# PLANNING COMMISSION
## Meeting Agenda
## Monday, January 27, 2020
## 7:00 PM
**City Council Chambers – 222 NE 2nd Avenue**

**Commissioner John Savory (Chair)**

**Commissioner Larry Boatright (Vice Chair)** | **Commissioner Derrick Mottern**
**Commissioner Jeff Mills** | **Commissioner Jennifer Trundy**
**Commissioner Jason Taylor** | **Commissioner John Hutchinson**

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**1. CALL TO ORDER**
   a. Invocation and Pledge of Allegiance

**2. CITIZEN INPUT ON NON-AGENDA ITEMS –** *This is an opportunity for audience members to address the Planning Commission on items not on the agenda. Each person will be given 3 minutes to speak. You are first required to fill out a testimony/comment card prior to speaking and hand it to the Recording Secretary. These forms are available by the sign-in podium. Staff and the Planning Commission will make every effort to respond to questions raised during citizen input before tonight's meeting ends or as quickly as possible thereafter.*

**3. MINUTES –** Planning Commission Minutes for January 13, 2020.

**4. NEW BUSINESS – None**

**5. PUBLIC HEARING –** *To testify, please fill out a testimony/comment card and give to the Recording Secretary.*
   a. A request from Stanton Furniture for a Site and Design Review to construct a 167,000 square foot manufacturing and distribution facility at the corner of SE 4th Ave and S Mulino Rd. (DR 19-03)

**6. FINAL DECISIONS –** *These are the final, written versions of previous oral decisions. No public testimony is taken.*
   a. Stanton Furniture Final Findings (DR 19-02)

**7. ITEMS OF INTEREST/REPORT FROM PLANNING STAFF–**
   a. Planning Commissioner Training, Land Use Decision making, Wednesday, January 27, 2020
   b. Next regularly scheduled Planning Commission meeting – Monday, February 10, 2020
      - There are currently no applications for review

**8. ITEMS OF INTEREST/GUIDANCE FROM PLANNING COMMISSION**

**9. ADJOURNMENT**

*The meeting location is accessible to persons with disabilities. A request for an interpreter for the hearing impaired or for other accommodations for person with disabilities should be made at least 48 hours before the meeting at 503-266-7001. A copy of this agenda can be found on the City's web page at www.canbyoregon.gov . City Council and Planning Commission Meetings are broadcast live and can be viewed on OCTS Channel 5. For a schedule of the playback times, please call 503-263-6287.*

# STANTON FURNITURE DR 19-03
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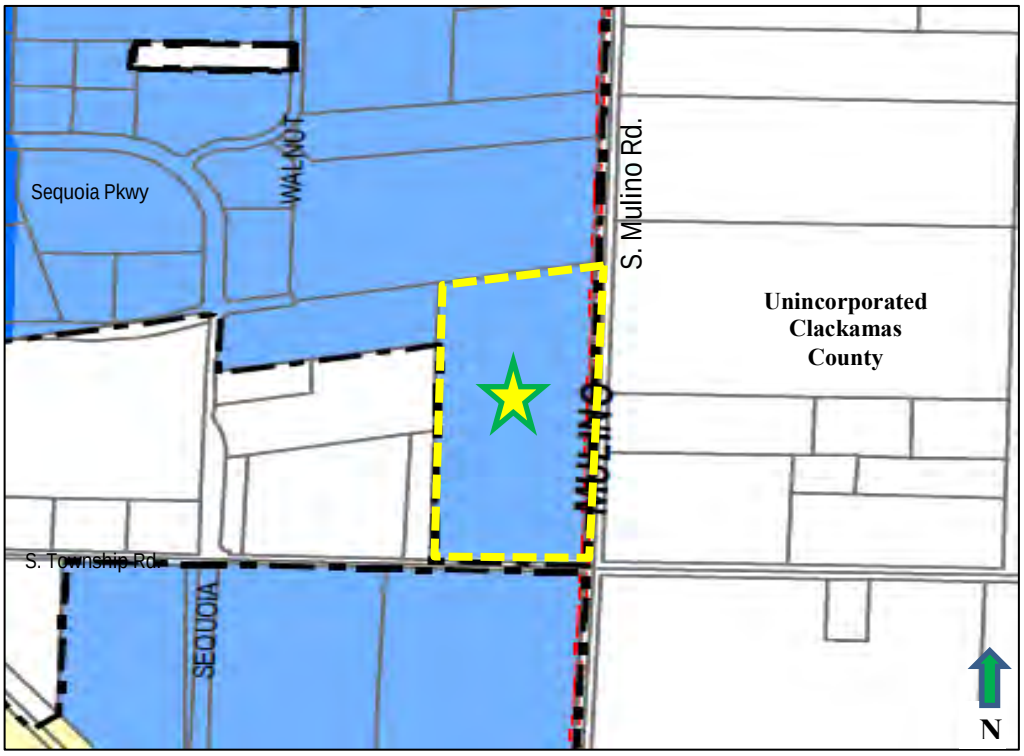
# City of Canby

**Staff Report**
**File #: DR 19-03 – Stanton Company - Pacific Furniture**

| | |
|---|---|
| **HEARING DATE:** | January 27, 2020 |
| **STAFF REPORT DATE:** | January 17, 2020 |
| **TO:** | Planning Commission |
| **STAFF:** | Sandy Freund, AICP, Senior Planner |

## Applicant Request

The applicant requests approval to construct a ±174,077 square foot manufacturing facility which includes ±160,885 square feet of warehouse, ±6,596 square feet of office space, and ±6,596 square feet of second floor storage area; associated employee parking, loading docks and yard area, as well as required landscaping, and all other associated development features for said project. The facility is anticipated to employee approximately 300 persons.




## Staff Recommendation

Based on the application submitted and the facts, findings, and conclusions of this report, staff recommends that the Planning Commission **Approve** DR 19-03 pursuant to the Conditions of Approval presented in *Section VIII* at the end of this report.

## Project Overview

The proposed Stanton Furniture facility will be approximately ±167,000 square feet, with 162,000 square feet dedicated to warehouse space for the manufacturing and distribution of furniture. The remaining 5,000 square feet will be used as office space. The proposed structure will be a concrete "tilt-up" building, with business operations scheduled for two shifts for 300 employees. Work shifts are anticipated to be from 5:30am to 3:00pm, and from 3:30pm to Midnight. There are 196 vehicular parking spaces proposed, 16 bicycle parking spaces and 35 truck loading berths. Requisite building and parking lot design, lighting and landscaping shall comply with all applicable standards of the *City of Canby's Land Development and Planning Ordinance* as outlined further in this staff report.

Key highlights of the proposed project include half-street improvements to SE 4th Avenue along the project frontage on the north, extending east to S. Mulino Road. Property owners to the southeast of the subject site have raised issues/concerns regarding the placement of truck loading berths along the east side of the building and potential noise impacts of truck back-up beepers; and potential of lighting and glare from placement of new pole lights. Staff has addressed these concerns within the report.

## Property/Owner Information

| | |
|---|---|
| **Location** | 23849 S. Mulino Road, Canby |
| **Tax Lot(s)** | 31E34 03100 |
| **Property Size** | ±15.84 acre |
| **Comprehensive Plan** | LI – Light Industrial |
| **Zoning** | M-1 Light Industrial; I-O – Canby Industrial Overlay Zone |
| **Owner** | Parsons Family Trust, Attn: Clifford Parsons |
| **Applicant** | VLMK Engineering + Design, Attn: Jennifer Kimura |
| **Application Type** | Site and Design Review - Type III Quasi-Judicial/Legislative |
| **City File Number** | DR 19-03 |

## Exhibits

**A.** Land Use Application – Site and Design Review Type III
**B.** Application Narrative & Criteria Response
**C.** Preliminary Site Plan Set
**D.** Preliminary Storm Drainage Report
**E.** Traffic Impact Analysis, Dated December 2019
**F.** Pre-Application Conference Minutes & Planning Summary Notes
**G.** Neighborhood Meeting Notes & Sign-in Sheet
**H.** Agency Comments:
  **1.** City Engineer – Hassan Ibrahim, PE, 503-684-3478
  **2.** Clackamas County Transportation, Jonny Gish, 503-742-4707
  **3.** Canby Fire District, Matt English, Division Chief/Paramedic, 503-878-0187
**I.** Public Comments Received (at time of report publication)

## I. Existing Conditions:

The subject property is located at 23849 S. Mulino Road, just north of S. Township Road and west of the future alignment of SE 4th Avenue to the east. The ±15.84-acre subject site is currently developed with a single-family residence and used for agricultural purposes; is rectangular in shape and relatively flat. The property is zoned M-1, Light Industrial, is within the Canby Industrial Park Area Overlay (I-O) zone, and is designated for Light Industrial (LI) uses in the City of Canby Comprehensive Plan.

***Surrounding Land Uses:***

| *Direction* | *Zoning* | *Land Uses* |
|---|---|---|
| North | M-1 | Agricultural – future project to be developed consistent with the M-1 zone. |
| West | M-1 / EFU | Single-family residential / Agricultural lands |
| South | M-1 | Agricultural |
| East | EFU | Single-family residential / Agricultural lands |

A portion of the subject site at the northwest corner abuts a ±4.55 acre property currently developed with a single-family residence within the M-1 zone. The use of this property is grandfathered in, as it was in existence prior to the adoption of the Canby Industrial Park Overlay zone. Two additional properties immediately abutting the subject site to the west are within the Urban Growth Boundary (UGB) and unincorporated Clackamas County, however, not annexed into city limits. One of the bordering properties located along the southern portion of the subject site is developed with a single-family residence and several detached structures. Across S. Mulino Road to the east are various agricultural properties developed with single-family homes, however all are located outside of city limits within unincorporated Clackamas County. The closest of these homes is approximately 320 feet away from the southernmost property line of the subject site, and the next is approximately 1,700 feet away moving northward, parallel with the subject site.

## II. Applicable Criteria & Findings

In addition to components of the City of Canby Comprehensive Plan, applicable criteria used in evaluating this application are listed in the following sections of the *City of Canby's Land Development and Planning Ordinance*:

- 16.08 General Provisions
- 16.10 Off-street Parking and Loading
- 16.32 M-1 Light Industrial Zone
- 16.35 I-O Canby Industrial Overlay Zone
- 16.43 Outdoor Lighting Standards
- 16.46 Access Limitations on Project Density
- 16.49 Site and Design Review
- 16.86 Street Alignments
- 16.88 General Standards and Procedures
- 16.89 Application and Review Procedures

## III. Infrastructure: *Utilities/Sewer/Disposal/Fire/Police*

- Water and electric service will be provided by Canby Utility.
- Wastewater, storm drainage, and streets are managed by the City of Canby Public Works.
- Disposal services are provided by Canby Disposal.
- Fire services are provided by Canby Fire District.
- Police services are provided by Canby Police Department.

Staff has provided conditions of approval at the end of this staff report (Section VIII), written to ensure the necessary public infrastructure of water, sanitary sewer lines, and fire hydrants are constructed and installed in accordance with all applicable city, county, state, and federal requirements accordingly.

## IV. Facts and Findings

Section 16.49 of the *City of Canby's Land Development and Planning Ordinance* identifies the purpose and scope of the Site and Design Review process, as well as sets forth procedural requirements subject to all Type III Site and Design Review applications. Section 16.49.040 (B) (1-6) sets forth the approval criteria for which an applicant must respond to in their narrative of the submitted development application. Staff incorporates the applicant's written responses as findings in support of the criteria. There may be instances, however, where criteria are only preliminarily met, and therefore require subsequent implementation of conditions of approval in order to meet those criteria.

The following analysis will evaluate the proposed project's compliance with the applicable approval criteria as listed above in Section II. Note that some portions of the following section are superseded by provisions of the Municipal Code tailored specifically to the Canby Pioneer Industrial Park, as noted herein.

**Section 16.49.40 (B) *Criteria and standards*.**

**B. In review of a Type III Site and Design Review Application, the Board shall, in exercising or performing its powers, duties or functions, determine whether there is compliance with the following**:

1. The proposed site development, including the site plan, architecture, landscaping and graphic design, is in conformance with the standards of this and other applicable city ordinances insofar as the location, height and appearance of the proposed development are involved; and
2. The proposed design of the development is compatible with the design of other developments in the same general vicinity; and
3. The location, design, size, color and materials of the exterior of all structures and signs are compatible with the proposed development and appropriate to the design character of other structures in the same vicinity.
4. The proposed development incorporates the use of LID best management practices (BMPs) whenever feasible based on site and soil conditions. LID best management practices include, but are not limited to, minimizing impervious surfaces, designing on-site LID stormwater management facilities, and retaining native vegetation.
5. The Board shall, in making its determination of compliance with this Ordinances, shall use the matrix in Table 16.49.040 to determine compatibility unless this matrix is superseded by another matrix applicable to a specific zone or zones under this title. An application is considered to be compatible with the standards of Table 16.49.040 if the following conditions are met: a. The development accumulates a minimum of 60 percent of the total possible number of points from the list of design criteria in Table 16.49.040; and b. At least 10 percent of the points used to comply with (a) above must be from the list of LID Elements in Table 16.49.040.
6. Street lights installation may be required on any public street or roadway as part of the Design Review Application.

Because the proposed project is located within the industrial park, the Site and Design Review criteria listed above are also addressed within the development standards found in Chapter 16.35 *Canby Industrial Area Overlay (I-O) Zone* of the *Planning Ordinance,* specifically Section 16.35.050

*Development Standards.* The proposed project is compatible with the surrounding uses of the project site, which are, for example, industrial uses such as warehousing, light manufacturing, wholesale distribution and storage, as well as business offices associated to primary industrial park uses, etc. Accordingly, the area is planned to accommodate large buildings and businesses with large numbers of employees. While the size, height, and bulk of the proposed building and associated improvements would represent a substantial change from the existing visual character on the project site, this change is anticipated by the Canby Industrial Master Plan, the Comprehensive Plan and applicable Concept Plan.

The proposed project features an onsite, underground storm water retention facility. The LID BMPs listed above (e.g., minimizing impervious surfaces and retaining native vegetation) are not feasible due to the nature of the proposed project (a manufacturing/warehousing facility requiring large maneuvering areas for delivery trucks) and the site's existing conditions (lacking native vegetation). However, impervious surfaces have been minimized to the extent feasible.

*Finding:* Staff finds that the proposed project, including the site plan, architecture, and landscaping, is compatible with the surrounding land uses of the project site. Therefore, staff finds, as conditioned, the criterion listed in 16.49.40 (B) have been satisfied.

**Chapter 16.35 *Canby Industrial Area Overlay (I-O) Zone***

Section 16.35.050 *Development standards:*

The following subsections listed in the table below indicate the required development standards of the I-O zone as applicable to the proposed project. These standards replace selected standards of the C-M, M-1 and M-2 zone found in Chapter 16.49. The following Standards are applicable as follows:

| CODE STANDARD | CODE REQUIREMENT | PROJECT PROPOSAL | MEETS CODE? |
|---|---|---|---|
| ***Planning Ordinance* Section 16.35.050 – Development Standards** | | | |
| **A.** Minimum lot area: | None | No restrictions | **N/A** |
| **B.** Minimum lot width and frontage: | None | No restrictions | **N/A** |
| **C** (1-3): Minimum yard from building foundation to right-of-way: | 1) Street yard(s):<br>• 20 ft. for buildings up to 25 ft. in height;<br>• 35 ft. for buildings 25-45 ft. in height.<br>2) Interior yards<br>• 10 ft. (except where abutting residential zone)<br>3) Rear yard:<br>• 10 ft. (except where abutting residential zone) | Street yard:<br>35-foot setback. Proposed building to be 25-45 ft. in overall height.<br>Interior yard:<br>40-ft. on the west; all other interior yards located at the rear of the site, outside of proposed development zone. | **YES** |
| **D.** Building height: | Maximum building height is 45 ft. | Proposed is 36 feet in height. | **YES** |

| CODE STANDARD | CODE REQUIREMENT | PROJECT PROPOSAL | MEETS CODE? |
|---|---|---|---|
| **E.** Max lot coverage: | 60 percent in M-1 zone | 167.481 sq.ft. / 34.18% | **YES** |
| **F.** Street access spacing: | Shall be a minimum of 200 feet on designated parkway and collector streets. | Proposed street accesses are more than 500 ft. from centerline to centerline. | **YES** |
| **G.** Street right-of-way improvements. | All right-of-way (ROW) improvements shall be made in accordance with the Canby Transportation System Plan. | The applicant proposes half-street improvements to SE 4th Avenue and S. Mulino Rd. (a County ROW), and turning radius improvements and future ROW dedication to S. Township Road. | **YES, as conditioned** |
| **H.** Building orientation to ensure direct, clear, convenient pedestrian access. | Development in M-1 zone shall provide at least one public entrance facing the street. A direct pedestrian connection shall be provided between primary building entrance and sidewalk. | The applicant has proposed the main public entrance to be on the east side of the building facing S. Mulino Rd., with pedestrian access via an onsite sidewalk, then onto a thermo-striped and/or raised concrete pedestrian path through the drive aisle that will connect to a new sidewalk along S. Mulino Road. | **YES** |
| **I.** Right-of-way plantings. | Street trees and ground cover shall be installed with development as approved by staff. | The applicant proposes to plant the required number of trees, shrubs and ground cover in accordance with code requirements; no shrubs are proposed within the ROW. | **YES** |
| **J.** Building exteriors. | Metal building exteriors are prohibited; architectural metal elements accenting/enhancing aesthetics of building entrances may be approved by Planning Commission. | The applicant proposes concrete tilt-up materials; and accents at the main entrance, which will include a steel rain protection canopy, as shown on submitted Landscape Plan, Sheet L1.0 of the plan set. | **YES** |

| CODE STANDARD | CODE REQUIREMENT | PROJECT PROPOSAL | MEETS CODE? |
|---|---|---|---|
| **K.** Lighting | Lighting shall be required for all streets, sidewalks, and pedestrian ways. | The applicant has stated all lighting of street sidewalks, building exteriors and pedestrian pathways will be lit with light fixtures down-shielded in accordance with all code requirements. The applicant will submit a final photometrics lighting plan prior to pre-construction meeting or building permit submittal, whichever occurs first. | **YES, as conditioned** |
| **L.** Shared Access | Shared access drives may be required at the time of land division review process. | The applicant does not propose to partition the land at this time; therefore, this criterion is not applicable. | **N/A** |
| **M.** Landscape irrigation. | All landscaped areas to be irrigated unless drought tolerant plants are installed and watered until established or replaced. | The applicant states all proposed landscaping will be installed and irrigated in accordance with the code. | **YES, as conditioned** |
| **N.** Other regulations. | Other M-1 zone regulations as applicable. | The applicant states all vision clearance and outside storage requirements will be met according to code. | **YES** |
| **O.** Open storage screening. | All open storage or "laydown yards" shall be screened from view with six-foot fence or hedge-type vegetation within three years of planting. | The applicant states all outdoor storage or outside laydown yards will be screened with sight obscuring landscaping or fencing. | **YES** |

*Finding:* In review of the applicant's responses to the standards listed above, staff finds this request is consistent, as conditioned, with the applicable provisions of the *Canby Land Development and Planning Ordinance*, therefore this criterion has been met.

**Other applicable subsections of Section 16.35 and 16.49:**

The City uses the Design Review Matrix, as identified in Section 16.35.70 I-O to evaluate compliance with the I-O design standards for projects in the Industrial Park. The matrix substitutes for the general design review matrix provided in Chapter 16.49, and sets to achieve scores equal to or greater than the minimum acceptable scores in the matrix. Required items addressed within the Design Review Matrix (DRM) include Parking, Transportation/Circulation; Landscaping; and Building Appearance and Orientation are summarized below, per the responses from the applicant's narrative for the DRM:

**Parking and Loading**

The proposed project, Manufacturing/Warehousing and Office uses require 2.00 spaces per 1,000 gross square feet of office space, plus 1.00 space per 1,000 gross square feet of non-office manufacturing and warehouse spaces. The applicant proposes 196 total parking spaces, which includes office and ADA spaces accordingly. The total number of parking spaces proposed, 196, exceeds the minimum requirement of 174 spaces. (Total warehouse building area = 160,885 sq.ft. x 1.0 space = 161 parking spaces; plus Office space = 6,596 sq.ft. x 2.0 spaces = 13 spaces). Off-Street Loading Facilities (Section 16.10.60) are required for the project. The *Planning Ordinance* requires a minimum of 3 loading berths for the proposed project. The applicant has provided 35 loading berths (placed approximately 130 feet away from S. Mulino Road), thereby exceeding the minimum requirements. The *Ordinance* requires all loading areas to be screened from public view, from public streets, and adjacent properties by means of sight obscuring landscaping, walls or other means. The applicant has proposed to screen the loading berths from S. Mulino Road with a combination of landscaping of trees, shrubs and ground cover adjacent to, and atop of a 535-foot long retaining wall. Due to grade differences, the proposed building will sit approximately 7-12 feet below street grade of S. Mulino Road. The proposed retaining wall ranging from 3 feet in height up to 13.5 feet at its highest point from south to north. The landscaping in combination with the concrete retaining wall will aid in both noise attenuation and visual mitigation associated with the proposed project. (Site Plan Sheets C1.0 and L1.0 of applicant materials).

**Transportation/Circulation**

The applicant states the parking area has been designed to have one-way flow around the proposed building in a counter clock-wise direction, entering from S. Mulino Road. The drive aisle has been enlarged to accommodate vehicular traffic as required with an industrial use. Vehicular and pedestrian circulation has been designed to be separate from the flow of the industrial truck traffic circulation in order to maximize safety on-site. Access to the site is proposed via two 50-foot wide driveways, one driveway to S. Mulino Road and one driveway to the future extension of SE 4th Avenue. It is anticipated all project traffic will exit the site onto S. Mulino Road, travel south to SE Township Road, then head east onto SE Township Road towards Sequoia Parkway towards Hwy. 99E. Clackamas County Transportation have indicated that no public access will be permitted onto S. Mulino Road from SE 4th Avenue, until such time that full width street improvements have been constructed along the project frontage of SE 4th Avenue and future project frontage to the north of the subject site. Therefore, access onto SE 4th Avenue will be restricted to emergency access only. .

Per the City Engineer the City of Canby, Industrial Area Master Plan, dated October 1998, refers to S. Mulino Road as a 3-lane collector with continuous turn lane having a street width of 50-feet and required right-of-way of 74-feet. The TSP requires Industrial Roadway Collectors to have an ultimate right-of-way width ranging between 50-80 feet. Conditions of approval have been provided for half-street improvements to S. Mulino Road by the City Engineer, in cooperation with Clackamas County Transportation.

The main entrance to the office will be facing east toward S. Mulino Road. Two pedestrian pathways will be provided to the parking area across the drive aisle on the east side of the building, one from the main entrance, and the second path from the center point of the building on its south side. A third pedestrian path will be provided from the new sidewalk, public bench and bicycle parking area along SE 4th Avenue on the north side of the building. This pathway will lead to the lumber storage area and employee area, which will be covered with an all-weather canopy, as well as screened with a six-foot tall chain link fence with slats.

**Landscaping**

The proposed development area of the project will total approximately ±489,968 sq.ft. Section 16.49.080 of the *Planning Ordinance* requires fifteen (15) percent of the total developed land area to be landscaped. The proposed project requires 73,495 square feet of landscaping, including the parking lot area (489,968 x 15%= 73,495). The applicant has proposed approximately 74,541 sq.ft. of landscaping, thus exceeding the minimum required; this total includes approximately 17,340 sq.ft. of landscaping for the parking lot, including trees and shrubs for parking lot islands. Landscaping adjacent to the proposed sidewalk along S. Mulino Road will be the most significant amount of the project site. This is intentional in order to provide additional buffering to residential uses across S. Mulino Road located to the southeast of the project site within unincorporated Clackamas County, and which may be indirectly impacted by the proposed development.

**Building Appearance and Orientation**

The applicant proposes tilt-up concrete construction. The building will be articulated with a variety of concrete panel designs and colors in order to provide visual differentiation on the south and east elevations. Per Sheet A2.0, *Building Elevations,* of the submitted Site Plans, there will be accent colors near the office area of the building providing visual relief. The Stanton logo will be a blue and deep olive-green color, in addition to other horizontal concrete accents between windows (glazing).

*Finding:* The applicant has achieved a score of 15, which is above the minimum score required as outlined in the Design Review Matrix for projects within the I-O Zone. Staff finds the applicant has complied with the design guidelines for the proposed project, therefore this criterion, as conditioned, has been met.

## V. Other applicable requirements of the Land Development and Planning Ordinance:

### Section 16.08.150 *Traffic Impact Analysis*

A Transportation Impact Analysis (TIA) was prepared for the proposed project by DKS Associates in December 2019. Using existing traffic data and projections for the generation of new vehicle trips by the proposed project, the TIA analyzes impacts of the proposed project on the area's circulation network, including roadways and intersections. The report's methodology and assumptions are identified in the TIA, which is attached to this Staff Report as an attachment.

The TIA projects that the proposed project would generate 64 AM peak hour trips, 69 PM peak hour trips, and 460 overall daily vehicle trips. Based on data for Stanton's existing operations, approximately 9 percent (approximately 40 trucks) of these daily trips would be truck trips. The TIA assumed the completion of the planned segment of SE 4th Avenue between the project site and Sequoia Parkway to the west, with two-way traffic flow with the scenario of trips associated with the proposed development to the north. Trips generated by the proposed project and surrounding development are not anticipated to trigger unacceptable levels of service or volume/capacity ratios at any of the studied intersections. Levels of Service (LOS) would remain at either A or B; these indicate conditions where traffic moves without significant delays over periods of peak hour travel demand.

### Section 16.08.160 *Safety and Functionality Standards*

The City will not issue any development permits unless the proposed development complies with the City's basic transportation safety and functionality standards, the purpose of which is to ensure that development does not occur in areas where the surrounding public facilities are inadequate. At the time of development permit application submittal, the applicant shall demonstrate that the property has or will have the following:

A. Adequate street drainage;

B. Provides safe access an clear vision at intersections;

C. Public utilities are available and adequate to serve the project;

D. Access onto a public street with the minimum paved widths as stated in Subsection E below.

E. Adequate frontage improvements as follows:

   b. For collector and arterial streets, a minimum paved width of 20 feet along the site's frontage.

F. Compliance with mobility standards identified in the TSP. If a mobility deficiency already exists, the development shall not create further deficiencies.

The adequacy of public utilities and future public improvements to serve the proposed project was discussed at the pre-application conference held on August 14, 2019. While electrical, water, and sewer service are capable of serving the project site, street improvements and extensions of infrastructure shall be required. The applicant has stated in their application materials full compliance with all safety and functionality requirements as required by the *Planning Ordinance.* The applicant has indicated the proposed development will include the design and construction of the required half-street improvements fronting the project site along SE 4th Avenue (37 feet of right-of-way = half of total right-of-way), S. Mulino Road (25-feet of pavement, and 7-feet of additional right-of-way), and dedication of the additional needed right-of-way width (17-feet) along S. Township Road, as well as construction and improvements to curb radius from S. Mulino to S. Township Road accordingly. Improvements include 6-foot wide sidewalk, 5-foot wide planter strip, and 6-foot wide bicycle lane per the TSP. All proposed frontage improvements will be constructed to City Standards found within the Public Works Design Standards handbook, and TSP, and as outlined in the City Engineer's Memo of conditions of approval, dated January 15, 2020, and agreed upon by Clackamas County Transportation Engineer.

*SE 4th Avenue:* Full construction and operation of SE 4th Avenue is dependent on additional properties abutting the future roadway to the north to dedicate and construct their portion(s) of the roadway (typically referred to as "half-street" improvements). Until the full roadway is constructed for all properties abutting SE 4th Avenue, Clackamas County will not permit any public access to and from S. Mulino Road. As a result, all access shall be restricted to emergency access only. Additionally, until such time of full-width roadway improvements of SE 4th Avenue fronting the project site are completed, a barricade may potentially be placed if necessary by either the City or County in order to prevent travel onto the underdeveloped roadway if only half-way constructed.

**Section 16.32 *M-1 Light Industrial Zone***

Uses permitted outright in the M-1 Zone include "manufacturing, fabricating, processing, compounding, assembling or packing of products made from previously prepared materials;" food processing plants; ice and cold storage plants; transfer and storage companies; and wholesale distribution uses including warehousing and storage. The proposed land use—manufacturing; wholesale distribution, including warehousing and storage, and related office is consistent with this list of allowed uses.

**Section 16.43 *Outdoor Lighting Standards***

There are two *Lighting Zones (LZ)* found within the *Planning Ordinance*, one for residential areas, LZ-1, and one for all other zoning districts, LZ-2. The proposed project is within the Industrial zone, and therefore subject to LZ-2 standards, as listed in Table 16.43.040 *Lighting Zone descriptions*, also found on page 44 of the applicant's narrative materials. LZ-2 permits a medium ambient illumination level, and is permitted within "high-density urban neighborhoods, shopping and commercial districts, industrial parks and districts…" The *Ordinance* identifies requirements related to the placement, shielding, height, and intensity of light of outdoor light fixtures. The applicant has addressed in their narrative full compliance with all Outdoor Lighting Standards as required by the City. A preliminary photometric plan has been provided (Sheet LT1.0 of Site Plan set), with final photometric plan required at the time of building permit submittal or pre-construction meeting, whichever occurs first. Said plan shall be consistent with, and comply with, all requirements as outlined in Section 16.43.110 of the *Planning Ordinance* as well as requirements by Canby Utility for the street lighting along S. Mulino Road and SE 4th Avenue.

**Section 16.46 *Access Limitations on Project Density***

Section 16.46.030 of the *Planning Ordinance* addresses the number and spacing of accesses onto City streets from a project site. Per Sheet G1.0 of the submitted site plan set, the applicant has provided two (2) access points to the project site. Accessed is proposed from S. Mulino Road (a Clackamas County road), and SE 4th Avenue. For Collector streets such as the future alignment of SE 4th Avenue, the minimum required spacing between driveways is 100 feet (measured centerline to centerline; see Table 16.46.030). Note that the I-O Overlay Zone, applicable to the project site, identifies a more restrictive standard of 200-foot spacing for collector roadways. The applicant has stated in their narrative the proposed spacing between access points of S. Mulino Road and SE 4th Avenue, will have separation of more than 500 feet from centerline to centerline, and are not near an intersection. Additionally, until SE 4th Avenue is fully constructed (for full-width of the roadway) along the project site frontage and frontage to the north, access to and from the project site will be limited to only S. Mulino Road (per Clackamas County Transportation Engineer), with SE 4th Avenue to be used as emergency access only until said improvements are completed.

Staff has provided condition(s) of approval to ensure all new half-street dedication and construction improvements are completed in compliance with the roadway design standards provided in Chapter 7 of the Transportation System Plan (TSP) pertinent to the Industrial Park, and in accordance with the requirements of the Public Works Design Standards in consultation with the City Traffic Engineer, Public Works and Clackamas County Transportation.

*Finding:* Staff finds, with conditions of approval, all applicable provisions of the Canby Land Development and Planning Ordinance will be met.

## VI. Agency Comments

Notice of this application and request for comments/conditions of approval was sent via email to all applicable public agencies. Staff has received conditions of approval from the City Engineer/Public Works, Canby Fire District, and Clackamas County Transportation. Staff has also provided conditions of approval to ensure all infrastructure is provided and installed in accordance with all applicable city and state regulations. All conditions of approval and agency comments are provided herein in Section VIII. Other agency comments and/or conditions of approval received after staff report publication will be provided at the public hearing.

## VII. Public Testimony

Notice of this application and opportunity to provide comment was mailed to owners and residents of lots within 500 feet of the subject property.

- Comments received from Scott & Susy Gustafson, 23885 S. Blount Rd., Canby, OR 97013, dated January 13, 2020.
    - Issues raised are related to potential noise impacts from truck back-up beepers, and new site lighting impacts.
- Comments received from Oliver Korsness, 747 N. Ash Street, Canby, OR 97013, dated January 16, 2020.
    - In favor of this business locating to the Industrial Park.
    - Suggestion to construct more schools as Canby grows.

*Staff response:*

Staff has reviewed the public comments received, including phone call(s), as well as the input received by the applicant at the neighborhood meeting held on September 17, 2019.

- Regarding lighting impacts, the *Planning Ordinance* sets forth specific regulations pertaining to site lighting, including height of light poles, lumens (brightness), spillover glare (trespass), and shielding of all light fixtures. Staff has provided conditions of approval requiring the applicant to comply with all *Ordinance* requirements accordingly.
- Potential noise impacts from truck and forklift back-up beepers has been taken into consideration by the applicant in the overall design of the project. In particular the truck loading berths, designed to be placed along the east side of the building, the building itself will be below grade of S. Mulino Road approximately 8-12 feet, and ±142 feet away from the road. With the loading berths below grade, in conjunction with a retaining wall (placed below grade) adjacent to the proposed sidewalk with a substantial amount of landscaping installed, and the distance of the building from S. Mulino Rd., it is anticipated noise attenuation will be more successful than if the building were constructed at street grade and closer to S. Mulino Road.
- Staff is unable to provide conditions of the applicant to redesign their building; nor can staff imposed noise standards per the Municipal Code, Chapter 9.48.050 *Exceptions and variances*:

  A. Exceptions. The following sounds are exempted from the provisions of this chapter:

  10. "Sounds caused by business operations in the commercial and industrial zones, provided the sounds result from lawful commercial business activity or manufacturing operations."

- Lastly, staff cannot restrict the use of truck back-up beepers, as these are a requirement of the Occupational Health and Safety Administration (OSHA).
- Data from a recent School District study indicates school enrollment is actually down in Canby.

**Conclusion**

Staff has reviewed the applicant's narrative and submitted application materials and finds that this Site and Design Review application conforms to the applicable review criteria and standards of the Canby Land Development and Planning Ordinance, subject to the conditions of approval as noted in Section VIII of this report.

