	0.45

TURN	W-S / S-N	W-N / S-W
SIDE	N-S / N-S	S-N / S-N

N 1st @ Del Mar											
YEAR	PDO	INJURY	FATAL	HEAD	REAR	SIDE	TURN	OTHER	PED	BIKE	TOTAL
2017		2			1			1			2
2018	1				1						1
2019											0
2020											0
2021	1	1			1		1				2
											0
TOTALS:	2	3	0	0	3	0	1	1	0	0	5

CHECK
OK
OK
OK
OK
OK
OK

P.M. PEAK HOUR	Number of Years, n	ADT	AVG. ANNUAL MILES (MILLIONS)	AVG. YEARLY CRASHES	CRASH RATE/ MILLION MILES
647	5	6470	2361550.000	1000000.0	0.42

REAR	2 S-N / S-N	E-W / E-W
OTHER	S-N	
TURN	W-N / S-N	

			# Crashes	ADT	MEV	Crash Rate	Critical Crash Rate
1	1 St @ Main St	Stop	7	7710	14.07	0.50	0.71 under
2	Shaw Highway @ EB Ramps	Stop	3	6780	12.37	0.24	0.74 under
3	Shaw Highway @ WB Ramps	Stop	3	3650	6.66	0.45	0.88 under
4	N 1st @ Del Mar	Stop	5	6470	11.81	0.42	0.75 under

Weighted Average

Stop	18	44.91	0.400772601

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

162: NORTH SANTIAM

Highway 162 ALL ROAD TYPES, MP 8.77 to 9.18 01/01/2017 to 12/31/2021, Both Add and Non-Add mileage

1 - 6 of 15 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S D M / P R J S W / E A U I C O / E L G N H R / D C S V L K	DATE / DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# FC / COMPNT / MLG TYP / MILEPNT	CONN# / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE / (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P# TYPE	PRTC INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02696	Y N N N N N	07/01/2017	MARION	1 02		STRGHT		N	N	CLR	OVERTURN	01	NONE 0	STRGHT									001	30
STATE		SA		MN 0		UN	(DIVMD)	UNKNOWN	N	DRY	NCOL		PRVTE	W -E								000		00
N		2P		8.86		04			N	DAY	INJ		MTRCYCLE		01 DRVR	INJB	26	M	OR-Y		050	000	001	30
N		44 51 11.03	-122 52 2.27		016200100S00		(04)												OR<25					
01750	Y N N N N N	05/29/2021	MARION	1 02		STRGHT		N	Y	CLR	FIX OBJ	01	NONE 9	STRGHT									079,058	32,30
COUNTY		SA		MN 0		UN	(DIVMD)	UNKNOWN	N	DRY	FIX		N/A	W -E								000		00
Y		4A		8.95		01			N	DARK	PDO		PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000		00
N		44 51 8.08	-122 51 57.08		016200100S00		(04)												UNK					
00839	N N N N	03/07/2019	MARION	1 02	5	INTER	4-LEG	N	N	CLR	ANGL-OTH	01	NONE 0	TURN-L										02
NONE		TH		CN 0		CN		STOP SIGN	N	DRY	TURN		PRVTE	E -S								000		00
N		5P		8.79		02	1		N	DAY	INJ		PSNGR CAR		01 DRVR	INJC	28	F	OR-Y		028	000		02
N		44 51 1.06	-122 51 56.7		0162BS100S00														OR<25					
												02	NONE 0	STRGHT										
													PRVTE	S -N								000		00
													PSNGR CAR		01 DRVR	INJC	27	M	OR-Y		000	000		00
																			OR<25					
01558	N N N N N N	04/21/2017	MARION	1 02	2	INTER	4-LEG	N	N	CLR	S-1TURN	01	NONE 9	STRGHT										07
STATE		FR		CN 0		CN		STOP SIGN	N	DRY	REAR		N/A	N -S								000		00
N		4P		8.93		03	1		N	DAY	PDO		MTRCYCLE		01 DRVR	NONE	00	Unk	UNK		000	000		00
N		44 51 .74	-122 51 56.68		0162BC100S00														UNK					
												02	NONE 9	TURN-L										
													N/A	N -E								000		00
													PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000		00
																			UNK					
00308	N N N N	01/25/2019	MARION	1 02	2	INTER	5-LEG	N	N	CLR	O-1 L-TURN	01	NONE 9	STRGHT										02
NONE		FR		CN 0		CN		STOP SIGN	N	DRY	TURN		N/A	S -N								000		00
N		5P		8.93		04	0		N	DUSK	PDO		PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000		00
N		44 51 .74	-122 51 56.68		0162BC100S00														UNK					
												02	NONE 9	TURN-L										
													N/A	N -E								000		00
													PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000		00
																			UNK					
03488	N N N N N N	09/10/2019	MARION	1 02	4	INTER	4-LEG	N	N	RAIN	S-STRGHT	01	NONE 0	STRGHT										13
STATE		TU		CN 0		CN		STOP SIGN	N	WET	SS-O		PRVTE	N -S								000		00
N		4P		8.93		01	0		N	DAY	INJ		PSNGR CAR		01 DRVR	INJB	30	F	SUSP		045,010,017	000		13
N		44 51 16.77	-122 51 58.05		0162BE100S00														OR<25					
												02	NONE 0	STRGHT										
													PRVTE	N -S								000		00
													PSNGR CAR		01 DRVR	NONE	75	M	OR-Y		000	000		00
																			OR>25					
04498	N N N N N N	11/11/2019	MARION	1 02	4	INTER	4-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										27,29
STATE		MO		CN 0		CN		STOP SIGN	N	DRY	REAR		PRVTE	S -N								000		00
N		1P		8.93		02	0		N	DAY	INJ		PSNGR CAR		01 DRVR	INJC	49	F	OR-Y		016,026	038		27,29
N		44 51 16.77	-122 51 58.04		0162BE100S00														OR<25					
												02	NONE 0	STOP										
													PRVTE	S -N								012		00
													PSNGR CAR		01 DRVR	INJC	58	F	OR-Y		000	000		00
																			OR<25					

162: NORTH SANTIAM

Highway 162 ALL ROAD TYPES, MP 8.77 to 9.18 01/01/2017 to 12/31/2021, Both Add and Non-Add mileage

AGENDA ITEM 4A

SER# / INVEST / RD DPT / UNLOC?	S P E D	D R E L	M J G C	S U N S	W I H V	C H L	O R K	DATE / DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# FC / COMPNT / MLG TYP / MILEPNT	CONN# / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE / (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																		02	NONE 0	STOP									012		00
																			PRVTE	S -N											
																			PSNGR CAR		02	PSNG	INJC	54	M			000	000		00
																		02	NONE 0	STOP									012		00
																			PRVTE	S -N											
																			PSNGR CAR		03	PSNG	INJB	16	F			000	000		00
																		02	NONE 0	STOP									012		00
																			PRVTE	S -N											
																			PSNGR CAR		04	PSNG	INJC	31	F			000	000		00
00556	N	Y	N	N	N	N		02/22/2021	MARION	1 07	5	INTER	5-LEG	N	N	RAIN	ANGL-OTH	01	NONE 0	TURN-R											33,03,08
COUNTY								MO		CN 0		S		STOP SIGN	N	WET	TURN		PRVTE	W -S								000		00
N								3P		9.08		06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	53	M	OR-Y		051,021,001	000		33,03,08
N								44 51 16.51	-122 51 58.03		0162BS100S00															OR<25					
																		02	NONE 0	STRGHT									000		00
																			PRVTE	S -N											
																			PSNGR CAR		01	DRVR	INJB	67	F	NONE		000	000		00
																										OR<25					
01568	N	N	N	N				04/28/2019	MARION	1 02	3	INTER	5-LEG	N	N	UNK	ANGL-OTH	01	NONE 9	TURN-L											02
NONE								SU		CN 0		CN		STOP SIGN	N	UNK	TURN		N/A	W -N								000		00
N								8A		9.18		04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N								44 51 16.48	-122 51 58.02		0162BD100S00															UNK					
																		02	NONE 9	TURN-L									000		00
																			N/A	S -W											
																			PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																										UNK					
00153	Y	N	N	N				01/15/2021	MARION	2 02		STRGHT		N	Y	FOG	FIX OBJ	01	NONE 9	STRGHT										120	30
STATE								FR		MN 0		UN	(DIVMD)	UNKNOWN	N	DRY	FIX		N/A	E -W								000		00
Y								10P		8.81		01			N	DARK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N								44 51 13.67	-122 52 5.06		016200200S00		(04)													UNK					
03495	Y	N	N	N				09/16/2018	MARION	2 02		STRGHT		N	Y	RAIN	FIX OBJ	01	NONE 9	STRGHT										120	30
STATE								SU		MN 0		UN	(DIVMD)	UNKNOWN	N	WET	FIX		N/A	E -W								000		00
Y								9A		8.82		01			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N								44 51 13.33	-122 52 4.44		016200200S00		(04)													UNK					
01752	N	N	N	N	N	N		05/22/2018	MARION	2 02		STRGHT		N	Y	CLR	FIX OBJ	01	NONE 0	STRGHT										062,010	16
STATE								TU		MN 0		UN	(DIVMD)	UNKNOWN	N	DRY	FIX		PRVTE	E -W								000	062,010	00
Y								4A		8.82		06			N	DARK	INJ		PSNGR CAR		01	DRVR	INJB	40	F	OR-Y		081	025		16
N								44 51 13.32	-122 52 4.45		016200200S00		(04)													OR<25					
																		01	NONE 0	STRGHT									000	062,010	00
																			PRVTE	E -W											
																			PSNGR CAR		02	PSNG	INJB	51	M			000	000		00
00523	Y	N	N	N				02/05/2019	MARION	2 02		STRGHT		N	Y	CLD	FIX OBJ	01	NONE 9	STRGHT										119	01,27
STATE								TU		MN 0		UN	(DIVMD)	UNKNOWN	N	ICE	FIX		N/A	E -W								000		00
Y								10P		8.97		06			N	DARK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N								44 51 8.31	-122 51 55.33		016200200S00		(04)													UNK					

EXHIBIT 4 - 5. TIA

162: NORTH SANTIAM

Highway 162 ALL ROAD TYPES, MP 8.77 to 9.18 01/01/2017 to 12/31/2021, Both Add and Non-Add mileage

162: NORTH SANTIAM

Highway 162 ALL ROAD TYPES, MP 8.77 to 9.18 01/01/2017 to 12/31/2021, Both Add and Non-Add mileage

14 - 15 of 15 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D C	A	D R G S	M J U V	S I N H	C	W O R K	DATE / DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# FC / COMPNT / MLG TYP / MILEPNT	CONN# / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE / (MEDIAN) / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02059	N	N	N	N	N	N	N	05/25/2017	MARION	2 02		STRGHT		N	N	CLR	ANIMAL	01	NONE 9	STRGHT										035	12
STATE				TH				MN 0				UN	(DIVMD)	UNKNOWN	N	DRY	OTH		N/A	E -W								000		00
N				10A				9.03				04			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N				44 51 6.38	-122 51 51.87						016200200S00		(04)													UNK					
02342	N	N	N	N				08/06/2020	MARION	2 02		STRGHT		N	N	CLR	S-STRGHT	01	NONE 9	STRGHT											29
STATE				TH				MN 0				UN	(DIVMD)	UNKNOWN	N	DRY	REAR		N/A	E -W								000		00
N				10P				9.05				03			N	DARK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N				44 51 5.73	-122 51 50.72						016200200S00		(04)													UNK					
																		02	NONE 9	STRGHT											
																			N/A	E -W								000		00
																			PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																										UNK					

162: NORTH SANTIAM

Highway 162 ALL ROAD TYPES, MP 8.77 to 9.18 01/01/2017 to 12/31/2021, Both Add and Non-Add mileage

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Highway 162 ALL ROAD TYPES, MP 8.77 to 9.18 01/01/2017 to 12/31/2021, Both Add and Non-Add mileage

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: 2021														
FIXED / OTHER OBJECT	0	0	2	2	0	0	0	2	0	0	2	0	0	2
TURNING MOVEMENTS	0	1	0	1	0	1	0	0	1	1	0	1	0	0
YEAR 2021 TOTAL	**0**	**1**	**2**	**3**	**0**	**1**	**0**	**2**	**1**	**1**	**2**	**1**	**0**	**2**
YEAR: 2020														
REAR-END	0	0	1	1	0	0	0	1	0	0	1	0	0	0
YEAR 2020 TOTAL	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**
YEAR: 2019														
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	0	1	0	1	0	0	1
REAR-END	0	1	0	1	0	5	0	1	0	1	0	1	0	0
SIDESWIPE - OVERTAKING	0	1	0	1	0	1	0	0	1	1	0	1	0	0
TURNING MOVEMENTS	0	1	2	3	0	2	0	2	0	2	1	3	0	0
YEAR 2019 TOTAL	**0**	**3**	**3**	**6**	**0**	**8**	**0**	**3**	**2**	**4**	**2**	**5**	**0**	**1**
YEAR: 2018														
FIXED / OTHER OBJECT	0	1	1	2	0	2	0	1	1	1	1	0	0	2
YEAR 2018 TOTAL	**0**	**1**	**1**	**2**	**0**	**2**	**0**	**1**	**1**	**1**	**1**	**0**	**0**	**2**
YEAR: 2017														
MISCELLANEOUS	0	0	1	1	0	0	0	1	0	1	0	0	0	0
NON-COLLISION	0	1	0	1	0	1	0	1	0	1	0	0	0	0

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Highway 162 ALL ROAD TYPES, MP 8.77 to 9.18 01/01/2017 to 12/31/2021, Both Add and Non-Add mileage

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
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR 2017 TOTAL	**0**	**1**	**2**	**3**	**0**	**1**	**0**	**3**	**0**	**3**	**0**	**1**	**0**	**0**
FINAL TOTAL	**0**	**6**	**9**	**15**	**0**	**12**	**0**	**10**	**4**	**9**	**6**	**7**	**0**	**5**

CITY OF AUMSVILLE, MARION COUNTY

WILLAMETTE ST and N 1ST ST, City of Aumsville, Marion County, 01/01/2017 to 12/31/2021

1 - 2 of 2 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R G S	U N H V	J S L	I C R K	W O	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00565	N	N	N	N				02/14/2021	09	WILLAMETTE ST	INTER	3-LEG	N	N	SLT	PRKD MV	01	NONE 9	TURN-L										010	08
NO RPT								SU	0	N 1ST ST	E		UNKNOWN	N	ICE	REAR		N/A	N -E									000		00
N								5P			05	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N								44 50 42.7	-122 51 57.79																UNK					
																	02	NONE 9	PRKD-P											
																		N/A	W -E									008		00
																		PSNGR CAR											
02028	Y	N	N	N	N	N		05/31/2019	07	WILLAMETTE ST	INTER	3-LEG	N	Y	CLR	FIX OBJ	01	NONE 0	TURN-L										040,121,003	27,01,08
CITY								FR	0	N 1ST ST	S		STOP SIGN	N	DRY	FIX		PRVTE	E -S									000	040,121	00
N								7A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	17	M	OR-Y		002,083,081	038	003	27,01,08
N								44 50 42.69	-122 51 57.76																OR<25					
																	01	NONE 0	TURN-L											
																		PRVTE	E -S									000	040,121	00
																		PSNGR CAR		02	PSNG	INJB	15	F			000	000		00

CITY OF AUMSVILLE, MARION COUNTY

WILLAMETTE ST and N 1ST ST, City of Aumsville, Marion County, 01/01/2017 to 12/31/2021

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

WILLAMETTE ST and N 1ST ST, City of Aumsville, Marion County, 01/01/2017 to 12/31/2021

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: 2021														
REAR-END	0	0	1	1	0	0	0	0	1	0	1	1	0	0
YEAR 2021 TOTAL	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	**0**	**0**
YEAR: 2019														
FIXED / OTHER OBJECT	0	1	0	1	0	1	0	1	0	1	0	1	0	1
YEAR 2019 TOTAL	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**
FINAL TOTAL	**0**	**1**	**1**	**2**	**0**	**1**	**0**	**1**	**1**	**1**	**1**	**2**	**0**	**1**

CITY OF AUMSVILLE, MARION COUNTY

DELMAR DR and N 1ST ST, City of Aumsville, Marion County, 01/01/2017 to 12/31/2021

1 - 5 of 5 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	I H L	S C K	W O R	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / TYPE / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02083	N	N	N	N	N	N	N	06/24/2021	07	DELMAR DR	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										32,27
CITY			TH					0	N 1ST ST	CN		STOP SIGN	N	DRY	REAR			PRVTE	S -N								000		00
N			3P							04	0		N	DAY	INJ			PSNGR CAR		01	DRVR	INJC	27	M	OR-Y		052,016,026	038		32,27
N			44 50 49.8					-122 51 57.75																	OR<25					
																	02	NONE 0	STOP										
																		PRVTE	S -N								012		00
																		PSNGR CAR		01	DRVR	INJC	19	F	OR-Y		000	000		00
																									OR>25					
00081	N	N	N	N	N	N	N	01/08/2021	07	DELMAR DR	INTER	3-LEG	N	N	FOG	ANGL-OTH	01	NONE 9	TURN-L											02
CITY			FR					0	N 1ST ST	CN		STOP SIGN	N	DRY	TURN			N/A	W -N								000		00
N			5P							04	0		N	DLIT	PDO			PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			44 50 49.78					-122 51 57.78																	UNK					
																	02	NONE 9	STRGHT										
																		N/A	S -N								000		00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK					
03494	N	N	N	N	N	N	N	08/26/2017	07	N 1ST ST	STRGHT		N	Y	CLR	FIX OBJ	01	NONE 0	STRGHT									079		16
CITY			SA					45	DELMAR DR	N	(NONE)	UNKNOWN	N	DRY	FIX			PRVTE	S -N								000	079		00
Y			6A							06			N	DAY	INJ			PSNGR CAR		01	DRVR	INJC	24	M	SUSP		039,081	025		16
N			44 50 50.49					-122 51 57.72			(02)														OR<25					
05367	N	N	N	N	N	N	N	12/11/2017	07	N 1ST ST	STRGHT		Y	N	CLR	S-1STOP	01	NONE 0	STRGHT											27,29
CITY			MO					43	DELMAR DR	S	(NONE)	UNKNOWN	N	DRY	REAR			PRVTE	S -N								000		00
N			5P							06			N	DARK	INJ			PSNGR CAR		01	DRVR	NONE	46	F	OR-Y		016,026	038		27,29
N			44 50 49.16					-122 51 57.78			(02)														OR<25					
																	02	NONE 0	STOP										
																		PRVTE	S -N								012		00
																		PSNGR CAR		01	DRVR	INJC	18	F	OR-Y		000	000		00
																									OR<25					
03510	N	N	N	N				09/17/2018	08	DELMAR DR	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT											29
NO RPT			MO					162	N 1ST ST	W	(NONE)	SP RR STOP	N	DRY	REAR			N/A	E -W								000		00
N			1P							07			N	DAY	PDO			PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			44 50 49.81					-122 52 .36			(02)														UNK					
																	02	NONE 9	STOP										
																		N/A	E -W								011		00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK					

CITY OF AUMSVILLE, MARION COUNTY

DELMAR DR and N 1ST ST, City of Aumsville, Marion County, 01/01/2017 to 12/31/2021

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

MAIN ST and N 1ST ST, City of Aumsville, Marion County, 01/01/2017 to 12/31/2021

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: 2020														
REAR-END	0	0	1	1	0	0	1	1	0	1	0	0	0	0
YEAR 2020 TOTAL	**0**	**0**	**1**	**1**	**0**	**0**	**1**	**1**	**0**	**1**	**0**	**0**	**0**	**0**
YEAR: 2019														
ANGLE	0	1	0	1	0	2	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR 2019 TOTAL	**0**	**1**	**1**	**2**	**0**	**2**	**0**	**2**	**0**	**2**	**0**	**2**	**0**	**0**
YEAR: 2018														
ANGLE	0	1	0	1	0	1	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	1	1	2	0	3	0	1	1	2	0	2	0	0
YEAR 2018 TOTAL	**0**	**2**	**1**	**3**	**0**	**4**	**0**	**2**	**1**	**3**	**0**	**3**	**0**	**0**
YEAR: 2017														
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	0	1	1	0	1	0	1
YEAR 2017 TOTAL	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**1**	**0**	**1**
FINAL TOTAL	**0**	**3**	**4**	**7**	**0**	**6**	**1**	**5**	**2**	**7**	**0**	**6**	**0**	**1**

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.

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

N 1ST ST and DELMAR DR, City of Aumsville, Marion County, 01/01/2017 to 12/31/2021

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: 2021														
REAR-END	0	1	0	1	0	2	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	0	1	1	0	0
YEAR 2021 TOTAL	**0**	**1**	**1**	**2**	**0**	**2**	**0**	**2**	**0**	**1**	**1**	**2**	**0**	**0**
YEAR: 2018														
REAR-END	0	0	1	1	0	0	0	1	0	1	0	0	0	0
YEAR 2018 TOTAL	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**
YEAR: 2017														
FIXED / OTHER OBJECT	0	1	0	1	0	1	0	1	0	1	0	0	0	1
REAR-END	0	1	0	1	0	1	0	1	0	0	1	0	1	0
YEAR 2017 TOTAL	**0**	**2**	**0**	**2**	**0**	**2**	**0**	**2**	**0**	**1**	**1**	**0**	**1**	**1**
FINAL TOTAL	**0**	**3**	**2**	**5**	**0**	**4**	**0**	**5**	**0**	**3**	**2**	**2**	**1**	**1**

162: NORTH SANTIAM **Highway 162 ALL ROAD TYPES, MP 8.77 to 9.18 01/01/2017 to 12/31/2021, Both Add and Non-Add mileage**

1 - 6 of 15 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R G S	J N V	S H L	W O R K	DATE / DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# / COMPNT / MLG / LRS	FC / TYP / MILEPNT	CONN# / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02696	Y	N	N	N	N	N	07/01/2017	MARION	1	02		STRGHT		N	N	CLR	OVERTURN	01	NONE 0	STRGHT										001	30
STATE							SA		MN	0		UN	(DIVMD)	UNKNOWN	N	DRY	NCOL		PRVTE	W -E								000		00
N							2P		8.86			04			N	DAY	INJ		MTRCYCLE		01	DRVR	INJB	26	M	OR-Y		050	000	001	30
N							44 51 11.03	-122 52 2.27			016200100S00		(04)													OR<25					
01750	Y	N	N	N	N	N	05/29/2021	MARION	1	02		STRGHT		N	Y	CLR	FIX OBJ	01	NONE 9	STRGHT										079,058	32,30
COUNTY							SA		MN	0		UN	(DIVMD)	UNKNOWN	N	DRY	FIX		N/A	W -E								000		00
Y							4A		8.95			01			N	DARK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							44 51 8.08	-122 51 57.08			016200100S00		(04)													UNK					
00839	N	N	N	N			03/07/2019	MARION	1	02	5	INTER	4-LEG	N	N	CLR	ANGL-OTH	01	NONE 0	TURN-L											02
NONE							TH		CN	0		CN		STOP SIGN	N	DRY	TURN		PRVTE	E -S								000		00
N							5P		8.79			02	1		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	28	F	OR-Y		028	000		02
N							44 51 1.06	-122 51 56.7			0162BS100S00															OR<25					
																		02	NONE 0	STRGHT											
																			PRVTE	S -N								000		00
																			PSNGR CAR		01	DRVR	INJC	27	M	OR-Y		000	000		00
																										OR<25					
01558	N	N	N	N	N	N	04/21/2017	MARION	1	02	2	INTER	4-LEG	N	N	CLR	S-1TURN	01	NONE 9	STRGHT											07
STATE							FR		CN	0		CN		STOP SIGN	N	DRY	REAR		N/A	N -S								000		00
N							4P		8.93			03	1		N	DAY	PDO		MTRCYCLE		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							44 51 .74	-122 51 56.68			0162BC100S00															UNK					
																		02	NONE 9	TURN-L											
																			N/A	N -E								000		00
																			PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																										UNK					
00308	N	N	N	N			01/25/2019	MARION	1	02	2	INTER	5-LEG	N	N	CLR	O-1 L-TURN	01	NONE 9	STRGHT											02
NONE							FR		CN	0		CN		STOP SIGN	N	DRY	TURN		N/A	S -N								000		00
N							5P		8.93			04	0		N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							44 51 .74	-122 51 56.68			0162BC100S00															UNK					
																		02	NONE 9	TURN-L											
																			N/A	N -E								000		00
																			PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																										UNK					
03488	N	N	N	N	N	N	09/10/2019	MARION	1	02	4	INTER	4-LEG	N	N	RAIN	S-STRGHT	01	NONE 0	STRGHT											13
STATE							TU		CN	0		CN		STOP SIGN	N	WET	SS-O		PRVTE	N -S								000		00
N							4P		8.93			01	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	30	F	SUSP		045,010,017	000		13
N							44 51 16.77	-122 51 58.05			0162BE100S00															OR<25					
																		02	NONE 0	STRGHT											
																			PRVTE	N -S								000		00
																			PSNGR CAR		01	DRVR	NONE	75	M	OR-Y		000	000		00
																										OR>25					
04498	N	N	N	N	N	N	11/11/2019	MARION	1	02	4	INTER	4-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											27,29
STATE							MO		CN	0		CN		STOP SIGN	N	DRY	REAR		PRVTE	S -N								000		00
N							1P		8.93			02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	49	F	OR-Y		016,026	038		27,29
N							44 51 16.77	-122 51 58.04			0162BE100S00															OR<25					
																		02	NONE 0	STOP											
																			PRVTE	S -N								012		00
																			PSNGR CAR		01	DRVR	INJC	58	F	OR-Y		000	000		00
																										OR<25					

AGENDA ITEM 4A

CONTINUOUS SYSTEM CRASH LISTING

162: NORTH SANTIAM **Highway 162 ALL ROAD TYPES, MP 8.77 to 9.18 01/01/2017 to 12/31/2021, Both Add and Non-Add mileage**

7 - 13 of 15 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E E D / D M R J S W / A U I C O / L G N H R / C S V L K	DATE / DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# FC / COMPNT / MLG TYP / MILEPNT	CONN# / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE / (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	SPCL USE / TRLR QTY / OWNER / V# TYPE	MOVE / FROM / TO	PRTC / P# TYPE	INJ / SVRTY	AGE	SEX	LICNS / RES	PED / LOC	ERROR	ACT	EVENT	CAUSE
												02 NONE 0	STOP										
												PRVTE	S -N								012		00
												PSNGR CAR		02 PSNG	INJC	54	M			000	000		00
												02 NONE 0	STOP										
												PRVTE	S -N								012		00
												PSNGR CAR		03 PSNG	INJB	16	F			000	000		00
												02 NONE 0	STOP										
												PRVTE	S -N								012		00
												PSNGR CAR		04 PSNG	INJC	31	F			000	000		00
00556	N Y N N N N	02/22/2021	MARION	1 07	5	INTER	5-LEG	N	N	RAIN	ANGL-OTH	01 NONE 0	TURN-R										33,03,08
COUNTY		MO		CN 0		S		STOP SIGN	N	WET	TURN	PRVTE	W -S								000		00
N		3P		9.08		06	0		N	DAY	INJ	PSNGR CAR		01 DRVR	NONE	53	M	OR-Y		051,021,001	000		33,03,08
N		44 51 16.51	-122 51 58.03		0162BS100S00													OR<25					
												02 NONE 0	STRGHT										
												PRVTE	S -N								000		00
												PSNGR CAR		01 DRVR	INJB	67	F	NONE		000	000		00
																		OR<25					
01568	N N N N	04/28/2019	MARION	1 02	3	INTER	5-LEG	N	N	UNK	ANGL-OTH	01 NONE 9	TURN-L										02
NONE		SU		CN 0		CN		STOP SIGN	N	UNK	TURN	N/A	W -N								000		00
N		8A		9.18		04	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000		00
N		44 51 16.48	-122 51 58.02		0162BD100S00													UNK					
												02 NONE 9	TURN-L										
												N/A	S -W								000		00
												PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000		00
																		UNK					
00153	Y N N N	01/15/2021	MARION	2 02		STRGHT		N	Y	FOG	FIX OBJ	01 NONE 9	STRGHT									120	30
STATE		FR		MN 0		UN	(DIVMD)	UNKNOWN	N	DRY	FIX	N/A	E -W								000		00
Y		10P		8.81		01			N	DARK	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000		00
N		44 51 13.67	-122 52 5.06		016200200S00		(04)											UNK					
03495	Y N N N	09/16/2018	MARION	2 02		STRGHT		N	Y	RAIN	FIX OBJ	01 NONE 9	STRGHT									120	30
STATE		SU		MN 0		UN	(DIVMD)	UNKNOWN	N	WET	FIX	N/A	E -W								000		00
Y		9A		8.82		01			N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000		00
N		44 51 13.33	-122 52 4.44		016200200S00		(04)											UNK					
01752	N N N N N N	05/22/2018	MARION	2 02		STRGHT		N	Y	CLR	FIX OBJ	01 NONE 0	STRGHT									062,010	16
STATE		TU		MN 0		UN	(DIVMD)	UNKNOWN	N	DRY	FIX	PRVTE	E -W								000	062,010	00
Y		4A		8.82		06			N	DARK	INJ	PSNGR CAR		01 DRVR	INJB	40	F	OR-Y		081	025		16
N		44 51 13.32	-122 52 4.45		016200200S00		(04)											OR<25					
												01 NONE 0	STRGHT										
												PRVTE	E -W								000	062,010	00
												PSNGR CAR		02 PSNG	INJB	51	M			000	000		00
00523	Y N N N	02/05/2019	MARION	2 02		STRGHT		N	Y	CLD	FIX OBJ	01 NONE 9	STRGHT									119	01,27
STATE		TU		MN 0		UN	(DIVMD)	UNKNOWN	N	ICE	FIX	N/A	E -W								000		00
Y		10P		8.97		06			N	DARK	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000		00
N		44 51 8.31	-122 51 55.33		016200200S00		(04)											UNK					

AGENDA ITEM 4A

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162: NORTH SANTIAM **Highway 162 ALL ROAD TYPES, MP 8.77 to 9.18 01/01/2017 to 12/31/2021, Both Add and Non-Add mileage**

1 - 6 of 15 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	D M R J S W A U I C O G N H R L K	DATE / DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# FC / COMPNT / MLG TYP / MILEPNT	CONN# / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02696	Y	N N N N N N	07/01/2017	MARION	1 02		STRGHT		N	N	CLR	OVERTURN	01	NONE 0	STRGHT											001	30
STATE			SA		MN 0		UN	(DIVMD)	UNKNOWN	N	DRY	NCOL		PRVTE	W -E									000		00
N			2P		8.86		04			N	DAY	INJ		MTRCYCLE		01	DRVR	INJB	26	M	OR-Y		050	000	001	30
N			44 51 11.03	-122 52 2.27		016200100S00		(04)													OR<25					
01750	Y	N N N N N N	05/29/2021	MARION	1 02		STRGHT		N	Y	CLR	FIX OBJ	01	NONE 9	STRGHT										079,058	32,30
COUNTY			SA		MN 0		UN	(DIVMD)	UNKNOWN	N	DRY	FIX		N/A	W -E									000		00
Y			4A		8.95		01			N	DARK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			44 51 8.08	-122 51 57.08		016200100S00		(04)													UNK					
00839	N	N N N	03/07/2019	MARION	1 02 5		INTER	4-LEG	N	N	CLR	ANGL-OTH	01	NONE 0	TURN-L											02
NONE			TH		CN 0		CN		STOP SIGN	N	DRY	TURN		PRVTE	E -S									000		00
N			5P		8.79		02	1		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	28	F	OR-Y		028	000		02
N			44 51 1.06	-122 51 56.7		0162BS100S00															OR<25					
													02	NONE 0	STRGHT											
														PRVTE	S -N									000		00
														PSNGR CAR		01	DRVR	INJC	27	M	OR-Y		000	000		00
																					OR<25					
01558	N	N N N N N N	04/21/2017	MARION	1 02 2		INTER	4-LEG	N	N	CLR	S-1TURN	01	NONE 9	STRGHT											07
STATE			FR		CN 0		CN		STOP SIGN	N	DRY	REAR		N/A	N -S									000		00
N			4P		8.93		03	1		N	DAY	PDO		MTRCYCLE		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			44 51 .74	-122 51 56.68		0162BC100S00															UNK					
													02	NONE 9	TURN-L											
														N/A	N -E									000		00
														PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																					UNK					
00308	N	N N N	01/25/2019	MARION	1 02 2		INTER	5-LEG	N	N	CLR	O-1 L-TURN	01	NONE 9	STRGHT											02
NONE			FR		CN 0		CN		STOP SIGN	N	DRY	TURN		N/A	S -N									000		00
N			5P		8.93		04	0		N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			44 51 .74	-122 51 56.68		0162BC100S00															UNK					
													02	NONE 9	TURN-L											
														N/A	N -E									000		00
														PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																					UNK					
03488	N	N N N N N N	09/10/2019	MARION	1 02 4		INTER	4-LEG	N	N	RAIN	S-STRGHT	01	NONE 0	STRGHT											13
STATE			TU		CN 0		CN		STOP SIGN	N	WET	SS-O		PRVTE	N -S									000		00
N			4P		8.93		01	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	30	F	SUSP		045,010,017	000		13
N			44 51 16.77	-122 51 58.05		0162BE100S00															OR<25					
													02	NONE 0	STRGHT											
														PRVTE	N -S									000		00
														PSNGR CAR		01	DRVR	NONE	75	M	OR-Y		000	000		00
																					OR>25					
04498	N	N N N N N N	11/11/2019	MARION	1 02 4		INTER	4-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											27,29
STATE			MO		CN 0		CN		STOP SIGN	N	DRY	REAR		PRVTE	S -N									000		00
N			1P		8.93		02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	49	F	OR-Y		016,026	038		27,29
N			44 51 16.77	-122 51 58.04		0162BE100S00															OR<25					
													02	NONE 0	STOP											
														PRVTE	S -N									012		00
														PSNGR CAR		01	DRVR	INJC	58	F	OR-Y		000	000		00
																					OR<25					

AGENDA ITEM 4A

APPENDIX C:

TRAFFIC VOLUMES

Aumsville Commercial Center

Intersection: 1: Shaw Hwy @ OR 22 EB Ramps City: Aumsville, OR

Counter: Quality Counts Date: Wednesday, December 7, 2022

Total of All Vehicles

Time Period		Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume	Pedestrians			
		Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total			SB	WB	NB	EB
7:00	7:15	0	14	2	16	6	0	18	24	7	94	0	101	0	0	0	0	141		0	0	0	0
7:15	7:30	0	27	4	31	2	0	23	25	13	67	0	80	0	0	0	0	136		0	0	1	0
7:30	7:45	0	36	7	43	2	0	12	14	26	74	0	100	0	0	0	0	157		0	0	0	0
7:45	8:00	0	28	8	36	4	0	26	30	18	58	0	76	0	0	0	0	142	576	0	0	0	0
8:00	8:15	0	21	5	26	3	0	21	24	8	66	0	74	0	0	0	0	124	559	0	0	0	0
8:15	8:30	0	15	8	23	3	0	25	28	10	52	0	62	0	0	0	0	113	536	0	0	0	0
8:30	8:45	0	9	6	15	6	0	17	23	13	47	0	60	0	0	0	0	98	477	0	0	0	0
8:45	9:00	0	15	2	17	1	0	23	24	6	41	0	47	0	0	0	0	88	423	0	0	0	0
9:00	9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
9:15	9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
9:30	9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
9:45	10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
Count Period Total		**0**	**165**	**42**		**27**	**0**	**165**		**101**	**499**	**0**		**0**	**0**	**0**		**999**		**0**	**0**	**1**	**0**

PM Peak Hour Count Summary

	Southbound				Westbound				Northbound				Eastbound						Pedestrians			
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach			SB	WB	NB	EB
Peak Volumes	**0**	**105**	**21**	**126**	**14**	**0**	**79**	**93**	**64**	**293**	**0**	**357**	**0**	**0**	**0**	**0**	**576**		**0**	**0**	**1**	**0**
PHF	0.00	0.73	0.66	0.73	0.58	0.00	0.76	0.78	0.62	0.78	0.00	0.88	0.00	0.00	0.00	0.00	0.92					
Trucks	0	7	2		1	0	6		7	12	0		0	0	0							
% Trucks	0%	7%	10%		7%	0%	8%		11%	4%	0%		0%	0%	0%							

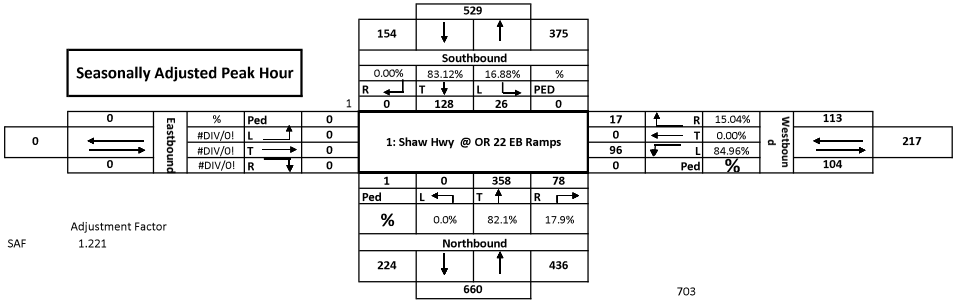

Seasonally Adjusted Peak Hour
529
154
375
Southbound
0.00%
83.12%
16.88%
%
R
T
L
PED
1
0
128
26
0
0
Eastbound
%
Ped
#DIV/0!
#DIV/0!
#DIV/0!
L
T
R
0
0
0
0
1: Shaw Hwy @ OR 22 EB Ramps
17
0
96
0
R
T
L
Ped
15.04%
0.00%
84.96%
%
Westboun
d
113
104
217
1
0
358
78
Ped
L
T
R
%
0.0%
82.1%
17.9%
Northbound
224
436
660
703
Adjustment Factor
SAF
1.221

EXHIBIT 4 - 5. TIA

AGENDA ITEM 4A

1: Shaw Hwy @ OR 22 EB Ramps

Pedestrians and Cars

Time Period	Southbound					Westbound					Northbound					Eastbound					15 Minute Volume	Hourly Volume
	Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left			
7:00 AM			12	2			5		16			6	89								130	
7:15 AM			25	3			2		22			12	65								129	
7:30 AM			36	7			2		12			24	73								154	
7:45 AM			25	7			4		23			15	54								128	541
8:00 AM			21	5			3		20			8	61								118	529
8:15 AM			15	7			3		22			9	49								105	505
8:30 AM			9	5			6		13			11	43								87	438
8:45 AM			13	2			1		23			6	40								85	395
9:00 AM																					0	277
9:15 AM																					0	172
9:30 AM																					0	85
9:45 AM																					0	0
Total	0	0	156	38		0	26	0	151		0	91	474	0		0	0	0	0			
Peak Hour	**0**	**0**	**98**	**19**	**0**	**0**	**13**	**0**	**73**	**0**	**0**	**57**	**281**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**541**	**1575**

Trucks

Time Period	Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left			
7:00 AM		2	0		1		2		1	5							11	
7:15 AM		2	1		0		1		1	2							7	
7:30 AM		0	0		0		0		2	1							3	
7:45 AM		3	1		0		3		3	4							14	35
8:00 AM		0	0		0		1		0	5							6	30
8:15 AM		0	1		0		3		1	3							8	31
8:30 AM		0	1		0		4		2	4							11	39
8:45 AM		2	0		0		0		0	1							3	28
9:00 AM																	0	22
9:15 AM																	0	14
9:30 AM																	0	3
9:45 AM																	0	0
Total	0	9	4		1	0	14		10	25	0		0	0	0			
Peak Hour	**0**	**7**	**2**	**0**	**1**	**0**	**6**	**0**	**7**	**12**	**0**	**0**	**0**	**0**	**0**	**0**	**35**	**96**

Bikes

Time Period	Southbound				Westbound				Northbound				Eastbound				SB	WB	NB	EB
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left					
7:00 AM										0							0	0	0	0
7:15 AM										1							0	0	1	0
7:30 AM										0							0	0	0	0
7:45 AM										0							0	0	0	0
8:00 AM										0							0	0	0	0
8:15 AM										0							0	0	0	0
8:30 AM										0							0	0	0	0
8:45 AM										0							0	0	0	0
9:00 AM																	0	0	0	0
9:15 AM																	0	0	0	0
9:30 AM																	0	0	0	0
9:45 AM																	0	0	0	0
Total	0	0	0		0	0	0		0	1	0		0	0	0					
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Pedestrians

Time Period	NE				NW				SW				SE			SB	WB	NB	EB
	Left	Right	Total		Left	Right	Total		Left	Right	Total		Left	Right	Total				
7:00 AM			0				0				0				0	0	0	0	0
7:15 AM			0				0				0				0	0	0	0	0
7:30 AM			0				0				0				0	0	0	0	0
7:45 AM			0				0				0				0	0	0	0	0
8:00 AM			0				0				0				0	0	0	0	0
8:15 AM			0				0				0				0	0	0	0	0
8:30 AM			0				0				0				0	0	0	0	0
8:45 AM			0				0				0				0	0	0	0	0
9:00 AM			0				0				0				0	0	0	0	0
9:15 AM			0				0				0				0	0	0	0	0
9:30 AM			0				0				0				0	0	0	0	0
9:45 AM			0				0				0				0	0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Intersection: 2: Shaw Hwy @ NE Santiam Hwy Ramp City: Aumsville, OR

Counter: Sandow Engineering Date: Thursday, August 10, 2023

Total of All Vehicles

Time Period	Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume	Pedestrians			
	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total			SB	WB	NB	EB
7:00 7:15	4	4	0	8	0	0	0	0	0	10	54	64	11	0	0	11	83		0	0	0	0
7:15 7:30	5	15	0	20	0	0	0	0	0	8	46	54	3	0	0	3	77		0	0	0	0
7:30 7:45	12	8	0	20	0	0	0	0	0	17	66	83	11	0	1	12	115		0	0	0	0
7:45 8:00	7	15	0	22	0	0	0	0	0	20	44	64	4	0	4	8	94	369	0	0	0	0
8:00 8:15	9	9	0	18	0	0	0	0	0	17	33	50	6	0	4	10	78	364	0	0	0	0
8:15 8:30	11	11	0	22	0	0	0	0	0	13	45	58	7	0	2	9	89	376	0	0	0	0
8:30 8:45	6	7	0	13	0	0	0	0	0	13	46	59	13	0	2	15	87	348	0	0	0	0
8:45 9:00	10	17	0	27	0	0	0	0	0	14	32	46	7	0	2	9	82	336	0	0	0	0
9:00 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
9:15 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
9:30 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
9:45 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
Count Period Total	**64**	**86**	**0**		**0**	**0**	**0**		**0**	**112**	**366**		**62**	**0**	**15**		**705**		**0**	**0**	**0**	**0**

PM Peak Hour Count Summary

	Southbound				Westbound				Northbound				Eastbound						Pedestrians			
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach			SB	WB	NB	EB
Peak Volumes	**28**	**42**	**0**	**70**	**0**	**0**	**0**	**0**	**0**	**55**	**210**	**265**	**29**	**0**	**5**	**34**	**369**		**0**	**0**	**0**	**0**
PHF	0.58	0.70	0.00	0.80	0.00	0.00	0.00	0.00	0.00	0.69	0.80	0.80	0.66	0.00	0.31	0.71	0.80					
Trucks	1	2	0		0	0	0		0	1	4		0	0	0							
% Trucks	4%	5%	0%		0%	0%	0%		0%	2%	2%		0%	0%	0%							

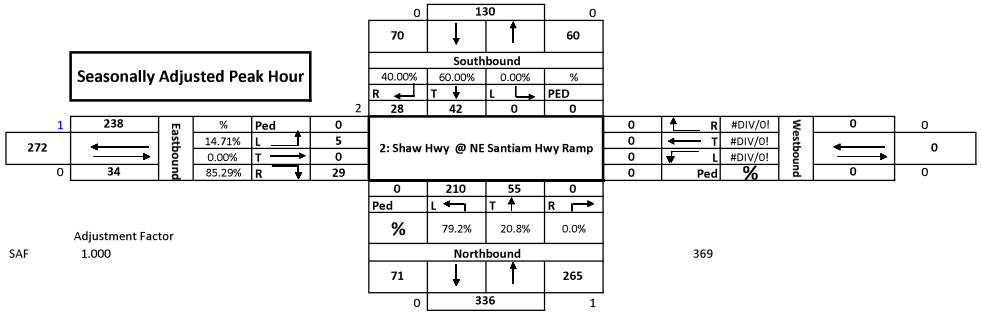

Seasonally Adjusted Peak Hour
0
130
0
70
60
Southbound
40.00%
60.00%
0.00%
%
R
T
L
PED
2
28
42
0
0
1
238
Eastbound
%
Ped
0
272
14.71%
L
5
2: Shaw Hwy @ NE Santiam Hwy Ramp
0.00%
T
0
0
34
85.29%
R
29
0
210
55
0
Ped
L
T
R
%
79.2%
20.8%
0.0%
Northbound
71
265
0
336
1
0
R
#DIV/0!
0
T
#DIV/0!
0
L
#DIV/0!
0
Ped
%
Westbound
0
0
0
0
0
Adjustment Factor
SAF
1.000
369

EXHIBIT 4 - 5. TIA

AGENDA ITEM 4A

2: Shaw Hwy @ NE Santiam Hwy Ramp

Pedestrians and Cars

Time Period	Southbound					Westbound					Northbound					Eastbound					15 Minute Volume	Hourly Volume
	Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left			
7:00 AM		4	3										10	53			11				81	
7:15 AM		4	15										7	46			3				75	
7:30 AM		12	7										17	65			11		1		113	
7:45 AM		7	15										20	42			4		4		92	361
8:00 AM		9	8										15	32			6		4		74	354
8:15 AM		11	10										13	42			6		2		84	363
8:30 AM		2	7										12	46			11		2		80	330
8:45 AM		6	17										13	29			7		2		74	312
9:00 AM																					0	238
9:15 AM																					0	154
9:30 AM																					0	74
9:45 AM																					0	0
Total	0	55	82	0		0	0	0	0		0	0	107	355		0	59	0	15			
Peak Hour	**0**	**27**	**40**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**54**	**206**	**0**	**0**	**29**	**0**	**5**	**0**	**361**	**1078**

Trucks

Time Period	Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left			
7:00 AM		1									1						2	
7:15 AM	1									1							2	
7:30 AM		1									1						2	
7:45 AM											2						2	8
8:00 AM		1								2	1						4	10
8:15 AM		1									3		1				5	13
8:30 AM	4									1			2				7	18
8:45 AM	4									1	3						8	24
9:00 AM																	0	20
9:15 AM																	0	15
9:30 AM																	0	8
9:45 AM																	0	0
Total	9	4	0		0	0	0		0	5	11		3	0	0			
Peak Hour	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**8**	**31**

Bikes

Time Period	Southbound				Westbound				Northbound				Eastbound			SB	WB	NB	EB
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left				
7:00 AM																0	0	0	0
7:15 AM																0	0	0	0
7:30 AM																0	0	0	0
7:45 AM																0	0	0	0
8:00 AM																0	0	0	0
8:15 AM																0	0	0	0
8:30 AM																0	0	0	0
8:45 AM																0	0	0	0
9:00 AM																0	0	0	0
9:15 AM																0	0	0	0
9:30 AM																0	0	0	0
9:45 AM																0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0				
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Pedestrians

Time Period	Left				Left				Left				Left						
			0				**0**			**0**	**0**				**0**				
7:15 AM		0	0				0			0	0			0	0	0	0	0	0
7:30 AM		0	0				0				0				0	0	0	0	0
7:45 AM			0		0		0				0				0	0	0	0	0
8:00 AM			0				0			0	0		0		0	0	0	0	0
8:15 AM			0				0		0		0				0	0	0	0	0
8:30 AM			0				0				0				0	0	0	0	0
8:45 AM			0				0			0	0		0		0	0	0	0	0
9:00 AM			0				0				0				0	0	0	0	0
9:15 AM			0				0				0				0	0	0	0	0
9:30 AM			0				0				0				0	0	0	0	0
9:45 AM			0				0				0				0	0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection: 3: 1st @ Main **City:** Aumsville, OR

Counter: Sandow Engineering **Date:** Thursday, August 10, 2023

Total of All Vehicles

Time Period	Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume	Pedestrians			
	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total			SB	WB	NB	EB
7:00 7:15	20	0	4	24	15	25	1	41	0	0	0	0	0	13	19	32	97		0	0	0	0
7:15 7:30	17	0	8	25	10	20	0	30	1	2	0	3	2	13	20	35	93		1	0	0	0
7:30 7:45	19	2	7	28	17	17	1	35	1	0	0	1	1	20	35	56	120		0	4	0	0
7:45 8:00	23	0	9	32	13	19	2	34	0	0	0	0	0	23	32	55	121	431	0	0	0	0
8:00 8:15	17	1	6	24	13	19	0	32	0	0	0	0	0	17	21	38	94	428	0	0	0	0
8:15 8:30	16	0	7	23	8	24	0	32	2	1	0	3	0	16	21	37	95	430	0	0	0	0
8:30 8:45	15	2	9	26	22	34	0	56	0	1	0	1	0	25	25	50	133	443	0	0	0	0
8:45 9:00	30	2	9	41	9	40	2	51	1	1	1	3	0	29	31	60	155	477	1	1	0	0
9:00 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
9:15 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
9:30 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
9:45 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
Count Period Total	**157**	**7**	**59**		**107**	**198**	**6**		**5**	**5**	**1**		**3**	**156**	**204**		**908**		**2**	**5**	**0**	**0**

PM Peak Hour Count Summary

	Southbound				Westbound				Northbound				Eastbound						Pedestrians			
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach			SB	WB	NB	EB
Peak Volumes	**79**	**2**	**28**	**109**	**55**	**81**	**4**	**140**	**2**	**2**	**0**	**4**	**3**	**69**	**106**	**178**	**431**		**1**	**4**	**0**	**0**
PHF	0.86	0.25	0.78	0.85	0.81	0.81	0.50	0.85	0.50	0.25	0.00	0.33	0.38	0.75	0.76	0.79	0.89					
Trucks	1	0	0		1	3	0		0	0	0		2	5	3							
% Trucks	1%	0%	0%		2%	4%	0%		0%	0%	0%		67%	7%	3%							

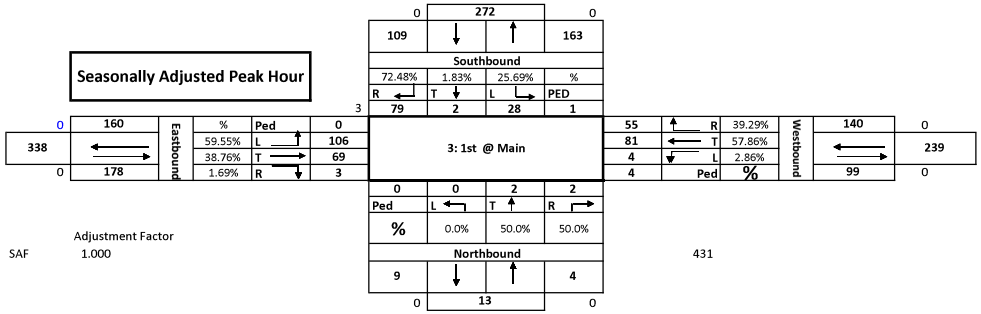

Seasonally Adjusted Peak Hour
0
272
0
109
163
Southbound
72.48%
1.83%
25.69%
%
R
T
L
PED
3
79
2
28
1
0
160
Eastbound
%
Ped
0
338
59.55%
L
106
3: 1st @ Main
38.76%
T
69
0
178
1.69%
R
3
0
0
2
2
Ped
L
T
R
%
0.0%
50.0%
50.0%
Adjustment Factor
SAF
1.000
Northbound
9
4
0
13
0
55
R
39.29%
Westbound
140
0
81
T
57.86%
239
4
L
2.86%
4
Ped
%
99
0
431

EXHIBIT 4 - 5. TIA

AGENDA ITEM 4A

3: 1st @ Main

Pedestrians and Cars

Time Period	Southbound					Westbound					Northbound					Eastbound					15 Minute Volume	Hourly Volume
	Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left			
7:00 AM		20		4			15	25	1									13	19		97	
7:15 AM	1	17		8			10	18				1	2				1	13	20		90	
7:30 AM		18	2	7		4	17	16	1			1						16	35		113	
7:45 AM		23		9			12	19	2									22	29		116	416
8:00 AM		16	1	6			13	17										17	19		89	408
8:15 AM		16		6			8	23				2	1					16	18		90	408
8:30 AM		14	2	9			22	34					1					25	25		132	427
8:45 AM	1	30	2	8		1	9	38	2			1	1	1				28	29		149	460
9:00 AM																					0	371
9:15 AM																					0	281
9:30 AM																					0	149
9:45 AM																					0	0
Total	2	154	7	57		5	106	190	6		0	5	5	1		0	1	150	194			
Peak Hour	**1**	**78**	**2**	**28**	**0**	**4**	**54**	**78**	**4**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**1**	**64**	**103**	**0**	**416**	**1232**

Trucks

Time Period	Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left			
7:00 AM																	0	
7:15 AM						2							1				3	
7:30 AM	1					1							1	4			7	
7:45 AM					1									1	3		5	15
8:00 AM	1					2									2		5	20
8:15 AM			1			1									3		5	22
8:30 AM	1																1	16
8:45 AM			1			2								1	2		6	17
9:00 AM																	0	12
9:15 AM																	0	7
9:30 AM																	0	6
9:45 AM																	0	0
Total	3	0	2		1	8	0		0	0	0		2	6	10			
Peak Hour	**1**	**0**	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**5**	**3**	**0**	**15**	**57**

Bikes

Time Period	Southbound				Westbound				Northbound				Eastbound			SB	WB	NB	EB
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left				
7:00 AM																0	0	0	0
7:15 AM																0	0	0	0
7:30 AM																0	0	0	0
7:45 AM																0	0	0	0
8:00 AM																0	0	0	0
8:15 AM																0	0	0	0
8:30 AM																0	0	0	0
8:45 AM																0	0	0	0
9:00 AM																0	0	0	0
9:15 AM																0	0	0	0
9:30 AM																0	0	0	0
9:45 AM																0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0				
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Pedestrians

Time Period	Left				Left				Left				Left						
			0				**0**			**0**	**0**				**0**				
7:15 AM		0	0				0			0	0			0	0	0	0	0	0
7:30 AM		0	0				0				0				0	0	0	0	0
7:45 AM			0		0		0				0				0	0	0	0	0
8:00 AM			0				0			0	0		0		0	0	0	0	0
8:15 AM			0				0		0		0				0	0	0	0	0
8:30 AM			0				0				0				0	0	0	0	0
8:45 AM			0				0			0	0		0		0	0	0	0	0
9:00 AM			0				0				0				0	0	0	0	0
9:15 AM			0				0				0				0	0	0	0	0
9:30 AM			0				0				0				0	0	0	0	0
9:45 AM			0				0				0				0	0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection: **4: 1st @ Del Mar** City: **Aumsville, OR**

Counter: **Sandow Engineering** Date: **Thursday, August 10, 2023**

Total of All Vehicles

Time Period	Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume	Pedestrians			
	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total			SB	WB	NB	EB
7:00 7:15	4	21	0	25	0	0	0	0	0	53	5	58	2	0	12	14	97		0	0	0	0
7:15 7:30	6	21	0	27	0	0	0	0	0	42	1	43	1	0	17	18	88		0	0	1	0
7:30 7:45	7	26	0	33	1	0	0	1	0	70	2	72	4	0	26	30	136		0	0	0	0
7:45 8:00	6	27	0	33	0	0	0	0	0	62	3	65	5	0	18	23	121	442	0	0	0	0
8:00 8:15	2	26	0	28	0	0	0	0	0	39	2	41	3	0	10	13	82	427	0	0	0	0
8:15 8:30	5	19	0	24	0	0	0	0	0	46	1	47	3	0	17	20	91	430	0	0	0	0
8:30 8:45	6	31	0	37	0	0	0	0	0	44	5	49	2	0	12	14	100	394	0	0	0	0
8:45 9:00	5	45	0	50	1	0	0	1	0	45	5	50	6	0	10	16	117	390	0	0	0	0
9:00 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
9:15 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
9:30 9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
9:45 10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
Count Period Total	**41**	**216**	**0**		**2**	**0**	**0**		**0**	**401**	**24**		**26**	**0**	**122**		**832**		**0**	**0**	**1**	**0**

PM Peak Hour Count Summary

	Southbound				Westbound				Northbound				Eastbound						Pedestrians			
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach			SB	WB	NB	EB
Peak Volumes	**23**	**95**	**0**	**118**	**1**	**0**	**0**	**1**	**0**	**227**	**11**	**238**	**12**	**0**	**73**	**85**	**442**		**0**	**0**	**1**	**0**
PHF	0.82	0.88	0.00	0.89	0.25	0.00	0.00	0.25	0.00	0.81	0.55	0.83	0.60	0.00	0.70	0.71	0.81					
Trucks	1	2	0		0	0	0		0	4	2		0	0	2							
% Trucks	4%	2%	0%		0%	0%	0%		0%	2%	18%		0%	0%	3%							

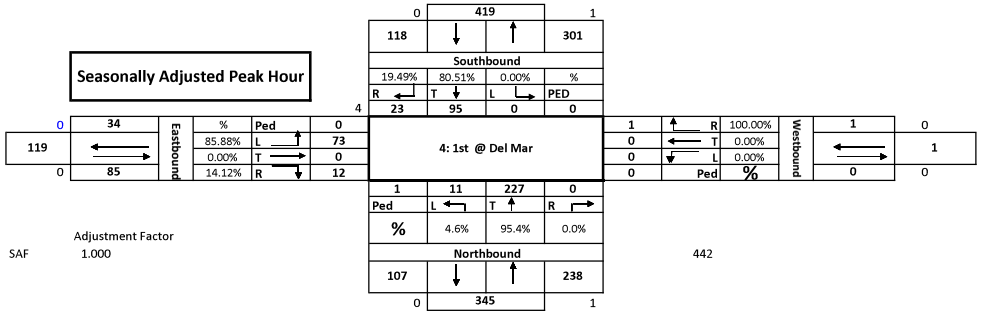

Seasonally Adjusted Peak Hour
0
419
1
118
301
Southbound
19.49%
80.51%
0.00%
%
R
T
L
PED
4
23
95
0
0
0
34
119
85
Eastbound
%
Ped
0
85.88%
L
73
0.00%
T
0
14.12%
R
12
4: 1st @ Del Mar
1
R
100.00%
0
T
0.00%
0
L
0.00%
0
Ped
%
Westbound
1
0
1
0
0
1
11
227
0
Ped
L
T
R
%
4.6%
95.4%
0.0%
Adjustment Factor
SAF
1.000
Northbound
442
107
238
0
345
1

EXHIBIT 4 - 5. TIA

AGENDA ITEM 4A

4: 1st @ Del Mar

Pedestrians and Cars

Time Period	Southbound					Westbound					Northbound					Eastbound					15 Minute Volume	Hourly Volume
	Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left			
7:00 AM		4	20										52	4			2		12		94	
7:15 AM		5	21								1		42	1			1		16		86	
7:30 AM		7	25				1						69	2			4		26		134	
7:45 AM		6	27										60	2			5		17		117	431
8:00 AM		2	22										35	2			3		10		74	411
8:15 AM		5	18										42	1			3		17		86	411
8:30 AM		6	30										44	5			2		12		99	376
8:45 AM		5	42				1						41	5			6		9		109	368
9:00 AM																					0	294
9:15 AM																					0	208
9:30 AM																					0	109
9:45 AM																					0	0
Total	0	40	205	0		0	2	0	0		1	0	385	22		0	26	0	119			
Peak Hour	**0**	**22**	**93**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**223**	**9**	**0**	**0**	**12**	**0**	**71**	**0**	**431**	**1253**