## VIII. Conditions of Approval

### A. General Conditions:

1. The applicant shall ensure the pre-construction plans are consistent with the submitted plans or as approved by the decision-making authority. (Canby Planning – SF, shall determine compliance with this condition)
2. The applicant shall obtain a demolition permit from Clackamas County, (as well as Canby Planning) prior to demolition of on-site existing structures if applicable. (Canby Planning – SF, shall determine compliance with this condition)
3. The applicant shall obtain a grading permit from Clackamas County prior to any on-site disturbance. (Clackamas County Building Codes Division, shall determine compliance with this condition)
4. The applicant shall obtain the necessary Erosion Control permit(s) from the City of Canby. (Canby Planning-SF, and Public Works-JN, shall determine compliance with this condition.
5. The applicant shall provide, and have approved, a truck haul route, with flaggers as necessary, for all construction activity at said development site. The haul route shall be approved at the time of the pre-construction meeting by the Public Works Department. (Public Works – JN, shall determine compliance with this condition)

### B. Public Improvements:

6. Prior to the start of any public improvements work, the applicant shall schedule a pre-construction conference with the City of Canby and obtain construction plans approval and signatures from all applicable reviewing agencies. (Canby Planning – SF, shall determine compliance with this condition)
7. All public improvements shall comply with all applicable City of Canby Public Works Design Standards. (Public Works-JN, shall determine compliance with this condition)
8. All identified street improvements and right-of-way dedications must be designed and constructed (or bonded) to the satisfaction of the City Engineer. (City Engineer-HI & Public Works-JN, shall determine compliance with this condition)
9. All site development shall comply with applicable City of Canby Public Works Design Standards. (City Engineer-HI & Public Works-JN, shall determine compliance with this condition)

**SE 4th Avenue:**

10. Required half-street improvements to SE 4th Avenue along the project frontage shall be constructed to Collector street standards, per the Industrial Area Roadway Standard Cross-Section, Figure 7-7, the TSP, and Chapter 2, Section 2.207, of the Public Works Design Standards. (City Engineer-HI, shall determine compliance with this condition)
11. The applicant or developer shall be required to dedicate 37-feet of right-of-way with an ultimate right-of-way width of 74 feet. The centerline shall be located at the common property line with the adjoining properties. Half-street improvements will be required to be constructed along the entire site frontage to S. Mulino road where the curb and gutter is placed at 25-feet from the right-of-way centerline, with the appropriate 10:1 asphalt taper, 5-foot planter strip and 6-foot wide concrete sidewalk. Street lights and street trees shall be provided per City requirements. A 12-wide PUE shall be required. (City Engineer-HI, shall determine compliance with this condition)

**12.** All sanitary sewer and waterlines shall be designed and constructed along the entire site frontage based on the existing depth and alignment at the terminus of SE 4th Avenue. These utilities shall take into consideration the section of roadway between the westerly property line of the subject site and the utilities in existing street section connecting to Sequoia Parkway. (City Engineer-HI, shall determine compliance with this condition)

**13.** The curb return radii at the intersection with S. Mulino Road and driveway wings or radii shall be large enough to allow for AASHTO WB-67 vehicle turning movements. The property line shall be concentric with this return. The applicant's engineer shall submit to the City truck turning movement templates illustrating that the turning movement requirements are met. (City Engineer-HI, shall determine compliance with this condition)

**14.** All project driveways shall have an industrial driveway approach consisting of 8-inch minimum concrete thickness with reinforcements or mesh welded wire fabric. (City Engineer-HI, shall determine compliance with this condition)

**15.** The minimum access spacing between driveways along SE 4th Avenue or S. Mulino Road shall be 200 feet. (City Engineer-HI, shall determine compliance with this condition)

**16.** All access onto SE 4th Avenue shall be restricted to emergency access only until such time that full-width roadway improvements fronting the project site have been constructed. If usage occurs prior to completed road improvements, a barricade may be placed by either the City or County in order to prevent travel onto the roadway. (City Engineer-HI and/or Public Works-JN in cooperation with County Transportation-JG, shall determine compliance with this condition)

**S. Mulino Road:** (County owned right-of-way)

Although this road is owned and maintained by Clackamas County, the majority of road improvements shall be constructed and designed to City of Canby Public Works Design Standards, as agreed upon by Clackamas County Transportation Engineer and City of Canby, unless noted otherwise herein:

**17.** The applicant shall coordinate with County Transportation Engineer and City of Canby Engineer regarding the design, construction and striping applicability of a 12-foot left turn lane at S. Township Road, pursuant to *Clackamas County Roadway Standards.* (Clackamas County Transportation – JG, shall determine compliance with this condition)

**18.** The applicant shall install dual ADA curb ramps at the corners of SE 4th Avenue and S. Township Road. (Clackamas County Transportation – JG, in cooperation with City Engineer-HI, shall determine compliance with this condition)

**19.** The inbound asphalt taper of S. Mulino Road shall be provided per Roadway Standards, Section 250.6.4 of *Clackamas County Roadway Standards.* (Clackamas County Transportation – JG, shall determine compliance with this condition)

**20.** Half-street improvements shall be required along the entire site frontage where the curb and gutter are placed at 25-feet from the right-of-way centerline with the appropriate 10:1 asphalt taper, 5-foot planter strip and 6-foot concrete sidewalk. Street lights and street trees shall be provided per City requirements. A 12-foot wide PUE shall be provided. Six-foot bicycle lane placement to be determined by the City Engineer pursuant to the TSP. (City Engineer-HI, shall determine compliance with this condition)

**21.** Prior to occupancy, a demonstration of sight distance shall be verified, documented and stamped by a registered professional civil or traffic engineer, licensed in the State of Oregon. The minimum sight distance in each direction on S. Mulino Road and SE 4th Avenue shall be 335 feet based on 30-mph posted speed limit and 280 feet based on assumed posted speed of 25-mph. (City Engineer-HI, shall determine compliance with this condition)

**22.** The applicant/developer shall construct SE 4th Avenue and S. Mulino Road intersection that will accommodate the curb return radii and allow for AASHTO WB-67 vehicle turning movements. The right-of-way dedication shall be concentric with this curb return alignment. The applicant's engineer shall submit to the City truck turning movement templates illustrating that the turning movement requirements are met. (City Engineer-HI, shall determine compliance with this condition)

**23.** Street lighting shall be provided along the entire site (developed portion) frontage with S. Mulino Road. (City Engineer-HI, shall determine compliance with this condition, in coordination with Canby Utility as applicable)

**24.** The applicant shall design and construct stormwater drainage facilities in conformance with City of Canby Standards and *Clackamas County Roadway Standards* Chapter 4 for S. Mulino Road, and S. Township Road when that portion of the project site is developed. Where there is no outfall for the storm system, detention and infiltration shall accommodate a 25-year storm, with a safe overflow path for the 100-year storm. The applicant and the City shall enter into a maintenance agreement for water quality facilities located within the public right-of-way. Said agreement shall include a Maintenance of Operation Plan, as approved by DTD Engineering and the City of Canby. (Clackamas County Transportation – JG, in cooperation with City Engineer-HI/Public Works - JN, shall determine compliance with this condition)

**25.** Prior to placement of road striping the applicant shall submit a striping plan for S. Mulino Road to Clackamas County Traffic Engineering for approval of layout and materials. (Clackamas County Transportation – JG)

**26.** Prior to placement of utility installation in County right-of-way, the applicant shall obtain Utility Placement Permits for any utility work required within the right-of-way of S. Mulino Road. (Clackamas County Transportation – JG)

**27.** Prior to Certificate of Occupancy, the applicant shall verify the public right-of-way width and location along the entire site frontage of S. Mulino Road. The right-of-way and width shall be verified by a professional surveyor to the satisfaction of DTD Engineering, City of Canby and County Surveyor. The applicant shall dedicate adequate right-of-way for S. Mulino Road to accommodate required improvements. (Clackamas County Transportation – JG, in cooperation with City Engineer-HI, and County Surveyor, shall determine compliance with this condition)

**28.** Prior to Certificate of Occupancy the applicant shall submit an Engineer's cost estimate to be approved by Clackamas County Engineering for the asphalt concrete, aggregates, and any other required public improvement in S. Mulino Road right-of-way. (Clackamas County Transportation – JG, in cooperation with City Engineer-HI, shall determine compliance with this condition)

**29.** Prior to Final Inspection the applicant shall provide and maintain minimum intersection sight distances at SE 4th Avenue intersection with S. Mulino Road, and S. Mulino Road with S. Township Road. Intersection sight distances shall restrict plantings at maturity, retaining wall, embankments, trees, fences or any other objects that obstruct vehicular site distance.

Minimum required intersection sight distance of 610 feet to the north and south along S. Mulino Road from SE 4th Avenue, and 610 feet to the west and 500 feet to the east along S. Township Road from S. Mulino Road. (Clackamas County Transportation – JG, in cooperation with City Engineer-HI, shall determine compliance with this condition)

**30.** Prior to Final Inspection the applicant shall submit as-built plans for all improvements showing all construction changes, added and deleted items, location of utilities, etc. A professional engineer, registered in the state of Oregon, shall stamp and sign as-built plans. Any plans for signals, signing and striping require both a paper copy (maximum size of 11"x17") and a .dwg version of the as-builts for the Traffic Engineering Section. (Clackamas County Transportation–JG, in cooperation with City Engineer-HI, shall determine compliance with this condition)

**31.** Prior to Site Improvements the applicant shall provide a Development Permit to the County Engineering Department for review and approval of frontage improvements, erosion control Best Management Practices implemented, sight distances and the driveway improvements. The permit shall be obtained prior to commencement of site work and Certificate of Occupancy. To obtain the permit, the applicant shall submit construction plans prepared and stamped by an engineer registered in the state of Oregon, or plans acceptable to the Engineering Division, provide a performance guarantee equal to 125% of the estimated cost of the construction and pay a plan review and inspection fee. The fee with be calculated as a percentage of the construction costs if it exceeds the minimum permit fee. The minimum fee and the percentage will be determined by the current fee structure at the time of Development Permit application. (Clackamas County Transportation – JG, shall determine compliance with this condition)

**32.** Prior to Site Improvements, the applicant shall submit an approvable construction plan set showing all requirement improvements. All required street, street frontage and related improvements shall comply with the standards and requirements of *Clackamas County Roadway Standards* unless otherwise noted herein. All proposed and required improvements shall be designed, constructed, inspected and approved, or financially guaranteed, pursuant to Clackamas County. (Clackamas County Transportation – JG, shall determine compliance with this condition)

**S. Township Road**

**33.** S. Township Road is classified as a Collector Road in the Canby Transportation System Plan (TSP), and under City jurisdiction, per City Annexation approved in 2019, finalized in 2020. The existing right-of-way is 40 feet. The Industrial Master Plan, dated October 1998, shows this road as a 3-lane collector with continuous turn lane having a street width of 50-feet and required right-of-way width of 75 feet. As part of this development, the applicant / developer shall be required to dedicate 17-feet of right-of-way and a radius to accommodate a minimum 40-foot turning curb radii. (City Engineer-HI, shall determine compliance with this condition, in coordination with Canby Utility as applicable)

**34.** Half-street improvements along the entire site frontage (except for the taper improvements referenced in Condition 32 above) will be deferred until such time that the remainder of the property has been developed, or prior to the recordation of a Partition of land of said undeveloped portion of the project site, whichever occurs first. Future half-street improvements between Sequoia Parkway and S. Mulino Road shall include curb and gutter located at 25-feet from the centerline of the ultimate 74-foot wide right-of-way, 5-foot planter strip, and a 6-foot wide concrete sidewalk; as well as street lights and extended utilities

(water, sanitary sewer if gravity allows, and an acceptable means of storm water disposal) and franchise utilities. These improvements shall be constructed in conformance with the TSP and the Industrial Area Master Plan. 6-foot bicycle lane placement to be determined by City Engineer in accordance with the TSP. (City Engineer-HI, shall determine compliance with this condition, in coordination with Canby Utility as applicable)

**35.** The minimum access spacing between driveways along SE 4th Avenue or S. Mulino Road shall be 200 feet. (City Engineer-HI, shall determine compliance with this condition)

**36.** All project driveways shall have an industrial driveway approach consisting of 8-inch minimum concrete thickness with reinforcements or mesh welded wire fabric. (City Engineer-HI, shall determine compliance with this condition)

**37.** The applicant shall pay the city of Canby Master Fee authorized engineering plan review fee equal to 2% of public improvement costs prior to the construction of public improvements (approval of construction plans) as each phase of development occurs. (Canby Planning – SF, shall determine compliance with this condition)

**Sewer and Storm Drainage:**

**38.** All private storm drainage discharge shall be disposed on-site. Design methodology shall be in conformance with the City of Canby Public Works Design Standards revised in December 2019. (City Engineer-HI and Public Works-JN, shall determine compliance with this condition)

**39.** A final storm drainage analysis shall be submitted with the Final Design set. The applicant's/developer's engineer shall be required to demonstrate how the stormwater runoff generated from the new impervious surfaces will be disposed of. If drywells (UIC) are used as a means to discharge storm runoff from the private streets, they must meet the following criteria: The UIC structures location shall meet at least one of the two following conditions: (1) the vertical separation distance between the UIC and seasonal high groundwater is more than 2.5 feet or (2) the horizontal separation distance between the UIC and any water well is a minimum of 267 feet in accordance of the City of Canby Stormwater Master Plan, Appendix "C" Groundwater Protectiveness Demonstration and Risk Prioritization for Underground Injection Control (UIC) Devices. The storm drainage report shall be in conformance with the requirements as state in Chapter 4 of the City of Canby Public Works Design Standards as revised December 2019. (City Engineer-HI and Public Works-JN, shall determine compliance with this condition)

**40.** The applicant will be required to submit an updated Storm Drainage Report that provides detailed analysis as part of the storm report. Capacity analysis shall be required in order to verify that additional runoff will not impede or impound the existing system. The proposed drywell (UIC) must meet the following criteria" The UIC structures location shall meet at least one of the two following conditions: (1) the vertical separation distance between the UIC and seasonal high groundwater is more than 2.5 feet, or (2) the horizontal separation distance between the UIC and any water well is a minimum of 267 feet in accordance with the City of Canby Stormwater Master Plan, Appendix "C", Groundwater Protectiveness Demonstration and Risk Prioritization for Underground Injection Control (UIC) Devices. The storm drainage report shall be in conformance with the requirements as stated in Chapter 4 of the City of Canby Public Works Design Standards, dated June 2012. Additionally, the drywells must connect via a conveyance system as required by the City of Canby Public Works Department. (City Engineer – HI/Public Works JN)

**41.** The applicant shall abandon any existing domestic or irrigation wells on site, as applicable. Abandonment of said wells shall be in compliance with OAR 690-220-0030. A copy of Oregon Water Rights Department (OWRD) Abandonment Certificate shall be submitted to the City. (City Engineer-HI, shall determine compliance with this condition)

**42.** The applicant shall abandon any existing sewage disposal systems found on site, as applicable. Abandonment of said disposal systems shall be in compliance with DEQ and Clackamas County Water Environmental Services (WES) regulations. A copy of Septic Tank Removal Certificate shall be submitted to the City. (City Engineer-HI, shall determine compliance with this condition)

**43.** The applicant shall coordinate with Canby Utility and Canby Public Works Department in order to provide the appropriate connections to all required utilities, as well as demonstrate final utility easement placement. Final design shall be provided on the Civil Construction Plans set, and approved prior to or at the pre-construction meeting. (City Engineer – HI/Public Works – JN, and Canby Utility, shall determine compliance with this condition)

**44.** All "as-builts" of City public improvements installed shall be filed with Canby Public Works within sixty (60) days of completion of the improvements. (City Engineer – HI/Public Works – JN shall determine compliance with this condition)

**Utilities / Fire Protection**

**45.** The applicant shall work with Canby Utility and Canby Public Works Department in order to provide the appropriate connections to all required utilities as well as demonstrate final utility easement placement in design and City approval of the civil construction plans. (Public Works – JN, and Canby Utility, shall determine compliance with this condition)

**46.** Prior to the pre-construction meeting and issuance of grading permits, the applicant shall comply with all applicable Canby Fire District (CFD) requirements as identified in the memo received from CFD and attached herein. Please contact the CFD Division Chief at 503-266-5851 for further information.

**47.** All fire protection apparatus's such as fire hydrants, etc., shall be placed in accordance with the requirements of the CFD codes and regulation. The most current Oregon Fire Code shall be referenced. (Canby Fire District – ME, shall determine compliance with this condition)

**48.** The developer shall comply with all conditions of approval, and all following items shall be addressed and referenced to the Authority having jurisdiction for compliance with all fire related questions.

**49.** Construction of the facility shall incorporate CFD requirements into their construction schedule for on-going inspections. (Canby Fire District – ME, shall determine compliance with this condition)

**50.** The applicant/developer shall reference Chapter 33 of the most current Oregon Fire Code for construction needs to be reviewed prior to fire hydrant installation. (Canby Fire District – ME, shall determine compliance with this condition)

**51.** Fire flow GPM inspections and access shall be done prior to flammable construction materials being place on site. (Canby Fire District – ME, shall determine compliance with this condition)

**52.** The applicant/developer shall reference Chapter 22 of the Oregon Fire Code for Combustible Dust Producing operation. (Canby Fire District – ME, shall determine compliance with this condition)

**53.** A Mobile Emergency Radio Communication (MERC) plan for 50k square feet and above, shall be submitted for review and approval. (Canby Fire District – ME, shall determine compliance with this condition)

**54.** All Building address numbers shall be @24-inch in size, and contrasting with numbers on corners of the building. (Canby Fire District – ME, shall determine compliance with this condition)

**55.** Alarm panel enunciator shall be placed at the front entry of the building or near the Fire Riser door depending on building configuration. (Canby Fire District – ME, shall determine compliance with this condition)

**56.** Knox Box shall be placed at front entry or riser room doors. Area shall be determined during construction. Locate at https://www.knoxbox.com/. (Canby Fire District – ME, shall determine compliance with this condition)

**57.** Hydrant at the entry, or entries and locations of the other hydrants shall be placed outside the collapse area of the structure when possible. Hydrants shall be placed at 300 feet center-to-center. Blue ground reflector for all hydrants for the project as soon as they are put in service. (Replaced if second lift of road surface is done later) (Canby Fire District – ME, shall determine compliance with this condition)

**58.** The structure shall be fully fire sprinklered including overhangs. Dust collection system duct work shall be protected with fire sprinkler heads to ensure suppression per Oregon Fire Code Chapter 22. (Canby Fire District – ME, shall determine compliance with this condition)

**59.** Fire department connection (FDC) within 50 feet of a hydrant dedicated to the FDC, with address number on the FDC pipe, FDC pipe painted red, BRASSB male plug for caps instead of plastic or pot metal caps for better security for the FDC head. FDC sign measured 12 x 18, shall also on the pipe. (Canby Fire District – ME, shall determine compliance with this condition)

**60.** Landscaping should be low growing vegetation to not block visibility of the Hydrant, FDC, or addressing. (Canby Fire District – ME, shall determine compliance with this condition)

**61.** The developer shall provide a PDF of approved prints for our Pre-Fire Plan program. (Canby Fire District – ME, shall determine compliance with this condition)

**62.** Fire sprinkler riser room door will be labeled with 8 inch label: “Fire Sprinkler Riser Room “Alarm Panel”. (Canby Fire District – ME, shall determine compliance with this condition)

**63.** Fire Lanes shall be painted red on curb with – “No Parking Fire Lane” in white - and signage. (Canby Fire District – ME, shall determine compliance with this condition)

**64.** Fire Extinguishers will have 3-D signage mounted for easy visibility. (Canby Fire District – ME, shall determine compliance with this condition)

**65.** Certificate of Occupancy will be signed off by CFD after a complete walk through and review for compliance with all Fire Code regulations. (Canby Fire District – ME, shall determine compliance with this condition)

**Project Design/ Site Plan Approval:**

**66.** The applicant shall provide a final photometrics plan, with elevations of all light poles, bollards, and wall fixtures at the time of building permit or pre-construction meeting, whichever occurs first. Outdoor lighting shall not produce light overspill glare and/or trespass onto surrounding properties. Said plan(s) shall be consistent with Chapter 16.43, *Outdoor Lighting Standards*, of the Municipal Code. Special consideration shall be given to the minimization of light and glare impacts to existing residential and agricultural land uses. (Canby Planning – SF, shall determine compliance with this condition in coordination with Canby Utility)

**67.** Consistent with Subsection 16.10.100, *Bicycle Parking*, of the Municipal Code, the majority of the proposed bicycle parking shall be located to within 50 feet of the main entrance of the building. Other bicycle parking locations can be adjacent to the north side of the building. Prior to site plan approval, the project applicant shall submit a final site plan demonstrating that the location and design of proposed bicycle parking conforming to the aforementioned code section. (Canby Planning – SF, shall determine compliance with this condition)

**Building Permits:**

**68.** The project applicant shall secure a Street Opening and/or Driveway Construction permit for all paved driveway or utility installations associated with the proposed development or offsite improvements. Said permits shall comply with the City's Public Works Design Standards. (Public Works – JN, shall determine compliance with this condition)

**69.** Prior to occupancy, sight distance at all access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon. (City Engineer – HI, in coordination with Clackamas County Transportation-JG, shall determine compliance with this condition)

**70.** The project applicant shall apply for a City of Canby Site Plan Permit and Erosion Control Permit from Canby Planning Department, and building permits at Clackamas County Building permits. (Canby Planning – SF and Public Works - JN shall determine compliance with this condition)

**71.** Clackamas County Building Codes Division will provide structural, electrical, plumbing, and mechanical plan review and inspection services for construction of the project.

**72.** The applicant shall file a sign permit for any future signs that shall be limited to the size and height standards applicable to the I-O (Canby Industrial Area Overlay Zone) as indicated in Section 16.42.050, Table 7, of the Sign Ordinance. Proposed signs, after having been found to conform to the sign ordinance, must secure a building permit from Clackamas County Building Inspection prior to their installation. (Canby Planning-SF, in coordination with Clackamas County Building Codes Division, shall determine compliance with this condition)

**Prior to Occupancy:**

**73.** Prior to the issuance of a Certificate of Occupancy, all landscaping plant material indicated on the submitted landscape plan shall either be installed and irrigated with a fully automatic designed and installed irrigation system as proposed, or with sufficient financial security (bonding, escrow, etc.) pursuant to the provisions of CMC 16.49.100 (B).

**Street Trees:**

**74.** The applicant should be aware that the City street tree fee is now $250 per tree if planted by the City, and the City recommends submittal of a separate Street Tree Plan to assist in the location, species, and total tree count. (Public Works – JN in cooperation with Canby Planning-SF, shall determine compliance with this condition)

# EXHIBIT A
# LAND USE APPLICATION

## SITE AND DESIGN REVIEW
## General Type III

City of Canby
Planning Department
222 NE 2nd Avenue
PO Box 930
Canby, OR 97013
(503) 266-7001

**APPLICANT INFORMATION:** *(Check ONE box below for designated contact person regarding this application)*

☒ Applicant Name: VLMK Engineering + Design Phone: 503.222.4453
Address: 3933 SW Kelly Avenue Email: jenniferk@vlmk.com
City/State: Portland, Oregon Zip: 97239

☐ Representative Name: Phone:
Address: Email:
City/State: Zip:

☒ Property Owner Name: Clifford Parsons, Trustee Phone: 503.209.3429
Signature: Clifford Parsons Trustee
Address: PO Box 728 Email: cparsons@canby.com
City/State: Canby, Oregon Zip: 97045

☐ Property Owner Name: Phone:
Signature:
Address: Email:
City/State: Zip:

*NOTE: Property owners or contract purchasers are required to authorize the filing of this application and must sign above*

❶ All property owners represent they have full legal capacity to and hereby do authorize the filing of this application and certify that the information and exhibits herewith submitted are true and correct.
❷ All property owners understand that they must meet all applicable Canby Municipal Code (CMC) regulations, including but not limited to CMC Chapter 16.49 Site and Design Review standards.
❸ All property owners hereby grant consent to the City of Canby and its officers, agents, employees, and/or independent contractors to enter the property identified herein to conduct any and all inspections that are considered appropriate by the City to process this application.

**PROPERTY & PROJECT INFORMATION:**

| 23849 S. Mulino Road | 15.90 acres | 31E34 03100 |
|---|---|---|
| Street Address or Location of Subject Property | Total Size of Property | Assessor Tax Lot Numbers |
| Farmland | M-1 | |
| Existing Use, Structures, Other Improvements on Site | Zoning | Comp Plan Designation |

Proposed construction of a 162,386 sf building and associated site work.
Describe the Proposed Development or Use of Subject Property

| STAFF USE ONLY | | | | |
|---|---|---|---|---|
| DR 19-03 | 12/9/19 | lf | | |
| FILE # | DATE RECEIVED | RECEIVED BY | RECEIPT # | DATE APP COMPLETE |

# EXHIBIT B

VLMK ENGINEERING + DESIGN

## PROJECT NARRATIVE

| | | | |
|---|---|---|---|
| *Project Name:* | Stanton Furniture | *Applicant:* | VLMK Engineering + Design |
| *Project Address:* | S Mulino Road | | 503.222.4453 |
| | Canby, OR 97013 | *Contact:* | Jason Sahlin, VLMK |

### OVERVIEW:

Stanton Furniture is a local manufacturer for household furniture. Stanton will be relocating from their existing facilities in Tualatin to Canby. This new combined manufacturing and distribution warehouse will be approximately 167,000 square feet, including 162,000 square feet of warehouse and approximately 5,000 square feet of office space.

The development site is located within the Sequoia Industrial Park, bordered by SE 4th Ave. to the North and access to S. Mulino Road on the East. Frontage along SE 4th Avenue will be dedicated to the City for Right-of-Way. City street improvements will include half street improvements to SE 4th Ave and S. Mulino Road.

Building construction will include a concrete tilt-up building with panel relief and articulation along the street frontage as illustrated in the Building Elevations. Landscaping has been designed with a combination of trees, shrubs and groundcover to buffer the loading dock and yard area, as well as compliment and accentuate the building features.

Approximately 300 emplyees are expected at this facility. Parking for this facility will be provided on site, and meets the city standard parking requirements.

### VEHICLE ACCESS

The primary access will be one (1) 50ft wide driveway access from S Mulino Road and one (1) 50ft wide driveway access from SE 4th Ave.

### PARKING

The onsite parking is designed to accommodate the needs of Stanton Furniture. The current design includes the required minimum for onsite parking and loading as well as bicycle parking. The proposed design also includes a small seating area available for use by the public.

### SITE UTILITIES

Water and sanitary service requirements for the new building will be limited to the fixtures serving the office and providing the required fire service for the new development. All utilities will be fed from SE 4th Avenue.

## DESIGN CRITERIA REVIEW

The proposed use and building design meets or exceeds most all of the guidelines as outlined in the city development code for the land use Zone and the Overlay Zone.

An Exception to the maximum driveway width is proposed. As previously approved with adjacent developments, a 50ft wide driveway access is proposed in two (2) location along SE 4th Ave and Mulino Road. The driveway is designed to City standards and will conform to all required ADA and sight distance requirements.

VLMK
ENGINEERING + DESIGN

## DESIGN CRITERIA RESPONSE

| | | | |
|---|---|---|---|
| *Project Name:* | Stanton Furniture | *Applicant:* | VLMK Engineering + Design |
| *Project Address:* | S Mulino Road<br>Canby, OR 97013 | | 503.222.4453 |
| | | *Contact:* | Jason Sahlin, VLMK |

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## DESIGN CRITERIA RESPONSE

### CHAPTER 16.08 GENERAL PROVISIONS

### 16.08.010 COMPLIANCE WITH TITLE.

No building, structure, or land shall hereafter be used or occupied, and no building, structure or part thereof shall hereafter be erected, constructed, reconstructed, moved or structurally altered contrary to the provisions of this title. No lot area, yard, or required off-street parking or loading area existing on or after the effective date of the ordinance codified in this title shall be reduced in area, dimension, or size below the minimums required by this title, nor shall any lot area, yard, or required off-street parking or loading area that is required by this title for one use be used to satisfy the lot area, yard, off-street parking or loading area requirement for any other use, except as may be provided in this title. (Ord. 740 section 10.3.05(A), 1984)

### 16.08.20 ZONING MAP.

A. The location and boundaries of the zones designated in this division are established as shown on the map entitled "Zoning Map of the City of Canby" dated with the effective date of the ordinance codified in this title and signed by the Mayor and the city recorder and hereafter referred to as the zoning map.

***Findings:*** *The property is situated in the I-O Canby Industrial Area Overlay zone (Pioneer Industrial Park) which permits uses in the underlying M-1 zone. The M-1 Zone states in*

*16.32.010 that uses permitted outright in the M-1 Zone includes (A) "Manufacturing," (T) "Warehouse," and (X) "Business or Professional Office, When Related and Incidental to the Primary Industrial Uses of the Area."*

B. The signed copy of the zoning map shall be maintained on file in the office of the city recorder and is made a part of this title. (Ord. 740 section 10.3.05(B), 1984)

**16.08.030 ZONE BOUNDARIES**

Unless otherwise specified, zone boundaries are lot lines or the centerline of streets, railroad rights-of-way, or such lines extended. Where a zone boundary divides a lot into two or more zones, the entire lot shall be considered to be in the zone containing the greater lot area, provided the boundary adjustment is a distance of less than twenty feet. (Ord. 740 section 10.3.05(C), (1984)

***Findings:*** *This criterion does not apply to this project. The development property is not divided by a zone boundary.*

**16.08.040 ZONING OF ANNEXED AREAS.**

Zoning of newly annexed areas shall be considered by the Planning Commission in its review and by the Council in conducting its public hearing for the annexation. (Ord. 740 section 10.3.05(D), 1984) (Ord. 1294, 2008)

***Findings:*** *This criterion does not apply to this project. The proposed development has previously been annexed.*

**16.08.050 PROHIBITED PARKING.**

In addition to the provisions of the motor vehicle laws of Oregon regulating parking, no person shall park any vehicle, except an automobile, motorcycle, van or pickup truck rated no larger than one ton, on any public street or alley within any residential zone, except for an emergency or for the purpose of loading or unloading. (Ord. 740 section 10.3.05(E), 1984)

**16.08.060**

(Ord. 740 section 10.3.05(F), 1984; renumbered as 16.64.040(I)(6) by Ord. 1043 section 3, 2000)

**16.08.070 ILLEGALLY CREATED LOTS.**

In no case shall a lot which has been created in violation of state statute or city ordinance be considered as a lot of record for development purposes, until such violation has been legally remedied. (Ord. 740 section 10.3.05(G), 1984)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development will occur on a lot that has been properly recorded in accordance with the statues of governing jurisdictions.*

## 16.08.80 AREA AND YARD REDUCTIONS.

A. When there are existing dwellings on the lots situated immediately to each side of a given lot and each of those neighboring lots has less than the required street yard depth, the street yard of the subject property may be reduced to the average street yard of those two abutting lots.

***Findings:*** *This criterion does not apply to this project. The proposed development does not propose the reduce the required yard depth.*

B. When there is an existing dwelling situated on a lot immediately to either side of a given lot which fronts on the same street, and such existing dwelling has a street yard which is less than half of that required in the zone, the street yard of the subject property may be reduced to a depth which is halfway between that normally required in the zone and that of the existing dwelling on the neighboring lot.

***Findings:*** *This criterion does not apply to this project. The proposed development does not propose the reduce the required yard depth.*

C. If, on the effective date of the ordinance codified in this title, a lot or the aggregate of contiguous lots held in a single ownership has less than the required area or width, the lot or lots may be occupied by a permitted use subject to the other requirements of the zone; provided that if the deficiency is one of area, residential uses shall be limited to single-family dwellings; and further provided that if the deficiency is one of width, each required interior yard may be reduced by one foot for each four feet of deficient width. In no case, however, shall such reduction result in an interior yard of less than five feet.

***Findings:*** *This criterion does not apply to this project. The proposed development does not propose the reduce the required yard area.*

D. Where two or more contiguous substandard recorded lots are in common ownership and are of such size to constitute at least one conforming zoning lot, such lots or portions thereof shall be so joined, developed, and used for the purpose of forming an effective and conforming lot or lots. Such contiguous substandard lots in common ownership shall be considered as being maintained in common ownership after the effective date of the ordinance codified in this title for zoning purposes. (Ord. 740 section 10.3.05(H), 1984; Ord. 1237, 2007)

***Findings:*** *This criterion does not apply to this project. The proposed development does not include multiple contiguous lots with the same owner. The development site lies completely within a conforming zone lot.*

## 16.08.90 SIDEWALKS REQUIRED.

A. In all commercially zoned areas, the construction of sidewalks and curbs (with appropriate ramps for the handicapped on each corner lot) shall be required as a condition of the issuance of a building permit for new construction or substantial remodeling, where such work is estimated to exceed a valuation of twenty thousand dollars, as determined by the building code. Where multiple permits are issued for construction on the same site, this requirement

shall be imposed when the total valuation exceeds twenty thousand dollars in any calendar year.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes City standard sidewalks, curbs and ramps.*

B. The Planning Commission may impose appropriate sidewalk and curbing requirements as a condition of approving any discretionary application it reviews. (Ord. 740 section 10.3.05(I), 1984)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes City standard sidewalks, curbs and ramps.*

**16.08.100 HEIGHT ALLOWANCES.**

The following types of structures or structural posts are not subject to the building height limitations: chimneys, cupolas, tanks, church spires, belfries, derricks, fire and hose towers, flagpoles, water tanks, elevators, windmills, utility poles and other similar projections. The height of wireless telecommunications systems facilities shall be in accordance with section 16.08.120. (Ord. 740 section 10.3.05(J), 1984; Ord. 981 section 18, 1997)

***Findings:*** *This criterion does not apply to this project. The proposed development does not include any of the above listed exceptions to the height limitations. If such an item is desired by the owner, it is understood that as part of this section it will be allowed.*

**16.08.110 FENCES.**

A. Fences not more than three and one-half feet in height may be constructed within the street setbacks of any R-1, R-1.5, R-2 or C-1 zone. Fences not more than six feet in height may be constructed in any interior yard, rear yard, or street yard along an alley; provided, however, that in no case shall a fence be constructed in violation of the requirements of a vision clearance area.

***Findings:*** *This criterion does not apply to this project. The proposed development does not lie within the above listed zones.*

B. On corner lots, the 3.5-foot height limit will apply within the required setback along both street-facing yards.

***Findings:*** *This criterion does not apply to this project. The proposed development does not lie on a corner lot.*

C. No more than one row of fencing is allowed within a required street yard setback.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. No more than a single row of fencing is proposed.*

D. The Planning Commission may require sight-blocking or noise mitigating fences for any development it reviews.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. Screening of parking and loading areas shall be achieved with landscape buffers as required. It is understood that the Planning Commission may require a fence.*

E. Fences of up to eight feet in height are permitted for any development in C-2, C-M, M-1 or M-2, or Planned Unit Development zones.

***Findings:*** *This criterion does not apply to this project. The proposed development does not lie within one of the listed zones.*

F. No fence/wall shall be constructed throughout a subdivision, planned unit development or be part of a project that is/was subject to site and design review approval where the effect or purpose is to wall said project off from the rest of the community unless reviewed and approved by the Planning Commission. (Ord. 890 section 8, 1993; Ord. 740 section 10.3.05(K), 1984; Ord. 955 section 2, 1996; Ord. 981 section 43, 1997)

***Findings:*** *This criterion does not apply to this project. The proposed development does not propose to construct any wall or fence for the purpose of 'walling' off the development from the rest of the City.*

G. In all zones, private fences along a public pedestrian/bicycle pathway shall comply with the following in order to provide security and visibility for pathway users while maintaining privacy for the residence.

1. Fencing installed as part of a new subdivision shall comply with either (a) or (b) below.

2. Fencing installed by a property owner on an individual lot shall comply with either (a), (b), or (c) below.

    a. Solid fencing shall be no greater than four (4) feet in height; or

    b. Fencing shall be constructed with black open wire material, wooden slats, or some other material that allows visual access between the pathway and adjacent uses; or

    c. Solid fencing shall be set back at least three (3) feet from the property line that abuts the pathway.

***Findings:*** *This criterion does not apply to this project. The proposed development does not include any fencing along the public pedestrian/bicycle pathway.*

**H. Use of hazardous materials.**

Fences and walls shall not be constructed of or contain any material which will do bodily harm, such as electric or barbed wire, razor wire, broken glass, spikes, or any other hazardous or dangerous material, except as follows:

a. Barbed wire or electrified fences enclosing livestock are permitted in any zone permitting farm use. Electrified fences shall be posted or flagged at not less than 25-foot intervals with clearly visible warnings of the hazard when adjacent to developed areas.

b. In commercial and industrial zones barbed wire is permitted attached to the top of a fence that is at least six foot in height above grade; provided, that barbed wire shall not extend over a street, sidewalk, alley or roadway. The attached barbed wire shall be placed at least six inches above the top of the fence. (Ord. 890 section 8, 1993; Ord. 740 section 10.3.05(K), 1984; Ord. 955 section 2, 1996; Ord. 981 section 43, 1997; Ord. 1338, 2010; Ord. 1514, 2019)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. Proposed fencing will be a chain link type with the possibility of barbed wire at the top as permitted in this section.*

## 16.08.115 ARBORS

A. Arbors that are constructed of proper design (height and setbacks) and in accordance with, the design standards of the particular zone where it is located are allowed with the following limitations:

1. Arbors shall be stand-alone structures and shall not be attached to a fence.

2. The arbor shall not exceed eight feet in height and shall maintain a five foot setback from the property line.

3. If the vegetation becomes too full or too high, the owner is financially responsible to rectify the situation, and to maintain the vegetation, and arbor;

4. 4The primary purpose of the arbor is to support and sustain foliage/vegetation, provide shade, recreational space, and ascetic amenity. (Ord. 1514, 2019)

***Findings:*** *This criterion does not apply to this project. The proposed development does not include any proposed Arbors.*

## 16.08.120 SITING AND REVIEW PROCESS FOR WIRELESS TELECOMMUNICATIONS SYSTEMS FACILITIES.

***Findings:*** *This criterion does not apply to this project. The proposed development does not include any proposed wireless telecommunications facilities.*

## 16.08.130 STANDARD TRANSPORTATION IMPROVEMENTS.

A. Pursuant to the Transportation Planning Rule, projects that are specifically identified in the Canby Transportation System Plan, for which the City has made all the required land use and goal compliance findings, are permitted outright and subject only to the standards established by the Transportation System Plan. This section pertains to additional transportation projects that may not be identified in the Canby Transportation System Plan, and whether the use is permitted outright or permitted subject to the issuance of a conditional use permit.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. SE 4th Avenue will be extended East to connect with S Mulino Rd., and Mulino Road will be improved along the frontage of the property. See plans for additional information.*

## 16.08.140 TEMPORARY VENDOR.

***Findings:*** *This criterion does not apply to this project. The proposed development does not include any proposed Temporary Vendors as identified by this section.*

## 16.08.150 TRAFFIC IMPACT STUDY (TIS).

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The completed Traffic Impact Study is included with this submittal.*

## 16.08.160 SAFETY AND FUNCTIONALITY STANDARDS.

The City will not issue any development permits unless the proposed development complies with the city's basic transportation safety and functionality standards, the purpose of which is to ensure that development does not occur in areas where the surrounding public facilities are inadequate. Upon submission of a development permit application, an applicant shall demonstrate that the development property has or will have the following:

A. Adequate street drainage, as determined by the city.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes design for adequate street drainage.*

B. Safe access and clear vision at intersections, as determined by the city.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes design for safe and clear vision at entrances and exits.*

C. Adequate public utilities, as determined by the city.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes design adequate public utilities.*

D. Access onto a public street with the minimum paved widths as stated in Subsection E below.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes design of half street improvements to the City Design Standards.*

E. Adequate frontage improvements as follows:

1. For local streets and neighborhood connectors, a minimum paved width of 16 feet along the site's frontage.

***Findings:*** *This criterion does not apply to this project. The proposed development does not front a local or neighborhood connector street.*

2. For collector and arterial streets, a minimum paved width of 20 feet along the site's frontage.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes design of half street improvements to the City Design Standards.*

3. For all streets, a minimum horizontal right-of-way clearance of 20 feet along the site's frontage.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes design of half street improvements to the City Design Standards.*

F. Compliance with mobility standards identified in the TSP. If a mobility deficiency already exists, the development shall not create further deficiencies. (Ord 1340, 2011)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. A mobility deficiency has not been created.*

## CHAPTER 16.10 OFF-STREET PARKING AND LOADING

### 16.10.10 OFF-STREET PARKING REQUIRED – EXCEPTIONS.

A. At the time of establishment of a new structure or use, change in use, or change in use of an existing structure, within any planning district of the city, off-street parking spaces and off-street loading berths shall be as provided in this and following sections, unless greater requirements are otherwise established by the conditional use permit or the site and design review process, based upon clear and objective findings that a greater number of spaces are necessary at that location for protection of public health, safety and welfare. A lesser number of spaces may be permitted by the Planning Commission based on clear and objective

findings that a lesser number of parking spaces will be sufficient to carry out the objective of this section.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development will meet or exceed the parking requirements of this section.*

B. No off-street parking shall be required for any use permitted outright within the C-1 zone in the rectangular area bounded by N. Ivy Street on the east, NW First Avenue on the south, N. Elm Street on the west, and NW Third Avenue on the north.

***Findings:*** *This exception does not apply to this project. The proposed development does not lie within the C-1 zone.*

C. At the time of enlargement of an existing structure or use, the provisions of this section shall apply to the enlarged structure or use only. (Ord. 1304, 2009; Ord. 1237, 2007; Ord. 890 section 9, 1993; Ord. 872, 1992; Ord. 854 section 2, 1991; Ord. 848, Part V, section 1, 16.10.010(A)(B), 1990)

***Findings:*** *This exception does not apply to this project. The proposed development does not contain any existing structures.*

## 16.10.20 DEFINITIONS.

A. Floor Area. Except where otherwise specified, the floor area measured shall be the gross floor area of the building primary to the function of the particular use of the property other than space devoted to off-street parking or loading.
B. Employees. Where employees are specified, the term shall apply to all persons, including proprietors, working on the premises during the peak shift. (Ord. 854 section 2, 1991; Ord. 848, Part V, section 1, 16.10.020(A)(B), 1990)

## 16.10.30 GENERAL REQUIREMENTS.

A. Should the owner or occupant of a structure change the use to which the building is put, thereby increasing parking or loading requirements, the increased parking/loading area shall be provided prior to commencement of the new use.

***Findings:*** *This criterion does not apply to this project. There is no existing use identified. All minimum parking will be determined by this use. Any future change in use will conform to the requirements of this section.*

B. Parking and loading requirements for structures not specifically listed herein shall be determined by the City Planner, based upon requirements of comparable uses listed.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. Parking and loading requirements are listed for the proposed use.*

C. In the event several uses occupy a single structure, the total requirements for off- street parking shall be the sum of the requirements of the several uses computed separately. If the applicant can demonstrate that the uses do not have overlapping parking needs (based on days and hours of operation) and can share parking, the total requirement for combined uses may be reduced by up to 60 percent.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development will calculate parking using separated uses including Office and Manufacturing/Storage. Adequate parking has been supplied for the overlap during shift change and additional spaces are not necessary.*

D. Off-street parking spaces for dwellings shall be located on the same lot, or adjacent lot, with the dwelling. Parking spaces located within an on-site garage shall count toward the minimum parking requirement for residential uses. Other required parking spaces may be located on a separate parcel, provided the parcel is not greater than five hundred (500) feet from the entrance to the building to be served, measured along the shortest pedestrian route to the building. The applicant must prove that the parking located on another parcel is functionally located and that there is safe vehicular and pedestrian access to and from the site.

***Findings:*** *This criterion does not apply to this project. The proposed development does not contain any proposed dwellings.*

E. Required parking spaces shall be available for the parking of operable passenger automobiles of residents, customers, patrons and employees and shall not be used for storage of vehicles or materials or for the parking of trucks used in conducting the business.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development will ensure that required parking spaces will remain available for the parking of operable passenger automobiles customers and that required spaces for patrons and employees and shall not be used for storage of vehicles or materials or for the parking of trucks used in conducting the business.*

F. Institution of on-street parking shall not be allowed for off-street parking, where none is previously provided, and shall not be done solely for the purpose of relieving crowded parking lots in commercial or industrial planning districts.

***Findings:*** *This criterion does not apply to this project. The proposed development does not propose the use of on-street parking.*

G. Parking facilities may be shared by users on adjacent parcels if all of the following standards are met, or the Planning Commission determines a lesser combination meets the intent of the ordinance:

1. One of the parcels has excess parking spaces, considering the present use of the property; and the other parcel lacks sufficient area for required parking spaces. Excess

parking spaces can be determined by considering when the uses need the parking spaces, such as time of day or day of week.

2. The total number of parking spaces meets the standards for the sum of the number of spaces that would be separately required for each use. If the applicant can demonstrate that the uses do not have overlapping parking needs (based on days and hours of operation) and can share parking, the total requirement for combined uses may be reduced by up to 60 percent.

3. Legal documentation, to the satisfaction of the City Attorney, shall be submitted verifying present use of the excess parking area on one lot by patrons of the uses deficient in required parking areas.

4. Physical access between adjoining lots shall be such that functional and reasonable access is provided to uses on the parcel deficient in parking spaces.

5. Adequate directional signs shall be installed specifying the joint parking arrangement.

***Findings:*** *This criterion does not apply to this project. The proposed development does not propose to share parking facilities with the adjacent parcels.*

H. The number of vehicular spaces required in Table 16.10.050 may be reduced by up to 10% if one of the following is demonstrated to the satisfaction of the Planning Director or Planning Commission:

1. Residential densities greater than nine units per gross acre (limit parking to no less than one space per unit for multi-family structures); or

2. The proposed proposed development is pedestrian-oriented by virtue of a location which is within convenient walking distance of existing or planned neighborhood activities (such as schools, parks, shopping, etc.) and the development provides additional pedestrian amenities not required by the code which, when taken together, significantly contribute to making walking convenient (e.g., wider sidewalks, pedestrian plazas, pedestrian scale lighting, benches, etc.). (Ord. 890 section 10, 1993; Ord. 854 section 2 [part], 1991; Ord. 848, Part V, section 16.10.030, 1990; Ord. 1043 section 3, 2000; Ord. 1338, 2010)

***Findings:*** *This criterion does not apply to this project. The proposed development does not propose any reductions to the minimum required number of parking spaces.*

**16.10.040 PROHIBITED NEAR INTERSECTIONS.**

In no case will off-street parking be allowed within a vision clearance area of an intersection. (Ord. 740 section 10.3.10(D), 1984)

***Findings:*** *This criterion does not apply to this project. The proposed development does not propose the use of on-street parking.*

**16.10.050 PARKING STANDARDS DESIGNATED.**

The parking standards set out in Table 16.10.050 shall be observed. (Ord. 854 section 2, [part], 1991; Ord. 848 section 1, 16.10.050, 1990; Ord. 740 section 10.3.10(E), 1984; Ord. 981 section 20, 1997)

**TABLE 16.10.050**

Off-street Parking Provisions - The following are the minimum standards for off-street vehicle parking:

| USE | PARKING REQUIREMENT |
|---|---|
| ***Residential Uses:*** | |
| a. Single-family dwellings | 2.00 spaces per dwelling unit for new construction. (Existing single- family dwellings having only a single parking space shall not be considered to be nonconforming.) |
| b. Two-family dwellings | 2.00 spaces per dwelling unit. |
| c. Multi-family dwellings in complexes with private internal driveways | One space per studio or 1-bedrrom unit. 2.00 spaces per 2-bedroom or larger unit. One additional guest parking space shall be provided for every five units for each development often or more units. |
| d. Retirement/assisted living | 1.0 spaces per unit |
| e. Residential day care facility and | 1.00 space per employee |
| ***Institutions:*** | |
| a. Convalescent home, nursing home or sanitarium | 1.00 spaces per two beds for patients or residents, plus 1.00 space per employee |
| b. Hospital | 4.00 spaces per two beds |
| ***Places of Public Assembly:*** | |
| a. Library, reading room | 1.00 space per 400 square feet of public area |
| b. Nursery, primary/elementary, or junior high school | 2.00 spaces per employee |
| c. Senior high school | 1.00 space per classroom, plus 1.00 space per six students |
| d. Other places of public assembly, including churches | 1.00 space per four seats or eight feet of bench length |
| ***Commercial Amusement:*** | |
| a. Theater | 1.00 per six seats |
| b. Bowling alley | 3.0 spaces per 1,000 square feet of floor area |
| c. Dance hall, skating rink | 3.0 spaces per 1,000 square feet of floor area |
| d. Racquet courts, health clubs | 3.0 spaces per 1,000 square feet of floor area |
| ***Commercial*** | |

| | |
|---|---|
| a. Retail shops (under 100,000 sq. ft. | 2.00 spaces per 1,000 square feet of floor area |
| b. Retail store handling exclusively bulky merchandise such as furniture, automobile and service repair shops | 1.00 space per 1,000 square feet of sales floor area |
| c. Shopping center (over 100,000 square feet of gross leasable area) | 3.00 spaces per 1,000 square feet of gross leasable area |
| d. Banks/savings and loans | 2.00 spaces per 1,000 gross square feet of floor area |
| e. Medical/dental offices | 3.00 spaces per 1,000 gross square feet of floor area |
| f. General offices | 2.00 spaces per 1,000 gross square feet of floor area |
| g. Real estate offices | 2.00 spaces per 1,000 gross square feet of floor area |
| h. Government offices | 3.50 spaces per 1,000 gross square feet of floor area |
| i. Restaurant | 8.00 spaces per 1,000 gross square feet of floor area |
| j. Take-out restaurant | 8.00 spaces per 1,000 gross square feet of floor area |
| k. Motel | 0.75 spaces per rentable room |
| l. Residential hotel, rooming house, | 0.75 spaces per rentable room |
| m. Hotel | 0.75 spaces per rentable room |
| n. Club or lodge | 1.00 space per 200 square feet of floor area |
| o. Day care , adult or child care; does not include Family Daycare (12 or fewer children) under ORS 657A.250 | 1.00 space per 500 square feet of floor area |
| p. All others | 1.00 space per 550 square feet |
| q. Wireless telecommunication systems | 1.00 space per site |
| r. Self-Storage (Mini) Warehouse | 2.00 spaces per 1,000 gross square feet of office space |
| ***Industrial:*** | |
| a. Manufacturing | 2.00 spaces per 1,000 gross square feet of office space, plus 1.00 space per 1,000 gross square feet of non-office manufacturing space. Minimum of 5 parking spaces overall. |
| b. Warehousing | 2.00 spaces per 1,000 gross square feet of office space, plus 1.00 space per 1,000 gross square feet of non-office warehousing space. Minimum of 5 parking spaces overall. |
| c. Wholesale establishments | 2.00 spaces per 1,000 gross square feet of office space, plus 1.50 spaces per 1,000 gross square feet of non-office wholesale space. Minimum of 5 parking spaces overall. |

(Ord 1296, 2008, Ord. 1338, 2010; Ord. 1514, 2019)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development will calculate parking using warehouse as the primary use with accessory office as listed in the above table.*

## 16.10.60 OFF-STREET LOADING FACILITIES

A. The minimum number of off-street loading berths for commercial and industrial uses is as follows:

| SQUARE FEET OF FLOOR AREA | NUMBER OF BERTHS |
|---|---|
| Less than 5,000 | 0 |
| 5000 – 25,000 | 1 |
| 25,000 – 60,000 | 2 |
| 60,000 and over | 3 |

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes 35 loading berths that will all meet the requirements of this section.*

B. Loading berths shall conform to the following minimum size specifications:

1. Commercial uses – 13′ x 35′
2. Industrial uses – 12′ x 60′
3. Berths shall have an unobstructed minimum height of 14′.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes 35 loading berths that will all meet the requirements of this section.*

C. Required loading areas shall be screened from public view, from public streets, and adjacent properties by means of sight-site obscuring landscaping, walls or other means, as approved through the site and design review process.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed loading berths located along S Mulino Road will be screened from public view with the use of berms and dense landscaping via a combination of trees and shrubs.*

D. Required loading facilities shall be installed prior to final building inspection and shall be permanently maintained as a condition of use.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed loading facilities will be installed prior to final building inspection and will be permanently maintained.*

E. A driveway designed for continuous forward flow of passenger vehicles for the purpose of loading and unloading children shall be located on the site of a school or day care center having a capacity greater than twenty-five (25) students.

***Findings:*** *This criterion does not apply to this project. The proposed development does not propose any schools or daycare centers.*

F. The off-street loading facilities shall, in all cases, be on the same lot or parcel as the structure they are intended to serve. In no case shall the required off-street loading spaces be part of the area used to satisfy the off-street parking requirement.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed loading facilities are designed to be located adjacent to the building on the site and clear of the on-site parking lot.*

G. The Planning Commission may exempt a building from the loading berth requirement, or delay the requirement, based on findings that loading berths are not needed for a particular building or business. (Ord. 854 section 2[part], 1991; Ord. 848, Part V, section 1, 16.10.060, 1990; Ord. 1237, 2007)

***Findings:*** *This exception is not needed. The proposed development meets or exceeds the required loading berth requirements.*

## 16.10.70 PARKING LOTS AND ACCESS.

A. Parking Lots. A parking lot, whether as accessory or principal use, intended for the parking of automobiles or trucks, shall comply with the following:

1. Parking lot design shall comply with the dimensional standards set forth in Figure 1 of this section.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development has designed the parking lot to comply with the dimensional standards per figure 1 of this section.*

2. Parking stalls of eight (8) feet in width and sixteen (16) feet in length for compact vehicles may comprise up to a maximum of thirty (30) percent of the total number of parking stalls. Such parking stalls shall be marked "Compact Parking only" either on the parking surface or on a sign in front of the parking stalls.

***Findings:*** *This criterion does not apply to this project. The proposed development does not propose any compact parking spaces.*

3. Areas used for standing or maneuvering of vehicles shall have paved asphalt, concrete, solid concrete paver surfaces, or paved "tire track" strips maintained

adequately for all weather use and so drained as to avoid the flow of water across sidewalks or into public streets, with the following exception:

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development has designed the parking lot to be fully paved with asphalt throughout.*

a. The Planning Director or Planning Commission may approve the use of an engineered aggregate system for outdoor storage and/or non-required parking areas provided that the applicant can demonstrate that City Standards related to:

   i. minimizing dust generation,

   ii. minimizing transportation of aggregate to city streets, and

   iii. minimizing infiltration of environmental contaminants including, but not limited to, motor oils, fuels, volatile organic compounds (e.g. benzene, toluene, ethylbenzene, xylene), and ethylene glycol are met.

   The decision maker may impose conditions as necessary to meet City Standards.

***Findings:*** *This criterion does not apply to this project. The proposed development does not propose any engineered aggregate systems.*

b. Use of permeable surfacing materials for parking lots and driveways is encouraged whenever site and soil conditions make permeable surfacing feasible. Permeable surfacing includes, but is not limited to: paving blocks, turf block, pervious concrete, and porous asphalt. All permeable surfacing shall be designed, constructed, and maintained in accordance with the Canby Public Works Design Standards and the manufacturer's recommendations. Maintenance of permeable surfacing materials located on private property are the responsibility of the property owner.

***Findings:*** *The proposed development has increased onsite water infiltration that will keep a majority of surface water onsite. Landscape minimums have been met and a large undeveloped area will exist to the East of the proposed development area. No permeable asphalt is proposed due to the costs of ongoing maintenance.*

4. The full width of driveways must be paved in accordance with (3) above:

   a. For a minimum of 20 feet from the right-of-way line back into the private property to prevent debris from entering public streets, and

   b. To within 150 feet of all portions of the exterior wall of the first story of any structure(s) served by the driveway to ensure fire and emergency service provision.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development has designed the driveways to be paved with concrete and asphalt to the full width and depth to meet the requirements outlined in this section.*

5. Except for parking to serve residential uses, parking areas adjacent to or within residential planning districts or adjacent to residential uses shall be designed to minimize disturbance of residents. Artificial lighting, which may be provided, shall be so deflected as not to shine or create glare in any residential planning district or on any adjacent dwelling, or any street right-of-way in such a manner as to impair the use of such way.

***Findings:*** *This criterion does not apply to this project. The proposed development is not adjacent to a residential planning district or use.*

6. Groups of more than four (4) parking spaces shall be so located and served by driveways that their use will require no backing movements or other maneuvering within a street right-of-way other than an alley.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development has designed the parking lot as to not require backing movements within a street right-of-way.*

7. Off-street parking areas, and the accesses to them, shall be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress and the maximum safety of pedestrian and vehicular traffic on the site and in adjacent roadways. The Planning Director or Planning Commission may require engineering analysis and/or truck turning diagrams to ensure safe and efficient traffic flow based on the number and type of vehicles using the site, the classification of the public roadway, and the design of the parking lot and access drives.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development has designed the parking area to have one-way flow around the building in a counter clock-wise direction. The drive aisle has been enlarged to accommodate vehicle traffic as required with an industrial use. Vehicle and pedestrian traffic has been designed to be separate from the flow of the industrial truck traffic to maximize safety concerns.*

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

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development has designed the parking facilities to include the use of parking*

*bumpers to prevent cars from encroaching on the adjacent pedestrian walkways. No parking is located along the right-of-way that would require such provisions.*

9. Accessible parking shall be provided, constructed, striped, signed and maintained as required by ORS 447.233 and all Oregon Structural Specialty Code requirements.

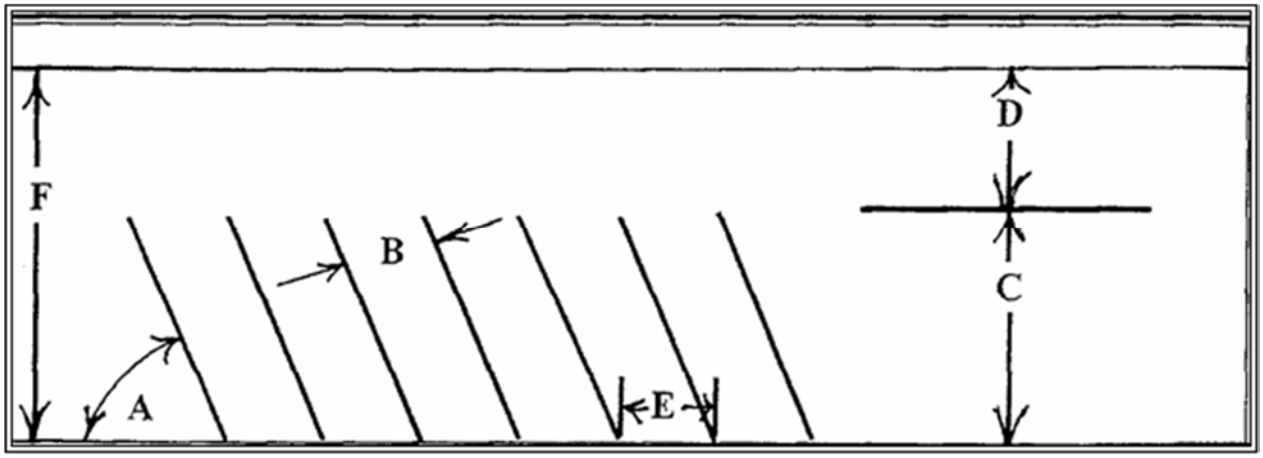
***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development has designed the accessible parking to meet the requirements of ORS 447.233 and all Oregon Structural Specialty Code requirements.*

**TABLE 16.10.070**
**Minimum dimensional Standard for Parking**

This table and Figure 16.10.070 provide the minimum dimensional standards for parking areas and spaces.

A = Parking angle in degrees
B = Minimum stall width
C = Minimum stall depth
D = Minimum clear aisle width
E = Minimum clear stall distance at bay side
F = Minimum clear bay width

| A | B | C | D | E | F |
|---|---|---|---|---|---|
| 0 (parallel) | 8'0" | - | 12'0" | 22'0" | 20'0" |
| 30 | 8'6" | 16'4" | 12'0" | 17'0" | 28'4" |
| 45 | 8'6" | 18'9" | 12'6" | 12'0" | 31'3" |
| 60 | 8'6" | 19'10" | 18'0" | 9'10" | 37'10" |
| 90 | 8'6" | 18'0" | 24'0" | 8'6" | 42'0" |



B. Access

1. The provision and maintenance of vehicular and pedestrian ingress and egress from private property to the public streets as stipulated in this ordinance are continuing requirements for the use of any structure or parcel of real property in the City of Canby. No building permit or other permits shall be issued until scale plans are presented that show how the ingress and egress requirement is to be fulfilled. Should the owner or occupant of a lot or building change the use to which the lot or building is put, thereby increasing ingress and egress requirements, it shall be unlawful and a violation of this ordinance to begin or maintain such altered use until the required increase in ingress and egress is provided.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. With the proposed development, the Engineer will submit design drawings to the City that demonstrate how the requirements of this section will be met. In the event that any modifications are to be made with future development, it is understood that revised drawings would need to be re-submitted and approved as required.*

2. The City of Canby encourages joint/shared access. Owners of two (2) or more uses, structures, or parcels of land may agree to, or may be required by the City to, utilized jointly the same ingress and egress when the combined ingress and egress of both uses, structures, or parcels of land satisfies their combined requirements as designed in this ordinance, provided that satisfactory legal evidence is presented to the City Attorney in the form of deeds, easements, leases or contracts shall be placed on permanent files with the city recorder.

***Findings:*** *This criterion does not apply to this project. The proposed development is not adjacent to another development that would agree to utilize a shared access. Discussions regarding shared access at S. Walnut will continue with future development of adjacent parcels.*

3. All ingress and egress shall connect directly with public streets.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development proposes three (2) ingress/egress driveways accesses connecting directly with public streets.*

4. Vehicular access for residential uses shall be brought to within fifty (50) feet of the ground floor entrances or the ground floor landing of a stairway, ramp or elevator leading to dwelling units.

***Findings:*** *This criterion does not apply to this project. The proposed development does not contain any residential uses.*

5. Required sidewalks shall extend from the ground floor entrances or the ground floor landing of a stairs, ramps or elevators to the sidewalk or curb of the public street or streets that provide the required access and egress.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development has designed the City sidewalk within the right-of-way to be connected to the front entrances via concrete sidewalk and a single stripped pedestrian access path across the drive aisle adjacent to the parking lot to provide safe access to the building.*

6. To afford safe pedestrian access and egress for properties within the city, a sidewalk shall be constructed along all street frontages, prior to use or occupancy of the building or structure proposed for said property. The sidewalks required by this section shall be constructed to city standards except in the case of streets with inadequate right-of-way width or where the final street design and grade have not been established, in which case the sidewalks shall be constructed to a design, and in a manner approved by the Site and Design Review Board. Sidewalks approved by Board may include temporary sidewalks and sidewalks constructed on private property; provided, however, that such sidewalks shall provide continuity with sidewalks of adjoining commercial developments existing or proposed. When a sidewalk is to adjoin a future street improvement, the sidewalk construction shall include construction of the curb and gutter section to grade and alignment established by the Site and Design Review Board.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development has designed the City sidewalk within the right-of-way to be constructed to meet the City design standards. Per City Comments during the Pre-Application Conference, City sidewalk is to be constructed for the full frontage of the property along SE 4th Avenue and S Mulino Road.*

7. The standards set forth in this ordinance are minimum standards for access and egress, and may be increased through the site and design review process in any particular instance where the standards provided herein are deemed insufficient to protect the public health, safety and general welfare. (Ord. 890 section 12, 1993; Ord. 1237, 2007; Ord. 1338, 2010)

## Minimum Access Requirements

**16.10.070(B)(8): Minimum access requirements for residential uses - ingress and egress for residential uses shall not be less than the following (except that in the case of flag lots, section 16.64.0400) shall apply):**

| *Dwelling units* | *Minimum number of accesses required* | *Minimum access width* | *Sidewalks & Curbs (in addition to driveways)* |
|---|---|---|---|
| 1 or 2 | 1 | 12 feet | none required |

| | | | |
|---|---|---|---|
| 3-19 | 1 | 20 feet | Minimum of one sidewalk connection to residences and parking areas; curb required if sidewalk adjacent to driveway. |
| 20-49 | Option A:<br>1 access<br>OR<br>Option B:<br>2 accesses | 20 feet<br><br>12 feet | Minimum of one sidewalk connection to residences and parking areas; curb required if sidewalk adjacent to driveway. |
| 50-499 | Option A:<br>1 access<br>OR<br>Option B:<br>2<br>accesses | 30 feet<br><br>20 feet | Curbs required; Minimum of one sidewalk connection to residences and parking areas |
| Over 500 | As required by Site and Design Review Board | | As required by Public Works Director |

**16.10.070(B)(9): Minimum access requirements for commercial or institutional uses - ingress and egress for commercial uses shall not be less than the following:**

| *Parking spaces required* | *Minimum number of accesses required* | *Minimum access width* | *Sidewalks & curbs (in addition to driveways)* |
|---|---|---|---|
| 1-4 | 1 | 12 feet | *None required* |
| 5-99 | 1 | 20 feet | Curbs required; sidewalk on one side minimum |
| 100-249 | 2 | 20 feet | Curbs required; sidewalk on one side minimum |
| Over 250 | As required by Site and Design Review Board | As required by Public Works Director | |

**16.10.070(B)(10): Minimum access requirements for industrial uses - ingress and egress for industrial uses shall not be less than the following:**

| *Parking spaces required* | *Minimum number of accesses required* | *Minimum access width* | *Sidewalks & curbs (in addition to driveways)* |
|---|---|---|---|
| 1-250 | 1 | 24 feet | Curbs required; sidewalks on one side minimum |
| Over 250 | As required by Public Works Director | | |

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes three (2) accesses with widths greater than 24ft.*

8. One-Way Ingress or Egress – The hard surfaced pavement of one-way drives shall not be less than twelve (12) feet for multi-family residential, commercial or industrial uses. (Ord. 1514, 2019)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes two (2) one-way accesses, both will be larger than the minimum of twelve (12) feet as required.*

9. **Driveways:**

    a. Access to private property shall be permitted with the use of driveway curb cuts. The access points with the street shall be the minimum necessary to provide access while not inhibiting the safe circulation and carrying capacity of the street. Driveways shall meet all applicable guidelines of the Americans with Disabilities Act (ADA). Driveway distance shall be measured from the curb intersection point [as measured for vision clearance area (16.04.670)]. Distances to an intersection shall be measured from the stop bar at the intersection.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development driveway has been designed for industrial truck traffic to be 50 feet wide to provide safe turning movements without crossing lanes of traffic. ADA approved ramps are included on either side of all driveways.*

    b. Driveways shall be limited to one per property except for certain uses which include large commercial uses such as large box stores, large public uses such as schools and parks, drive through facilities, property with a frontage of over 250-feet and similar uses.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development has provided (1) driveway access off SE 4th Avenue and (1) driveway access off S Mulino Road.*

    c. Double frontage lots and corner lots may be limited to access from a single street, usually the lower classification street. Single family residential shall not have access onto arterials, and shall have access onto collectors only if there is no other option.

***Findings:*** *In addition to the (2) driveways onto SE4th Avenue an additional existing access will be maintained to the North onto S. Walnut. This access will be primarily used for pedestrian traffic and smaller delivery vehicles du to the limited width of 24 feet.*

    d. If additional driveways are approved by the City Administrator or designee, a finding shall be made that no eminent traffic hazard would result and impacts on through traffic would be minimal. Restrictions may be imposed on additional driveways, such as limited turn movements, shared access between uses, closure of existing driveways, or other access management actions.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed driveways have been designed in accordance with the approval of the City Staff.*

*An accompanying Traffic Impact Study will demonstrate that no traffic hazards will be created.*

e. Within commercial, industrial, and multi-family areas, shared driveways and internal access between similar uses are encouraged to reduce the access points to the higher classified roadways, to improve internal site circulation, and to reduce local trips or movements on the street system. Shared driveways or internal access between uses will be established by means of common access easements at the time of development.