Trucks

Time Period	Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left			
7:00 AM		1								1	1						3	
7:15 AM	1														1		2	
7:30 AM		1								1							2	
7:45 AM										2	1				1		4	11
8:00 AM		4								4							8	16
8:15 AM		1								4							5	19
8:30 AM		1															1	18
8:45 AM		3								4					1		8	22
9:00 AM																	0	14
9:15 AM																	0	9
9:30 AM																	0	8
9:45 AM																	0	0
Total	1	11	0		0	0	0		0	16	2		0	0	3			
Peak Hour	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**2**	**0**	**0**	**0**	**2**	**0**	**11**	**46**

Bikes

Time Period	Southbound				Westbound				Northbound				Eastbound			SB	WB	NB	EB
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left				
7:00 AM																0	0	0	0
7:15 AM																0	0	0	0
7:30 AM																0	0	0	0
7:45 AM																0	0	0	0
8:00 AM																0	0	0	0
8:15 AM																0	0	0	0
8:30 AM																0	0	0	0
8:45 AM																0	0	0	0
9:00 AM																0	0	0	0
9:15 AM																0	0	0	0
9:30 AM																0	0	0	0
9:45 AM																0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0				
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Pedestrians

Time Period	Left				Left				Left				Left						
			0				**0**			**0**	**0**				**0**				
7:15 AM		0	0				0			0	0			0	0	0	0	0	0
7:30 AM		0	0				0				0				0	0	0	0	0
7:45 AM			0		0		0				0				0	0	0	0	0
8:00 AM			0				0			0	0		0		0	0	0	0	0
8:15 AM			0				0		0		0				0	0	0	0	0
8:30 AM			0				0				0				0	0	0	0	0
8:45 AM			0				0			0	0		0		0	0	0	0	0
9:00 AM			0				0				0				0	0	0	0	0
9:15 AM			0				0				0				0	0	0	0	0
9:30 AM			0				0				0				0	0	0	0	0
9:45 AM			0				0				0				0	0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Global Peak Hour

Intersections						
		1: Shaw Hwy @ OR 22 EB Ramps	2: Shaw Hwy @ NE Santiam Hwy Ramp	3: 1st @ Main	4: 1st @ Del Mar	
Time Period		Volume	Volume	Volume	Volume	Total
7:00 AM	8:00 AM	576	369	431	442	**1818**
7:15 AM	8:15 AM	559	364	428	427	**1778**
7:30 AM	8:30 AM	536	376	430	430	**1772**
7:45 AM	8:45 AM	477	348	443	394	**1662**
8:00 AM	9:00 AM	423	336	477	390	**1626**
		576	376	477	442	**1818**

Peak Hour 7:00 AM
7:15 AM
7:30 AM
7:45 AM

Intersection: 1: Shaw Hwy @ OR 22 EB Ramps City: Aumsville, OR

Counter: Quality Counts Date: Wednesday, December 7, 2022

Total of All Vehicles

Time Period		Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume	Pedestrians			
		Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total			SB	WB	NB	EB
16:00	16:15	0	28	10	38	7	0	40	47	15	69	0	84	0	0	0	0	169		0	0	0	0
16:15	16:30	0	23	3	26	9	0	55	64	13	40	0	53	0	0	0	0	143		0	0	0	0
16:30	16:45	0	31	6	37	9	0	63	72	9	43	0	52	0	0	0	0	161		0	0	0	0
16:45	17:00	0	36	3	39	3	0	65	68	10	39	0	49	0	0	0	0	156	629	0	0	0	0
17:00	17:15	0	23	6	29	6	0	59	65	19	41	0	60	0	0	0	0	154	614	0	0	0	0
17:15	17:30	0	21	2	23	6	0	66	72	14	43	0	57	0	0	0	0	152	623	0	0	0	0
17:30	17:45	0	35	5	40	10	0	57	67	15	26	0	41	0	0	0	0	148	610	0	0	0	0
17:45	18:00	0	18	4	22	4	0	48	52	4	34	0	38	0	0	0	0	112	566	0	0	0	0
18:00	18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
18:15	18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
18:30	18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
18:45	19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
Count Period Total		**0**	**215**	**39**		**54**	**0**	**453**		**99**	**335**	**0**		**0**	**0**	**0**		**1195**		**0**	**0**	**0**	**0**

PM Peak Hour Count Summary

	Southbound				Westbound				Northbound				Eastbound						Pedestrians			
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach			SB	WB	NB	EB
Peak Volumes	**0**	**111**	**17**	**128**	**24**	**0**	**253**	**277**	**52**	**166**	**0**	**218**	**0**	**0**	**0**	**0**	**623**		**0**	**0**	**0**	**0**
PHF	0.00	0.77	0.71	0.82	0.67	0.00	0.96	0.96	0.68	0.97	0.00	0.91	0.00	0.00	0.00	0.00	0.97					
Trucks	0	4	2		1	0	2		1	5	0		0	0	0							
% Trucks	0%	4%	12%		4%	0%	1%		2%	3%	0%		0%	0%	0%							

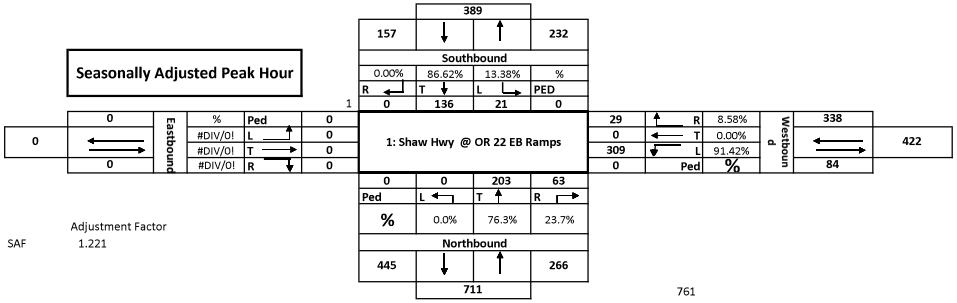

Seasonally Adjusted Peak Hour
389
157
232
Southbound
0.00%
86.62%
13.38%
%
R
T
L
PED
1
0
136
21
0
0
Eastbound
%
Ped
#DIV/0!
L
#DIV/0!
T
#DIV/0!
R
0
0
0
1: Shaw Hwy @ OR 22 EB Ramps
29
0
309
0
R
T
L
Ped
8.58%
0.00%
91.42%
%
Westboun
d
338
84
422
0
0
0
0
203
63
Ped
L
T
R
%
0.0%
76.3%
23.7%
Northbound
445
266
711
761
Adjustment Factor
SAF
1.221

EXHIBIT 4 - 5. TIA

AGENDA ITEM 4A

1: Shaw Hwy @ OR 22 EB Ramps

Pedestrians and Cars

Time Period	Southbound					Westbound					Northbound					Eastbound					15 Minute Volume	Hourly Volume
	Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left			
4:00 PM			26	10			5		39			15	65								160	
4:15 PM			20	3			8		54			13	38								136	
4:30 PM			30	6			9		62			9	41								157	
4:45 PM			34	2			2		64			9	37								148	601
5:00 PM			22	5			6		59			19	41								152	593
5:15 PM			21	2			6		66			14	42								151	608
5:30 PM			34	5			10		56			14	26								145	596
5:45 PM			18	4			4		48			4	34								112	560
6:00 PM																					0	408
6:15 PM																					0	257
6:30 PM																					0	112
6:45 PM																					0	0
Total	0	0	205	37		0	50	0	448		0	97	324	0		0	0	0	0			
Peak Hour	**0**	**0**	**107**	**15**	**0**	**0**	**23**	**0**	**251**	**0**	**0**	**51**	**161**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**608**	**1802**

Trucks

Time Period	Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left			
4:00 PM		2	0		2		1		0	4							9	
4:15 PM		3	0		1		1		0	2							7	
4:30 PM		1	0		0		1		0	2							4	
4:45 PM		2	1		1		1		1	2							8	28
5:00 PM		1	1		0		0		0	0							2	21
5:15 PM		0	0		0		0		0	1							1	15
5:30 PM		1	0		0		1		1	0							3	14
5:45 PM		0	0		0		0		0	0							0	6
6:00 PM																	0	4
6:15 PM																	0	3
6:30 PM																	0	0
6:45 PM																	0	0
Total	0	10	2		4	0	5		2	11	0		0	0	0			
Peak Hour	**0**	**4**	**2**	**0**	**1**	**0**	**2**	**0**	**1**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**64**

Bikes

Time Period	Southbound				Westbound				Northbound				Eastbound				SB	WB	NB	EB
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left					
4:00 PM																	0	0	0	0
4:15 PM																	0	0	0	0
4:30 PM																	0	0	0	0
4:45 PM																	0	0	0	0
5:00 PM																	0	0	0	0
5:15 PM																	0	0	0	0
5:30 PM																	0	0	0	0
5:45 PM																	0	0	0	0
6:00 PM																	0	0	0	0
6:15 PM																	0	0	0	0
6:30 PM																	0	0	0	0
6:45 PM																	0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0					
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		**0**	**0**	**0**	**0**

Pedestrians

Time Period	NE				NW				SW				SE			SB	WB	NB	EB
	Left	Right	Total		Left	Right	Total		Left	Right	Total		Left	Right	Total				
4:00 PM			0				0				0				0	0	0	0	0
4:15 PM			0				0				0				0	0	0	0	0
4:30 PM			0				0				0				0	0	0	0	0
4:45 PM			0				0				0				0	0	0	0	0
5:00 PM			0				0				0				0	0	0	0	0
5:15 PM			0				0				0				0	0	0	0	0
5:30 PM			0				0				0				0	0	0	0	0
5:45 PM			0				0				0				0	0	0	0	0
6:00 PM			0				0				0				0	0	0	0	0
6:15 PM			0				0				0				0	0	0	0	0
6:30 PM			0				0				0				0	0	0	0	0
6:45 PM			0				0				0				0	0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Intersection: **2: Shaw Hwy @ NE Santiam Hwy Ramp** City: **Aumsville, OR**

Counter: **Sandow Engineering** Date: **Wednesday, August 9, 2023**

Total of All Vehicles

Time Period		Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume	Pedestrians			
		Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total			SB	WB	NB	EB
16:00	16:15	12	21	0	33	0	0	0	0	0	26	46	72	11	0	4	15	120		0	0	0	0
16:15	16:30	8	19	0	27	0	0	0	0	0	27	31	58	5	0	5	10	95		0	0	0	0
16:30	16:45	10	22	0	32	0	0	0	0	0	26	47	73	13	0	6	19	124		0	0	0	0
16:45	17:00	15	18	0	33	0	0	0	0	0	35	26	61	13	0	7	20	114	453	0	0	0	0
17:00	17:15	15	18	0	33	0	0	0	0	0	38	30	68	16	0	6	22	123	456	0	0	0	0
17:15	17:30	14	10	0	24	0	0	0	0	0	19	22	41	20	0	11	31	96	457	0	0	0	0
17:30	17:45	10	17	0	27	0	0	0	0	0	15	36	51	12	0	5	17	95	428	0	0	0	0
17:45	18:00	6	23	0	29	0	0	0	0	0	13	21	34	12	0	4	16	79	393	0	0	0	0
18:00	18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
18:15	18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
18:30	18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
18:45	19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
Count Period Total		**90**	**148**	**0**		**0**	**0**	**0**		**0**	**199**	**259**		**102**	**0**	**48**		**846**		**0**	**0**	**0**	**0**

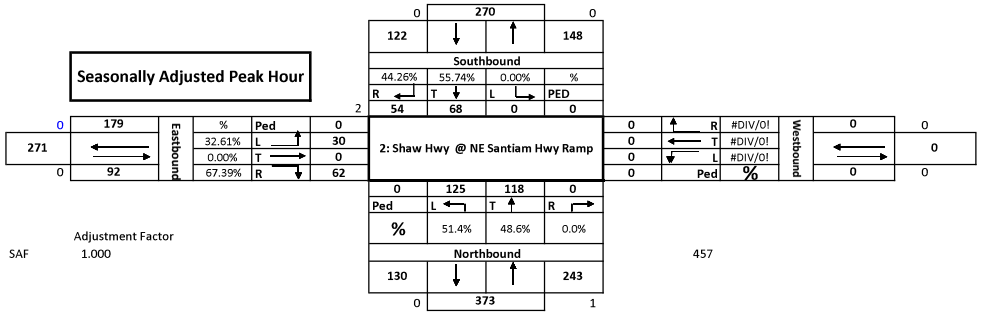
PM Peak Hour Count Summary

	Southbound				Westbound				Northbound				Eastbound						Pedestrians			
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach			SB	WB	NB	EB
Peak Volumes	**54**	**68**	**0**	**122**	**0**	**0**	**0**	**0**	**0**	**118**	**125**	**243**	**62**	**0**	**30**	**92**	**457**		**0**	**0**	**0**	**0**
PHF	0.90	0.77	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.78	0.66	0.83	0.78	0.00	0.68	0.74	0.92					
Trucks	1	3	0		0	0	0		0	6	7		0	0	4							
% Trucks	2%	4%	0%		0%	0%	0%		0%	5%	6%		0%	0%	13%							

EXHIBIT 4 - 5. TIA

AGENDA ITEM 4A

Seasonally Adjusted Peak Hour



Adjustment Factor

SAF 1.000

457

EXHIBIT 4 - 5. TIA

AGENDA ITEM 4A

2: Shaw Hwy @ NE Santiam Hwy Ramp

Pedestrians and Cars

Time Period	Southbound					Westbound					Northbound					Eastbound					15 Minute Volume	Hourly Volume
	Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left			
4:00 PM		12	21										24	45			10		4		116	
4:15 PM		8	17										23	29			5		5		87	
4:30 PM		10	21										26	41			13		4		115	
4:45 PM		15	17										32	26			13		7		110	428
5:00 PM		15	17										37	29			16		6		120	432
5:15 PM		13	10										17	22			20		9		91	436
5:30 PM		10	17										15	36			12		5		95	416
5:45 PM		5	22										12	21			11		4		75	381
6:00 PM																					0	261
6:15 PM																					0	170
6:30 PM																					0	75
6:45 PM																					0	0
Total	0	88	142	0		0	0	0	0		0	0	186	249		0	100	0	44			
Peak Hour	**0**	**53**	**65**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**112**	**118**	**0**	**0**	**62**	**0**	**26**	**0**	**436**	**1296**

Trucks

Time Period	Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left			
4:00 PM										2	1		1				4	
4:15 PM		2								4	2						8	
4:30 PM		1									6				2		9	
4:45 PM		1								3							4	25
5:00 PM		1								1	1						3	24
5:15 PM	1									2					2		5	21
5:30 PM																	0	12
5:45 PM	1	1								1			1				4	12
6:00 PM																	0	9
6:15 PM																	0	4
6:30 PM																	0	4
6:45 PM																	0	0
Total	2	6	0		0	0	0		0	13	10		2	0	4			
Peak Hour	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**7**	**0**	**0**	**0**	**4**	**0**	**21**	**70**

Bikes

Time Period	Southbound				Westbound				Northbound				Eastbound			SB	WB	NB	EB
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left				
4:00 PM																0	0	0	0
4:15 PM																0	0	0	0
4:30 PM																0	0	0	0
4:45 PM																0	0	0	0
5:00 PM																0	0	0	0
5:15 PM																0	0	0	0
5:30 PM																0	0	0	0
5:45 PM																0	0	0	0
6:00 PM																0	0	0	0
6:15 PM																0	0	0	0
6:30 PM																0	0	0	0
6:45 PM																0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0				
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Pedestrians

Time Period	Left				Left				Left				Left						
			0				**0**			**0**	**0**				**0**				
4:15 PM		0	0				0			0	0			0	0	0	0	0	0
4:30 PM		0	0				0				0				0	0	0	0	0
4:45 PM			0		0		0				0				0	0	0	0	0
5:00 PM			0				0			0	0		0		0	0	0	0	0
5:15 PM			0				0		0		0				0	0	0	0	0
5:30 PM			0				0				0				0	0	0	0	0
5:45 PM			0				0			0	0		0		0	0	0	0	0
6:00 PM			0				0				0				0	0	0	0	0
6:15 PM			0				0				0				0	0	0	0	0
6:30 PM			0				0				0				0	0	0	0	0
6:45 PM			0				0				0				0	0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection: **3: 1st @ Main** City: **Aumsville, OR**

Counter: **Sandow Engineering** Date: **Wednesday, August 9, 2023**

Total of All Vehicles

Time Period		Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume	Pedestrians			
		Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total			SB	WB	NB	EB
16:00	16:15	36	0	12	48	22	43	0	65	0	3	0	3	0	46	38	84	200		0	0	1	1
16:15	16:30	36	0	15	51	13	41	2	56	1	1	0	2	0	49	29	78	187		1	2	0	0
16:30	16:45	37	1	10	48	26	30	0	56	2	0	1	3	2	46	35	83	190		0	0	0	0
16:45	17:00	33	2	15	50	7	43	1	51	4	3	0	7	0	54	29	83	191	768	1	0	0	0
17:00	17:15	34	0	18	52	15	34	2	51	0	2	0	2	0	52	36	88	193	761	1	0	0	1
17:15	17:30	38	0	21	59	12	49	0	61	1	3	0	4	0	45	28	73	197	771	0	0	1	0
17:30	17:45	29	0	25	54	8	36	0	44	3	0	0	3	1	42	36	79	180	761	0	0	0	1
17:45	18:00	30	1	13	44	9	35	1	45	0	0	0	0	0	38	25	63	152	722	0	0	0	0
18:00	18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
18:15	18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
18:30	18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
18:45	19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
Count Period Total		**273**	**4**	**129**		**112**	**311**	**6**		**11**	**12**	**1**		**3**	**372**	**256**		**1490**		**3**	**2**	**2**	**3**

PM Peak Hour Count Summary

	Southbound				Westbound				Northbound				Eastbound						Pedestrians			
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach			SB	WB	NB	EB
Peak Volumes	**142**	**3**	**64**	**209**	**60**	**156**	**3**	**219**	**7**	**8**	**1**	**16**	**2**	**197**	**128**	**327**	**771**		**2**	**0**	**1**	**1**
PHF	0.93	0.38	0.76	0.89	0.58	0.80	0.38	0.90	0.44	0.67	0.25	0.57	0.25	0.91	0.89	0.93	0.98					
Trucks	5	0	1		4	2	0		0	0	0		0	12	4							
% Trucks	4%	0%	2%		7%	1%	0%		0%	0%	0%		0%	6%	3%							

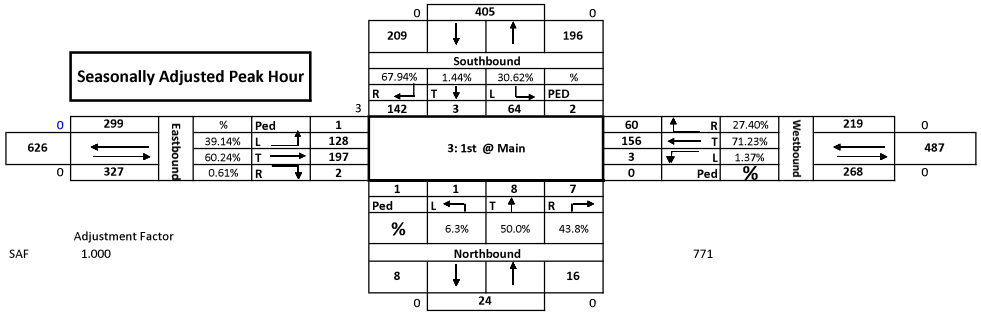

Seasonally Adjusted Peak Hour
0
405
0
209
196
Southbound
67.94%
1.44%
30.62%
%
R
T
L
PED
3
142
3
64
2
0
299
Eastbound
%
Ped
1
626
39.14%
L
128
3: 1st @ Main
60
R
27.40%
Westbound
219
0
60.24%
T
197
156
T
71.23%
487
0
327
0.61%
R
2
3
L
1.37%
0
Ped
%
268
0
1
1
8
7
Ped
L
T
R
%
6.3%
50.0%
43.8%
Northbound
8
16
0
24
0
Adjustment Factor
SAF
1.000
771

EXHIBIT 4 - 5. TIA

AGENDA ITEM 4A

3: 1st @ Main

Pedestrians and Cars

Time Period	Southbound					Westbound					Northbound					Eastbound					15 Minute Volume	Hourly Volume
	Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left			
4:00 PM		36		12			22	41					2					44	37		194	
4:15 PM	1	34		15		2	12	41	2			1	1					45	27		178	
4:30 PM		34	1	10			23	30				2		1			2	45	34		182	
4:45 PM		32	2	14			6	43	1			4	3					49	28		182	736
5:00 PM		31		18			15	33	2				2					49	35		185	727
5:15 PM		38		21			12	48				1	2					42	27		191	740
5:30 PM		29		25			8	36				3				1	1	41	36		179	737
5:45 PM		29	1	12			9	33	1									36	24		145	700
6:00 PM																					0	515
6:15 PM																					0	324
6:30 PM																					0	145
6:45 PM																					0	0
Total	1	263	4	127		2	107	305	6		0	11	10	1		1	3	351	248			
Peak Hour	**0**	**135**	**3**	**63**	**0**	**0**	**56**	**154**	**3**	**0**	**0**	**7**	**7**	**1**	**0**	**0**	**2**	**185**	**124**	**0**	**740**	**2203**

Trucks

Time Period	Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left			
4:00 PM						2								2	1		5	
4:15 PM	2				1									4	2		9	
4:30 PM	3				3									1	1		8	
4:45 PM			1		1									5	1		8	30
5:00 PM	2					1								3	1		7	32
5:15 PM						1								3	1		5	28
5:30 PM														1			1	21
5:45 PM	1		1			2								2	1		7	20
6:00 PM																	0	13
6:15 PM																	0	8
6:30 PM																	0	7
6:45 PM																	0	0
Total	8	0	2		5	6	0		0	0	0		0	21	8			
Peak Hour	**5**	**0**	**1**	**0**	**4**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**4**	**0**	**28**	**90**

Bikes

Time Period	Southbound				Westbound				Northbound				Eastbound			SB	WB	NB	EB
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left				
4:00 PM										1				1		0	0	1	1
4:15 PM																0	0	0	0
4:30 PM																0	0	0	0
4:45 PM	1															1	0	0	0
5:00 PM	1													1		1	0	0	1
5:15 PM										1						0	0	1	0
5:30 PM																0	0	0	0
5:45 PM																0	0	0	0
6:00 PM																0	0	0	0
6:15 PM																0	0	0	0
6:30 PM																0	0	0	0
6:45 PM																0	0	0	0
Total	2	0	0		0	0	0		0	2	0		0	2	0				
Peak Hour	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**1**	**1**

Pedestrians

Time Period	Left				Left				Left				Left						
			0				**0**			**0**	**0**				**0**				
4:15 PM		0	0				0			0	0			0	0	0	0	0	0
4:30 PM		0	0				0				0				0	0	0	0	0
4:45 PM			0		0		0				0				0	0	0	0	0
5:00 PM			0				0			0	0		0		0	0	0	0	0
5:15 PM			0				0		0		0				0	0	0	0	0
5:30 PM			0				0				0				0	0	0	0	0
5:45 PM			0				0			0	0		0		0	0	0	0	0
6:00 PM			0				0				0				0	0	0	0	0
6:15 PM			0				0				0				0	0	0	0	0
6:30 PM			0				0				0				0	0	0	0	0
6:45 PM			0				0				0				0	0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection: **4: 1st @ Delmar** City: **Aumsville, OR**

Counter: **Sandow Engineering** Date: **Wednesday, August 9, 2023**

Total of All Vehicles

Time Period		Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume	Pedestrians			
		Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total	Right	Thru	Left	Approach Total			SB	WB	NB	EB
16:00	16:15	22	57	0	79	0	0	0	0	0	55	8	63	3	1	11	15	157		0	0	0	0
16:15	16:30	11	52	0	63	0	0	0	0	0	46	3	49	5	0	12	17	129		1	0	0	0
16:30	16:45	13	66	0	79	0	0	0	0	0	66	5	71	3	0	13	16	166		0	0	0	0
16:45	17:00	19	67	0	86	0	0	0	0	0	47	4	51	5	0	14	19	156	608	0	0	0	0
17:00	17:15	16	76	0	92	0	0	0	0	0	50	6	56	1	0	11	12	160	611	0	0	0	0
17:15	17:30	30	71	0	101	0	0	0	0	0	39	7	46	6	0	3	9	156	638	0	0	0	0
17:30	17:45	18	61	0	79	0	0	0	0	0	41	6	47	6	0	13	19	145	617	0	0	0	0
17:45	18:00	21	51	0	72	0	0	0	0	0	32	1	33	1	0	5	6	111	572	0	0	0	0
18:00	18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
18:15	18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
18:30	18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
18:45	19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
Count Period Total		**150**	**501**	**0**		**0**	**0**	**0**		**0**	**376**	**40**		**30**	**1**	**82**		**1180**		**1**	**0**	**0**	**0**

PM Peak Hour Count Summary

	Southbound				Westbound				Northbound				Eastbound						Pedestrians			
	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach	Right	Thru	Left	Approach			SB	WB	NB	EB
Peak Volumes	**78**	**280**	**0**	**358**	**0**	**0**	**0**	**0**	**0**	**202**	**22**	**224**	**15**	**0**	**41**	**56**	**638**		**0**	**0**	**0**	**0**
PHF	0.65	0.92	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.77	0.79	0.79	0.63	0.00	0.73	0.74	0.96					
Trucks	0	8	0		0	0	0		0	9	1		0	0	1							
% Trucks	0%	3%	0%		0%	0%	0%		0%	4%	5%		0%	0%	2%							

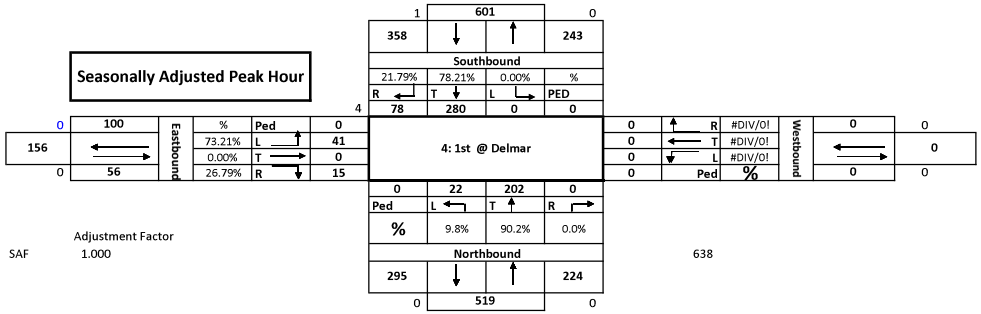

Seasonally Adjusted Peak Hour
1
601
0
358
243
Southbound
21.79%
78.21%
0.00%
%
R
T
L
PED
4
78
280
0
0
0
100
Eastbound
%
Ped
0
156
73.21%
L
41
4: 1st @ Delmar
0.00%
T
0
0
56
26.79%
R
15
0
R
#DIV/0!
0
T
#DIV/0!
0
L
#DIV/0!
0
Ped
%
Westbound
0
0
0
0
0
0
0
22
202
0
Ped
L
T
R
%
9.8%
90.2%
0.0%
Northbound
295
224
0
519
0
Adjustment Factor
SAF
1.000
638

EXHIBIT 4 - 5. TIA

AGENDA ITEM 4A

4: 1st @ Delmar

Pedestrians and Cars

Time Period	Southbound					Westbound					Northbound					Eastbound					15 Minute Volume	Hourly Volume
	Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left		Peds	Right	Thru	Left			
4:00 PM		22	56										55	8			3		11		155	
4:15 PM		11	49										42	3			5		11		121	
4:30 PM		13	63										60	5			3		12		156	
4:45 PM		19	66										45	3			5		14		152	584
5:00 PM		16	72										49	6			1		11		155	584
5:15 PM		30	71										39	7			6		3		156	619
5:30 PM		18	61										41	6			5		13		144	607
5:45 PM		21	48										31	1			1		5		107	562
6:00 PM																					0	407
6:15 PM																					0	251
6:30 PM																					0	107
6:45 PM																					0	0
Total	0	150	486	0		0	0	0	0		0	0	362	39		0	29	0	80			
Peak Hour	**0**	**78**	**272**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**193**	**21**	**0**	**0**	**15**	**0**	**40**	**0**	**619**	**1787**

Trucks

Time Period	Southbound				Westbound				Northbound				Eastbound				15 Minute Volume	Hourly Volume
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left			
4:00 PM		1												1			2	
4:15 PM		2								4					1		7	
4:30 PM		3								6					1		10	
4:45 PM		1								2	1						4	23
5:00 PM		4								1							5	26
5:15 PM																	0	19
5:30 PM													1				1	10
5:45 PM		3								1							4	10
6:00 PM																	0	5
6:15 PM																	0	5
6:30 PM																	0	4
6:45 PM																	0	0
Total	0	14	0		0	0	0		0	14	1		1	1	2			
Peak Hour	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**1**	**0**	**0**	**0**	**1**	**0**	**19**	**68**

Bikes

Time Period	Southbound				Westbound				Northbound				Eastbound			SB	WB	NB	EB
	Right	Thru	Left		Right	Thru	Left		Right	Thru	Left		Right	Thru	Left				
4:00 PM																0	0	0	0
4:15 PM		1														1	0	0	0
4:30 PM																0	0	0	0
4:45 PM																0	0	0	0
5:00 PM																0	0	0	0
5:15 PM																0	0	0	0
5:30 PM																0	0	0	0
5:45 PM																0	0	0	0
6:00 PM																0	0	0	0
6:15 PM																0	0	0	0
6:30 PM																0	0	0	0
6:45 PM																0	0	0	0
Total	0	1	0		0	0	0		0	0	0		0	0	0				
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Pedestrians

Time Period	Left				Left				Left				Left						
			0				**0**			**0**	**0**				**0**				
4:15 PM		0	0				0			0	0			0	0	0	0	0	0
4:30 PM		0	0				0				0				0	0	0	0	0
4:45 PM			0		0		0				0				0	0	0	0	0
5:00 PM			0				0			0	0		0		0	0	0	0	0
5:15 PM			0				0		0		0				0	0	0	0	0
5:30 PM			0				0				0				0	0	0	0	0
5:45 PM			0				0			0	0		0		0	0	0	0	0
6:00 PM			0				0				0				0	0	0	0	0
6:15 PM			0				0				0				0	0	0	0	0
6:30 PM			0				0				0				0	0	0	0	0
6:45 PM			0				0				0				0	0	0	0	0
Total	0	0	0		0	0	0		0	0	0		0	0	0	0	0	0	0
Peak Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PM Global Peak Hour

	Intersections				
	1: Shaw Hwy @ OR 22 EB Ramps	2: Shaw Hwy @ NE Santiam Hwy Ramp	3: 1st @ Main	4: 1st @ Delmar	
Time Period	Volume	Volume	Volume	Volume	Total
4:00 PM 5:00 PM	629	453	768	608	**2458**
4:15 PM 5:15 PM	614	456	761	611	**2442**
4:30 PM 5:30 PM	623	457	771	638	**2489**
4:45 PM 5:45 PM	610	428	761	617	**2416**
5:00 PM 6:00 PM	566	393	722	572	**2253**
	629	457	771	638	**2489**

Peak Hour 4:30 PM
4:45 PM
5:00 PM
5:15 PM

Seasonal Adjustment Factor

December		
Year	Peak	count
2017	116	95
2018	116	93
2019	116	95
2020	128	102
2021	116	95

Values in gray are high and low values not used

Seasonal Adj. Factor	1.2211

August		
Year	peak	count
2017	116	116
2018	116	116
2019	116	116
2020	128	128
2021	116	112

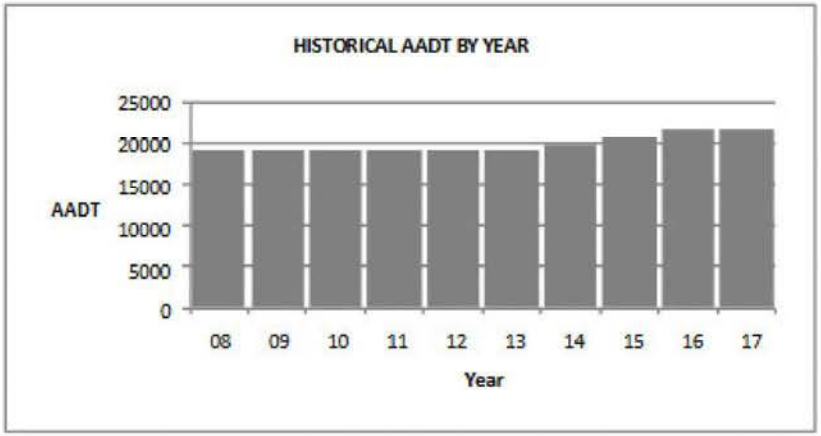
Values in gray are high and low values not used

Seasonal Adj. Factor	1.0000

Location:	OR22; MP 10.02; NORTH SANTIAM HIGHWAY NO. 162; 1.08 miles east of Shaw Highway Interchange	Site Name:	Aumsville (24-005)
		Installed:	January, 2001

HISTORICAL TRAFFIC DATA

		Percent of AADT				
Year	AADT	Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
2008	19241	142	12.0	11.2	11.0	10.9
2009	19304	140	12.1	11.2	11.0	10.8
2010	19295	141	11.8	11.4	11.1	11.0
2011	19073	144	11.9	11.5	11.2	11.0
2012	19169	144	12.7	11.8	11.7	11.4
2013	19220	142	12.2	11.3	11.1	11.0
2014	19795	143	12.8	11.5	11.3	11.2
2015	20812	142	11.4	11.1	10.8	10.6
2016	21682	141	11.9	11.2	11.0	10.7
2017	21925	136	12.1	11.0	10.7	10.5



2017 TRAFFIC DATA

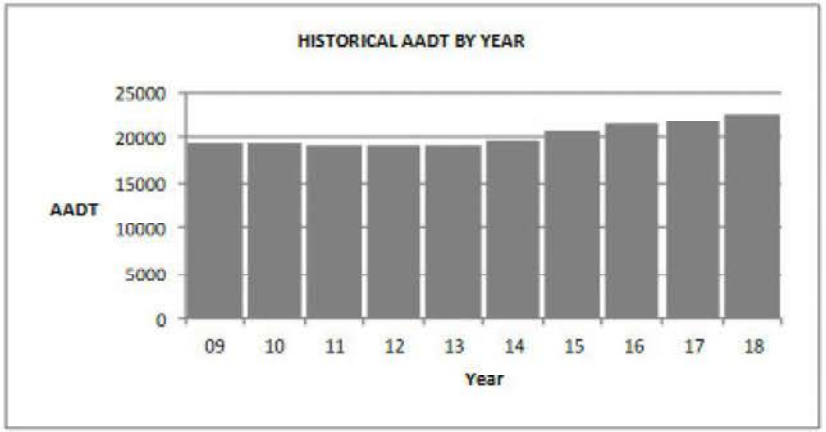
	Average Weekday Traffic	Percent of AADT	Average Daily Traffic	Percent of AADT
January	19029	87	17663	81
February	20476	93	19502	89
March	21189	97	20528	94
April	22193	101	21669	99
May	23351	107	23137	106
June	24309	111	24201	110
July	25341	116	25732	117
August	25338	116	24991	114
September	23361	107	23263	106
October	22895	104	22094	101
November	21699	99	20470	93
December	20748	95	19849	91

For Vehicle Classification data near your project, please go to the following web page: https://www.oregon.gov/ODOT/Data/Documents/TVT_2017.xlsx

Location:	OR22; MP 10.02; NORTH SANTIAM HIGHWAY NO. 162; 1.08 miles east of Shaw Highway Interchange	Site Name:	Aumsville (24-005)
		Installed:	January, 2001

HISTORICAL TRAFFIC DATA

		Percent of AADT				
Year	AADT	Max Day	Max Hour	10TH Hour	20TH Hour	30TH Hour
2009	19304	140	12.1	11.2	11.0	10.8
2010	19295	141	11.8	11.4	11.1	11.0
2011	19073	144	11.9	11.5	11.2	11.0
2012	19169	144	12.7	11.8	11.7	11.4
2013	19220	142	12.2	11.3	11.1	11.0
2014	19795	143	12.8	11.5	11.3	11.2
2015	20812	142	11.4	11.1	10.8	10.6
2016	21682	141	11.9	11.2	11.0	10.7
2017	21925	136	12.1	11.0	10.7	10.5
2018	22748	137	11.9	10.8	10.7	10.5



2018 TRAFFIC DATA

	Average Weekday Traffic	Percent of AADT	Average Daily Traffic	Percent of AADT
January	20574	90	19539	86
February	21147	93	20104	88
March	22211	98	21280	94
April	22897	101	21991	97
May	23985	105	23767	104
June	24990	110	24870	109
July	26300	116	26766	118
August	26440	116	26379	116
September	24247	107	23938	105
October	23453	103	22710	100
November	22410	99	21255	93
December	21196	93	20374	90

For Vehicle Classification data near your project, please go to the following web page: https://www.oregon.gov/ODOT/Data/Documents/TVT_2018.xlsx

Location	OR22; MP 10.02; NORTH SANTIAM HIGHWAY NO. 162; 1.08 miles east of Shaw Highway Interchange	Site Name	Aumsville (24-005)
		Installed	January, 2001

HISTORICAL ANNUAL TRAFFIC DATA

Year	Annual Average Daily Traffic (AADT)	Critical Values as percent of Annual Average Daily Traffic (AADT)				
		Max Day	Max Hour	10th Hour	20th Hour	30th Hour
2010	19295	141	11.8	11.4	11.1	11.0
2011	19073	144	11.9	11.5	11.2	11.0
2012	19169	144	12.7	11.8	11.7	11.4
2013	19220	142	12.2	11.3	11.1	11.0
2014	19795	143	12.8	11.5	11.3	11.2
2015	20812	142	11.4	11.1	10.8	10.6
2016	21682	141	11.9	11.2	11.0	10.7
2017	21925	136	12.1	11.0	10.7	10.5
2018	22748	137	11.9	10.8	10.7	10.5
2019	22916	***	***	***	***	***

2019 SEASONAL TRAFFIC DATA

Month	Weekday		Daily	
	Average	% AADT	Average	% AADT
January	21286	93	20165	88
February	19627	86	18870	82
March	22513	98	21592	94
April	23469	102	22614	99
May	24215	106	23895	104
June	25275	110	25142	110
July	26109	114	26414	115
August	26620	116	26707	117
September	24685	108	24157	105
October	23871	104	23004	100
November	22682	99	21523	94
December	21870	95	20909	91

Location	22/Shaw Highway Interchange ; NORTH SANTIAM HIGHWAY NO. 162; 1.08 miles east of Shaw Highway Interchange	Site Name	Aumsville (24-005)
		Installed	January, 2001

HISTORICAL ANNUAL TRAFFIC DATA

Year	Annual Average Daily Traffic (AADT)	Critical Values as percent of Annual Average Daily Traffic (AADT)				
		Max Day	Max Hour	10th Hour	20th Hour	30th Hour
2011	19073	143.8	11.9	11.5	11.2	11.0
2012	19169	143.6	12.7	11.8	11.7	11.4
2013	19220	142.0	12.2	11.3	11.1	11.0
2014	19795	143.1	12.8	11.5	11.3	11.2
2015	20812	141.6	11.4	11.1	10.8	10.6
2016	21700	140.5	11.8	11.2	10.9	10.7
2017	21925	136.4	12.1	11.0	10.7	10.5
2018	22748	136.6	11.9	10.8	10.7	10.5
2019	22916	134.8	11.7	10.9	10.7	10.6
2020	20584	145.2	13.9	12.4	11.8	11.5

2020 SEASONAL TRAFFIC DATA

Month	Weekday		Daily	
	Average	% AADT	Average	% AADT
January	21538	105	19999	97
February	22635	110	20992	102
March	19757	96	18188	88
April	16665	81	15362	75
May	20373	99	19339	94
June	23788	116	23799	116
July	26215	127	25696	125
August	26364	128	25931	126
September	19855	96	18625	90
October	21610	105	20145	98
November	20566	100	19330	94
December	20936	102	19610	95

Highest Hour

Date	Day	Hours of Day	Rank	Volume	%AADT
07/26/2020	Sunday	0:00 - 1:00 pm	1	2864	13.9
07/19/2020	Sunday	2:00 - 3:00 pm	10	2554	12.4
08/02/2020	Sunday	0:00 - 1:00 pm	20	2437	11.8
09/04/2020	Friday	4:00 - 5:00 pm	30	2371	11.5
09/07/2020	Monday	0:00 - 1:00 pm	40	2338	11.4
08/28/2020	Friday	2:00 - 3:00 pm	50	2309	11.2

Highest Day

Date	Day	Volume	AADT
08/14/2020	Friday	29891	145.2

Comments:

EXHIBIT 4 - 5. TIA

AGENDA ITEM 4A

Location	OR22; NORTH SANTIAM HIGHWAY NO. 162; 1.08 miles east of Shaw Highway Interchange	Site Name	Aumsville (24-005)
		Installed	January, 2001

HISTORICAL ANNUAL TRAFFIC DATA

Year	Annual Average Daily Traffic (% AADT)	Critical Values as percent of Annual Average Daily Traffic (% AADT)				
		MaxDay	MaxHour	10thHour	20thHour	30thHour
2012	19169	143.6	12.7	11.8	11.7	11.4
2013	19220	142.0	12.2	11.3	11.1	11.0
2014	19795	143.1	12.8	11.5	11.3	11.2
2015	20812	141.6	11.4	11.1	10.8	10.6
2016	21700	140.5	11.8	11.2	10.9	10.7
2017	21925	136.4	12.1	11.0	10.7	10.5
2018	22748	136.6	11.9	10.8	10.7	10.5
2019	22916	134.8	11.7	10.9	10.7	10.6
2020	20584	145.2	13.9	12.4	11.8	11.5
2021	22331	131.6	10.7	10.3	10.2	10.1

2021 SEASONAL TRAFFIC DATA

Month	Weekday		Daily	
	Average	% AADT	Average	% AADT
January	20599	92	19444	87
February	22064	99	20782	93
March	23548	105	22193	99
April	24385	109	22924	103
May	24841	111	23543	105
June	25837	116	24594	110
July	25871	116	24728	111
August	25109	112	23957	107
September	24387	109	23157	104
October	23416	105	22038	99
November	22626	101	21097	94
December	21305	95	19519	87

Highest Hour

Date	Day	Hours of Day	Rank	Volume	% AADT
09/10/2021	Friday	4:00 - 5:00 pm	1	2400	10.7
04/09/2021	Friday	4:00 - 5:00 pm	10	2304	10.3
06/18/2021	Friday	2:00 - 3:00 pm	20	2281	10.2
07/23/2021	Friday	4:00 - 5:00 pm	30	2253	10.1
05/21/2021	Friday	3:00 - 4:00 pm	40	2232	10.0
06/11/2021	Friday	3:00 - 4:00 pm	50	2213	9.9

Highest Day

Date	Day	Volume	% AADT
05/28/2021	Friday	29398	131.6

Comments:

EXHIBIT 4 - 5. TIA

AGENDA ITEM 4A

Aumsville Commercial Center

APPENDIX D: SYNCHRO OUTPUTS

1st at Del Mar AM Peak Hour

2030 Build											los	B
Phase		Adj flow	Sat Flow									
1	SBL	59	903	0.065	Prot	1,2	0.261					
		48	738		Perm	5,6	0.105					
2	NBT	332	1693	0.196		5,5	0.021				Cycle Length	51
3	WBL	1	78	0.013	Prot	1,1	0.065				Lost Time/phase	4
		20	1563		Perm	5pr,1pm	0.010				# phases	4
4	EBT	41	1610	0.025		1pr,5pm	0.076	0.261			Total Lost Time	16
5	NBL	5	487	0.010	Prot	3,4	0.038					
		10	946	0.011	Perm	7,8	0.067			Critical	v/c	0.48
6	SBT	157	1664	0.094		7,7	0.059					
7	EBL	42	717	0.059	Prot	3,3	0.013					
		55	911		Perm	7pr,3pm	0.059					
8	WBT	15	1723	0.009		3pr,7pm	0.013	0.067				
							Critical Pairs	0.329				

2035 Build											los	B
Phase		Adj flow	Sat Flow									
1	SBL	60	919	0.065	Prot	1,2	0.270					
		47	722		Perm	5,6	0.108					
2	NBT	346	1694	0.204		5,5	0.021				Cycle Length	51
3	WBL	1	78	0.013	Prot	1,1	0.065				Lost Time/phase	4
		20	1563		Perm	5pr,1pm	0.010				# phases	4
4	EBT	41	1610	0.025		1pr,5pm	0.076	0.270			Total Lost Time	16
5	NBL	5	502	0.010	Prot	3,4	0.038					
		10	932	0.011	Perm	7,8	0.070			Critical	v/c	0.49
6	SBT	163	1664	0.098		7,7	0.061					
7	EBL	44	716	0.061	Prot	3,3	0.013					
		57	912		Perm	7pr,3pm	0.061					
8	WBT	15	1723	0.009		3pr,7pm	0.013	0.070				
							Critical Pairs	0.340				

2050 Build											los	B
Phase		Adj flow	Sat Flow									
1	SBL	62	952	0.065	Prot	1,2	0.281					
		45	689		Perm	5,6	0.116					
2	NBT	366	1698	0.216		5,5	0.022				Cycle Length	51
3	WBL	1	78	0.013	Prot	1,1	0.065				Lost Time/phase	4
		20	1563		Perm	5pr,1pm	0.010				# phases	4
4	EBT	42	1606	0.026		1pr,5pm	0.077	0.281			Total Lost Time	16
5	NBL	6	573	0.010	Prot	3,4	0.039					
		10	860	0.012	Perm	7,8	0.074			Critical	v/c	0.52
6	SBT	176	1663	0.106		7,7	0.066					
7	EBL	47	716	0.066	Prot	3,3	0.013					
		60	912		Perm	7pr,3pm	0.066					
8	WBT	15	1723	0.009		3pr,7pm	0.013	0.074				
							Critical Pairs	0.355				

HCM 6th TWSC
3: Shaw Hwy & NE Santiam Hwy Ramp

12/14/2023

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	29	195	55	30	28
Future Vol, veh/h	5	29	195	55	30	28
Conflicting Peds, #/hr	0	0	3	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	2	2	5	4
Mvmt Flow	6	36	244	69	38	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	616	59	76	0	-	0
Stage 1	59	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	457	1012	1523	-	-	-
Stage 1	969	-	-	-	-	-
Stage 2	578	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	378	1009	1519	-	-	-
Mov Cap-2 Maneuver	378	-	-	-	-	-
Stage 1	805	-	-	-	-	-
Stage 2	576	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	6.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1519	-	810	-	-
HCM Lane V/C Ratio	0.16	-	0.052	-	-
HCM Control Delay (s)	7.8	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.6	-	0.2	-	-

HCM 6th TWSC
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/14/2023

Intersection	
Int Delay, s/veh	3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	79	14	236	64	21	38
Future Vol, veh/h	79	14	236	64	21	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	0	90	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	7	4	11	10	7
Mvmt Flow	86	15	257	70	23	41

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	344	257	0	-	257	0
Stage 1	257	-	-	-	-	-
Stage 2	87	-	-	-	-	-
Critical Hdwy	6.48	6.27	-	-	4.2	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.363	-	-	2.29	-
Pot Cap-1 Maneuver	640	770	-	0	1263	-
Stage 1	772	-	-	0	-	-
Stage 2	921	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	628	770	-	-	1263	-
Mov Cap-2 Maneuver	628	-	-	-	-	-
Stage 1	772	-	-	-	-	-
Stage 2	904	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	2.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	628	770	1263	-
HCM Lane V/C Ratio	-	0.137	0.02	0.018	-
HCM Control Delay (s)	-	11.6	9.8	7.9	0
HCM Lane LOS	-	B	A	A	A
HCM 95th %tile Q(veh)	-	0.5	0.1	0.1	-

HCM 6th TWSC
11: N 1st St/Shaw Hwy & Del Mar Dr

12/14/2023

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	73	12	11	227	95	23
Future Vol, veh/h	73	12	11	227	95	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	3	0	18	2	2	4
Mvmt Flow	90	15	14	280	117	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	439	131	145	0	-	0
Stage 1	131	-	-	-	-	-
Stage 2	308	-	-	-	-	-
Critical Hdwy	6.43	6.2	4.28	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	2.362	-	-	-
Pot Cap-1 Maneuver	573	924	1345	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	566	924	1345	-	-	-
Mov Cap-2 Maneuver	566	-	-	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	743	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1345	-	599	-	-
HCM Lane V/C Ratio	0.01	-	0.175	-	-
HCM Control Delay (s)	7.7	0	12.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.6	-	-

HCM 6th TWSC
14: Shaw Hwy/N 1st St & Gordon Ln

12/14/2023

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	237	0	0	107
Future Vol, veh/h	0	1	237	0	0	107
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	0	1	293	0	0	132

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	425	293	0	0	293	0
Stage 1	293	-	-	-	-	-
Stage 2	132	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	590	751	-	-	1280	-
Stage 1	762	-	-	-	-	-
Stage 2	899	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	590	751	-	-	1280	-
Mov Cap-2 Maneuver	590	-	-	-	-	-
Stage 1	762	-	-	-	-	-
Stage 2	899	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	751	1280	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	-	-	9.8	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	106	69	3	4	81	55	0	2	2	28	2	79
Future Vol, veh/h	106	69	3	4	81	55	0	2	2	28	2	79
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	7	67	0	4	2	0	0	0	0	0	1
Mvmt Flow	119	78	3	4	91	62	0	2	2	31	2	89

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	153	0	0	81	0	0	494	479	80	450	449	122
Stage 1	-	-	-	-	-	-	318	318	-	130	130	-
Stage 2	-	-	-	-	-	-	176	161	-	320	319	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.309
Pot Cap-1 Maneuver	1421	-	-	1529	-	-	489	489	986	523	508	932
Stage 1	-	-	-	-	-	-	698	657	-	878	792	-
Stage 2	-	-	-	-	-	-	831	769	-	696	657	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1421	-	-	1529	-	-	412	446	986	485	464	932
Mov Cap-2 Maneuver	-	-	-	-	-	-	412	446	-	485	464	-
Stage 1	-	-	-	-	-	-	639	602	-	804	790	-
Stage 2	-	-	-	-	-	-	747	767	-	634	602	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.6	0.2	10.9	10.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	614	1421	-	-	1529	-	-	742
HCM Lane V/C Ratio	0.007	0.084	-	-	0.003	-	-	0.165
HCM Control Delay (s)	10.9	7.8	-	-	7.4	0	-	10.8
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.3	-	-	0	-	-	0.6

HCM 6th TWSC
3: Shaw Hwy & NE Santiam Hwy Ramp

11/21/2023

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	31	209	59	32	30
Future Vol, veh/h	5	31	209	59	32	30
Conflicting Peds, #/hr	0	0	3	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	2	2	5	4
Mvmt Flow	6	39	261	74	40	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	658	62	81	0	-	0
Stage 1	62	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	432	1009	1517	-	-	-
Stage 1	966	-	-	-	-	-
Stage 2	554	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	352	1006	1513	-	-	-
Mov Cap-2 Maneuver	352	-	-	-	-	-
Stage 1	790	-	-	-	-	-
Stage 2	552	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	6.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1513	-	800	-	-
HCM Lane V/C Ratio	0.173	-	0.056	-	-
HCM Control Delay (s)	7.9	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.6	-	0.2	-	-

HCM 6th TWSC
7: Shaw Hwy SE & SE Santiam Hwy Ramp

11/21/2023

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	85	15	253	68	22	41
Future Vol, veh/h	85	15	253	68	22	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	0	90	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	7	4	11	10	7
Mvmt Flow	92	16	275	74	24	45

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	368	275	0	-	275	0
Stage 1	275	-	-	-	-	-
Stage 2	93	-	-	-	-	-
Critical Hdwy	6.48	6.27	-	-	4.2	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.363	-	-	2.29	-
Pot Cap-1 Maneuver	620	752	-	0	1243	-
Stage 1	758	-	-	0	-	-
Stage 2	916	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	608	752	-	-	1243	-
Mov Cap-2 Maneuver	608	-	-	-	-	-
Stage 1	758	-	-	-	-	-
Stage 2	898	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	2.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	608	752	1243	-
HCM Lane V/C Ratio	-	0.152	0.022	0.019	-
HCM Control Delay (s)	-	12	9.9	8	0
HCM Lane LOS	-	B	A	A	A
HCM 95th %tile Q(veh)	-	0.5	0.1	0.1	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	78	13	12	243	102	25
Future Vol, veh/h	78	13	12	243	102	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	3	0	18	2	2	4
Mvmt Flow	96	16	15	300	126	31

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	472	142	157	0	-	0
Stage 1	142	-	-	-	-	-
Stage 2	330	-	-	-	-	-
Critical Hdwy	6.43	6.2	4.28	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	2.362	-	-	-
Pot Cap-1 Maneuver	549	911	1331	-	-	-
Stage 1	883	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	541	911	1331	-	-	-
Mov Cap-2 Maneuver	541	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	726	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1331	-	574	-	-
HCM Lane V/C Ratio	0.011	-	0.196	-	-
HCM Control Delay (s)	7.7	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	-	-

HCM 6th TWSC
14: Shaw Hwy/N 1st St & Gordon Ln

11/21/2023

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	254	0	0	114
Future Vol, veh/h	0	1	254	0	0	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	0	1	314	0	0	141

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	455	314	0	0	314	0
Stage 1	314	-	-	-	-	-
Stage 2	141	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	567	731	-	-	1258	-
Stage 1	745	-	-	-	-	-
Stage 2	891	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	567	731	-	-	1258	-
Mov Cap-2 Maneuver	567	-	-	-	-	-
Stage 1	745	-	-	-	-	-
Stage 2	891	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	731	1258	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	-	-	9.9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	113	74	3	4	87	59	0	2	2	30	2	85
Future Vol, veh/h	113	74	3	4	87	59	0	2	2	30	2	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	7	67	0	4	2	0	0	0	0	0	1
Mvmt Flow	127	83	3	4	98	66	0	2	2	34	2	96

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	164	0	0	86	0	0	527	511	85	480	479	131
Stage 1	-	-	-	-	-	-	339	339	-	139	139	-
Stage 2	-	-	-	-	-	-	188	172	-	341	340	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.309
Pot Cap-1 Maneuver	1408	-	-	1523	-	-	465	469	980	499	489	921
Stage 1	-	-	-	-	-	-	680	643	-	869	785	-
Stage 2	-	-	-	-	-	-	818	760	-	678	643	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1408	-	-	1523	-	-	385	425	980	461	444	921
Mov Cap-2 Maneuver	-	-	-	-	-	-	385	425	-	461	444	-
Stage 1	-	-	-	-	-	-	619	585	-	791	783	-
Stage 2	-	-	-	-	-	-	729	758	-	613	585	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.6	0.2	11.1	11.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	593	1408	-	-	1523	-	-	723
HCM Lane V/C Ratio	0.008	0.09	-	-	0.003	-	-	0.182
HCM Control Delay (s)	11.1	7.8	-	-	7.4	0	-	11.1
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.3	-	-	0	-	-	0.7

HCM 6th TWSC
3: Shaw Hwy & NE Santiam Hwy Ramp

12/14/2023

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	32	218	62	34	31
Future Vol, veh/h	6	32	218	62	34	31
Conflicting Peds, #/hr	0	0	3	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	2	2	5	4
Mvmt Flow	8	40	273	78	43	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	690	66	85	0	-	0
Stage 1	66	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	414	1003	1512	-	-	-
Stage 1	962	-	-	-	-	-
Stage 2	538	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	334	1000	1508	-	-	-
Mov Cap-2 Maneuver	334	-	-	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	536	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	6.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1508	-	761	-	-
HCM Lane V/C Ratio	0.181	-	0.062	-	-
HCM Control Delay (s)	7.9	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.7	-	0.2	-	-

HCM 6th TWSC
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/14/2023

Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	88	16	264	72	24	43
Future Vol, veh/h	88	16	264	72	24	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	0	90	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	7	4	11	10	7
Mvmt Flow	96	17	287	78	26	47

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	386	287	0	-	287	0
Stage 1	287	-	-	-	-	-
Stage 2	99	-	-	-	-	-
Critical Hdwy	6.48	6.27	-	-	4.2	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.363	-	-	2.29	-
Pot Cap-1 Maneuver	606	740	-	0	1231	-
Stage 1	748	-	-	0	-	-
Stage 2	910	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	593	740	-	-	1231	-
Mov Cap-2 Maneuver	593	-	-	-	-	-
Stage 1	748	-	-	-	-	-
Stage 2	890	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	2.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	593	740	1231	-
HCM Lane V/C Ratio	-	0.161	0.024	0.021	-
HCM Control Delay (s)	-	12.2	10	8	0
HCM Lane LOS	-	B	B	A	A
HCM 95th %tile Q(veh)	-	0.6	0.1	0.1	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	82	13	12	254	106	26
Future Vol, veh/h	82	13	12	254	106	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	3	0	18	2	2	4
Mvmt Flow	101	16	15	314	131	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	491	147	163	0	-	0
Stage 1	147	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Critical Hdwy	6.43	6.2	4.28	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	2.362	-	-	-
Pot Cap-1 Maneuver	535	905	1324	-	-	-
Stage 1	878	-	-	-	-	-
Stage 2	716	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	528	905	1324	-	-	-
Mov Cap-2 Maneuver	528	-	-	-	-	-
Stage 1	866	-	-	-	-	-
Stage 2	716	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.1	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1324	-	560	-	-
HCM Lane V/C Ratio	0.011	-	0.209	-	-
HCM Control Delay (s)	7.8	0	13.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.8	-	-

HCM 6th TWSC
14: Shaw Hwy/N 1st St & Gordon Ln

12/14/2023

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	265	0	0	120
Future Vol, veh/h	0	1	265	0	0	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	0	1	327	0	0	148

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	475	327	0	0	327	0
Stage 1	327	-	-	-	-	-
Stage 2	148	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	552	719	-	-	1244	-
Stage 1	735	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	552	719	-	-	1244	-
Mov Cap-2 Maneuver	552	-	-	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	884	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	719	1244	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	-	-	10	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	119	77	3	4	91	62	0	2	2	31	2	88
Future Vol, veh/h	119	77	3	4	91	62	0	2	2	31	2	88
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	7	67	0	4	2	0	0	0	0	0	1
Mvmt Flow	134	87	3	4	102	70	0	2	2	35	2	99

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	172	0	0	90	0	0	553	537	89	504	503	137
Stage 1	-	-	-	-	-	-	357	357	-	145	145	-
Stage 2	-	-	-	-	-	-	196	180	-	359	358	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.309
Pot Cap-1 Maneuver	1399	-	-	1518	-	-	447	453	975	482	474	914
Stage 1	-	-	-	-	-	-	665	632	-	863	781	-
Stage 2	-	-	-	-	-	-	810	754	-	663	631	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1399	-	-	1518	-	-	367	408	975	443	427	914
Mov Cap-2 Maneuver	-	-	-	-	-	-	367	408	-	443	427	-
Stage 1	-	-	-	-	-	-	601	571	-	780	779	-
Stage 2	-	-	-	-	-	-	718	752	-	596	570	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.7	0.2	11.3	11.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	575	1399	-	-	1518	-	-	708
HCM Lane V/C Ratio	0.008	0.096	-	-	0.003	-	-	0.192
HCM Control Delay (s)	11.3	7.8	-	-	7.4	0	-	11.3
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.3	-	-	0	-	-	0.7