***Findings:*** *The proposed development does not include any shared driveways at this time. There are no adjacent developments or existing easements to which a shared access could be agreed upon or utilized.*

f. Driveway widths shall be as shown on the following table.

**Driveway Widths (Minimum/Maximum, Ft.)**

| Street Classification | Res. | Comm. | Ind. |
|---|---|---|---|
| **Arterial:** | NA (1) | 12/36 | 12/36 |
| **Industrial:** | NA (1) | 12/36 | 12/36 |
| **Collector:** | 12/24 (2) | 12/36 | 12/36 |
| **Neighborhood Route:** | 12/24 (2) | 12/36 | 12/36 |
| **Local:** | 12/24 (2) | 12/36 | 12/36 |
| **Cul-de-sac:** | 12/24 (2) | 12/36 | 12/36 |
| **Public Alley** | 12/24 (2) | NA | NA |

Res. = Residential Zone
Comm. = Commercial Zone
Ind. = Industrial Zone

**Notes:** **(1) Special conditions may warrant access.**

**(2) 28' maximum width for 3-car garage.**

***Findings:*** *The proposed development proposes to apply for an exception to the minimum driveway width of 36ft along SE 4th Avenue. Previous developments in the area, located along similar collector streets have been approved to increase the driveway widths up to the proposed with of 50 feet.*

g. Driveway spacing shall be as shown in the following table.

**Minimum Driveway Spacing**

| Street Classification | Intersection | Driveway |
|---|---|---|
| **Arterial (2)** | 330' (1) | 330' (1) |

| | | |
|---|---|---|
| **Industrial Streets (2)** | 100' (1) | 100' (1) |
| **Collector (2)** | 100' (1) | 100' (1) |
| **Neighborhood Route** | 50' (1)(3) | 10' |
| **Local (all)** | 50' (1)(3) | 10' |
| **Cul-de-sac** | 50' (1)(3) | 10' |
| **Public Alley** | 50’ (1)(3) | |

**Notes:**
**(1)** Minimum distance or no closer than 60% of parcel frontage unless this prohibits access to the site, in which case City Administrator or designee may approve a deviation.
**(2)** Direct access to this street will not be allowed if an alternative exists or is planned.
**(3)** For single-family residential houses, the minimum distance between driveways and an intersection shall be thirty (30) feet.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed driveways are spaced more than 500 feet apart and more than 300 feet from an intersection.*

h. Curb cuts shall be a minimum of five feet from the property line, unless a shared driveway is installed. Single driveways may be paved up to an adjacent property line but shall maintain a five (5) foot separation from the side property line where the driveway enters the property. Driveways shall not be constructed within the curb return of a street intersection. Deviations may be approved by the City Administrator or designee.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed driveways are spaced more than 75 feet from the adjacent property lines.*

i. For roads with a classification of Collector and above, driveways adjacent to street intersections shall be located beyond the required queue length for traffic movements at the intersection. If this requirement prohibits access to the site, a driveway with restricted turn movements may be permitted.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed driveways are located beyond the required queue length for traffic movements at the intersections at S Mulino Road and Sequoia Parkway.*

j. Multi-family access driveways will be required to meet the same access requirements as commercial driveways if the multi-family site generated 100 or more trips per day.

***Findings:*** *This criterion does not apply to this project. The proposed development does not contain any multi-family driveways.*

k. For circular type driveways, the minimum distance between the two driveway curb cuts on one single-family residential lot shall be thirty (30) feet. (Ord. 1514, 2019)

***Findings:*** *This criterion does not apply to this project. The proposed development does not contain any residential type circular driveways.*

10. When considering a public facilities plan that has been submitted as part of site and design review plan in accordance with this ordinance, the city Public Works Supervisor may approve the location of a driveway closer than fifty (50) feet from the intersection of collector or arterial streets, based on written findings of fact in support of the decision. Said written approval shall be incorporated into the recommended decision of the City Planner for the site and design review plan under the process set forth.

***Findings:*** *This criterion does not apply to this project. The proposed development does not contain any facilities with this application.*

11. Where an existing alley is 20 feet or less in width, the property line setback abutting the alley shall increase to provide a minimum of 24 feet for maneuvering and backing movements from, garages, carports, or parking areas. (Ord. 890 section 12, 1993; Ord. 872, 1991; Ord. 854 section 2 [part], 1991; Ord 848, Part V, section 16.10.070 (A)(B) 1990; Ord. 955 section 3 & 4 1996; Ord. 981 section 44, 1997; Ord. 1019 section 5, 1999; Ord 1237, 2007; Ord. 1514, 2019)

***Findings:*** *This criterion does not apply to this project. The proposed development does not contain an alley.*

**16.10.080 STREET TREE PLAN.**

A Street Tree Plan can be provided in lieu of meeting the requirement of planting a tree every 30 lineal feet of street frontage as stated in Ordinance 1385 Exhibit B. The Street Tree Plan can compensate for driveways, utilities, or other obstructions that inhibit the 30 foot spacing requirement. The requirement for the planting of street trees is required under Chapter 12.32 CMC. (Ord. 854, 1991; Ord. 848, Part VI, section 1, 1990; Ord. 1514, 2019)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The landscaping design submitted with application includes the planting of street trees as required.*

**16.10.90 DRIVE-UP USES.**

A. Drive-up uses shall provide a minimum stacking area clear of the public right-of- way or parking lot aisle from the window service to the vehicles as follows:

1. All drive-up uses. – Each lane shall provide a minimum capacity for two (2) to eight (8) automobiles, as determined by the Site and Design Review Board.

2. For purposes of this section, an automobile shall be considered no less than twenty (20) feet in length. The width and turning radius of drive-up aisles shall be approved by the City Public Works Director.

B. The stacking area shall not interfere with safe and efficient access to other parking areas on the property. Traffic aisles shall be wide enough to accommodate backing movements where adjacent to parking stalls. Parking maneuvers shall not occur in the stacking area. (Ord. 848, Part VII, section 16.10.090, 1990)

***Findings:*** *This criterion does not apply to this project. The proposed development does not contain any drive-up uses.*

**16.10.100 BICYCLE PARKING.**

Bicycle parking shall be provided for all multi-family residential, institutional, commercial, and industrial uses.

A. Dimensions and characteristics: Bicycle parking spaces shall be a minimum of six (6) feet long and two (2) feet wide, and overhead clearance in covered spaces shall be a minimum of seven (7) feet. A minimum five (5) foot aisle for bicycle maneuvering shall be provided and maintained beside or between each row of bicycle parking. Bicycle racks located on a sidewalk shall provide a minimum of two (2) feet between the rack and a wall or other obstacle, and between the rack and curb face. Bicycle racks or lockers shall be securely anchored to the surface or a structure. Bicycle racks located in the Downtown Commercial Zone shall be of the inverted U style (a.k.a. staple racks). See Figure 20 of the Canby Downtown Plan for correct rack placement.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes bicycle racks to be constructed to meet the requirements of this section.*

B. Location: Bicycle parking shall be located in well-lit, secure locations within fifty (50) feet of the main entrance to a building, but not further from the entrance than the closest automobile parking space, and in no case further than 50 feet from an entrance when several entrances are involved.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes bicycle racks to be constructed near the main entrance to meet the requirements of this section.*

C. Number of spaces: The bicycle parking standards set out in Table 16.10.100 shall be observed. (Ord. 1019 section 1, 1999; Ord. 1076, 2001)

| TABLE 16.10.100 BICYCLE PARKING STANDARD | |
|---|---|
| **LAND USE CATEGORY** | **MINIMUM REQUIRED BICYCLE PARKING SPACES** |
| **Residential** | |
| Multi-family residential, general | 1 space per unit |
| Multi-family residential, seniors or with physical disabilities | 4, or 1 space per 5 units, whichever is greater |
| **Institutional** | |
| Schools – Elementary | To be determined through design review |
| Schools - Jr. High/Middle School | To be determined through design review |
| Schools - St. High | To be determined through design review |
| College | To be determined through design review |
| Transit Centers/Park & Ride Lots | 5% of auto spaces *(or 100% of demand, depending on accessibility to bicyclists)* |
| Religious Institutions | 1 space per 40 seat capacity |
| Hospitals | 1 space per 5 beds |
| Doctor, Dentist Offices | 2, or 1 space per 1000 $ft^2$, whichever is greater |
| Libraries, Museums, etc. | 2, or 1 space per 1000 $ft^2$, whichever is greater |
| **Commercial** | |
| Retail Sales | 0.33 space per 1000 $ft^2$, whichever is greater |
| Auto-oriented Services | 2, or 0.33 space per 1000 $ft^2$, whichever is greater |
| Groceries/Supermarkets | 0.33 space per 1000 $ft^2$ |
| Offices | 2, or I space per 1000 $ft^2$, whichever is greater |
| Restaurants | 1 space per 1000 $ft^2$ |
| Drive-in Restaurants | 1 space per 1000 $ft^2$ |
| Shopping Centers | 0.33 space per I000 $ft^2$ |
| Financial Institutions | 2, or 0.33 space per $1000^2$ ,whichever is greater |
| Theaters, Auditoriums, etc. | 1 space per 30 seats |
| Downtown Commercial Zone | 4 spaces per block |
| **Industrial** | |
| Industrial Park | 2, or .1 space per 1000 $ft^2$, whichever is greater |
| Warehouse | 2, or .1 space per 1000 $ft^2$, whichever is greater |
| Manufacturing, etc. | 2, or .15 space per 1000 $ft^2$, whichever is greater |

NOTES:
Each individual use needs to be evaluated for bicycle parking – e.g., a commercial accessory use in an industrial district may have different requirements than the industrial uses around it. Similarly, in mixed-use developments, the amount of each use and required bicycle parking needs" evaluation. Finally, within each use category one needs to consider the different user categories - residents, employees, customers, etc. - and parking requirements for each. (Ord. 1019 section I, 1999; Ord. 1043 section 3, 2000; Ord. 1076, 2001)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development has identified sixteen (16) bicycle parking spaces are required. This*

*minimum may be expanded in order substitute for the on-site vehicle parking requirement at the discretion of the Planning Commission or Staff.*

## CHAPTER 16.32 M-1 LIGHT INDUSTRIAL ZONE

### 16.32.10 USES PERMITTED OUTRIGHT.

Uses permitted outright in the M-1 zone shall be as follows:

A. Manufacturing, fabricating, processing, compounding, assembling or packaging of products made from previously prepared materials such as cloth, plastic, paper, metal, wood (but not including sawmills or lumber mills), the operation of which will not result in

1. The dissemination of dusts, gas, smoke, fumes, odors, atmospheric pollutants or noise which exceed Oregon Department of Environmental Quality standards

2. Danger by reason of fire, explosion or other physical hazard;

3. Unusual traffic hazards;

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes uses as outlined in this section. Stanton Furniture manufactures furniture within their facility.*

B. Automobile body shop, or heavy repair shop;

C. Contractor's equipment or storage yard;

D. Dwelling for watchman or caretaker working on the property;

E. Food processing plant;

F. Fuel distribution, wholesale or retail;

G. Ice or cold storage plant;

H. Laundry or dry-cleaning plant;

I. Lumber yard;

J. Machinery, farm equipment or implement sales, service or rent;

K. Motor or rail freight terminal;

L. Railroad tracks and related facilities;

M. Restaurant, when related and incidental to primary industrial uses of the area;

N. Service station, when related and incidental to primary industrial uses of the area;

O. Stone, marble, or granite cutting;

P. Tire retreading or recapping;

Q. Transfer and storage company;

R. Utility storage or service yard;

S. Veterinarian's office or animal hospital;

T. Warehouse;

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes uses as outlined in this section. Stanton Furniture is a household furniture manufacturer.*

U. Wholesale distribution, including warehousing and storage;

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes uses as outlined in this section. Stanton Furniture is a household furniture manufacturer.*

V. Wireless or cellular communications facility/tower;

W. Other light industrial uses as determined by the Planning Commission;

X. Business or professional office, when related and incidental to primary industrial uses of the area;

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes the design of an accessory office to serve the primary use of warehouse storage and manufacturing.*

Y. Public building or uses such as fire station, or park or playground.

Z. Attached WTS facilities (see 16.08.120).

AA. Detached WTS facilities (monopole or lattice tower), under 150 feet in height and at least 660 feet from the nearest land zoned or planned for residential use or Highway 99E (see 16.08.120).

BB. Detached WTS facilities (monopole), under 100 feet in height and less than 660 feet from the nearest land zoned or planned for residential use or Highway 99E (see 16.08.120).

CC. Detached WTS facilities (monopole), equal to or over 150 feet in height and at least 660 feet from the nearest land zoned or planned for residential use or Highway 99E (see 16.08.120).

DD. Minor public facility.

EE. Brewery: General manufacturing of products included in SIC 208: Beverages. (Ord. 890 section 31, 1993; Ord. 749 section 1(A), 1984, Ord. 740 section 10.3.31(A), 1984; Ord. 995 section 10 & 11, 1996; Ord. 981 section 30 & 31,

**16.32.20 CONDITIONAL USES.**

Conditional uses in the M-1 zone shall be as follows:

A. Commercial recreation uses;

B. Motels, hotels and similar accommodations;

C. Other heavy commercial or light industrial uses as determined by the Planning Commission;

D. Waste and/or recycling transfer operations.

E. Detached WTS facilities (monopole), equal to or over 100 feet in height and less than 660 feet from the nearest land zoned or planned for residential use or Highway 99E (see 16.08.120).

F. Detached WTS facilities (lattice tower), equal to or over 150 feet in height and at least 660 feet from the nearest land zoned or planned for residential use or Highway 99E (see 16.08.120).

G. Major public facility, except as modified by Section 16.32.010. (Ord. 960, section 2, 12/18/96; Ord. 890, section 32, 1993; Ord. 740 section 10.3.31(B), 1984; Ord. 981 section 32, 1997; Ord. 1237, 2007)

***Findings:*** *This criterion does not apply to this project. The proposed development does not propose any conditional uses as outlined in the City of Canby Development Code.*

**16.32.30 DEVELOPMENT STANDARDS.**

The following subsections indicate the required development standards of the M-1 zone:

A. Minimum lot area: five thousand square feet;

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development area is greater than the minimum of five thousand square feet.*

B. Minimum width and frontage: fifty feet;

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development area has frontage greater than the minimum of fifty feet.*

C. Minimum yard requirements:

1. Street yard: twenty feet where abutting Highway 99E and S. Ivy Street. Gas station canopies shall be exempted from the twenty foot setback requirements. Properties not fronting on Highway 99E or S. Ivy Street shall maintain a 10 foot street yard setback. Sign setbacks along Highway 99-E and S. Ivy Street are to be measured from the face of the curb rather than the lot line. Where no curb exists, the setback shall be measured from the property line. Other than signs which are nonconforming structures and street banners which have been approved per the requirements of the Uniform Sign Code, no signs will be allowed to be located within, or to project over, a street right-of-way.

***Findings:*** *This criterion does not apply to this project. The proposed development is not located along HWY 99-E or S. Ivy Street.*

2. Interior yard: none, except ten feet where abutting a residential zone.

***Findings:*** *This criterion does not apply to this project. The proposed development is not adjacent to a residential zone.*

3. Rear yard: none, except ten feet where abutting a residential zone.

***Findings:*** *This criterion does not apply to this project. The proposed development is not adjacent to a residential zone.*

D. Maximum building height:

1. Freestanding signs: thirty feet;

***Findings:*** *This criterion does not apply to this project. The proposed development does not include the design of any free-standing signs.*

2. All other structures: forty-five feet.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed building height is below the maximum height of forty-five feet.*

E. Maximum lot coverage: no limit.

F. Other regulations:

1. Vision clearance distances shall be fifteen feet from any alley or driveway and thirty feet from any other street or railroad.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development will maintain vision clearances as outlined in this section.*

2. All setbacks to be measured from the foundation line of the building. Overhangs shall not exceed two feet.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The building setback will be maintained and correctly calculated.*

3. Prior to issuance of a building permit, wireless/cellular towers require written certification of approval/compliance from the Federal Communications Commission, Federal Aviation Administration and the Oregon Department of Transportation (Department of Aeronautics).

***Findings:*** *This criterion does not apply to this project. The proposed development does not contain any proposed wireless/cellular towers.*

4. Outside storage areas abutting a residential zone shall be screened from view by a site-blocking fence, landscaping, or berm and shall be of such material and design as will not detract from adjacent residences. (Ord. 890 section 33, 1993; Ord. 830 section 11, 12, 1989; Ord. 740 section 10.3.31(C), 1984; Ord. 955 section 12, 1996; Ord. 981 section 51, 1997; Ord. 1237, 2007; Ord. 1514, 2019)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. An outdoor lumber storage yard is proposed, but will be screened by a site-blocking fence.*

## CHAPTER 16.35 CANBY INDUSTRIAL AREA OVERLAY (I-O) ZONE

### 16.35.010 PURPOSE.

The purpose of the Canby Industrial Area Overlay (I-O) zone is to implement the design guidelines and standards of the Canby Industrial Area Master Plan (Master Plan):

A. Provide efficient circulation and access;

B. Allow flexibility in siting development, including a range of industrial and commercial/industrial land uses;

C. Provide visual continuity for streetscapes and developments;

D. Encourage durable, high quality building materials.

The zone is intended to ensure high-quality industrial development with a mix of employment types and uses. (Ord. 1008 section 1 [part], 1998; Ord. 1057 section 2 [part], 2000)

**16.35.20 APPLICABILITY.**

It is the policy of the City of Canby to apply the I-O zone to all lands within the Canby Pioneer Industrial Park Master Plan area and other areas determined by the City, as defined in the Industrial Area Master Plan. The Master Plan area generally includes the area bound by Highway 99E and 1st Avenue to the north, Mulino Road to the east, SE 13th Avenue to the south, and the Molalla Forest Logging Road Trail to the west. The I-O zone has the following affect with regard to other chapters of this ordinance:

A. Incorporates the Canby Industrial Area Master Plan into Title 16. The Master Plans design guidelines, standards, and plan maps are hereby incorporated by reference.

B. Permits land uses which are permitted by the underlying zone districts (C-M, M-1, M-2), with some exceptions.

C. Replaces selected development standards contained in the C-M, M-1, and M-2 zones, for continuity and quality of site design within the Master Plan area.

D. Utilizes the City's processes for development review, including land divisions, conditional uses, and design reviews. Provides a design review matrix (i.e., replacing the table in Chapter 16.49) which is tailored to the Master Plan area.

E. Provides additional conditional use standards to ensure development compatibility.

F. Lists uses that are prohibited outright due to incompatibility with the goals for the area. (Ord. 1008 section 1 [part], 1998; Ord. 1057 section 2 [part], 2000)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development lies within the boundary of the Canby Pioneer Industrial Park and is Covered under the I/O Overlay district.*

**16.35.25 PRE-APPLICATION REVIEW AND CONDITIONS OF APPROVAL**

A. A pre-application meeting with utility and service providers is required prior to any land use application, building permit application, or business license application in the I-O zone, unless this requirement is waived by the City Planner. The City Planner shall provide application forms for this purpose indicating all required information. The pre-application meeting shall allow utility and service providers to make a detailed assessment of the proposed use prior to forming a recommendation on approval. In addition, this meeting will allow the City to evaluate whether a Conditional Use Permit will be required.

***Findings:*** *The Pre-Application conference was held on September 12, 2019*

B. At the pre-application meeting, the City shall determine the need for a Hazardous Materials Management Plan. If required by the City, the applicant shall prepare a plan meeting the relevant sections of the Oregon Fire Code as determined by the City. The Plan shall allow utility and service providers to review the health and safety impacts of any proposed use and ensure an adequate plan will be in place to address those impacts prior to forming a recommendation on approval.

***Findings:*** *At the Pre-Application Conference, It was determined that this development would not require a Hazardous Material Management Plan.*

C. The Planning Commission or City Council may impose conditions to protect public health and safety on any discretionary land use application. (Ord. 1057 section 2 [part], 2000; Ord. 1237, 2007)

**16.35.030 USES PERMITTED OUTRIGHT.**

Unless limited by sections 16.35.040 or 16.35.045, uses permitted outright in the C-M zone, M-1 zone, and M-2 zone are permitted outright in the I-O zone, subject to the respective zone district boundaries. (Ord. 1008 section 1 [part], 1998; Ord. 1057 section 2 [part], 2000)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development meets the outright allowed uses allowed in the M-1 zone.*

**16.35.40 CONDITIONAL USES.**

Unless limited by subsection A below or section 16.35.045, conditional uses permitted in the C-M zone, M-1 zone, and M-2 zone are permitted as conditional uses in the I-O zone, subject to the respective zone district boundaries.

A. Any proposed site development, change in use, land division, or other action that results in any of the following requires conditional use approval in the I-O zone:

1. Less than 3 employees per developed acre. For the purposes of this section only, "developed" means all areas used for buildings, landscaping, vehicle maneuvering and parking areas, outdoor storage, and other areas occupied by the use. For the purposes of this section only, employees means full-time equivalents unless the City specifically allows other interpretations;

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development area is approx. 11.25 acres, totaling a required 34 employees. Stanton Furniture will have is expected to employ around 300 people (+/-).*

2. More than 60 acres total in I-O zoning that is occupied by a single use or business. For the purposes of this section, businesses classified in the same NAICS industry group (four-digit code) are considered to be in the same use. This section is intended to apply cumulatively to all properties in the zone;

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development does not contain a development area greater than 60 acres.*

3. Utilization of any public service or utility to such an extent that the utility would not be able to supply all other uses projected in its current long-range plans;

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development will utilize City utilities but will not adversely impact the supply for future developments.*

4. Uses requiring an H occupancy under the Oregon Structural Specialty Code;

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development does not propose an H occupancy.*

5. In any C-M zoning overlain by I-O zoning, any retail or commercial use with a building footprint exceeding 50,000 square feet;

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development does not lie within a C-M zone.*

6. In any M-1 or M-2 zoning overlain by I-O zoning, any retail or commercial use not related to or supportive of the primary industrial use of the park; or

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development does not propose any retail or commercial use not directly supportive of the primary industrial use.*

7. In any M-1 or M-2 zoning overlain by I-O zoning, retail areas occupying more than 15% of the building footprint.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development does not propose any retail sales spaces.*

B. To approve a conditional use in the I-O zone, the Planning Commission shall find that each of the following additional criteria are either met, or can be met by observance of conditions, unless it is not applicable:

1. The proposed use is compatible with the industrial nature of the park and will have minimal negative impact on the development and use of surrounding properties;

2. The proposed use does not pose a threat to public health or safety; and

3. The proposed use is beneficial to the overall economic diversity and vitality of the City.

These criteria are in addition to those provided in Section 16.50.010. In all other aspects, the conditional use process shall be as specified in Chapter 16.50. (Ord 1008 section 1 [part], 1998, Ord. 1057 section 2 [part], 2000; Ord. 1237, 2007; Ord. 1514, 2019).

***Findings:*** *This criterion does not apply to this project. The proposed development does not include the application for any Conditional Uses.*

**16.35.45 PROHIBITED USES.**

The following uses are prohibited in the I-O zone:

A. Slaughter house;

B. Rendering, reduction, or distillation of, or manufacturing from, animals, fish and their by-products;

C. Auto, truck or motorcycle race track;

D. Auto, truck, or motorcycle wrecking or salvage yard;

E. Scrap metal storage and sales;

F. Reclamation or manufacturing of steel barrels or drums;

G. Dump or landfill, including rubbish, slag, organic materials, offal, or garbage in general;

H. Livestock feeding pen, other than those associated with existing agricultural uses;

I. Fireworks manufacturing or the manufacturing of ammunition or explosives;

J. Nuclear power plant or similar use;

K. Curing and storage of hides;

L. Incinerator, smelter, blast furnace, or coke oven;

M. Manufacture of oils, gasoline, or products made directly from petroleum, other oils, or tar products;

N. Fertilizer production;

O. Creosote production;

P. Insecticide production;

Q. Tire manufacturing;

R. Saw, shingle, or lumber mill; and

S. In any M-1 or M-2 zoning overlain by I-O zoning, commercial or retail uses over 50,000 square feet are prohibited.

This list should not be used to imply that any other use is permitted. (Ord. 1057 section 2 [part], 2000)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development does not contain any of the uses outlined in this section.*

**16.35.50 DEVELOPMENT STANDARDS.**

The following subsections indicate the required development standards of the I-O zone. These standards replace the standards of the C-M zone, M-1 zone, and M-2 zone, as follows:

A. Minimum lot area: none.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. No Restriction.*

B. Minimum lot width and frontage: none.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. No Restriction.*

C. Minimum yard requirements (measured from building foundation to right-of-way line):

1. Street yards(s): 20 feet for buildings up to 25 feet in height; 35 feet for buildings between 25 feet and 45 feet in height. Parking and internal drives (except curb cuts and entrance drives) are prohibited within the required 20 foot street yard.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development contains a building with a height between 25 feet and 45 feet and as designed a setback of more than 120 feet from the right-of-way. The Parking setback is equal to or greater than the minimum of 20 feet.*

2. Interior yard: 10 feet, except 20 feet where abutting a residential zone. Common-wall lot lines (attached buildings), and development which provide shared parking and circulation with abutting developments, are exempt from interior yard standards.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development exceeds the minimum 10-foot interior yard setback all interior yards are located at the rear of the site, outside the proposed development zone.*

3. Rear yard: 10 feet, except 20 feet where abutting a residential zone. Common- wall lot lines (attached buildings), and development which provide shared parking and circulation with abutting developments, are exempt from interior yard standards.

D. Maximum building height: 45 feet.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development contains a building with a height below the maximum height of 45 feet. The approximate building height is 36 feet.*

E. Maximum lot coverage: 60 percent in the C-M zone; none in the M-1 and M-2 zones.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. No Restriction, as the proposed development lies within the M-1 Zone.*

F. Street access (curb cuts) spacing shall be a minimum of 200 feet on designated parkway and collector streets.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed street accesses have a separation of more than 500 feet from centerline to centerline.*

G. Street right-of-way improvements shall be made in accordance with the Canby Transportation System Plan (TSP).

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development is design to include half street improvements to SE 4th Avenue and S Mulino Road as directed by the City during the Pre-Application Conference.*

H. Building orientation standards. The following standards are intended to ensure direct, clear, and convenient pedestrian access:

1. Development in the M-1 zone and M-2 zone shall provide at least one public entrance facing the street. A direct pedestrian connection shall be provided between the primary building entrance and public sidewalk.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development is designed to have the main entrance to the building on the East face of the building facing S Mulino Road. Pedestrian access is provided via a striped pedestrian path across the drive aisle via an onsite sidewalk connected to the City sidewalk at the main entrance.*

2. Developments within the C-M zone shall provide continuous, straight-line pedestrian connections between the street(s), buildings, and parking areas.

***Findings:*** *This criterion does not apply to this project. The proposed development does not lie within the C-M zone.*

I. Right-of-way plantings: Street trees and ground cover plantings shall be installed with development, as approved by the City. Shrubs are prohibited within the public right-of-way.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development is designed to include street trees and ground cover to be approved by the City. The use of shrubs within the right-of-way will not be included in the design.*

J. Metal building exteriors are prohibited, except that the Planning Commission may approve architectural metal elements that accent and enhance the aesthetics of building entrances and office areas

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development is designed to be constructed of concrete tilt-up materials. Accents including a steel canopy at the main entrance will be used. Refer to Architectural elevations included in this submittal for reference.*

K. Lighting shall be required for all streets, sidewalks, and pedestrian ways. Applications for land division approval and site plan review shall include photometric plans.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes the addition of street lighting, building lighting and lighting of pedestrian pathways. A photometrics plan will be included in the site plan review submittal.*

L. Shared access: The City may require the provision of shared access drives through the land division review process. Shared access drives are intended to maintain adequate driveway spacing and circulation along the designated Parkway and Collector streets.

***Findings:*** *This criterion does not apply to this project. The land division proposed with this development was not identified at the Pre-Application Conference to include a shared access with the parcel to the South.*

M. All landscaped areas shall be irrigated unless drought tolerant plants are installed and watered until well established and replaced in event of failure.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes landscape irrigation for all landscaped areas.*

N. Other regulations: The C-M zone, M-1 zone, and M-2 zone provide other applicable regulations related to vision clearance, Highway 99E sidewalk width, setback measurement, outside storage, and wireless/cellular tower certification.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development will meet the requirements of other applicable regulations in regards to vision clearance and outside storage.*

O. Open storage or "laydown yards" shall be screened by a six foot site-obscuring fence or hedge-type vegetation that would become a solid site obscuring barrier within three years of planting. (Ord. 1008 section 1[part], 1998; Ord. 1237, 2007; Ord. 1299, 2008; Ord. 1514, 2019)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. All outside laydown yards and storage areas are screened with sight obscuring landscaping or fencing.*

**16.35.60 DESIGN GUIDELINES.**

The Industrial Area Master Plan provides design guidelines for reviewing development applications. The guidelines, which are incorporated into Table 16.35.040, encourage:

A. Flexibility to align local streets based on parcelization and development requirements;

B. Tree retention, planting of large (3-inch) caliper trees, and use of lawn/ground cover planting in front yard setbacks;

C. Placement of buildings at or near the setback line;

D. Placement of parking areas to the side or rear of buildings;

E. Placement of smaller commercial buildings at or near the street;

F. Building entries visible from the street with direct pedestrian connections;

G. Use of quality building materials;

H. Architectural detail to break up and articulate large surfaces and volumes, and to accentuate building entries; and

I. Open space retention and trail connections, as designated by the Master Plan. (Ord. 1008, section 1[part], 1998)

**16.35.70 I-O DESIGN REVIEW MATRIX.**

The City uses the following matrix to evaluate compliance with the I-O design guidelines. The matrix substitutes for the general design review matrix provided in Chapter 16.49. Design review applications must comply with all other applicable provisions of Chapter 16.49, and achieve scores equal to or greater than the minimum acceptable scores in the matrix. (See Master Plan for illustrations.)

A. Exception: The City may reduce the minimum acceptable score(s) upon finding that certain provisions do not apply to a proposed development.

Industrial Overlay Design Review Matrix
**Table 16.35.040**

| CRITERIA | Possible Scores |
|---|---|
| **Parking** | |
| Parking areas located to the side or rear of buildings as viewed from public right-of-way: <50% of parking spaces=0; 50%-75%=1; 75%-100%=2. | 0 1 2 |
| Increase minimum interior parking lot landscape over the base 15%: 15%-18%=0; 18%-22%=1; >22%=2. | 0 1 2 |
| Increase the base number of trees required by 16.49.120 (all landscape islands must contain 1 tree, 1 tree for every 40' along the required setback): 100%-105% of base requirement=0; 105%-110% of base requirement=1;>110%=2; (# of trees proposed/# of trees required x100=% of base requirement) | 0 1 2 |
| Number of parking spaces provided: (% of required minimum): >110%=0; 110%-105%=1; 105%-100%=2. See Table 16.10.050 for required parking. (# of spaces proposed/# of spaces required x100=% of required minimum) | 0 1 2 |
| **Minimum Acceptable Score 4 points** | **Total 4** |

| | |
|---|---|
| **Transportation/Circulation** | |
| Design private, on-site pedestrian pathways: 6' painted ways=0; 6' brick/paver ways=1; 6' brick/paver & raised concrete ways=2 | 0 1 2 |
| Number of pedestrian connections between the street sidewalk and internal circulation system: One connection = 0 Two or more connections = 1 | 0 1 2 |
| **Minimum Acceptable Score (some provisions may not apply) 2points** | **Total 2** |

| | |
|---|---|
| **Landscaping** | |
| Trees installed at 3 inch caliper: <25% of trees=0; 25%-50%=1; 50%-100%=2. | 0 1 2 |
| Usable outdoor amenity provided with development (e.g., water features, plazas, seating areas, and similar features): no=0; yes=1; yes and for public use =2. | 0 1 2 |
| Amount of grass (less grass is better) (% of total landscaped area)>50%=0; 25%-50%=1; <25%=2 | 0 1 2 |
| **Minimum Acceptable Score 3 points** | **Total 3** |

| **Building Appearance and Orientation** | | | |
|---|---|---|---|
| Building orientation at or near the street: parking or drive separates building from street=0; at least 20% of elevation within 5 feet of minimum setback=1; at least 20% of elevation is at minimum setback=2. | **0** | **1** | **2** |
| Building entrances visible from the street: no=0; yes=1. | **0** | **1** | **2** |
| Buildings use quality materials: concrete, wood, or wood siding=0; concrete masonry, stucco, or similar material=1; brick or stone=2. | **0** | **1** | **2** |
| Articulation and/or detailing to break up large building surfaces and accentuate the building entrance(s): no=0; yes=2. | **0** | **1** | **2** |
| **Minimum Acceptable Score** **4 points** | **Total 4** | | |

## CHAPTER 16.42 SIGNS

***Findings:*** *This criterion does not apply to this project. The proposed development does not include any signage with this application.*

## CHAPTER 16.43 OUTDOOR LIGHTING STANDARDS

### 16.43.40 LIGHTING ZONES.

A. Zoning districts designated for residential uses (R-1, R-1.5 and R-2) are designated Lighting Zone One (LZ 1). All other zoning districts are designated Lighting Zone Two (LZ 2).

***Findings:*** *The proposed development will follow the Zone Two (LZ 2) requirements.*

B. The designated Lighting Zone of a parcel or project shall determine the limitations for lighting as specified in this ordinance.

***Findings:*** *The proposed development will follow the Zone Two (LZ 2) requirements.*

**Table 16.43.040 Lighting Zone Descriptions**

| **Zone** | **Ambient Illumination** | **Representative Locations** |
|---|---|---|
| LZ 1 | Low | Rural areas, low-density urban neighbor- hoods and districts, residential historic dist- ricts. This zone is intended to be the default for residential areas. |

| | | |
|---|---|---|
| LZ 2 | Medium | High-density urban neighborhoods, shopping and commercial districts, industrial parks and districts. This zone is intended to be the default condition for commercial and in- dustrial districts in urban areas. |

## 16.43.60 PROHIBITED LIGHT AND LIGHTING.

A. All outdoor light sources, except streetlights, shall be shielded or installed so that there is no direct line of sight between the light source or its reflection at a point 3 feet or higher above the ground at the property line of the source. Light that does not meet this requirement constitutes light trespass. Streetlights shall be fully shielded. However, the applicant is permitted to have some unshielded lighting if lumens are within the limits of Table 16.43.070 below.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes a lighting design that is sensitive to the light trespass requirements outlined in this section. Street lighting design is present and also meets the requirements of this section.*

B. The following lighting systems are prohibited from being installed or used except by special use permit:.

1. Aerial Lasers.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development does not include aerial lasers.*

2. "Searchlight" style lights.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development does not include "searchlight" style lights.*

3. Other very intense lighting, defined as having a light source exceeding 5200 lumens.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development does not include lighting having a light source that exceeds 5200 lumens.*

## 16.43.70 LUMINAIRE LAMP LUMENS, SHIELDING, AND INSTALLATION REQUIREMENTS.

A. All outdoor lighting shall comply with the limits to lamp wattage and the shielding requirements in Table 16.43.070 per the applicable Lighting Zone. These limits are the upper limits. Good lighting design will usually result in lower limits.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development will include lighting fixtures that comply with the requirements of this section. 'Good lighting' design applications will be utilized where possible.*

B. The city may accept a photometric test report, lighting plan, demonstration or sample, or other satisfactory confirmation that the luminaire meets the requirements of the shielding classification.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development will include a photometrics plan during the site review process that includes the lighting fixture specification showing that the luminaires used meet the requirements of this section.*

C. Such shielded fixtures must be constructed and installed in such a manner that all light emitted by the fixture complies with the specification given. This includes all the light emitted by the fixture, either directly from the lamp or by a diffusing element, or indirectly by reflection or refraction from any part of the fixture. Any structural part of the fixture providing this shielding must be permanently affixed.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development will include a photometrics plan during the site review process that includes the lighting fixture specification showing that the luminaires used meet the requirements of this section.*

D. All canopy lighting must be fully shielded. However, indirect upward light is permitted under an opaque canopy provided that no lamp or vertical element of a lens or diffuser is visible from beyond the canopy and such that no direct upward light is emitted beyond the opaque canopy.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development will include a photometrics plan during the site review process that includes the lighting fixture specification showing that the luminaires used meet the requirements of this section.*

E. Landscape features shall be used to block vehicle headlight trespass while vehicles are at an external point of service (i.e. drive-thru aisle).

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes a landscape design that screens the parking spaces with regards to light trespass from vehicle head lights. Drive-thru aisles are not included in this development.*

F. All facade lighting must be restricted to the facade surface. The margins of the facade shall not be illuminated. Light trespass is prohibited.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development does not propose façade lighting at this time. Building wall pack lights and down lights at the canopy are the two types of on-site lighting that is designed. Street lighting is also included with this development.*

**Table 16.43.070 – Luminaire Maximum Lumens and Required Shielding**

| Lighting Zone | Fully Shielded | Shielded | Partly Shielded | Unshielded (Shielding is highly encouraged. Light trespass is prohibited.) |
|---|---|---|---|---|
| LZ 1 | 2600 lumens or less | 800 lumens or less | None Permitted | Low voltage landscape lighting and temporary holiday lighting. |
| LZ 2 | 7800 lumens or less | 1600 lumens or less | 800 lumens or less | Landscape and facade lighting 1600 lumens or less; ornamental lights of 800 lumens or less. |

## 16.43.80 HEIGHT LIMITS.

Pole and surface-mounted luminaires under this section must conform with Section 16.43.070.

A. Lighting mounted onto poles or any structures intended primarily for mounting of lighting shall not exceed a mounting height of 40% of the horizontal distance of the light pole from the property line, nor a maximum height according to Table 16.43.080, whichever is lower. The following exceptions apply:

1. Lighting for residential sports courts and pools shall not exceed 15 feet above court or pool deck surface.

2. Lights specifically for driveways, and then only at the intersection of the road providing access to the site, may be mounted at any distance relative to the property line, but may not exceed the mounting height listed in Table 16.43.080.

3. Mounting heights greater than 40% of the horizontal distance to the property line but no greater than permitted by Table 16.43.080 may be used provided that the luminaire is side-shielded toward the property line.
4. Landscape lighting installed in a tree. See the Definitions section.

5. Street and bicycle path lights.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. Site Lighting is supplied solely for the illumination of pedestrian pathways will meet the requirements of this section. There is no other proposed site lighting.*

B. Lighting mounted onto buildings or other structures shall not exceed a mounting height greater than 4 feet higher than the tallest part of the building or structure at the place where the lighting is installed, nor higher than 40% of the horizontal distance of the light from the property line, whichever is less. The following exceptions apply:

1. Lighting attached to single family residences shall not exceed the height of the eave. Lighting for driveways shall conform to Table 16.43.080.

2. Lighting for facades may be mounted at any height equal to or less than the total height of the structure being illuminated regardless of horizontal distance to property line.

3. For buildings less than 40 feet to the property line, including canopies or overhangs onto the sidewalk or public right of way, luminaires may be mounted to the vertical facade or the underside of canopies at 16 feet or less.

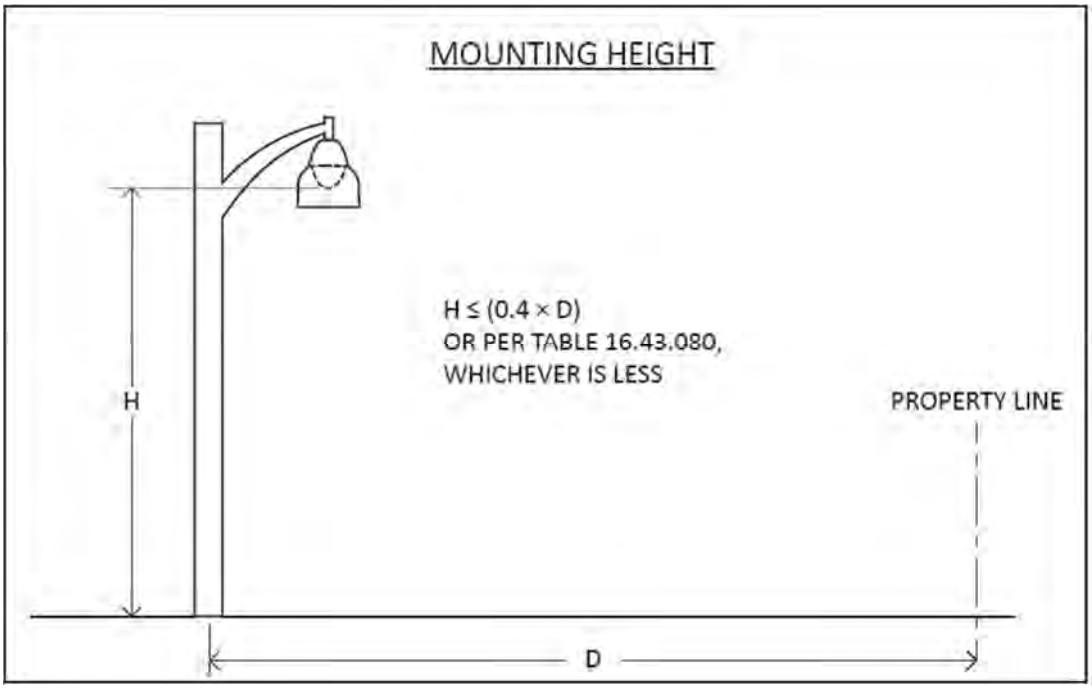
4. The top exterior deck of parking garages should be treated as normal pole mounted lighting rather than as lights mounted to buildings. The lights on the outside edges of such a deck must be side shielded to the property line.

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development has design wall mounted light fixtures to be below the top of the wall of the building.*

**Table 16.43.080 – Maximum Lighting Mounting Height in Feet**

| Lighting Zone | Lighting for Driveways, Parking and Transit | Lighting for Walkways, Plazas and other Pedestrian Areas | All Other Lighting |
|---|---|---|---|
| LZ 1 | 35.0 | 18.0 | 8.0 |
| LZ 2 | 37.5 | 18.0 | 15.0 |

**Figure 16.43.2: Mounting Height**




**16.43.090 LIGHTING CONTROLS**

The city strongly recommends the use of timers and/or motion detectors on outdoor lighting, and that motion detectors be set to minimize unnecessary activation. For example, motion detectors for entryway or driveway lights should not activate for off-site pedestrians or cars.

**16.43.100 EXCEPTIONS TO STANDARDS.**

***Findings:*** *This criterion does not apply to this project. The proposed development does not include exceptions to the standard requirements.*

**16.43.110 LIGHTING PLAN REQUIRED**

A lighting plan shall be submitted with the development or building permit application and shall include:

A. A site plan showing the location of all buildings and building heights, parking, and pedestrian areas.

B. The location and height (above grade) of all proposed and existing luminaires on the subject property.

C. Luminaire details including type and lumens of each lamp, shielding and cutoff information, and a copy of the manufacturer's specification sheet for each luminaire.

D. Control descriptions including type of control (time, motion sensor, etc.), the luminaire to be controlled by each control type, and the control schedule when applicable.

E. Any additional information necessary to demonstrate compliance with the standards in this section. (Ord.1338, 2010)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development will include a photometrics plan during the site review process that includes the lighting fixture specification showing that the luminaires used meet the requirements of this section.*

## CHAPTER 16.46 ACCESS LIMITATIONS

### 16.46.10 NUMBER OF UNITS IN RESIDENTIAL DEVELOPMENT.

***Findings:*** *This criterion does not apply to this project. The proposed development does not include and residential development.*

### 16.46.20 INGRESS AND EGRESS.

Ingress and egress to any lot or parcel, the creation of which has been approved by the Planning Commission, shall be taken along that portion fronting on a public street unless otherwise approved by the Planning Commission.

**A. Vision Clearance:**
Vision clearance distance shall be ten feet from a street to an alley or a street to a driveway and thirty feet from a street to any other street.

B. Where an existing alley is 20 feet or less in width, the setback abutting the alley shall increase to provide a minimum of 24 feet for maneuvering and backing movements from, garages, carports, or parking areas. (Ord. 740 section 10.3.62, 1984; Ord. 1514, 2019)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. With the construction of improvements along SE 4th Avenue and S Mulino Road, one new driveway is proposed on each road (two total).*

### 16.46.30 ACCESS CONNECTION.

Spacing of accesses on City streets. The number and spacing of accesses on City streets shall be as specified in Table 16.46.030. Proposed developments or land use actions that do not comply with these standards will be required to obtain an access spacing exception and address the joint and cross access requirements of this Chapter. (Ord. 1043 section 3, 2000; Ord. 1076, 2001; Ord. 1237, 2007)

**TABLE 16.46.30**
**Access Management Guidelines for City Streets***

| Street Facility | Maximum spacing** of roadways | Minimum spacing** of roadways | Minimum spacing** of roadway to driveway*** | Minimum Spacing** driveway to driveway*** |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Arterial | 1,000 feet | 660 feet | 330 feet | 330 feet or combine |
| Collector | 600 feet | 250 feet | 100 feet | 100 feet or combine |
| Neighborhood/Local | 600 feet | 150 feet | 50 feet**** | 10 feet |

* Exceptions may be made in the downtown commercial district, if approved by the City Engineering or Public Works Department, where alleys and historic street grids do not conform to access spacing standards.
** Measured centerline on both sides of the street
*** Private access to arterial roadways shall only be granted through a requested variance of access spacing policies when access to a lower classification facility is not feasible (which shall include an access management plan evaluation).
**** Not applicable for single-family residential driveways; refer to section 16.10.070(B)(10) for single-family residential access standards

Note: Spacing shall be measured between access points on both sides of the street. (Ord. 1340, 2011)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The Proposed street accesses have a separation of more than 500 feet from centerline to centerline and is not located near an intersection.*

**16.46.035 RESTRICTED ACCESS.**

The City may allow an access to a City street that does not meet the spacing requirements of Table 16.46.030 if the proposed access is restricted (prevents certain turning movements). The City may require an applicant to provide an engineered traffic study, access management plan, or other information as needed to demonstrate that the roadway will operate within the acceptable standards with the restricted access in place. (Ord. 1237, 2007). Access to OR 99E shall be regulated by ODOT through OAR 734.51. (Ord. 1340, 2011)

**16.46.40 JOINT AND CROSS ACCESS.**

***Findings:*** *This criterion does not apply to this development. The Proposed street accesses have met the access separation requirements.*

**16.46.50 NONCONFORMING ACCESS FEATURES.**

Legal access connections in place as of April 19, 2000 that do not conform with the standards herein are considered nonconforming features and shall be brought into compliance with applicable standards under the following conditions:

A. When new access connection permits are requested; or

B. Change in use or enlargements or improvements that will significantly increase trip generation. (Ord. 1043 section 3, 2000)

***Findings:*** *This criterion does not apply to this development. The Proposed street accesses have met the access separation requirements.*

**16.46.060 AMOUNT OF ACCESS POINTS.**

In the interest of promoting unified access and circulation systems, the number of access points permitted shall be the minimum number necessary to provide reasonable access to these properties, not the maximum available for that frontage. All necessary easements, agreements, and stipulations shall be met. This shall also apply to phased development plans. The owner and all lessees within the affected area are responsible for compliance with the requirements of this ordinance and both shall be cited for any violation. (Ord 1043 section 3, 2000)

***Findings:*** *The proposed development meets or exceeds these Required Conditions. The proposed development includes two (2) accesses.*

**16.46.70 EXCEPTION STANDARDS.**

***Findings:*** *This criterion does not apply to this development. The Proposed development does not propose any exceptions to the standards*

**16.46.80 STATE HIGHWAY STANDARDS.**

A. Refer to the Motor Vehicle Chapter of the Transportation System Plan. ODOT regulates access to OR 99E. ODOT shall review and process applications for approaches to OR 99E consistent with Oregon Highway Plan standards and OAR 734.51 procedures. An ODOT permit to operate and maintain a State Highway Approach must be approved prior to site occupancy.

***Findings:*** *This criterion does not apply to this development. The Proposed development is not located along a state highway.*

**16.46.90 SHARED ACCESS ONTO STATE HIGHWAY.**

A. Subdivisions with frontage on the state highway system shall be designed into shared access points to and from the highway. Normally, a maximum of two accesses shall be allowed regardless of the number of lots or businesses served. If access off of a secondary street is possible, then access should not be allowed onto the state highway. If access off of a secondary street becomes available, then conversion to that access is encouraged, along with closing the state highway access.

B. New direct accesses to individual one- and two-family dwellings shall be prohibited on all state highways, unless doing so would deny reasonable access to an existing legal lot of record. (Ord 1043 section 3, 2000)

***Findings:*** *This criterion does not apply to this development. The Proposed development is not located along a state highway.*

## CHAPTER 16.49 SITE AND DESIGN REVIEW

***Findings:*** *This criterion does not apply to this development. The Proposed development lies within the I-O Overlay zone. All of the requirements of the I-O Overlay zone superseded the requirements of this section.*

## CHAPTER 16.50 CONDITIONAL USES

### 16.50.10 AUTHORIZATION TO GRANT OR DENY CONDITIONAL USES.

***Findings:*** *This criterion does not apply to this development. The Proposed development is an outright allowed use in the M-1 zone and the I-O overlay district. No Conditional Use applications are to be submitted with this development.*

## CHAPTER 16.89 APPLICATION AND REVIEW PROCEDURES

***Findings:*** *The proposed development meets or exceeds these Required Conditions. This application is for a Type III Decision. Pre-Application Conference, Neighborhood Meeting, and Public Notice requirements have all been met and correspondence included with this application as required.*

## CHAPTER 16.120 PARKS, OPEN SPACE, AND RECREATIONAL LAND

### 16.120.010 PURPOSE

The availability of park, open space, and recreation land is an important element in determining the character of a developing neighboring city to the metropolitan area, such as City of Canby. Land which substitutes trees, grass, and vegetation for structures, paving, and other urban features provides not only an aesthetically pleasing landscape with striking views of Mt. Hood, but also buffers incompatible uses, and preserves sensitive environmental features and important resources. Parks, open space, natural parks and trail recreation lands, together with support facilities, also help to meet the active and passive recreational needs of the population of Canby; therefore, concurrent development of support facilities is equally important. This chapter implements policies of Goal 8 of the Comprehensive Plan, the Park and Recreation Master Plan, and Park and Open Space Acquisition Plan by outlining provisions for parks, open space and recreational facilities in the City of Canby.

### 16.120.20 MINIMUM STANDARD FOR PARK, OPEN SPACE AND RECREATION LAND

A. Parkland Dedication: All new residential, commercial and industrial developments shall be required to provide park, open space and recreation sites to serve existing and future residents and employees of those developments. Multi-family developments which provide some “congregate” services and/or facilities, such as group transportation, dining halls,

emergency monitoring systems, etc., but which have individual dwelling units rather than sleeping quarters only, are considered to be multi- family developments for the purpose of parkland dedication. Licensed adult congregate living facilities, nursing homes, and all other similar facilities which provide their clients with individual beds and sleeping quarters, but in which all other care and service are communal and provided by facility employees, are specifically exempt from park land dedication and system development fee requirements.

1. The required parkland shall be dedicated as a condition of approval for:

    a. Approval of a tentative plat of a subdivision or partition.

***Findings:*** *This criterion does not apply to this development. The Proposed development does not include a tentative plat of a subdivision or partition.*

    b. Approval of site and design review for all development but single-family and duplex development.

***Findings:*** *The proposed development includes the implementation of a public plaza, but will pay the SDC for Parks, Open Space and Recreation Land if found to be required by the City.*

    c. The replat or amendment of any site plan for multi-family development or manufactured home park where dedication has not previously been made or where the density of the development involved will be increased.

***Findings:*** *This criterion does not apply to this development. The Proposed development does not include any multi-family or manufactured developments.*

2. The City shall require land dedication or payment of the system development charge (SDC) in lieu of land dedication (Section 4.20.170). In addition, the City may credit private on-site park, open space and recreation area(s) and facilities (Section 16.120.060). The City may approve any combination of these elements. Prior to parkland dedication, a Level I Environmental Assessment of the lands proposed for dedication shall be performed by the applicant as part of the site plan approval for the project.

***Findings:*** *This criterion does not apply to this development. The Proposed development does require any parkland dedication as part of the I-O overlay zone.*

## 16.120.30 DEDICATION PROCEDURES

***Findings:*** *This criterion does not apply to this development. The Proposed development does require any parkland dedication as part of the I-O overlay zone.*

## 16.120.40 CASH IN LIEU OF DEDICATION OF LAND

In no case shall land dedication requirements be in excess of 15 percent of the gross land area of the development without the agreement of the developer. The decision of whether land is acceptable for use by the public for park and recreation purposes is to be made by the City Planning Commission based on the findings and planning set forth in the Canby Park and Recreation Master Plan and Acquisition Plan. Formal acceptance of parks and recreation lands required to be dedicated shall be by the City Council following any land use hearing and recommendation by the City Planning Commission. In all cases, except for PUD's, actual dedication of land shall occur prior to final plat sign-off. Dedication of land in the case of a PUD shall occur, by separate instrument, prior to commencement of construction of the project.

If land proposed for dedication to the public does not meet the criteria set forth in the Canby Park and Open Space Acquisition Plan, then at the option of the city, a park system development charge shall be required. Once calculated, the dedication of land shall remain the same, and not change, unless the original plans are altered.

A. Procedures for Land Dedication. Development applications shall include a scaled plan which identifies the sites proposed to be dedicated as park land. Parkland and recreational sites shall be clearly and accurately depicted on the final plat map and documented in the tax lot files. All phased residential subdivisions and planned unit developments shall show any proposed parkland for dedication on the overall master plan plat for the proposed development in addition to other anticipated public facilities. Such master plan as finally approved and accepted by the Planning Commission is considered binding on all future phases. Any requests by the developer to change parkland dedication for future phases must be brought back to the Commission for approval. In case of phased development where separate plats are recorded, land dedication shall occur prior to final platting of forty percent of the gross land area.

   Tentative approval of parkland boundaries shall be made by the hearing body at the time of the public hearing on the development proposal. All sites shall be dedicated in a condition ready for full service including electrical, water, sewer and streets as is applicable to the location of the site or as necessary infrastructure and/or improvements to adjacent sites can be made at the discretion of the city. In case of phased development, sites may be improved as each phased is developed rather than at the time of original dedication. An environmental audit sufficient to meet DEQ requirements shall be required on all parkland proposed to be dedicated to the city prior to acceptance. The cost of such an audit shall be split equally between the city and the developer.

   All lands dedicated to the city for parkland and recreational space shall be conveyed to the city either by warranty deed or be depicted on the final recorded plat as so dedicated. The conveyor shall be responsible for payment of all title searches, real estate taxes, and recording fees at the time of conveyance.

B. Options for Meeting System Development Charge Requirements. Any land proposed or required for parkland dedication, including improvements thereon, shall be appraised at its

fair market value at the time it is dedicated to the city. The cost of the appraisal shall be divided equally between the developer and the city. This value of the property shall be credited toward the system development charge calculated for the development with the difference being the cash owed the System Development Improvement Fund. In no case may the city require more land of the developer than would be required if the entire amount of the system development charge was paid in cash. Similarly, no developer may dedicate parkland above the valuation required by the system development charge so that the city would be required to refund money to the developer unless mutually agreed upon by the city and developer.

If no parkland dedication is required or requested by the city, the full amount of the park system development charge will be assessed and is due and payable at the time the first building permit(s) is/are issued.

a. Cash charged in lieu of land dedication shall be based on the City's System Development Charge for parkland, as provided by the Systems Development Charge ordinance.

b. Cash in lieu of parkland dedication may be paid in installments on a per building basis for multi-family development or a per lot basis for platted single family or duplex subdivisions. Payment must be made in full for each building or lot in conjunction with construction permits.

***Findings:*** *The proposed development includes the implementation of a public plaza, but will pay the SDC for Parks, Open Space and Recreation Land if found to be required by the City.*

**16.120.050 REVIEW PROCEDURE**

Decisions made for section 16.120.020 Minimum standards for park, open space and recreation land and Section 16.120.030 Dedication procedures shall be made by the Planning Director for Type I and Type II decisions and by the Planning Commission for Type III decisions. The applicant shall have full rights of appeal to the Planning Commission or City Council according to procedures set forth in Division VIII General Standards and Procedures.

**16.120.60 PARTIAL CREDIT FOR PRIVATE PARK, OPEN SPACE AND RECREATIONAL FACILITIES/AREAS:**

Where a substantial private park and recreational area is provided in a proposed residential development and such space is to be privately owned and maintained by the future residents of the development, partial credit, not to exceed 50% may be given against the dedication if the Planning Commission finds that it is in the public interest to do so and that all the following standards are met:

1. That yards, court areas, and setbacks required to be maintained by the zoning and building ordinances and regulations shall not be included in the computation of such private parkland.

2. That the private ownership and maintenance of the parkland is adequately provided for by recorded written agreement, conveyance or restrictions.

3. That the use of the private parkland is restricted for park and recreational purposes by recorded covenant, which runs with the land in favor of the future owners of property and which cannot be defeated or eliminated without the consent of the City or its successor.

4. That the proposed private parkland is reasonably adaptable for use for park and recreational purposes, taking into consideration such factors as size, shape, topography, geology, access and location.

5. That facilities proposed for the parkland are in substantial accordance with the provision of the Canby Park and Recreation Master Plan and Canby Park and Open Space Acquisition Plan and,

6. That the parkland for which credit is given is a minimum of two acres and provides a minimum of three of the basic local park elements listed below, or a combination of such and other recreational improvements that will meet the specific recreation park needs of the future residents of the area:

| **CRITERIA LIST** | **ACRES** |
|---|---|
| Children's play apparatus area | .50 - .75 |
| Landscaped park-like and quiet areas | .50 - 1.00 |
| Family picnic area | .25 - .75 |
| Game court area | .25 - .50 |
| Turf play field | 1.00 - 3.00 |
| Recreation center building | .15 - .25 |
| Swimming pool (42' x 75') w/adjacent deck and lawn area | .25 - .50 |
| Recreation and community gardening | .15 - .25 |

Before credit is given, the Planning Commission shall make written findings that the above standards are met.

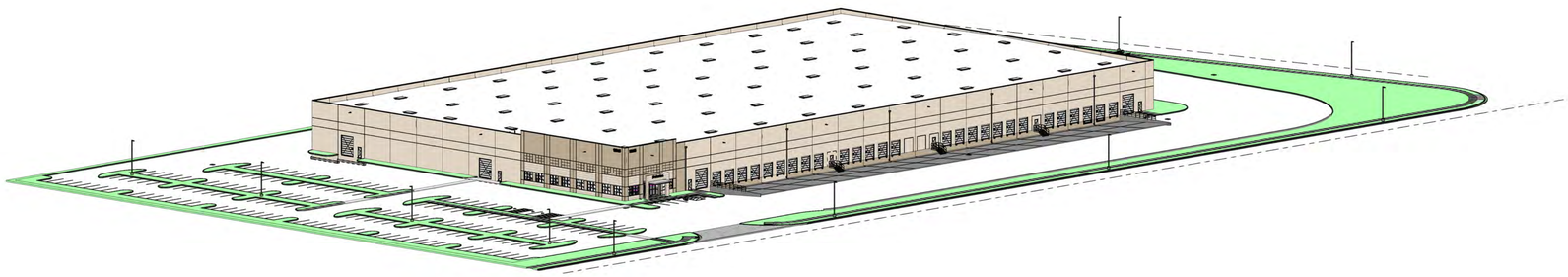
***Findings:*** *The proposed development includes the implementation of a public plaza, but will pay the SDC for Parks, Open Space and Recreation Land if found to be required by the City.*

EXHIBIT C

# STANTON FURNITURE

## MANUFACTURING & DISTRIBUTION WAREHOUSE

S. MULINO ROAD CANBY, OR



PROJECT AERIAL ISOMETRIC

PROJECT DIRECTORY:

**Owner:**
Stanton/Pacific Furniture
21249 SW 115th Ave.
Tualatin, OR 97062
Contact: Nathan Hagglund, Brad Rehm
Phone: 503.597.5295
Email: hagglund@gmail.com
Email: brad@pacificfurnitureindustries.com

**Jurisdiction:**
Canby, Oregon
222 Northeast 2nd Ave.
Canby, Oregon 97013
Phone: 503.266.7001
Contact: Bryan Brown
Email: BrownB@canbyoregon.gov

**Site Surveyor:**
Northwest Surveying, Inc.
1815 NW 169th Place, Suite 2090
Beaverton, OR 97006
Contact: Clint Stubbs
Phone: 503.848.2127
Email: nwsurvehying@nwsrvy.com

**Engineer:**
VLMK Engineering + Design
3933 SW Kelley Ave.
Portland, Oregon 97239
Contact: Colby Anderson
Phone: 503.222.4453
Email: colbya@vlmk.com

**Geotechnical Engineer:**
GeoDesign, Inc.
9450 SW Commerce Circle, Suite 300
Wilsonville, OR 97070
Contact: Shawn Dimke, PE, GE
Phone: 503.968.8787

**Landscape Architect:**
Otten Landscape Architects
3933 SW Kelley Ave.
Portland, Oregon 97239
Contact: Erin Holsenbeck
Phone: 503.972.0311
Email: erin@ottenla.com


VICINITY MAP

AREA SUMMARY:

| Description | Area | | | |
|---|---|---|---|---|
| Overall Site | 692,456 | sqft | 15.90 | Acres |
| ROW Dedication | 39,487 | sqft | 0.91 | Acres |
| Site After Dedication | 652,969 | sqft | 14.99 | Acres |
| Development Area | 489,968 | sqft | 11.25 | Acres |
| Building Roofline | 167,481 | sqft | 34.18% | |
| Total Landscaping | 73,713 | sqft | 15.04% | 73,495 |
| Sidewalks | 9,903 | sqft | 2.02% | |
| Concrete Aprons | 29,248 | sqft | 5.97% | |
| AC Paving | 209,623 | sqft | 42.78% | |
| (Onsite) Total Impervious | 416,255 | sqft | 84.96% | |
| Parking Spaces | 196 | SP | | |
| Parking Area | 49,927 | sqft | | |
| Parking Lot Landscaping | 17,340 | sqft | 25.8% | (Parking Lot Landscaping) |

USE/OCCUPANCY SUMMARY:

| Name | Area | | Zoning Use | Occupancy Classification |
|---|---|---|---|---|
| Warehouse | 160,885 | sqft | F-1 | Manufacturing |
| Ground-Floor Office | 6,596 | sqft | Office | B Business |
| Total Ground Floor Area | 167,481 | sqft | | |
| Second-Floor Storage | 6,596 | sqft | Storage | S-1 Moderate Hazard Storage |
| Total Building Area | 174,077 | sqft | | |
| Canopies | 5,498 | sqft | | |
| Trash Enclosure | - | sqft | | |
| Total Fire Area | 179,575 | sqft | | |

Note: All areas are speculative, Actual uses will be addressed during the TI submittal.

PLANNING AND ZONING SUMMARY

| | |
|---|---|
| JURISDICTION: | CITY OF CANBY, OREGON |
| LAND USE ZONE: | M-1 (LIGHT INDUSTRIAL) (I O) OVERLAY |
| CONSTRUCTION TYPE: | III-B |
| NEIGHBORHOOD: | SEQUOIA INDUSTRIAL PARK |
| LEGAL DESCRIPTION: | |
| TAX ACCOUNT/PARCEL NUMBER: | 31E34 03100 |
| STREET ADDRESS AND CROSS STREETS: | SE 4th Avenue & S. Mulino Road |
| SITE AREA: | 15.90 Acres |
| WETLANDS: | N/A |
| FLOODPLAIN: | N/A |
| OTHER: | |

PERMITS

| DESCRIPTION | PERMIT/APP. NO. | SUBMITED | RE-SUBMIT | APPROVED |
|---|---|---|---|---|
| DESIGN REVIEW | | 12/6/19 | | |

DEFERRED SUBMITAL (BIDDER DESIGN)

| |
|---|
| MECHANICAL |
| ELECTRICAL |
| PLUMBING |
| STOREFRONT SYSTEMS |
| LANDSCAPE IRRIGATION |
| FIRE PROTECTION SYSTEMS |
| OPEN WEB STEEL JOISTS AND GIRDERS |
| CHAIN LINK FENCING EXCEEDING 6'-0" IN HEIGHT |

NOTES:

SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD, AFTER REVIEW AND SUBJECT TO BEING IN GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS, THE ENGINEER WILL RETURN THE SUBMITTAL TO THE CONTRACTOR. THE CONTRACTOR SHALL THEN FORWARD THE SUBMITTAL TO THE BUILDING DEPARTMENT. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

SCHEDULE OF DRAWINGS

| SHEET | DRAWING NAME | DESCRIPTION OF SET | DESIGN REVIEW SUBMITTAL | PRICING SET | REVISED DESIGN REVIEW SUBMITTAL | * | * | * |
|---|---|---|---|---|---|---|---|---|
| | | DATE | 6-Dec-2019 | 13-Dec-2019 | 16-Jan-2020 | | | |
| GENERAL | | | | | | | | |
| G0.0 | COVER SHEET | | N | R | R | | | |
| G1.0 | SITE PLAN | | N | R | R | | | |
| G3.0 | SITE DETAILS | | | N | | | | |
| G3.1 | SITE DETAILS | | | N | | | | |
| G3.2 | SITE DETAILS | | | | | | | |
| G3.3 | ADA PARKING DETAILS | | | | | | | |
| CIVIL | | | | | | | | |
| C1.0 | SITE GRADING OVERALL PLAN | | N | X | R | | | |
| C1.1 | SITE GRADING NW ENLARGEMENT | | | | | | | |
| C1.2 | SITE GRADING NE ENLARGEMENT | | | | | | | |
| C1.3 | SITE GRADING SE ENLARGEMENT | | | | | | | |
| C1.4 | SITE GRADING SW ENLARGEMENT | | | | | | | |
| C1.5 | GRADING DETAILS | | | | | | | |
| C2.0 | SITE UTILITY OVERALL PLAN | | N | X | R | | | |
| C2.1 | SITE UTILITY NW ENLARGEMENT | | | | | | | |
| C2.2 | SITE UTILITY NE ENLARGEMENT | | | | | | | |
| C2.3 | SITE UTILITY SE ENLARGEMENT | | | | | | | |
| C2.4 | SITE UTILITY SW ENLARGEMENT | | | | | | | |
| C2.5 | UTILITY DETAILS | | | | | | | |
| C2.6 | UTILITY DETAILS | | | | | | | |
| C3.0 | EROSION AND SEDIMENT CONTROL COVER | | | | | | | |
| C3.1 | EXISTING CONDITIONS DEMO PLAN | | | | | | | |
| C3.2 | EROSION AND SEDIMENT CONTROL PLAN | | | | | | | |
| C3.3 | EROSION AND SEDIMENT CONTROL DETAILS | | | | | | | |
| SURVEY | | | | | | | | |
| 1 OF 1 | TOPOGRAPHIC SURVEY | | | | | | | |
| LANDSCAPING | | | | | | | | |
| L1.0 | LANDSCAPE PLAN | | N | R | R | | | |
| L2.0 | DETAILS AND SPECS | | N | R | R | | | |
| ARCHITECTURAL | | | | | | | | |
| A0.1 | NOTES AND INFORMATION | | | N | | | | |
| A1.0 | FLOOR PLAN | | | N | | | | |
| A1.1 | ENLARGED FIRST FLOOR PLAN | | | N | | | | |
| A1.2 | ENLARGED SECOND FLOOR PLAN | | | N | | | | |
| A2.0 | BUILDING ELEVATIONS | | N | R | R | | | |
| A3.0 | BUILDING SECTIONS | | | | | | | |
| A3.1 | WALL SECTIONS | | | | | | | |
| A3.2 | WALL SECTIONS | | | | | | | |
| A4.0 | DOOR DETAILS | | | N | | | | |
| A4.1 | WINDOW DETAILS | | | N | | | | |
| A5.0 | ROOF PLAN AND DETAILS | | | N | | | | |
| A5.1 | ROOF DETAILS | | | N | | | | |
| A6.0 | REFLECTED CEILING PLAN | | | | | | | |
| A7.0 | ARCHITECTURAL DETAILS | | | | | | | |
| A8.0 | SPECIFICATIONS | | | N | | | | |
| A8.1 | SPECIFICATIONS | | | N | | | | |
| A8.2 | SPECIFICATIONS | | | N | | | | |
| A8.3 | SPECIFICATIONS | | | N | | | | |
| STRUCTURAL | | | | | | | | |
| S1.0 | FOUNDATION PLAN | | | N | | | | |
| S1.1 | FOUNDATION PLAN SW CORNER | | | N | | | | |
| S1.2 | FOUNDATION PLAN NW CORNER | | | N | | | | |
| S1.3 | FOUNDATION PLAN NE CORNER | | | N | | | | |
| S1.4 | FOUNDATION PLAN SE CORNER | | | N | | | | |
| S2.0 | FOUNDATION DETAILS | | | N | | | | |
| S2.1 | FOUNDATION DETAILS | | | N | | | | |
| S3.0 | ROOF FRAMING PLAN | | | N | | | | |
| S3.1 | ROOF FRAMING PLAN SW CORNER | | | N | | | | |
| S3.2 | ROOF FRAMING PLAN NW CORNER | | | N | | | | |
| S3.3 | ROOF FRAMING PLAN SE CORNER | | | N | | | | |
| S3.4 | ROOF FRAMING PLAN NE CORNER | | | N | | | | |
| S4.0 | ROOF FRAMING DETAILS | | | N | | | | |
| S4.1 | ROOF FRAMING DETAILS | | | N | | | | |
| S5.0 | TILT WALL PANEL ELEVATIONS | | | N | | | | |
| S6.0 | TILT WALL PANEL TYPES | | | N | | | | |
| MEP | | | | | | | | |
| LT1.0 | PRELIMINARY SITE PHOTOMETRIC PLAN | | | | N | | | |
| | | TOTAL | 7 | 37 | 8 | | | |

LEGEND

| | |
|---|---|
| N | FIRST RELEASE DRAWING<br>NOT ISSUED WITH SET |
| X | RE-ISSUED WITH NO CHANGES |
| R | REVISED DRAWING |
| D | DELETED DRAWING (NOT SHOWN) |

| | |
|---|---|
| PROGRESS SET | |
| PRICING SET | |
| DESIGN REVIEW INTAKE SET | X |
| PERMIT INTAKE SET | |
| CONSTRUCTION SET | |

**VLMK**
ENGINEERING + DESIGN
3933 SW Kelly Avenue
Portland, Oregon 97239
503.222.4453
**VLMK.COM**

PROJECT NAME
STANTON FURNITURE
MANUFACTURING & DISTRIBUTION WAREHOUSE
S. MULINO ROAD CANBY, OR

SITE DESIGN REVIEW

REVISIONS

| | DATE | DESCRIPTION |
|---|---|---|

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION

DATE 1/3/2020

| SCALE | PROJ. NO. |
|---|---|
| AS NOTED | 20190255 |
| DRAWN: CGA | CHECKED: JCS |

COVER SHEET

G0.0

1/17/2020 9:11:13 AM

## PAVEMENT SECTIONS (NON AMENDED SOIL):

(BASED ON 20 YEAR DESIGN LIFE FROM GEO REPORT, DATED --/--/--)

1. CAR PARKING AND AISLE - ---" A.C. PAVING OVER --" CRUSHED ROCK OVER COMPACTED SUBGRADE.
2. MODERATE TRUCK MANEUVERING - ---" A.C. PAVING OVER --" CRUSHED ROCK OVER COMPACTED SUBGRADE.
3. HEAVY TRUCK MANEUVERING - ---" A.C. PAVING OVER --" CRUSHED ROCK OVER COMPACTED SUBGRADE.