HCM 6th TWSC
3: Shaw Hwy & NE Santiam Hwy Ramp

11/21/2023

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	35	234	66	36	34
Future Vol, veh/h	6	35	234	66	36	34
Conflicting Peds, #/hr	0	0	3	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	2	2	5	4
Mvmt Flow	8	44	293	83	45	43

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	739	70	91	0	-	0
Stage 1	70	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	388	998	1504	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	513	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	307	995	1500	-	-	-
Mov Cap-2 Maneuver	307	-	-	-	-	-
Stage 1	760	-	-	-	-	-
Stage 2	511	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	6.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1500	-	749	-	-
HCM Lane V/C Ratio	0.195	-	0.068	-	-
HCM Control Delay (s)	8	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.7	-	0.2	-	-

HCM 6th TWSC
7: Shaw Hwy SE & SE Santiam Hwy Ramp

11/21/2023

Intersection	
Int Delay, s/veh	3.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	95	17	283	77	25	46
Future Vol, veh/h	95	17	283	77	25	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	0	90	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	7	4	11	10	7
Mvmt Flow	103	18	308	84	27	50

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	412	308	0	-	308	0
Stage 1	308	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.48	6.27	-	-	4.2	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.363	-	-	2.29	-
Pot Cap-1 Maneuver	585	720	-	0	1209	-
Stage 1	732	-	-	0	-	-
Stage 2	905	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	572	720	-	-	1209	-
Mov Cap-2 Maneuver	572	-	-	-	-	-
Stage 1	732	-	-	-	-	-
Stage 2	884	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	2.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	572	720	1209	-
HCM Lane V/C Ratio	-	0.181	0.026	0.022	-
HCM Control Delay (s)	-	12.7	10.1	8	0
HCM Lane LOS	-	B	B	A	A
HCM 95th %tile Q(veh)	-	0.7	0.1	0.1	-

HCM 6th TWSC

11: N 1st St/Shaw Hwy & Del Mar Dr 11/21/2023

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	87	14	13	272	114	28
Future Vol, veh/h	87	14	13	272	114	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	3	0	18	2	2	4
Mvmt Flow	107	17	16	336	141	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	527	159	176	0	-	0
Stage 1	159	-	-	-	-	-
Stage 2	368	-	-	-	-	-
Critical Hdwy	6.43	6.2	4.28	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.3	2.362	-	-	-
Pot Cap-1 Maneuver	510	892	1309	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	698	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	502	892	1309	-	-	-
Mov Cap-2 Maneuver	502	-	-	-	-	-
Stage 1	854	-	-	-	-	-
Stage 2	698	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.8	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1309	-	534	-	-
HCM Lane V/C Ratio	0.012	-	0.234	-	-
HCM Control Delay (s)	7.8	0	13.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.9	-	-

HCM 6th TWSC
14: Shaw Hwy/N 1st St & Gordon Ln

11/21/2023

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	284	0	0	128
Future Vol, veh/h	0	1	284	0	0	128
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	0	1	351	0	0	158

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	509	351	0	0	351	0
Stage 1	351	-	-	-	-	-
Stage 2	158	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	528	697	-	-	1219	-
Stage 1	717	-	-	-	-	-
Stage 2	875	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	528	697	-	-	1219	-
Mov Cap-2 Maneuver	528	-	-	-	-	-
Stage 1	717	-	-	-	-	-
Stage 2	875	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	697	1219	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	-	-	10.2	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

HCM 6th TWSC

23: Main St & N 1st Ave 11/21/2023

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	127	83	4	5	97	66	0	2	2	34	2	95
Future Vol, veh/h	127	83	4	5	97	66	0	2	2	34	2	95
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	7	67	0	4	2	0	0	0	0	0	1
Mvmt Flow	143	93	4	6	109	74	0	2	2	38	2	107

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	183	0	0	97	0	0	594	576	95	541	541	146
Stage 1	-	-	-	-	-	-	381	381	-	158	158	-
Stage 2	-	-	-	-	-	-	213	195	-	383	383	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.309
Pot Cap-1 Maneuver	1386	-	-	1509	-	-	420	431	967	455	451	904
Stage 1	-	-	-	-	-	-	645	617	-	849	771	-
Stage 2	-	-	-	-	-	-	794	743	-	644	616	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1386	-	-	1509	-	-	339	385	967	415	403	904
Mov Cap-2 Maneuver	-	-	-	-	-	-	339	385	-	415	403	-
Stage 1	-	-	-	-	-	-	579	553	-	762	768	-
Stage 2	-	-	-	-	-	-	695	740	-	574	553	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.7	0.2	11.6	11.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	551	1386	-	-	1509	-	-	682
HCM Lane V/C Ratio	0.008	0.103	-	-	0.004	-	-	0.216
HCM Control Delay (s)	11.6	7.9	-	-	7.4	0	-	11.7
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.3	-	-	0	-	-	0.8

HCM 6th TWSC
3: Shaw Hwy & NE Santiam Hwy Ramp

12/19/2023

Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	46	250	68	47	30
Future Vol, veh/h	5	46	250	68	47	30
Conflicting Peds, #/hr	6	0	3	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	2	2	5	4
Mvmt Flow	6	58	313	85	59	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	798	81	100	0	-	0
Stage 1	81	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	358	985	1493	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	487	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	277	982	1489	-	-	-
Mov Cap-2 Maneuver	277	-	-	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	486	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	6.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1489	-	786	-	-
HCM Lane V/C Ratio	0.21	-	0.081	-	-
HCM Control Delay (s)	8.1	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.8	-	0.3	-	-

HCM 6th TWSC
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/19/2023

Intersection	
Int Delay, s/veh	4.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	153	15	303	77	22	71
Future Vol, veh/h	153	15	303	77	22	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	0	90	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	7	4	11	10	7
Mvmt Flow	166	16	329	84	24	77

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	454	329	0	-	329	0
Stage 1	329	-	-	-	-	-
Stage 2	125	-	-	-	-	-
Critical Hdwy	6.48	6.27	-	-	4.2	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.363	-	-	2.29	-
Pot Cap-1 Maneuver	553	701	-	0	1187	-
Stage 1	716	-	-	0	-	-
Stage 2	886	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	541	701	-	-	1187	-
Mov Cap-2 Maneuver	541	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	867	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	1.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	541	701	1187	-
HCM Lane V/C Ratio	-	0.307	0.023	0.02	-
HCM Control Delay (s)	-	14.6	10.3	8.1	0
HCM Lane LOS	-	B	B	A	A
HCM 95th %tile Q(veh)	-	1.3	0.1	0.1	-

HCM Signalized Intersection Capacity Analysis

11: N 1st St/Shaw Hwy & Del Mar Dr

12/19/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	23	13	19	14	59	12	243	29	98	102	25
Future Volume (vph)	78	23	13	19	14	59	12	243	29	98	102	25
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
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	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1614	1628		1630	1716	1458	1409	1691		1630	1658	
Flt Permitted	0.57	1.00		1.00	1.00	1.00	0.66	1.00		0.45	1.00	
Satd. Flow (perm)	971	1628		1716	1716	1458	975	1691		772	1658	
Peak-hour factor, PHF	0.81	0.92	0.81	0.92	0.92	0.92	0.81	0.81	0.92	0.92	0.81	0.81
Adj. Flow (vph)	96	25	16	21	15	64	15	300	32	107	126	31
RTOR Reduction (vph)	0	14	0	0	0	59	0	5	0	0	11	0
Lane Group Flow (vph)	96	27	0	21	15	5	15	327	0	107	146	0
Heavy Vehicles (%)	3%	2%	0%	2%	2%	2%	18%	2%	2%	2%	2%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	11.0	7.0		5.0	4.0	4.0	22.9	22.0		28.1	24.6	
Effective Green, g (s)	11.0	7.0		5.0	4.0	4.0	23.9	22.5		29.1	25.1	
Actuated g/C Ratio	0.22	0.14		0.10	0.08	0.08	0.47	0.45		0.58	0.50	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	4.0		2.5	4.0	
Lane Grp Cap (vph)	262	225		168	135	115	473	753		512	824	
v/s Ratio Prot	c0.03	0.02		0.00	0.01		0.00	c0.19		c0.02	0.09	
v/s Ratio Perm	c0.05			0.01		0.00	0.01			0.10		
v/c Ratio	0.37	0.12		0.12	0.11	0.04	0.03	0.43		0.21	0.18	
Uniform Delay, d1	16.5	19.1		20.8	21.6	21.5	7.1	9.6		5.1	7.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.2		0.2	0.3	0.1	0.0	0.5		0.1	0.1	
Delay (s)	17.2	19.2		21.0	21.9	21.6	7.1	10.2		5.3	7.1	
Level of Service	B	B		C	C	C	A	B		A	A	
Approach Delay (s)		17.8			21.5			10.0			6.4	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	50.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
11: N 1st St/Shaw Hwy & Del Mar Dr

12/19/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	23	13	19	14	59	12	243	29	98	102	25
Future Volume (veh/h)	78	23	13	19	14	59	12	243	29	98	102	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1723	1750	1723	1723	1723	1504	1723	1723	1723	1723	1695
Adj Flow Rate, veh/h	96	25	16	21	15	64	15	300	32	107	126	31
Peak Hour Factor	0.81	0.92	0.81	0.92	0.92	0.92	0.81	0.81	0.92	0.92	0.81	0.81
Percent Heavy Veh, %	3	2	0	2	2	2	18	2	2	2	2	4
Cap, veh/h	451	166	106	392	211	179	543	461	49	467	477	117
Arrive On Green	0.07	0.17	0.17	0.02	0.12	0.12	0.03	0.30	0.29	0.08	0.36	0.34
Sat Flow, veh/h	1628	981	628	1641	1723	1460	1433	1530	163	1641	1335	328
Grp Volume(v), veh/h	96	0	41	21	15	64	15	0	332	107	0	157
Grp Sat Flow(s),veh/h/ln	1628	0	1610	1641	1723	1460	1433	0	1693	1641	0	1664
Q Serve(g_s), s	1.9	0.0	0.8	0.4	0.3	1.5	0.3	0.0	6.4	1.6	0.0	2.5
Cycle Q Clear(g_c), s	1.9	0.0	0.8	0.4	0.3	1.5	0.3	0.0	6.4	1.6	0.0	2.5
Prop In Lane	1.00		0.39	1.00		1.00	1.00		0.10	1.00		0.20
Lane Grp Cap(c), veh/h	451	0	273	392	211	179	543	0	511	467	0	595
V/C Ratio(X)	0.21	0.00	0.15	0.05	0.07	0.36	0.03	0.00	0.65	0.23	0.00	0.26
Avail Cap(c_a), veh/h	729	0	383	749	410	348	844	0	762	719	0	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	0.0	13.4	14.0	14.7	15.2	8.6	0.0	11.5	8.2	0.0	8.6
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.0	0.1	0.9	0.0	0.0	2.0	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.3	0.1	0.1	0.5	0.1	0.0	2.0	0.4	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	0.0	13.6	14.1	14.8	16.1	8.6	0.0	13.5	8.4	0.0	9.0
LnGrp LOS	B	A	B	B	B	B	A	A	B	A	A	A
Approach Vol, veh/h		137			100			347			264	
Approach Delay, s/veh		13.4			15.5			13.3			8.7	
Approach LOS		B			B			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	15.4	4.8	10.4	5.1	17.5	6.6	8.6
Change Period (Y+Rc), s	4.5	4.5	4.0	4.0	4.5	4.5	4.0	4.0
Max Green Setting (Gmax), s	8.5	16.5	9.0	9.0	8.5	16.5	9.0	9.0
Max Q Clear Time (g_c+I1), s	3.6	8.4	2.4	2.8	2.3	4.5	3.9	3.5
Green Ext Time (p_c), s	0.1	2.5	0.0	0.0	0.0	1.3	0.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	12.1
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	129	74	3	4	87	72	0	2	2	36	3	97
Future Vol, veh/h	129	74	3	4	87	72	0	2	2	36	3	97
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	7	67	0	4	2	0	0	0	0	0	1
Mvmt Flow	145	83	3	4	98	81	0	2	2	40	3	109

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	179	0	0	86	0	0	578	562	85	524	523	139
Stage 1	-	-	-	-	-	-	375	375	-	147	147	-
Stage 2	-	-	-	-	-	-	203	187	-	377	376	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.309
Pot Cap-1 Maneuver	1391	-	-	1523	-	-	430	439	980	467	462	912
Stage 1	-	-	-	-	-	-	650	621	-	860	779	-
Stage 2	-	-	-	-	-	-	804	749	-	649	620	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1391	-	-	1523	-	-	345	392	980	426	413	912
Mov Cap-2 Maneuver	-	-	-	-	-	-	345	392	-	426	413	-
Stage 1	-	-	-	-	-	-	582	556	-	771	777	-
Stage 2	-	-	-	-	-	-	703	747	-	578	556	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.9	0.2	11.5	11.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	560	1391	-	-	1523	-	-	686
HCM Lane V/C Ratio	0.008	0.104	-	-	0.003	-	-	0.223
HCM Control Delay (s)	11.5	7.9	-	-	7.4	0	-	11.7
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.3	-	-	0	-	-	0.8

HCM 6th TWSC
3: Shaw Hwy & NE Santiam Hwy Ramp

12/19/2023

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	47	259	71	49	31
Future Vol, veh/h	6	47	259	71	49	31
Conflicting Peds, #/hr	6	0	3	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	2	2	5	4
Mvmt Flow	8	59	324	89	61	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	827	84	103	0	-	0
Stage 1	84	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	344	981	1489	-	-	-
Stage 1	944	-	-	-	-	-
Stage 2	474	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	264	978	1485	-	-	-
Mov Cap-2 Maneuver	264	-	-	-	-	-
Stage 1	726	-	-	-	-	-
Stage 2	473	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	6.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1485	-	749	-	-
HCM Lane V/C Ratio	0.218	-	0.088	-	-
HCM Control Delay (s)	8.1	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.8	-	0.3	-	-

HCM 6th TWSC
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/19/2023

Intersection	
Int Delay, s/veh	4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	156	16	314	81	24	73
Future Vol, veh/h	156	16	314	81	24	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	0	90	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	7	4	11	10	7
Mvmt Flow	170	17	341	88	26	79

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	472	341	0	-	341	0
Stage 1	341	-	-	-	-	-
Stage 2	131	-	-	-	-	-
Critical Hdwy	6.48	6.27	-	-	4.2	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.363	-	-	2.29	-
Pot Cap-1 Maneuver	540	690	-	0	1175	-
Stage 1	707	-	-	0	-	-
Stage 2	880	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	528	690	-	-	1175	-
Mov Cap-2 Maneuver	528	-	-	-	-	-
Stage 1	707	-	-	-	-	-
Stage 2	860	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.6	0	2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	528	690	1175	-
HCM Lane V/C Ratio	-	0.321	0.025	0.022	-
HCM Control Delay (s)	-	15	10.4	8.1	0
HCM Lane LOS	-	C	B	A	A
HCM 95th %tile Q(veh)	-	1.4	0.1	0.1	-

HCM Signalized Intersection Capacity Analysis

11: N 1st St/Shaw Hwy & Del Mar Dr

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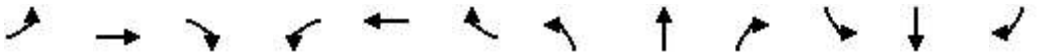

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	23	13	19	14	59	12	254	29	98	106	26
Future Volume (vph)	82	23	13	19	14	59	12	254	29	98	106	26
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1614	1628		1630	1716	1458	1409	1692		1630	1659	
Flt Permitted	0.57	1.00		1.00	1.00	1.00	0.65	1.00		0.44	1.00	
Satd. Flow (perm)	971	1628		1716	1716	1458	970	1692		752	1659	
Peak-hour factor, PHF	0.81	0.92	0.81	0.92	0.92	0.92	0.81	0.81	0.92	0.92	0.81	0.81
Adj. Flow (vph)	101	25	16	21	15	64	15	314	32	107	131	32
RTOR Reduction (vph)	0	14	0	0	0	59	0	5	0	0	10	0
Lane Group Flow (vph)	101	27	0	21	15	5	15	341	0	107	153	0
Heavy Vehicles (%)	3%	2%	0%	2%	2%	2%	18%	2%	2%	2%	2%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	11.0	7.0		5.0	4.0	4.0	23.1	22.2		28.3	24.8	
Effective Green, g (s)	11.0	7.0		5.0	4.0	4.0	24.1	22.7		29.3	25.3	
Actuated g/C Ratio	0.22	0.14		0.10	0.08	0.08	0.48	0.45		0.58	0.50	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	4.0		2.5	4.0	
Lane Grp Cap (vph)	261	224		167	135	115	473	757		503	827	
v/s Ratio Prot	c0.03	0.02		0.00	0.01		0.00	c0.20		c0.02	0.09	
v/s Ratio Perm	c0.05			0.01		0.00	0.01			0.11		
v/c Ratio	0.39	0.12		0.13	0.11	0.04	0.03	0.45		0.21	0.18	
Uniform Delay, d1	16.7	19.2		20.9	21.7	21.6	7.1	9.7		5.1	7.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.2		0.2	0.3	0.1	0.0	0.6		0.2	0.1	
Delay (s)	17.4	19.3		21.1	22.0	21.7	7.1	10.3		5.3	7.2	
Level of Service	B	B		C	C	C	A	B		A	A	
Approach Delay (s)		17.9			21.6			10.1			6.4	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	50.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
11: N 1st St/Shaw Hwy & Del Mar Dr

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	23	13	19	14	59	12	254	29	98	106	26
Future Volume (veh/h)	82	23	13	19	14	59	12	254	29	98	106	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1723	1750	1723	1723	1723	1504	1723	1723	1723	1723	1695
Adj Flow Rate, veh/h	101	25	16	21	15	64	15	314	32	107	131	32
Peak Hour Factor	0.81	0.92	0.81	0.92	0.92	0.92	0.81	0.81	0.92	0.92	0.81	0.81
Percent Heavy Veh, %	3	2	0	2	2	2	18	2	2	2	2	4
Cap, veh/h	453	169	108	387	209	177	541	472	48	458	485	118
Arrive On Green	0.07	0.17	0.17	0.02	0.12	0.12	0.03	0.31	0.29	0.08	0.36	0.35
Sat Flow, veh/h	1628	981	628	1641	1723	1460	1433	1538	157	1641	1337	327
Grp Volume(v), veh/h	101	0	41	21	15	64	15	0	346	107	0	163
Grp Sat Flow(s),veh/h/ln	1628	0	1610	1641	1723	1460	1433	0	1694	1641	0	1664
Q Serve(g_s), s	2.1	0.0	0.8	0.4	0.3	1.5	0.3	0.0	6.8	1.6	0.0	2.7
Cycle Q Clear(g_c), s	2.1	0.0	0.8	0.4	0.3	1.5	0.3	0.0	6.8	1.6	0.0	2.7
Prop In Lane	1.00		0.39	1.00		1.00	1.00		0.09	1.00		0.20
Lane Grp Cap(c), veh/h	453	0	277	387	209	177	541	0	520	458	0	603
V/C Ratio(X)	0.22	0.00	0.15	0.05	0.07	0.36	0.03	0.00	0.66	0.23	0.00	0.27
Avail Cap(c_a), veh/h	717	0	377	737	403	342	835	0	749	705	0	735
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.4	0.0	13.5	14.3	15.0	15.5	8.6	0.0	11.6	8.3	0.0	8.7
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.0	0.1	0.9	0.0	0.0	2.1	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.3	0.1	0.1	0.5	0.1	0.0	2.2	0.4	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	0.0	13.7	14.4	15.1	16.4	8.6	0.0	13.7	8.4	0.0	9.0
LnGrp LOS	B	A	B	B	B	B	A	A	B	A	A	A
Approach Vol, veh/h		142			100			361			270	
Approach Delay, s/veh		13.6			15.8			13.5			8.8	
Approach LOS		B			B			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	15.8	4.8	10.6	5.1	17.9	6.8	8.7
Change Period (Y+Rc), s	4.5	4.5	4.0	4.0	4.5	4.5	4.0	4.0
Max Green Setting (Gmax), s	8.5	16.5	9.0	9.0	8.5	16.5	9.0	9.0
Max Q Clear Time (g_c+I1), s	3.6	8.8	2.4	2.8	2.3	4.7	4.1	3.5
Green Ext Time (p_c), s	0.1	2.5	0.0	0.0	0.0	1.4	0.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	135	77	3	4	91	75	0	2	2	37	3	100
Future Vol, veh/h	135	77	3	4	91	75	0	2	2	37	3	100
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	7	67	0	4	2	0	0	0	0	0	1
Mvmt Flow	152	87	3	4	102	84	0	2	2	42	3	112

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	186	0	0	90	0	0	603	587	89	547	546	144
Stage 1	-	-	-	-	-	-	393	393	-	152	152	-
Stage 2	-	-	-	-	-	-	210	194	-	395	394	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.309
Pot Cap-1 Maneuver	1382	-	-	1518	-	-	414	425	975	451	448	906
Stage 1	-	-	-	-	-	-	636	609	-	855	775	-
Stage 2	-	-	-	-	-	-	797	744	-	634	609	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1382	-	-	1518	-	-	329	377	975	410	397	906
Mov Cap-2 Maneuver	-	-	-	-	-	-	329	377	-	410	397	-
Stage 1	-	-	-	-	-	-	566	542	-	761	773	-
Stage 2	-	-	-	-	-	-	693	742	-	561	542	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5	0.2	11.7	12
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	544	1382	-	-	1518	-	-	673
HCM Lane V/C Ratio	0.008	0.11	-	-	0.003	-	-	0.234
HCM Control Delay (s)	11.7	7.9	-	-	7.4	0	-	12
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.4	-	-	0	-	-	0.9

HCM 6th TWSC
3: Shaw Hwy & NE Santiam Hwy Ramp

12/19/2023

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	50	275	75	51	34
Future Vol, veh/h	6	50	275	75	51	34
Conflicting Peds, #/hr	0	0	3	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	2	2	5	4
Mvmt Flow	8	63	344	94	64	43

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	871	89	110	0	-	0
Stage 1	89	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	324	975	1480	-	-	-
Stage 1	940	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	243	972	1476	-	-	-
Mov Cap-2 Maneuver	243	-	-	-	-	-
Stage 1	707	-	-	-	-	-
Stage 2	453	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	6.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1476	-	736	-	-
HCM Lane V/C Ratio	0.233	-	0.095	-	-
HCM Control Delay (s)	8.2	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.9	-	0.3	-	-

HCM 6th TWSC
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/19/2023

Intersection	
Int Delay, s/veh	4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	163	17	333	86	25	76
Future Vol, veh/h	163	17	333	86	25	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	0	90	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	7	4	11	10	7
Mvmt Flow	177	18	362	93	27	83

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	499	362	0	-	362	0
Stage 1	362	-	-	-	-	-
Stage 2	137	-	-	-	-	-
Critical Hdwy	6.48	6.27	-	-	4.2	-
Critical Hdwy Stg 1	5.48	-	-	-	-	-
Critical Hdwy Stg 2	5.48	-	-	-	-	-
Follow-up Hdwy	3.572	3.363	-	-	2.29	-
Pot Cap-1 Maneuver	520	672	-	0	1154	-
Stage 1	691	-	-	0	-	-
Stage 2	875	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	507	672	-	-	1154	-
Mov Cap-2 Maneuver	507	-	-	-	-	-
Stage 1	691	-	-	-	-	-
Stage 2	853	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.4	0	2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	507	672	1154	-
HCM Lane V/C Ratio	-	0.349	0.027	0.024	-
HCM Control Delay (s)	-	15.9	10.5	8.2	0
HCM Lane LOS	-	C	B	A	A
HCM 95th %tile Q(veh)	-	1.6	0.1	0.1	-

HCM Signalized Intersection Capacity Analysis

11: N 1st St/Shaw Hwy & Del Mar Dr

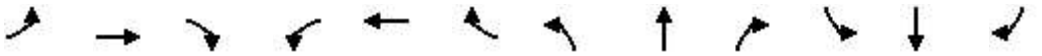
12/19/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	87	23	14	19	14	59	13	272	28	98	114	28
Future Volume (vph)	87	23	14	19	14	59	13	272	28	98	114	28
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
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	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1614	1624		1630	1716	1458	1409	1695		1630	1658	
Flt Permitted	0.56	1.00		0.98	1.00	1.00	0.65	1.00		0.42	1.00	
Satd. Flow (perm)	957	1624		1674	1716	1458	958	1695		721	1658	
Peak-hour factor, PHF	0.81	0.92	0.81	0.92	0.92	0.92	0.81	0.81	0.92	0.92	0.81	0.81
Adj. Flow (vph)	107	25	17	21	15	64	16	336	30	107	141	35
RTOR Reduction (vph)	0	15	0	0	0	59	0	4	0	0	11	0
Lane Group Flow (vph)	107	27	0	21	15	5	16	362	0	107	166	0
Heavy Vehicles (%)	3%	2%	0%	2%	2%	2%	18%	2%	2%	2%	2%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	11.1	7.1		5.1	4.1	4.1	23.3	22.4		28.5	25.0	
Effective Green, g (s)	11.1	7.1		5.1	4.1	4.1	24.3	22.9		29.5	25.5	
Actuated g/C Ratio	0.22	0.14		0.10	0.08	0.08	0.48	0.45		0.58	0.50	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	4.0		2.5	4.0	
Lane Grp Cap (vph)	259	226		166	137	117	468	761		488	829	
v/s Ratio Prot	c0.03	0.02		0.00	0.01		0.00	c0.21		c0.02	0.10	
v/s Ratio Perm	c0.06			0.01		0.00	0.02			0.11		
v/c Ratio	0.41	0.12		0.13	0.11	0.04	0.03	0.48		0.22	0.20	
Uniform Delay, d1	16.8	19.2		20.9	21.8	21.6	7.1	9.8		5.2	7.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	0.2		0.3	0.3	0.1	0.0	0.6		0.2	0.2	
Delay (s)	17.6	19.4		21.2	22.0	21.8	7.1	10.5		5.4	7.2	
Level of Service	B	B		C	C	C	A	B		A	A	
Approach Delay (s)		18.1			21.7			10.3			6.5	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	51.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
11: N 1st St/Shaw Hwy & Del Mar Dr

12/19/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	23	14	19	14	59	13	272	28	98	114	28
Future Volume (veh/h)	87	23	14	19	14	59	13	272	28	98	114	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1723	1750	1723	1723	1723	1504	1723	1723	1723	1723	1695
Adj Flow Rate, veh/h	107	25	17	21	15	64	16	336	30	107	141	35
Peak Hour Factor	0.81	0.92	0.81	0.92	0.92	0.92	0.81	0.81	0.92	0.92	0.81	0.81
Percent Heavy Veh, %	3	2	0	2	2	2	18	2	2	2	2	4
Cap, veh/h	454	168	114	381	207	175	534	490	44	447	491	122
Arrive On Green	0.08	0.18	0.18	0.02	0.12	0.12	0.03	0.31	0.30	0.08	0.37	0.36
Sat Flow, veh/h	1628	956	650	1641	1723	1460	1433	1559	139	1641	1332	331
Grp Volume(v), veh/h	107	0	42	21	15	64	16	0	366	107	0	176
Grp Sat Flow(s),veh/h/ln	1628	0	1606	1641	1723	1460	1433	0	1698	1641	0	1663
Q Serve(g_s), s	2.2	0.0	0.9	0.4	0.3	1.6	0.3	0.0	7.4	1.6	0.0	3.0
Cycle Q Clear(g_c), s	2.2	0.0	0.9	0.4	0.3	1.6	0.3	0.0	7.4	1.6	0.0	3.0
Prop In Lane	1.00		0.40	1.00		1.00	1.00		0.08	1.00		0.20
Lane Grp Cap(c), veh/h	454	0	282	381	207	175	534	0	534	447	0	613
V/C Ratio(X)	0.24	0.00	0.15	0.06	0.07	0.36	0.03	0.00	0.69	0.24	0.00	0.29
Avail Cap(c_a), veh/h	702	0	367	722	394	334	820	0	733	686	0	718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	13.7	14.7	15.4	15.9	8.6	0.0	11.8	8.4	0.0	8.8
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.0	0.1	0.9	0.0	0.0	2.2	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.3	0.1	0.1	0.5	0.1	0.0	2.4	0.4	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	0.0	13.9	14.8	15.5	16.9	8.6	0.0	14.0	8.6	0.0	9.2
LnGrp LOS	B	A	B	B	B	B	A	A	B	A	A	A
Approach Vol, veh/h		149			100			382			283	
Approach Delay, s/veh		13.7			16.2			13.8			9.0	
Approach LOS		B			B			B			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	16.4	4.8	10.9	5.1	18.5	7.0	8.7
Change Period (Y+Rc), s	4.5	4.5	4.0	4.0	4.5	4.5	4.0	4.0
Max Green Setting (Gmax), s	8.5	16.5	9.0	9.0	8.5	16.5	9.0	9.0
Max Q Clear Time (g_c+I1), s	3.6	9.4	2.4	2.9	2.3	5.0	4.2	3.6
Green Ext Time (p_c), s	0.1	2.5	0.0	0.0	0.0	1.5	0.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	143	83	4	5	97	79	0	2	2	40	3	107
Future Vol, veh/h	143	83	4	5	97	79	0	2	2	40	3	107
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	3	7	67	0	4	2	0	0	0	0	0	1
Mvmt Flow	161	93	4	6	109	89	0	2	2	45	3	120

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	198	0	0	97	0	0	644	627	95	585	585	154
Stage 1	-	-	-	-	-	-	417	417	-	166	166	-
Stage 2	-	-	-	-	-	-	227	210	-	419	419	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.21
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.309
Pot Cap-1 Maneuver	1369	-	-	1509	-	-	389	403	967	425	426	895
Stage 1	-	-	-	-	-	-	617	595	-	841	765	-
Stage 2	-	-	-	-	-	-	780	732	-	616	593	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1369	-	-	1509	-	-	303	354	967	383	374	895
Mov Cap-2 Maneuver	-	-	-	-	-	-	303	354	-	383	374	-
Stage 1	-	-	-	-	-	-	544	525	-	742	761	-
Stage 2	-	-	-	-	-	-	669	728	-	540	523	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5	0.2	12	12.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	518	1369	-	-	1509	-	-	647
HCM Lane V/C Ratio	0.009	0.117	-	-	0.004	-	-	0.26
HCM Control Delay (s)	12	8	-	-	7.4	0	-	12.5
HCM Lane LOS	B	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0.4	-	-	0	-	-	1

1st at Del Mar PM Peak Hour

2030 Build											los	B
Phase		Adj flow	Sat Flow									
1	SBL	112	919	0.122	Prot	1,2	0.298					
		88	722		Perm	5,6	0.265					
2	NBT	287	1632	0.176		5,5	0.031				Cycle Length	52
3	WBL	28	689	0.041	Prot	1,1	0.122				Lost Time/phase	4
		38	952		Perm	5pr,1pm	0.016				# phases	4
4	EBT	63	1643	0.038		1pr,5pm	0.137	0.298			Total Lost Time	16
5	NBL	12	769	0.016	Prot	3,4	0.079					
		13	833	0.016	Perm	7,8	0.057			Critical	v/c	0.54
6	SBT	409	1639	0.250		7,7	0.028					
7	EBL	13	460	0.028	Prot	3,3	0.041					
		33	1181		Perm	7pr,3pm	0.028					
8	WBT	50	1723	0.029		3pr,7pm	0.041	0.079				
							Critical Pairs	0.377				

2035 Build											los	B
Phase		Adj flow	Sat Flow									
1	SBL	114	936	0.122	Prot	1,2	0.304					
		86	706		Perm	5,6	0.278					
2	NBT	297	1634	0.182		5,5	0.032				Cycle Length	52
3	WBL	27	673	0.040	Prot	1,1	0.122				Lost Time/phase	4
		39	968		Perm	5pr,1pm	0.017				# phases	4
4	EBT	64	1640	0.039		1pr,5pm	0.138	0.304			Total Lost Time	16
5	NBL	13	785	0.017	Prot	3,4	0.079					
		13	817	0.016	Perm	7,8	0.057			Critical	v/c	0.55
6	SBT	428	1639	0.261		7,7	0.028					
7	EBL	13	459	0.028	Prot	3,3	0.040					
		35	1182		Perm	7pr,3pm	0.028					
8	WBT	50	1723	0.029		3pr,7pm	0.040	0.079				
							Critical Pairs	0.383				

2050 Build											los	B
Phase		Adj flow	Sat Flow									
1	SBL	120	984	0.122	Prot	1,2	0.323					
		80	657		Perm	5,6	0.314					
2	NBT	330	1640	0.201		5,5	0.036				Cycle Length	52
3	WBL	17	427	0.040	Prot	1,1	0.122				Lost Time/phase	4
		49	1214		Perm	5pr,1pm	0.018				# phases	4
4	EBT	66	1634	0.040		1pr,5pm	0.140	0.323			Total Lost Time	16
5	NBL	16	897	0.018	Prot	3,4	0.080					
		13	705	0.018	Perm	7,8	0.061			Critical	v/c	0.58
6	SBT	486	1639	0.297		7,7	0.032					
7	EBL	12	377	0.032	Prot	3,3	0.040					
		42	1264		Perm	7pr,3pm	0.032					
8	WBT	50	1723	0.029		3pr,7pm	0.040	0.080				
							Critical Pairs	0.403				

HCM 6th TWSC
3: Shaw Hwy & NE Santiam Hwy Ramp

11/21/2023

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	62	125	118	68	54
Future Vol, veh/h	30	62	125	118	68	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	0	6	5	4	2
Mvmt Flow	33	67	136	128	74	59

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	504	104	133	0	-	0
Stage 1	104	-	-	-	-	-
Stage 2	400	-	-	-	-	-
Critical Hdwy	6.53	6.2	4.16	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.3	2.254	-	-	-
Pot Cap-1 Maneuver	508	956	1427	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	654	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	456	956	1427	-	-	-
Mov Cap-2 Maneuver	456	-	-	-	-	-
Stage 1	801	-	-	-	-	-
Stage 2	654	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1427	-	704	-	-
HCM Lane V/C Ratio	0.095	-	0.142	-	-
HCM Control Delay (s)	7.8	0	11	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.5	-	-

HCM 6th TWSC
7: Shaw Hwy SE & SE Santiam Hwy Ramp

11/21/2023

Intersection	
Int Delay, s/veh	6.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	253	53	190	52	17	113
Future Vol, veh/h	253	53	190	52	17	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	0	90	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	4	3	2	12	4
Mvmt Flow	261	55	196	54	18	116

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	348	196	0	-	196	0
Stage 1	196	-	-	-	-	-
Stage 2	152	-	-	-	-	-
Critical Hdwy	6.41	6.24	-	-	4.22	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.336	-	-	2.308	-
Pot Cap-1 Maneuver	651	840	-	0	1319	-
Stage 1	840	-	-	0	-	-
Stage 2	878	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	641	840	-	-	1319	-
Mov Cap-2 Maneuver	641	-	-	-	-	-
Stage 1	840	-	-	-	-	-
Stage 2	865	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.6	0	1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	641	840	1319	-
HCM Lane V/C Ratio	-	0.407	0.065	0.013	-
HCM Control Delay (s)	-	14.4	9.6	7.8	0
HCM Lane LOS	-	B	A	A	A
HCM 95th %tile Q(veh)	-	2	0.2	0	-

HCM 6th TWSC
11: N 1st St/Shaw Hwy & Del Mar Dr

11/21/2023

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	41	15	22	202	280	87
Future Vol, veh/h	41	15	22	202	280	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	0	5	4	3	0
Mvmt Flow	43	16	23	210	292	91

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	594	338	383	0	-	0
Stage 1	338	-	-	-	-	-
Stage 2	256	-	-	-	-	-
Critical Hdwy	6.42	6.2	4.15	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	2.245	-	-	-
Pot Cap-1 Maneuver	468	709	1159	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	787	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	458	709	1159	-	-	-
Mov Cap-2 Maneuver	458	-	-	-	-	-
Stage 1	706	-	-	-	-	-
Stage 2	787	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1159	-	506	-	-
HCM Lane V/C Ratio	0.02	-	0.115	-	-
HCM Control Delay (s)	8.2	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

HCM 6th TWSC
14: Shaw Hwy/N 1st St & Gordon Ln

11/21/2023

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	224	0	0	295
Future Vol, veh/h	0	0	224	0	0	295
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	4	0	0	3
Mvmt Flow	0	0	233	0	0	307

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	540	233	0	0	233	0
Stage 1	233	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	506	811	-	-	1346	-
Stage 1	810	-	-	-	-	-
Stage 2	751	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	506	811	-	-	1346	-
Mov Cap-2 Maneuver	506	-	-	-	-	-
Stage 1	810	-	-	-	-	-
Stage 2	751	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1346	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th TWSC

23: Main St & N 1st Ave 11/21/2023

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	128	197	2	3	156	60	1	8	7	64	3	142
Future Vol, veh/h	128	197	2	3	156	60	1	8	7	64	3	142
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	6	0	0	1	7	0	0	0	2	0	4
Mvmt Flow	131	201	2	3	159	61	1	8	7	65	3	145

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	220	0	0	203	0	0	734	690	202	668	661	190
Stage 1	-	-	-	-	-	-	464	464	-	196	196	-
Stage 2	-	-	-	-	-	-	270	226	-	472	465	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.12	6.5	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.518	4	3.336
Pot Cap-1 Maneuver	1343	-	-	1381	-	-	338	371	844	372	385	847
Stage 1	-	-	-	-	-	-	582	567	-	806	742	-
Stage 2	-	-	-	-	-	-	740	721	-	573	566	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1343	-	-	1381	-	-	257	334	844	334	347	847
Mov Cap-2 Maneuver	-	-	-	-	-	-	257	334	-	334	347	-
Stage 1	-	-	-	-	-	-	525	511	-	727	741	-
Stage 2	-	-	-	-	-	-	610	720	-	505	511	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.1	0.1	13.4	15.1
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	443	1343	-	-	1381	-	-	568
HCM Lane V/C Ratio	0.037	0.097	-	-	0.002	-	-	0.375
HCM Control Delay (s)	13.4	8	-	-	7.6	0	-	15.1
HCM Lane LOS	B	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0	-	-	1.7

HCM 6th TWSC
3: Shaw Hwy & NE Santiam Hwy Ramp

11/21/2023

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	66	134	126	73	58
Future Vol, veh/h	32	66	134	126	73	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	0	6	5	4	2
Mvmt Flow	35	72	146	137	79	63

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	540	111	142	0	-	0
Stage 1	111	-	-	-	-	-
Stage 2	429	-	-	-	-	-
Critical Hdwy	6.53	6.2	4.16	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.3	2.254	-	-	-
Pot Cap-1 Maneuver	484	948	1417	-	-	-
Stage 1	887	-	-	-	-	-
Stage 2	634	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	430	948	1417	-	-	-
Mov Cap-2 Maneuver	430	-	-	-	-	-
Stage 1	788	-	-	-	-	-
Stage 2	634	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1417	-	680	-	-
HCM Lane V/C Ratio	0.103	-	0.157	-	-
HCM Control Delay (s)	7.8	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.6	-	-

HCM 6th TWSC

7: Shaw Hwy SE & SE Santiam Hwy Ramp 11/21/2023

Intersection	
Int Delay, s/veh	6.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	217	57	203	56	18	121
Future Vol, veh/h	217	57	203	56	18	121
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	0	90	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	4	3	2	12	4
Mvmt Flow	224	59	209	58	19	125

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	372	209	0	-	209	0
Stage 1	209	-	-	-	-	-
Stage 2	163	-	-	-	-	-
Critical Hdwy	6.41	6.24	-	-	4.22	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.336	-	-	2.308	-
Pot Cap-1 Maneuver	631	826	-	0	1304	-
Stage 1	828	-	-	0	-	-
Stage 2	869	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	621	826	-	-	1304	-
Mov Cap-2 Maneuver	621	-	-	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	855	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	621	826	1304	-
HCM Lane V/C Ratio	-	0.36	0.071	0.014	-
HCM Control Delay (s)	-	14	9.7	7.8	0
HCM Lane LOS	-	B	A	A	A
HCM 95th %tile Q(veh)	-	1.6	0.2	0	-

HCM 6th TWSC

11: N 1st St/Shaw Hwy & Del Mar Dr 11/21/2023

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	44	16	24	216	300	93
Future Vol, veh/h	44	16	24	216	300	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	0	5	4	3	0
Mvmt Flow	46	17	25	225	313	97

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	637	362	410	0	-	0
Stage 1	362	-	-	-	-	-
Stage 2	275	-	-	-	-	-
Critical Hdwy	6.42	6.2	4.15	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	2.245	-	-	-
Pot Cap-1 Maneuver	441	687	1133	-	-	-
Stage 1	704	-	-	-	-	-
Stage 2	771	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	430	687	1133	-	-	-
Mov Cap-2 Maneuver	430	-	-	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	771	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1133	-	478	-	-
HCM Lane V/C Ratio	0.022	-	0.131	-	-
HCM Control Delay (s)	8.2	0	13.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

HCM 6th TWSC
14: Shaw Hwy/N 1st St & Gordon Ln

11/21/2023

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	240	0	0	316
Future Vol, veh/h	0	0	240	0	0	316
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	4	0	0	3
Mvmt Flow	0	0	250	0	0	329

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	579	250	0	0	250	0
Stage 1	250	-	-	-	-	-
Stage 2	329	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	481	794	-	-	1327	-
Stage 1	796	-	-	-	-	-
Stage 2	734	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	481	794	-	-	1327	-
Mov Cap-2 Maneuver	481	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	734	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1327	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	137	211	2	3	167	64	1	9	7	68	3	152
Future Vol, veh/h	137	211	2	3	167	64	1	9	7	68	3	152
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	6	0	0	1	7	0	0	0	2	0	4
Mvmt Flow	140	215	2	3	170	65	1	9	7	69	3	155

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	235	0	0	217	0	0	784	737	216	713	706	203
Stage 1	-	-	-	-	-	-	496	496	-	209	209	-
Stage 2	-	-	-	-	-	-	288	241	-	504	497	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.12	6.5	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.518	4	3.336
Pot Cap-1 Maneuver	1326	-	-	1365	-	-	313	348	829	347	363	833
Stage 1	-	-	-	-	-	-	559	549	-	793	733	-
Stage 2	-	-	-	-	-	-	724	710	-	550	548	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1326	-	-	1365	-	-	232	310	829	308	323	833
Mov Cap-2 Maneuver	-	-	-	-	-	-	232	310	-	308	323	-
Stage 1	-	-	-	-	-	-	500	491	-	709	731	-
Stage 2	-	-	-	-	-	-	585	708	-	479	490	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.1	0.1	14.2	16.4
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	407	1326	-	-	1365	-	-	541
HCM Lane V/C Ratio	0.043	0.105	-	-	0.002	-	-	0.421
HCM Control Delay (s)	14.2	8	-	-	7.6	0	-	16.4
HCM Lane LOS	B	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0	-	-	2.1

HCM 6th TWSC
3: Shaw Hwy & NE Santiam Hwy Ramp

11/21/2023

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	69	140	132	76	60
Future Vol, veh/h	34	69	140	132	76	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	0	6	5	4	2
Mvmt Flow	37	75	152	143	83	65

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	563	116	148	0	-	0
Stage 1	116	-	-	-	-	-
Stage 2	447	-	-	-	-	-
Critical Hdwy	6.53	6.2	4.16	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.3	2.254	-	-	-
Pot Cap-1 Maneuver	469	942	1409	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	622	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	414	942	1409	-	-	-
Mov Cap-2 Maneuver	414	-	-	-	-	-
Stage 1	779	-	-	-	-	-
Stage 2	622	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.5	4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1409	-	663	-	-
HCM Lane V/C Ratio	0.108	-	0.169	-	-
HCM Control Delay (s)	7.9	0	11.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.6	-	-

HCM 6th TWSC
7: Shaw Hwy SE & SE Santiam Hwy Ramp

11/21/2023

Intersection	
Int Delay, s/veh	7.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	283	59	213	58	19	127
Future Vol, veh/h	283	59	213	58	19	127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	0	90	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	4	3	2	12	4
Mvmt Flow	292	61	220	60	20	131

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	391	220	0	-	220	0
Stage 1	220	-	-	-	-	-
Stage 2	171	-	-	-	-	-
Critical Hdwy	6.41	6.24	-	-	4.22	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.336	-	-	2.308	-
Pot Cap-1 Maneuver	615	815	-	0	1292	-
Stage 1	819	-	-	0	-	-
Stage 2	861	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	605	815	-	-	1292	-
Mov Cap-2 Maneuver	605	-	-	-	-	-
Stage 1	819	-	-	-	-	-
Stage 2	846	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.3	0	1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	605	815	1292	-
HCM Lane V/C Ratio	-	0.482	0.075	0.015	-
HCM Control Delay (s)	-	16.4	9.8	7.8	0
HCM Lane LOS	-	C	A	A	A
HCM 95th %tile Q(veh)	-	2.6	0.2	0	-

HCM 6th TWSC
11: N 1st St/Shaw Hwy & Del Mar Dr

11/21/2023

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	46	17	25	226	314	97
Future Vol, veh/h	46	17	25	226	314	97
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	0	5	4	3	0
Mvmt Flow	48	18	26	235	327	101

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	665	378	428	0	-	0
Stage 1	378	-	-	-	-	-
Stage 2	287	-	-	-	-	-
Critical Hdwy	6.42	6.2	4.15	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	2.245	-	-	-
Pot Cap-1 Maneuver	425	673	1116	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	414	673	1116	-	-	-
Mov Cap-2 Maneuver	414	-	-	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	762	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.1	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1116	-	462	-	-
HCM Lane V/C Ratio	0.023	-	0.142	-	-
HCM Control Delay (s)	8.3	0	14.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

HCM 6th TWSC
14: Shaw Hwy/N 1st St & Gordon Ln

11/21/2023

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	251	0	0	330
Future Vol, veh/h	0	0	251	0	0	330
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	4	0	0	3
Mvmt Flow	0	0	261	0	0	344

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	605	261	0	0	261	0
Stage 1	261	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	464	783	-	-	1315	-
Stage 1	787	-	-	-	-	-
Stage 2	722	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	464	783	-	-	1315	-
Mov Cap-2 Maneuver	464	-	-	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	722	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1315	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th TWSC

23: Main St & N 1st Ave 11/21/2023

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	143	221	2	3	175	67	1	9	8	72	3	159
Future Vol, veh/h	143	221	2	3	175	67	1	9	8	72	3	159
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	6	0	0	1	7	0	0	0	2	0	4
Mvmt Flow	146	226	2	3	179	68	1	9	8	73	3	162

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	247	0	0	228	0	0	821	772	227	747	739	213
Stage 1	-	-	-	-	-	-	519	519	-	219	219	-
Stage 2	-	-	-	-	-	-	302	253	-	528	520	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.12	6.5	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.518	4	3.336
Pot Cap-1 Maneuver	1313	-	-	1352	-	-	296	333	817	329	347	822
Stage 1	-	-	-	-	-	-	544	536	-	783	726	-
Stage 2	-	-	-	-	-	-	712	701	-	534	535	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1313	-	-	1352	-	-	215	295	817	291	307	822
Mov Cap-2 Maneuver	-	-	-	-	-	-	215	295	-	291	307	-
Stage 1	-	-	-	-	-	-	484	477	-	696	724	-
Stage 2	-	-	-	-	-	-	567	699	-	461	476	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.2	0.1	14.4	17.7
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	400	1313	-	-	1352	-	-	519
HCM Lane V/C Ratio	0.046	0.111	-	-	0.002	-	-	0.46
HCM Control Delay (s)	14.4	8.1	-	-	7.7	0	-	17.7
HCM Lane LOS	B	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0	-	-	2.4

HCM 6th TWSC
3: Shaw Hwy & NE Santiam Hwy Ramp

11/21/2023

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	38	79	159	150	86	69
Future Vol, veh/h	38	79	159	150	86	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	0	6	5	4	2
Mvmt Flow	41	86	173	163	93	75

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	640	131	168	0	-	0
Stage 1	131	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Critical Hdwy	6.53	6.2	4.16	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.3	2.254	-	-	-
Pot Cap-1 Maneuver	423	924	1386	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	582	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	365	924	1386	-	-	-
Mov Cap-2 Maneuver	365	-	-	-	-	-
Stage 1	750	-	-	-	-	-
Stage 2	582	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	4.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1386	-	617	-	-
HCM Lane V/C Ratio	0.125	-	0.206	-	-
HCM Control Delay (s)	8	0	12.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.8	-	-

HCM 6th TWSC
7: Shaw Hwy SE & SE Santiam Hwy Ramp

11/21/2023

Intersection	
Int Delay, s/veh	9.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	321	67	241	66	22	144
Future Vol, veh/h	321	67	241	66	22	144
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	0	90	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	4	3	2	12	4
Mvmt Flow	331	69	248	68	23	148

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	442	248	0	-	248	0
Stage 1	248	-	-	-	-	-
Stage 2	194	-	-	-	-	-
Critical Hdwy	6.41	6.24	-	-	4.22	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.336	-	-	2.308	-
Pot Cap-1 Maneuver	575	786	-	0	1261	-
Stage 1	796	-	-	0	-	-
Stage 2	841	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	564	786	-	-	1261	-
Mov Cap-2 Maneuver	564	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	824	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.3	0	1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	564	786	1261	-
HCM Lane V/C Ratio	-	0.587	0.088	0.018	-
HCM Control Delay (s)	-	20	10	7.9	0
HCM Lane LOS	-	C	B	A	A
HCM 95th %tile Q(veh)	-	3.8	0.3	0.1	-

HCM 6th TWSC
11: N 1st St/Shaw Hwy & Del Mar Dr

11/21/2023

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	52	19	28	257	356	110
Future Vol, veh/h	52	19	28	257	356	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	0	5	4	3	0
Mvmt Flow	54	20	29	268	371	115

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	755	429	486	0	-	0
Stage 1	429	-	-	-	-	-
Stage 2	326	-	-	-	-	-
Critical Hdwy	6.42	6.2	4.15	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.3	2.245	-	-	-
Pot Cap-1 Maneuver	376	630	1062	-	-	-
Stage 1	657	-	-	-	-	-
Stage 2	731	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	364	630	1062	-	-	-
Mov Cap-2 Maneuver	364	-	-	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	731	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.7	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1062	-	410	-	-
HCM Lane V/C Ratio	0.027	-	0.18	-	-
HCM Control Delay (s)	8.5	0	15.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-	-

HCM 6th TWSC
14: Shaw Hwy/N 1st St & Gordon Ln

11/21/2023

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	284	0	0	375
Future Vol, veh/h	0	0	284	0	0	375
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	4	0	0	3
Mvmt Flow	0	0	296	0	0	391

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	687	296	0	0	296	0
Stage 1	296	-	-	-	-	-
Stage 2	391	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	416	748	-	-	1277	-
Stage 1	759	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	416	748	-	-	1277	-
Mov Cap-2 Maneuver	416	-	-	-	-	-
Stage 1	759	-	-	-	-	-
Stage 2	688	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1277	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	163	250	3	4	198	76	1	10	9	81	4	180
Future Vol, veh/h	163	250	3	4	198	76	1	10	9	81	4	180
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	6	0	0	1	7	0	0	0	2	0	4
Mvmt Flow	166	255	3	4	202	78	1	10	9	83	4	184

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	280	0	0	258	0	0	932	877	257	847	839	241
Stage 1	-	-	-	-	-	-	589	589	-	249	249	-
Stage 2	-	-	-	-	-	-	343	288	-	598	590	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.12	6.5	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.518	4	3.336
Pot Cap-1 Maneuver	1277	-	-	1318	-	-	249	289	787	282	304	793
Stage 1	-	-	-	-	-	-	498	499	-	755	704	-
Stage 2	-	-	-	-	-	-	676	677	-	489	498	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1277	-	-	1318	-	-	170	251	787	243	264	793
Mov Cap-2 Maneuver	-	-	-	-	-	-	170	251	-	243	264	-
Stage 1	-	-	-	-	-	-	433	434	-	657	701	-
Stage 2	-	-	-	-	-	-	514	674	-	411	433	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.2	0.1	15.9	23.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	350	1277	-	-	1318	-	-	460
HCM Lane V/C Ratio	0.058	0.13	-	-	0.003	-	-	0.588
HCM Control Delay (s)	15.9	8.2	-	-	7.7	0	-	23.4
HCM Lane LOS	C	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0.4	-	-	0	-	-	3.7

HCM 6th TWSC
3: Shaw Hwy & NE Santiam Hwy Ramp

12/19/2023

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	32	94	271	156	101	58
Future Vol, veh/h	32	94	271	156	101	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	0	6	5	4	2
Mvmt Flow	35	102	295	170	110	63

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	902	142	173	0	-	0
Stage 1	142	-	-	-	-	-
Stage 2	760	-	-	-	-	-
Critical Hdwy	6.53	6.2	4.16	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.3	2.254	-	-	-
Pot Cap-1 Maneuver	295	911	1380	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	443	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	225	911	1380	-	-	-
Mov Cap-2 Maneuver	225	-	-	-	-	-
Stage 1	656	-	-	-	-	-
Stage 2	443	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.6	5.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1380	-	513	-	-
HCM Lane V/C Ratio	0.213	-	0.267	-	-
HCM Control Delay (s)	8.3	0	14.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.8	-	1.1	-	-

HCM 6th TWSC
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/19/2023

Intersection	
Int Delay, s/veh	20.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	399	57	370	86	18	177
Future Vol, veh/h	399	57	370	86	18	177
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	0	90	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	4	3	2	12	4
Mvmt Flow	411	59	381	89	19	182

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	601	381	0	-	381	0
Stage 1	381	-	-	-	-	-
Stage 2	220	-	-	-	-	-
Critical Hdwy	6.41	6.24	-	-	4.22	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.336	-	-	2.308	-
Pot Cap-1 Maneuver	465	662	-	0	1125	-
Stage 1	693	-	-	0	-	-
Stage 2	819	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	456	662	-	-	1125	-
Mov Cap-2 Maneuver	456	-	-	-	-	-
Stage 1	693	-	-	-	-	-
Stage 2	803	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	46.5	0	0.8
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	456	662	1125	-
HCM Lane V/C Ratio	-	0.902	0.089	0.016	-
HCM Control Delay (s)	-	51.6	11	8.3	0
HCM Lane LOS	-	F	B	A	A
HCM 95th %tile Q(veh)	-	9.9	0.3	0.1	-

HCM Signalized Intersection Capacity Analysis

11: N 1st St/Shaw Hwy & Del Mar Dr

12/19/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	42	16	61	46	197	24	216	57	184	300	93
Future Volume (vph)	44	42	16	61	46	197	24	216	57	184	300	93
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
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	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1630	1655		1630	1716	1458	1583	1635		1630	1650	
Flt Permitted	0.72	1.00		0.58	1.00	1.00	0.52	1.00		0.44	1.00	
Satd. Flow (perm)	1243	1655		989	1716	1458	869	1635		750	1650	
Peak-hour factor, PHF	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Adj. Flow (vph)	46	46	17	66	50	214	25	225	62	200	312	97
RTOR Reduction (vph)	0	15	0	0	0	184	0	14	0	0	14	0
Lane Group Flow (vph)	46	48	0	66	50	30	25	273	0	200	396	0
Heavy Vehicles (%)	2%	2%	0%	2%	2%	2%	5%	4%	2%	2%	3%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	8.0	5.8		10.8	7.2	7.2	20.3	19.3		29.5	24.0	
Effective Green, g (s)	8.0	5.8		10.8	7.2	7.2	21.3	19.8		30.0	24.5	
Actuated g/C Ratio	0.16	0.11		0.21	0.14	0.14	0.41	0.39		0.58	0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	4.0		2.5	4.0	
Lane Grp Cap (vph)	210	186		252	240	204	380	629		543	786	
v/s Ratio Prot	0.01	0.03		c0.02	0.03		0.00	0.17		c0.04	c0.24	
v/s Ratio Perm	0.02			c0.04		0.02	0.03			0.17		
v/c Ratio	0.22	0.26		0.26	0.21	0.15	0.07	0.43		0.37	0.50	
Uniform Delay, d1	18.9	20.8		16.7	19.6	19.4	9.0	11.7		5.5	9.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.5		0.4	0.3	0.2	0.1	0.7		0.3	0.7	
Delay (s)	19.2	21.4		17.1	19.9	19.6	9.0	12.3		5.8	10.0	
Level of Service	B	C		B	B	B	A	B		A	A	
Approach Delay (s)		20.5			19.2			12.1			8.6	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	51.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
11: N 1st St/Shaw Hwy & Del Mar Dr

12/19/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	42	16	61	46	197	24	216	57	184	300	93
Future Volume (veh/h)	44	42	16	61	46	197	24	216	57	184	300	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1750	1723	1723	1723	1682	1695	1723	1723	1709	1750
Adj Flow Rate, veh/h	46	46	17	66	50	214	25	225	62	200	312	97
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Percent Heavy Veh, %	2	2	0	2	2	2	5	4	2	2	3	0
Cap, veh/h	418	213	79	447	326	276	365	338	93	499	448	139
Arrive On Green	0.04	0.18	0.18	0.05	0.19	0.19	0.04	0.26	0.25	0.13	0.36	0.35
Sat Flow, veh/h	1641	1200	443	1641	1723	1460	1602	1279	353	1641	1250	389
Grp Volume(v), veh/h	46	0	63	66	50	214	25	0	287	200	0	409
Grp Sat Flow(s),veh/h/ln	1641	0	1643	1641	1723	1460	1602	0	1632	1641	0	1639
Q Serve(g_s), s	1.0	0.0	1.4	1.4	1.0	5.9	0.5	0.0	6.7	3.3	0.0	9.1
Cycle Q Clear(g_c), s	1.0	0.0	1.4	1.4	1.0	5.9	0.5	0.0	6.7	3.3	0.0	9.1
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.22	1.00		0.24
Lane Grp Cap(c), veh/h	418	0	292	447	326	276	365	0	432	499	0	587
V/C Ratio(X)	0.11	0.00	0.22	0.15	0.15	0.78	0.07	0.00	0.66	0.40	0.00	0.70
Avail Cap(c_a), veh/h	702	0	349	712	366	310	648	0	655	636	0	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.4	0.0	14.9	13.2	14.3	16.3	10.8	0.0	14.0	8.6	0.0	11.7
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.1	0.2	9.8	0.1	0.0	2.5	0.4	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.5	0.5	0.4	2.5	0.1	0.0	2.2	0.8	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	0.0	15.2	13.3	14.5	26.2	10.9	0.0	16.5	9.0	0.0	15.0
LnGrp LOS	B	A	B	B	B	C	B	A	B	A	A	B
Approach Vol, veh/h		109			330			312			609	
Approach Delay, s/veh		14.4			21.8			16.0			13.0	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	15.2	6.2	11.5	5.5	19.2	5.7	12.0
Change Period (Y+Rc), s	4.5	4.5	4.0	4.0	4.5	4.5	4.0	4.0
Max Green Setting (Gmax), s	8.5	16.5	9.0	9.0	8.5	16.5	9.0	9.0
Max Q Clear Time (g_c+I1), s	5.3	8.7	3.4	3.4	2.5	11.1	3.0	7.9
Green Ext Time (p_c), s	0.2	2.0	0.1	0.1	0.0	2.3	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	16.0
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	162	211	2	3	167	96	1	9	7	101	4	179
Future Vol, veh/h	162	211	2	3	167	96	1	9	7	101	4	179
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	6	0	0	1	7	0	0	0	2	0	4
Mvmt Flow	165	215	2	3	170	98	1	9	7	103	4	183