## PAVEMENT SECTIONS (NON AMENDED SOIL):

(BASED ON 20 YEAR DESIGN LIFE FROM GEO REPORT, DATED --/--/--)

1. CAR PARKING AND AISLE - ---" A.C. PAVING OVER --" CRUSHED ROCK OVER 12" AMENDED SUBGRADE WITH 5% CEMENT.
2. MODERATE TRUCK MANEUVERING - ---" A.C. PAVING OVER --" CRUSHED ROCK OVER 12" AMENDED SUBGRADE WITH 5% CEMENT.
3. HEAVY TRUCK MANEUVERING - ---" A.C. PAVING OVER --" CRUSHED ROCK OVER 12" AMENDED SUBGRADE WITH 5% CEMENT.

## SITE PLANNING SYMBOLS

- ASPHALT PAVING AS NOTED THIS SHEET
- LANDSCAPED AREA - SEE SHEET L1.0
- 6.08' CONTROL DIMENSION
- 6.0' HIGH CHAIN LINK FENCE WITH GATES AS SHOWN (SEE SPECIFICATIONS)
- DISABLED PARKING STALL. 9.0' STALL WITH 6.0' STRIPED SIDE ACCESS. PROVIDE CODE APPROVED SIGN AT EACH STALL SEE STANDARD DETAIL AT SITE DETAIL SHEET.
- (#) NUMBER OF STANDARD PARKING STALLS 9.0' X 18.0'
- TRANSFORMER
- LIGHT POLE
- WALL MOUNTED LIGHT
- D.S. DOWNSPOUT

## GENERAL NOTES

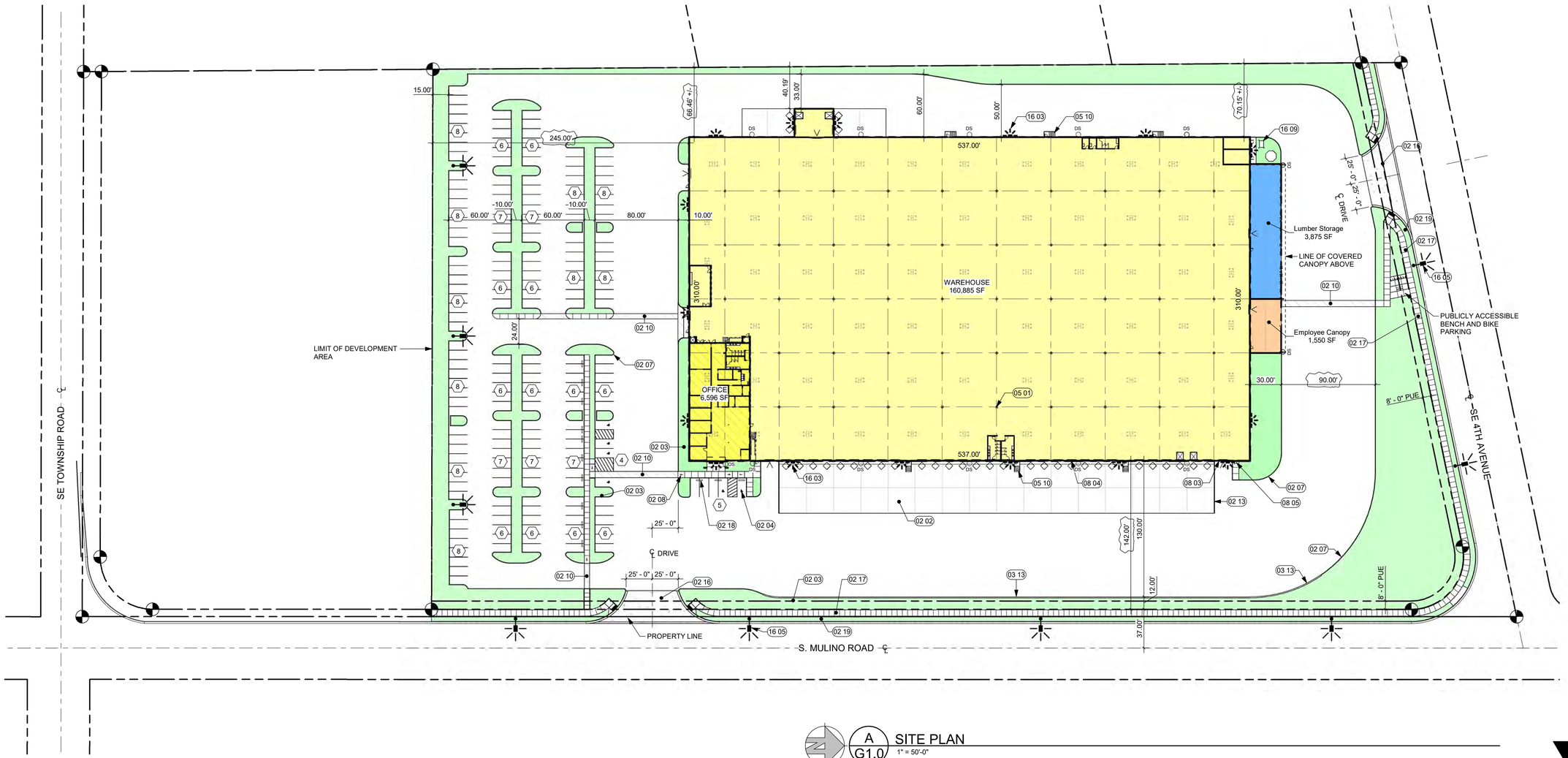
1. PROPERTY LINE BEARINGS AND DISTANCES AS WELL AS SITE AREA CALCULATIONS ARE PROVIDED FOR ZONING AND PERMIT REVIEW ONLY. REAL PROPERTY LEGAL DESCRIPTIONS AND AREA CALCULATIONS ARE TO BE PROVIDED BY A REGISTERED PROFESSIONAL SURVEYOR.
2. THIS PROJECT IS DESIGNED AS A "SHELL" BUILDING AND WILL ADDRESS THE FOLLOWING ITEMS WITH THE TENANT IMPROVEMENT PERMIT SUBMITTAL:
   - A. INTERIOR BIKE RACKS (IF REQUIRED).
   - B. CURTAIN BOARDS (IF REQUIRED) DUE TO THE USE OF DEMISING WALLS.
   - C. ENERGY CODE COMPLIANCE FORMS PER EACH TENANT.
   - D. EGRESS PATH AND LIGHTING PER EACH TENANT.
   - E. RACK PERMITS AND HIGH PILE STORAGE REQUIREMENTS PER EACH TENANT.

## KEYNOTE LEGEND

| | |
|---|---|
| 02 02 | LOADING DOCK CONCRETE SLAB. 7" THICK UNREINFORCED CONCRETE OVER 6 INCHES COMPACTED CRUSHED ROCK OVER COMPACTED SUBGRADE. |
| 02 03 | LANDSCAPE PLANTER, SEE LANDSCAPING PLANS. |
| 02 04 | ADA ACCESSIBLE PARKING SPACE WITH SIGNAGE. SEE SITE DETAIL SHEET. |
| 02 07 | EXTRUDED CONCRETE CURB. LOCATE AROUND ALL LANDSCAPE AREAS AS SHOWN (U.N.O.). 5.0' TYPICAL CURB RADIUS AT CORNERS (U.N.O.). SEE SITE DETAIL SHEET. |
| 02 08 | SIDEWALK RAMP. 1:12 MAXIMUM SLOPE. PROVIDE CODE APPROVED DETECTABLE WARNING, SEE SITE DETAIL SHEET. |
| 02 10 | PEDESTRIAN EGRESS PATHWAY WITH THERMOPLASTIC STRIPING. VERIFY COLOR WITH OWNER AND JURISDICTION. |
| 02 13 | LOADING DOCK RETAINING WALL WITH GUARDRAIL - SEE SITE DETAIL SHEET. |
| 02 15 | 6.0' HIGH CHAIN LINK FENCE WITH BARBED WIRE ABOVE - SEE SITE DETAIL SHEET AND SPECIFICATIONS. |
| 02 16 | NEW CONCRETE DRIVEWAY - PUBLIC RIGHT-OF-WAY STANDARD SEE PUBLIC WORKS DRAWINGS. |
| 02 17 | NEW PUBLIC SIDEWALK - PUBLIC STANDARD PER PUBLIC WORKS DRAWINGS. |
| 02 18 | 6" CONCRETE WHEEL STOP - SEE SITE DETAIL SHEET |
| 02 19 | NEW PUBLIC LANDSCAPING STRIP - SEE PUBLIC WORKS DRAWINGS |
| 03 03 | CONCRETE TILT-UP PANELS TYPICAL ON ALL SIDES. SEE STRUCTURAL FOR THICKNESS AND DETAILS. |
| 03 13 | BIDDER DESIGNED RETAINING WALL. SEE SITE PLANS FOR ADDITIONAL INFORMATION |
| 05 01 | STEEL BUILDING COLUMN PER STRUCTURAL |
| 05 02 | METAL CAP FLASHING TYPICAL AT PARAPET ON ALL SIDES. SEE SITE DETAIL SHEET |
| 05 04 | CANOPY PER PLANS AND DETAILS, SEE STRUCTURAL FOR MORE INFORMATION |
| 05 08 | DOWNSPOUTS - 6" DIA. TYP. (U.N.O.) - SEE ROOF PLAN DETAILS. ALSO SEE SITE UTILITY PLAN FOR STORM TIE IN. |

## KEYNOTE LEGEND

| | |
|---|---|
| 05 10 | STAIRS AND LANDING TO BE BIDDER DESIGN. CONCRETE TREAD WITH METAL PAN AND RISER, TYPICAL. |
| 05 16 | STEEL SHED ROOF CANOPY PER PLAN, SEE STRUCTURAL |
| 08 03 | OVERHEAD DOOR AT GRADE LEVEL PER DOOR SCHEDULE. |
| 08 04 | OVERHEAD DOORS AT DOCK LEVEL PER DOOR SCHEDULE. |
| 08 05 | EXTERIOR MAN DOOR PER DOOR SCHEDULE. |
| 08 07 | ALUMINUM STOREFRONT WINDOWS PER DETAILS AND SPECIFICATIONS. |
| 08 08 | ALUM. STOREFRONT VESTIBULE AT MAIN ENTRY PER ENERGY CODE. |
| 10 04 | BUILDING SIGN, BY OTHERS (DEFERRED SUBMITTAL) |
| 16 03 | WALL LIGHT - PER ELECTRICAL (BIDDER DESIGN). |
| 16 05 | POLE MOUNTED SITE LIGHTING. BIDDER DESIGN, DEFERRED SUBMITTAL |
| 16 09 | TRANSFORMER PAD AND BOLLARDS - COORDINATE WITH ELECTRICAL (BIDDER DESIGN). |




A G1.0 SITE PLAN
1" = 50'-0"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503.222.4453
VLMK.COM


PROJECT NAME

STANTON FURNITURE
MANUFACTURING & DISTRIBUTION WAREHOUSE

S. MULINO ROAD
CANBY, OR

PRELIMINARY PRICING SET

REVISIONS

| | DATE | DESCRIPTION |
|---|---|---|

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION

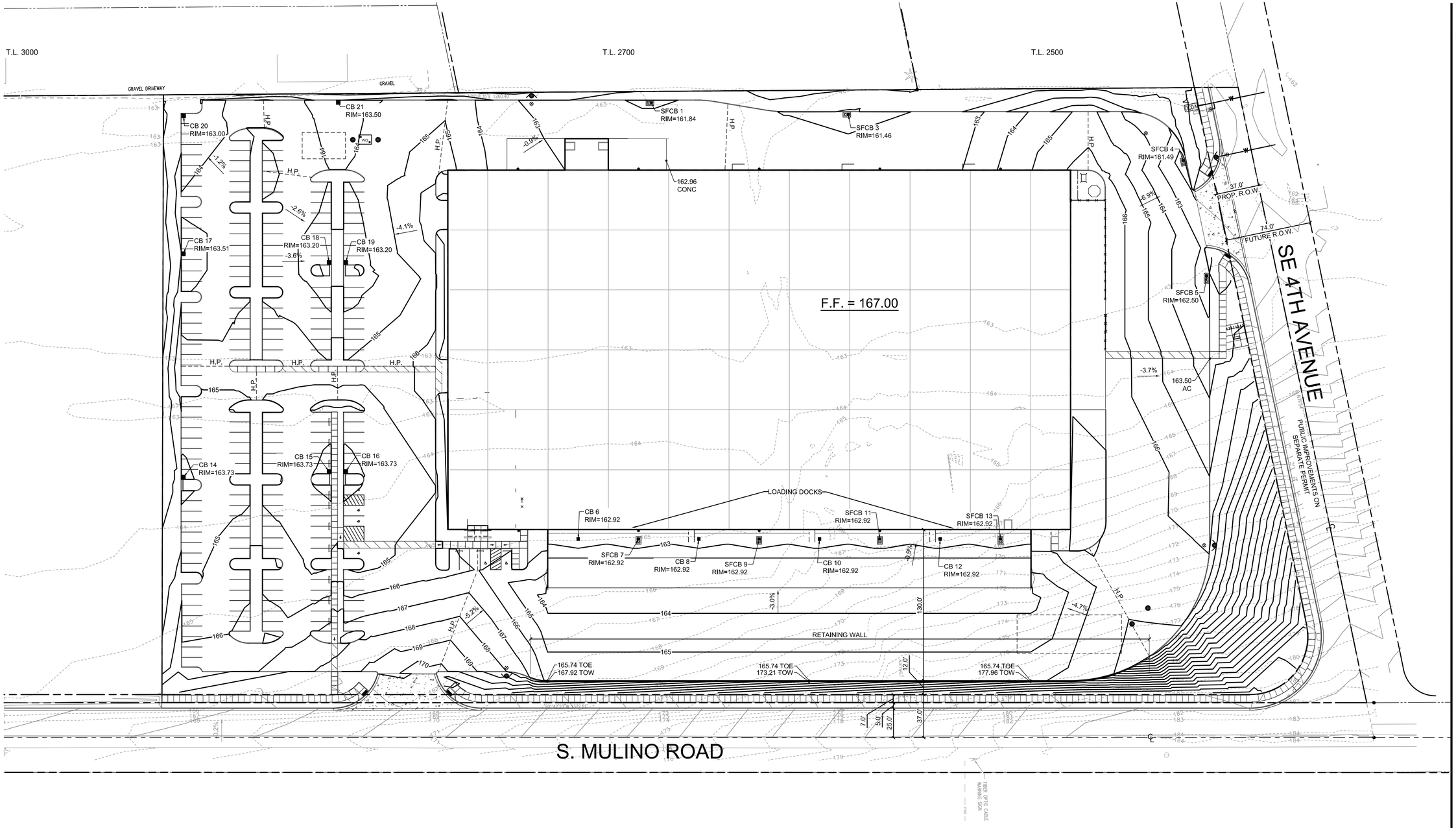
DATE 1/3/2020

| SCALE | PROJ. NO. |
|---|---|
| AS NOTED | 20190255 |
| DRAWN CGA | CHECKED JCS |

SITE PLAN

G1.0

1/14/2020 6:45:00 AM




## SITE GRADING PLAN

1" = 40'

40 0 40 80 120

## AS-BUILT NOTE:

CONTRACTOR SHALL PROVIDE A TOPOGRAPHIC AS-BUILT SURVEY TO INCLUDE ALL INFILTRATION PONDS AT FINISH GRADE, AND ALL UTILITY RIMS, AND ALL CATCH BASIN/FIELD INLET INVERT ELEVATIONS ON THE SITE.

## SITE INFORMATION

SURVEY INFORMATION FROM BOUNDARY & TOPOGRAPHIC SURVEY FROM TOPOGRAPHIC SURVEY OF LOT 300, 301, AND 303. LOCATED IN SE 1/4 SEC. 34, T.3S., R.1E., W.M, CITY OF CANBY, CLACKAMAS COUNTY, OREGON, PROVIDED BY: NORTHWEST SURVEYING INC. (ADDRESS: 1815 NW 169TH PL. BEAVERTON, OR 97006, PHONE: 503-848-2179)

BENCHMARK:
THE HORIZONTAL BASIS OF BEARINGS IS THE OREGON STATE PLANE COORDINATE SYSTEM (NORTH ZONE) NAD 83/91. ELEVATIONS ARE GPS DERIVED ON THE NAVD 1988 VERTICAL DATUM

## GENERAL SYMBOLS

| EXISTING | NEW | |
|---|---|---|
| ▩ | ■ | CATCH BASIN (CB) -OR- AREA DRAIN (AD) |
| ◎ | ● | MANHOLE (MH) |
| ○ | ● | UTILITY POLE |
| ◇ | ◆ | FIRE HYDRANT (FH) |
| M | M | METER |
| V | V | UTILITY VAULT |
| T | T | TRANSFORMER AND PAD |
| TRAN | TRAN | TRANSFORMER |
| ⊗ | ⊗ | VALVE BOX COVER |
| ⊠ | ⊠ | POST INDICATOR VALVE |
| ☼ | ☼ | LIGHT POLE |
| ☼ | ☼ | WALL MOUNTED LIGHT |
| ⊀ | ⊀ | FIRE DEPARTMENT CONNECTION (FDC) |
| ⋈ | ⋈ | GATE VALVE |
| ⋈ | ⋈ | CHECK VALVE |
| C.O. | C.O. | CLEAN OUT (CO) |

## GRADING SYMBOLS

| | |
|---|---|
| 140 | EXISTING CONTOUR LINE |
| 144 | NEW CONTOUR LINE |
| 142.84 EG | EXISTING SPOT ELEVATION |
| 143.40 FG | NEW SPOT ELEVATION PROVIDE STAKE. |

| | |
|---|---|
| EL | ELEVATION |
| B.M. | BENCH MARK |
| TC | TOP OF CURB |
| BC | BOTTOM OF CURB |
| MH | MANHOLE |
| CB | CATCH BASIN |
| AC | ASPHALT CONCRETE |
| AD | AREA DRAIN |
| H.P. | HIGH POINT |
| GB | GRADE BREAK |
| T.O.W. | TOP OF WALL |
| EXTG | EXISTING |

## ABBREVIATIONS

| | |
|---|---|
| EL | ELEVATION |
| B.M. | BENCH MARK |
| TC | TOP OF CURB |
| BC | BOTTOM OF CURB |
| MH | MANHOLE |
| CB | CATCH BASIN |
| AC | ASPHALT CONCRETE |
| AD | AREA DRAIN |
| H.P. | HIGH POINT |
| GB | GRADE BREAK |
| T.O.W. | TOP OF WALL |
| T.O.E. | TOE OF WALL |
| EXTG | EXISTING |
| CE | CURB EXPOSURE |
| SF | STORMFILTER |
| CONC | CONCRETE |
| TYP. | TYPICAL |
| FG | FINISHED GRADE |
| EG | EXISTING GRADE |

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PROJECT NAME
STANTON FURNITURE

CANBY, OREGON

REVISIONS

| | DATE | DESCRIPTION |
|---|---|---|
| | | |

DATE
DECEMBER, 2019

| SCALE | PROJ. NO. |
|---|---|
| AS NOTED | 20190255 |
| DRAWN | CHECKED |
| AOC | BMD |

PRELIMINARY SITE GRADING PLAN

C1.0

G:\Acad\2019\20190255\Drawings\100 C1.0 Site Grading Plan.dwg 1/15/2020 5:22 PM

T.L. 3000

T.L. 2700

T.L. 2500

UNDERGROUND STORMTECH STORMWATER RETENTION FACILITY WITH 14 STORMTECH MC-4500 STORMTECH CHAMBERS

CB 21 RIM=163.50

PRIVATE FIRE HYDRANT

SFCB 1 RIM=161.84

SFCB 3 RIM=161.46

2"DW 10"FW 4" FDC

2" DOMESTIC METER AND DC ASSY 8" DCDA ASSY 4" FDC

WATER SERVICE CONNECTION. PUBLIC WATER LINE TO BE INSTALLED UNDER SEPARATE PERMIT

CB 20 RIM=163.00

SUMP MH

WATER QUALITY TREATMENT VAULT

PUBLIC HYDRANT

37.0' PROP. R.O.W.

SFCB 4 RIM=161.49

74.0' FUTURE R.O.W.

SE 4TH AVENUE

ROOF DOWNSPOUT

STUB WATER SERVICES FOR BUILDING SERVICE CONNECTION 2" DW, 8"FW, 4" FDC

STUB SANITARY FOR BUILDING SERVICE CONNECTION 8"IE 157.55

SFCB 5 RIM=162.50

SANITARY SERVICE CONNECTION. PUBLIC SANITARY LINE TO BE INSTALLED UNDER SEPARATE PERMIT

8" SAN S = 0.010

CB 17 RIM=163.51

CB 18 RIM=163.20

CB 19 RIM=163.20

F.F. = 167.00

CB 14 RIM=163.73

CB 15 RIM=163.73

CB 16 RIM=163.73

CB 6 RIM=162.92

SFCB 7 RIM=162.92

CB 8 RIM=162.92

SFCB 9 RIM=162.92

CB 10 RIM=162.92

SFCB 11 RIM=162.92

CB 12 RIM=162.92

SFCB 13 RIM=162.92

PRIVATE FIRE HYDRANT

PUBLIC IMPROVEMENTS ON SEPARATE PERMIT

UNDERGROUND STORMTECH STORMWATER RETENTION FACILITY WITH 60 STORMTECH MC-4500 STORMTECH CHAMBERS

SUMP MANHOLE

ACCESS MANHOLE

PRIVATE FIRE HYDRANT

37.0'

S. MULINO ROAD

FIBER OPTIC CABLE WARNING SIGN

STORMWATER NARRATIVE:
WATER QUALITY TREATMENT OF RUNOFF FROM PAVED SURFACES WILL BE PROVIDED UTILIZING WATER QUALITY FILTER VAULTS AND CATCH BASINS PRIOR TO DISCHARGE INTO UNDERGROUND RETENTION SYSTEMS.

TREATED STORMWATER WILL BE INFILTRATED ONSITE UTILIZING TWO UNDERGROUND STORMTECH RETENTION FACILITIES LOCATED AT THE NORTHEAST AND SOUTHWEST CORNERS OF THE SITE.

THESE FACILITIES WILL BE REGISTERED WITH THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITYS "UNDERGROUND INJECTION CONTROL" (UIC) PROGRAM AS PART OF THE PERMIT APPROVAL PROCESS.

## SITE UTILITY PLAN

1" = 40'

40 0 40 80 120

## SITE INFORMATION

SURVEY INFORMATION FROM BOUNDARY & TOPOGRAPHIC SURVEY FROM TOPOGRAPHIC SURVEY OF LOT 300, 301, AND 303. LOCATED IN SE 1/4 SEC. 34, T.3S., R.1E., W.M, CITY OF CANBY, CLACKAMAS COUNTY, OREGON. PROVIDED BY: NORTHWEST SURVEYING INC. (ADDRESS: 1815 NW 169TH PL. BEAVERTON, OR 97006, PHONE: 503-848-2179)

BENCHMARK:
THE HORIZONTAL BASIS OF BEARINGS IS THE OREGON STATE PLANE COORDINATE SYSTEM (NORTH ZONE) NAD 83/91. ELEVATIONS ARE GPS DERIVED ON THE NAVD 1988 VERTICAL DATUM

## GENERAL SYMBOLS

| EXISTING | NEW. | |
|---|---|---|
| | ■ | CATCH BASIN (CB) -OR- AREA DRAIN (AD) |
| | ● | MANHOLE (MH) |
| | ● | UTILITY POLE |
| | ◆ | FIRE HYDRANT (FH) |
| M | M | METER |
| V | V | UTILITY VAULT |
| T | T | TRANSFORMER AND PAD |
| TRAN | TRAN | TRANSFORMER |
| | ⊗ | VALVE BOX COVER |
| | ⊠ | POST INDICATOR VALVE |
| | ✳ | LIGHT POLE |
| | ✳ | WALL MOUNTED LIGHT |
| | ⋁ | FIRE DEPARTMENT CONNECTION (FDC) |
| | ⋈ | GATE VALVE |
| | N | CHECK VALVE |
| C.O. | C.O. | CLEAN OUT (CO) |

## UTILITY SYMBOLS

| | |
|---|---|
| SA | SANITARY - EXISTING |
| SA | SANITARY - NEW |
| ST | STORM - EXIST |
| ST | STORM - NEW |
| G | GAS - EXISTING |
| G | GAS - NEW |
| T | TELEPHONE - EXISTING |
| T | TELEPHONE - NEW |
| E | ELECTRICAL - EXISTING |
| E | ELECTRICAL - NEW |
| W | WATER - EXISTING |
| W | WATER - NEW |
| DW | DOMESTIC WATER - NEW |
| FW | FIRE WATER - NEW |
| FDC | FDC SERVICE LINE - NEW |
| IE | INVERT ELEVATION |
| C.O. | CLEAN OUT |
| MH | MANHOLE |
| CB | CATCH BASIN |
| AD | AREA DRAIN |
| EXTG | EXISTING |


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Portland, Oregon 97239
503.222.4453
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PROJECT NAME
STANTON FURNITURE

CANBY, OREGON

REVISIONS

| | DATE | DESCRIPTION |
|---|---|---|
| | | |

DATE DECEMBER, 2019

| SCALE | PROJ. NO. |
|---|---|
| AS NOTED | 20190255 |
| DRAWN | CHECKED |
| AOC | BMD |

PRELIMINARY SITE UTILITY PLAN

C2.0

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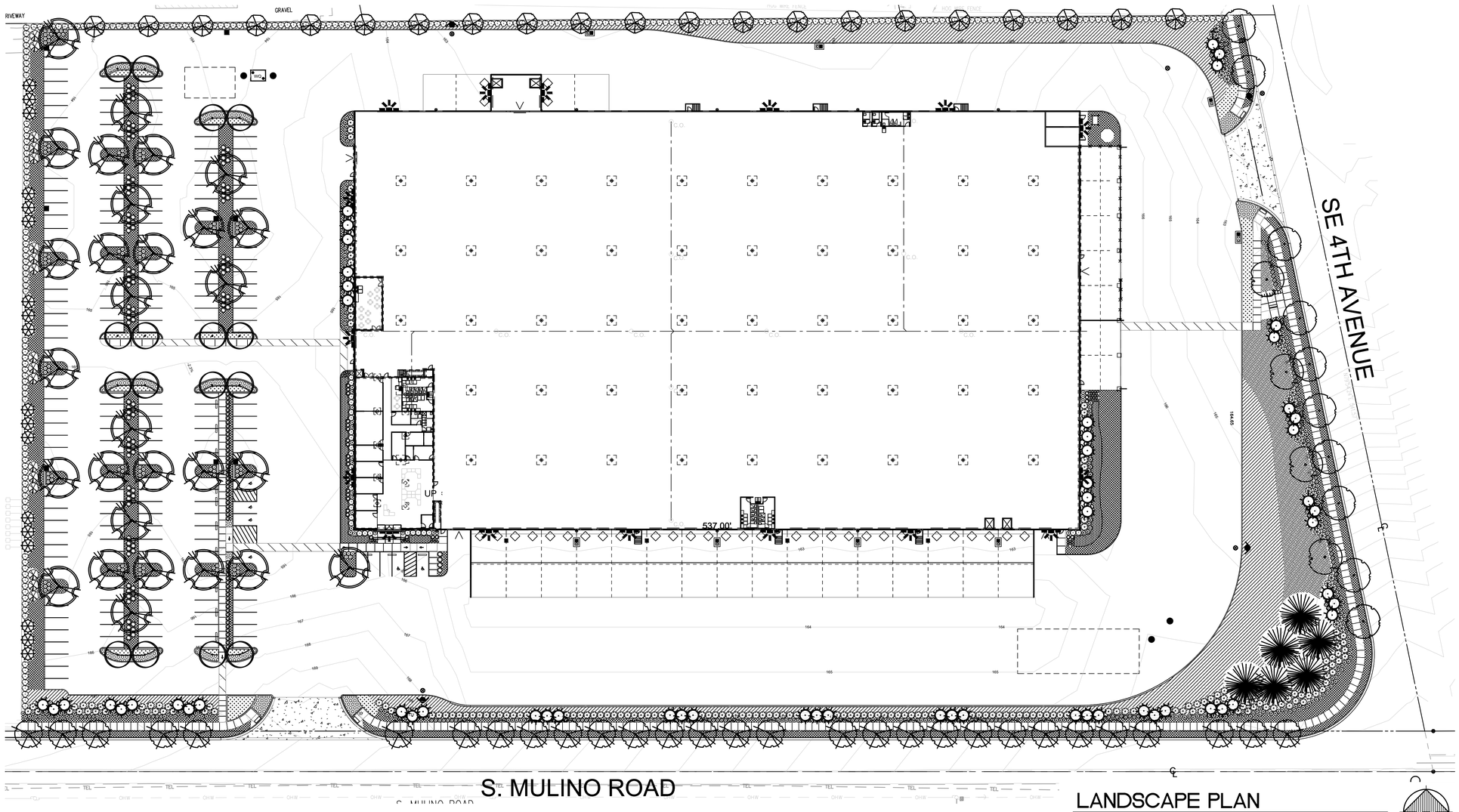



## LANDSCAPE PLAN

SCALE 1" = 40'-0"