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	268	0	0	217	0	0	865	820	216	779	772	219
Stage 1	-	-	-	-	-	-	546	546	-	225	225	-
Stage 2	-	-	-	-	-	-	319	274	-	554	547	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.12	6.5	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.518	4	3.336
Pot Cap-1 Maneuver	1290	-	-	1365	-	-	276	312	829	313	333	816
Stage 1	-	-	-	-	-	-	526	521	-	778	721	-
Stage 2	-	-	-	-	-	-	697	687	-	517	521	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1290	-	-	1365	-	-	191	271	829	272	289	816
Mov Cap-2 Maneuver	-	-	-	-	-	-	191	271	-	272	289	-
Stage 1	-	-	-	-	-	-	459	454	-	678	719	-
Stage 2	-	-	-	-	-	-	536	685	-	438	454	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.5	0.1	15.4	24.2
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	363	1290	-	-	1365	-	-	470
HCM Lane V/C Ratio	0.048	0.128	-	-	0.002	-	-	0.617
HCM Control Delay (s)	15.4	8.2	-	-	7.6	0	-	24.2
HCM Lane LOS	C	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0	-	-	4.1

HCM 6th TWSC
3: Shaw Hwy & NE Santiam Hwy Ramp

12/19/2023

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	34	97	277	162	104	60
Future Vol, veh/h	34	97	277	162	104	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	0	6	5	4	2
Mvmt Flow	37	105	301	176	113	65

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	924	146	178	0	-	0
Stage 1	146	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Critical Hdwy	6.53	6.2	4.16	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.3	2.254	-	-	-
Pot Cap-1 Maneuver	286	906	1374	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	434	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	217	906	1374	-	-	-
Mov Cap-2 Maneuver	217	-	-	-	-	-
Stage 1	647	-	-	-	-	-
Stage 2	434	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.1	5.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1374	-	497	-	-
HCM Lane V/C Ratio	0.219	-	0.287	-	-
HCM Control Delay (s)	8.4	0	15.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.8	-	1.2	-	-

HCM 6th TWSC
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/19/2023

Intersection	
Int Delay, s/veh	25.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	411	59	380	88	19	183
Future Vol, veh/h	411	59	380	88	19	183
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	0	90	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	4	3	2	12	4
Mvmt Flow	424	61	392	91	20	189

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	621	392	0	-	392	0
Stage 1	392	-	-	-	-	-
Stage 2	229	-	-	-	-	-
Critical Hdwy	6.41	6.24	-	-	4.22	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.336	-	-	2.308	-
Pot Cap-1 Maneuver	453	652	-	0	1114	-
Stage 1	685	-	-	0	-	-
Stage 2	811	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	444	652	-	-	1114	-
Mov Cap-2 Maneuver	444	-	-	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	795	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	56.2	0	0.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	444	652	1114	-
HCM Lane V/C Ratio	-	0.954	0.093	0.018	-
HCM Control Delay (s)	-	62.7	11.1	8.3	0
HCM Lane LOS	-	F	B	A	A
HCM 95th %tile Q(veh)	-	11.4	0.3	0.1	-

HCM Signalized Intersection Capacity Analysis

11: N 1st St/Shaw Hwy & Del Mar Dr

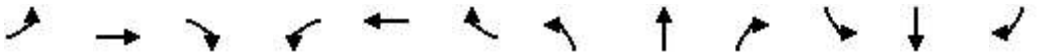
12/19/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	42	17	61	46	197	25	226	57	184	314	97
Future Volume (vph)	46	42	17	61	46	197	25	226	57	184	314	97
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
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	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1630	1652		1630	1716	1458	1583	1637		1630	1650	
Flt Permitted	0.72	1.00		0.59	1.00	1.00	0.51	1.00		0.43	1.00	
Satd. Flow (perm)	1243	1652		1006	1716	1458	855	1637		734	1650	
Peak-hour factor, PHF	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Adj. Flow (vph)	48	46	18	66	50	214	26	235	62	200	327	101
RTOR Reduction (vph)	0	16	0	0	0	184	0	13	0	0	14	0
Lane Group Flow (vph)	48	48	0	66	50	30	26	284	0	200	414	0
Heavy Vehicles (%)	2%	2%	0%	2%	2%	2%	5%	4%	2%	2%	3%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	8.2	5.9		10.8	7.2	7.2	20.5	19.5		29.7	24.2	
Effective Green, g (s)	8.2	5.9		10.8	7.2	7.2	21.5	20.0		30.2	24.7	
Actuated g/C Ratio	0.16	0.11		0.21	0.14	0.14	0.42	0.39		0.58	0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	4.0		2.5	4.0	
Lane Grp Cap (vph)	214	188		253	238	203	376	633		536	788	
v/s Ratio Prot	0.01	0.03		c0.02	0.03		0.00	0.17		c0.04	c0.25	
v/s Ratio Perm	0.03			c0.04		0.02	0.03			0.17		
v/c Ratio	0.22	0.26		0.26	0.21	0.15	0.07	0.45		0.37	0.53	
Uniform Delay, d1	18.9	20.9		16.9	19.7	19.6	9.0	11.8		5.6	9.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.5		0.4	0.3	0.2	0.1	0.7		0.3	0.8	
Delay (s)	19.2	21.4		17.3	20.1	19.8	9.0	12.4		5.9	10.2	
Level of Service	B	C		B	C	B	A	B		A	B	
Approach Delay (s)		20.5			19.3			12.2			8.9	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	51.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	48.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
11: N 1st St/Shaw Hwy & Del Mar Dr

12/19/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	42	17	61	46	197	25	226	57	184	314	97
Future Volume (veh/h)	46	42	17	61	46	197	25	226	57	184	314	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1750	1723	1723	1723	1682	1695	1723	1723	1709	1750
Adj Flow Rate, veh/h	48	46	18	66	50	214	26	235	62	200	327	101
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Percent Heavy Veh, %	2	2	0	2	2	2	5	4	2	2	3	0
Cap, veh/h	418	210	82	445	324	275	353	348	92	494	452	140
Arrive On Green	0.04	0.18	0.18	0.05	0.19	0.19	0.04	0.27	0.26	0.13	0.36	0.35
Sat Flow, veh/h	1641	1179	461	1641	1723	1460	1602	1293	341	1641	1253	387
Grp Volume(v), veh/h	48	0	64	66	50	214	26	0	297	200	0	428
Grp Sat Flow(s),veh/h/ln	1641	0	1640	1641	1723	1460	1602	0	1634	1641	0	1639
Q Serve(g_s), s	1.0	0.0	1.4	1.4	1.0	6.0	0.5	0.0	7.0	3.3	0.0	9.7
Cycle Q Clear(g_c), s	1.0	0.0	1.4	1.4	1.0	6.0	0.5	0.0	7.0	3.3	0.0	9.7
Prop In Lane	1.00		0.28	1.00		1.00	1.00		0.21	1.00		0.24
Lane Grp Cap(c), veh/h	418	0	292	445	324	275	353	0	440	494	0	592
V/C Ratio(X)	0.11	0.00	0.22	0.15	0.15	0.78	0.07	0.00	0.68	0.40	0.00	0.72
Avail Cap(c_a), veh/h	696	0	344	706	362	307	631	0	648	628	0	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	15.1	13.3	14.5	16.5	10.9	0.0	14.0	8.7	0.0	11.9
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.1	0.2	10.3	0.1	0.0	2.6	0.4	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.5	0.5	0.4	2.5	0.1	0.0	2.4	0.8	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	0.0	15.3	13.4	14.7	26.8	11.0	0.0	16.6	9.1	0.0	15.9
LnGrp LOS	B	A	B	B	B	C	B	A	B	A	A	B
Approach Vol, veh/h		112			330			323			628	
Approach Delay, s/veh		14.6			22.3			16.2			13.8	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	15.5	6.2	11.6	5.6	19.5	5.7	12.1
Change Period (Y+Rc), s	4.5	4.5	4.0	4.0	4.5	4.5	4.0	4.0
Max Green Setting (Gmax), s	8.5	16.5	9.0	9.0	8.5	16.5	9.0	9.0
Max Q Clear Time (g_c+I1), s	5.3	9.0	3.4	3.4	2.5	11.7	3.0	8.0
Green Ext Time (p_c), s	0.2	2.1	0.1	0.1	0.0	2.1	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	10

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	168	221	2	3	175	99	1	9	8	105	4	186
Future Vol, veh/h	168	221	2	3	175	99	1	9	8	105	4	186
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	6	0	0	1	7	0	0	0	2	0	4
Mvmt Flow	171	226	2	3	179	101	1	9	8	107	4	190

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	280	0	0	228	0	0	902	855	227	814	806	230
Stage 1	-	-	-	-	-	-	569	569	-	236	236	-
Stage 2	-	-	-	-	-	-	333	286	-	578	570	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.12	6.5	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.518	4	3.336
Pot Cap-1 Maneuver	1277	-	-	1352	-	-	261	298	817	297	318	804
Stage 1	-	-	-	-	-	-	511	509	-	767	713	-
Stage 2	-	-	-	-	-	-	685	679	-	501	509	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1277	-	-	1352	-	-	176	257	817	256	274	804
Mov Cap-2 Maneuver	-	-	-	-	-	-	176	257	-	256	274	-
Stage 1	-	-	-	-	-	-	443	441	-	664	711	-
Stage 2	-	-	-	-	-	-	519	677	-	421	441	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.5	0.1	15.7	27.7
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	356	1277	-	-	1352	-	-	450
HCM Lane V/C Ratio	0.052	0.134	-	-	0.002	-	-	0.669
HCM Control Delay (s)	15.7	8.3	-	-	7.7	0	-	27.7
HCM Lane LOS	C	A	-	-	A	A	-	D
HCM 95th %tile Q(veh)	0.2	0.5	-	-	0	-	-	4.8

HCM 6th TWSC
3: Shaw Hwy & NE Santiam Hwy Ramp

12/19/2023

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	38	107	296	180	114	69
Future Vol, veh/h	38	107	296	180	114	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	0	6	5	4	2
Mvmt Flow	41	116	322	196	124	75

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1002	162	199	0	-	0
Stage 1	162	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Critical Hdwy	6.53	6.2	4.16	-	-	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.3	2.254	-	-	-
Pot Cap-1 Maneuver	256	888	1350	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	406	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	187	888	1350	-	-	-
Mov Cap-2 Maneuver	187	-	-	-	-	-
Stage 1	616	-	-	-	-	-
Stage 2	406	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.3	5.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1350	-	448	-	-
HCM Lane V/C Ratio	0.238	-	0.352	-	-
HCM Control Delay (s)	8.5	0	17.3	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.9	-	1.6	-	-

HCM 6th TWSC
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/19/2023

Intersection	
Int Delay, s/veh	45.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	449	67	408	96	22	200
Future Vol, veh/h	449	67	408	96	22	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	Free	-	None
Storage Length	0	90	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	1	4	3	2	12	4
Mvmt Flow	463	69	421	99	23	206

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	673	421	0	-	421	0
Stage 1	421	-	-	-	-	-
Stage 2	252	-	-	-	-	-
Critical Hdwy	6.41	6.24	-	-	4.22	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.336	-	-	2.308	-
Pot Cap-1 Maneuver	~ 422	628	-	0	1087	-
Stage 1	664	-	-	0	-	-
Stage 2	792	-	-	0	-	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	~ 412	628	-	-	1087	-
Mov Cap-2 Maneuver	~ 412	-	-	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	773	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	100.3	0	0.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	412	628	1087	-
HCM Lane V/C Ratio	-	1.124	0.11	0.021	-
HCM Control Delay (s)	-	113.6	11.4	8.4	0
HCM Lane LOS	-	F	B	A	A
HCM 95th %tile Q(veh)	-	16.7	0.4	0.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM Signalized Intersection Capacity Analysis

11: N 1st St/Shaw Hwy & Del Mar Dr

12/19/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	42	19	61	46	197	28	257	57	184	356	110
Future Volume (vph)	52	42	19	61	46	197	28	257	57	184	356	110
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
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	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	1.00	0.85	1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1630	1647		1630	1716	1458	1583	1641		1630	1650	
Flt Permitted	0.77	1.00		0.74	1.00	1.00	0.44	1.00		0.40	1.00	
Satd. Flow (perm)	1320	1647		1271	1716	1458	728	1641		695	1650	
Peak-hour factor, PHF	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Adj. Flow (vph)	54	46	20	66	50	214	29	268	62	200	371	115
RTOR Reduction (vph)	0	18	0	0	0	192	0	11	0	0	14	0
Lane Group Flow (vph)	54	48	0	66	50	22	29	319	0	200	472	0
Heavy Vehicles (%)	2%	2%	0%	2%	2%	2%	5%	4%	2%	2%	3%	0%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	8.6	5.2		9.0	5.4	5.4	22.0	20.2		29.8	24.1	
Effective Green, g (s)	8.6	5.2		9.0	5.4	5.4	23.0	20.7		30.8	24.6	
Actuated g/C Ratio	0.17	0.10		0.17	0.10	0.10	0.44	0.40		0.60	0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	4.0		2.5	4.0	
Lane Grp Cap (vph)	239	165		246	179	152	361	657		526	785	
v/s Ratio Prot	0.01	c0.03		c0.02	0.03		0.00	0.19		c0.05	c0.29	
v/s Ratio Perm	0.02			0.03		0.02	0.03			0.18		
v/c Ratio	0.23	0.29		0.27	0.28	0.15	0.08	0.48		0.38	0.60	
Uniform Delay, d1	18.6	21.5		18.4	21.4	21.1	8.2	11.5		5.4	10.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.7		0.4	0.6	0.3	0.1	0.8		0.3	1.5	
Delay (s)	18.9	22.3		18.8	22.0	21.4	8.2	12.3		5.7	11.5	
Level of Service	B	C		B	C	C	A	B		A	B	
Approach Delay (s)		20.8			21.0			12.0			9.8	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	51.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
11: N 1st St/Shaw Hwy & Del Mar Dr

12/19/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	42	19	61	46	197	28	257	57	184	356	110
Future Volume (veh/h)	52	42	19	61	46	197	28	257	57	184	356	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1750	1723	1723	1723	1682	1695	1723	1723	1709	1750
Adj Flow Rate, veh/h	54	46	20	66	50	214	29	268	62	200	371	115
Peak Hour Factor	0.96	0.92	0.96	0.92	0.92	0.92	0.96	0.96	0.92	0.92	0.96	0.96
Percent Heavy Veh, %	2	2	0	2	2	2	5	4	2	2	3	0
Cap, veh/h	405	203	88	428	317	269	332	404	94	492	487	151
Arrive On Green	0.04	0.18	0.18	0.05	0.18	0.18	0.04	0.30	0.29	0.12	0.39	0.38
Sat Flow, veh/h	1641	1139	495	1641	1723	1460	1602	1332	308	1641	1251	388
Grp Volume(v), veh/h	54	0	66	66	50	214	29	0	330	200	0	486
Grp Sat Flow(s),veh/h/ln	1641	0	1634	1641	1723	1460	1602	0	1640	1641	0	1639
Q Serve(g_s), s	1.2	0.0	1.6	1.5	1.1	6.5	0.6	0.0	8.1	3.4	0.0	11.9
Cycle Q Clear(g_c), s	1.2	0.0	1.6	1.5	1.1	6.5	0.6	0.0	8.1	3.4	0.0	11.9
Prop In Lane	1.00		0.30	1.00		1.00	1.00		0.19	1.00		0.24
Lane Grp Cap(c), veh/h	405	0	291	428	317	269	332	0	498	492	0	637
V/C Ratio(X)	0.13	0.00	0.23	0.15	0.16	0.80	0.09	0.00	0.66	0.41	0.00	0.76
Avail Cap(c_a), veh/h	653	0	318	667	335	284	584	0	780	609	0	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.5	0.0	16.3	14.4	15.8	18.0	10.9	0.0	14.1	8.8	0.0	12.3
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.1	0.2	13.3	0.1	0.0	2.2	0.4	0.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.6	0.5	0.4	1.0	0.2	0.0	2.7	0.9	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	0.0	16.6	14.5	16.0	31.4	11.0	0.0	16.2	9.2	0.0	16.5
LnGrp LOS	B	A	B	B	B	C	B	A	B	A	A	B
Approach Vol, veh/h		120			330			359			686	
Approach Delay, s/veh		15.7			25.7			15.8			14.4	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	18.0	6.3	12.2	5.7	22.0	6.0	12.5
Change Period (Y+Rc), s	4.5	4.5	4.0	4.0	4.5	4.5	4.0	4.0
Max Green Setting (Gmax), s	8.5	21.5	9.0	9.0	8.5	21.5	9.0	9.0
Max Q Clear Time (g_c+I1), s	5.4	10.1	3.5	3.6	2.6	13.9	3.2	8.5
Green Ext Time (p_c), s	0.2	3.2	0.1	0.1	0.0	3.6	0.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	17.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Int Delay, s/veh	15.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	188	250	3	4	198	108	1	10	9	114	4	207
Future Vol, veh/h	188	250	3	4	198	108	1	10	9	114	4	207
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	110	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	3	6	0	0	1	7	0	0	0	2	0	4
Mvmt Flow	192	255	3	4	202	110	1	10	9	116	4	211

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	312	0	0	258	0	0	1014	961	257	915	907	257
Stage 1	-	-	-	-	-	-	641	641	-	265	265	-
Stage 2	-	-	-	-	-	-	373	320	-	650	642	-
Critical Hdwy	4.13	-	-	4.1	-	-	7.1	6.5	6.2	7.12	6.5	6.24
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.12	5.5	-
Follow-up Hdwy	2.227	-	-	2.2	-	-	3.5	4	3.3	3.518	4	3.336
Pot Cap-1 Maneuver	1243	-	-	1318	-	-	219	258	787	253	278	777
Stage 1	-	-	-	-	-	-	466	473	-	740	693	-
Stage 2	-	-	-	-	-	-	652	656	-	458	472	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1243	-	-	1318	-	-	138	217	787	212	234	777
Mov Cap-2 Maneuver	-	-	-	-	-	-	138	217	-	212	234	-
Stage 1	-	-	-	-	-	-	394	400	-	626	690	-
Stage 2	-	-	-	-	-	-	470	653	-	373	399	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.6	0.1	17.5	46.5
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	309	1243	-	-	1318	-	-	396
HCM Lane V/C Ratio	0.066	0.154	-	-	0.003	-	-	0.837
HCM Control Delay (s)	17.5	8.4	-	-	7.7	0	-	46.5
HCM Lane LOS	C	A	-	-	A	A	-	E
HCM 95th %tile Q(veh)	0.2	0.5	-	-	0	-	-	7.8

RIDGEVIEW SUBDIVISION

APPENDIX E: QUEUING OUTPUTS

Queuing and Blocking Report
2023 background AM

11/21/2023

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	40	35
Average Queue (ft)	27	12
95th Queue (ft)	49	34
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	40	48
Average Queue (ft)	20	10
95th Queue (ft)	46	35
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , All Intervals

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	44	52
Average Queue (ft)	22	10
95th Queue (ft)	47	35
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
2023 background AM

11/21/2023

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	SB
Directions Served	L	LT
Maximum Queue (ft)	67	17
Average Queue (ft)	43	3
95th Queue (ft)	66	18
Link Distance (ft)	572	402
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	SB
Directions Served	L	LT
Maximum Queue (ft)	70	38
Average Queue (ft)	36	3
95th Queue (ft)	66	21
Link Distance (ft)	572	402
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	SB
Directions Served	L	LT
Maximum Queue (ft)	79	39
Average Queue (ft)	38	3
95th Queue (ft)	67	20
Link Distance (ft)	572	402
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Queuing and Blocking Report
2023 background AM

11/21/2023

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	55	23
Average Queue (ft)	37	3
95th Queue (ft)	63	29
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	62	35
Average Queue (ft)	32	2
95th Queue (ft)	54	19
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, All Intervals

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	62	53
Average Queue (ft)	34	2
95th Queue (ft)	57	22
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
2023 background AM

11/21/2023

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	6
Average Queue (ft)	1
95th Queue (ft)	9
Link Distance (ft)	564
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	12
Average Queue (ft)	1
95th Queue (ft)	7
Link Distance (ft)	564
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , All Intervals

Movement	WB
Directions Served	LR
Maximum Queue (ft)	18
Average Queue (ft)	1
95th Queue (ft)	8
Link Distance (ft)	564
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
2023 background AM

11/21/2023

Intersection: 23: Main St & N 1st Ave, Interval #1

Movement	EB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	43	18	52
Average Queue (ft)	14	3	33
95th Queue (ft)	44	16	51
Link Distance (ft)		392	1728
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	110		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 23: Main St & N 1st Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	53	6	30	54
Average Queue (ft)	12	0	5	31
95th Queue (ft)	41	5	22	49
Link Distance (ft)		1237	392	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	58	6	30	58
Average Queue (ft)	12	0	4	32
95th Queue (ft)	41	4	21	50
Link Distance (ft)		1237	392	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty, Interval #1: 0
Network wide Queuing Penalty, Interval #2: 0
Network wide Queuing Penalty, All Intervals: 0

Queuing and Blocking Report
2030 background AM

11/21/2023

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #1

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	36	70	4
Average Queue (ft)	26	18	1
95th Queue (ft)	47	64	7
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	50	58
Average Queue (ft)	22	12
95th Queue (ft)	48	41
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , All Intervals

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	50	76	4
Average Queue (ft)	23	13	0
95th Queue (ft)	48	48	3
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
2030 background AM

11/21/2023

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	NB	SB
Directions Served	L	TR	LT
Maximum Queue (ft)	86	11	16
Average Queue (ft)	45	2	4
95th Queue (ft)	95	16	19
Link Distance (ft)	572	376	402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	1		
Queuing Penalty (veh)	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	SB
Directions Served	L	LT
Maximum Queue (ft)	74	41
Average Queue (ft)	38	7
95th Queue (ft)	65	29
Link Distance (ft)	572	402
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	NB	SB
Directions Served	L	TR	LT
Maximum Queue (ft)	101	11	41
Average Queue (ft)	40	0	6
95th Queue (ft)	74	8	27
Link Distance (ft)	572	376	402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Queuing and Blocking Report
2030 background AM

11/21/2023

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #1

Movement	EB
Directions Served	LR
Maximum Queue (ft)	70
Average Queue (ft)	41
95th Queue (ft)	69
Link Distance (ft)	353
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	66	27
Average Queue (ft)	34	2
95th Queue (ft)	56	14
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, All Intervals

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	71	27
Average Queue (ft)	36	1
95th Queue (ft)	60	12
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	6
Average Queue (ft)	0
95th Queue (ft)	5
Link Distance (ft)	564
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , All Intervals

Movement	WB
Directions Served	LR
Maximum Queue (ft)	6
Average Queue (ft)	0
95th Queue (ft)	4
Link Distance (ft)	564
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
2030 background AM

11/21/2023

Intersection: 23: Main St & N 1st Ave, Interval #1

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	42	9	12	50
Average Queue (ft)	22	1	2	34
95th Queue (ft)	51	10	13	51
Link Distance (ft)		1237	392	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	53	12	30	61
Average Queue (ft)	17	1	5	33
95th Queue (ft)	47	7	22	54
Link Distance (ft)		1237	392	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	60	15	30	64
Average Queue (ft)	18	1	4	34
95th Queue (ft)	48	8	20	53
Link Distance (ft)		1237	392	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty, Interval #1: 0
Network wide Queuing Penalty, Interval #2: 0
Network wide Queuing Penalty, All Intervals: 0

Queuing and Blocking Report
2035 background AM

11/21/2023

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	49	53
Average Queue (ft)	28	18
95th Queue (ft)	53	52
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	40	49
Average Queue (ft)	23	10
95th Queue (ft)	47	36
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , All Intervals

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	49	53
Average Queue (ft)	24	12
95th Queue (ft)	49	41
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
2035 background AM

11/21/2023

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	SB
Directions Served	L	LT
Maximum Queue (ft)	49	16
Average Queue (ft)	35	4
95th Queue (ft)	53	21
Link Distance (ft)	572	402
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	97	17	56
Average Queue (ft)	38	1	5
95th Queue (ft)	74	14	28
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	0	0	
Queuing Penalty (veh)	0	0	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	97	17	56
Average Queue (ft)	38	1	5
95th Queue (ft)	70	12	26
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	0	0	
Queuing Penalty (veh)	0	0	

Queuing and Blocking Report
2035 background AM

11/21/2023

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	74	18
Average Queue (ft)	44	3
95th Queue (ft)	75	17
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	73	17
Average Queue (ft)	35	2
95th Queue (ft)	60	15
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, All Intervals

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	77	29
Average Queue (ft)	37	2
95th Queue (ft)	65	16
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
2035 background AM

11/21/2023

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	12
Average Queue (ft)	2
95th Queue (ft)	14
Link Distance (ft)	564
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	24
Average Queue (ft)	2
95th Queue (ft)	16
Link Distance (ft)	564
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , All Intervals

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	2
95th Queue (ft)	16
Link Distance (ft)	564
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
2035 background AM

11/21/2023

Intersection: 23: Main St & N 1st Ave, Interval #1

Movement	EB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	52	6	81
Average Queue (ft)	16	1	42
95th Queue (ft)	44	9	79
Link Distance (ft)		392	1728
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	110		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 23: Main St & N 1st Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	63	26	34	65
Average Queue (ft)	16	1	4	33
95th Queue (ft)	48	14	20	50
Link Distance (ft)		1237	392	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 23: Main St & N 1st Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	71	26	34	81
Average Queue (ft)	16	1	3	35
95th Queue (ft)	47	12	18	59
Link Distance (ft)		1237	392	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Network Summary

Network wide Queuing Penalty, Interval #1: 0
Network wide Queuing Penalty, Interval #2: 0
Network wide Queuing Penalty, All Intervals: 0

Queuing and Blocking Report
2050 background AM

11/21/2023

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	41	53
Average Queue (ft)	28	22
95th Queue (ft)	49	55
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	46	44
Average Queue (ft)	23	13
95th Queue (ft)	49	39
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , All Intervals

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	51	57
Average Queue (ft)	24	15
95th Queue (ft)	49	44
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
2050 background AM

11/21/2023

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	NB	SB
Directions Served	L	TR	LT
Maximum Queue (ft)	73	11	57
Average Queue (ft)	49	2	15
95th Queue (ft)	84	17	59
Link Distance (ft)	572	376	402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	SB
Directions Served	L	LT
Maximum Queue (ft)	88	56
Average Queue (ft)	42	9
95th Queue (ft)	70	36
Link Distance (ft)	572	402
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	NB	SB
Directions Served	L	TR	LT
Maximum Queue (ft)	88	11	82
Average Queue (ft)	44	0	10
95th Queue (ft)	74	8	42
Link Distance (ft)	572	376	402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Queuing and Blocking Report
2050 background AM

11/21/2023

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	61	18
Average Queue (ft)	38	3
95th Queue (ft)	64	19
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	86	12
Average Queue (ft)	36	1
95th Queue (ft)	62	7
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, All Intervals

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	90	18
Average Queue (ft)	37	1
95th Queue (ft)	63	11
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
2050 background AM

11/21/2023

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	12
Average Queue (ft)	2
95th Queue (ft)	14
Link Distance (ft)	564
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	18
Average Queue (ft)	1
95th Queue (ft)	11
Link Distance (ft)	564
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , All Intervals

Movement	WB
Directions Served	LR
Maximum Queue (ft)	18
Average Queue (ft)	1
95th Queue (ft)	12
Link Distance (ft)	564
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report
2050 background AM

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Intersection: 23: Main St & N 1st Ave, Interval #1

Movement	EB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	63	24	59
Average Queue (ft)	29	5	37
95th Queue (ft)	69	23	66
Link Distance (ft)		392	1728
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	110		
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 23: Main St & N 1st Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	63	15	24	56
Average Queue (ft)	18	1	2	34
95th Queue (ft)	50	8	14	53
Link Distance (ft)		1237	392	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	71	15	24	67
Average Queue (ft)	21	1	3	35
95th Queue (ft)	56	7	16	57
Link Distance (ft)		1237	392	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Network Summary

Network wide Queuing Penalty, Interval #1: 0
Network wide Queuing Penalty, Interval #2: 0
Network wide Queuing Penalty, All Intervals: 0

Queuing and Blocking Report
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12/19/2023

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	50	61
Average Queue (ft)	30	28
95th Queue (ft)	56	62
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #2

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	49	59	6
Average Queue (ft)	26	16	1
95th Queue (ft)	50	49	7
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , All Intervals

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	55	67	6
Average Queue (ft)	27	19	1
95th Queue (ft)	51	53	6
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
2030 build AM

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Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	SB
Directions Served	L	LT
Maximum Queue (ft)	105	27
Average Queue (ft)	58	7
95th Queue (ft)	107	34
Link Distance (ft)	572	402
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	2	
Queuing Penalty (veh)	0	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	NB	SB
Directions Served	L	TR	LT
Maximum Queue (ft)	104	15	40
Average Queue (ft)	53	1	7
95th Queue (ft)	87	12	29
Link Distance (ft)	572	376	402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	1		
Queuing Penalty (veh)	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	NB	SB
Directions Served	L	TR	LT
Maximum Queue (ft)	115	15	46
Average Queue (ft)	54	1	7
95th Queue (ft)	92	11	30
Link Distance (ft)	572	376	402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	1		
Queuing Penalty (veh)	0		

Queuing and Blocking Report
2030 build AM

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Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #1

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	81	48	41	24	52	29	117	49	44
Average Queue (ft)	47	27	17	6	26	6	69	28	16
95th Queue (ft)	90	53	46	26	56	28	124	51	42
Link Distance (ft)	345			497			1895		394
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0								
Queuing Penalty (veh)	0								

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #2

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	66	59	41	30	61	33	99	67	54
Average Queue (ft)	34	22	13	8	25	5	41	24	13
95th Queue (ft)	61	49	40	30	54	24	82	52	39
Link Distance (ft)	345			497			1895		394
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0								
Queuing Penalty (veh)	0								

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, All Intervals

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	90	60	53	30	62	40	117	67	58
Average Queue (ft)	37	23	14	8	25	5	48	25	14
95th Queue (ft)	70	50	42	29	55	25	97	52	39
Link Distance (ft)	345			497			1895		394
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0								
Queuing Penalty (veh)	0								

Queuing and Blocking Report
2030 build AM

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Intersection: 23: Main St & N 1st Ave, Interval #1

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	62	4	24	65
Average Queue (ft)	24	1	3	37
95th Queue (ft)	60	6	19	65
Link Distance (ft)		1232	392	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	59	10	30	64
Average Queue (ft)	16	1	4	34
95th Queue (ft)	45	7	22	56
Link Distance (ft)		1232	392	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	62	14	30	76
Average Queue (ft)	18	1	4	35
95th Queue (ft)	49	7	21	59
Link Distance (ft)		1232	392	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty, Interval #1: 0
Network wide Queuing Penalty, Interval #2: 0
Network wide Queuing Penalty, All Intervals: 0

Queuing and Blocking Report
2035 build AM

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Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	41	62
Average Queue (ft)	32	32
95th Queue (ft)	50	63
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #2

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	49	56	4
Average Queue (ft)	30	17	0
95th Queue (ft)	50	51	5
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , All Intervals

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	54	65	4
Average Queue (ft)	30	21	0
95th Queue (ft)	50	56	5
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
2035 build AM

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Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	SB
Directions Served	L	LT
Maximum Queue (ft)	103	20
Average Queue (ft)	54	6
95th Queue (ft)	91	26
Link Distance (ft)	572	402
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	2	
Queuing Penalty (veh)	0	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	133	23	47
Average Queue (ft)	60	1	6
95th Queue (ft)	110	19	28
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	2		
Queuing Penalty (veh)	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	133	23	47
Average Queue (ft)	58	1	6
95th Queue (ft)	106	16	27
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	2		
Queuing Penalty (veh)	0		

Queuing and Blocking Report
2035 build AM

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Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #1

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	77	44	42	39	56	48	111	46	27
Average Queue (ft)	42	20	18	13	31	14	70	28	16
95th Queue (ft)	79	48	46	40	57	46	117	52	31
Link Distance (ft)	345			360			1895		394
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0								
Queuing Penalty (veh)	0								

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #2

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	80	39	43	35	58	40	119	54	51
Average Queue (ft)	36	18	15	11	28	5	49	23	16
95th Queue (ft)	68	43	41	35	53	25	98	49	44
Link Distance (ft)	345			360			1895		394
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0								
Queuing Penalty (veh)	0								

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, All Intervals

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	88	48	47	39	62	48	125	55	51
Average Queue (ft)	38	18	15	11	28	7	54	24	16
95th Queue (ft)	71	45	42	36	54	32	105	49	41
Link Distance (ft)	345			360			1895		394
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0								
Queuing Penalty (veh)	0								

Queuing and Blocking Report
2035 build AM

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Intersection: 23: Main St & N 1st Ave, Interval #1

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	60	12	18	63
Average Queue (ft)	24	2	3	39
95th Queue (ft)	61	11	19	66
Link Distance (ft)		1232	392	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	56	12	24	70
Average Queue (ft)	20	1	2	38
95th Queue (ft)	50	7	15	62
Link Distance (ft)		1232	392	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	61	16	24	71
Average Queue (ft)	21	1	2	38
95th Queue (ft)	53	8	16	63
Link Distance (ft)		1232	392	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty, Interval #1: 0
Network wide Queuing Penalty, Interval #2: 0
Network wide Queuing Penalty, All Intervals: 0

Queuing and Blocking Report
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Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	54	58
Average Queue (ft)	30	27
95th Queue (ft)	54	65
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #2

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	54	66	4
Average Queue (ft)	29	17	0
95th Queue (ft)	50	48	4
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , All Intervals

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	55	75	4
Average Queue (ft)	29	19	0
95th Queue (ft)	51	53	3
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
2050 build AM

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Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	116	23	21
Average Queue (ft)	74	3	5
95th Queue (ft)	121	35	26
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	3		
Queuing Penalty (veh)	1		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	NB	SB
Directions Served	L	TR	LT
Maximum Queue (ft)	116	11	45
Average Queue (ft)	59	0	7
95th Queue (ft)	104	9	31
Link Distance (ft)	572	376	402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	1		
Queuing Penalty (veh)	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	131	23	11	45
Average Queue (ft)	63	1	0	6
95th Queue (ft)	109	16	8	30
Link Distance (ft)	572		376	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	2			
Queuing Penalty (veh)	0			

Queuing and Blocking Report
2050 build AM

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Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #1

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	75	46	31	39	56	31	138	62	50
Average Queue (ft)	46	24	16	16	29	9	83	29	22
95th Queue (ft)	78	53	40	45	52	36	150	53	49
Link Distance (ft)	345			424			1895		396
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0								
Queuing Penalty (veh)	0								

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #2

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	93	52	51	48	57	24	133	58	66
Average Queue (ft)	39	24	16	11	27	4	50	26	15
95th Queue (ft)	73	49	44	37	54	21	102	52	44
Link Distance (ft)	345			424			1895		396
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0								
Queuing Penalty (veh)	0								

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, All Intervals

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	98	59	51	53	71	37	147	67	66
Average Queue (ft)	41	24	16	12	28	5	58	26	17
95th Queue (ft)	74	50	43	39	54	25	119	52	46
Link Distance (ft)	345			424			1895		396
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0								
Queuing Penalty (veh)	0								

Queuing and Blocking Report
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Intersection: 23: Main St & N 1st Ave, Interval #1

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	55	16	18	70
Average Queue (ft)	30	3	3	44
95th Queue (ft)	62	14	16	71
Link Distance (ft)		1232	392	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	56	18	18	100
Average Queue (ft)	20	1	2	38
95th Queue (ft)	48	11	14	70
Link Distance (ft)		1232	392	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	60	22	30	104
Average Queue (ft)	22	2	2	40
95th Queue (ft)	52	12	15	70
Link Distance (ft)		1232	392	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty, Interval #1: 1
Network wide Queuing Penalty, Interval #2: 0
Network wide Queuing Penalty, All Intervals: 0

Queuing and Blocking Report
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Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	61	45
Average Queue (ft)	40	19
95th Queue (ft)	70	52
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #2

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	70	54	7
Average Queue (ft)	35	12	0
95th Queue (ft)	64	43	6
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , All Intervals

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	74	61	7
Average Queue (ft)	36	14	0
95th Queue (ft)	65	45	5
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
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Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	102	23	11
Average Queue (ft)	59	3	2
95th Queue (ft)	103	35	14
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	1	0	
Queuing Penalty (veh)	1	0	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	134	11	25
Average Queue (ft)	67	1	2
95th Queue (ft)	111	9	15
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	2		
Queuing Penalty (veh)	1		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	139	34	31
Average Queue (ft)	65	1	2
95th Queue (ft)	109	19	15
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	2	0	
Queuing Penalty (veh)	1	0	

Queuing and Blocking Report
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Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #1

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	47	38	4
Average Queue (ft)	30	9	1
95th Queue (ft)	53	38	6
Link Distance (ft)	353	125	454
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	71	53
Average Queue (ft)	31	10
95th Queue (ft)	58	37
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, All Intervals

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	71	54	4
Average Queue (ft)	31	9	0
95th Queue (ft)	57	37	3
Link Distance (ft)	353	125	454
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , All Intervals

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Queuing and Blocking Report
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Intersection: 23: Main St & N 1st Ave, Interval #1

Movement	EB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	44	39	109
Average Queue (ft)	23	18	61
95th Queue (ft)	48	45	117
Link Distance (ft)		199	1728
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	110		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 23: Main St & N 1st Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	72	18	30	94
Average Queue (ft)	25	1	14	51
95th Queue (ft)	61	10	38	85
Link Distance (ft)		1238	199	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 23: Main St & N 1st Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	72	18	40	124
Average Queue (ft)	24	1	15	54
95th Queue (ft)	59	9	40	94
Link Distance (ft)		1238	199	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Network Summary

Network wide Queuing Penalty, Interval #1: 1
Network wide Queuing Penalty, Interval #2: 1
Network wide Queuing Penalty, All Intervals: 1

Queuing and Blocking Report
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Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	69	46
Average Queue (ft)	43	20
95th Queue (ft)	77	51
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	71	62
Average Queue (ft)	38	16
95th Queue (ft)	63	45
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , All Intervals

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	79	63
Average Queue (ft)	39	17
95th Queue (ft)	67	47
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Queuing and Blocking Report
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Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	SB
Directions Served	L	LT
Maximum Queue (ft)	107	10
Average Queue (ft)	62	2
95th Queue (ft)	108	12
Link Distance (ft)	572	402
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	1	
Queuing Penalty (veh)	1	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	133	46	51
Average Queue (ft)	57	2	6
95th Queue (ft)	101	27	28
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	2		
Queuing Penalty (veh)	1		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	147	46	51
Average Queue (ft)	58	2	5
95th Queue (ft)	103	24	25
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	1		
Queuing Penalty (veh)	1		

Queuing and Blocking Report
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Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	44	43
Average Queue (ft)	30	12
95th Queue (ft)	52	41
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #2

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	58	40
Average Queue (ft)	32	8
95th Queue (ft)	57	31
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, All Intervals

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	58	44
Average Queue (ft)	31	9
95th Queue (ft)	56	34
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , All Intervals

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Queuing and Blocking Report
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Intersection: 23: Main St & N 1st Ave, Interval #1

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	48	4	29	82
Average Queue (ft)	25	1	12	52
95th Queue (ft)	54	6	38	83
Link Distance (ft)		1238	199	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	54	23	35	116
Average Queue (ft)	22	1	13	57
95th Queue (ft)	52	12	38	95
Link Distance (ft)		1238	199	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	54	23	35	116
Average Queue (ft)	23	1	13	56
95th Queue (ft)	52	11	38	92
Link Distance (ft)		1238	199	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty, Interval #1: 1
Network wide Queuing Penalty, Interval #2: 1
Network wide Queuing Penalty, All Intervals: 1

Queuing and Blocking Report
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Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	66	42
Average Queue (ft)	43	22
95th Queue (ft)	69	49
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #2

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	76	59	4
Average Queue (ft)	39	15	0
95th Queue (ft)	60	44	4
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , All Intervals

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	78	60	4
Average Queue (ft)	40	16	0
95th Queue (ft)	63	46	3
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
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Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	128	46	20
Average Queue (ft)	76	13	3
95th Queue (ft)	141	73	19
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	6	0	
Queuing Penalty (veh)	4	0	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	123	69	11
Average Queue (ft)	70	3	2
95th Queue (ft)	109	34	14
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	2	0	
Queuing Penalty (veh)	1	0	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	145	69	21
Average Queue (ft)	72	6	2
95th Queue (ft)	118	46	15
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	3	0	
Queuing Penalty (veh)	2	0	

Queuing and Blocking Report
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Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	56	61
Average Queue (ft)	32	17
95th Queue (ft)	56	61
Link Distance (ft)	353	125
Upstream Blk Time (%)		0
Queuing Penalty (veh)		0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #2

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	65	53	6
Average Queue (ft)	31	9	0
95th Queue (ft)	59	36	5
Link Distance (ft)	353	125	223
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, All Intervals

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	74	70	6
Average Queue (ft)	31	11	0
95th Queue (ft)	59	44	5
Link Distance (ft)	353	125	223
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , All Intervals

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Queuing and Blocking Report
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Intersection: 23: Main St & N 1st Ave, Interval #1

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	63	6	30	99
Average Queue (ft)	29	1	17	67
95th Queue (ft)	63	11	40	111
Link Distance (ft)		1238	199	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	60	39	39	125
Average Queue (ft)	27	3	16	55
95th Queue (ft)	57	20	41	97
Link Distance (ft)		1238	199	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	69	39	39	125
Average Queue (ft)	27	3	16	58
95th Queue (ft)	58	18	41	101
Link Distance (ft)		1238	199	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty, Interval #1: 4
Network wide Queuing Penalty, Interval #2: 1
Network wide Queuing Penalty, All Intervals: 2

Queuing and Blocking Report
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Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #1

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	60	53	4
Average Queue (ft)	40	23	1
95th Queue (ft)	72	56	7
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #2

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	83	64	8
Average Queue (ft)	44	19	0
95th Queue (ft)	70	51	5
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , All Intervals

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	83	69	13
Average Queue (ft)	43	20	0
95th Queue (ft)	71	52	5
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
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Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	SB
Directions Served	L	LT
Maximum Queue (ft)	146	40
Average Queue (ft)	82	10
95th Queue (ft)	150	40
Link Distance (ft)	572	402
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	5	
Queuing Penalty (veh)	4	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	185	92	54
Average Queue (ft)	89	9	6
95th Queue (ft)	163	58	31
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	7	0	
Queuing Penalty (veh)	5	0	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	199	92	58
Average Queue (ft)	87	7	7
95th Queue (ft)	160	50	33
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	7	0	
Queuing Penalty (veh)	4	0	

Queuing and Blocking Report
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Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	58	58
Average Queue (ft)	36	18
95th Queue (ft)	61	56
Link Distance (ft)	353	125
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #2

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	61	81	9
Average Queue (ft)	33	14	0
95th Queue (ft)	58	54	5
Link Distance (ft)	353	125	223
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, All Intervals

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	62	86	9
Average Queue (ft)	34	15	0
95th Queue (ft)	59	55	5
Link Distance (ft)	353	125	223
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #1

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , Interval #2

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 14: Shaw Hwy/N 1st St & Gordon Ln , All Intervals

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Queuing and Blocking Report
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Intersection: 23: Main St & N 1st Ave, Interval #1

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	65	8	30	114
Average Queue (ft)	37	1	17	69
95th Queue (ft)	71	9	41	112
Link Distance (ft)		1238	199	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	68	26	43	148
Average Queue (ft)	34	2	17	71
95th Queue (ft)	64	13	44	121
Link Distance (ft)		1238	199	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 23: Main St & N 1st Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	72	26	43	155
Average Queue (ft)	34	2	17	70
95th Queue (ft)	66	12	43	119
Link Distance (ft)		1238	199	1728
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Network Summary

Network wide Queuing Penalty, Interval #1: 4
Network wide Queuing Penalty, Interval #2: 5
Network wide Queuing Penalty, All Intervals: 4

Queuing and Blocking Report
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Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	84	76
Average Queue (ft)	55	43
95th Queue (ft)	91	84
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #2

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	102	78	17
Average Queue (ft)	44	30	1
95th Queue (ft)	78	70	10
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , All Intervals

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	104	82	17
Average Queue (ft)	46	33	1
95th Queue (ft)	82	75	8
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
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Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	277	115	37
Average Queue (ft)	167	43	10
95th Queue (ft)	279	134	37
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	40	0	
Queuing Penalty (veh)	23	0	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	353	115	10	47
Average Queue (ft)	193	56	0	8
95th Queue (ft)	365	151	8	34
Link Distance (ft)	572		508	402
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	48	0		
Queuing Penalty (veh)	27	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	355	115	10	52
Average Queue (ft)	187	53	0	8
95th Queue (ft)	347	147	7	35
Link Distance (ft)	572		508	402
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	46	0		
Queuing Penalty (veh)	26	0		

Queuing and Blocking Report
2030 build PM

12/19/2023

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #1

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	46	56	62	66	71	33	126	83	128
Average Queue (ft)	27	33	31	29	50	10	78	46	61
95th Queue (ft)	53	59	68	60	73	34	125	75	120
Link Distance (ft)	345			383			1895		414
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)		0							
Queuing Penalty (veh)		0							

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #2

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	68	84	84	80	94	52	123	88	137
Average Queue (ft)	24	35	35	28	53	14	57	45	63
95th Queue (ft)	56	68	69	63	84	42	104	78	123
Link Distance (ft)	345			383			1895		414
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0	0							
Queuing Penalty (veh)	0	0							

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, All Intervals

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	68	93	86	81	94	52	137	96	140
Average Queue (ft)	25	35	34	28	52	13	62	45	62
95th Queue (ft)	55	66	69	62	82	40	112	78	122
Link Distance (ft)	345			383			1895		414
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0	0							
Queuing Penalty (veh)	0	0							

Queuing and Blocking Report
2030 build PM

12/19/2023

Intersection: 23: Main St & N 1st Ave, Interval #1

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	67	10	35	153
Average Queue (ft)	35	1	14	87
95th Queue (ft)	74	11	41	156
Link Distance (ft)		1233	199	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	74	20	35	175
Average Queue (ft)	30	2	11	82
95th Queue (ft)	61	11	35	146
Link Distance (ft)		1233	199	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 23: Main St & N 1st Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	85	22	40	200
Average Queue (ft)	31	2	11	84
95th Queue (ft)	64	11	36	149
Link Distance (ft)		1233	199	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Network Summary

Network wide Queuing Penalty, Interval #1: 24
Network wide Queuing Penalty, Interval #2: 27
Network wide Queuing Penalty, All Intervals: 26

Queuing and Blocking Report
2035 build PM

12/19/2023

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #1

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	92	98
Average Queue (ft)	49	45
95th Queue (ft)	97	99
Link Distance (ft)	1763	622
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #2

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	97	96	13
Average Queue (ft)	45	35	1
95th Queue (ft)	80	74	6
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , All Intervals

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	115	115	13
Average Queue (ft)	46	37	0
95th Queue (ft)	84	81	5
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
2035 build PM

12/19/2023

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	340	115	32
Average Queue (ft)	209	56	5
95th Queue (ft)	395	150	27
Link Distance (ft)	572		402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	54	0	
Queuing Penalty (veh)	33	0	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	436	115	11	53
Average Queue (ft)	241	55	1	7
95th Queue (ft)	504	150	9	30
Link Distance (ft)	572		508	402
Upstream Blk Time (%)	7			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	56	0		
Queuing Penalty (veh)	33	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	436	115	11	53
Average Queue (ft)	233	55	0	6
95th Queue (ft)	481	150	8	30
Link Distance (ft)	572		508	402
Upstream Blk Time (%)	5			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	56	0		
Queuing Penalty (veh)	33	0		

Queuing and Blocking Report
2035 build PM

12/19/2023

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #1

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	56	59	64	57	89	29	128	89	153
Average Queue (ft)	26	32	36	27	55	15	86	50	72
95th Queue (ft)	63	55	66	62	91	38	148	93	151
Link Distance (ft)	345			427			1895		250
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0	0							0
Queuing Penalty (veh)	0	0							0

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #2

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	59	90	83	68	115	42	170	116	167
Average Queue (ft)	23	37	36	24	51	13	72	47	62
95th Queue (ft)	51	74	70	57	86	39	136	90	131
Link Distance (ft)	345			427			1895		250
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)		1			0		0		0
Queuing Penalty (veh)		0			0		0		0

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, All Intervals

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	76	95	88	73	117	42	174	130	175
Average Queue (ft)	24	36	36	25	52	13	76	47	64
95th Queue (ft)	54	71	69	59	88	39	140	91	136
Link Distance (ft)	345			427			1895		250
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0	1			0		0		0
Queuing Penalty (veh)	0	0			0		0		0

Queuing and Blocking Report
2035 build PM

12/19/2023

Intersection: 23: Main St & N 1st Ave, Interval #1

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	80	18	39	209
Average Queue (ft)	37	3	13	99
95th Queue (ft)	79	16	39	193
Link Distance (ft)		1233	199	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 23: Main St & N 1st Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	70	38	44	203
Average Queue (ft)	33	4	15	81
95th Queue (ft)	62	23	42	161
Link Distance (ft)		1233	199	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 23: Main St & N 1st Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	84	38	48	258
Average Queue (ft)	34	4	15	85
95th Queue (ft)	67	22	41	170
Link Distance (ft)		1233	199	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Network Summary

Network wide Queuing Penalty, Interval #1: 34
Network wide Queuing Penalty, Interval #2: 33
Network wide Queuing Penalty, All Intervals: 33

Queuing and Blocking Report
2050 build PM

12/19/2023

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #1

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	91	88	4
Average Queue (ft)	55	50	1
95th Queue (ft)	92	97	7
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , Interval #2

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	123	122	18
Average Queue (ft)	55	42	1
95th Queue (ft)	100	91	6
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Shaw Hwy & NE Santiam Hwy Ramp , All Intervals

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	131	130	18
Average Queue (ft)	55	43	1
95th Queue (ft)	98	93	7
Link Distance (ft)	1763	622	487
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Queuing and Blocking Report
2050 build PM

12/19/2023

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	607	115	37
Average Queue (ft)	564	105	7
95th Queue (ft)	674	158	32
Link Distance (ft)	572		402
Upstream Blk Time (%)	68		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	98	0	
Queuing Penalty (veh)	67	1	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	618	115	66
Average Queue (ft)	544	97	12
95th Queue (ft)	760	165	46
Link Distance (ft)	572		402
Upstream Blk Time (%)	85		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	92	0	
Queuing Penalty (veh)	61	1	

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	SB
Directions Served	L	R	LT
Maximum Queue (ft)	618	115	70
Average Queue (ft)	549	99	11
95th Queue (ft)	745	164	43
Link Distance (ft)	572		402
Upstream Blk Time (%)	81		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)		90	
Storage Blk Time (%)	93	0	
Queuing Penalty (veh)	62	1	

Queuing and Blocking Report
2050 build PM

12/19/2023

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #1

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	60	84	74	63	99	37	145	117	161
Average Queue (ft)	30	40	41	31	56	18	86	60	76
95th Queue (ft)	68	87	74	67	96	43	153	128	155
Link Distance (ft)	345			455			1895		298
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0	0			0				0
Queuing Penalty (veh)	0	0			0				0

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, Interval #2

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	55	77	69	73	110	50	151	90	196
Average Queue (ft)	27	31	31	30	54	16	74	48	83
95th Queue (ft)	54	67	63	62	92	43	132	82	162
Link Distance (ft)	345			455			1895		298
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)		0			0				0
Queuing Penalty (veh)		0			0				0

Intersection: 11: N 1st St/Shaw Hwy & Del Mar Dr, All Intervals

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	L	TR	L	TR
Maximum Queue (ft)	68	90	77	80	115	54	166	129	205
Average Queue (ft)	28	33	33	30	54	16	77	50	82
95th Queue (ft)	58	73	66	63	93	43	138	96	160
Link Distance (ft)	345			455			1895		298
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)		100	200		150	250		200	
Storage Blk Time (%)	0	0			0				0
Queuing Penalty (veh)	0	0			0				0

Queuing and Blocking Report
2050 build PM

12/19/2023

Intersection: 23: Main St & N 1st Ave, Interval #1

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	81	38	39	193
Average Queue (ft)	44	7	19	109
95th Queue (ft)	87	32	48	187
Link Distance (ft)		1233	199	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 23: Main St & N 1st Ave, Interval #2

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	70	24	39	259
Average Queue (ft)	36	4	14	111
95th Queue (ft)	68	18	39	223
Link Distance (ft)		1233	199	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 23: Main St & N 1st Ave, All Intervals

Movement	EB	WB	NB	SB
Directions Served	L	LTR	LTR	LTR
Maximum Queue (ft)	90	38	48	259
Average Queue (ft)	38	5	15	110
95th Queue (ft)	74	22	42	216
Link Distance (ft)		1233	199	1895
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	110			
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Network Summary

Network wide Queuing Penalty, Interval #1: 69
Network wide Queuing Penalty, Interval #2: 62
Network wide Queuing Penalty, All Intervals: 64

Aumsville Commercial Center

APPENDIX F: MITIGATION OUTPUTS

HCM 6th AWSC

7: Shaw Hwy SE & SE Santiam Hwy Ramp 11/29/2023

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	151	16	310	80	24	71
Future Vol, veh/h	151	16	310	80	24	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	7	4	11	10	7
Mvmt Flow	164	17	337	87	26	77
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	11.3	12.7	9.1
HCM LOS	B	B	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	25%
Vol Thru, %	79%	0%	0%	75%
Vol Right, %	21%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	390	151	16	95
LT Vol	0	151	0	24
Through Vol	310	0	0	71
RT Vol	80	0	16	0
Lane Flow Rate	424	164	17	103
Geometry Grp	2	7	7	2
Degree of Util (X)	0.535	0.289	0.025	0.148
Departure Headway (Hd)	4.545	6.344	5.115	5.172
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	793	563	693	689
Service Time	2.586	4.129	2.899	3.24
HCM Lane V/C Ratio	0.535	0.291	0.025	0.149
HCM Control Delay	12.7	11.7	8	9.1
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	3.2	1.2	0.1	0.5

HCM 6th AWSC
7: Shaw Hwy SE & SE Santiam Hwy Ramp

11/29/2023

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	158	17	329	85	25	74
Future Vol, veh/h	158	17	329	85	25	74
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	8	7	4	11	10	7
Mvmt Flow	172	18	358	92	27	80
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	11.7	13.7	9.3
HCM LOS	B	B	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	25%
Vol Thru, %	79%	0%	0%	75%
Vol Right, %	21%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	414	158	17	99
LT Vol	0	158	0	25
Through Vol	329	0	0	74
RT Vol	85	0	17	0
Lane Flow Rate	450	172	18	108
Geometry Grp	2	7	7	2
Degree of Util (X)	0.573	0.306	0.027	0.157
Departure Headway (Hd)	4.584	6.417	5.187	5.239
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	783	555	682	679
Service Time	2.631	4.214	2.983	3.317
HCM Lane V/C Ratio	0.575	0.31	0.026	0.159
HCM Control Delay	13.7	12.1	8.1	9.3
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	3.7	1.3	0.1	0.6

HCM 6th AWSC

7: Shaw Hwy SE & SE Santiam Hwy Ramp 11/29/2023

Intersection	
Intersection Delay, s/veh	25.7
Intersection LOS	D

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	405	59	373	87	19	181
Future Vol, veh/h	405	59	373	87	19	181
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	1	4	3	2	12	4
Mvmt Flow	418	61	385	90	20	187
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	30.7	25.8	13.7
HCM LOS	D	D	B

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	10%
Vol Thru, %	81%	0%	0%	91%
Vol Right, %	19%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	460	405	59	200
LT Vol	0	405	0	19
Through Vol	373	0	0	181
RT Vol	87	0	59	0
Lane Flow Rate	474	418	61	206
Geometry Grp	2	7	7	2
Degree of Util (X)	0.768	0.813	0.099	0.382
Departure Headway (Hd)	5.829	7.007	5.839	6.678
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	616	514	609	542
Service Time	3.918	4.783	3.613	4.678
HCM Lane V/C Ratio	0.769	0.813	0.1	0.38
HCM Control Delay	25.8	33.8	9.3	13.7
HCM Lane LOS	D	D	A	B
HCM 95th-tile Q	7.1	7.9	0.3	1.8

HCM 6th AWSC

7: Shaw Hwy SE & SE Santiam Hwy Ramp 11/29/2023

Intersection	
Intersection Delay, s/veh	37.9
Intersection LOS	E

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	443	67	401	95	22	198
Future Vol, veh/h	443	67	401	95	22	198
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	1	4	3	2	12	4
Mvmt Flow	457	69	413	98	23	204
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	46.9	38.5	15.6
HCM LOS	E	E	C

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	10%
Vol Thru, %	81%	0%	0%	90%
Vol Right, %	19%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	496	443	67	220
LT Vol	0	443	0	22
Through Vol	401	0	0	198
RT Vol	95	0	67	0
Lane Flow Rate	511	457	69	227
Geometry Grp	2	7	7	2
Degree of Util (X)	0.878	0.933	0.119	0.442
Departure Headway (Hd)	6.183	7.353	6.18	7.017
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	588	498	584	513
Service Time	4.224	5.053	3.88	5.07
HCM Lane V/C Ratio	0.869	0.918	0.118	0.442
HCM Control Delay	38.5	52.5	9.7	15.6
HCM Lane LOS	E	F	A	C
HCM 95th-tile Q	10.1	11.2	0.4	2.2

2035 Build

Intersection Shaw @ OR 22 EB

	Eastbound			Westbound			Northbound			Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Volume	0	0	0	151	0	16	0	310	80	0	71	24
% HV	0%	0%	0%	8%	0%	7%	0%	4%	11%	10%	7%	0%
Demand Volume	0	0	0	163	0	17	0	322	89	0	76	24
Entry Volume		0			167			390			95	
Entry Lane Volume (adj)		0			180			411			100	
Exiting Flow Rates		24			89			239			340	
Conflicting Flow		239			322			0			163	
Entry Capacity		1111			1042			1333			1177	
v/c ratio		0.00			0.16			0.31			0.08	
Delay		8.2			4.1			8.9			8.3	
LOS												
95th Percentile Queue (veh)		0.0			0.6			1.3			0.3	

Intersection Delay	7.4
Intersection v/c	0.24

2050 Build

Intersection Shaw @ OR 22 EB

	Eastbound			Westbound			Northbound			Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Volume	0	0	0	158	0	17	0	329	85	0	74	25
% HV	0%	0%	0%	8%	0%	7%	0%	4%	11%	10%	7%	0%
Demand Volume	0	0	0	171	0	18	0	342	94	0	79	25
Entry Volume		0			175			414			99	
Entry Lane Volume (adj)		0			189			437			104	
Exiting Flow Rates		25			94			250			360	
Conflicting Flow		250			342			0			171	
Entry Capacity		1101			1026			1333			1170	
v/c ratio		0.00			0.17			0.33			0.09	
Delay		8.3			4.2			9.0			8.4	
LOS												
95th Percentile Queue (veh)		0.0			0.6			1.4			0.3	

Intersection Delay	7.5
Intersection v/c	0.25

2035 Build

Intersection Shaw @ OR 22 EB

	Eastbound			Westbound			Northbound			Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Volume	0	0	0	405	0	59	0	373	87	19	181	0
% HV	0%	0%	0%	1%	0%	4%	0%	3%	2%	12%	4%	0%
Demand Volume	0	0	0	409	0	61	0	384	89	21	188	0
Entry Volume		0			464			460			200	
Entry Lane Volume (adj)		0			470			473			210	
Exiting Flow Rates		0			110			597			446	
Conflicting Flow		619			384			21			409	
Entry Capacity		831			994			1312			975	
v/c ratio		0.00			0.47			0.36			0.21	
Delay		9.3			6.8			9.3			9.7	
LOS												
95th Percentile Queue (veh)		0.0			2.5			1.7			0.8	

Intersection Delay	8.8
Intersection v/c	0.38

2050 Build

Intersection Shaw @ OR 22 EB

	Eastbound			Westbound			Northbound			Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Volume	0	0	0	443	0	67	0	401	95	22	198	0
% HV	0%	0%	0%	1%	0%	4%	0%	3%	2%	12%	4%	0%
Demand Volume	0	0	0	447	0	70	0	413	97	25	206	0
Entry Volume		0			510			496			220	
Entry Lane Volume (adj)		0			517			510			231	
Exiting Flow Rates		0			122			653			483	
Conflicting Flow		678			413			25			447	
Entry Capacity		794			972			1308			947	
v/c ratio		0.00			0.52			0.39			0.24	
Delay		9.5			7.7			9.5			10.0	
LOS												
95th Percentile Queue (veh)		0.0			3.1			1.9			1.0	

Intersection Delay	9.2
Intersection v/c	0.42

HCM Signalized Intersection Capacity Analysis
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/05/2023

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	151	16	310	80	24	71
Future Volume (vph)	151	16	310	80	24	71
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.5	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frt	1.00	0.85	0.97			1.00
Flt Protected	0.95	1.00	1.00			0.99
Satd. Flow (prot)	1539	1390	1614			1604
Flt Permitted	0.95	1.00	1.00			0.88
Satd. Flow (perm)	1539	1390	1614			1422
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	164	17	337	87	26	77
RTOR Reduction (vph)	0	13	21	0	0	0
Lane Group Flow (vph)	164	4	403	0	0	103
Heavy Vehicles (%)	8%	7%	4%	11%	10%	7%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	3		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	7.2	7.7	18.1			18.1
Effective Green, g (s)	7.2	7.7	19.5			19.5
Actuated g/C Ratio	0.20	0.22	0.55			0.55
Clearance Time (s)	4.5	4.0	5.4			5.4
Vehicle Extension (s)	3.0	2.5	4.0			4.0
Lane Grp Cap (vph)	314	304	894			787
v/s Ratio Prot	c0.11		c0.25			
v/s Ratio Perm		0.00				0.07
v/c Ratio	0.52	0.01	0.45			0.13
Uniform Delay, d1	12.5	10.8	4.7			3.8
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	1.6	0.0	0.5			0.1
Delay (s)	14.0	10.8	5.2			3.9
Level of Service	B	B	A			A
Approach Delay (s)	13.7		5.2			3.9
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	35.2	Sum of lost time (s)	8.5
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/05/2023

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	151	16	310	80	24	71
Future Volume (veh/h)	151	16	310	80	24	71
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1641	1654	1695	1600	1614	1654
Adj Flow Rate, veh/h	164	0	337	0	26	77
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	7	4	11	10	7
Cap, veh/h	220		835		291	655
Arrive On Green	0.14	0.00	0.49	0.00	0.43	0.49
Sat Flow, veh/h	1563	1402	1695	0	196	1331
Grp Volume(v), veh/h	164	0	337	0	103	0
Grp Sat Flow(s),veh/h/ln	1563	1402	1695	0	1527	0
Q Serve(g_s), s	2.3	0.0	2.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.3	0.0	2.9	0.0	0.8	0.0
Prop In Lane	1.00	1.00		0.00	0.25	
Lane Grp Cap(c), veh/h	220		835		854	0
V/C Ratio(X)	0.75		0.40		0.12	0.00
Avail Cap(c_a), veh/h	722		1523		1431	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	9.6	0.0	3.7	0.0	3.3	0.0
Incr Delay (d2), s/veh	5.0	0.0	0.4	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.5	0.0	4.2	0.0	3.4	0.0
LnGrp LOS	B		A		A	A
Approach Vol, veh/h	164	A	337	A		103
Approach Delay, s/veh	14.5		4.2			3.4
Approach LOS	B		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		15.4			15.4	7.8
Change Period (Y+Rc), s		* 5.4			* 5.4	4.5
Max Green Setting (Gmax), s		* 19			* 19	10.7
Max Q Clear Time (g_c+I1), s		4.9			2.8	4.3
Green Ext Time (p_c), s		4.6			1.2	0.4

Intersection Summary	
HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

HCM Signalized Intersection Capacity Analysis
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/05/2023

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	158	17	329	85	25	74
Future Volume (vph)	158	17	329	85	25	74
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.5	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frt	1.00	0.85	0.97			1.00
Flt Protected	0.95	1.00	1.00			0.99
Satd. Flow (prot)	1539	1390	1614			1604
Flt Permitted	0.95	1.00	1.00			0.87
Satd. Flow (perm)	1539	1390	1614			1412
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	172	18	358	92	27	80
RTOR Reduction (vph)	0	14	21	0	0	0
Lane Group Flow (vph)	172	4	429	0	0	107
Heavy Vehicles (%)	8%	7%	4%	11%	10%	7%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	3		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	7.3	7.8	18.2			18.2
Effective Green, g (s)	7.3	7.8	19.6			19.6
Actuated g/C Ratio	0.21	0.22	0.55			0.55
Clearance Time (s)	4.5	4.0	5.4			5.4
Vehicle Extension (s)	3.0	2.5	4.0			4.0
Lane Grp Cap (vph)	317	306	893			781
v/s Ratio Prot	c0.11		c0.27			
v/s Ratio Perm		0.00				0.08
v/c Ratio	0.54	0.01	0.48			0.14
Uniform Delay, d1	12.6	10.8	4.8			3.8
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	1.9	0.0	0.6			0.1
Delay (s)	14.5	10.8	5.4			3.9
Level of Service	B	B	A			A
Approach Delay (s)	14.1		5.4			3.9
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	35.4	Sum of lost time (s)	8.5
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/05/2023

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	158	17	329	85	25	74
Future Volume (veh/h)	158	17	329	85	25	74
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1641	1654	1695	1600	1614	1654
Adj Flow Rate, veh/h	172	0	358	0	27	80
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	7	4	11	10	7
Cap, veh/h	225		831		289	651
Arrive On Green	0.14	0.00	0.49	0.00	0.43	0.49
Sat Flow, veh/h	1563	1402	1695	0	194	1327
Grp Volume(v), veh/h	172	0	358	0	107	0
Grp Sat Flow(s),veh/h/ln	1563	1402	1695	0	1522	0
Q Serve(g_s), s	2.5	0.0	3.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.5	0.0	3.2	0.0	0.9	0.0
Prop In Lane	1.00	1.00		0.00	0.25	
Lane Grp Cap(c), veh/h	225		831		848	0
V/C Ratio(X)	0.76		0.43		0.13	0.00
Avail Cap(c_a), veh/h	732		1502		1407	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	9.6	0.0	3.8	0.0	3.3	0.0
Incr Delay (d2), s/veh	5.3	0.0	0.5	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.1	0.0	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.9	0.0	4.3	0.0	3.4	0.0
LnGrp LOS	B		A		A	A
Approach Vol, veh/h	172	A	358	A		107
Approach Delay, s/veh	14.9		4.3			3.4
Approach LOS	B		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		15.4			15.4	7.9
Change Period (Y+Rc), s		* 5.4			* 5.4	4.5
Max Green Setting (Gmax), s		* 19			* 19	10.9
Max Q Clear Time (g_c+I1), s		5.2			2.9	4.5
Green Ext Time (p_c), s		4.8			1.3	0.4

Intersection Summary	
HCM 6th Ctrl Delay	7.0
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR, SBT] is excluded from calculations of the approach delay and intersection delay.