PLANT LIST: GENERAL LANDSCAPING

| SYMBOL | # | LATIN/COMMON NAME TREES | SIZE | SPACING |
|---|---|---|---|---|
| | | **TREES** | | |
| | 11 | ACER TRUNCATUM 'WARRENRED'<br>Pacific Sunset Maple | 2" cal. | As shown |
| | 59 | CUPRESSOCYPARIS LEYLANDII 'MONCAL'<br>Emerald Isle Leyland Cypress | 7-8' ht. | As shown |
| | 21 | CARPINUS BETULUS 'FRANS FONTAINE'<br>Frans Fontaine Hornbeam | 2" cal. | As shown |
| | 4 | PRUNUS YEDOENSIS "AKEBONO"<br>Akebono Flowering Cherry | 2" cal. | As shown |
| | 29 | SYRINGA RETICULATA<br>Japanese Tree Lilac | 2" cal. | As shown |
| | 16 | PARROTIA PERSICA<br>Persian Ironwood | 2" cal. | As shown |
| | 18 | PINUS NIGRA 'OREGON GREEN'<br>Oregon Green Austrian Pine | 6-7' ht. | As shown |
| | 6 | THUJA PLICATA<br>Western Red Cedar | 8' high | As shown |
| | 29 | ZELKOVA SERRATA 'GREEN VASE'<br>Green Vase Zelkova | 2" cal. | As shown |

| SYMBOL | # | LATIN/COMMON NAME SHRUBS | SIZE | SPACING |
|---|---|---|---|---|
| | | **SHRUBS** | | |
| | 17 | CAMELLIA JAPONICA 'MAGNOLIAEFLORA'<br>Magnoliaeflora Camellia | 5 gal. | 8' o.c. |
| | 28 | CISTUS 'GRAYSWOOD PINK'<br>Grayswood Pink Rock Rose | 5 gal. | 5' o.c. |
| | 27 | CORNUS ALBA 'ELEGANTISSIMA'<br>Variegated Redtwig Dogwood | 5 gal. | 5' o.c. |
| | 291 | CORNUS SERICEA 'KELSEYI'<br>Kelsey's Dwarf Red-osier Dogwood | 5 gal. | 3' o.c. |
| | 58 | ILEX CRENATA "COMPACTA"<br>Compact Japanese Holly | 2 gal. | 3' o.c. |
| | 254 | LIGUSTRUM JAPONICUM "TEXANUM"<br>Waxleaf Privet | 5 gal. | 4' o.c. |
| | 633 | MAHONIA REPENS<br>Creeping Oregon Grape | 1 gal. | 3' o.c. |
| | 143 | NANDINA DOMESTICA "GULF STREAM"<br>Gulf Stream Nandina | 2 gal. | 3' o.c. |
| | 24 | RHAMNUS FRANGULA 'FINE LINE'<br>Fine Line Buckthorn | 5 gal. | 3' o.c. |
| | 191 | ROSA 'FLOWER CARPET AMBER'<br>Flower Carpet Amber Rose | 2 gal. | 3' o.c. |
| | 113 | SPIRAEA BUM. 'ANTHONY WATERER'<br>Anthony Waterer Spirea | 2 gal. | 4' o.c. |
| | 278 | VIBURNUM DAVIDII<br>David Viburnum | 2 gal. | 3' o.c. |
| | 172 | PRUNUS LAUROCERASUS 'SCHIPKAENSIS'<br>Schipka Cherry Laurel | 4-5' ht. | 5' o.c. |

| SYMBOL | # | LATIN/COMMON NAME | SIZE | SPACING |
|---|---|---|---|---|
| | | **PERENNIALS** | | |
| | 48 | CAREX OSHIMENSIS 'EVERGOLD'<br>Evergold Sedge | 1 gal. | 18" o.c. |
| | 913 | CAREX TESTACEA<br>Orange New Zealand Sedge | 1 gal. | 18" o.c. |
| | | **GROUNDCOVER** | | |
| | 1137 | COTONEASTER DAM. 'CORAL BEAUTY'<br>Bearberry Cotoneaster | 1 gal. | 4' o.c. |
| | 3118 | ARCTOSTAPHYLOS UVA-URSI "MASS."<br>Massachusetts Kinnikinnick | 1 gal. | 3' o.c. |

GENERAL NOTES:

1. Contractor is to verify all plant quantities.
2. Adjust plantings in the field as necessary.
3. Project is to be irrigated by an automatic, underground system, which will provide full coverage for all plant material. System is to be design/ build by Landscape Contractor. Guarantee system for a minimum one year. Show drip systems as alternate bid only.
4. All plants are to be fully foliaged, well branched and true to form.
5. Contractor is to notify Landscape Architect or Owner's Representative of any site changes or unforeseen conditions that may be detrimental to plant health, or cause future problems to any structural elements of the project.
6. Contractor shall notify the Landscape Architect if specified materials or methods are not consistent with local climate and/or practices.

| NO. | DATE | REVISIONS |
|---|---|---|

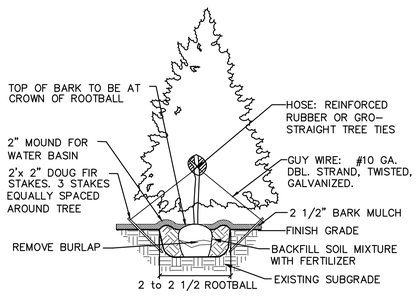
REGISTERED LANDSCAPE ARCHITECT
LA793
ERIN HOLSONBACK
OREGON
5/10/2013
EXP. 5/31/20

OTTEN & Associates Landscape Architecture, LLC
3933 SW Kelly Avenue, Suite B • Portland, Oregon 97239
Phone: (503) 972-0311 • www.ottenla.com

**STANTON FURNITURE**
CANBY, OREGON

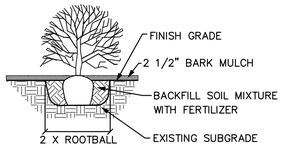
LANDSCAPE PLAN

DATE 12-12-2019
SCALE NOTED
DRAWN MPL
CHECKED EH
SHEET NO L1.0
1 OF 2



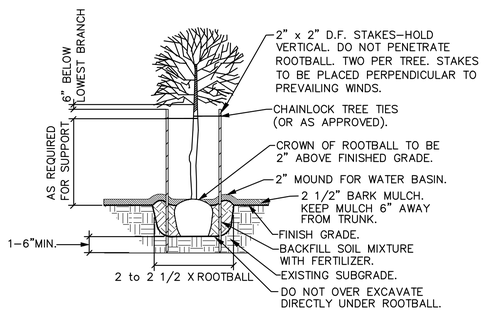

EVERGREEN TREE STAKING DETAIL

NOT TO SCALE




SHRUB PLANTING DETAIL

NOT TO SCALE




NOTE: ANY PROPOSED CHANGES TO OUR SPECIFICATION OR DETAIL SHOULD BE APPROVED BY THE LANDSCAPE ARCHITECT. LIKEWISE, IN ACCORDANCE WITH BEST PRACTICES OF LOCAL LANDSCAPE INSTALLATION, SHOULD THE LANDSCAPE CONTRACTOR FIND A PREFERRED ALTERNATE METHOD, THE LANDSCAPE ARCHITECT MAY BE SO ADVISED.

GENERAL DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE

## OUTLINE SPECIFICATIONS PLANTING

**GENERAL:** All plants shall conform to all applicable standards of the latest edition of the "American Association of Nurserymen Standards", A.N.S.I. Z60.1 – 1973. Meet or exceed the regulations and laws of Federal, State, and County regulations, regarding the inspection of plant materials, certified as free from hazardous insects, disease, and noxious weeds, and certified fit for sale in Oregon.

The apparent silence of the Specifications and Plans as to any detail, or the apparent omission from them of a detailed description concerning any point, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of first quality are to be used. All interpretations of these Specifications shall be made upon the basis above stated.

Landscape contractor shall perform a site visit prior to bidding to view existing conditions.

**PERFORMANCE QUALITY ASSURANCE:** Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary horticultural practices and who are completely familiar with the specified requirements and methods needed for the proper performance of the work of this section.

**NOTIFICATION:** Give Landscape Architect minimum of 2 days advance notice of times for inspections. Inspections at growing site does not preclude Landscape Architect's right of rejection of deficient materials at project site. Each plant failing to meet the above mentioned "Standards" or otherwise failing to meet the specified requirements as set forth shall be rejected and removed immediately from the premises by the Contractor and at his expense, and replaced with satisfactory plants or trees conforming to the specified requirements.

**SUBSTITUTIONS:** Only as approved by the Landscape Architect or the Owner's Representative.

**GUARANTEE AND REPLACEMENT:** All plant material shall be guaranteed from final acceptance for one full growing season or one year, whichever is longer. During this period the Contractor shall replace any plant material that is not in good condition and producing new growth (except that material damaged by severe weather conditions, due to Owner's negligence, normally unforeseen peculiarities of the planting site, or lost due to vandalism). Guarantee to replace, at no cost to Owner, unacceptable plant materials with plants of same variety, age, size and quality as plant originally specified. Conditions of guarantee on replacement plant shall be same as for original plant.

Landscape Contractor shall keep on site for Owner's Representative's inspection, all receipts for soil amendment and topsoil deliveries.

**PROTECTION** Protect existing roads, sidewalks, and curbs, landscaping, and other features remaining as final work. Verify location of underground utilities prior to doing work. Repair and make good any damage to service lines, existing features, etc. caused by landscaping installation.

**PLANT QUALITY ASSURANCE:** Deliver direct from nursery. Maintain and protect roots of plant material from drying or other possible injury. Store plants in shade and protect them from weather immediately upon delivery, if not to be planted within four hours.

Nursery stock shall be healthy, well branched and rooted, formed true to variety and species, full foliaged, free of disease, injury, defects, insects, weeds, and weed roots. Trees shall have straight trunks, symmetrical tips, and have an intact single leader. Any trees with double leaders will be rejected upon inspection. All Plants: True to name, with one of each bundle or lot tagged with the common and botanical name and size of the plants in accordance with standards of practice of the American Association of Nurserymen, and shall conform to the Standardized Plant Names, 1942 Edition.

Container grown stock: Small container–grown plants, furnished in removable containers, shall be well rooted to ensure healthy growth. **Grow container plants in containers a minimum of one year** prior to delivery, with roots filling container but not root bound. Bare root stock: Roots well–branched and fibrous. Balled and burlapped (B&B): Ball shall be of natural size to ensure healthy growth. Ball shall be firm and the burlap sound. No loose or made ball will be acceptable.

**TOPSOIL AND FINAL GRADES:** Landscape Contractor is to supply and place 12" of topsoil in planting beds and 6" in lawn areas. Landscape Contractor is to verify with the General Contractor if the on–site topsoil is or is not conducive to proper plant growth. The topsoil shall be a sandy loam, free of all weeds and debris inimical to lawn or plant growth. Furnish soil analysis by a qualified soil testing laboratory stating percentages of organic matter; gradation of sand, silt and clay content; cation exchange capacity; deleterious material; pH; and plant nutrient content of the topsoil. Report suitability of topsoil for plant growth and recommended quantities of nitrogen, phosphorus and potash nutrients and soil amendments (including compost) to be added to produce satisfactory topsoil. If stockpiled topsoil on site is not conducive to proper plant growth, the Landscape Contractor shall import the required amount.

Landscaping shall include finished grades and even distribution of topsoil to meet planting requirements. Grades and slopes shall be as indicated. Planting bed grades shall be approximately 3" below adjacent walks, paving, finished grade lines, etc., to allow for bark application. Finish grading shall remove all depressions or low areas to provide positive drainage throughout the area.

## PLANTING SPECIFICATIONS:

**HERBICIDES:** Prior to soil preparation, all areas showing any undesirable weed or grass growth shall be treated with Round–up in strict accordance with the manufacturer's instructions.

**SOIL PREPARATION:** Work all areas by rototilling to a minimum depth of 8". Remove all stones (over 1½" size), sticks, mortar, large clumps of vegetation, roots, debris, or extraneous matter turned up in working. Soil shall be of a homogeneous fine texture. Level, smooth and lightly compact area to plus or minus .10 of required grades.

In groundcover areas add 2" of compost (or as approved) and till in to the top 6" of soil.

**PLANTING HOLE:** Lay out all plant locations and excavate all soils from planting holes to 2 1/2 times the root ball or root system width. Loosen soil inside bottom of plant hole. Dispose of any "subsoil" or debris from excavation. Check drainage of planting hole with water, and adjust any area showing drainage problems.

**SOIL MIX:** Prepare soil mix in each planting hole by mixing:
2 part native topsoil (no subsoil)
1 part compost (as approved)

Thoroughly mix in planting hole and add fertilizers at the following rates:
Small shrubs – 1/8 lb./ plant
Shrubs – 1/3 to 1/2 lb./ plant
Trees – 1/3 to 1 lb./ plant

**FERTILIZER:** For trees and shrubs use Commercial Fertilizer "A" Inorganic (5–4–3) with micro–nutrients and 50% slow releasing nitrogen. DO NOT apply fertilizer to Water Quality Swale.

**PLANTING TREES AND SHRUBS:** Plant upright and face to give best appearance or relationship to adjacent plants and structures. Place 6" minimum, lightly compacted layer of prepared planting soil under root system. Loosen and remove twine binding and burlap from top 1/2 of root balls. Cut off cleanly all broken or frayed roots, and spread roots out. Stagger Plants in rows. Backfill planting hole with soil mix while working each layer to eliminate voids.

When approximately 2/3 full, water thoroughly, then allow water to soak away. Place remaining backfill and dish surface around plant to hold water. Final grade should keep root ball slightly above surrounding grade, not to exceed 1". Water again until no more water is absorbed. Initial watering by irrigation system is not allowed.

**STAKING OF TREES:** Stake or guy all trees. Stakes shall be 2" X 2" (nom.) quality tree stakes with point. They shall be of Douglas Fir, clear and sturdy. Stake to be minimum 2/3 the height of the tree, not to exceed 8'–0". Drive stake firmly 1'–6" below the planting hole. Tree ties for deciduous trees shall be "Chainlock" (or better). For Evergreen trees use "Gro–Strait" Tree Ties (or a reinforced rubber hose and guy wires) with guy wires of a minimum 2 strand twisted 12 ga. wire. Staking and guying shall be loose enough to allow movement of tree while holding tree upright.

**MULCHING OF PLANTINGS:** Mulch planting areas with dark, aged, medium grind fir or hemlock bark (aged at least 6 months) to a depth of 2" in ground cover areas and 2½" in shrub beds. Apply evenly, not higher than grade of plant as it came from the nursery, and rake to a smooth finish. Water thoroughly, then hose down planting area with fine spray to wash leaves of plants.

**GENERAL MAINTENANCE:** Protect and maintain work described in these specifications against all defects of materials and workmanship, through final acceptance. Replace plants not in normal healthy condition at the end of this period. Water, weed, cultivate, mulch, reset plants to proper grade or upright position, remove dead wood and do necessary standard maintenance operations. Irrigate when necessary to avoid drying out of plant materials, and to promote healthy growth.

**CLEAN–UP:** At completion of each division of work all extra material, supplies, equipment, etc., shall be removed from the site. All walks, paving, or other surfaces shall be swept clean, mulch areas shall have debris removed and any soil cleared from surface. All areas of the project shall be kept clean, orderly and complete.

| NO. | DATE | REVISIONS |
|---|---|---|
| | | |

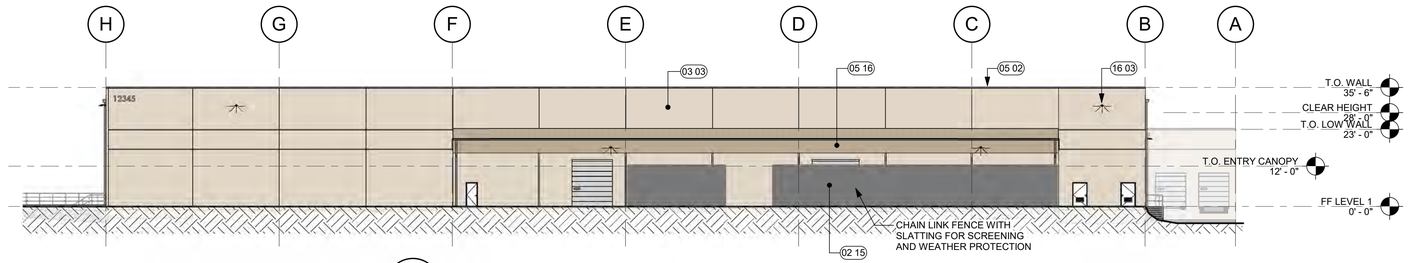
REGISTERED LANDSCAPE ARCHITECT
LA793
ERIN HOLSONBACK
OREGON
5/10/2013
EXP. 5/31/20

OTTEN & Associates Landscape Architecture, LLC
3933 SW Kelly Avenue, Suite B • Portland, Oregon 97239
Phone: (503) 972-0311 • www.ottenla.com

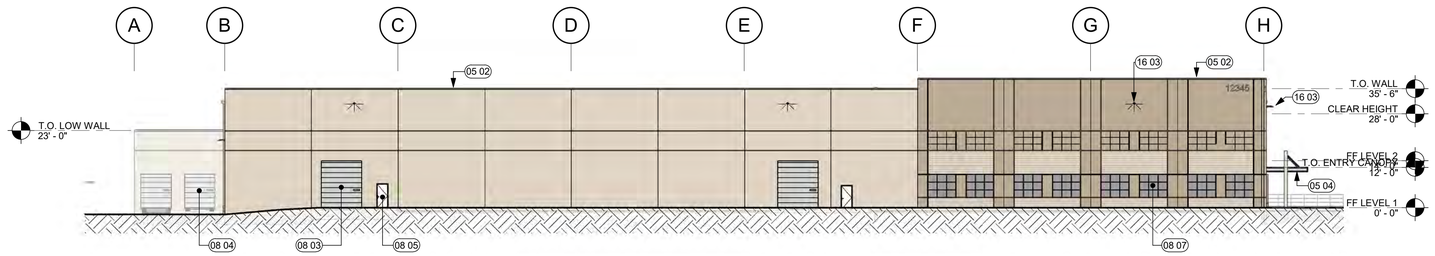
**STANTON FURNITURE**
CANBY, OREGON

DETAILS & SPECS

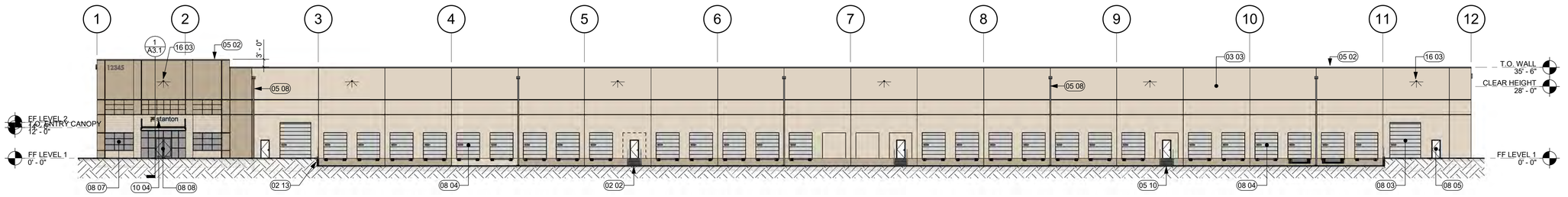
DATE 12–12–2019
SCALE AS SHOWN
DRAWN MPL | CHECKED EH
SHEET NO L2.0
2 OF 2

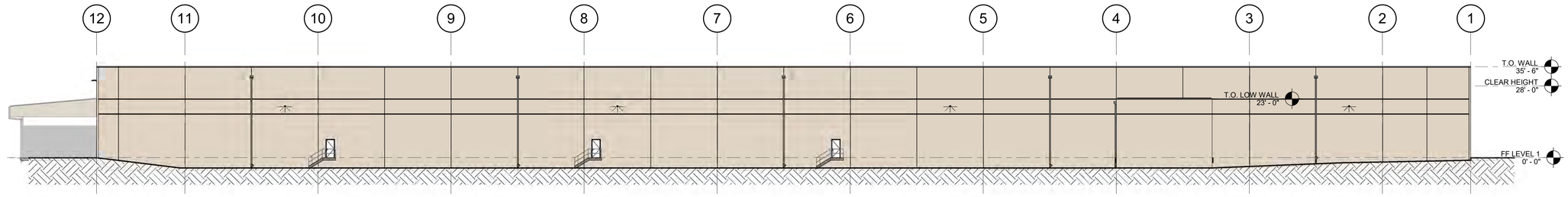

N A2.0 NORTH ELEVATION
3/64" = 1'-0" ELEVATION N




S A2.0 SOUTH ELEVATION
3/64" = 1'-0" ELEVATION S




E A2.0 EAST ELEVATION
3/64" = 1'-0" ELEVATION E




W A2.0 WEST ELEVATION
3/64" = 1'-0" ELEVATION W

## ELEVATION NOTES

1. FOR ADDITIONAL INFORMATION SEE STRUCTURAL PANEL ELEVATIONS.
2. FOR PANEL REINFORCING, EMBED, AND CONNECTION INFORMATION, SEE STRUCTURAL PANEL ELEVATIONS.
3. ALL PANEL THICKNESS TO BE AS INDICATED ON THE STRUCTURAL ELEVATIONS.
4. ALL BUILDING ELEVATIONS ARE DRAWN FROM THE EXTERIOR FACE, U.O.N.
5. VERTICAL BARS IN REINFORCEMENT CAGES ARE FULL HEIGHT AND PLACED EACH FACE, SEE DETAIL
6. SEE FOUNDATION PLAN AND ARCHITECTURAL SHEETS TO DETERMINE PANEL DIMENSIONS AND ELEVATIONS.
7. DO NOT LOCATE TIES AT REVEALS. CONTRACTOR TO CONFIRM ALL CLEARANCE REQUIREMENTS ARE MAINTAINED AT REVEAL LOCATIONS.
8. PROVIDE CHAIRS FOR TOP BARS WHERE WIDTH OF CAGE EXCEEDS 4'-0".
9. SEE SPECIFICATIONS FOR PANEL CONCRETE MIX REQUIREMENTS

## ELEVATION KEYNOTE LEGEND

| | |
|---|---|
| 02 02 | LOADING DOCK CONCRETE SLAB. 7" THICK UNREINFORCED CONCRETE OVER 6 INCHES COMPACTED CRUSHED ROCK OVER COMPACTED SUBGRADE. |
| 02 03 | LANDSCAPE PLANTER, SEE LANDSCAPING PLANS. |
| 02 04 | ADA ACCESSIBLE PARKING SPACE WITH SIGNAGE. SEE SITE DETAIL SHEET. |
| 02 07 | EXTRUDED CONCRETE CURB. LOCATE AROUND ALL LANDSCAPE AREAS AS SHOWN (U.N.O.). 5.0" TYPICAL CURB RADIUS AT CORNERS (U.N.O.). SEE SITE DETAIL SHEET. |
| 02 08 | SIDEWALK RAMP. 1:12 MAXIMUM SLOPE. PROVIDE CODE APPROVED DETECTABLE WARNING, SEE SITE DETAIL SHEET. |
| 02 10 | PEDESTRIAN EGRESS PATHWAY WITH THERMOPLASTIC STRIPING. VERIFY COLOR WITH OWNER AND JURISDICTION. |
| 02 13 | LOADING DOCK RETAINING WALL WITH GUARDRAIL - SEE SITE DETAIL SHEET. |
| 02 15 | 6.0' HIGH CHAIN LINK FENCE WITH BARBED WIRE ABOVE - SEE SITE DETAIL SHEET AND SPECIFICATIONS. |
| 02 16 | NEW CONCRETE DRIVEWAY - PUBLIC RIGHT-OF-WAY STANDARD SEE PUBLIC WORKS DRAWINGS. |
| 02 17 | NEW PUBLIC SIDEWALK - PUBLIC STANDARD PER PUBLIC WORKS DRAWINGS. |
| 02 18 | 6" CONCRETE WHEEL STOP - SEE SITE DETAIL SHEET |
| 02 19 | NEW PUBLIC LANDSCAPING STRIP - SEE PUBLIC WORKS DRAWINGS |
| 03 03 | CONCRETE TILT-UP PANELS TYPICAL ON ALL SIDES. SEE STRUCTURAL FOR THICKNESS AND DETAILS. |
| 03 13 | BIDDER DESIGNED RETAINING WALL. SEE SITE PLANS FOR ADDITIONAL INFORMATION |
| 05 01 | STEEL BUILDING COLUMN PER STRUCTURAL |
| 05 02 | METAL CAP FLASHING TYPICAL AT PARAPET ON ALL SIDES. SEE SITE DETAIL SHEET |
| 05 04 | CANOPY PER PLANS AND DETAILS, SEE STRUCTURAL FOR MORE INFORMATION |
| 05 08 | DOWNSPOUTS - 6" DIA. TYP. (U.N.O.) - SEE ROOF PLAN DETAILS. ALSO SEE SITE UTILITY PLAN FOR STORM TIE IN. |
| 05 10 | STAIRS AND LANDING TO BE BIDDER DESIGN. CONCRETE TREAD WITH METAL PAN AND RISER, TYPICAL. |
| 05 16 | STEEL SHED ROOF CANOPY PER PLAN, SEE STRUCTURAL |
| 08 03 | OVERHEAD DOOR AT GRADE LEVEL PER DOOR SCHEDULE. |
| 08 04 | OVERHEAD DOORS AT DOCK LEVEL PER DOOR SCHEDULE. |
| 08 05 | EXTERIOR MAN DOOR PER DOOR SCHEDULE. |
| 08 07 | ALUMINUM STOREFRONT WINDOWS PER DETAILS AND SPECIFICATIONS. |
| 08 08 | ALUM. STOREFRONT VESTIBULE AT MAIN ENTRY PER ENERGY CODE. |
| 10 04 | BUILDING SIGN, BY OTHERS (DEFERRED SUBMITTAL) |
| 16 03 | WALL LIGHT - PER ELECTRICAL (BIDDER DESIGN). |
| 16 05 | POLE MOUNTED SITE LIGHTING. BIDDER DESIGN, DEFERRED SUBMITTAL |
| 16 09 | TRANSFORMER PAD AND BOLLARDS - COORDINATE WITH ELECTRICAL (BIDDER DESIGN). |

VLMK
ENGINEERING + DESIGN
3933 SW Kelly Avenue
Portland, Oregon 97239
503.222.4453
VLMK.COM

PROJECT NAME
STANTON FURNITURE
MANUFACTURING & DISTRIBUTION WAREHOUSE
S. MULINO ROAD
CANBY, OR

SITE DESIGN REVIEW

REVISIONS

| | DATE | DESCRIPTION |
|---|---|---|

FOR REFERENCE ONLY
NOT FOR CONSTRUCTION

DATE 1/3/2020

| SCALE | PROJ. NO. |
|---|---|
| AS NOTED | 20190255 |
| DRAWN CGA | CHECKED JCS |

BUILDING ELEVATIONS

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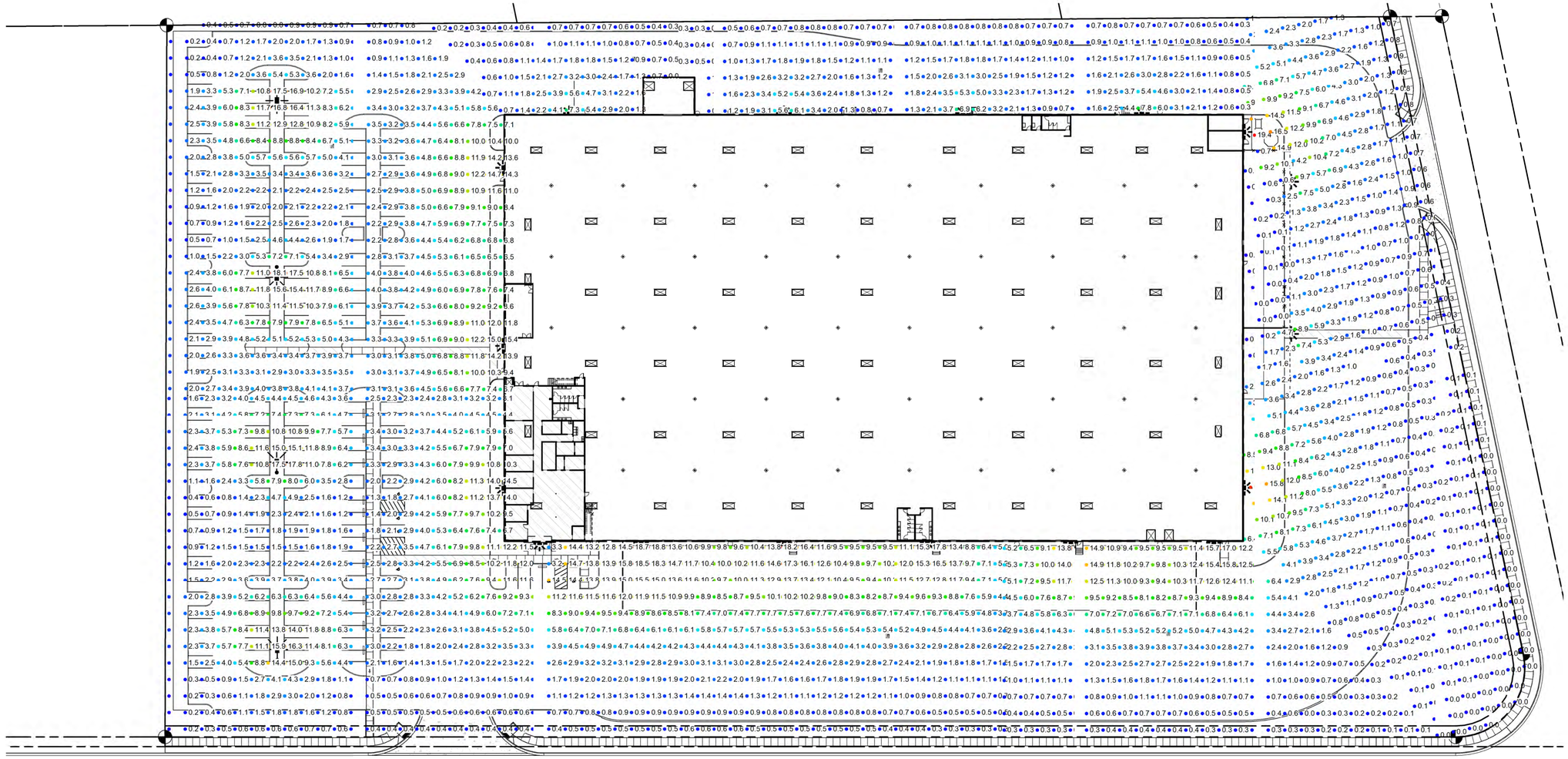

A
LT1.0

## PRELIMINARY SITE PHOTOMETRIC PLAN - BIDDER DESIGNER TO VERIFY

1" = 40'-0"

NOTES:
1. TYPICAL WALL PACK LIGHTS TO BE AT 30'-0" AFF. WALL PACK LIGHTS ON WEST WALL TO BE AT 20'-0" AFF.
2. TYPICAL LIGHT POLES ON SITE TO BE 25'-0" TALL (BIDDER DESIGNER TO VERIFY).


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ENGINEERING + DESIGN

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Portland, Oregon 97239
503.222.4453
VLMK.COM


PROJECT NAME

STANTON FURNITURE
MANUFACTURING & DISTRIBUTION WAREHOUSE

S. MULINO ROAD
CANBY, OR

SITE DESIGN REVIEW

REVISIONS

| | DATE | DESCRIPTION |
|---|---|---|

FOR REFERENCE ONLY
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| | |
|---|---|
| DATE 1/3/2020 | |
| SCALE AS NOTED | PROJ. NO. 20190255 |
| DRAWN CGA | CHECKED JCS |

PRELIMINARY PHOTOMETRIC PLAN

LT1.0

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**EXHIBIT D**

# STANTON CANBY

# PRELIMINARY STORMWATER REPORT

*VLMK Project Number: 20190255*

*Stanton/Pacific Furniture*
*21249 SW 115th Ave.*
*Tualatin, OR 97062*

*Prepared By: Antony Chin*
*December 4, 2019*

| | | | |
|---|---|---|---|
| *Project:* | Stanton Canby | *Project Number:* | 20190255 |
| *Project Address:* | | | |

TABLE OF CONTENTS

I. SECTION ONE

A. Site Vicinity Map

B. Project Information

Stanton Furniture consists of a 168,781 SF warehouse and manufacturing facility with support office. Proposed site work includes new parking areas, truck loading docks, vehicle maneuvering areas, stormwater management facilities, and related infrastructure. This report analyzes the network of new stormwater management facilities designed to provide water quality treatment and water quantity control for on-site stormwater runoff.

The properties have been utilized for agricultural purposes and include one residential home. The terrain slopes from the east to the west.

Survey information for the site is from a topographic survey provided by: Northwest Surveying Inc. (1815 NW 169th Place, Suite 2090. Beaverton, OR 97006 Phone: (503)848-2127).

All stormwater facilities and conveyance systems for this development have been designed per the City of Canby Public Works Design Standards and the 2016 Clean Water Services LIDA Handbook.

Software used in design:

- HydroCAD Stormwater Modeling Software
- Microsoft Excel 2016
- AutoCAD Civil 3D 2018

C. Stormwater Narrative

Onsite stormwater runoff will be collected at various catch basins, roof drains, and/or curb cuts located throughout the property. All stormwater runoff from pollution-generating surfaces (i.e. asphalt) will be conveyed to water quality treatment facilities. Runoff from roof areas will bypass water quality treatment as authorized by DEQ rule for Underground Injection Control (UIC). All runoff will be routed to one of two sedimentation manholes for pretreatment prior to conveyance to one of two underground infiltration facilities that consist of StormTech Underground Chambers where all stormwater runoff will infiltrate into native soils. The infiltration systems will comply and be registered with DEQ UIC Rule Authorization requirements.

Water Quality Treatment

Due to limitations from site layout, grading, landscape and conveyance criteria, 410,412 SF of impervious area will be treated using a proprietary filtration system, BayFilter units by ADS. The CWS water quality event that was used to size these facilities is 0.36" over 4 hours.