1st at EB Ramps AM Peak Hour

2035 Build								los	A
Phase	Adj flow	Sat Flow		2	0.199				
2 NBT	337	1695	0.199	6	0.067				
6 SBT	103	1527	0.067					Cycle Length	35
8 WBL	164	1563	0.105					Lost Time/phase	4
								# phases	4
						0.199		Total Lost Time	16
				8	0.105		Critical	v/c	0.56
						0.105			
					Critical Pairs	0.304			

2050 Build								los	A
Phase	Adj flow	Sat Flow		2	0.211				
2 NBT	358	1695	0.211	6	0.070				
6 SBT	107	1522	0.070					Cycle Length	35
8 WBL	172	1563	0.110					Lost Time/phase	4
								# phases	4
						0.211		Total Lost Time	16
				8	0.110		Critical	v/c	0.59
						0.110			
					Critical Pairs	0.321			

HCM Signalized Intersection Capacity Analysis
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/05/2023

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	405	59	373	87	19	181
Future Volume (vph)	405	59	373	87	19	181
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frt	1.00	0.85	0.97			1.00
Flt Protected	0.95	1.00	1.00			1.00
Satd. Flow (prot)	1646	1430	1659			1662
Flt Permitted	0.95	1.00	1.00			0.93
Satd. Flow (perm)	1646	1430	1659			1561
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	418	61	385	90	20	187
RTOR Reduction (vph)	0	41	21	0	0	0
Lane Group Flow (vph)	418	20	454	0	0	207
Heavy Vehicles (%)	1%	4%	3%	2%	12%	4%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	8		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	11.2	11.2	12.9			12.9
Effective Green, g (s)	11.2	11.2	14.3			14.3
Actuated g/C Ratio	0.33	0.33	0.43			0.43
Clearance Time (s)	4.0	4.0	5.4			5.4
Vehicle Extension (s)	2.5	2.5	4.0			4.0
Lane Grp Cap (vph)	550	478	708			666
v/s Ratio Prot	c0.25		c0.27			
v/s Ratio Perm		0.01				0.13
v/c Ratio	0.76	0.04	0.64			0.31
Uniform Delay, d1	10.0	7.5	7.6			6.3
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	5.9	0.0	2.2			0.4
Delay (s)	15.8	7.6	9.8			6.7
Level of Service	B	A	A			A
Approach Delay (s)	14.8		9.8			6.7
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	33.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/05/2023

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	405	59	373	87	19	181
Future Volume (veh/h)	405	59	373	87	19	181
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1736	1695	1709	1723	1586	1695
Adj Flow Rate, veh/h	418	0	385	0	20	187
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	4	3	2	12	4
Cap, veh/h	532		697		160	645
Arrive On Green	0.32	0.00	0.41	0.00	0.36	0.41
Sat Flow, veh/h	1654	1437	1709	0	66	1582
Grp Volume(v), veh/h	418	0	385	0	207	0
Grp Sat Flow(s),veh/h/ln	1654	1437	1709	0	1648	0
Q Serve(g_s), s	6.8	0.0	5.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.8	0.0	5.1	0.0	2.5	0.0
Prop In Lane	1.00	1.00		0.00	0.10	
Lane Grp Cap(c), veh/h	532		697		727	0
V/C Ratio(X)	0.79		0.55		0.28	0.00
Avail Cap(c_a), veh/h	839		983		993	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	9.1	0.0	6.7	0.0	6.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	1.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.8	0.0	0.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.1	0.0	7.7	0.0	6.3	0.0
LnGrp LOS	B		A		A	A
Approach Vol, veh/h	418	A	385	A		207
Approach Delay, s/veh	11.1		7.7			6.3
Approach LOS	B		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		16.1			16.1	13.5
Change Period (Y+Rc), s		* 5.4			* 5.4	4.0
Max Green Setting (Gmax), s		* 16			* 16	15.0
Max Q Clear Time (g_c+I1), s		7.1			4.5	8.8
Green Ext Time (p_c), s		3.6			2.2	1.0

Intersection Summary	
HCM 6th Ctrl Delay	8.8
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR, SBT] is excluded from calculations of the approach delay and intersection delay.

HCM Signalized Intersection Capacity Analysis
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/05/2023

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	443	67	401	95	22	198
Future Volume (vph)	443	67	401	95	22	198
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.5	4.0	4.0			4.0
Lane Util. Factor	1.00	1.00	1.00			1.00
Frt	1.00	0.85	0.97			1.00
Flt Protected	0.95	1.00	1.00			0.99
Satd. Flow (prot)	1646	1430	1658			1661
Flt Permitted	0.95	1.00	1.00			0.93
Satd. Flow (perm)	1646	1430	1658			1549
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	457	69	413	98	23	204
RTOR Reduction (vph)	0	42	19	0	0	0
Lane Group Flow (vph)	457	27	492	0	0	227
Heavy Vehicles (%)	1%	4%	3%	2%	12%	4%
Turn Type	Prot	Perm	NA		Perm	NA
Protected Phases	3		2			6
Permitted Phases		8			6	
Actuated Green, G (s)	14.8	15.3	14.9			14.9
Effective Green, g (s)	14.8	15.3	16.3			16.3
Actuated g/C Ratio	0.37	0.39	0.41			0.41
Clearance Time (s)	4.5	4.0	5.4			5.4
Vehicle Extension (s)	3.0	2.5	4.0			4.0
Lane Grp Cap (vph)	615	552	682			637
v/s Ratio Prot	c0.28		c0.30			
v/s Ratio Perm		0.02				0.15
v/c Ratio	0.74	0.05	0.72			0.36
Uniform Delay, d1	10.8	7.6	9.7			8.0
Progression Factor	1.00	1.00	1.00			1.00
Incremental Delay, d2	4.8	0.0	4.0			0.5
Delay (s)	15.6	7.6	13.8			8.5
Level of Service	B	A	B			A
Approach Delay (s)	14.5		13.8			8.5
Approach LOS	B		B			A

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	39.6	Sum of lost time (s)	8.5
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
7: Shaw Hwy SE & SE Santiam Hwy Ramp

12/05/2023

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	443	67	401	95	22	198
Future Volume (veh/h)	443	67	401	95	22	198
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1736	1695	1709	1723	1586	1695
Adj Flow Rate, veh/h	457	0	413	0	23	204
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	4	3	2	12	4
Cap, veh/h	574		693		144	637
Arrive On Green	0.35	0.00	0.41	0.00	0.37	0.41
Sat Flow, veh/h	1654	1437	1709	0	70	1571
Grp Volume(v), veh/h	457	0	413	0	227	0
Grp Sat Flow(s),veh/h/ln	1654	1437	1709	0	1641	0
Q Serve(g_s), s	8.6	0.0	6.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.6	0.0	6.5	0.0	3.2	0.0
Prop In Lane	1.00	1.00		0.00	0.10	
Lane Grp Cap(c), veh/h	574		693		714	0
V/C Ratio(X)	0.80		0.60		0.32	0.00
Avail Cap(c_a), veh/h	842		945		946	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	10.1	0.0	8.0	0.0	7.1	0.0
Incr Delay (d2), s/veh	3.4	0.0	1.2	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	1.4	0.0	0.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.5	0.0	9.2	0.0	7.4	0.0
LnGrp LOS	B		A		A	A
Approach Vol, veh/h	457	A	413	A		227
Approach Delay, s/veh	13.5		9.2			7.4
Approach LOS	B		A			A

Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		17.9			17.9	16.4
Change Period (Y+Rc), s		* 5.4			* 5.4	4.5
Max Green Setting (Gmax), s		* 18			* 18	17.5
Max Q Clear Time (g_c+I1), s		8.5			5.2	10.6
Green Ext Time (p_c), s		4.0			2.7	1.5

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

1st at EB Ramps PM Peak Hour

2035 Build

Phase		Adj flow	Sat Flow						
					2	0.225			
2	NBT	385	1709	0.225	6	0.126			
6	SBT	207	1648	0.126				Cycle Length	90
8	WBL	418	1654	0.253				Lost Time/phase	4
								# phases	4
							0.225	Total Lost Time	16
					8	0.253			
								Critical v/c	0.58
							0.253		
						Critical Pairs	0.478		

los A

2050 Build

Phase		Adj flow	Sat Flow						
					2	0.242			
2	NBT	413	1709	0.242	6	0.138			
6	SBT	227	1641	0.138				Cycle Length	90
8	WBL	457	1654	0.276				Lost Time/phase	4
								# phases	4
							0.242	Total Lost Time	16
					8	0.276			
								Critical v/c	0.63
							0.276		
						Critical Pairs	0.518		

los B

Queuing and Blocking Report
2035 build AWSC AM

11/29/2023

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	NB	SB
Directions Served	L	TR	LT
Maximum Queue (ft)	82	135	69
Average Queue (ft)	51	71	39
95th Queue (ft)	87	124	68
Link Distance (ft)	572	376	402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	91	10	133	62
Average Queue (ft)	50	0	72	35
95th Queue (ft)	82	8	115	56
Link Distance (ft)	572		376	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	94	10	153	74
Average Queue (ft)	50	0	72	36
95th Queue (ft)	83	7	117	60
Link Distance (ft)	572		376	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Queuing and Blocking Report
2050 build AWSC AM

11/29/2023

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	NB	SB
Directions Served	L	TR	LT
Maximum Queue (ft)	71	115	61
Average Queue (ft)	46	79	37
95th Queue (ft)	73	119	64
Link Distance (ft)	572	376	402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	93	28	128	73
Average Queue (ft)	47	1	69	36
95th Queue (ft)	77	18	106	62
Link Distance (ft)	572		376	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	94	28	134	74
Average Queue (ft)	47	1	72	36
95th Queue (ft)	76	16	110	62
Link Distance (ft)	572		376	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	156	69	159	80
Average Queue (ft)	97	13	92	53
95th Queue (ft)	158	73	164	85
Link Distance (ft)	572		508	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	11	0		
Queuing Penalty (veh)	7	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	196	69	204	87
Average Queue (ft)	91	9	92	47
95th Queue (ft)	166	58	176	79
Link Distance (ft)	572		508	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	9	0		
Queuing Penalty (veh)	5	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	207	92	220	96
Average Queue (ft)	92	10	92	49
95th Queue (ft)	164	62	174	81
Link Distance (ft)	572		508	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	10	0		
Queuing Penalty (veh)	6	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	184	73	216	82
Average Queue (ft)	101	14	121	56
95th Queue (ft)	183	74	254	88
Link Distance (ft)	572		508	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	15	0		
Queuing Penalty (veh)	11	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	170	92	213	96
Average Queue (ft)	97	12	104	55
95th Queue (ft)	163	69	176	83
Link Distance (ft)	572		508	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	12	0		
Queuing Penalty (veh)	8	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	188	92	253	103
Average Queue (ft)	98	13	108	55
95th Queue (ft)	168	70	200	84
Link Distance (ft)	572		508	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	13	0		
Queuing Penalty (veh)	9	0		

Queuing and Blocking Report
2035 build Signal AM

12/05/2023

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	115	23	96	66
Average Queue (ft)	61	3	51	27
95th Queue (ft)	111	35	107	68
Link Distance (ft)	572		376	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	2	0		
Queuing Penalty (veh)	0	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	101	21	141	59
Average Queue (ft)	54	1	50	19
95th Queue (ft)	91	17	105	52
Link Distance (ft)	572		376	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	1	0		
Queuing Penalty (veh)	0	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	127	44	141	76
Average Queue (ft)	55	2	50	21
95th Queue (ft)	96	23	105	56
Link Distance (ft)	572		376	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	1	0		
Queuing Penalty (veh)	0	0		

Queuing and Blocking Report
2050 build signal AM

12/05/2023

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	NB	SB
Directions Served	L	TR	LT
Maximum Queue (ft)	109	132	68
Average Queue (ft)	68	75	29
95th Queue (ft)	123	140	73
Link Distance (ft)	572	376	402
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	2		
Queuing Penalty (veh)	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	130	21	132	81
Average Queue (ft)	57	2	57	27
95th Queue (ft)	100	23	111	63
Link Distance (ft)	572		376	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	1	0		
Queuing Penalty (veh)	0	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	135	21	147	84
Average Queue (ft)	59	1	62	28
95th Queue (ft)	107	20	119	66
Link Distance (ft)	572		376	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	1	0		
Queuing Penalty (veh)	0	0		

Queuing and Blocking Report
2035 build signal PM

12/05/2023

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	194	114	166	70
Average Queue (ft)	130	22	103	37
95th Queue (ft)	197	97	169	72
Link Distance (ft)	572		508	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	15	0		
Queuing Penalty (veh)	9	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	216	104	191	104
Average Queue (ft)	116	13	90	46
95th Queue (ft)	186	72	158	89
Link Distance (ft)	572		508	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	11	0		
Queuing Penalty (veh)	7	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	219	115	212	104
Average Queue (ft)	119	15	93	44
95th Queue (ft)	190	78	161	86
Link Distance (ft)	572		508	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	12	0		
Queuing Penalty (veh)	7	0		

Queuing and Blocking Report
2050 build signal PM

12/05/2023

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #1

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	196	92	187	101
Average Queue (ft)	135	16	107	49
95th Queue (ft)	219	82	186	90
Link Distance (ft)	572		508	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	17	0		
Queuing Penalty (veh)	12	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, Interval #2

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	270	115	223	125
Average Queue (ft)	143	24	109	49
95th Queue (ft)	245	101	193	97
Link Distance (ft)	572		508	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	21	0		
Queuing Penalty (veh)	14	0		

Intersection: 7: Shaw Hwy SE & SE Santiam Hwy Ramp, All Intervals

Movement	WB	WB	NB	SB
Directions Served	L	R	TR	LT
Maximum Queue (ft)	278	115	223	134
Average Queue (ft)	141	22	109	49
95th Queue (ft)	239	97	192	95
Link Distance (ft)	572		508	402
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		90		
Storage Blk Time (%)	20	0		
Queuing Penalty (veh)	13	0		

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RENEWAL 06/30/24

DATE: February 7, 2024

TO: Marion County
Engineering Division
Marion County Public Works

FROM: Kelly Sandow PE
Sandow Engineering

RE: Response to Aumsville Commercial Center Comments

The following provides a response/additional information regarding the trip generation as requested by Marion County as part of the review of the Aumsville Commercial Center Traffic Impact Analysis.

As presented in TIA

For reference, the following is the trip generation, as presented in the TIA. Since the trips for the Industrial Park and Hotel are low, internal trips were not subtracted from the total. This was done to provide a more conservative evaluation.

TABLE 1: TRIP GENERATION- PM PEAK HOUR FROM TIA

Land Use	Size	Rate	Trips
310- Hotel	124 Rooms	0.74(x)-27.89	64
821- Shopping Plaza	97.4 ksf	5.19	506
130- Industrial Park	56 Ksf	0.34	19
		TOTAL:	**589**

Item #1: Office vs. Industrial Park Land Uses

Buildings A through G are proposed as flexible industrial/office space. Specific tenants are not identified. Therefore, as requested by Marion County and ODOT, the trip generation estimates are revised utilizing the higher trip rates for office land use. The most closely related land use is 710- General Office. Following the ITE methodology, the fitted curve equations are the most appropriate to use for this land use. The updated trip generation using 710- General Office instead of 130- Industrial Park is provided in the following table.

The office land use has substantially more trips in the PM peak hour and it is reasonable to assume that there would be internal trips between the office users and the retail within the site during the PM peak hour. Therefore, the internal trips are factored in. Following the ITE and NCHRP methodology, the internal trips are 10%. Attachment A provides the internal trip calculations.

TABLE 2: TRIP GENERATION- PM PEAK HOUR USING OFFICE

Land Use	Size	Rate	Trips
310- Hotel	124 Rooms	0.74(x)-27.89	64
821- Shopping Plaza	97.4 ksf	5.19	506
710- General Office	56 Ksf	LN(T)=0.83*ln(ksf)+1.29	103
Internal Trips		10%	-67
		TOTAL :	**605**

The TIA evaluated conditions with 589 PM peak hour trips. Using the General Office rate, the trip generation would increase by 16 additional PM peak-hour trips. Once distributed within the study area, no intersection (outside of the site access) will have more than 10 additional trips. This trip increase is not substantial enough trips to impact the findings of the TIA.

Item #2: Shopping Center with Supermarket

The trip generation estimate utilized ITE Land Use Code 821- Shopping Plaza (40-150 Ksf). This land use has a subcategory for the inclusion of a supermarket. The ITE Trip Generation Manuals and Trip Generation Handbook have a stated premise that the manuals are to provide guidance and that professional judgment is required to ensure that the data used is reasonable for the proposed site.

The PM peak hour trip estimate not using the supermarket subcategory is 506 trips. Using the supermarket subcategory, the trips increase to 866. A PM peak hour trip generation of 866 for the retail portion of this development is not reasonable. The rationale for this is:

- The population of Aumsville is 4,200. This is not a large community to draw a consistent average of 866 trips in the PM peak hour each weekday.
- The adjacent town of Stayton has 5 grocery stores (Safeway, Rolf's, Bi-Mart, Grocery Outlet, and Stop-n-Save. It is unlikely that a grocery store in Aumsville will pull a significant amount of traffic from Stayton or Sublimity.

Due to the local characteristics, the trip estimate of 866 PM weekday peak hour trips as an average occurring every weekday is unrealistic, and a trip estimate of 506 is more likely what the retail on the site would generate.

Item #3: Fast Food Restaurant and Gas Station vs Shopping Center

As per the ITE Trip Generation manuals, a shopping center is defined as having an integrated unit of shops and includes out parcels that are typically drive-in banks, retail stores, restaurants, offices, etc.

Therefore, within the TIA, all the out parcels on this site are included within the shopping center as it matches the definition of a shopping center.

As there are no specific tenants identified at this time, the buildings with a drive-through lane are assumed to be fast-food restaurants.

The ITE Land Use 945 Convenience Store/Gas Station is the most closely matched to the use on this site. The land use has two subcategories: Gross Floor Area (GFA) and Fueling Positions. If the GFA subcategory is selected, then the independent variable is the number of fueling positions. This site is proposed at 5 ksf and 10 fueling positions, resulting in 228 PM peak hour trips. If the Fueling Position subcategory is selected, then the independent variable is the building size. The trip estimate using this classification is 273 PM peak hour trips. The methodology resulting in 273 PM peak hour trips is used for further trip generation evaluation.

As per Chapter 6.3 of the Trip Generation Handbook, shopping centers are considered as a single land use, and all buildings considered as part of the shopping center do not have the internal trip capture taken into consideration. When buildings on site are not considered part of the shopping center and have trips calculated using rates for other uses, internal trip capture between the separate uses is calculated. Therefore, if the outbuildings with drive-through lanes and the convenience store/gas station are considered separate from the shopping center land use, the internal trip capture is applied.

The internal trip capture is calculated following the ITE and NCHRP Methodology. The total square footage of the restaurant pads with drive-through facilities is 12,400 sf, and the gas station is 5,000 sf, reducing the stopping center to 80,000 sf. The internal trip capture between all the land uses on site is 33%. See Attachment B for the worksheet calculating the internal trip rates.

The fast-food restaurants and gas station will have a substantial number of trips that are classified as pass-by trips. Pass-by trips are trips that are already on 1st St/Shaw Hwy and divert from their normal route of travel directly into the site driveway, back out of the site driveway, and back to the normal route of travel. The ITE rates show that fast-food restaurants have a 55% pass-by trip rate, and convenience stores/gas stations have a 75% pass-by rate. As per ITE methodology, the internal trips are removed first, then then the pass-by trips are removed. For the fast-food restaurants, following this methodology, the pass-by trips are 151 during the PM peak hour. For the convenience store/gas station, the pass-by trips are 137 during the PM peak hour. In general, pass-by trips should not exceed 35% of the trips on the adjacent roadway. 1st St/Shaw Hwy will have a PM peak hour background traffic volume at the time of completion of 683 trips. Therefore, the pass-by trips will be capped at 240.

TABLE 3: TRIP GENERATION- PM PEAK HOUR USING SEPARATE RATES FOR DRIVE-THROUGH AND GAS STATION

Land Use	Size	Rate	Trips
310- Hotel	124 rooms	0.74(x)-27.89	64
821- Shopping Plaza	80 ksf	5.19	415
710- General Office	56 ksf	LN(T)=0.83*ln(ksf)+1.29	103
934-FF with Drive Thru	12.4 ksf	33.03	410
945-Convenience Store/Gas Station	5 ksf	54.54	273
Internal Trips		33%	-417
Pass-By Trips- 934		*55%*	*(-151)*
Pass-by Trips-945		*75%*	*(-137)*
		Max Pass-by*	-240
		TOTAL NEW TRIPS :	**608**

*Generally, the maximum pass-by is 35% of the adjacent street trips. Therefore, the pass-by trips are capped at 240 (35% of background volume at full build-out).

The TIA evaluated conditions with 589 PM peak hour trips. Using the General Office rate and separate rates for the Fast-Food Restaurant w/Drive Through and Convenience Store/Gas Station, the trip generation results in 19 additional trips. Once distributed within the study area, no intersection (outside of the site access) will have more than 10 additional trips. This is not a substantial enough trip increase to impact the findings of the TIA.

SUMMARY

As demonstrated in the evaluation above, modifying the trip estimates to include the trip rates for General Office instead of Industrial Park and calculating the trips using the specific land uses for the drive-through pad and gas station results in an increase in 19 PM peak hour trips over what was evaluated the TIA. Once distributed within the study area, no intersection (outside of the site access) will have more than 10 additional trips. This is not a substantial enough trip increase to impact the findings of the TIA.

EXHIBIT 4 - 6 TRIP ESTIMATE

Attachment A

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Aumsville	**Organization:**	Sandow Engineering
Project Location:		**Performed By:**	
Scenario Description:		**Date:**	
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				103	17	86
Retail				506	248	258
Restaurant				0		
Cinema/Entertainment				0		
Residential				0		
Hotel				64	33	31
All Other Land Uses[2]				0		
				673	298	375

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

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

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		17	0	0	0	0
Retail	5		0	0	0	6
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	5	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	673	298	375
Internal Capture Percentage	10%	11%	9%
External Vehicle-Trips[5]	607	265	342
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

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

Land Use	Entering Trips	Exiting Trips
Office	29%	20%
Retail	9%	4%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	18%	16%

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

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

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

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

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

[6]Person-Trips

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

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Attachment A

Project Name:	Aumsville
Analysis Period:	**PM Street Peak Hour**

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

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	17	17	1.00	86	86
Retail	1.00	248	248	1.00	258	258
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	33	33	1.00	31	31

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		17	3	0	2	0
Retail	5		75	10	67	13
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	5	21	0	1	

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		20	0	0	0	0
Retail	5		0	0	0	6
Restaurant	5	124		0	0	23
Cinema/Entertainment	1	10	0		0	0
Residential	10	25	0	0		4
Hotel	0	5	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	5	12	17	12	0	0
Retail	22	226	248	226	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	6	27	33	27	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	17	69	86	69	0	0
Retail	11	247	258	247	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	5	26	31	26	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

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

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

Attachment B

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Aumsville	**Organization:**	Sandow Engineering
Project Location:		**Performed By:**	
Scenario Description:		**Date:**	
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				103	17	86
Retail				689	340	349
Restaurant				410	213	197
Cinema/Entertainment				0		
Residential				0		
Hotel				64	33	31
All Other Land Uses[2]				0		
				1,266	603	663

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

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

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		17	3	0	0	0
Retail	5		62	0	0	6
Restaurant	5	81		0	0	14
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	5	11	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,266	603	663
Internal Capture Percentage	33%	35%	32%
External Vehicle-Trips[5]	848	394	454
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

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

Land Use	Entering Trips	Exiting Trips
Office	59%	23%
Retail	30%	21%
Restaurant	36%	51%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	61%	52%

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

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

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

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

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

[6]Person-Trips

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

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Attachment B

Project Name:	Aumsville
Analysis Period:	**PM Street Peak Hour**

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

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	17	17	1.00	86	86
Retail	1.00	340	340	1.00	349	349
Restaurant	1.00	213	213	1.00	197	197
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	0	0	1.00	0	0
Hotel	1.00	33	33	1.00	31	31

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		17	3	0	2	0
Retail	7		101	14	91	17
Restaurant	6	81		16	35	14
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	5	21	0	1	

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		27	4	0	0	0
Retail	5		62	0	0	6
Restaurant	5	170		0	0	23
Cinema/Entertainment	1	14	6		0	0
Residential	10	34	30	0		4
Hotel	0	7	11	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	10	7	17	7	0	0
Retail	103	237	340	237	0	0
Restaurant	76	137	213	137	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	20	13	33	13	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	20	66	86	66	0	0
Retail	73	276	349	276	0	0
Restaurant	100	97	197	97	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	0	0	0	0	0	0
Hotel	16	15	31	15	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

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

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

Context Map

SCALE: 1"=200'-0"

0 50' 100' 200' 400' NORTH

hillman workshop
landscape architecture
2901 e. highland ave
phoenix, az 85016
480-686-7001

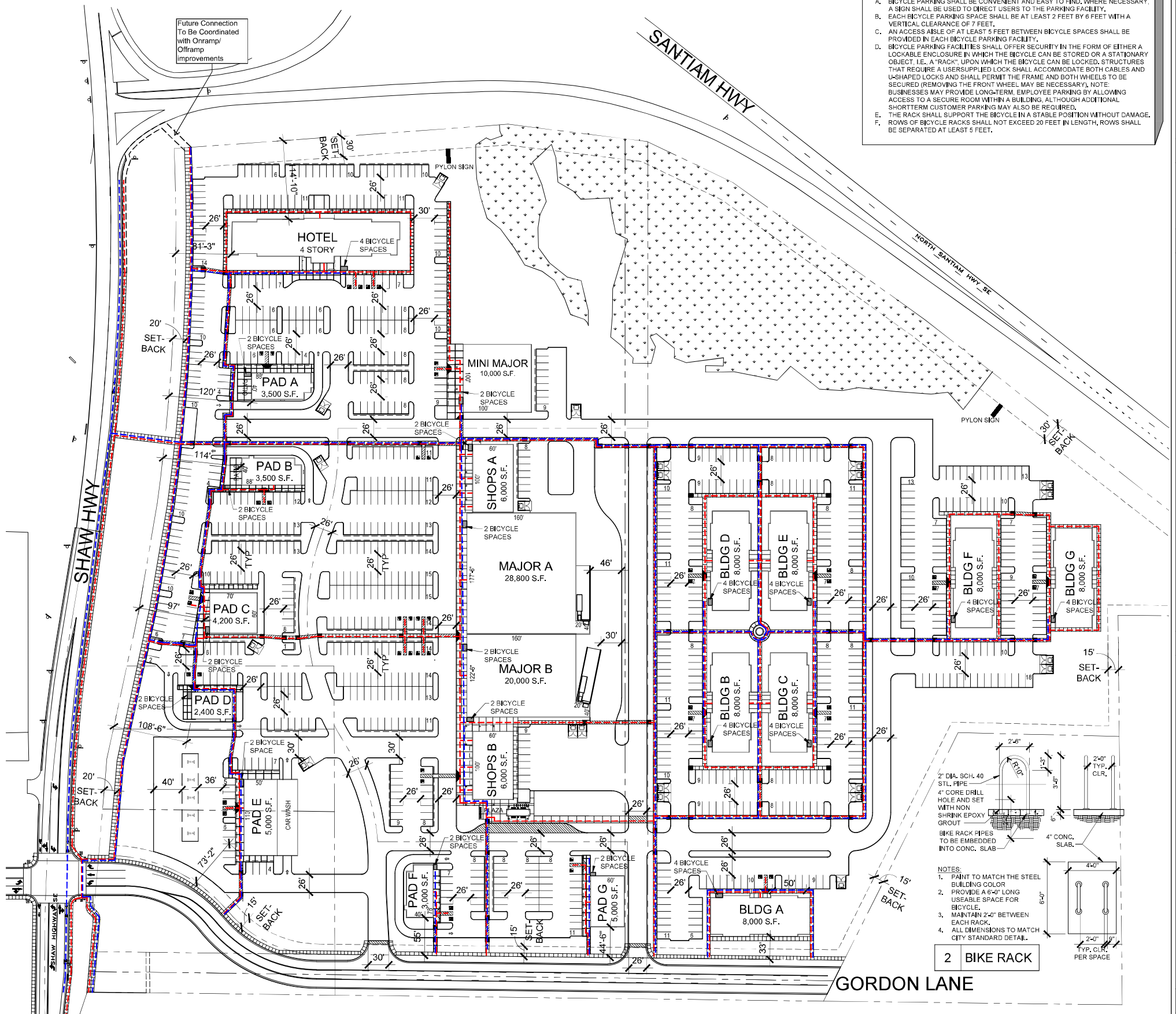
Aumsville Mixed Use Development

Aumsville, OR

DATE: 06.01.23

Context Map

CM1.0



1 PROPOSED SITE PLAN | DATE: 03.01.2024 | SCALE: 1" = 70'-0"

BICYCLE PARKING NOTES:

A. BICYCLE PARKING SHALL BE CONVENIENT AND EASY TO FIND. WHERE NECESSARY, A SIGN SHALL BE USED TO DIRECT USERS TO THE PARKING FACILITY.
B. EACH BICYCLE PARKING SPACE SHALL BE AT LEAST 2 FEET BY 6 FEET WITH A VERTICAL CLEARANCE OF 7 FEET.
C. AN ACCESS AISLE OF AT LEAST 5 FEET BETWEEN BICYCLE SPACES SHALL BE PROVIDED IN EACH BICYCLE PARKING FACILITY.
D. BICYCLE PARKING FACILITIES SHALL OFFER SECURITY IN THE FORM OF EITHER A LOCKABLE ENCLOSURE IN WHICH THE BICYCLE CAN BE STORED OR A STATIONARY OBJECT, I.E., A "RACK", UPON WHICH THE BICYCLE CAN BE LOCKED. STRUCTURES THAT REQUIRE A USERSUPPLIED LOCK SHALL ACCOMMODATE BOTH CABLES AND U-SHAPED LOCKS AND SHALL PERMIT THE FRAME AND BOTH WHEELS TO BE SECURED (REMOVING THE FRONT WHEEL MAY BE NECESSARY). NOTE: BUSINESSES MAY PROVIDE LONG-TERM, EMPLOYEE PARKING BY ALLOWING ACCESS TO A SECURE ROOM WITHIN A BUILDING, ALTHOUGH ADDITIONAL SHORTTERM CUSTOMER PARKING MAY ALSO BE REQUIRED.
E. THE RACK SHALL SUPPORT THE BICYCLE IN A STABLE POSITION WITHOUT DAMAGE.
F. ROWS OF BICYCLE RACKS SHALL NOT EXCEED 20 FEET IN LENGTH. ROWS SHALL BE SEPARATED AT LEAST 5 FEET.

PROJECT TEAM:

ARCHITECT:
PHNX DESIGN, LLC
1855 EAST SOUTHERN AVE, SUITE 204
MESA, ARIZONA 85204
CONTACT: MIKE HILLS
PH: (602) 762.7354
EMAIL: MIKEH@PHNX-DESIGN.COM

LANDSCAPE:
HILLMAN WORKSHOP
2901 E. HIGHLAND AVE
PHOENIX, AZ 85016
CONTACT: AARON HILLMAN
PH: (480) 686.2001

CIVIL:
FLAGLINE ENGINDERRING
686 NW YORK DR, STE #100
BEND, OR 97703
CONTACT: JIM PEX, PE
PH: (541) 797.6781

STREET CALCULATIONS

L/S FRONTAGE:	1,042 LN FT
STREET TREES REQUIRED:	1,042/40= 27 TREES REQUIRED
STREET TREES PROVIDED:	27 TREES BETWEEN STREET AND SIDEWALK
ADDITIONAL STREET TREES REQ:	27 TREES WITHIN 10' OF SIDEWALK REQUIRED
ADD STREET TREES PROVIDED:	27 ADDITIONAL TREES PROVIDED WITHIN 10' OF SIDEWALK
TOTAL STREET TREES REQUIRED:	54 TREES (2" CALIPER MIN.)
TOTAL STREET TREE PROVIDED:	54 TREES (2" CALIPER MIN.)
TREES SIZE	ALL STREET TREES PROVIDED ARE 2" CALIPER

RETAIL CENTER

EXISTING ZONING:		ID - INTERCHANGE DEVELOPMENT
PROPOSED USE:		MIXED USE CENTER
NET SITE AREA:		843,223 S.F. (19.36 AC)
BUILDING AREA:		
HOTEL:	(124 ROOMS)	
MAJOR A:	(RETAIL)	28,800 S.F.
MAJOR B:	(RETAIL)	20,000 S.F.
MINI MAJOR:	(RETAIL)	10,000 S.F.
SHOPS A:	(RETAIL)	6,000 S.F.
SHOPS B:	(RETAIL)	6,000 S.F.
PAD A:	(EATING EST.)	3,500 S.F.
PAD B:	(EATING EST.)	3,500 S.F.
PAD C:	(EATING EST.)	4,200 S.F.
PAD D:	(EATING EST.)	2,400 S.F.
PAD E:	(FUEL STATION)	5,000 S.F.
PAD F:	(EATING EST.)	3,000 S.F.
PAD G:	(EATING EST.)	5,000 S.F.
TOTAL BUILDING AREA:		97,400 S.F.
OCCUPANCY:		M (MERCANTILE)
CONSTRUCTION TYPE:		V-B SPRINKLERED (NFPA 13)
LOT COVERAGE:		97,400 / 843,223 X 100 = 11.55%
BUILDING HEIGHT:		35 FT 50FT FOR PROPOSED 4-STORY HOTEL
TOTAL PARKING REQUIRED:		
HOTEL	1 SPACE PER GUEST ROOM PLUS 1 SPACE FOR OWNER (124 RMS + 1 OWNER)	125 SPACES
RETAIL	1 SP PER 400 S.F. (70,800 / 400)	177 SPACES
FOOD	1 SP PER 100 S.F. (26,600 / 100)	266 SPACES
TOTAL PARKING REQUIRED:		568 SPACES
TOTAL PARKING PROVIDED:		601 SPACES 10'x20' = 151 SPACES 9'x19' = 450 SPACES
ADA PARKING REQUIRED:		13 SPACES
ADA PARKING PROVIDED:		34 SPACES
BICYCLE PARKING REQUIRED:		28 SPACES
BICYCLE PARKING PROVIDED:		28 SPACES

INDUSTRIAL OFFICE

EXISTING ZONING:		ID - INTERCHANGE DEVELOPMENT
PROPOSED USE:		MIXED USE CENTER
NET SITE AREA:		665,860 S.F. (15.29 AC)
BUILDING AREA:		
BUILDING A		8,000 S.F.
BUILDING B		8,000 S.F.
BUILDING C		8,000 S.F.
BUILDING D		8,000 S.F.
BUILDING E		8,000 S.F.
BUILDING F		8,000 S.F.
BUILDING G		8,000 S.F.
TOTAL BUILDING AREA:		56,000 S.F.
OCCUPANCY:		(OFFICE)
CONSTRUCTION TYPE:		V-B SPRINKLERED (NFPA 13)
LOT COVERAGE:		56,500 / 665,860 X 100 = 8.49%
BUILDING HEIGHT:		30 FT
TOTAL PARKING REQUIRED:		
OFFICE BUILDINGS (1 SP PER 300 SQ. FT.)	56,000 / 300 =	187 SPACES
TOTAL PARKING PROVIDED:		353 SPACES 10'x20' = 86 SPACES 9'x19' = 267 SPACES
ADA PARKING REQUIRED:		8 SPACES
ADA PARKING PROVIDED:		14 SPACES
BICYCLE PARKING REQUIRED:		18 SPACES
BICYCLE PARKING PROVIDED:		28 SPACES

REFERENCE CODES:
2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL ENERGY CONSERVATION CODE
2018 INTERNATIONAL FIRE CODE
2017 NATIONAL ELECTRIC CODE
AMERICANS WITH DISABILITY ACT ACCESSIBILITY GUIDELINES

LEGEND

RED DASHED LINE INDICATES ACCESSIBLE PEDESTRIAN PATHWAY TO PUBLIC WAY
BLUE DASHED LINE INDICATES BICYCLE PATH

PHNX DESIGN
1855 EAST SOUTHERN AVE, SUITE 204
MESA, ARIZONA 85204
PHONE: 602.762.7354

PROPOSED
SHAW HIGHWAY AND SANTIAM HIGHWAY
AUMSVILLE, OREGON

△	DATE	REVISION
1		
2		
3		
4		
5		

PROPOSED SITE PLAN

A100

PHNX JOB NUMBER: 22-379

1 | PERSPECTIVE

PHNX DESIGN
1855 EAST SOUTHERN AVE. SUITE 204
MESA, ARIZONA 85204
PHONE: 602.762.7264

PROPOSED

SHAW HIGHWAY AND SANTIAM HIGHWAY
AUMSVILLE, OREGON

△	DATE	REVISION
1		
2		
3		
4		
5		

PROPOSED

A300

PHNX JOB NUMBER: 22-370

FINISH KEYNOTES:

A. VENEER - HILLCREST STONE
ECHELON STANDARD MASONRY
COLOR: ALPINE

B. WOOD SIDING
ALPOLIC
COLOR: WLN WALNUT

C. SYNTHETIC STUCCO SYSTEM
FINISH: SMOOTH SAND FINISH
COLOR: SHERWIN WILLIAMS SW 9547 "VESSEL"

D. SYNTHETIC STUCCO SYSTEM
FINISH: SMOOTH SAND FINISH
COLOR: SHERWIN WILLIAMS SW 6253
"OLYMPUS WHITE"

E. SYNTHETIC STUCCO SYSTEM
FINISH: SMOOTH SAND FINISH
COLOR: SHERWIN WILLIAMS SW 9168
"ELEPHANT EAR"

F. METAL CANOPY AND COLUMN
COLOR: SHERWIN WILLIAMS SW 6258
"TRICORN BLACK"

G. METAL PARAPET CAP
METAL FLASHING
COLOR: SHERWIN WILLIAMS SW 6258
"TRICORN BLACK"

H. EXTERIOR HOLLOW METAL DOORS AND SES
PAINT: MATCH ADJACENT WALL/MATERIAL COLOR

I. ANODIZED ALUMINUM STOREFRONT SYSTEM
MANUFACT: KAWNEER OR APPROVED EQUAL
COLOR: DARK BRONZE

J. 1" INSULATED GLAZING
VALUE: (U=0.29, SHGC= 0.28)

2 SHOPS B - WEST EXTERIOR ELEVATION — SCALE: 3/16" = 1'-0"

1 SHOPS B - SOUTH EXTERIOR ELEVATION — SCALE: 3/16" = 1'-0"

PHNX DESIGN
1855 EAST SOUTHERN AVE. SUITE 204
MESA, ARIZONA 85204
PHONE 602.763.7354

PRELIMINARY
NOT FOR CONSTRUCTION OR RECORDING

PROPOSED
SHAW HIGHWAY AND SANTIAM HIGHWAY
AUMSVILLE, OREGON

DATE	REVISION
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- SHOPS B - EXTERIOR ELEVATIONS

A300A

PHNX JOB NUMBER: 22-379

FINISH KEYNOTES:

A. VENEER - HILLCREST STONE
ECHELON STANDARD MASONRY
COLOR: ALPINE

B. WOOD SIDING
ALPOLIC
COLOR: WLN WALNUT

C. SYNTHETIC STUCCO SYSTEM
FINISH: SMOOTH SAND FINISH
COLOR: SHERWIN WILLIAMS SW 9547 "VESSEL"

D. SYNTHETIC STUCCO SYSTEM
FINISH: SMOOTH SAND FINISH
COLOR: SHERWIN WILLIAMS SW 6253
"OLYMPUS WHITE"

E. SYNTHETIC STUCCO SYSTEM
FINISH: SMOOTH SAND FINISH
COLOR: SHERWIN WILLIAMS SW 9168
"ELEPHANT EAR"

F. METAL CANOPY AND COLUMN
COLOR: SHERWIN WILLIAMS SW 6258
"TRICORN BLACK"

G. METAL PARAPET CAP
METAL FLASHING
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1 WEST EXTERIOR ELEVATION — SCALE: 1/8" = 1'-0"

1 WEST EXTERIOR ELEVATION - CONTINUATION — SCALE: 1/8" = 1'-0"

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EXTERIOR ELEVATIONS

A300B

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FINISH: SMOOTH SAND FINISH
COLOR: SHERWIN WILLIAMS SW 9547 "VESSEL"

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FINISH: SMOOTH SAND FINISH
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- OFFICE - EXTERIOR ELEVATIONS

A300

PHNX JOB NUMBER: 22-379

AGENDA ITEM 4A

EXHIBIT 4 - 7. ARCHITECTURAL PLANS

FINISH KEYNOTES:

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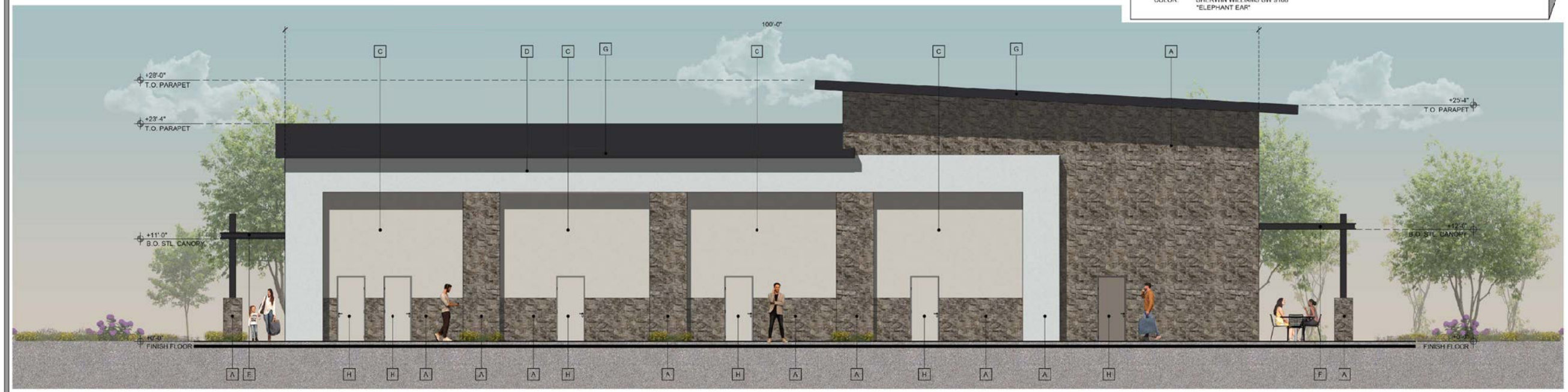

4 SHOPS B - EAST EXTERIOR ELEVATION — SCALE: 3/16" = 1'-0"

3 SHOPS B - NORTH EXTERIOR ELEVATION — SCALE: 3/16" = 1'-0"

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PHONE: 602.762.7334

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AUMSVILLE, OREGON

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- SHOPS B - EXTERIOR ELEVATIONS

A301A

PHNX JOB NUMBER: 22-379

FINISH KEYNOTES:

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ECHELON STANDARD MASONRY
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COLOR: WLN WALNUT

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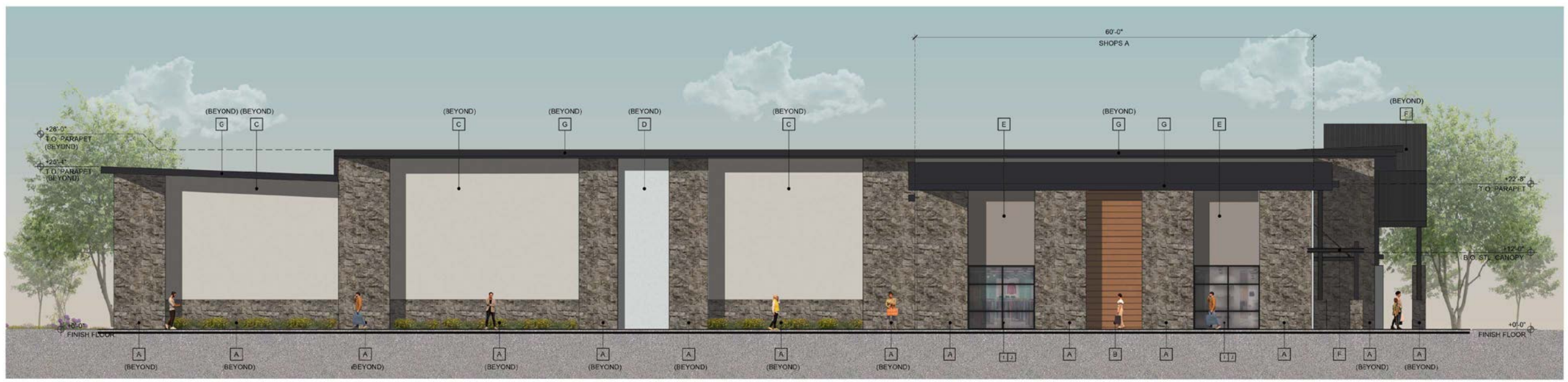
3 SOUTH EXTERIOR ELEVATION — SCALE: 1/8" = 1'-0"



2 NORTH EXTERIOR ELEVATION — SCALE: 1/8" = 1'-0"

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EXTERIOR ELEVATIONS

A301B

PHNX JOB NUMBER: 22-379

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- OFFICE - EXTERIOR ELEVATIONS

A301

PHNX JOB NUMBER: 22-379

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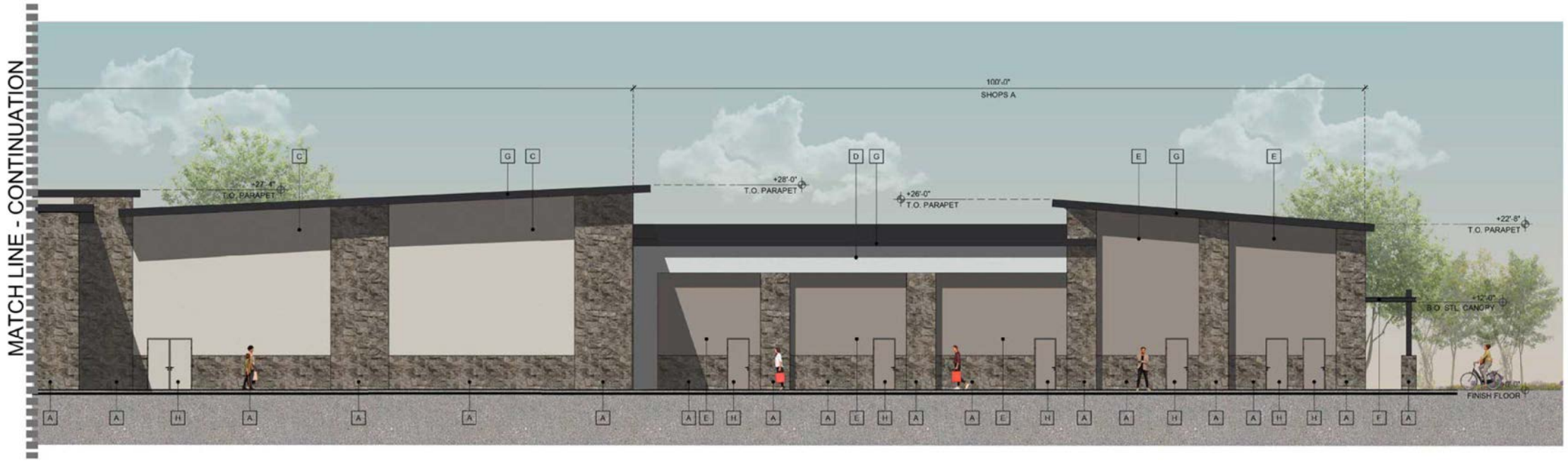

4 EAST EXTERIOR ELEVATION - CONTINUATION — SCALE: 1/8" = 1'-0"

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EXTERIOR ELEVATIONS

A302B

PHNX JOB NUMBER: 22-379

Landscape Plan

SCALE: 1"=80'-0"

PLANT PALETTE

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
	TREES		
	Acer rubrum 'Armstrong'	'Armstrong' Red Maple	1.5" Cal, B&B
	* Acer platanoides 'Columnare'	Columnar Norway Maple	1.5" Cal, B&B 2" Cal (frontage
	* Carpinus betulus 'Fastigiata'	Pyramidal European Hornbeam	1.5" Cal, B&B
	Cupressus glabra 'Blue Ice'	Blue Ice Arizona Cypress	6' Min.
	Cercis canadensis	Eastern Redbud	1.5" Cal, B&B
	* Pyrus calleryana 'Bradford'	Bradford Callery Pear	1.5" Cal, B&B 2" Cal (frontage
	* Fraxinus americana 'Autumn Purple'	'Autumn Purple' Ash	1.5" Cal, B&B
	Zelkova serrata 'Green Vase'	Green Vase Zelkova	1.5" Cal, B&B
	* Aumsville Approved Street Tree		
	GRASSES		
	Carex oshimensis 'Everest'	Sedge	1 Gal
	Calamagrostis 'Karl Foerster'	'Karl Foerster' Grass	1 Gal
	Festuca glauca 'Elijah Blue'	'Elijah Blue' Fescue	1 Gal
	SHRUBS EVERGREEN		
	Ligustrum japonicum 'Texasum'	Texas Wax-Leaf Privet	5 Gal
	Abelia x 'Kaleidoscope'	'Kaleidoscope' Abelia	1 Gal
	Arctostaphylos 'Sunset'	Sunset Manzanita	1 Gal
	Cistus x corbariensis	White Rockrose	3 Gal
	Ilex crenata 'Sky Pencil'	'Sky Pencil' Holly	3 Gal
	Mahonia repens	Creeping Mahonia	1 Gal
	Nandina domestica 'Compacta'	Compact Heavenly Bamboo	3 Gal
	Viburnum davidii	David Viburnum	3 Gal
	SHRUBS DECIDUOUS		
	Hydrangea 'Annabelle'	'Annabelle' Hydrangea	5 Gal
	Berberis 'Crimson Pigmy'	'Crimson Pigmy' Barberry	5 Gal
	Euonymus alatus 'Compactus'	Compact Burning Bush	1 Gal
	Cornus alba 'Hessei'	Siberian Dogwood	1 Gal
	Cornus sericea 'Kelseyii'	Kelsey Red Twig Dogwood	1 Gal
	Spiraea japonica 'Neon Flash'	'Neon Flash' Japanese Spirea	1 Gal
	Spiraea nipponica 'Snowmound'	Snowmound Spirea	3 Gal
	GROUND COVERS		
	Arctostaphylos uva-ursi 'Vancouver Jade'	Kinnikinnick	1 GAL
	Cotoneaster dammeri 'Coral Beauty'	Coral Beauty Cotoneaster	1 GAL
	Liriope muscari 'Big Blue'	Lilyturf	1 GAL
	Rubus pentalobus 'Emerald Carpet'	Emerald Carpet Bramble	1 GAL
	MISCELLANEOUS		
Mulch	Bark Mulch Topping in all Non-Grass Areas 3" thick typ.		
Grass	ProTime PT301 Water Smart Fescue Seed or Sod (Or Approved Equal)		

IRRIGATION NOTE:
Site to be irrigated by water efficient underground automatic irrigation system.

PLANTING SEASON NOTE:
It is anticipated that all planting onsite will be done between March 1st to October 31 to avoid winter season.

LANDSCAPE CALCULATIONS:	
SITE AREA:	35.33 ACRES (1,538,974.8 SQ FT)
LANDSCAPE AREA:	585,338 SQ FT (38% OF SITE)
PARKING AREA:	516,562 SQ FT
L/S IN PARKING AREA:	102,568 SQ FT (19.8 OF PARKING AREA)
L/S FRONTAGE:	1,042 LN FT
STREET TREES REQUIRED:	1,042/40= 27 TREES REQUIRED
STREET TREES PROVIDED:	27 TREES BETWEEN STREET AND SIDEWALK
ADDITIONAL STREET TREES REQ:	27 TREES WITHIN 10' OF SIDEWALK REQUIRED
ADD STREET TREES PROVIDED:	27 ADDITIONAL TREES PROVIDED WITHIN 10' OF SIDEWALK
TOTAL STREET TREES REQUIRED:	54 TREES (2" CALIPER MIN.)
TOTAL STREET TREE PROVIDED:	54 TREES (2" CALIPER MIN.)
TREES SIZE:	ALL STREET TREES PROVIDED ARE 2" CALIPER

SOIL NOTE:
Contractor to have a soil test performed by any Oregon State University County Extension Agent or by any other approved soils testing laboratory. The soils analysis shall provide a chemical analysis of the soil and recommendations for soil improvement for the crop to be grown. The recommendations shall be used to select the particular fertilizer and soil improvement chemicals to be used prior to planting.

After rough grading is completed and before topsoil is spread, apply lime and/or superphosphate as determined by soil analysis. Conform to manufacturer's recommendations for applying lime and superphosphate simultaneously, and schedule application or applications accordingly.

Spread topsoil and soil conditioner over the prepared rough grade using a rubber tired tractor with grader blade or equivalent, weighing maximum of 3 1/5 tons; thoroughly mix the applied materials to a depth of 8 inches with a disc or cultivator over the entire area in two directions at right angles. Rake topsoiled area to a uniform grade so that all areas drain, as shown or as approved. Remove all trash and stones exceeding 2 inches in diameter from area to a depth of 2 inches prior to preparation and planting grass.

After the specified chemical analysis report for topsoil is received, prepare topsoil mixture for plant pits and beds by thoroughly mixing approved topsoil with soil conditioner materials, fertilizer, and lime. Thoroughly mix with rotary mixer or other approved method in following proportions:

Topsoil Classification by Clay Content	Required Mixture			Parts By Volume	
	Topsoil	Sand	Peat	Fertilizer*	Lime*
Clay 5-10 percent	4	0	1	(1/2) LB/CY	(1/2) LB/CY
Clay 10-15 percent	2	2	1	(1/2) LB/CY	(1/2) LB/CY
Clay 15-25 percent	2	4	1.5	(1/2) LB/CY	(1/2) LB/CY

*Adjust in accordance with soil test chemical analysis report.
Store and protect topsoil mixture and other materials at designated area of the site. Protect topsoil mixture from excessive leaching by covering with tarpaulin if stored for more than six weeks.

hillman workshop
landscape architecture
2901 e. highland ave
phoenix, az 85016
480-686-2001

REGISTERED 1109 Aaron James Hillman OREGON 03.10.24 LANDSCAPE ARCHITECT

Aumsville Mixed Use Development

Aumsville, OR

DATE: 03.10.24

Landscape Plan

L1.0

NOTE:
THE BELOW MAINTENANCE SPEC IS PER THE OREGON LANDSCAPE CONTRACTORS ASSOCIATION LANDSCAPE GUIDELINES.

LANDSCAPE MAINTENANCE

15.01 DESCRIPTION
The landscape contractor might maintain the landscape plantings and the landscape area for a specified a period of time, usually the first year after planting or until landscape plantings are established; or might perform continuing maintenance on the site. The intent of the maintenance should be to preserve the health of the plants, the overall appearance of the site and the intended design concept. This section is not intended to address ongoing maintenance after the first year.

15.02 WORK INCLUDED
This section includes all work performed to maintain a landscape site up to one year after initial installation including, but not limited to, site inspection; hardscape cleaning; mowing, fertilization, pruning, and training of plant material, weed, disease and insect suppression; irrigation scheduling; tree staking removal; plant replacement; mulching; and general site clean-up.

15.03 QUALITY ASSURANCE
A. COMPLIANCE: All work must comply with client and written specifications and/or codes as set forth in contract or must be performed at the minimum standard as indicated.
B. LICENSING: Businesses performing only the maintenance of the landscape do not have to be licensed landscape contractors. If performing any chemical applications, they must be properly licensed by the Oregon Department of Agriculture for the proper pesticide certification. Contractors should limit pruning to no more than 12' (twelve feet) above ground. Larger trees and pruning heights should be referred to a licensed arborist.

15.04 SITE CONDITIONS
A. SITE INSPECTIONS:
1. Contractor or persons responsible for maintenance should perform a thorough site inspection prior to the commencement of work. Each site should be inspected at a one month minimum interval during the growing season.
2. All maintenance requirements for the site should be listed and the maintenance service provider should be familiar with all plant material including growth habits and growing requirements
3. Maintenance provider should inform client, or client's representative, of work required including scheduling, materials and fees and should enter into contract for such.

B. ENVIRONMENTAL CONDITIONS
1. The maintenance contractor should take note of any environmental conditions such as wetlands, existing waterways, drainage patterns, heat sinks, noxious weeds or quarantined plants, and pest infestations. The client and/or client's representative should be notified of such conditions and maintenance practices should be adjusted accordingly.

15.05 SCHEDULING
A. Maintenance services should be scheduled as per contract on an as-needed basis depending on the time of year, the individual landscape and the services provided.
B. Changes to those services specified by contract should be approved by the contractor, and the client or client's representative in writing.

15.06 WARRANTY
A. CONTRACTOR'S RESPONSIBILITY:
1. Maintenance contractor should furnish all supervision, labor, materials and supplies, and equipment needed to perform the specified work.
2. All plant material should be maintained in a healthy state, irrigation and drainage systems kept in good working order, and the general site kept clean and hazard free.

B. CONTRACTOR'S LIABILITY: The maintenance contractor should replace any plant material or hardscapes damaged by the contractor's action or lack of action.
C. LIMITS TO CONTRACTOR'S LIABILITY: Contractor should not be responsible for the following unless specifically agreed to in contract and allowed by law:
1. Replacement and or extension of irrigation components due to client request or normal wear. Without an irrigation contractors' license, only minor head and line repairs may be performed.
2. Replacement and/or renovation of any plant material or other materials damaged by power failure, weather, vandalism, rodents, other pests or any other causes beyond the contractors' control.
3. Renovation and thatching of turf.
4. Rotation of annual color.

15.07 EQUIPMENT
Unless agreed to in written contract, maintenance contractor should provide all necessary equipment to perform the maintenance services. All equipment should have safety guards in place and should be used for the manufacturers' intended purpose. Equipment should be maintained in the proper condition and adjusted to perform the needed work.

15.08 MATERIALS
A. FERTILIZERS: All fertilizers used should have proper labels with a guaranteed analysis and should be selected to provide nutrients for specific applications.
B. PESTICIDES: All pesticides should be registered with the EPA, approved for use by the state of Oregon, approved for the specific application, used only as per label instructions, and applied only by a licensed applicator.
C. GROWTH REGULATOR: Regulators should be used as per specification and label direction only and should be applied by a licensed applicator only.

15.09 TREES AND SHRUBS
A. PRUNING:
1. In general, trees and shrubs should not be pruned in the first season after planting except for the removal of dead, damaged or diseased wood or for training as per specifications. All pruning should conform to the design and maintenance concepts for the site as agreed to by contractor and client or client's representative.
2. Pruning should enhance the desired growth characteristics of the plants and promote strong structural growth, especially in trees. Trees with single central leaders need little or no pruning. Such trees should never be topped or have the central leader removed. Trees with multiple leaders should be pruned to develop strong structural scaffold branches that are 18-24" (eighteen to twenty four inches) apart and to prevent "V" crotches. In trees, watersprouts and suckers should be removed. All pruning cuts should be made to conform with current practices as set forth by the International Society of Arborists and/or university extension reasearch.
3. Timing of pruning should be selected based on plant need and design concepts:
a. Shearing and training may have to take place multiple times throughout the year.
b. Trees and shrubs that bloom on new wood should normally be pruned after flowering.
c. Trees and shrubs that bloom on second year and older wood should normally be pruned in the winter dormant season.
d. Trees that are prone to "bleeding", such as birch, should only be pruned in early winter or mid-summer.
4. When pruning plants that may have fungal or viral diseases, pruning tool should be disinfected before each cut is made.
5. Plants requiring special training such as espaliers should be pruned beginning right after planting and continuing on a regular basis depending on growth rate.
6. Unless specified or desired for special growth pattern or rehabilitation, no more than 30% (thirty percent) of a plant should be removed at any one pruning.
7. All pruning debris should be removed from the site and disposed of in a proper plant debris recycling site.

B. FERTILIZATION:
1. TREES AND SHRUBS: Fertilization of trees and shrubs should be carried out on an as needed basis for each individual plant.
a. METHODS: Contractor should select fertilization methods that supply nutrients to the feeder root zone of plants being fertilized while at the same time, protecting the environment from run-off and groundwater pollution. Amounts of fertilizer and formulations should be accurately calculated and applied for each individual application.
b. MATERIALS: It is recommended that unless specified, contractor should use the least amount of fertilizers possible; should use slow release type materials or use organic materials.
C. MULCHING: Where mulch was applied as part of the initial installation, a 2' to 4" (two inch to four inch) depth should be maintained. Cost for any additional material which may be needed should be negotiated with the client or client's representative.

15.10 TURFGRASS
A. MOWING
1. TIMING/FREQUENCY: Turf should be mowed whenever needed during active growth. Mowing should be avoided when ground is too wet and/or when frozen. A task schedule negotiated between the contractor and client or client's representative will determine mowing frequency.
2. HEIGHT: Cool season turfgrass should be mowed at heights recommended for each turf type. Mowing turf at the higher recommended ranges will increase durability and reduce the amount of water and nutrients required to keep turf healthy. At any cutting, no more than one third of the length of the blade should be removed.
3. PATTERN: The pattern of mowing should be changed each time the turf is mowed to prevent compaction and graining of turf.
4. CLIPPINGS: Whenever practical, mulching mowers should be used and clippings left on the lawn. When clippings are removed, they should be properly composted or deposited in a recycle site.
5. EDGING: Edging should be performed at a minimum two week interval during the active growing season to limit the spread of turf, maintain clean edges on paved areas, and to insure clear operation of sprinkler heads. An agreed upon task schedule will determine the actual frequency of edging.
6. EQUIPMENT: Mower types should be matched with the specified turf height and use. Mower blades should be kept sharp and balanced.

B. FERTILIZATION:
1. APPLICATION: Fertilization of turf should be based on soil tests and turf types.
2. TIMING: Fertilization of turf will be determined by contract requirements and localized environmental factors.
3. RATES: To prevent environmental damage and to promote overall turf health, the lowest recommended fertilizer rates for a given area should be used. If needed, soil Ph should be adjusted to fit the turf type used.
4. When possible, slow release and/or organic fertilizers should be used.
5. Fertilizers should be applied as per manufacturer's specifications and generally should be watered in after application.
6. Care should be taken in spreading fertilizer to prevent overthrow into areas not needing nutrients and on to hard surfaces where runoff could pollute water.

15.11 PEST CONTROL
Pest control should be performed on an as needed basis:
A. Pest control should be performed by individuals, or in the direct supervision of individuals, properly licensed by the Oregon Department of Agriculture for the applications being made.
B. Pesticide applications should be made using "Integrated Pest Management" principles as follows:
1. Pest tolerance levels should be established for each section of sites.
2. Contractor should use the least toxic methods for controlling pests including cultural and biological means first; then pesticides.
3. Pesticides should only be applied for specific, targeted pests.
4. When utilized, pesticides should be applied according to label, EPA, DEQ, and any other applicable regulations.
5. Pesticides should be used in the lowest strength that will deliver the desired level of of pest control.
6. Weeds should be managed using cultural means first, then herbicides as needed:
a Mulched areas should be properly maintained.
b. Hand removal should be performed whenever practical.
c. When herbicides are used, weeds should be removed as soon as they die back.

15.12 LEAF AND DEBRIS REMOVAL
A. LEAF REMOVAL: When feasible, leaves free from insect and disease should be sheet composted on site. Leaves removed from site should be disposed of in a proper yard waste recycling facility.
B. DEBRIS REMOVAL: Debris should be removed from site at each scheduled maintenance operation and sent to a proper disposal site.

15.13 BLOWING
When used, timing and safe use for operators and any persons within the surrounding area should be carefully considered to minimize noise and safety impacts. Use must comply with local ordinances.

hillman workshop
landscape architecture
2901 e. highland ave
phoenix, az 85016
480-686-2001

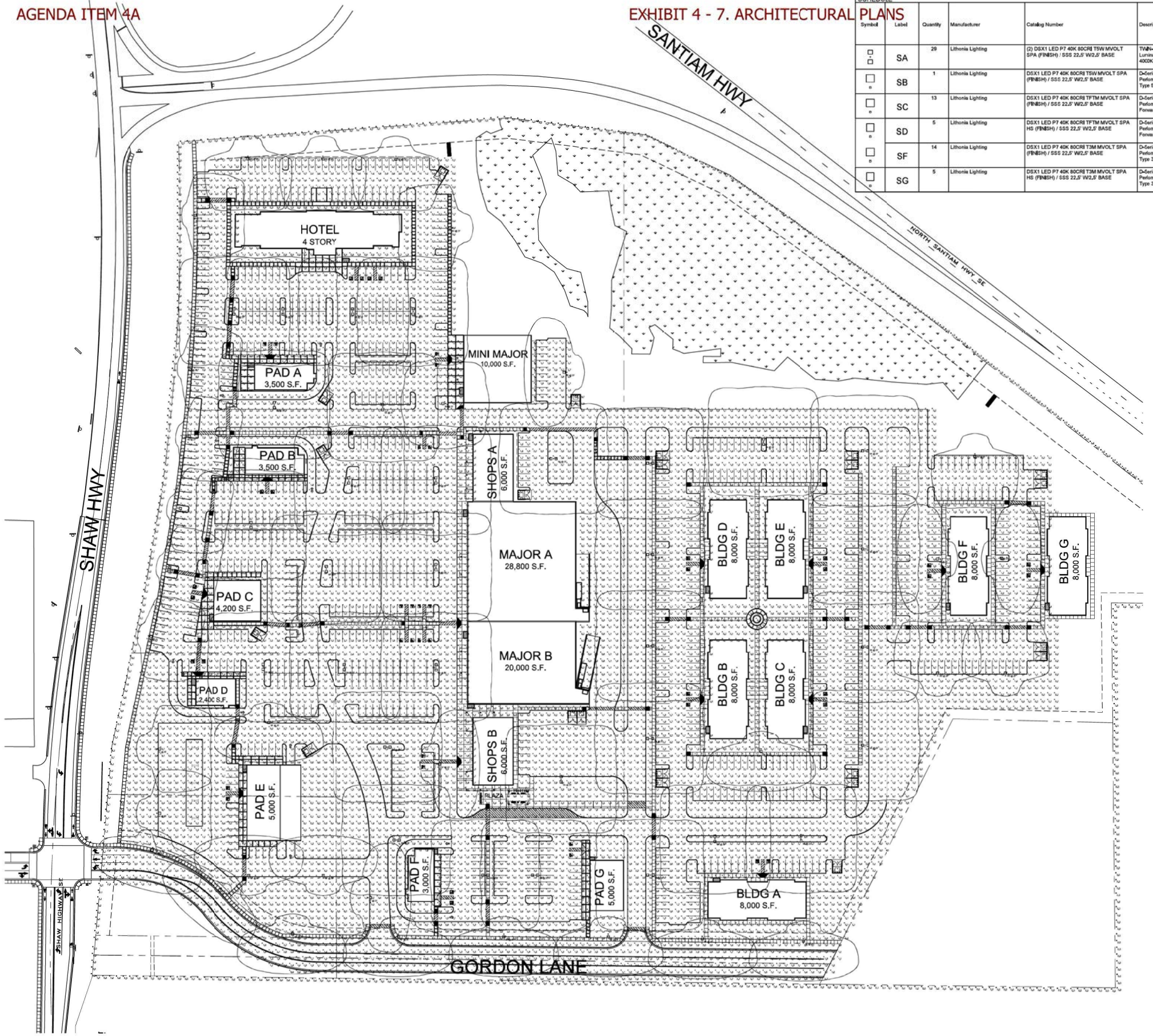
REGISTERED 1109 Aaron James Hillman OREGON 12.19.23 LANDSCAPE ARCHITECT

Aumsville Mixed Use Development
Aumsville, OR

DATE: 12.19.23

Landscape Maintenance

L2.0



SCHEDULE

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	SA	29	Lithonia Lighting	(2) DSX1 LED P7 40K 80CRI TSW MVOLT SPA (FINISH) / SSS 22,5' W2,5' BASE	TWIN-HEAD D-Series Size 1 Area Luminaire P7 Performance Package 4000K CCT 80 CRI Type 5 Wide	LED - 4000K	DSX1_LED_P7_40K_80CRI_TSW_ies	21624	0,91	368,86
	SB	1	Lithonia Lighting	DSX1 LED P7 40K 80CRI TSW MVOLT SPA (FINISH) / SSS 22,5' W2,5' BASE	D-Series Size 1 Area Luminaire P7 Performance Package 4000K CCT 80 CRI Type 5 Wide	LED - 4000K	DSX1_LED_P7_40K_80CRI_TSW_ies	21624	0,91	184,43
	SC	13	Lithonia Lighting	DSX1 LED P7 40K 80CRI TFTM MVOLT SPA (FINISH) / SSS 22,5' W2,5' BASE	D-Series Size 1 Area Luminaire P7 Performance Package 4000K CCT 80 CRI Forward Throw	LED - 4000K	DSX1_LED_P7_40K_80CRI_TFTM_ies	20825	0,91	184,43
	SD	5	Lithonia Lighting	DSX1 LED P7 40K 80CRI TFTM MVOLT SPA HS (FINISH) / SSS 22,5' W2,5' BASE	D-Series Size 1 Area Luminaire P7 Performance Package 4000K CCT 80 CRI Forward Throw Houseside Shield	LED - 4000K	DSX1_LED_P7_40K_80CRI_TFTM_HS.ies	17464	0,91	184,4348
	SF	14	Lithonia Lighting	DSX1 LED P7 40K 80CRI T3M MVOLT SPA (FINISH) / SSS 22,5' W2,5' BASE	D-Series Size 1 Area Luminaire P7 Performance Package 4000K CCT 80 CRI Type 3 Medium	LED - 4000K	DSX1_LED_P7_40K_80CRI_T3MU_ies	20378	0,91	184,43
	SG	5	Lithonia Lighting	DSX1 LED P7 40K 80CRI T3M MVOLT SPA HS (FINISH) / SSS 22,5' W2,5' BASE	D-Series Size 1 Area Luminaire P7 Performance Package 4000K CCT 80 CRI Type 3 Medium Houseside Shield	LED - 4000K	DSX1_LED_P7_40K_80CRI_T3M_HS.ies	17664	0,91	184,4348

STATISTICS

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
SITE - FC @ GRADE	+	1,8 fc	4,2 fc	0,2 fc	N/A	N/A
PROPERTY LINE - FC @ GRADE	X	0,1 fc	0,7 fc	0,0 fc	N/A	N/A

PHNX DESIGN
1855 EAST SOUTHERN AVE, SUITE 204
MESA, ARIZONA 85204
PHONE: 602.762.7354

PROPOSED SITE PLAN

SHAW HIGHWAY AND SANTIAM HIGHWAY
AUMSVILLE, OREGON

△	DATE	REVISION
1		
2		
3		
4		
5		

PHOTOMETRIC SITE PLAN

E100

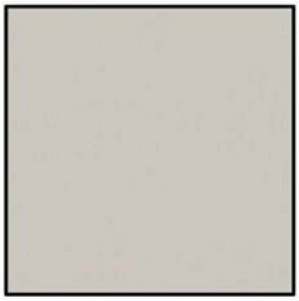
PHNX JOB NUMBER: 22-379

1 PROPOSED PHOTOMETRIC SITE PLAN

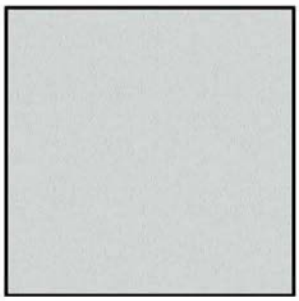
SCALE: 1" = 70'-0"

VENEER - HILLCREST STONE
ECHELON STANDARD MASONRY
COLOR: ALPINE

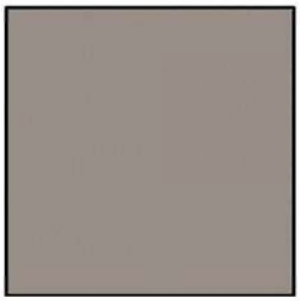
WOOD SIDING
ALPOLIC
COLOR: WLN WALNUT



SYNTHETIC STUCCO SYSTEM
FINISH: SMOOTH SAND FINISH
COLOR: SHERWIN WILLIAMS
SW 9547 "VESSEL"



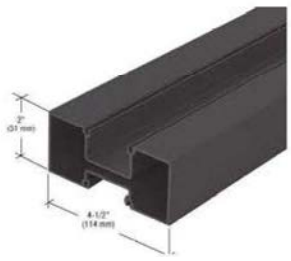
SYNTHETIC STUCCO SYSTEM
FINISH: SMOOTH SAND FINISH
COLOR: SHERWIN WILLIAMS
SW 6253 "OLYMPUS WHITE"



SYNTHETIC STUCCO SYSTEM
FINISH: SMOOTH SAND FINISH
COLOR: SHERWIN WILLIAMS SW 9168
"ELEPHANT EAR"

METAL CANOPY, COLUMN AND
METAL PARAPET CAP
COLOR: SHERWIN WILLIAMS
SW 6258"TRICORN BLACK"

1" INSULATED GLAZING



ALUMINUM STOREFRONT
MANUFACT: KAWNEER
COLOR: DARK BRONZE

PHX DESIGN
1855 E. SOUTHERN AVE., SUITE 204
MESA, ARIZONA 85206
602.762.7364

COLOR MATERIAL BOARD

SHAW HIGHWAY AND
SANTIAM HIGHWAY
AUMSVILLE, OREGON

D-Series Size 1
LED Area Luminaire

Catalog Number

Notes

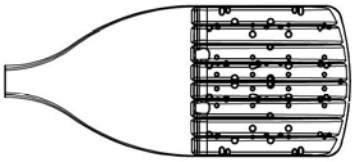
Type

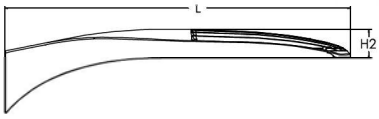
Hit the Tab key or mouse over the page to see all interactive elements.

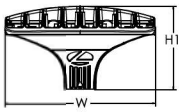
d-series

Specifications

EPA:	0.69 ft² (0.06 m²)
Length:	32.71" (83.1 cm)
Width:	14.26" (36.2 cm)
Height H1:	7.88" (20.0 cm)
Height H2:	2.73" (6.9 cm)
Weight:	34 lbs (15.4 kg)







Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature[2]	Color Rendering Index[2]	Distribution		Voltage	Mounting
DSX1 LED	**Forward optics** P1 P6 P2 P7 P3 P8 P4 P9 P5 **Rotated optics** P10[1] P12[1] P11[1] P13[1]	(this section 70CRI only) 30K 3000K 40K 4000K 50K 5000K (this section 80CRI only, extended lead times apply) 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	70CRI 70CRI 70CRI 80CRI 80CRI 80CRI 80CRI 80CRI	AFR Automotive front row T1S Type I short T2M Type II medium T3M Type III medium T3LG Type III low glare[3] T4M Type IV medium T4LG Type IV low glare[3] TFTM Forward throw medium	T5M Type V medium T5LG Type V low glare T5W Type V wide BLC3 Type III backlight control[3] BLC4 Type IV backlight control[3] LCCO Left corner cutoff[3] RCCO Right corner cutoff[3]	MVOLT (120V-277V)[4] HVOLT (347V-480V)[5,6] XVOLT (277V - 480V)[7,8]	**Shipped included** SPA Square pole mounting (#8 drilling) RPA Round pole mounting (#8 drilling) SPA5 Square pole mounting #5 drilling[9] RPA5 Round pole mounting #5 drilling[9] SPA8N Square narrow pole mounting #8 drilling WBA Wall bracket[10] MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)

Control options

Shipped installed

NLTAIR2 PIRHN	nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc.[11,12,20,21]
PIR	High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc[13,20,21]
PER	NEMA twist-lock receptacle only (controls ordered separate)[14]
PER5	Five-pin receptacle only (controls ordered separate)[14,21]
PER7	Seven-pin receptacle only (controls ordered separate)[14,21]
FAO	Field adjustable output[15,21]
BL30	Bi-level switched dimming, 30%[16,21]
BL50	Bi-level switched dimming, 50%[16,21]
DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[17]
DS	Dual switching[18,19,21]

Other options

Shipped installed

SPD20KV	20KV surge protection
HS	Houseside shield (black finish standard)[22]
L90	Left rotated optics[1]
R90	Right rotated optics[1]
CCE	Coastal Construction[23]
HA	50°C ambient operation[24]

Shipped separately

EGSR	External Glare Shield (reversible, field install required, matches housing finish)
BSDB	Bird Spikes (field install required)

Finish *(required)*

DDBXD	Dark Bronze
DBLXD	Black
DNAXD	Natural Aluminum
DWHXD	White
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white

Ordering Information

Accessories

Ordered and shipped separately.

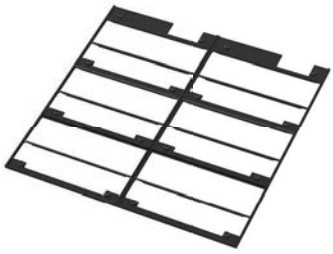
DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [25]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [25]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [25]
DSHORT SBK	Shorting cap [25]
DSX1HS P#	House-side shield (enter package number 1-13 in place of #)
DSXRPA (FINISH)	Round pole adapter (#8 drilling, specify finish)
DSXSPA5 (FINISH)	Square pole adapter #5 drilling (specify finish)
DSXRPA5 (FINISH)	Round pole adapter #5 drilling (specify finish)
DSX1EGSR (FINISH)	External glare shield (specify finish)
DSX1BSDB (FINISH)	Bird spike deterrent bracket (specify finish)

NOTES

1 Rotated optics available with packages P10, P11, P12 and P13. Must be combined with option L90 or R90.
2 30K, 40K, and 50K available in 70CRI and 80CRI. 27K and 35K only available with 80CRI. Contact Technical Support for other possible combinations.
3 T3LG, T4LG, BLC3, BLC4, LCCO, RCCO not available with option HS.
4 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
5 HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
6 HVOLT not available with package P1 and P10 when combined with option NLTAIR2 PIRHN or option PIR.
7 XVOLT operates with any voltage between 277V and 480V (50/60 Hz).
8 XVOLT not available in packages P1 or P10.
9 SPA5 and RPA5 for use with #5 drilling only (Not for use with #8 drilling).
10 WBA cannot be combined with Type 5 distributions plus photocell (PER).
11 NLTAIR2 and PIRHN must be ordered together. For more information on nLight AIR2 visit this link
12 NLTAIR2 PIRHN not available with other controls including PIR, PER, PER5, PER7, FAO, BL30, BL50, DMG and DS. NLTAIR2 PIRHN not available with P1 and P10 using HVOLT. NLTAIR2 PIRHN not available with P1 and P10 using XVOLT.
13 PIR not available with NLTAIR2 PIRHN, PER, PER5, PER7, FAO BL30, BL50, DMG and DS. PIR not available with P1 and P10 using HVOLT. PIR not available with P1 and P10 using XVOLT.
14 PER/PER5/PER7 not available with NLTAIR2 PIRHN, PIR, BL30, BL50, FAO, DMG and DS. Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
15 FAO not available with other dimming control options NLTAIR2 PIRHN, PIR, PER5, PER7, BL30, BL50, DMG and DS.
16 BL30 and BL50 are not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, FAO, DMG and DS.
17 DMG not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, BL30, BL50, FAO and DS.
18 DS not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, BL30, BL50, FAO and DMG.
19 DS requires (2) separately switched circuits. DS provides 50/50 fixture operation via (2) different sets of leads using (2) drivers. DS only available with packages P8, P9, P10, P11, P12 and P13.
20 Reference Motion Sensor Default Settings table on page 4 to see functionality.
21 Reference Controls Options table on page 4.
22 HS not available with T3LG, T4LG, BLC3, BLC4, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
23 CCE option not available with option BS and EGSR. Contact Technical Support for availability.
24 Option HA not available with performance packages P4, P5, P7, P8, P9 and P13.
25 Requires luminaire to be specified with PER, PER5 or PER7 option. See Controls Table on page 4.

Shield Accessories

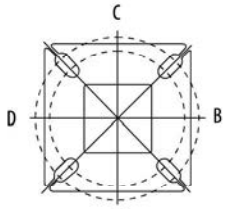
External Glare Shield (EGSR)

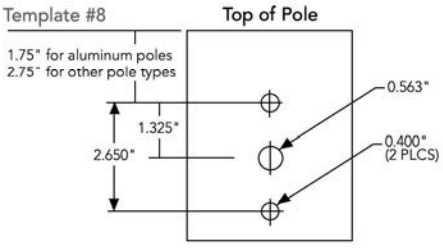


House Side Shield (HS)

Drilling

HANDHOLE ORIENTATION





Tenon Mounting Slipfitter

Tenon O.D.	Mounting	Single Unit	2 @ 180	2 @ 90	3 @ 90	3 @120	4 @ 90
2-3/8"	RPA	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 390	AS3-5 320	AS3-5 490
2-7/8"	RPA	AST25-190	AST25-280	AST25-290	AST25-390	AST25-320	AST25-490
4"	RPA	AST35-190	AST35-280	AST35-290	AST35-390	AST35-320	AST35-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19AS	DM28AS	DM29AS	DM39AS	DM32AS	DM49AS
		Minimum Acceptable Outside Pole Dimension					
SPA	#8	3.5"	3.5"	3.5"	3.5"		3.5"
RPA	#8	3"	3"	3"	3"	3"	3"
SPA5	#5	3"	3"	3"	3"		3"
RPA5	#5	3"	3"	3"	3"	3"	3"
SPA8N	#8	3"	3"	3"	3"		3"

DSX1 Area Luminaire - EPA

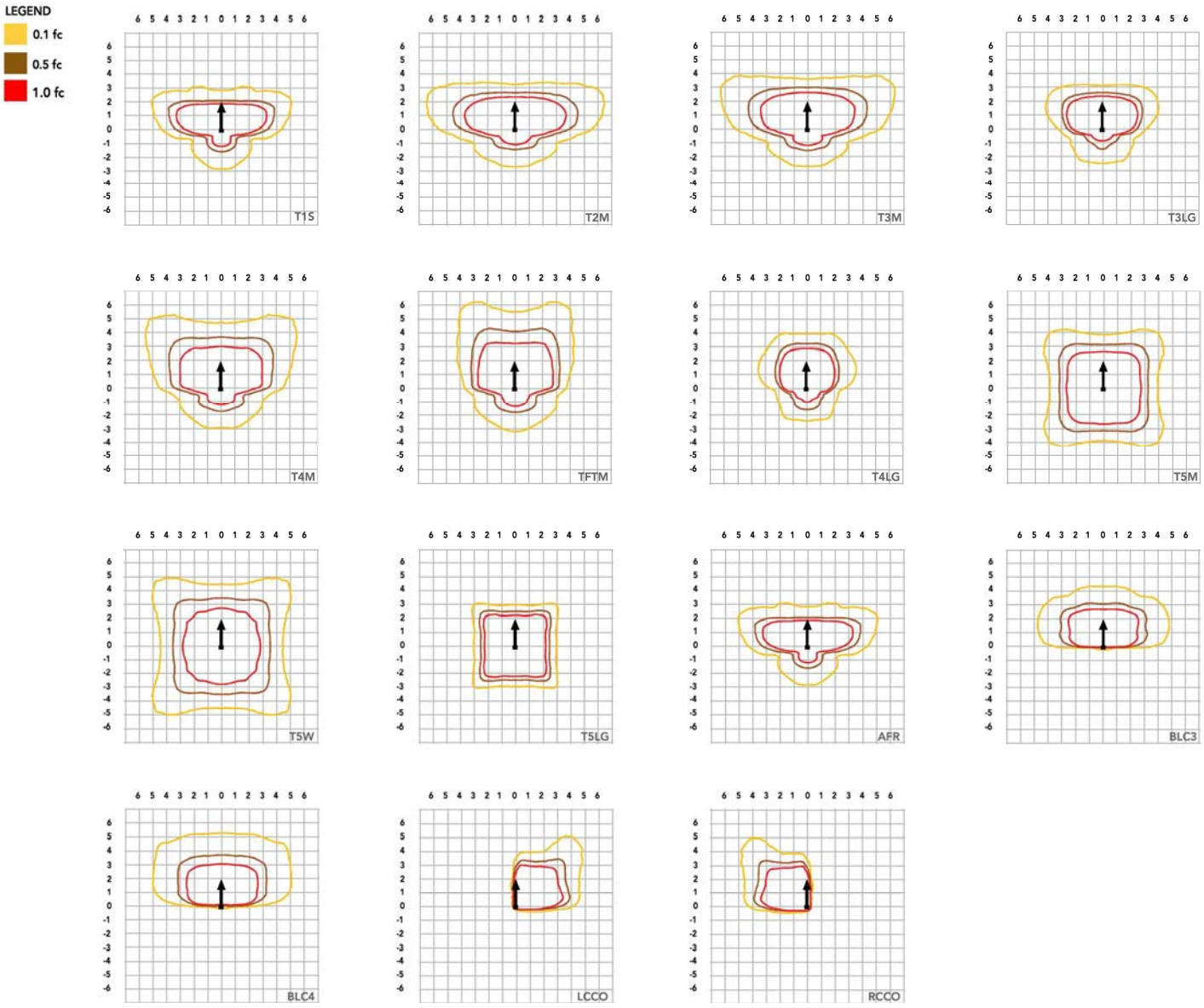
*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single DM19	2 @ 180 DM28	2 @ 90 DM29	3 @ 90 DM39	3 @ 120 DM32	4 @ 90 DM49
Mounting Type						
DSX1 with SPA	0.69	1.38	1.23	1.54	---	1.58
DSX1 with SPA5, SPA8N	0.70	1.40	1.30	1.66	---	1.68
DSX1 with RPA, RPA5	0.70	1.40	1.30	1.66	1.60	1.68
DSX1 with MA	0.83	1.66	1.50	2.09	2.09	2.09

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's homepage.

Isofootcandle plots for the DSX1 LED P9 40K 70CRI. Distances are in units of mounting height (25').



Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°C**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
0	1.00
25,000	0.95
50,000	0.90
100,000	0.81

FAO Dimming Settings

FAO Position	% Wattage	% Lumen Output
8	100%	100%
7	93%	95%
6	80%	85%
5	66%	73%
4	54%	61%
3	41%	49%
2	29%	36%
1	15%	20%

*Note: Calculated values are based on original performance package data. When calculating new values for given FAO position, use maximum published values by package listed on specification sheet (input watts and lumens by optic type).

Electrical Load

	Performance Package	LED Count	Drive Current (mA)	Wattage	Current (A) 120V	208V	240V	277V	347V	480V
Forward Optics (Non-Rotated)	P1	30	530	51	0.42	0.24	0.21	0.18	0.15	0.11
	P2	30	700	68	0.56	0.33	0.28	0.24	0.20	0.14
	P3	30	1050	104	0.85	0.49	0.43	0.37	0.29	0.21
	P4	30	1250	125	1.03	0.60	0.52	0.45	0.36	0.26
	P5	30	1400	142	1.15	0.66	0.58	0.50	0.40	0.29
	P6	40	1250	167	1.38	0.79	0.69	0.60	0.48	0.34
	P7	40	1400	188	1.54	0.89	0.77	0.67	0.53	0.38
	P8	60	1100	216	1.80	1.04	0.90	0.78	0.62	0.45
	P9	60	1400	279	2.31	1.33	1.15	1.00	0.80	0.58
Rotated Optics (Requires L90 or R90)	P10	60	530	101	0.84	0.49	0.42	0.37	0.29	0.21
	P11	60	700	135	1.12	0.65	0.56	0.49	0.39	0.28
	P12	60	1050	206	1.72	0.99	0.86	0.74	0.59	0.43
	P13	60	1400	279	2.30	1.33	1.15	1.00	0.79	0.57

LED Color Temperature / Color Rendering Multipliers

	70 CRI		80CRI		90CRI	
	Lumen Multiplier	Availability	Lumen Multiplier	Availability	Lumen Multiplier	Availability
5000K	102%	Standard	92%	Extended lead-time	71%	(see note)
4000K	100%	Standard	92%	Extended lead-time	67%	(see note)
3500K	100%	(see note)	90%	Extended lead-time	63%	(see note)
3000K	96%	Standard	87%	Extended lead-time	61%	(see note)
2700K	94%	(see note)	85%	Extended lead-time	57%	(see note)

Note: Some LED types are available as per special request. Contact Technical Support for more information.

Motion Sensor Default Settings

Option	Unoccupied Dimmed Level	High Level (when occupied)	Photocell Operation	Dwell Time	Ramp-up Time	Dimming Fade Rate
PIR	30%	100%	Enabled @ 2FC	7.5 min	3 sec	5 min
NLTAIR2 PIRHN	30%	100%	Enabled @ 2FC	7.5 min	3 sec	5 min

Controls Options

Nomenclature	Description	Functionality	Primary control device	Notes
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS (not available on DSX0)	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two separately switched circuits. Consider nLight AIR as a more cost effective alternative.
PER5 or PER7	Twist-lock photocell receptacle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire. Cannot be used with other controls options that need the 0-10V leads.
PIR	Motion sensor with integral photocell. Sensor suitable for 8' to 40' mounting height.	Luminaires dim when no occupancy is detected.	Acuity Controls rSBG	Cannot be used with other controls options that need the 0-10V leads.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclypse.	nLight Air rSBG	nLight AIR sensors can be programmed and commissioned from the ground using the CIAIRity Pro app. Cannot be used with other controls options that need the 0-10V leads.
BL30 or BL50	Integrated bi-level device that allows a second control circuit to switch all light engines to either 30% or 50% light output	BLC device provides input to 0-10V dimming leads on all drivers providing either 100% or dimmed (30% or 50%) control by a secondary circuit	BLC UVOLT1	BLC device is powered off the 0-10V dimming leads, thus can be used with any input voltage from 120 to 480V

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of configurations shown within the tolerances described within LM-79. Contact factory for performance data on any configurations not shown here.

Forward Optics

Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P1	51W	30	530	T1S	7,776	1	0	2	153	8,104	1	0	2	159	8,262	1	0	2	162
				T2M	7,203	1	0	3	142	7,507	2	0	3	147	7,653	2	0	3	150
				T3M	7,287	1	0	3	143	7,594	1	0	3	149	7,742	1	0	3	152
				T3LG	6,509	1	0	1	128	6,783	1	0	1	133	6,916	1	0	1	136
				T4M	7,395	1	0	3	145	7,707	1	0	3	151	7,857	1	0	3	154
				T4LG	6,726	1	0	1	132	7,010	1	0	1	138	7,146	1	0	1	140
				TFTM	7,446	1	0	3	146	7,760	1	0	3	152	7,912	1	0	3	155
				T5M	7,609	3	0	2	149	7,930	3	0	2	156	8,084	3	0	2	159
				T5W	7,732	3	0	2	152	8,058	4	0	2	158	8,215	4	0	2	161
				T5LG	7,631	3	0	1	150	7,953	3	0	1	156	8,108	3	0	1	159
				BLC3	5,300	0	0	2	104	5,524	0	0	2	109	5,631	0	0	2	111
				BLC4	5,474	0	0	3	108	5,705	0	0	3	112	5,816	0	0	3	114
				RCCO	5,348	0	0	2	105	5,573	0	0	2	109	5,682	0	0	2	112
				LCCO	5,348	0	0	2	105	5,573	0	0	2	109	5,682	0	0	2	112
				AFR	7,776	1	0	2	153	8,104	1	0	2	159	8,262	1	0	2	162
P2	68W	30	700	T1S	9,997	1	0	2	147	10,418	1	0	2	154	10,621	1	0	2	157
				T2M	9,260	2	0	3	137	9,651	2	0	3	142	9,839	2	0	3	145
				T3M	9,368	2	0	3	138	9,763	2	0	3	144	9,953	2	0	3	147
				T3LG	8,368	1	0	2	123	8,721	1	0	2	129	8,891	1	0	2	131
				T4M	9,507	2	0	3	140	9,909	2	0	3	146	10,102	2	0	3	149
				T4LG	8,647	1	0	2	128	9,012	1	0	2	133	9,187	1	0	2	136
				TFTM	9,573	2	0	3	141	9,977	2	0	3	147	10,172	2	0	3	150
				T5M	9,782	4	0	2	144	10,195	4	0	2	150	10,393	4	0	2	153
				T5W	9,940	4	0	2	147	10,360	4	0	2	153	10,562	4	0	2	156
				T5LG	9,810	3	0	1	145	10,224	3	0	1	151	10,423	3	0	1	154
				BLC3	6,814	0	0	2	101	7,101	0	0	2	105	7,240	0	0	2	107
				BLC4	7,038	0	0	3	104	7,334	0	0	3	108	7,477	0	0	3	110
				RCCO	6,875	1	0	2	101	7,165	1	0	2	106	7,305	1	0	2	108
				LCCO	6,875	1	0	2	101	7,165	1	0	2	106	7,305	1	0	2	108
				AFR	9,997	1	0	2	147	10,418	1	0	2	154	10,621	1	0	2	157
P3	102W	30	1050	T1S	14,093	2	0	2	138	14,687	2	0	2	144	14,973	2	0	2	147
				T2M	13,055	2	0	3	128	13,605	2	0	3	133	13,871	2	0	3	136
				T3M	13,206	2	0	4	129	13,763	2	0	4	135	14,031	2	0	4	137
				T3LG	11,797	2	0	2	115	12,294	2	0	2	120	12,534	2	0	2	123
				T4M	13,403	2	0	4	131	13,968	2	0	4	137	14,241	2	0	4	139
				T4LG	12,190	2	0	2	119	12,704	2	0	2	124	12,952	2	0	2	127
				TFTM	13,496	2	0	4	132	14,065	2	0	4	138	14,339	2	0	4	140
				T5M	13,790	4	0	2	135	14,371	4	0	2	141	14,652	4	0	2	143
				T5W	14,013	4	0	3	137	14,605	4	0	3	143	14,889	4	0	3	146
				T5LG	13,830	3	0	2	135	14,413	3	0	2	141	14,694	3	0	2	144
				BLC3	9,606	0	0	2	94	10,011	0	0	2	98	10,206	0	0	2	100
				BLC4	9,921	0	0	3	97	10,340	0	0	3	101	10,541	0	0	3	103
				RCCO	9,692	1	0	2	95	10,101	1	0	2	99	10,298	1	0	2	101
				LCCO	9,692	1	0	2	95	10,101	1	0	2	99	10,298	1	0	2	101
				AFR	14,093	2	0	2	138	14,687	2	0	2	144	14,973	2	0	2	147

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of configurations shown within the tolerances described within LM-79. Contact factory for performance data on any configurations not shown here.

Forward Optics

Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P4	124W	30	1250	T1S	16,416	2	0	3	132	17,109	2	0	3	138	17,442	2	0	3	141
				T2M	15,207	3	0	4	123	15,849	3	0	4	128	16,158	3	0	4	130
				T3M	15,383	2	0	4	124	16,032	2	0	4	129	16,345	2	0	4	132
				T3LG	13,742	2	0	2	111	14,321	2	0	2	116	14,600	2	0	2	118
				T4M	15,613	2	0	4	126	16,272	2	0	4	131	16,589	2	0	4	134
				T4LG	14,200	2	0	2	115	14,799	2	0	2	119	15,087	2	0	2	122
				TFTM	15,721	2	0	4	127	16,384	2	0	4	132	16,703	2	0	4	135
				T5M	16,063	4	0	2	130	16,741	4	0	2	135	17,067	4	0	2	138
				T5W	16,324	5	0	3	132	17,013	5	0	3	137	17,344	5	0	3	140
				T5LG	16,110	3	0	2	130	16,790	4	0	2	135	17,117	4	0	2	138
				BLC3	11,190	0	0	3	90	11,662	0	0	3	94	11,889	0	0	3	96
				BLC4	11,557	0	0	3	93	12,044	0	0	3	97	12,279	0	0	4	99
				RCCO	11,291	1	0	3	91	11,767	1	0	3	95	11,996	1	0	3	97
				LCCO	11,291	1	0	3	91	11,767	1	0	3	95	11,996	1	0	3	97
				AFR	16,416	2	0	3	132	17,109	2	0	3	138	17,442	2	0	3	141
P5	138W	30	1400	T1S	18,052	2	0	3	131	18,814	2	0	3	136	19,180	2	0	3	139
				T2M	16,723	3	0	4	121	17,428	3	0	4	126	17,768	3	0	4	129
				T3M	16,917	3	0	4	122	17,630	3	0	4	128	17,974	3	0	4	130
				T3LG	15,111	2	0	2	109	15,749	2	0	2	114	16,055	2	0	2	116
				T4M	17,169	3	0	5	124	17,893	3	0	5	130	18,242	3	0	5	132
				T4LG	15,615	2	0	2	113	16,274	2	0	2	118	16,591	2	0	2	120
				TFTM	17,288	2	0	4	125	18,017	2	0	5	130	18,368	3	0	5	133
				T5M	17,664	5	0	3	128	18,410	5	0	3	133	18,768	5	0	3	136
				T5W	17,951	5	0	3	130	18,708	5	0	3	135	19,073	5	0	3	138
				T5LG	17,716	4	0	2	128	18,463	4	0	2	134	18,823	4	0	2	136
				BLC3	12,305	0	0	3	89	12,824	0	0	3	93	13,074	0	0	3	95
				BLC4	12,709	0	0	4	92	13,245	0	0	4	96	13,503	0	0	4	98
				RCCO	12,416	1	0	3	90	12,940	1	0	3	94	13,192	1	0	3	95
				LCCO	12,416	1	0	3	90	12,940	1	0	3	94	13,192	1	0	3	95
				AFR	18,052	2	0	3	131	18,814	2	0	3	136	19,180	2	0	3	139
P6	165W	40	1250	T1S	21,031	2	0	3	127	21,918	2	0	3	133	22,345	2	0	3	135
				T2M	19,482	3	0	4	118	20,303	3	0	4	123	20,699	3	0	4	125
				T3M	19,708	3	0	5	119	20,539	3	0	5	124	20,939	3	0	5	127
				T3LG	17,604	2	0	2	107	18,347	2	0	2	111	18,704	2	0	2	113
				T4M	20,001	3	0	5	121	20,845	3	0	5	126	21,251	3	0	5	129
				T4LG	18,191	2	0	2	110	18,959	2	0	2	115	19,328	2	0	2	117
				TFTM	20,140	3	0	5	122	20,989	3	0	5	127	21,398	3	0	5	129
				T5M	20,579	5	0	3	125	21,447	5	0	3	130	21,865	5	0	3	132
				T5W	20,912	5	0	3	127	21,795	5	0	3	132	22,219	5	0	3	134
				T5LG	20,638	4	0	2	125	21,509	4	0	2	130	21,928	4	0	2	133
				BLC3	14,335	0	0	3	87	14,940	0	0	3	90	15,231	0	0	3	92
				BLC4	14,805	0	0	4	90	15,430	0	0	4	93	15,731	0	0	4	95
				RCCO	14,464	1	0	3	88	15,074	1	0	3	91	15,368	1	0	3	93
				LCCO	14,464	1	0	3	88	15,074	1	0	3	91	15,368	1	0	3	93
				AFR	21,031	2	0	3	127	21,918	2	0	3	133	22,345	2	0	3	135

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of configurations shown within the tolerances described within LM-79. Contact factory for performance data on any configurations not shown here.

Forward Optics

Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P7	184W	40	1400	T1S	22,741	2	0	3	123	23,700	2	0	3	129	24,162	3	0	3	131
				T2M	21,066	3	0	4	114	21,955	3	0	4	119	22,383	3	0	4	121
				T3M	21,311	3	0	5	116	22,210	3	0	5	120	22,642	3	0	5	123
				T3LG	19,036	2	0	2	103	19,839	2	0	3	108	20,226	2	0	3	110
				T4M	21,628	3	0	5	117	22,541	3	0	5	122	22,980	3	0	5	125
				T4LG	19,671	2	0	2	107	20,501	2	0	3	111	20,900	2	0	3	113
				TFTM	21,778	3	0	5	118	22,697	3	0	5	123	23,139	3	0	5	125
				T5M	22,252	5	0	3	121	23,191	5	0	3	126	23,643	5	0	3	128
				T5W	22,613	5	0	3	123	23,567	5	0	4	128	24,027	5	0	4	130
				T5LG	22,317	4	0	2	121	23,258	4	0	2	126	23,712	4	0	2	129
				BLC3	15,501	0	0	3	84	16,155	0	0	4	88	16,470	0	0	4	89
				BLC4	16,010	0	0	4	87	16,685	0	0	4	90	17,010	0	0	4	92
				RCCO	15,641	1	0	3	85	16,301	1	0	3	89	16,619	1	0	3	90
				LCCO	15,641	1	0	3	85	16,301	1	0	3	89	16,619	1	0	3	90
				AFR	22,741	2	0	3	123	23,700	2	0	3	129	24,162	3	0	3	131
P8	216W	60	1100	T1S	28,701	3	0	3	133	29,912	3	0	4	139	30,495	3	0	4	141
				T2M	26,587	3	0	5	123	27,709	3	0	5	128	28,249	3	0	5	131
				T3M	26,895	3	0	5	125	28,030	3	0	5	130	28,576	3	0	5	132
				T3LG	24,025	3	0	3	111	25,038	3	0	3	116	25,526	3	0	3	118
				T4M	27,296	3	0	5	127	28,448	3	0	5	132	29,002	3	0	5	134
				T4LG	24,826	3	0	3	115	25,873	3	0	3	120	26,378	3	0	3	122
				TFTM	27,485	3	0	5	127	28,645	3	0	5	133	29,203	3	0	5	135
				T5M	28,084	5	0	4	130	29,269	5	0	4	136	29,839	5	0	4	138
				T5W	28,539	5	0	4	132	29,743	5	0	4	138	30,323	5	0	4	141
				T5LG	28,165	4	0	2	131	29,354	4	0	2	136	29,926	4	0	2	139
				BLC3	19,563	0	0	4	91	20,388	0	0	4	94	20,786	0	0	4	96
				BLC4	20,205	0	0	5	94	21,057	0	0	5	98	21,468	0	0	5	99
				RCCO	19,740	1	0	4	91	20,572	1	0	4	95	20,973	1	0	4	97
				LCCO	19,740	1	0	4	91	20,572	1	0	4	95	20,973	1	0	4	97
				AFR	28,701	3	0	3	133	29,912	3	0	4	139	30,495	3	0	4	141
P9	277W	60	1400	T1S	34,819	3	0	4	126	36,288	3	0	4	131	36,996	3	0	4	134
				T2M	32,255	3	0	5	116	33,616	3	0	5	121	34,271	3	0	5	124
				T3M	32,629	3	0	5	118	34,006	3	0	5	123	34,668	3	0	5	125
				T3LG	29,146	3	0	3	105	30,376	3	0	4	110	30,968	3	0	4	112
				T4M	33,116	3	0	5	120	34,513	3	0	5	125	35,185	3	0	5	127
				T4LG	30,119	3	0	3	109	31,389	3	0	4	113	32,001	3	0	4	116
				TFTM	33,345	3	0	5	120	34,751	3	0	5	125	35,429	3	0	5	128
				T5M	34,071	5	0	4	123	35,509	5	0	4	128	36,201	5	0	4	131
				T5W	34,624	5	0	4	125	36,084	5	0	4	130	36,788	5	0	4	133
				T5LG	34,170	5	0	3	123	35,612	5	0	3	129	36,306	5	0	3	131
				BLC3	23,734	0	0	4	86	24,735	0	0	4	89	25,217	0	0	4	91
				BLC4	24,513	0	0	5	88	25,547	0	0	5	92	26,045	0	0	5	94
				RCCO	23,948	1	0	4	86	24,958	1	0	4	90	25,445	1	0	4	92
				LCCO	23,948	1	0	4	86	24,958	1	0	4	90	25,445	1	0	4	92
				AFR	34,819	3	0	4	126	36,288	3	0	4	131	36,996	3	0	4	134

Performance Data

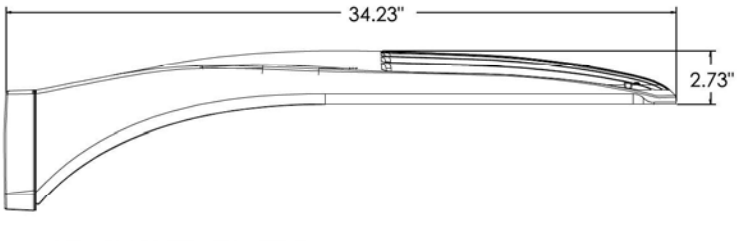
Lumen Output

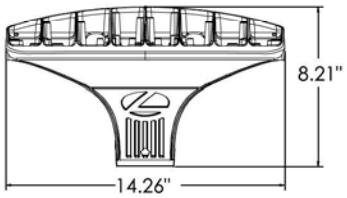
Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of configurations shown within the tolerances described within LM-79. Contact factory for performance data on any configurations not shown here.

Rotated Optics

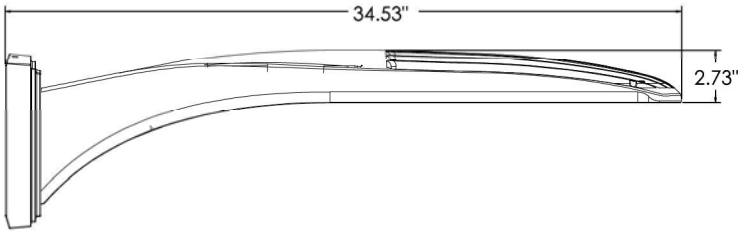
Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P10	101W	60	530	T1S	15,164	3	0	3	150	15,803	3	0	3	156	16,112	3	0	3	159
				T2M	14,047	4	0	4	139	14,640	4	0	4	145	14,925	4	0	4	147
				T3M	14,208	4	0	4	140	14,807	4	0	4	146	15,096	4	0	4	149
				T3LG	12,693	3	0	3	125	13,229	3	0	3	131	13,487	3	0	3	133
				T4M	14,420	4	0	4	142	15,028	4	0	4	148	15,321	4	0	4	151
				T4LG	13,115	3	0	3	129	13,668	3	0	3	135	13,934	3	0	3	138
				TFTM	14,522	4	0	4	143	15,134	4	0	4	149	15,429	4	0	4	152
				T5M	14,836	4	0	2	146	15,462	4	0	2	153	15,763	4	0	2	156
				T5W	15,076	4	0	3	149	15,712	5	0	3	155	16,019	5	0	3	158
				T5LG	14,879	3	0	2	147	15,507	3	0	2	153	15,809	3	0	2	156
				BLC3	10,335	3	0	3	102	10,771	4	0	4	106	10,981	4	0	4	108
				BLC4	10,674	4	0	4	105	11,124	4	0	4	110	11,341	4	0	4	112
				RCCO	10,429	1	0	2	103	10,869	1	0	2	107	11,080	1	0	2	109
				LCCO	10,429	1	0	2	103	10,869	1	0	2	107	11,080	1	0	2	109
				AFR	15,164	3	0	3	150	15,803	3	0	3	156	16,112	3	0	3	159
P11	135W	60	700	T1S	19,437	4	0	4	144	20,257	4	0	4	150	20,651	4	0	4	153
				T2M	18,005	4	0	4	133	18,765	4	0	4	139	19,131	4	0	4	142
				T3M	18,211	4	0	4	135	18,980	4	0	4	141	19,350	4	0	4	143
				T3LG	16,270	3	0	3	121	16,957	3	0	3	126	17,287	4	0	4	128
				T4M	18,483	4	0	4	137	19,263	5	0	5	143	19,638	5	0	5	146
				T4LG	16,810	3	0	3	125	17,519	3	0	3	130	17,861	3	0	3	132
				TFTM	18,614	4	0	4	138	19,399	4	0	4	144	19,777	5	0	5	147
				T5M	19,017	5	0	3	141	19,819	5	0	3	147	20,205	5	0	3	150
				T5W	19,325	5	0	3	143	20,140	5	0	3	149	20,533	5	0	3	152
				T5LG	19,072	4	0	2	141	19,876	4	0	2	147	20,264	4	0	2	150
				BLC3	13,247	4	0	4	98	13,806	4	0	4	102	14,075	4	0	4	104
				BLC4	13,682	4	0	4	101	14,259	4	0	4	106	14,537	4	0	4	108
				RCCO	13,367	1	0	3	99	13,931	1	0	3	103	14,203	1	0	3	105
				LCCO	13,367	1	0	3	99	13,931	1	0	3	103	14,203	1	0	3	105
				AFR	19,437	4	0	4	144	20,257	4	0	4	150	20,651	4	0	4	153
P12	206W	60	1050	T1S	27,457	4	0	4	133	28,616	4	0	4	139	29,174	4	0	4	142
				T2M	25,436	5	0	5	124	26,509	5	0	5	129	27,025	5	0	5	131
				T3M	25,727	5	0	5	125	26,812	5	0	5	130	27,335	5	0	5	133
				T3LG	22,984	4	0	4	112	23,954	4	0	4	116	24,421	4	0	4	119
				T4M	26,110	5	0	5	127	27,212	5	0	5	132	27,742	5	0	5	135
				T4LG	23,747	4	0	4	115	24,749	4	0	4	120	25,231	4	0	4	123
				TFTM	26,295	5	0	5	128	27,404	5	0	5	133	27,938	5	0	5	136
				T5M	26,864	5	0	4	130	27,997	5	0	4	136	28,543	5	0	4	139
				T5W	27,299	5	0	4	133	28,451	5	0	4	138	29,006	5	0	4	141
				T5LG	26,942	4	0	2	131	28,078	4	0	2	136	28,626	4	0	2	139
				BLC3	18,714	4	0	4	91	19,504	4	0	4	95	19,884	4	0	4	97
				BLC4	19,327	5	0	5	94	20,143	5	0	5	98	20,535	5	0	5	100
				RCCO	18,883	1	0	4	92	19,680	1	0	4	96	20,064	1	0	4	97
				LCCO	18,883	1	0	4	92	19,680	1	0	4	96	20,064	1	0	4	97
				AFR	27,457	4	0	4	133	28,616	4	0	4	139	29,174	4	0	4	142
P13	276W	60	1400	T1S	34,436	5	0	5	125	35,889	5	0	5	130	36,588	5	0	5	133
				T2M	31,900	5	0	5	116	33,246	5	0	5	121	33,894	5	0	5	123
				T3M	32,265	5	0	5	117	33,626	5	0	5	122	34,282	5	0	5	124
				T3LG	28,826	4	0	4	105	30,042	4	0	4	109	30,628	4	0	4	111
				T4M	32,746	5	0	5	119	34,128	5	0	5	124	34,793	5	0	5	126
				T4LG	29,782	4	0	4	108	31,039	4	0	4	113	31,644	5	0	4	115
				TFTM	32,978	5	0	5	120	34,369	5	0	5	125	35,039	5	0	5	127
				T5M	33,692	5	0	4	122	35,113	5	0	4	127	35,797	5	0	4	130
				T5W	34,238	5	0	4	124	35,682	5	0	4	129	36,378	5	0	4	132
				T5LG	33,789	5	0	3	122	35,215	5	0	3	128	35,901	5	0	3	130
				BLC3	23,471	5	0	5	85	24,461	5	0	5	89	24,937	5	0	5	90
				BLC4	24,240	5	0	5	88	25,262	5	0	5	92	25,755	5	0	5	93
				RCCO	23,683	1	0	4	86	24,682	1	0	4	89	25,163	1	0	4	91
				LCCO	23,683	1	0	4	86	24,682	1	0	4	89	25,163	1	0	4	91
				AFR	34,436	5	0	5	125	35,889	5	0	5	130	36,588	5	0	5	133

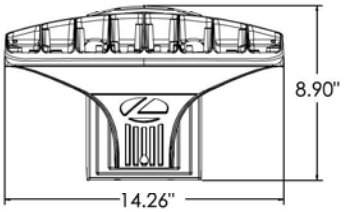
Dimensions



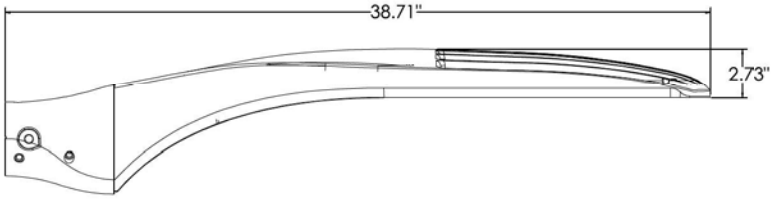


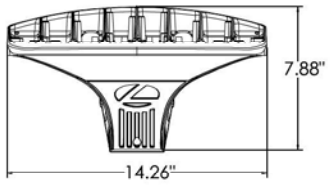
DSX1 with RPA, RPA5, SPA5, SPA8N mount
Weight: 36 lbs





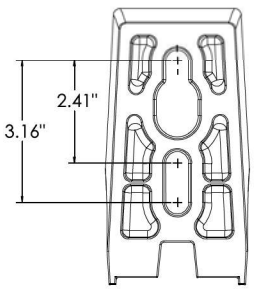
DSX1 with WBA mount
Weight: 38 lbs



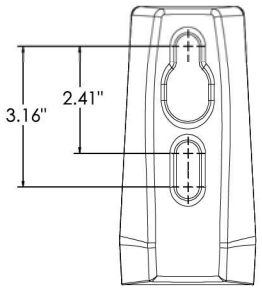


DSX1 with MA mount
Weight: 39 lbs

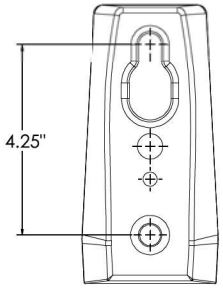
SPA (STANDARD ARM)



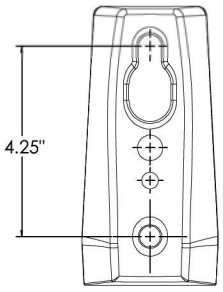
RPA



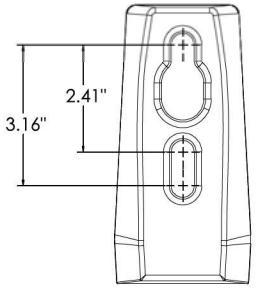
SPA5



RPA5



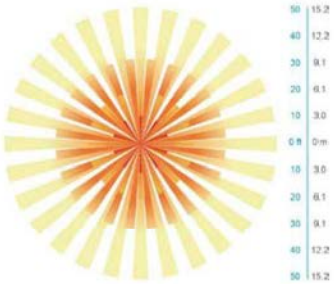
SPA8N



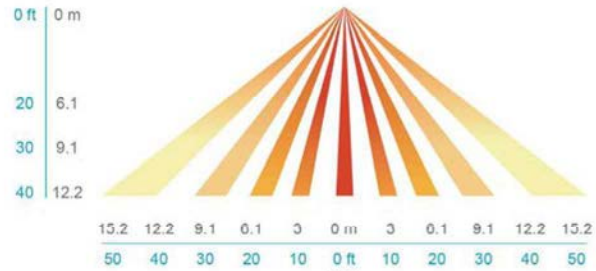
nLight Control - Sensor Coverage and Settings

nLight Sensor Coverage Pattern

NLTAIR2 PIRHN



Top



Side

FEATURES & SPECIFICATIONS

INTENDED USE

The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION

Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing driver compartment is completely sealed against moisture and environmental contaminants (IP66). Vibration rated per ANSI C136.31 for 3G for SPA and MA. 1.5G for mountings RPA, RPA5, SPA5 and SPA8N. Low EPA (0.69 ft^2) for optimized pole wind loading.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

Coastal Construction (CCE)

Optional corrosion resistant construction is engineered with added corrosion protection in materials and/or pre-treatment of base material under super durable paint. Provides additional corrosion protection for applications near coastal areas. Finish is salt spray tested to over 5,000 hours per ASTM B117 with scribe rating of 10. Additional lead-times may apply.

OPTICS

Precision-molded proprietary silicone lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 3000 K, 4000 K and 5000 K (70 CRI) configurations. 80CRI configurations are also available. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L81/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS

The DSX1 LED area luminaire has a number of control options. DSX Size 1, comes standard with 0-10V dimming drivers. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. Integrated motion sensor with on-board photocells feature field-adjustable programing and are suitable for mounting heights up to 40 feet. Control option BL features a bi-level device that allows a second control circuit to switch all light engines to either 30% or 50% light output.

nLIGHT AIR CONTROLS

The DSX1 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to-use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclypse. Additional information about nLight Air can be found here.

INSTALLATION

Integral mounting arm allows for fast mounting using Lithonia standard #8 drilling and accommodates pole drilling's from 2.41 to 3.12" on center. The standard "SPA" option for square poles and the "RPA" option for round poles use the #8 drilling. For #5 pole drillings, use SPA5 or RPA5. Additional mountings are available including a wall bracket (WBA) and mast arm (MA) option that allows luminaire attachment to a 2 3/8" horizontal mast arm.

LISTINGS

UL listed to meet U.S. and Canadian standards. UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP66 rated. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

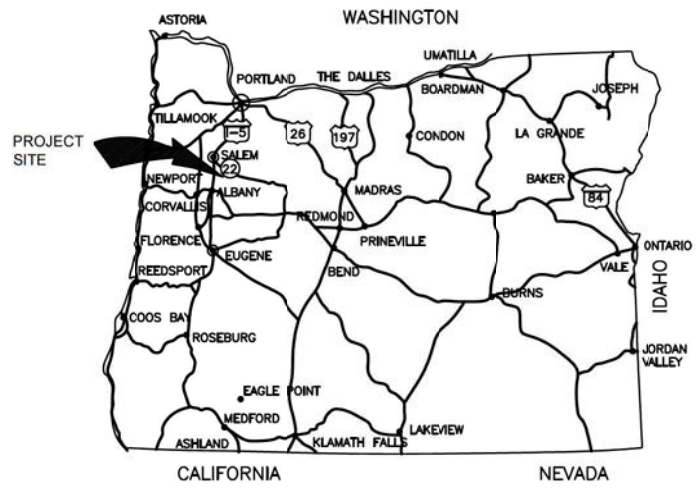
WARRANTY

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

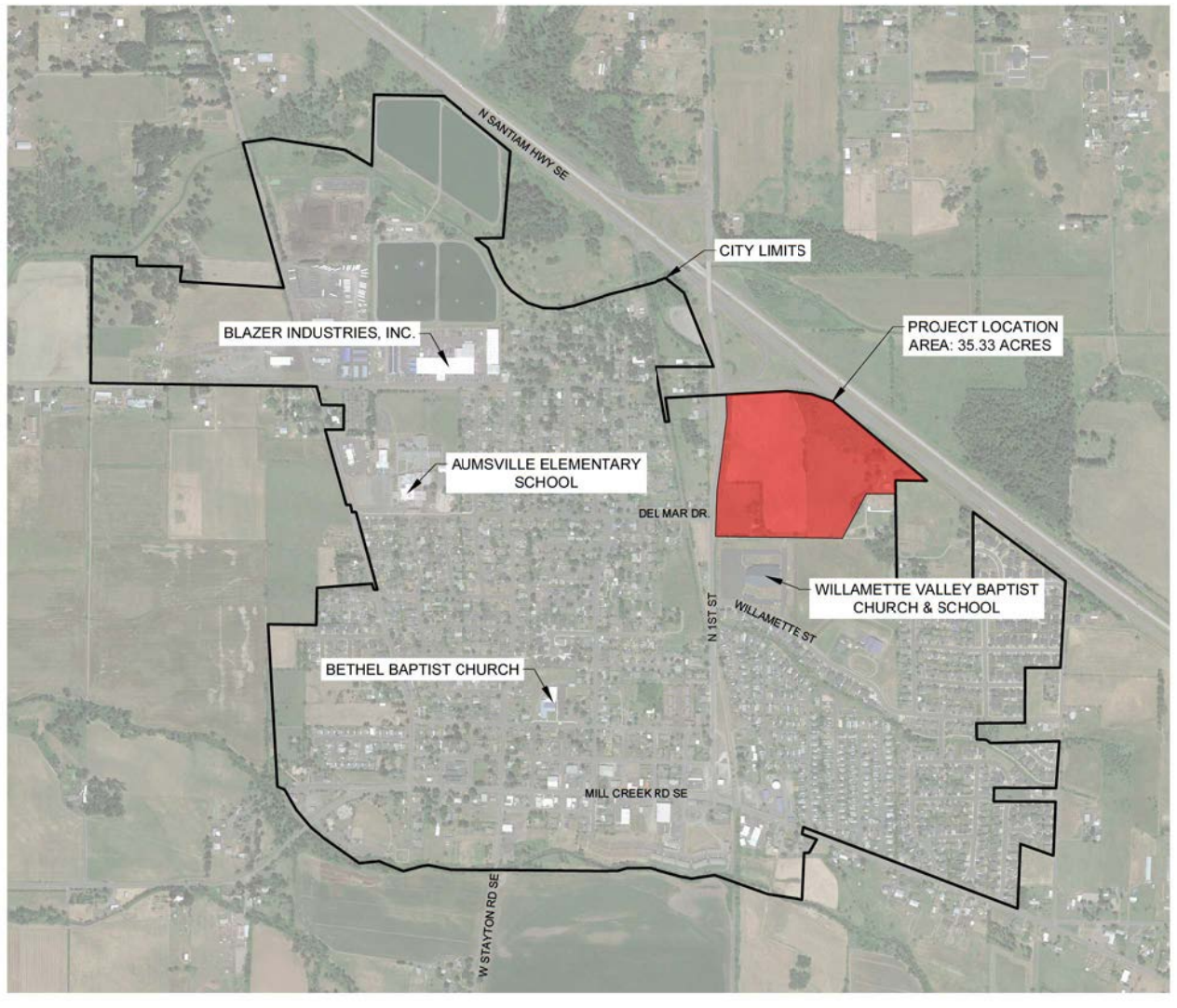
Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

RED MOON DEVELOPMENT
CITY OF AUMSVILLE

VICINITY MAP



CITY MAP



SHEET INDEX

SHEET NO.	DWG NO.	SHEET TITLE
1	G-01	GENERAL OVERVIEW
2	G-02	SITE ANALYSIS MAP - TAXLOT INFORMATION
3	G-03	TENTATIVE PRELIMINARY PLAT
4	G-04	SITE ANALYSIS MAP - LEASE LOT MAP
5	G-05	SITE ANALYSIS MAP - EXISTING FEATURES
6	G-06	SITE ANALYSIS MAP - RESOURCE AREAS AND STORMWATER ANALYSIS MAP
7	G-07	PROPOSED SITE PLAN - CIVIL SITE LAYOUT
8	G-08	PROPOSED SITE PLAN - PROPOSED UTILITY LAYOUT
9	G-09	PROPOSED SITE PLAN - DETAILS I
10	G-10	PROPOSED SITE PLAN - STORMWATER ANALYSIS
11	G-11	PRELIMINARY GRADING PLAN

LEGEND

EXISTING		PROPOSED
	PROPERTY BOUNDARY	
	EASEMENT	
55	MAJOR CONTOUR	75
	MINOR CONTOUR	
	CENTERLINE	
	EDGE OF PAVEMENT	
	SIDEWALK	
	ASPHALT PAVEMENT	
	BUILDING PERIMETER	
X X	FENCE	
	GATE POST	
	GUARDRAIL	
G G	GAS LINE	
	TRASH ENCLOSURE	
ro	COMM LINE	
	DITCH	
OHP	OVERHEAD POWER LINE	
	POWER POLE	
	GUY WIRE	
	POWER RISER	
	FIRE HYDRANT	

N

NOT TO SCALE

LEGEND

EXISTING		PROPOSED
W W	WATER LINE	W W
W	WATER VALVE	W
SD SD	STORM LINE	SD SD
	STORM CATCH BASIN	
D	STORM MANHOLE	D
CO	STORM CLEAN OUT	CO
	SLOTTED DRAIN PIPE	
	FLOW ARROW	
	DETENTION POND	
	SANITARY SEWER LINE	SS
	SANITARY SEWER MANHOLE	S
	SANITARY SEWER CLEANOUT	
	STREET SIGN	
	PYLON SIGN	
MB	MAILBOXES	
	PAVEMENT MARKING	
EG 75.50	FINISH GRADE ELEVATION	FG 75.50
	ASPHALT PAVEMENT REMOVAL	
	WETLAND TO REMAIN	
	WETLAND TO BE IMPACTED	

ENGINEER: FLAGLINE ENGINEERING
MAILING ADDRESS: 1011 SW EMKAY DR #207 BEND, OR 97702
CONTACT: JIM PEX, PE
PHONE #: 541.797.6781
EMAIL: JPEX@FLAGLINE.NET

SURVEY: S&F LAND SERVICES
MAILING ADDRESS: 901 NW CARLON SUITE 3 BEND, OR 97703
CONTACT: ANDREW HUSTON, PLS SURVEY DIRECTOR
PHONE #: 541.610.2268
EMAIL: ANDREW.HUSTON@SFLANDS.COM

GEOTECHNICAL: CENTRAL GEOTECHNICAL SERVICES, LLC
MAILING ADDRESS: 10240 SW NIMBUS AVE SUITE L6 PORTLAND, OR 97223
CONTACT: JOSE R. SERRANO, PE
PHONE #: 503.616.9419

SITE APPLICATION

DISCLAIMER

THIS DRAWING IS INTENDED TO BE PLOTTED IN COLOR ON A 22" X 34" SHEET. ADJUST SCALES ACCORDINGLY AND VERIFY COLOR LEGEND BELOW IS CORRECT:
RED BLUE

NO.	DATE	BY	APPR	REVISIONS

FLAGLINE ENGINEERING
BEND OFFICE
686 NW YORK DR, #100
BEND, OR 97703
541.797.6781

DESIGNED BY: VRC
DRAWN BY: JRTC
CHECKED BY: JDP
DATE: MARCH 2024
PROJECT NO:
SCALE: AS NOTED

AUMSVILLE, OREGON
RED MOON DEVELOPMENT

GENERAL OVERVIEW

DRAWING NO. G-01

SHEET NO.

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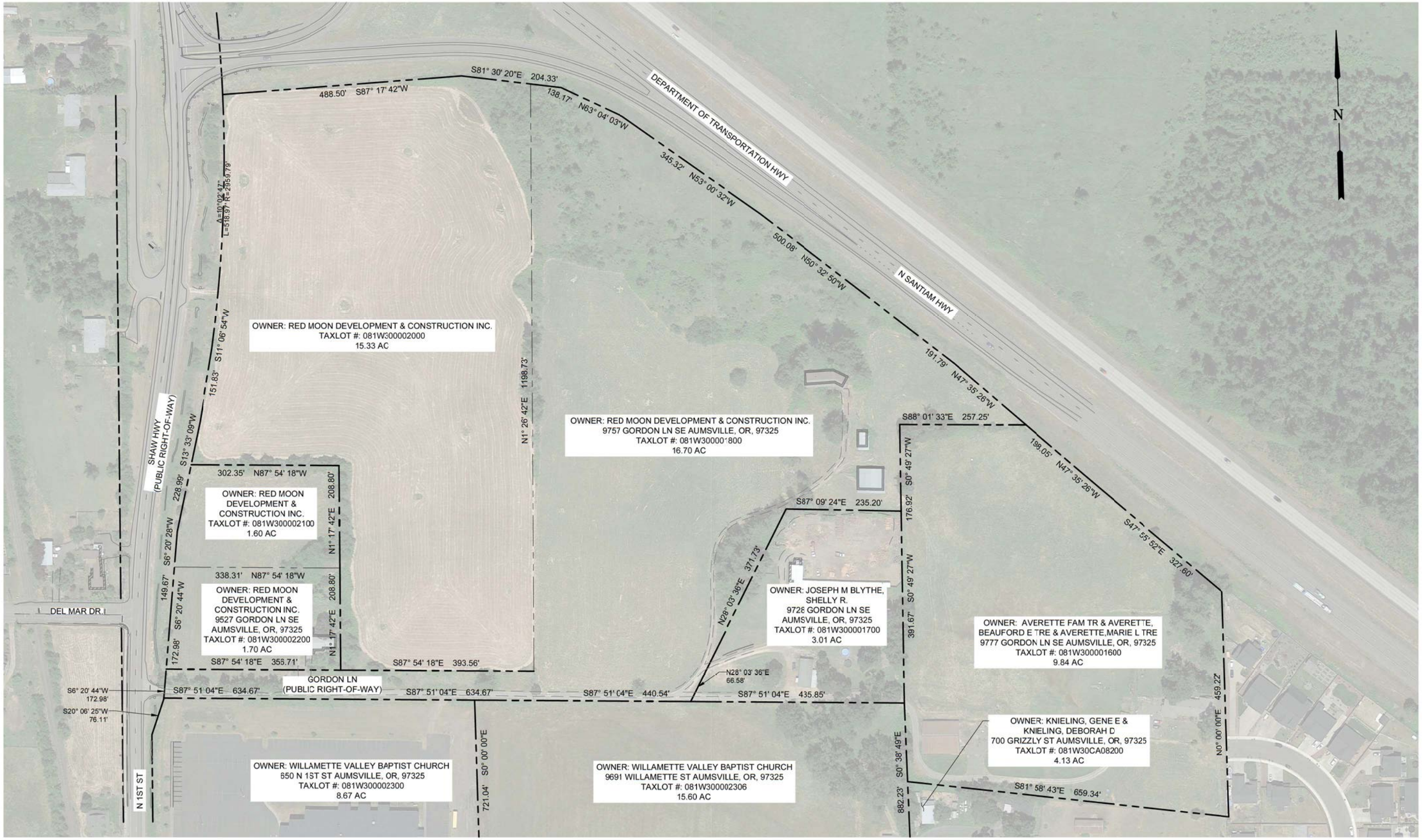

PLAN
SCALE: 1" = 100'

1
G-02

C:\Users\Jonathan Connor\Flagline Dropbox\Flagline\Projects\Red Moon Development\Aumsville\CAD_Working_Site Plan Application\G-02 SITE ANALYSIS MAP - TAXLOT INFORMATION.dwg

SITE APPLICATION

100 0 100 200
SCALE OF FEET
SCALE: 1"=100'

DISCLAIMER

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RED BLUE

NO.	DATE	BY	APPR	REVISIONS

FLAGLINE ENGINEERING
BEND OFFICE
686 NW YORK DR, #100
BEND, OR 97703
541.797.6781

DESIGNED BY: VRC
DRAWN BY: JRTC
CHECKED BY: JDP
DATE: MARCH 2024
PROJECT NO:
SCALE: AS NOTED

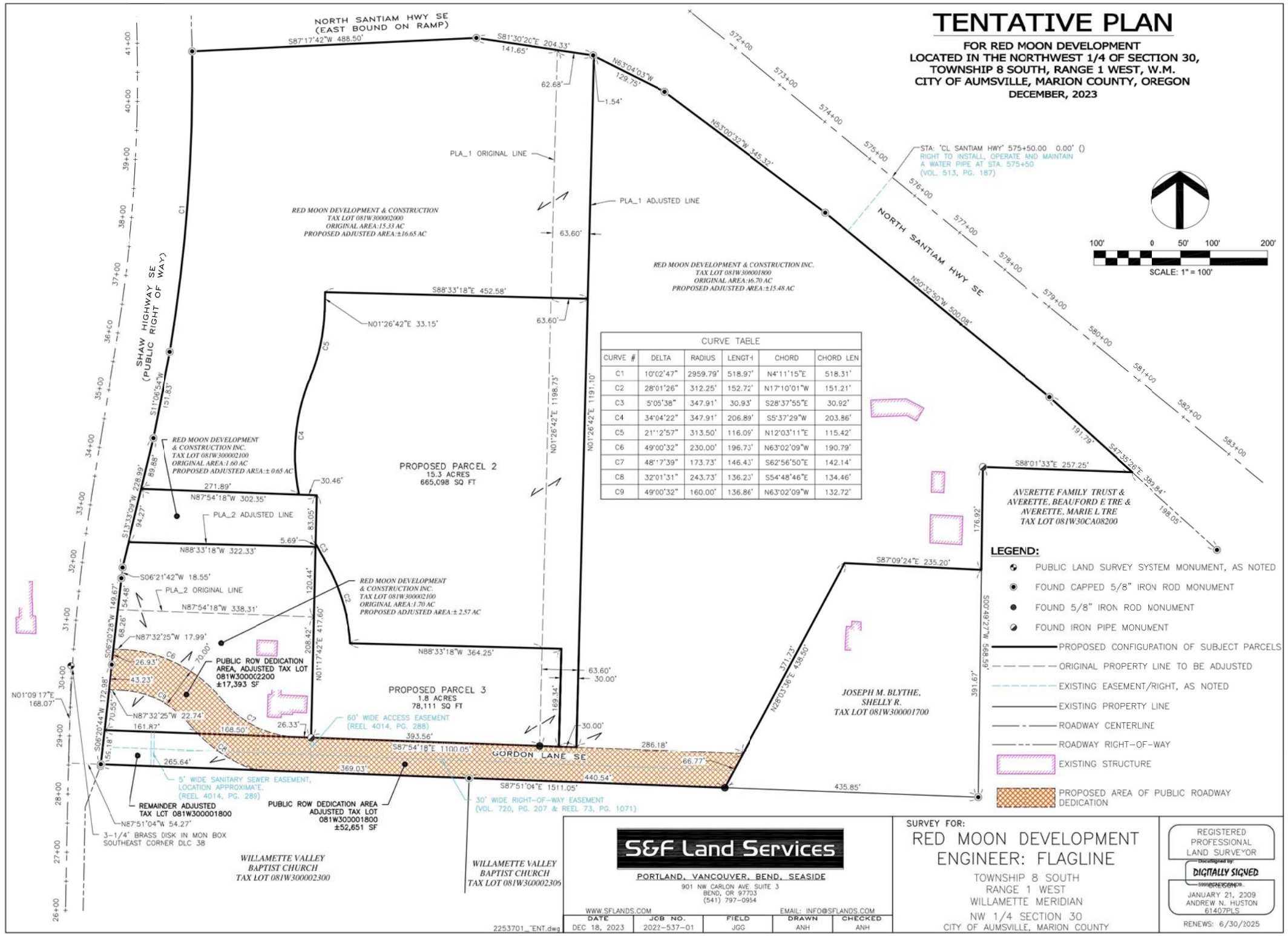
AUMSVILLE, OREGON
RED MOON DEVELOPMENT

SITE ANALYSIS MAP
TAXLOT INFORMATION

DRAWING NO. G-02
SHEET NO.

TENTATIVE PLAN

FOR RED MOON DEVELOPMENT
LOCATED IN THE NORTHWEST 1/4 OF SECTION 30,
TOWNSHIP 8 SOUTH, RANGE 1 WEST, W.M.
CITY OF AUMSVILLE, MARION COUNTY, OREGON
DECEMBER, 2023



CURVE TABLE					
CURVE #	DELTA	RADIUS	LENGTH	CHORD	CHORD LEN
C1	10°02'47"	2959.79'	518.97'	N4°11'15"E	518.31'
C2	28°01'26"	312.25'	152.72'	N17°10'01"W	151.21'
C3	5°05'38"	347.91'	30.93'	S28°37'55"E	30.92'
C4	34°04'22"	347.91'	206.89'	S5°37'29"W	203.86'
C5	21°12'57"	313.50'	116.09'	N12°03'11"E	115.42'
C6	49°00'32"	230.00'	196.73'	N63°02'09"W	190.79'
C7	48°17'39"	173.73'	146.43'	S62°56'50"E	142.14'
C8	32°01'31"	243.73'	136.23'	S54°48'46"E	134.46'
C9	49°00'32"	160.00'	136.86'	N63°02'09"W	132.72'

LEGEND:

- PUBLIC LAND SURVEY SYSTEM MONUMENT, AS NOTED
- FOUND CAPPED 5/8" IRON ROD MONUMENT
- FOUND 5/8" IRON ROD MONUMENT
- FOUND IRON PIPE MONUMENT
- PROPOSED CONFIGURATION OF SUBJECT PARCELS
- ORIGINAL PROPERTY LINE TO BE ADJUSTED
- EXISTING EASEMENT/RIGHT, AS NOTED
- EXISTING PROPERTY LINE
- ROADWAY CENTERLINE
- ROADWAY RIGHT-OF-WAY
- EXISTING STRUCTURE
- PROPOSED AREA OF PUBLIC ROADWAY DEDICATION

S&F Land Services
PORTLAND, VANCOUVER, BEND, SEASIDE
901 NW CARLON AVE, SUITE 3
BEND, OR 97703
(541) 797-0954
WWW.SFLANDS.COM EMAIL: INFO@SFLANDS.COM

DATE	JOB NO.	FIELD	DRAWN	CHECKED
DEC 18, 2023	2022-537-01	JGG	ANH	ANH

2253701_TENT.dwg

SURVEY FOR:
RED MOON DEVELOPMENT
ENGINEER: FLAGLINE
TOWNSHIP 8 SOUTH
RANGE 1 WEST
WILLAMETTE MERIDIAN
NW 1/4 SECTION 30
CITY OF AUMSVILLE, MARION COUNTY

REGISTERED PROFESSIONAL LAND SURVEYOR
DIGITALLY SIGNED
JANUARY 21, 2009
ANDREW N. HUSTON
61407PLS
RENEWS: 6/30/2025

SITE APPLICATION

DISCLAIMER

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RED BLUE

NO.	DATE	BY	APPR	REVISIONS

FLAGLINE ENGINEERING
BEND OFFICE
686 NW YORK DR, #100
BEND, OR 97703
541.797.6781

DESIGNED BY: VRC
DRAWN BY: JRTC
CHECKED BY: JDP
DATE: MARCH 2024
PROJECT NO:
SCALE: AS NOTED

AUMSVILLE, OREGON
RED MOON DEVELOPMENT

TENTATIVE PRELIMINARY PLAT

DRAWING NO. G-03
SHEET NO.

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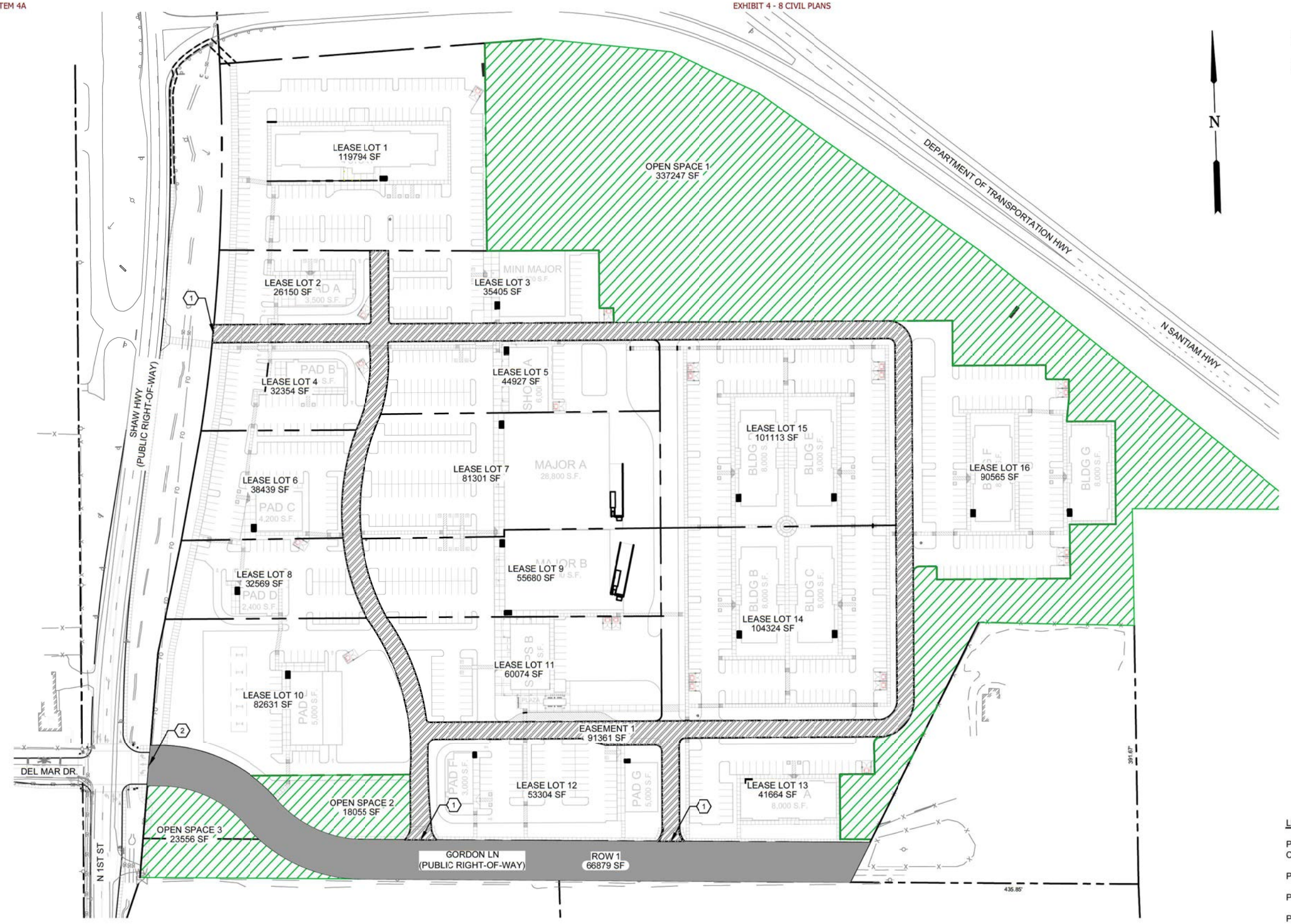

PLAN
SCALE: 1" = 80'

1
G-04

LEGEND

1. PROPOSED PRIVATE ACCESS ROAD, ALL PARCELS WILL BE GIVEN ACCESS AND PARKING EASEMENTS THROUGHOUT THE DEVELOPMENT.
2. PROPOSED PUBLIC RIGHT-OF-WAY

PARCEL REPORT

Parcel Name	Area (Square Feet)	Acres	Perimeter (FT)
Easement 1 (Private Road)	91360.549	2.097	6802.360
Lease Lot 1	119794.238	2.750	1405.472
Lease Lot 2	26150.138	0.600	690.159
Lease Lot 3	35405.302	0.813	897.881
Lease Lot 4	32353.747	0.743	743.597
Lease Lot 5	44927.399	1.031	1045.92
Lease Lot 6	38438.952	0.882	814.762
Lease Lot 7	81300.794	1.866	1256.429
Lease Lot 8	32569.358	0.748	799.917
Lease Lot 9	55680.108	1.278	1137.819
Lease Lot 10	82631.223	1.897	1153.154
Lease Lot 11	60073.946	1.379	1095.863
Lease Lot 12	53304.407	1.224	983.924
Lease Lot 13	41664.319	0.956	1014.679
Lease Lot 14	104323.739	2.395	1309.471
Lease Lot 15	101113.493	2.321	1291.513
Lease Lot 16	90564.736	2.079	1469.943
Open Space 1	337246.712	7.742	5134.669
Open Space 2	18054.764	0.414	608.551
Open Space 3	23555.849	0.541	838.939
Road 1 (ROW)	66879.088	1.535	2373.650

LEGEND

PROPOSED LEASE LINES SUBJECT TO CHANGE DURING FINAL DESIGN

PROPOSED LEASE LOT LINES

PROPOSED OPEN/COMMUNAL AREA

PROPOSED RIGHT OF WAY

PROPOSED EASEMENT/ REGION FOR PUBLIC UTILITIES

SITE APPLICATION

80 0 80 160
SCALE OF FEET
SCALE: 1"=80'

DISCLAIMER

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RED BLUE

NO.	DATE	BY	APPR	REVISIONS

FLAGLINE ENGINEERING
BEND OFFICE
686 NW YORK DR, #100
BEND, OR 97703
541.797.6781

DESIGNED BY: VRC
DRAWN BY: JRTC
CHECKED BY: JDP
DATE: MARCH 2024
PROJECT NO:
SCALE: AS NOTED

AUMSVILLE, OREGON
RED MOON DEVELOPMENT

PROPOSED SITE PLAN
LEASE LOT MAP

DRAWING NO. G-04
SHEET NO.

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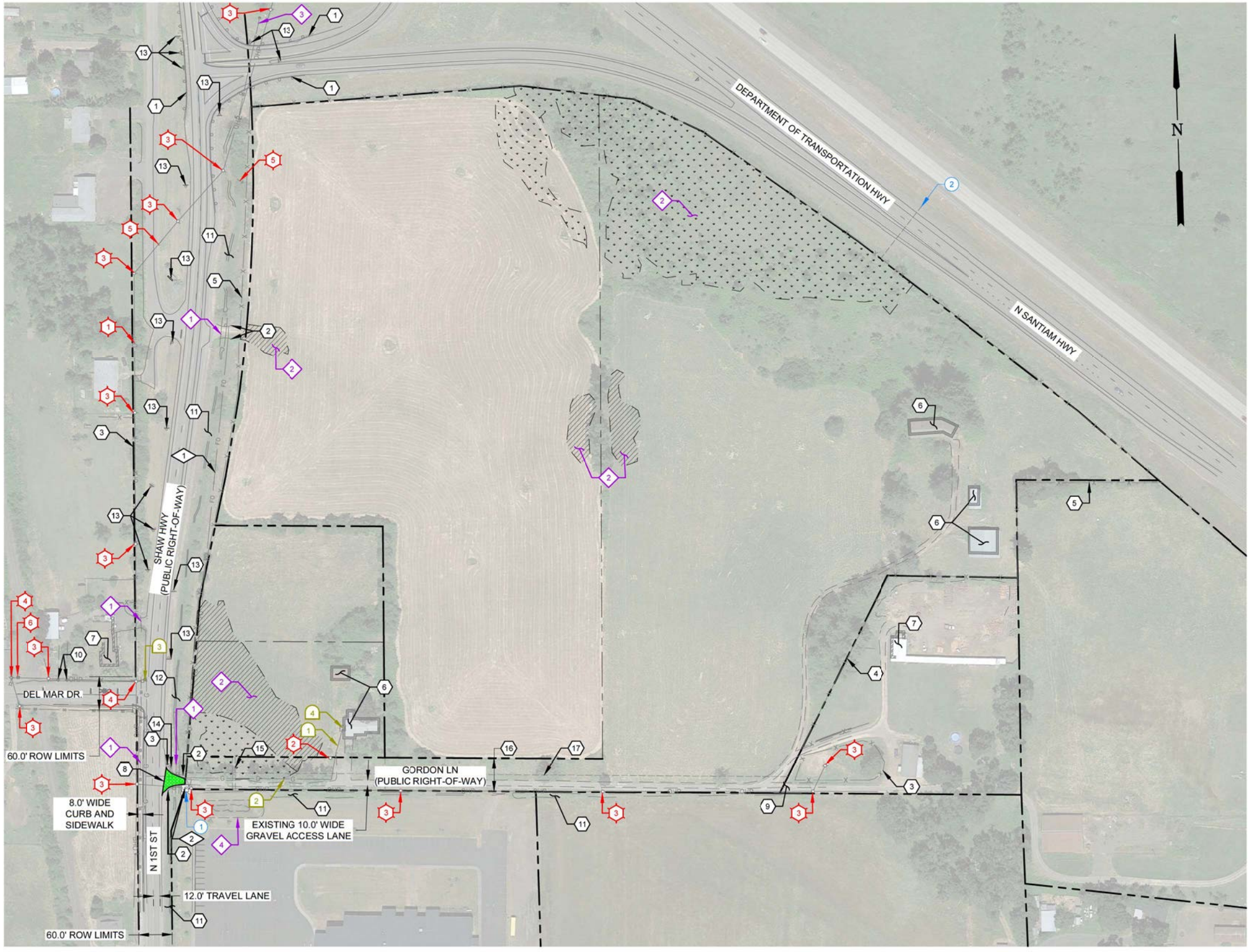

PLAN
SCALE: 1" = 100'

1
G-05

KEYNOTES:

1. EXISTING GUARD RAIL TO REMAIN
2. EXISTING GUARD RAIL TO REMAIN
3. EXISTING MAILBOX TO BE PROTECTED
4. EXISTING FENCE TO BE PROTECTED
5. EXISTING FENCE TO BE REMOVED
6. EXISTING BUILDING TO BE DEMOLISHED
7. EXISTING BUILDING TO BE PROTECTED
8. EXISTING ACCESS ROAD ENTRANCE TO BE DEMOLISHED
9. EXISTING ACCESS TO BE MAINTAINED
10. EXISTING FENCE GATE POST TO BE PROTECTED
11. EXISTING DITCH TO REMAIN
12. EXISTING DITCH TO BE ALTERED WITH PLACEMENT OF CULVERT
13. EXISTING ROAD SIGN TO REMAIN
14. EXISTING ROAD SIGN TO BE REMOVED
15. 5' WIDE SANITARY SEWER EASEMENT TO REMAIN
16. 60' WIDE ACCESS EASEMENT TO BE REPLATTED
17. 30' WIDE ROW EASEMENT TO BE REPLATTED
1. EXISTING OVER HEAD POWER LINE TO REMAIN
2. EXISTING POWER POLE TO BE REMOVED
3. EXISTING POWER POLE TO BE REMAIN
4. EXISTING POWER POLE WITH LIGHT TO REMAIN
5. EXISTING GUY ANCHOR TO REMAIN
6. EXISTING POWER RISER TO REMAIN

KEYNOTES CONT:

1. EXISTING FIBER OPTICS TO BE PROTECTED
2. EXISTING UNK RISER TO BE PROTECTED
1. EXISTING GAS LINE TO BE REMOVED
2. EXISTING GAS LINE TO BE PROTECTED
3. EXISTING GAS VALVE TO BE PROTECTED
4. EXISTING GAS METER TO BE REMOVED
1. EXISTING WATER VALVE TO REMAIN
1. EXISTING WATER LINE EASEMENT
1. SEE SHEET G-03 FOR STORMWATER SITE ANALYSIS. EXISTING CULVERT TO BE IMPROVED OR REMAIN BASED ON FINAL DESIGN.
2. EXISTING WETLAND, SEE SHEET G-03
3. EXISTING CULVERT TO BE PROTECTED
4. EXISTING SWALE TO REMAIN

CALL OUT LEGEND

ROAD #
POWER #
UTILITY #
GAS #
WATER #
STORM #

NOTE:

PLEASE REFER TO THE GEOTECHNICAL FINDINGS REPORT FOR A DESCRIPTION OF THE EXISTING SUBSURFACE CONDITIONS AND NATURAL HAZARDS.

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SITE APPLICATION

100 0 100 200
SCALE OF FEET
SCALE: 1"=100'

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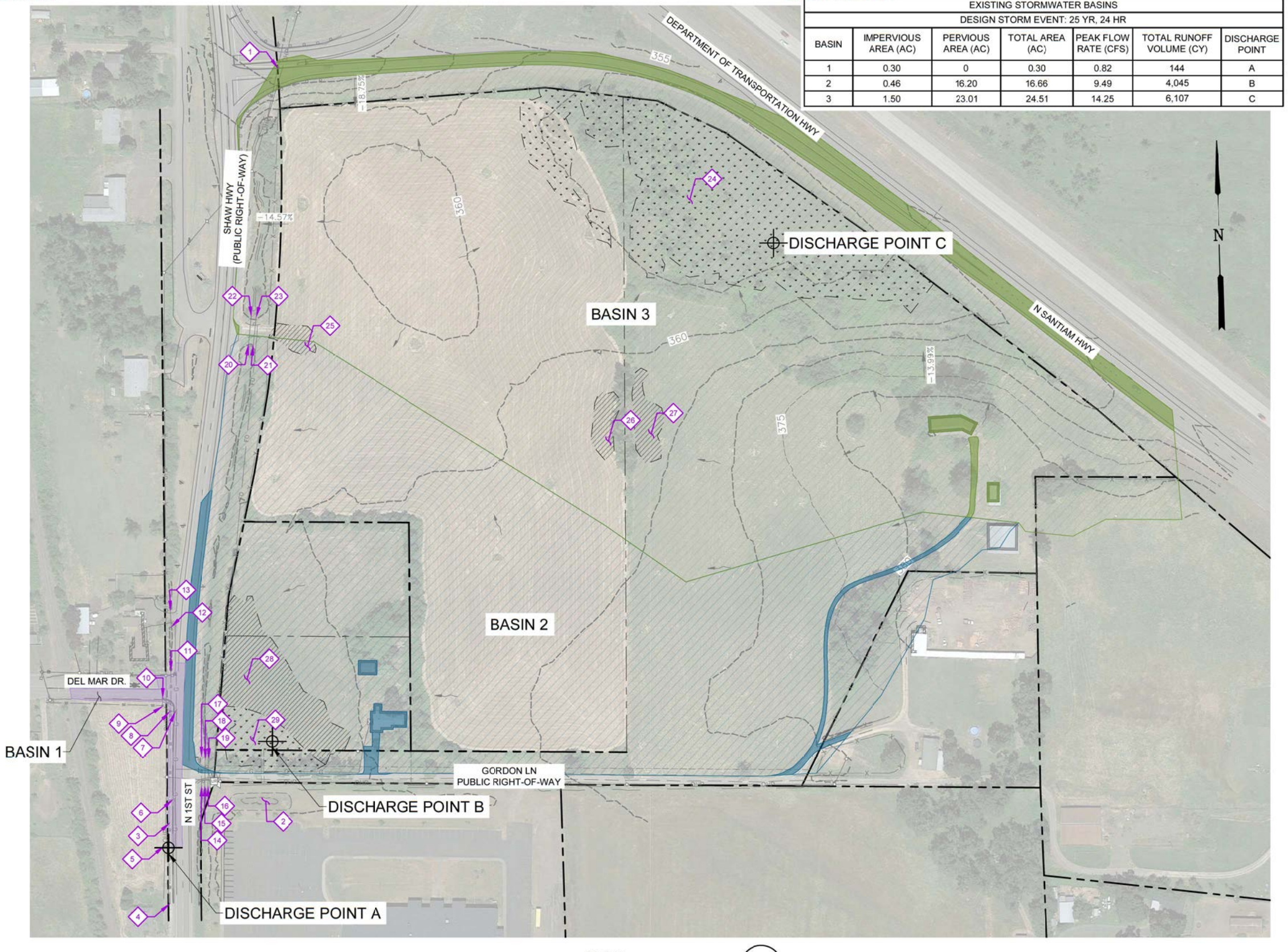
DATE: MARCH 2024
PROJECT NO:
SCALE: AS NOTED

AUMSVILLE, OREGON
RED MOON DEVELOPMENT

SITE ANALYSIS MAP
EXISTING FEATURES

DRAWING NO. G-05
SHEET NO.

EXISTING STORMWATER BASINS						
DESIGN STORM EVENT: 25 YR, 24 HR						
BASIN	IMPERVIOUS AREA (AC)	PERVIOUS AREA (AC)	TOTAL AREA (AC)	PEAK FLOW RATE (CFS)	TOTAL RUNOFF VOLUME (CY)	DISCHARGE POINT
1	0.30	0	0.30	0.82	144	A
2	0.46	16.20	16.66	9.49	4,045	B
3	1.50	23.01	24.51	14.25	6,107	C



PLAN
SCALE: 1" = 100'

1
G-06

KEY NOTES:

1. EXISTING STORM WATER CULVERT
2. EXISTING SWALE
3. EXISTING STORM DRAINAGE LINE
4. EXISTING STORM MANHOLE
   RIM: 359.39'
   IE 18" HDPE IN (N): 354.64'
   IE 18" HDPE OUT (S): 354.73'
5. EXISTING CATCH BASIN
   RIM: 358.11'
   IE 8" PVC OUT (E): 356.01'
6. EXISTING CATCH BASIN
   RIM: 358.40'
   IE 8" RCP OUT (W): 355.47'
7. EXISTING CATCH BASIN
   RIM: 358.29'
   IE 8" PVC OUT (W):354.61'
8. EXISTING STORM MANHOLE
   RIM: 358.76'
   IE 30" RCP IN (N): 354.27'
   IE 8" PVC IN (E): 355.21'
   IE 18" HDPE OUT (S): 354.26'
9. EXISTING STORM AREA DRAIN
   RIM: 356.57'
   IE 8" PVC IN (N): 355.44'
   IE 12" DIP IN (E)" 354.43'
   IE 12" PVC OUT (W): 354.34'
10. EXISTING CATCH BASIN
    RIM: 357.36'
    IE 8" PVC OUT (S): 355.65'
11. EXISTING 30" RCP STORM CULVERT
    IE (S): 353.94'
12. EXISTING 30" RCP STORM CULVERT
    IE (N): 353.88'
13. EXISTING 36" CMP STORM CULVERT
    IE (S): 353.60'
14. EXISTING 54" HDPE STORM CULVERT
    IE (N): 353.49'

KEY NOTES CONT:

15. EXISTING 54" RCP STORM CULVERT
    IE (N): 353.71'
16. EXISTING 54" RCP STORM CULVERT
    IE (N): 353.80'
17. EXISTING 54" HDPE STORM CULVERT
    IE (S): 353.73'
18. EXISTING 54" RCP STORM CULVERT
    IE (S): 354.02'
19. EXISTING 54" RCP STORM CULVERT
    IE (S): 353.98'
20. EXISTING 54" RCP STORM CULVERT
    IE (N): 351.32'
21. EXISTING 54" RCP STORM CULVERT
    IE (N): 351.44'
22. EXISTING 54" RCP STORM CULVERT
    IE (S): 351.37'
23. EXISTING 54" RCP STORM CULVERT
    IE (S): 351.24'
24. EXISTING WETLAND TO BE PROTECTED
    137719.92 SF
    3.2 AC
25. EXISTING WETLAND TO BE IMPACTED
    3353.30 SF
    0.08 AC
26. EXISTING WETLAND TO BE IMPACTED
    4527.98 SF
    0.10 AC
27. EXISTING WELAND TO BE IMPACTED
    6314.21 SF
    0.14 AC
28. EXISTING WETLAND TO BE IMPACTED
    30615.52 SF
    0.70 AC
29. EXISTING WETLAND TO BE IMPACTED
    13503.88 SF
    0.31 AC

LEGEND

- STORM CALL OUT
- EXISTING DRAINAGE PATH
- EXISTING SLOPES THAT EXCEED 10% (12.54%)
- EXISTING 5' MINOR CONTOURS
- EXISTING 10' MAJOR CONTOURS (55)
- WETLAND TO BE IMPACTED
- WETLAND TO REMAIN
- EXISTING PROPERTY LINES
- BASIN 1 IMPERVIOUS AREA
- BASIN 2 IMPERVIOUS AREA
- BASIN 2 PERVIOUS AREA
- BASIN 3 IMPERVIOUS AREA
- BASIN 3 PERVIOUS AREA

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SITE APPLICATION

100 0 100 200
SCALE OF FEET
SCALE: 1"=100'

DISCLAIMER

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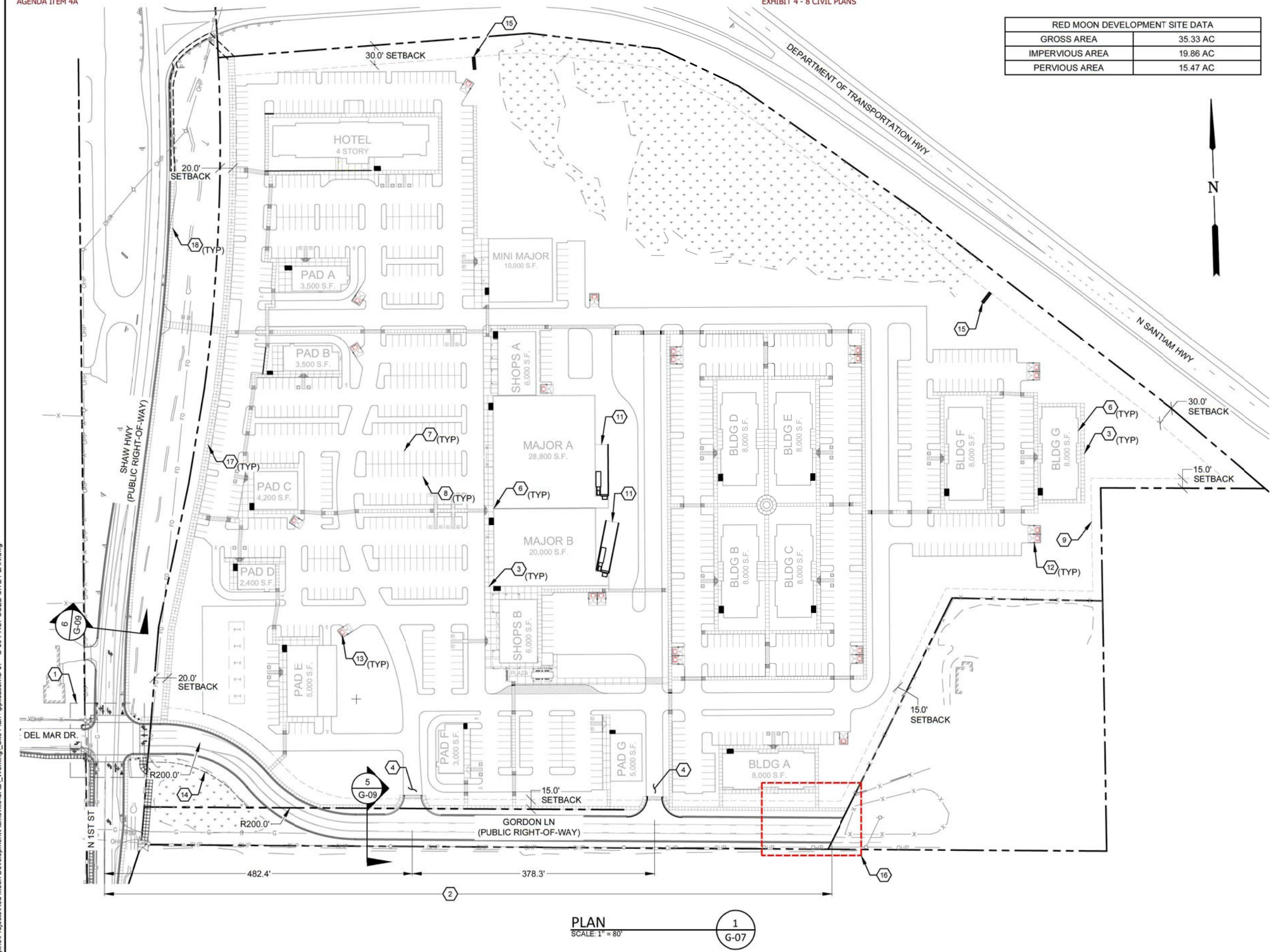
BEND OFFICE
686 NW YORK DR, #100
BEND, OR 97703
541.797.6781

DESIGNED BY: VRC
DRAWN BY: JRTC
CHECKED BY: JDP
DATE: MARCH 2024
PROJECT NO:
SCALE: AS NOTED

AUMSVILLE, OREGON
RED MOON DEVELOPMENT

SITE ANALYSIS MAP
RESOURCE AREAS AND STORMWATER ANALYSIS MAP

DRAWING NO. G-06
SHEET NO.



PLAN
SCALE: 1" = 80'
1 G-07

RED MOON DEVELOPMENT SITE DATA	
GROSS AREA	35.33 AC
IMPERVIOUS AREA	19.86 AC
PERVIOUS AREA	15.47 AC

KEYNOTES:

1. PROPOSED INTERSECTION TO BE IMPROVED UTILIZING SIGNAL POLES AND ASSOCIATED ROAD IMPROVEMENTS TO ACCOMMODATE DESIGN STANDARDS. WORK WILL BE COORDINATED WITH THE CITY OF AUMSVILLE AND MARION COUNTY.
2. PROPOSED EAST DEL MAR EXTENSION, SEE GENERAL NOTES FOR DESIGN STANDARDS IMPLEMENTED.
3. PROPOSED 5 FT WIDE CONCRETE SIDEWALK.
4. PROPOSED 30 FT WIDE SITE ACCESS.
5. NOT USED.
6. PROPOSED BUILDING FOOTPRINT.
7. PROPOSED 10 FT BY 20 FT PARKING SPACE.
8. PROPOSED ACCESSIBLE PARKING SPACE, SEE 2/G-09 3/G-09
9. PROPOSED 25 FT SETBACK.
10. PROPOSED 60 FT RIGHT-OF-WAY.
11. PROPOSED 20 FT BY 80 FT LOADING AND SERVICE AREA.
12. PROPOSED 20 FT BY 27 FT WASTE DISPOSAL AREA, SEE 4/G-09
13. PROPOSED 14 FT BY 20 FT WASTE DISPOSAL AREA, SEE 4/G-09
14. PROPOSED 60 FT WIDE RIGHT OF WAY TO BE REPLATTED.
15. PROPOSED PYLON SIGN LOCATION.
16. ENGINEER WILL COORDINATE WITH FIRE DEPARTMENT FOR PROPER CONFIGURATION OF HAMMERHEAD TURNAROUND
17. PROPOSED 10' WIDE MULTIUSED PATH
18. PROPOSED 5' CURB-TIGHT SIDEWALK

UTILITY NOTES:

SEE SHEET G-05: SITE MAP ANALYSIS - UTILITY LAYOUT FOR ALL INFORMATION REGARDING UTILITIES.

GENERAL NOTES:

1. CITY OF AUMSVILLE PUBLIC WORKS STANDARDS, DIVISION 2 (CITY STANDARDS); SECTION 2.14 (B), THE MINIMUM RADIUS OF HORIZONTAL CURVATURE FOR A COLLECTOR STREET IS 200 FT.
2. CITY STANDARDS, SECTION 2.14 (C), THE MINIMUM SPACING BETWEEN INTERSECTIONS FOR COLLECTOR STREETS IS 300 FT MEASURED CENTERLINE TO CENTERLINE.
3. CITY STANDARDS, SECTION 2.16 (B), THE MINIMUM HORIZONTAL TANGENT LENGTH AT AN INTERSECTION FOR A COLLECTOR STREET IS 75 FT MEASURED FROM THE CURB EXTENSION OF THE INTERSECTING STREET.
4. CITY STANDARDS, SECTION 2.11 (A), THE MINIMUM PAVEMENT WIDTH FOR A COLLECTOR STREET IS 40 FT MEASURED CURB TO CURB.
5. CITY OF AUMSVILLE TRANSPORTATION SYSTEM PLAN, TABLE S-1 AND PAGE 4-38 "STREET IMPROVEMENTS, EAST DEL MAR EXTENSION," GORDAN LANE WILL BE A 3-LANE COLLECTOR STREET.

LEGEND

ROAD CALL OUT
EDGE OF PAVEMENT
25 FT SETBACK LINE
TRASH ENCLOSURE
SIDEWALK
CROSSWALK
PROPOSED INTERSECTION IMPROVEMENT AREA

SITE APPLICATION

80 0 80 160
SCALE OF FEET
SCALE: 1"=80'

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541.797.6781

DESIGNED BY: VRC
DRAWN BY: JRTC
CHECKED BY: JDP
DATE: MARCH 2024
PROJECT NO:
SCALE: AS NOTED

AUMSVILLE, OREGON
RED MOON DEVELOPMENT

PROPOSED SITE PLAN
CIVIL SITE LAYOUT

DRAWING NO. G-07
SHEET NO.

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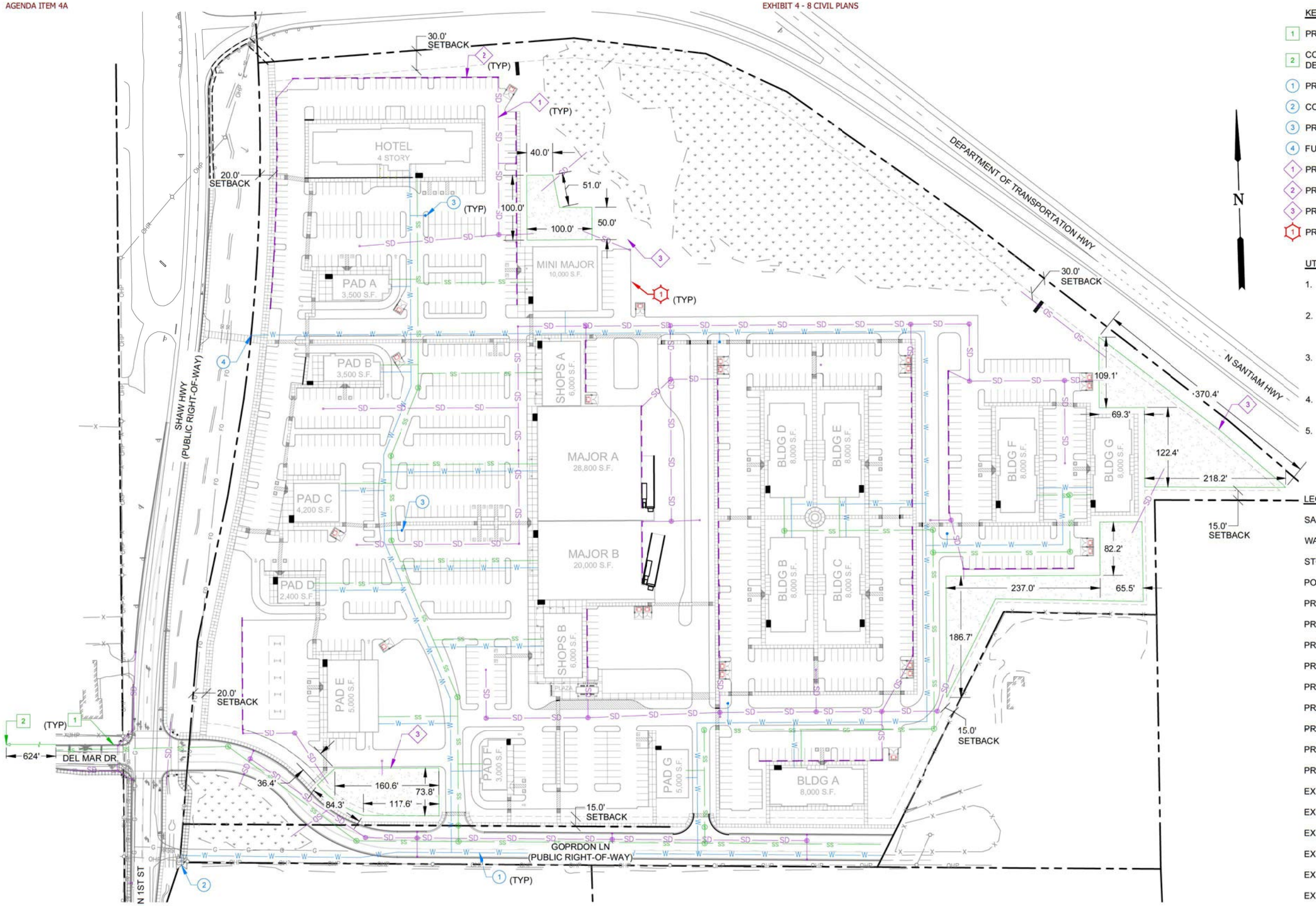

PLAN
SCALE: 1" = 80'

1
G-08

KEYNOTES:

1. PROPOSED SANITARY SEWER LINE, SEE UTILITY NOTES.
2. CONNECT TO EXISTING SANITARY SEWER MANHOLE AT THE INTERSECTION OF DEL MAR DR AND N 4TH ST.
1. PROPOSED POTABLE WATER LINE, SEE UTILITY NOTES.
2. CONNECT TO EXISTING WATER LINE, SEE UTILITY NOTES.
3. PROPOSED HYDRANT, SEE UTILITY NOTES.
4. FUTURE CONNECTION POINT.
1. PROPOSED STORMWATER LINE, SEE UTILITY NOTES.
2. PROPOSED SLOTTED DRAIN PIPE, SEE UTILITY NOTES.
3. PROPOSED STORMWATER DETENTION POND, SEE SHEET G-11.
1. PROPOSE LIGHT POLE, SEE UTILITY NOTES.

UTILITY NOTES:

1. SIZE AND DEPTH OF THE SANITARY SEWER, WATER, AND STORMWATER LINES SHALL BE DETERMINED IN THE FINAL DESIGN.
2. GAS, POWER, AND COMMUNICATION LINES TO BE DETERMINED. ENGINEER WILL COORDINATE WITH LOCAL AGENCIES TO INCORPORATE UTILITIES INTO THE DESIGN.
3. SANITARY SEWERS ARE LOCATED FIVE FEET FROM THE STREET CENTERLINE ON THE LOW SIDE OF THE STREET AND RUN PARALLEL WITH THE CENTERLINE OF THE RIGHT-OF-WAY.
4. WATER LINES ARE SPACED HORIZONTALLY 10 FT MINIMUM FROM SEWERS PER OAR REQUIREMENTS.
5. HYDRANTS HAVE BEEN SPACED 500 FT MAX FROM BUILDINGS.

LEGEND

- SANITARY SEWER CALL OUT
- WATER CALL OUT
- STORM DRAIN CALL OUT
- POWER CALL OUT
- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED WATER LINE
- PROPOSED HYDRANT
- PROPOSED STORM LINE
- PROPOSED SLOTTED DRAIN
- PROPOSED CATCH BASIN
- PROPOSED STORM MANHOLE
- PROPOSED DETENTION POND
- EXISTING GAS LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING POWER POLE
- EXISTING COMM LINE
- EXISTING STORM LINE
- EXISTING DITCH LINE
- EXISTING WETLAND TO BE PROTECTED

SITE APPLICATION

80 0 80 160
SCALE OF FEET
SCALE: 1"=80'

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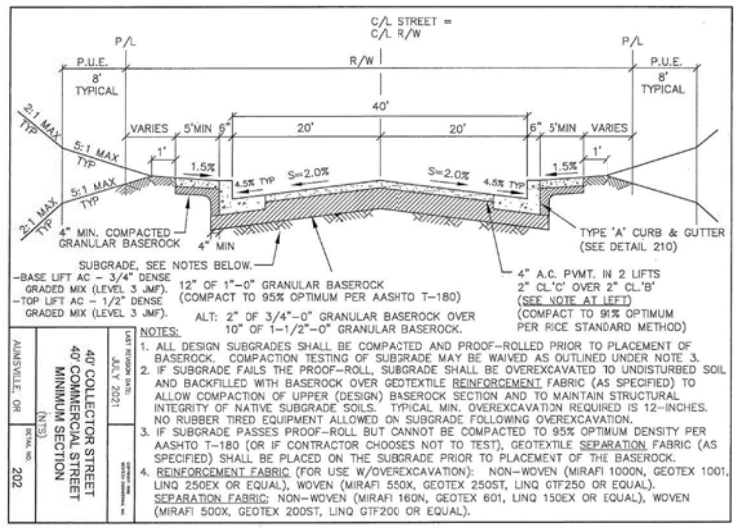
AUMSVILLE, OREGON
RED MOON DEVELOPMENT

PROPOSED SITE PLAN
CIVIL UTILITIES LAYOUT

DRAWING NO. G-08
SHEET NO.

AGENDA ITEM 4A

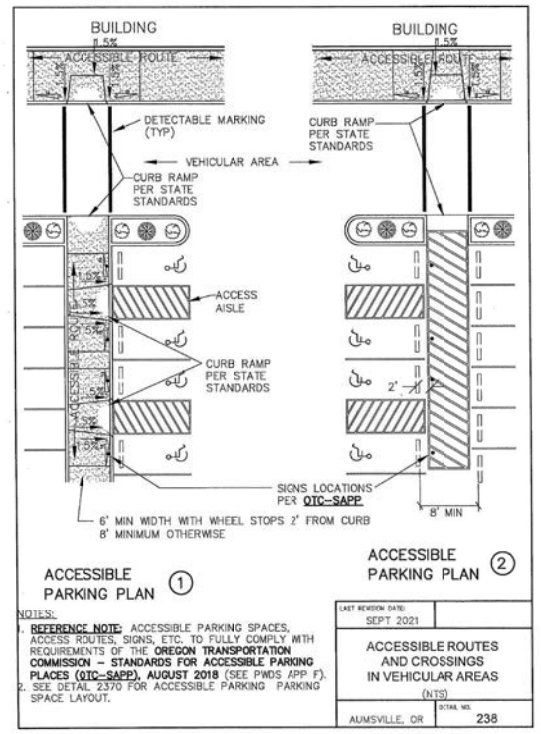
EXHIBIT 4 - 8 CIVIL PLANS



NOTES:
1. ALL DESIGN SUBGRADES SHALL BE COMPACTED AND PROOF-ROLLED PRIOR TO PLACEMENT OF BASEROCK. COMPACTION TESTING OF SUBGRADE MAY BE WAIVED AS OUTLINED UNDER NOTE 3.
2. IF SUBGRADE FAILS THE PROOF-ROLL, SUBGRADE SHALL BE OVEREXCAVATED TO UNDISTURBED SOIL AND BACKFILLED WITH BASEROCK OVER GEOTEXTILE REINFORCEMENT FABRIC (AS SPECIFIED) TO ALLOW COMPACTION OF UPPER (DESIGN) BASEROCK SECTION AND TO MAINTAIN STRUCTURAL INTEGRITY OF NATIVE SUBGRADE SOILS. TYPICAL MIN. OVEREXCAVATION REQUIRED IS 12-INCHES. NO RUBBER TIRED EQUIPMENT ALLOWED ON SUBGRADE FOLLOWING OVEREXCAVATION.
3. IF SUBGRADE PASSES PROOF-ROLL BUT CANNOT BE COMPACTED TO 95% OPTIMUM DENSITY PER AASHTO T-180 (OR IF CONTRACTOR CHOOSES NOT TO TEST), GEOTEXTILE SEPARATION FABRIC (AS SPECIFIED) SHALL BE PLACED ON THE SUBGRADE PRIOR TO PLACEMENT OF THE BASEROCK.
4. REINFORCEMENT FABRIC (FOR USE W/OVEREXCAVATION): NON-WOVEN (MIRAFI 1000N, GEOTEX 1001, LINQ 250EX OR EQUAL), WOVEN (MIRAFI 550X, GEOTEX 250ST, LINQ 0TF250 OR EQUAL).
SEPARATION FABRIC: NON-WOVEN (MIRAFI 160N, GEOTEX 601, LINQ 150EX OR EQUAL), WOVEN (MIRAFI 500X, GEOTEX 200ST, LINQ 0TF200 OR EQUAL).

AUMSVILLE, OR | LAST REVISION DATE: JULY 2021
40' COLLECTOR STREET / 40' COMMERCIAL STREET MINIMUM SECTION (NTS)
SECTION NO. 202 | DETAIL NO.

DETAIL 1 G-09
SCALE: N.T.S.



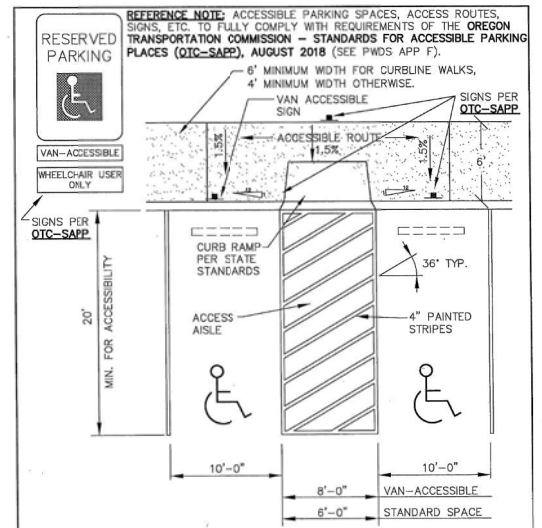
ACCESSIBLE PARKING PLAN 1

ACCESSIBLE PARKING PLAN 2

NOTES:
1. REFERENCE NOTE: ACCESSIBLE PARKING SPACES, ACCESS ROUTES, SIGNS, ETC. TO FULLY COMPLY WITH REQUIREMENTS OF THE OREGON TRANSPORTATION COMMISSION – STANDARDS FOR ACCESSIBLE PARKING PLACES (OTC-SAPP), AUGUST 2018 (SEE PWDS APP F).
2. SEE DETAIL 2370 FOR ACCESSIBLE PARKING SPACE LAYOUT.

LAST REVISION DATE: SEPT 2021
ACCESSIBLE ROUTES AND CROSSINGS IN VEHICULAR AREAS (NTS)
AUMSVILLE, OR | DETAIL NO. 238

DETAIL 2 G-09
SCALE: N.T.S.



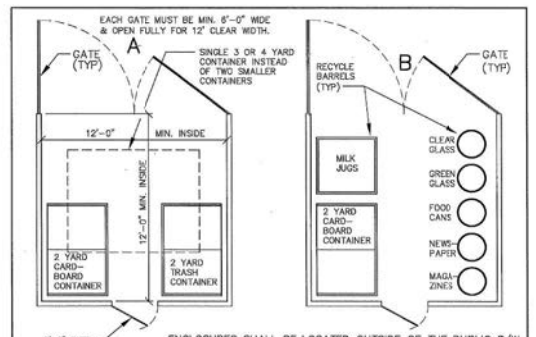
REFERENCE NOTE: ACCESSIBLE PARKING SPACES, ACCESS ROUTES, SIGNS, ETC. TO FULLY COMPLY WITH REQUIREMENTS OF THE OREGON TRANSPORTATION COMMISSION – STANDARDS FOR ACCESSIBLE PARKING PLACES (OTC-SAPP), AUGUST 2018 (SEE PWDS APP F).

DOUBLE ACCESSIBLE PARKING SPACE

NOTES:
1. ONE ACCESSIBLE PARKING SPACE MUST BE DESIGNATED "VAN-ACCESSIBLE", THE OTHER SPACE CAN BE EITHER "VAN-ACCESSIBLE" OR STANDARD PARKING SPACE.
2. VAN-ACCESSIBLE OR WHEELCHAIR ONLY SPACES SHALL HAVE AN ADDITIONAL SIGN MOUNTED BELOW THE STANDARD PARKING SPACE PARKING SIGN.
3. VAN-ACCESSIBLE SPACE CAN BE USED BY ANY VEHICLE WITH A DMV DISABLED PERMIT.
4. MAXIMUM 2% CROSS SLOPE ALLOWED IN PARKING SPACE OR ACCESS AISLE.
5. POST MOUNTED SIGNS SHALL HAVE 7' (±3") CLEARANCE FROM SIGN BOTTOM TO GROUND.

LAST REVISION DATE: FEB 2022
DOUBLE ACCESSIBLE PARKING SPACE (NTS)
AUMSVILLE, OR | DETAIL NO. 237

DETAIL 3 G-09
SCALE: N.T.S.



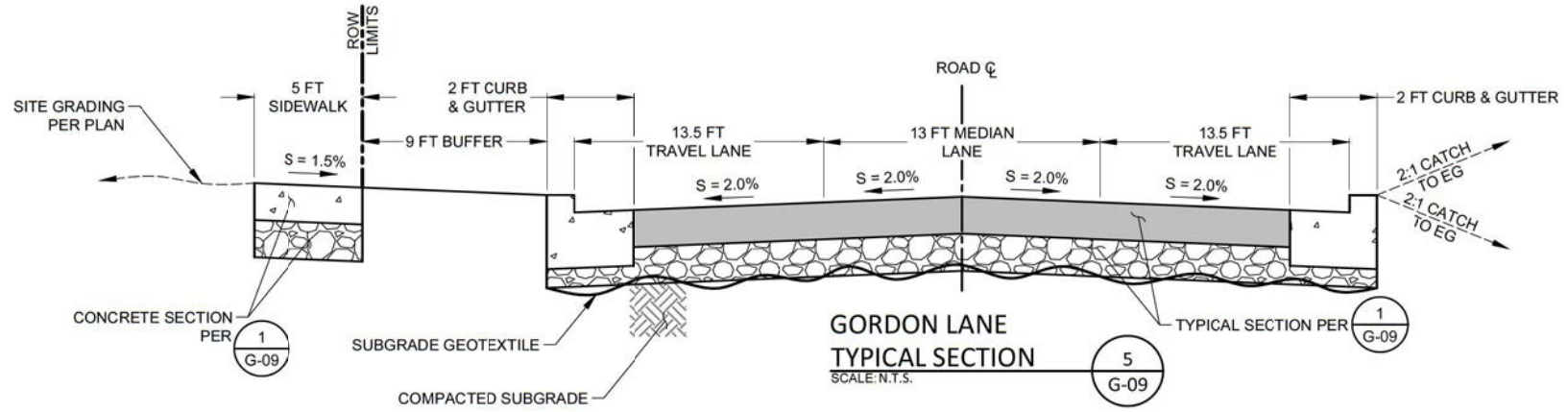
TRASH ENCLOSURE** RECYCLE ENCLOSURE**

**ENCLOSURES SHOWN ARE TYPICAL EXAMPLES UNLESS ALTERNATE CONFIGURATION IS APPROVED BY TRASH/RECYCLING FRANCHISEE AND CITY PLANNER.

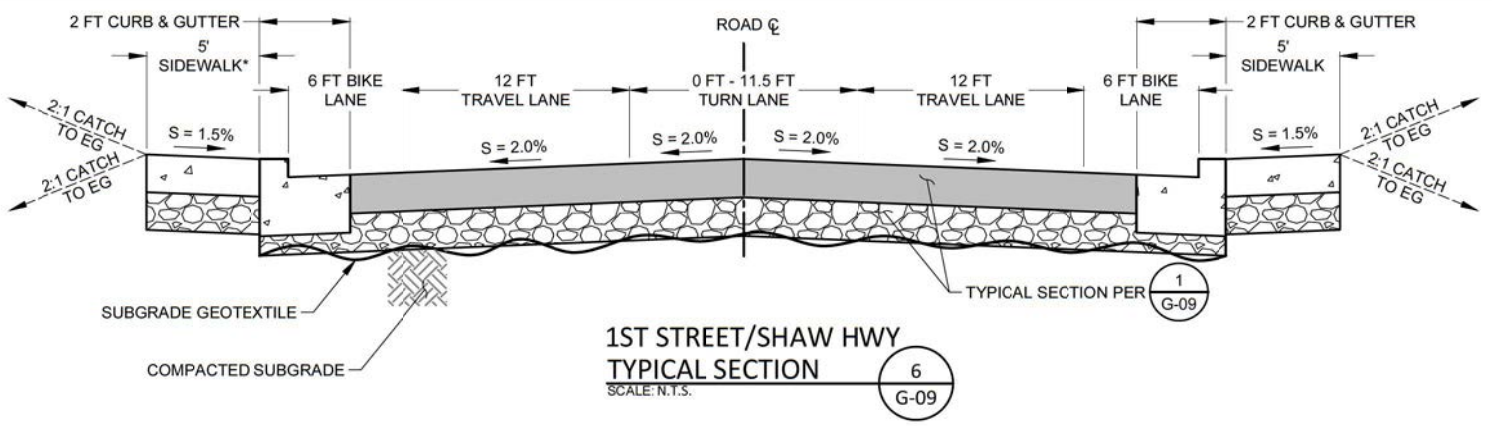
NOTES:
1. GATES:
   (a) ALL GATES MUST ATTACH AT THE END OF OF THE WALLS TO PROVIDE A MINIMUM OF 12' CLEAR WORKING SPACE WHEN OPEN.
   (b) TO SERVICE THE ENCLOSURE, THE GATES MUST BE ABLE TO BE PINNED IN MUST BE ABLE TO BE PINNED IN THE FULL OPEN POSITION.
   (c) GATES MUST OPEN FROM OUTSIDE THE ENCLOSURE.
2. FOR 5 OR 6 YARD CONTAINERS THE ENCLOSURE DEPTH MUST BE 15'.
3. WHERE REQ'D. (I.E. RESTAURANTS), GREASE BARRELS MUST BE SEPARATE FROM TRASH AND RECYCLING ENCLOSURES.
4. ROOFS OR OVERHANGS SHALL HAVE 15' OF OVERHEAD CLEARANCE.
5. IF RECYCLING IS NOT INCLUDED, AREA (A) CAN PROVIDE SERVICE FOR TRASH AND CARDBOARD FOR CONTAINER SIZES OF 1 TO 2 YARDS. IF A 3 YARD OR LARGER TRASH CONTAINER IS NEEDED, AN ADDITIONAL 12' X 12' SPACE WILL BE NECESSARY FOR CARDBOARD CONTAINER SERVICE.
6. CONCRETE PADS REQUIRED FOR ALL ENCLOSURES. WALLS, GATE & DOOR MATERIALS & HEIGHT PER CITY STANDARDS BASED ON SCREENING REQUIREMENTS.
7. A 1 YD. CONTAINER WILL HOLD APPROXIMATELY THE SAME AS 6 TRASH CANS (32 GAL SIZE). USE 6 TIMES THE CONTAINER SIZE IN YARDS TO ESTIMATE A CONTAINER CAPACITY. FOR EXAMPLE, A 3 YD. CONTAINER WILL HOLD APPROX THE SAME AMOUNT AS 18 TRASH CANS (32 GAL SIZE).

LAST REVISION DATE: FEB 2021
TYPICAL TRASH AND RECYCLING ENCLOSURE (NTS)
AUMSVILLE, OR | DETAIL NO. 240

DETAIL 4 G-09
SCALE: N.T.S.



GORDON LANE
TYPICAL SECTION
SCALE: N.T.S.
5 G-09



1ST STREET/SHAW HWY
TYPICAL SECTION
SCALE: N.T.S.
6 G-09

*WHERE SHOWN ON PLANS

SITE APPLICATION

DISCLAIMER

THIS DRAWING IS INTENDED TO BE PLOTTED IN COLOR ON A 22" X 34" SHEET. ADJUST SCALES ACCORDINGLY AND VERIFY COLOR LEGEND BELOW IS CORRECT:
RED BLUE

NO.	DATE	BY	APPR	REVISIONS

FLAGLINE ENGINEERING
BEND OFFICE
686 NW YORK DR, #100
BEND, OR 97703
541.797.6781

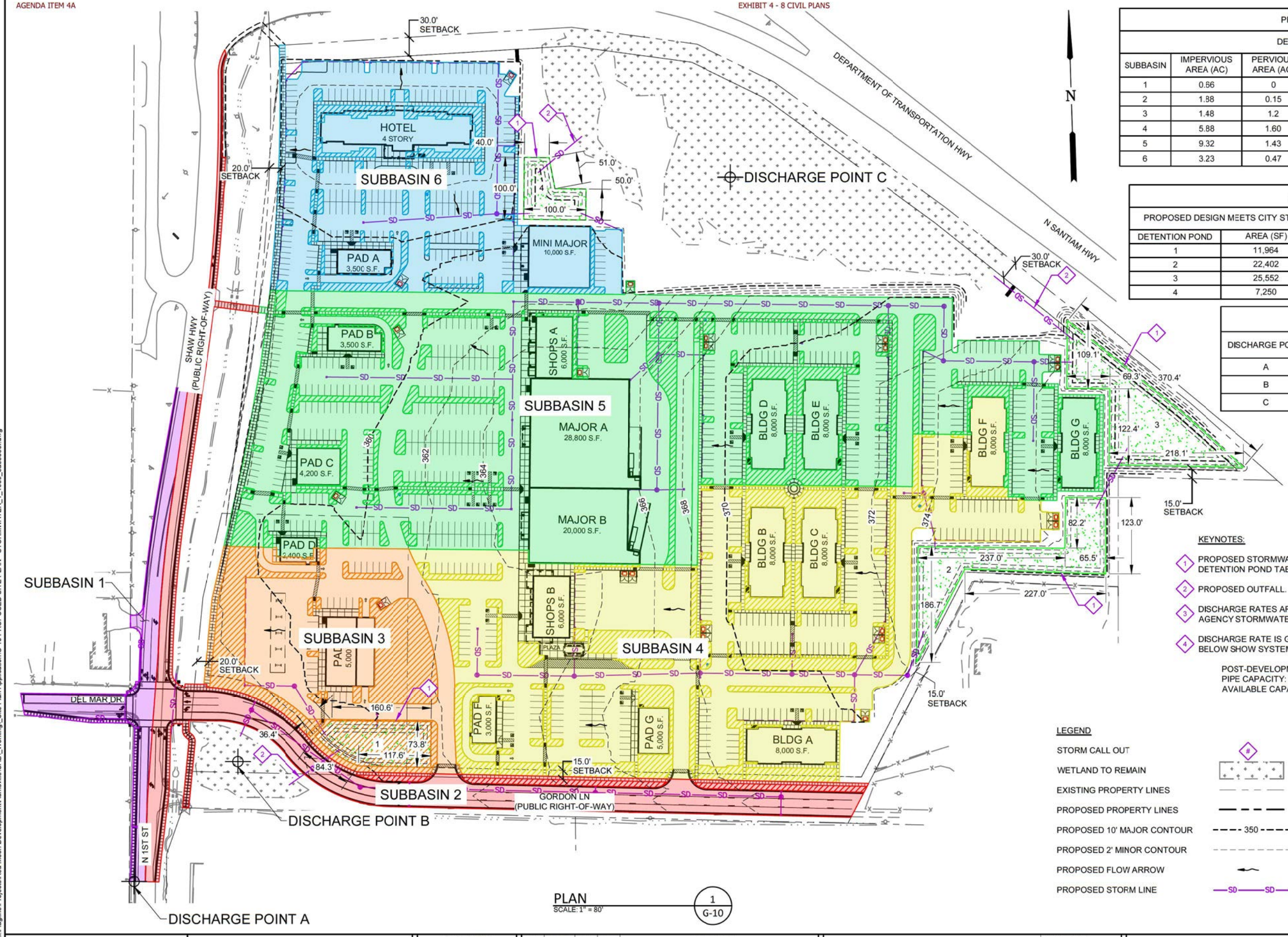
DESIGNED BY: VRC
DRAWN BY: JRTC
CHECKED BY: JDP
DATE: MARCH 2024
PROJECT NO:
SCALE: AS NOTED

AUMSVILLE, OREGON
RED MOON DEVELOPMENT

PROPOSED SITE PLAN DETAILS I

DRAWING NO. G-09
SHEET NO.

C:\Users\voldh\Flagline Dropbox\Flagline\Projects\Red Moon Development\Aumsville\CAD_Working_Site Plan Application\G-07 - G-09 PROPOSED SITE PLAN.dwg



PLAN
SCALE: 1" = 80'
1
G-10

PROPOSED STORMWATER BASINS						
DESIGN STORM EVENT: 25 YR, 24 HR						
SUBBASIN	IMPERVIOUS AREA (AC)	PERVIOUS AREA (AC)	TOTAL AREA (AC)	PEAK FLOW RATE (CFS)	TOTAL RUNOFF VOLUME (CY)	DISCHARGE POINT
1	0.66	0	0.66	1.86	328	A
2	1.88	0.15	2.03	5.59	956	B
3	1.48	1.2	2.68	5.56	938	POND1
4	5.88	1.60	7.48	18.35	3,163	POND 2
5	9.32	1.43	10.75	26.81	4,842	POND 3
6	3.23	0.47	3.70	9.73	1,672	POND 4

STORMWATER DETENTION POND				
PROPOSED DESIGN MEETS CITY STORMWATER CAPACITY REQUIREMENTS PER SECTION 3.18(d)(2)(a)(1)				
DETENTION POND	AREA (SF)	DEPTH (FT)	VOLUME (CY)	DISCHARGE POINT
1	11,964	7	1,899	B
2	22,402	5.33	2,739	C
3	25,552	7	4,355	C
4	7,250	7	962	C

STORMWATER DISCHARGE SUMMARY			
DISCHARGE POINT	PRE RUNOFF FLOW RATE (CFS)	POST RUNOFF FLOW RATE (CFS)	Δ DISCHARGE (CFS)
A	0.82	1.73	0.91 (4)
B	9.49	4.93	-4.56 (3)
C	14.25	2.03	-12.22 (3)

KEYNOTES:

1. PROPOSED STORMWATER DETENTION POND, SEE PROPOSED STORMWATER DETENTION POND TABLE.
2. PROPOSED OUTFALL.
3. DISCHARGE RATES ARE LESS THAN OR EQUAL TO PRE-DEVELOPMENT MEETING AGENCY STORMWATER REQUIREMENTS.
4. DISCHARGE RATE IS GREATER THAN PRE-DEVELOPMENT BUT CAPACITY DATA BELOW SHOW SYSTEM CAN HANDLE ADDITIONAL FLOW:

   POST-DEVELOPMENT 25 YR, 24 HR FLOW RATE: 1.73 CFS
   PIPE CAPACITY: 2.73 CFS
   AVAILABLE CAPACITY REMAINING: 1.0 CFS

LEGEND

- STORM CALL OUT
- WETLAND TO REMAIN
- EXISTING PROPERTY LINES
- PROPOSED PROPERTY LINES
- PROPOSED 10' MAJOR CONTOUR (350)
- PROPOSED 2' MINOR CONTOUR
- PROPOSED FLOW ARROW
- PROPOSED STORM LINE (SD)

LEGEND CONT.

- PROPOSED DETENTION POND
- SUBBASIN 1
- SUBBASIN 2
- SUBBASIN 3
- SUBBASIN 4
- SUBBASIN 5
- SUBBASIN 6

SITE APPLICATION

100 0 100 200
SCALE OF FEET
SCALE: 1"=100'

DISCLAIMER

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RED BLUE

NO.	DATE	BY	APPR	REVISIONS

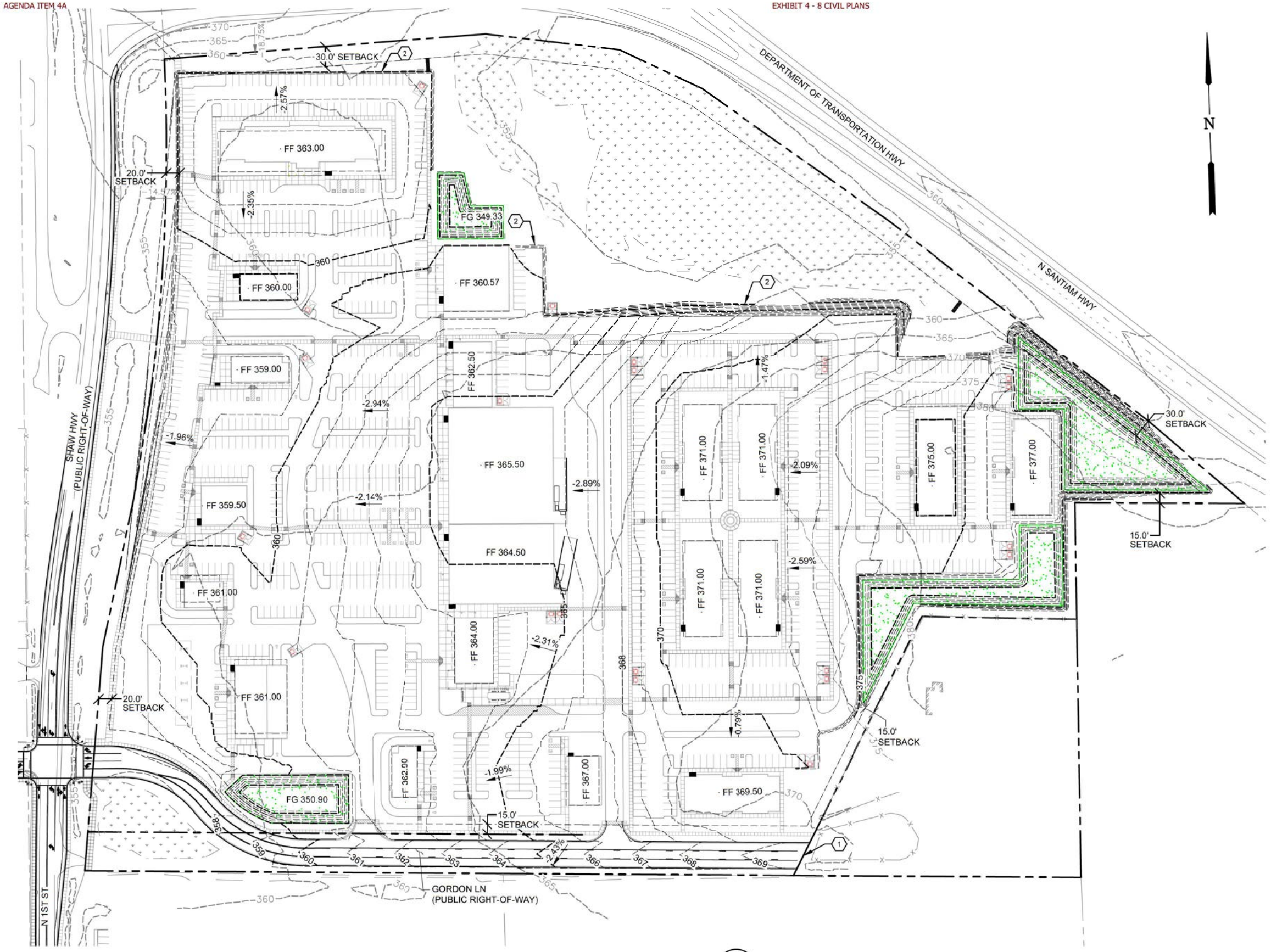
FLAGLINE ENGINEERING
BEND OFFICE
686 NW YORK DR, #100
BEND, OR 97703
541.797.6781

DESIGNED BY: VRC
DRAWN BY: VRC
CHECKED BY: JDP
DATE: MARCH 2024
PROJECT NO:
SCALE: AS NOTED

AUMSVILLE, OREGON
RED MOON DEVELOPMENT

PROPOSED SITE PLAN
STORMWATER ANALYSIS

DRAWING NO. G-10
SHEET NO.



KEYNOTES:

1. END OF IMPROVEMENTS, GRADE TO EXISTING
2. GRADE TO EXISTING, 2:1 MAX CATCH SLOPE

EARTHWORK TABLE		
CUT (CY)	FILL (CY)	NET (CY)
51,840	60,320	8,480 (FILL)

LEGEND

- ROAD CALL OUT
- EXISTING PROPERTY BOUNDARY
- EXISTING 10' MAJOR CONTOUR
- EXISTING 5' MINOR CONTOUR
- EXISTING FENCE
- EXISTING BUILDING PERIMETER
- EXISTING WETLAND
- EXISTING EDGE OF PAVEMENT
- PROPOSED 5' MAJOR CONTOUR
- PROPOSED 1' MINOR CONTOUR
- PROPOSED BUILDING PERIMETER
- PROPOSED SIDEWALK
- PROPOSED DETENTION POND

PLAN
SCALE: 1" = 80'

1
G-11

SITE APPLICATION

80 0 80 160
SCALE OF FEET
SCALE: 1"=80'

DISCLAIMER

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RED BLUE

NO.	DATE	BY	APPR	REVISIONS

FLAGLINE ENGINEERING
BEND OFFICE
686 NW YORK DR, #100
BEND, OR 97703
541.797.6781

DESIGNED BY: VRC
DRAWN BY: VRC
CHECKED BY: JDP
DATE: MARCH 2024
PROJECT NO:
SCALE: AS NOTED

AUMSVILLE, OREGON
RED MOON DEVELOPMENT

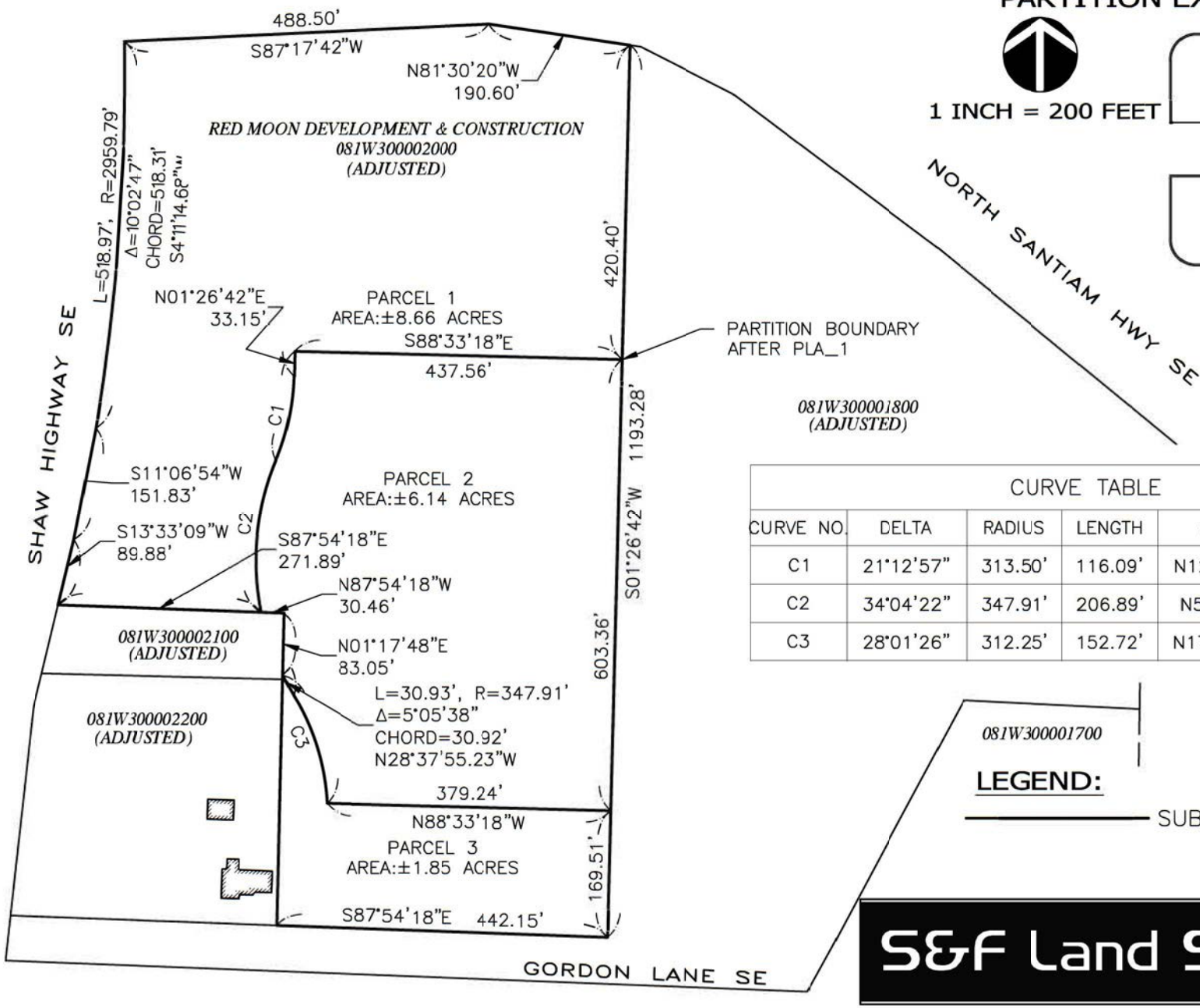
PRELIMINARY GRADING PLAN

DRAWING NO. G-11
SHEET NO.

C:\Users\Ari\Flagline Dropbox\Flagline\Projects\Red Moon Development\Aumsville\CAD_Working_Site Plan Application\G-11 GRADING PLAN.dwg

PARTITION EXHIBIT SKETCH

1 INCH = 200 FEET



CURVE TABLE					
CURVE NO.	DELTA	RADIUS	LENGTH	CHORD	CHORD LEN
C1	21°12'57"	313.50'	116.09'	N12°03'11"E	115.42'
C2	34°04'22"	347.91'	206.89'	N5°37'29"E	203.86'
C3	28°01'26"	312.25'	152.72'	N17°10'01"W	151.21'

LEGEND:

SUBJECT PROPERTIES

REGISTERED PROFESSIONAL LAND SURVEYOR

DocuSigned by:
DIGITALLY SIGNED
59958CAE808A409...

OREGON
JANUARY 21, 2009
ANDREW N. HUSTON
61407PLS

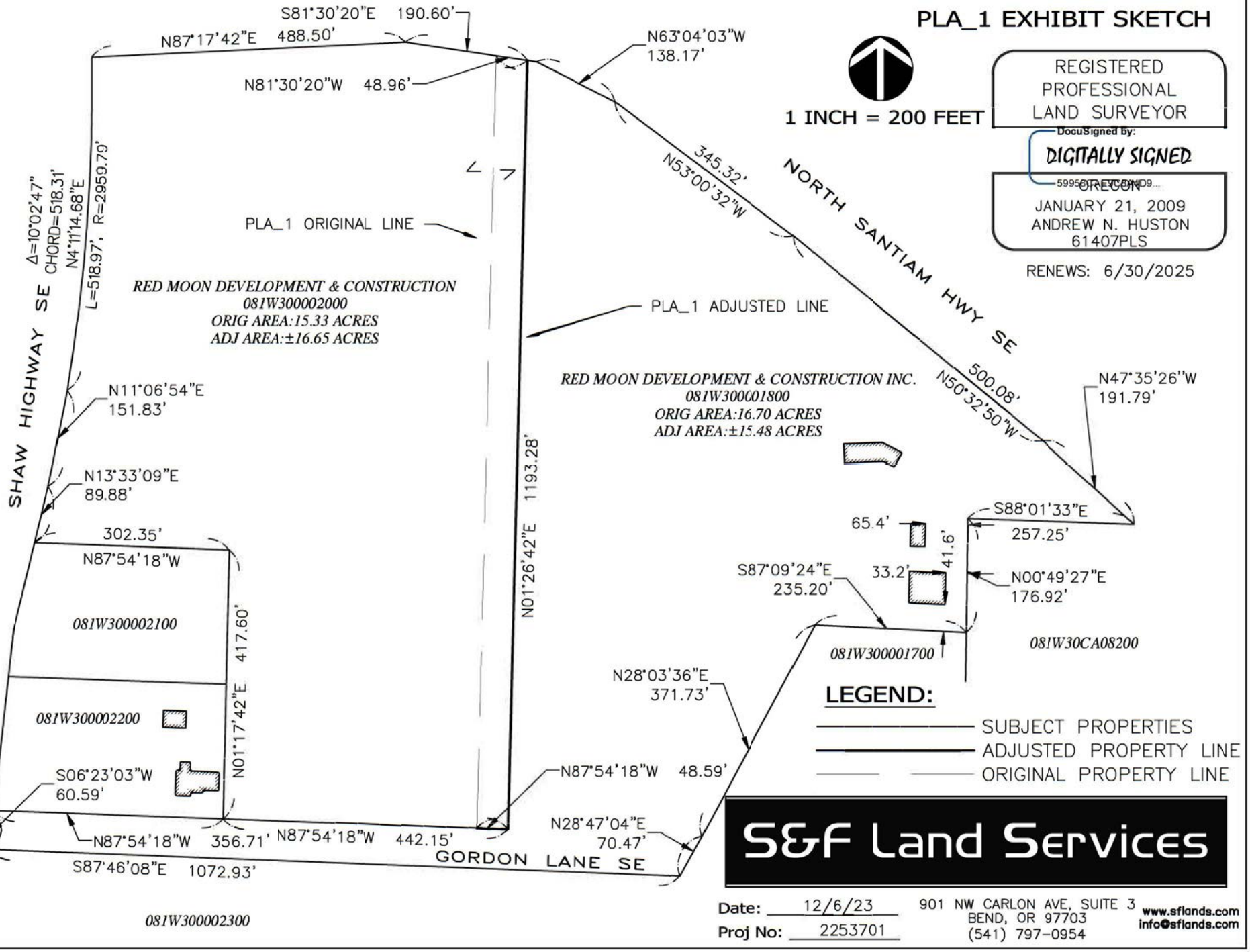
RENEWS: 6/30/2025

S&F Land Services

Date: 12/6/23
Proj No: 2253701

901 NW CARLON AVE, SUITE 3
BEND, OR 97703
(541) 797-0954

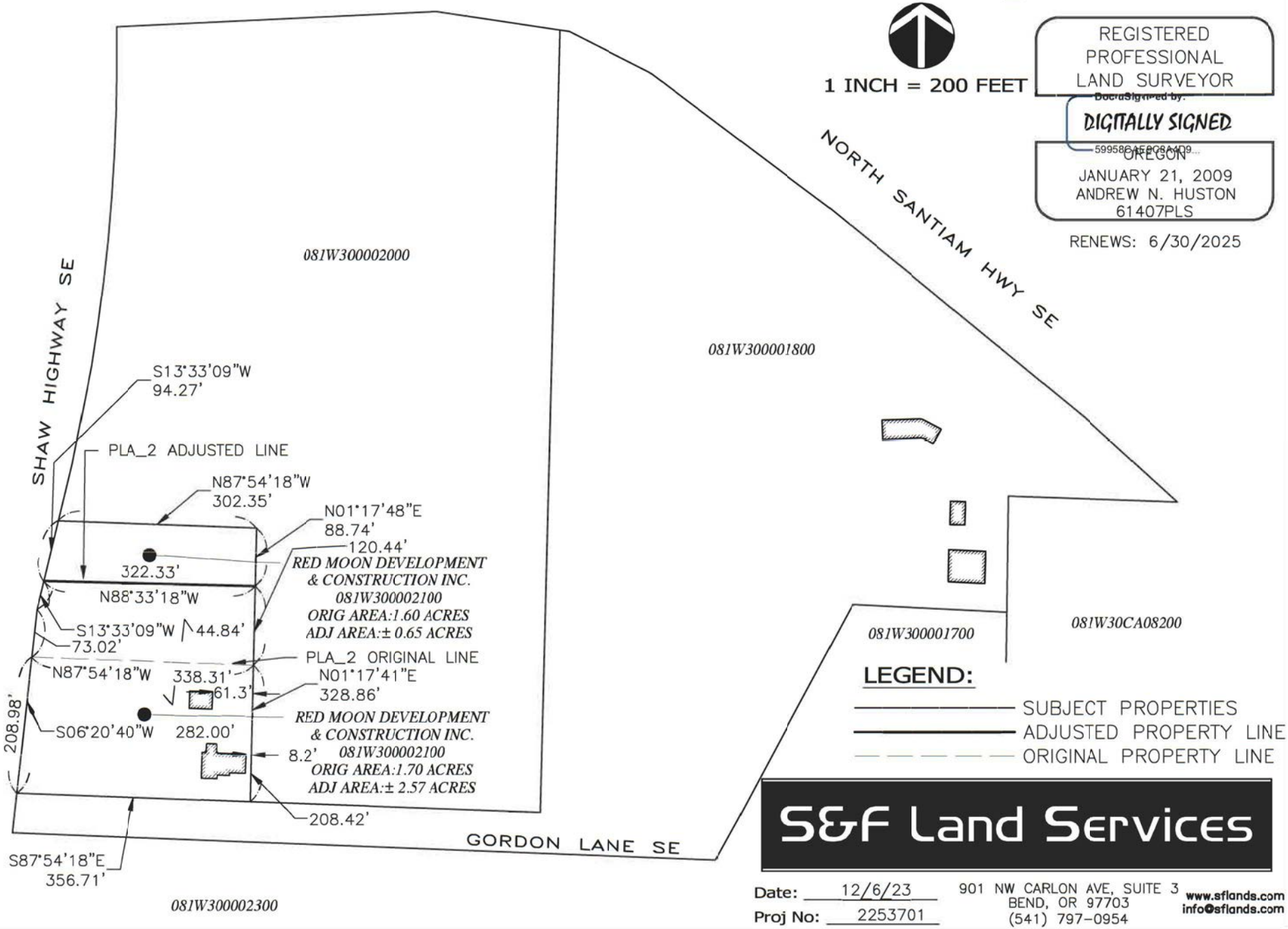
www.sflands.com
info@sflands.com


PLA_1 EXHIBIT SKETCH
1 INCH = 200 FEET
REGISTERED PROFESSIONAL LAND SURVEYOR
DocuSigned by:
DIGITALLY SIGNED
OREGON
JANUARY 21, 2009
ANDREW N. HUSTON
61407PLS
RENEWS: 6/30/2025
S81°30'20"E 190.60'
N87°17'42"E 488.50'
N81°30'20"W 48.96'
N63°04'03"W 138.17'
345.32'
N53°00'32"W
NORTH SANTIAM HWY SE
PLA_1 ORIGINAL LINE
PLA_1 ADJUSTED LINE
SHAW HIGHWAY SE
Δ=10°02'47"
CHORD=518.31'
N4°11'14.68"E
L=518.97', R=2959.79'
RED MOON DEVELOPMENT & CONSTRUCTION
081W300002000
ORIG AREA:15.33 ACRES
ADJ AREA:±16.65 ACRES
RED MOON DEVELOPMENT & CONSTRUCTION INC.
081W300001800
ORIG AREA:16.70 ACRES
ADJ AREA:±15.48 ACRES
N11°06'54"E 151.83'
N13°33'09"E 89.88'
302.35'
N87°54'18"W
081W300002100
081W300002200
417.60'
N01°17'42"E
N01°26'42"E 1193.28'
500.08'
N50°32'50"W
N47°35'26"W 191.79'
S88°01'33"E 257.25'
65.4'
41.6'
33.2'
S87°09'24"E 235.20'
N00°49'27"E 176.92'
081W300001700
081W30CA08200
N28°03'36"E 371.73'
N87°54'18"W 48.59'
N28°47'04"E 70.47'
S06°23'03"W 60.59'
N87°54'18"W 356.71'
N87°54'18"W 442.15'
S87°46'08"E 1072.93'
GORDON LANE SE
081W300002300
LEGEND:
SUBJECT PROPERTIES
ADJUSTED PROPERTY LINE
ORIGINAL PROPERTY LINE
S&F Land Services
Date: 12/6/23
Proj No: 2253701
901 NW CARLON AVE, SUITE 3
BEND, OR 97703
(541) 797-0954
www.sflands.com
info@sflands.com

PLA_2 EXHIBIT SKETCH

1 INCH = 200 FEET

REGISTERED PROFESSIONAL LAND SURVEYOR
DocuSigned by:
DIGITALLY SIGNED
599586AEB08A4D9...
OREGON
JANUARY 21, 2009
ANDREW N. HUSTON
61407PLS
RENEWS: 6/30/2025



LEGEND:

- SUBJECT PROPERTIES
- ADJUSTED PROPERTY LINE
- ORIGINAL PROPERTY LINE

S&F Land Services

Date: 12/6/23
Proj No: 2253701

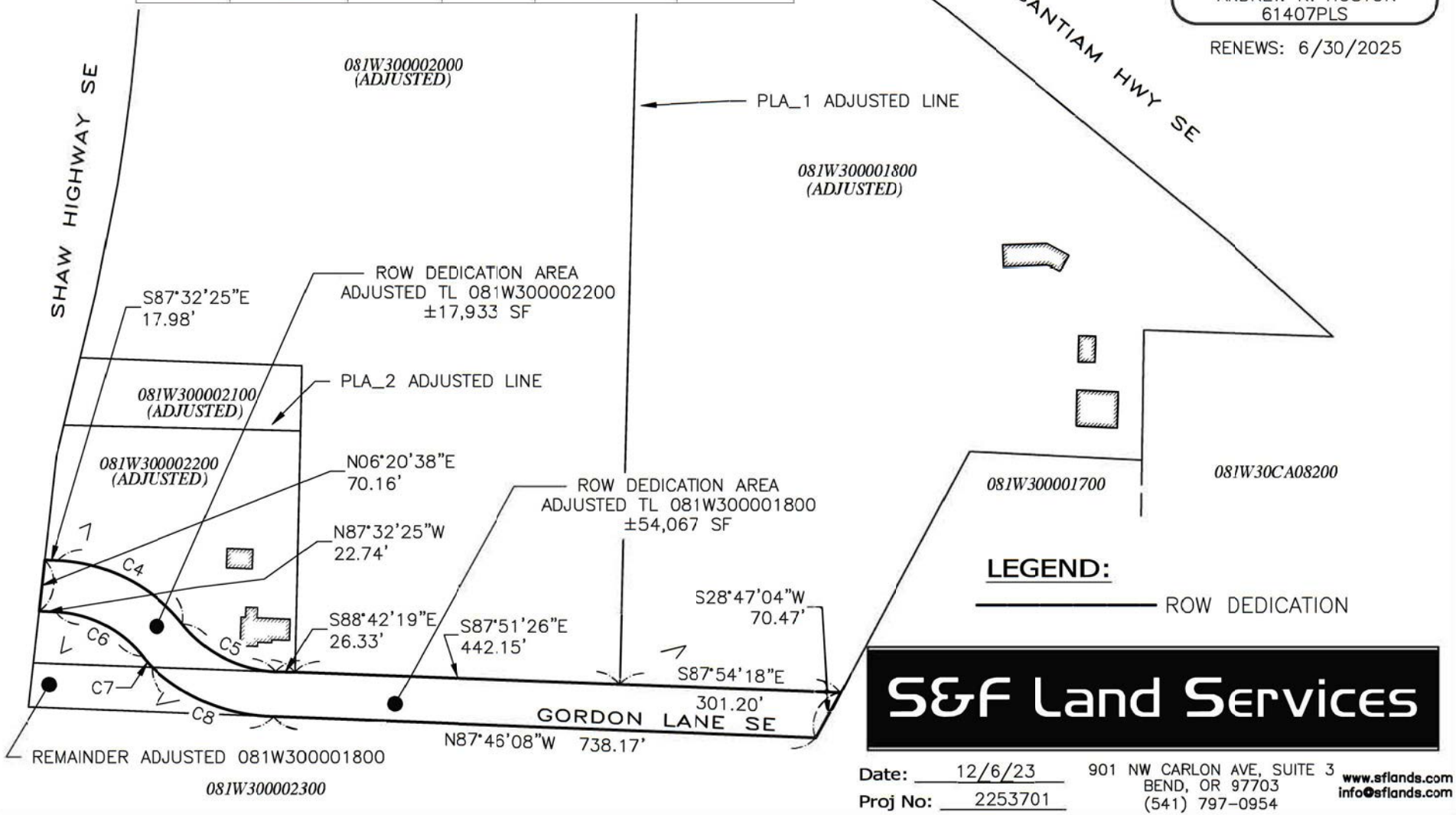
901 NW CARLON AVE, SUITE 3
BEND, OR 97703
(541) 797-0954
www.sflands.com
info@sflands.com

ROW DEDICATION EXHIBIT SKETCH

1 INCH = 200 FEET

CURVE TABLE					
CURVE NO.	DELTA	RADIUS	LENGTH	CHORD	CHORD LEN
C4	49°00'32"	230.00'	196.73'	S63°02'09"E	190.79'
C5	48°17'39"	173.73'	146.43'	S62°56'50"E	142.14'
C6	49°03'27"	160.00'	136.99'	N63°00'42"W	132.85'
C7	4°36'25"	243.73'	19.60'	N41°03'30"W	19.59'
C8	42°02'29"	249.71'	183.23'	N67°55'25"W	179.14'

REGISTERED PROFESSIONAL LAND SURVEYOR
DocuSigned by:
DIGITALLY SIGNED
59958CAE9C8A4D9...
OREGON
JANUARY 21, 2009
ANDREW N. HUSTON
61407PLS
RENEWS: 6/30/2025



LEGEND:

ROW DEDICATION

S&F Land Services

Date: 12/6/23
Proj No: 2253701

901 NW CARLON AVE, SUITE 3
BEND, OR 97703
(541) 797-0954
www.sflands.com
info@sflands.com

Shelly Mullins
410 Michael Way
Aumsville, OR 97325

June 17, 2024

City of Aumsville
Planning Commission
595 Main Street
Aumsville, OR, 97325

RE: Opposition to Case 2023-08 CU-SDR for 9757 Gordon Lane

Dear Members of the Aumsville Planning Commission,

I am writing to strongly oppose the proposed development project at 9757 Gordon Lane, which includes plans for a hotel, commercial retail center, gas station, and light industrial office center. As a resident of Aumsville for over 35 years, I have serious concerns regarding the compatibility and detrimental effects of this development with our community and the surrounding demographics.

The location chosen for this development is particularly unsuitable due to its proximity to residential neighborhoods and the current demographics of the area. As a resident, I am acutely aware that the existing population within the radius of this proposed development does not align with the type and scale of commercial activities being proposed. Introducing a hotel, retail center, gas station, and light industrial offices in this area could strain local infrastructure, increase traffic congestion, and disrupt the peaceful residential character that many of us cherish.

Moreover, I am concerned about the economic viability of such a development given the demographics of our community. Aumsville is a close-knit community with a primarily residential focus. Introducing large-scale commercial and industrial facilities may not be supported by the current local market demand and could potentially undermine existing businesses that cater to the needs and preferences of our community members.

Additionally, the introduction of another gas station and industrial offices raises environmental and safety concerns. These facilities could pose risks to air quality, contribute to noise and light pollution, runoff from commercial and industrial activities, and potentially impact the health and well-being of nearby residents. Preserving the environmental integrity of Aumsville and ensuring the safety of our community members should be paramount in any development decision.

Lastly, I am concerned about the economic impact on existing local businesses. Introducing large-scale commercial and industrial operations could overshadow and compete with smaller, locally-owned businesses that are the backbone of our community. Supporting local businesses should be a priority in any development plan.

In light of these concerns, I urge the Planning Commission to reconsider the approval of Case 2023-08 CU-SDR for 9757 Gordon Lane. Once established, such facilities are difficult to relocate or modify, and their presence could set a precedent for further commercial encroachment into residential areas. I believe that alternative development plans that are more compatible with the existing demographics and residential character of our community should be explored. It is essential that any development in Aumsville enhances, rather than detracts from, our quality of life and community cohesion.

Thank you for considering my perspective on this matter. I trust that you will carefully evaluate the potential impacts of this proposed development on our community and make a decision that reflects the best interests of all residents. Please prioritize the concerns and well-being of the residents who call Aumsville home. I believe there are alternative designs that would be more suitable for the proposed site without negatively impacting our community.

Thank you again for considering my concerns. I look forward to your thoughtful deliberation on this matter.

Sincerely,

Shelly Mullins

Sharon Woodward
1050 N 4th Street
Aumsville, OR 97325

June 17, 2024

City of Aumsville
595 Main Street
Aumsville, OR, 97325

RE: Opposition to Public Hearing Case 2023-08 CU-SDR for 9757 Gordon Lane

Dear Members of the Aumsville Planning Commission,

I am writing to express my strong opposition to the proposed development project at 9757 Gordon Lane, which includes plans for a hotel, commercial retail center, gas station, and light industrial office center. As a concerned resident of Aumsville, I believe this development poses significant challenges and risks to our community.

The location of this proposed development is particularly troubling due to its close proximity to residential areas. As someone who lives nearby, I am deeply concerned about the potential negative impacts on our neighborhood. Introducing a hotel, retail center, gas station, and industrial offices in this area could lead to increased traffic congestion, noise pollution, and safety hazards. These factors not only threaten the peaceful residential character of our community but also raise serious concerns about the safety and well-being of residents, especially children and elderly individuals.

Furthermore, I am worried about the environmental consequences of such a large-scale development. A project of this nature is likely to result in increased air and noise pollution, as well as potential risks of soil and water contamination from industrial activities. Protecting our environment and preserving the natural beauty of Aumsville should be priorities for any development decision.

In addition to these concerns, I fear that the introduction of major commercial and industrial facilities could adversely impact local businesses that currently serve our community. Aumsville prides itself on its small-town charm and the unique offerings of our local businesses. Allowing large-scale commercial enterprises to dominate the landscape could undermine the vitality of these local establishments and diminish the sense of community that we cherish.

Given these considerations, I respectfully urge the Planning Commission to reconsider the approval of Public Hearing Case 2023-08 CU-SDR for 9757 Gordon Lane. I believe there are alternative locations and development plans that could better align with the interests and values of our community without jeopardizing our quality of life.

Thank you for considering my perspective on this matter. I trust that you will carefully weigh the concerns of residents like myself as you deliberate on this important issue. Please feel free to contact me if you require any further information or clarification regarding my objections to the proposed development.

Sincerely,
Sharon Woodward
Sharon Woodward

Shelly Mullins
410 Michael Way
Aumsville, OR 97325

July 1, 2024

Aumsville City Council and Planning Commission
Aumsville City Hall
595 Main St
Aumsville, OR 97325

Dear Members of the Aumsville City Council and Planning Commission,

I am writing to express my deep disappointment regarding the recent decisions surrounding the proposed development at Gordon Ln and 1st Street. It is with a heavy heart that I feel compelled to address this matter, as it has become increasingly apparent that the voices and concerns of Aumsville residents and constituents have been largely disregarded throughout this process.

As a member of this community for over 35 years, I have always valued the collaborative spirit and mutual respect that I believed existed between the city officials and the residents. However, the handling of this development proposal has significantly undermined that trust. Many of us have taken the time to attend meetings, submit written comments, and express our legitimate concerns regarding the impact of this development on our neighborhood, including potential increases in traffic, strain on local infrastructure, and changes to the character of our community.

Despite our efforts to engage constructively and provide thoughtful feedback, it seems that our input has been overlooked or dismissed. This has left many of us feeling unheard and marginalized in decisions that directly affect our daily lives. The lack of meaningful dialogue and consideration of resident concerns not only undermines the democratic process but also jeopardizes the sense of community that Aumsville prides itself on.

We urge the City Council and Planning Commission to reconsider their approach and to take into account the well-being and opinions of their constituents. True community development should be a collaborative effort, one that balances growth with the preservation of our town's unique character and the quality of life for all residents. Ignoring the voices of those who live here erodes the very fabric of our community and sets a troubling precedent for future developments.

I sincerely hope that you will take our concerns to heart and work towards a more inclusive and transparent decision-making process. The residents of Aumsville deserve to be heard and to have their perspectives valued in shaping the future of our city.

Thank you for your attention to this important matter. I look forward to your response and to seeing positive steps taken to address the concerns of our community.

Sincerely,

Shelly Mullins