Storm Quantity Control (Complete Infiltration)

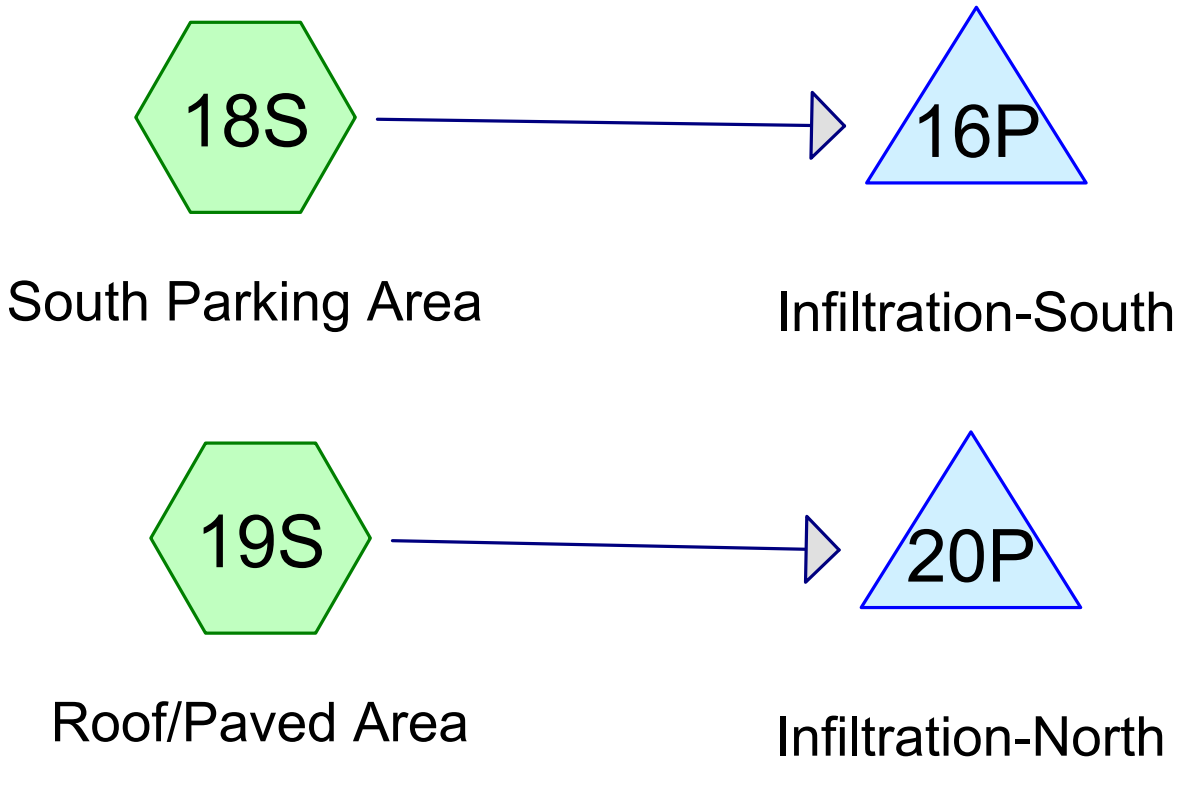
The stormwater quantity requirements will be achieved by infiltrating all runoff from storm events up to and including the 100-yr event in one of two infiltration systems consisting of MC-4500 StormTech Chambers each. The infiltration rate used in this design (27 in/hr) comes from geotechnical investigation adjacent to site and are valid at depths of 11 ft below existing ground surface. Therefore, the chambers are proposed at depths that engage this infiltrating layer. To further guarantee adequate infiltration, construction documents include notes that require the contractor to test actual infiltration rates in the presence of the geotechnical engineer to verify systems will perform as designed. These infiltration systems were designed by creating a hydrology model within HydroCAD. All facilities are adequately sized to retain the entire 100-year event without surface ponding. See detailed calculations and data included within the Appendix of this report.

Conveyance

The proposed storm conveyance pipes will be sized to convey the 100-year event flowrate (3.36") as calculated using the Santa Barbara Unit Hydrograph (SBUH). A conservative Manning's coefficient (η) of 0.013 will be used to size conveyance pipes.

II. APPENDIX

A. HydroCAD Calculations (2x Infiltration Systems)




Subcat Reach Pond Link

**Routing Diagram for Stanton Hydro**
Prepared by {enter your company name here}, Printed 12/4/2019
HydroCAD® 10.00-25 s/n 09712 © 2019 HydroCAD Software Solutions LLC

## Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|---|---|---|
| 1.689 | 74 | >75% Grass cover, Good, HSG C (18S, 19S) |
| 7.150 | 98 | Paved parking, HSG B (19S) |
| 2.420 | 98 | Paved parking, HSG C (18S) |
| **11.258** | **94** | **TOTAL AREA** |

## Summary for Subcatchment 18S: South Parking Area

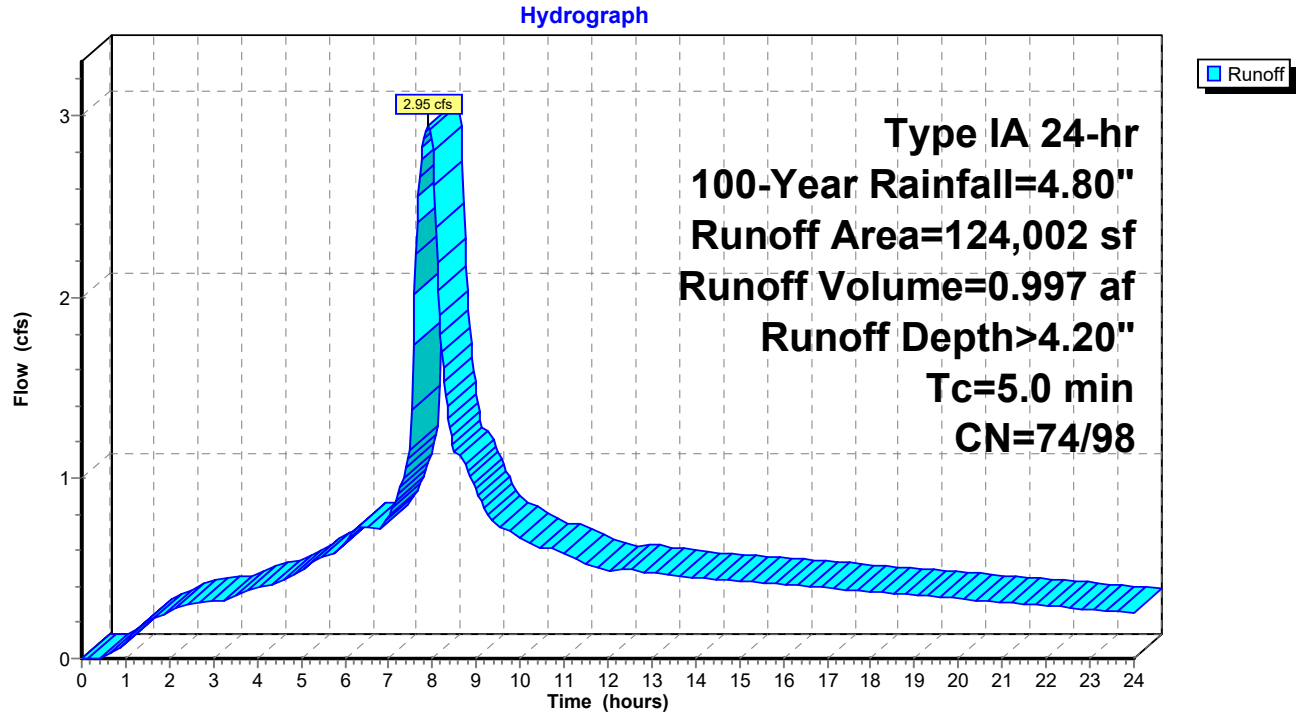
Runoff = 2.95 cfs @ 7.89 hrs, Volume= 0.997 af, Depth> 4.20"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Type IA 24-hr 100-Year Rainfall=4.80"

| Area (sf) | CN | Description |
|---|---|---|
| 105,402 | 98 | Paved parking, HSG C |
| 18,600 | 74 | >75% Grass cover, Good, HSG C |
| 124,002 | 94 | Weighted Average |
| 18,600 | 74 | 15.00% Pervious Area |
| 105,402 | 98 | 85.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.0 | | | | | **Direct Entry,** |

## Subcatchment 18S: South Parking Area



## Summary for Subcatchment 19S: Roof/Paved Area

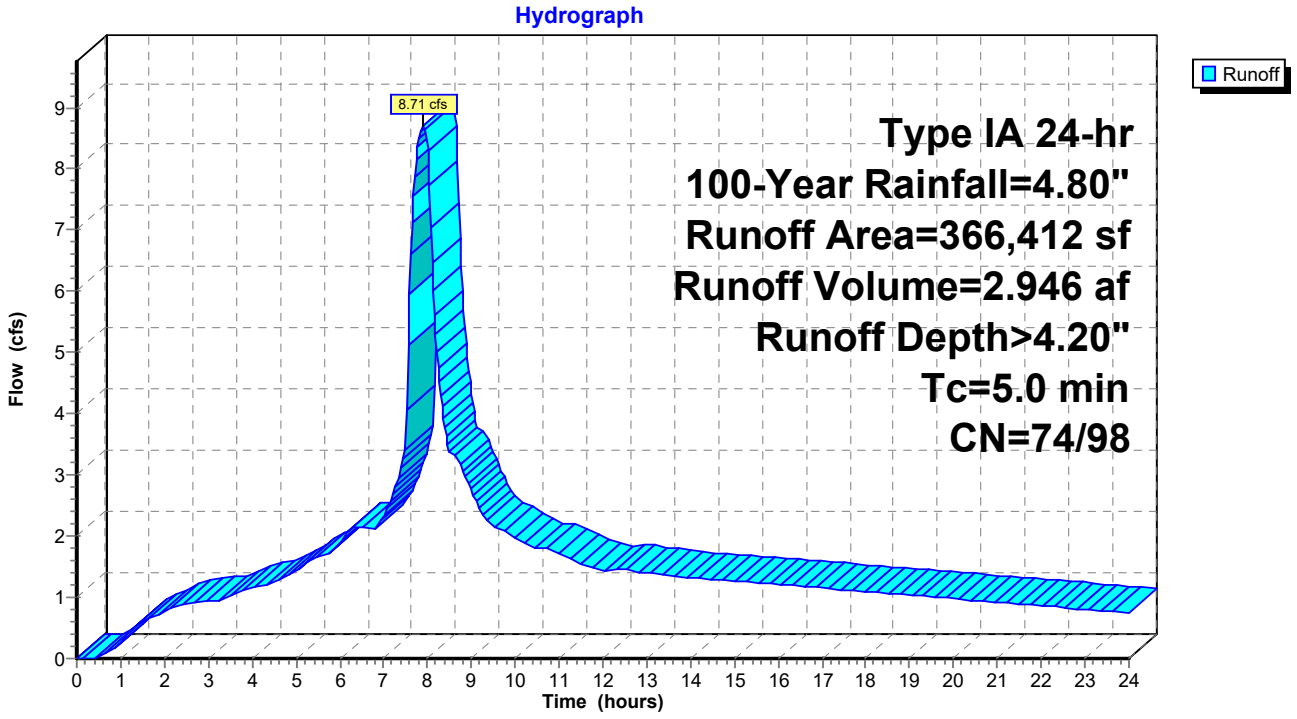
Runoff = 8.71 cfs @ 7.89 hrs, Volume= 2.946 af, Depth> 4.20"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Type IA 24-hr 100-Year Rainfall=4.80"

| Area (sf) | CN | Description |
|---|---|---|
| 311,450 | 98 | Paved parking, HSG B |
| 54,962 | 74 | >75% Grass cover, Good, HSG C |
| 366,412 | 94 | Weighted Average |
| 54,962 | 74 | 15.00% Pervious Area |
| 311,450 | 98 | 85.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.0 | | | | | **Direct Entry,** |

## Subcatchment 19S: Roof/Paved Area



## Summary for Pond 16P: Infiltration-South

Inflow Area = 2.847 ac, 85.00% Impervious, Inflow Depth > 4.20" for 100-Year event
Inflow = 2.95 cfs @ 7.89 hrs, Volume= 0.997 af
Outflow = 1.35 cfs @ 8.36 hrs, Volume= 0.997 af, Atten= 54%, Lag= 28.1 min
Discarded = 1.35 cfs @ 8.36 hrs, Volume= 0.997 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Peak Elev= 10.93' @ 8.36 hrs Surf.Area= 0.019 ac Storage= 0.107 af

Plug-Flow detention time= 19.7 min calculated for 0.997 af (100% of inflow)
Center-of-Mass det. time= 19.4 min ( 686.6 - 667.2 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 0.00' | 0.070 af | **22.67'W x 37.29'L x 11.00'H Field A**<br>0.213 af Overall - 0.038 af Embedded = 0.176 af x 40.0% Voids |
| #2A | 4.00' | 0.038 af | **ADS_StormTech MC-4500 +Cap** x 14 Inside #1<br>Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.02'L = 106.5 cf<br>Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap<br>14 Chambers in 2 Rows<br>Cap Storage= +35.7 cf x 2 x 2 rows = 142.8 cf |
| | | 0.108 af | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 0.00' | **27.000 in/hr Exfiltration over Wetted area** |

**Discarded OutFlow** Max=1.35 cfs @ 8.36 hrs HW=10.92' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 1.35 cfs)

## Pond 16P: Infiltration-South - Chamber Wizard Field A

**Chamber Model = ADS_StormTechMC-4500 +Cap (ADS StormTech®MC-4500 with cap volume)**
Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.02'L = 106.5 cf
Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
Cap Storage= +35.7 cf x 2 x 2 rows = 142.8 cf

100.0" Wide + 24.0" Spacing = 124.0" C-C Row Spacing

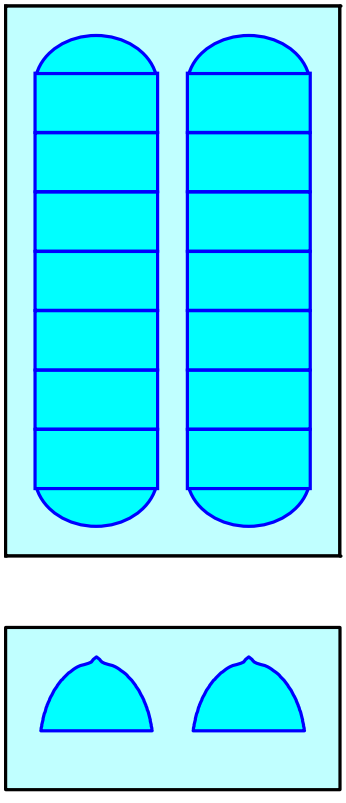
7 Chambers/Row x 4.02' Long +2.56' Cap Length x 2 = 33.29' Row Length +24.0" End Stone x 2 = 37.29' Base Length
2 Rows x 100.0" Wide + 24.0" Spacing x 1 + 24.0" Side Stone x 2 = 22.67' Base Width
48.0" Base + 60.0" Chamber Height + 24.0" Cover = 11.00' Field Height

14 Chambers x 106.5 cf + 35.7 cf Cap Volume x 2 x 2 Rows = 1,633.7 cf Chamber Storage

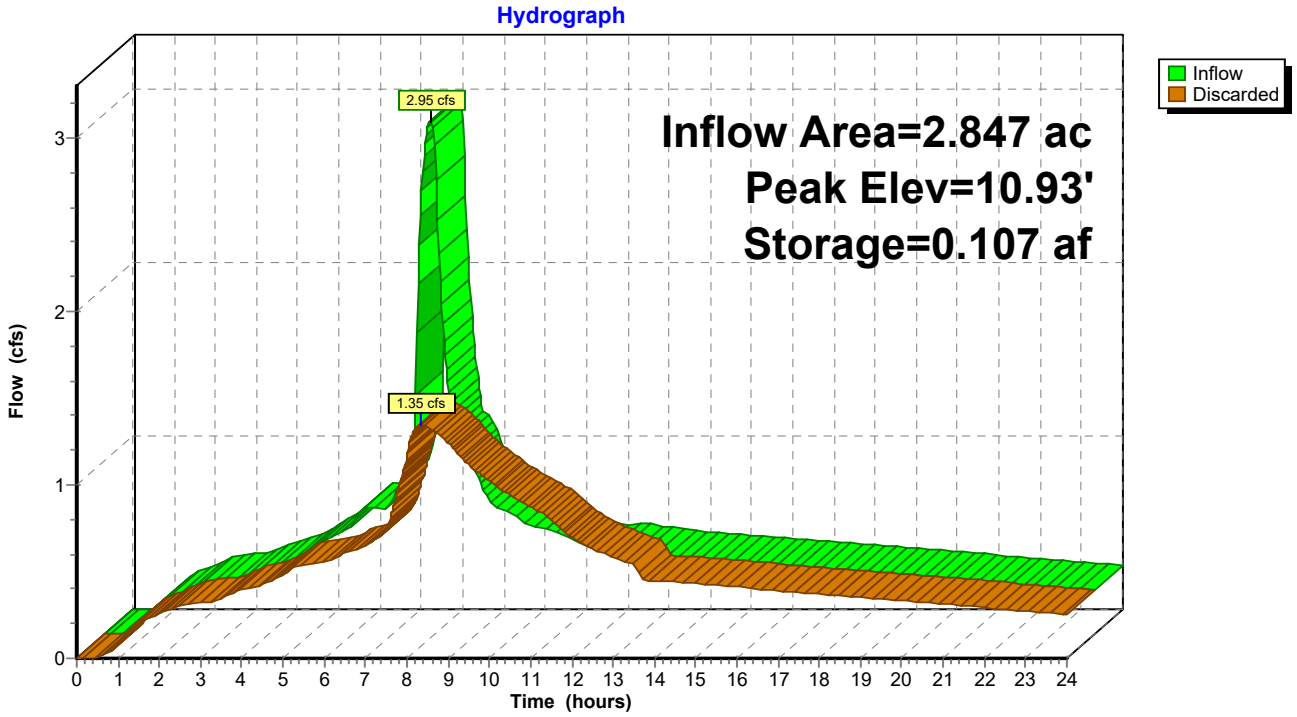
9,298.1 cf Field - 1,633.7 cf Chambers = 7,664.4 cf Stone x 40.0% Voids = 3,065.8 cf Stone Storage

Chamber Storage + Stone Storage = 4,699.4 cf = 0.108 af
Overall Storage Efficiency = 50.5%
Overall System Size = 37.29' x 22.67' x 11.00'

14 Chambers
344.4 cy Field
283.9 cy Stone



## Pond 16P: Infiltration-South



## Summary for Pond 20P: Infiltration-North

Inflow Area = 8.412 ac, 85.00% Impervious, Inflow Depth > 4.20" for 100-Year event
Inflow = 8.71 cfs @ 7.89 hrs, Volume= 2.946 af
Outflow = 3.25 cfs @ 8.70 hrs, Volume= 2.945 af, Atten= 63%, Lag= 48.3 min
Discarded = 3.25 cfs @ 8.70 hrs, Volume= 2.945 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.03 hrs
Peak Elev= 9.15' @ 8.70 hrs Surf.Area= 0.068 ac Storage= 0.340 af

Plug-Flow detention time= 24.4 min calculated for 2.945 af (100% of inflow)
Center-of-Mass det. time= 24.1 min ( 691.3 - 667.2 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1A | 0.00' | 0.238 af | **33.00'W x 89.62'L x 11.00'H Field A**<br>0.747 af Overall - 0.152 af Embedded = 0.595 af x 40.0% Voids |
| #2A | 4.00' | 0.152 af | **ADS_StormTech MC-4500 +Cap** x 60 Inside #1<br>Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.02'L = 106.5 cf<br>Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap<br>60 Chambers in 3 Rows<br>Cap Storage= +35.7 cf x 2 x 3 rows = 214.2 cf |
| | | 0.390 af | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Discarded | 0.00' | **27.000 in/hr Exfiltration over Wetted area** |

**Discarded OutFlow** Max=3.25 cfs @ 8.70 hrs HW=9.15' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 3.25 cfs)

## Pond 20P: Infiltration-North - Chamber Wizard Field A

**Chamber Model = ADS_StormTechMC-4500 +Cap (ADS StormTech®MC-4500 with cap volume)**
Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.02'L = 106.5 cf
Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
Cap Storage= +35.7 cf x 2 x 3 rows = 214.2 cf

100.0" Wide + 24.0" Spacing = 124.0" C-C Row Spacing

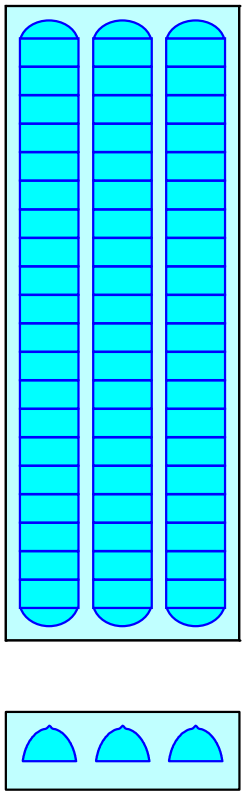
20 Chambers/Row x 4.02' Long +2.56' Cap Length x 2 = 85.62' Row Length +24.0" End Stone x 2 = 89.62' Base Length
3 Rows x 100.0" Wide + 24.0" Spacing x 2 + 24.0" Side Stone x 2 = 33.00' Base Width
48.0" Base + 60.0" Chamber Height + 24.0" Cover = 11.00' Field Height

60 Chambers x 106.5 cf + 35.7 cf Cap Volume x 2 x 3 Rows = 6,603.6 cf Chamber Storage

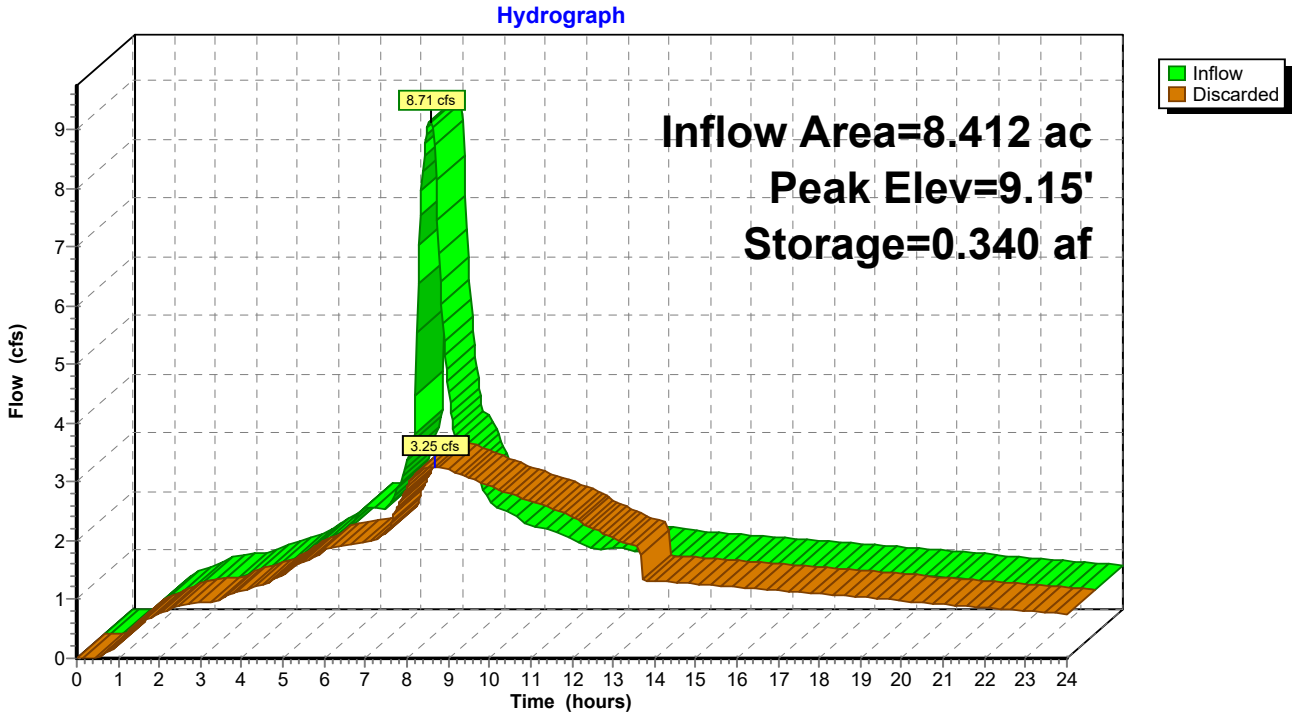
32,530.9 cf Field - 6,603.6 cf Chambers = 25,927.2 cf Stone x 40.0% Voids = 10,370.9 cf Stone Storage

Chamber Storage + Stone Storage = 16,974.5 cf = 0.390 af
Overall Storage Efficiency = 52.2%
Overall System Size = 89.62' x 33.00' x 11.00'

60 Chambers
1,204.8 cy Field
960.3 cy Stone



## Pond 20P: Infiltration-North



# EXHIBIT E

## Stanton Furniture

## Transportation Impact Analysis

January 2020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# SECTION 1. INTRODUCTION

The purpose of this transportation impact analysis is to identify potential transportation system needs triggered by the proposed Canby Stanton Furniture Development located at 23849 S Mulino Road in Canby, Oregon. The proposed site is currently used for agricultural purposes and will consist of a building with approximately 150,350 square foot for manufacturing and warehouse uses and associated offices[1]. The site is zoned M1 – Light Industrial and is in the Industrial Area Overlay (I-O). Access to the site is proposed via one driveway to S Mulino Road and one driveway to the extension of 4th Avenue from S Mulino Road.

Included in the following sections is a documentation of existing transportation conditions, a summary of the assumptions and methodologies used to analyze future transportation conditions, a detail of traffic operating conditions and a summary of recommendations related to the proposed project.

## Project Area

The project site is generally bounded by the 4th Avenue extension to the north, S Township Road to the south, S Mulino Road to the east, and Sequoia Parkway to the west. The following intersections were evaluated as study intersections (see Figure 1), with their intersection control listed:

- SE 13th Avenue / S Mulino Road (unsignalized)
- S Township Road / S Mulino Road (unsignalized)
- 4th Avenue extension / S Mulino Road (future unsignalized intersection)
- SE 1st Avenue / S Mulino Road (unsignalized)
- Sequoia Parkway / S Township Road (unsignalized)
- OR 99E / N Redwood Street / Sequoia Parkway (signalized)


**Figure 1: Study Area**

[1] Canby Stanton Furniture site plan, August 28, 2019.

# SECTION 2. EXISTING CONDITIONS

This section provides documentation of existing transportation conditions in the project area, including an inventory of the existing transportation network, and an operational analysis and safety evaluation of the study intersections. Supporting details are provided in the appendix.

## Pedestrian and Bicycle Facilities

An inventory of the existing pedestrian and bicycle facilities was conducted to determine the current location of sidewalks and bicycle lanes within the project area. Sidewalks are limited and are generally located along the frontages of new development on portions of Sequoia Parkway.

There is currently a striped bike lane along Sequoia Parkway, however there are no other bike facilities within the project area.

Pedestrian and bicycle count data during the morning and evening peak periods was also collected at the study intersections[2]. The count data shows that most of the pedestrian activity observed occurred at the Sequoia Parkway / S Township Road intersection (5 crossings during the p.m. peak period). Bicycle activity within the study area is minimal. The bicycle count data indicates that only one movement occurred at the Sequoia Parkway / S Township Road intersection in each of the peak periods. No additional bicycle activity was recorded at the study intersections.

## Transit

Transit service is provided in the vicinity of the project area by Canby Area Transit (CAT) via Route 99X to Oregon City and Woodburn. This route connects Canby to the Oregon City Transit Center where riders can transfer to several additional TriMet bus lines. The nearest bus stop to the project site is located approximately 1.10 miles to the north, near the OR 99E / Sequoia Parkway intersection.

CAT also provides general public Dial-A-Ride service for anyone traveling to or from destinations within the Canby Urban Growth Boundary (UGB). Service is provided between 8 a.m. and 6 p.m., Monday through Friday.

## Motor Vehicle Facilities

Characteristics of the key roadways in the project area are summarized in Table 1. Sequoia Parkway provides for higher capacity north-south motor vehicle movements through the study area. It is classified as a collector and maintains a continuous three-lane cross-section (i.e. one through lane in each direction with a center-turn lane) and connects OR 99E with S. Township Road.

[2] Based on traffic counts conducted during October 2018.

**Table 1: Project Area Roadway Characteristics**

| Roadway | Jurisdiction | Classification* | No. of Lanes | Posted Speed | Sidewalks | Bike Lanes |
|---|---|---|---|---|---|---|
| **S Mulino Road** | County | Collector | 2 | NP** | No | No |
| **Sequoia Parkway** | City | Collector | 3 | 30 | Intermittent | Yes |
| **Township Road** | City | Collector | 2 | 45 | No | No |

*Source: Canby Transportation System Plan. Adopted December 2010.
** No posted speed

## Existing Travel Conditions

To determine intersection operations, turn movement counts were conducted at study intersections during the weekday morning peak period (7 to 9 a.m.) and evening peak period (4 to 6 p.m.). The raw traffic count data is included in the Appendix. The existing peak period traffic volumes developed for the study intersections are displayed in Figure 2.

### *Daily Motor Vehicle Volumes*

Motor vehicle count data was collected along S Mulino Road near the proposed site[3]. The count data indicates that approximately 1,880 vehicles pass the proposed site along S Mulino Road during an average weekday. Approximately 54 percent of these vehicles travel southbound and 46 percent northbound. The highest number of trips along S Mulino Road occurred during the p.m. peak hour, with 201 vehicles counted near the proposed site (59 northbound and 142 southbound).

[3] Count data collected on October 22nd, 2019 on S Mulino Road near the proposed site.

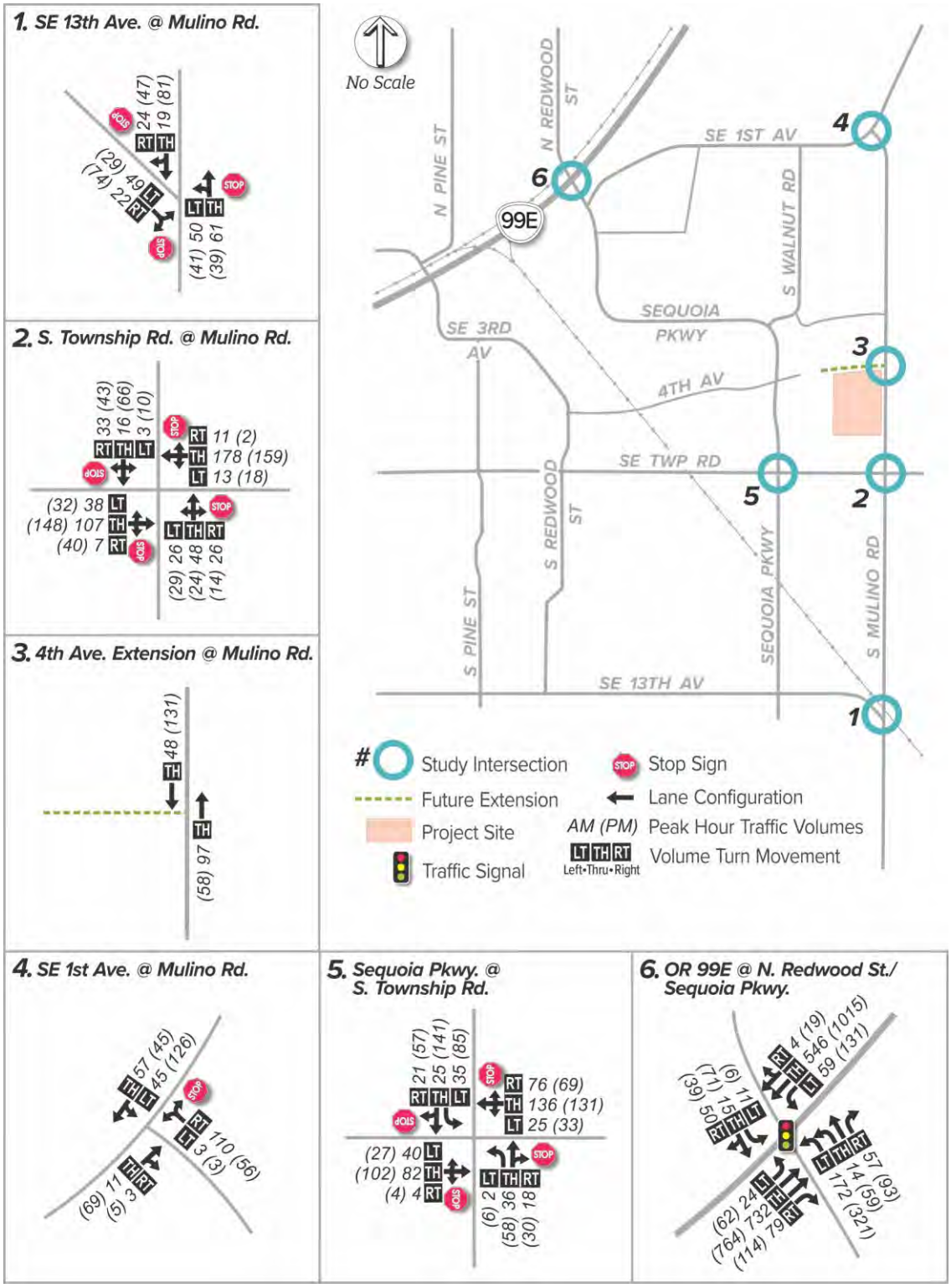


**Figure 2: Existing Peak Hour Traffic Volumes**

### *Intersection Operations*

This section discusses the existing conditions for motor vehicles at the study intersections, including an analysis of traffic operations.

#### Intersection Performance Measures

Level of service (LOS) ratings and volume-to-capacity (v/c) ratios are two commonly used performance measures that provide a good picture of intersection operations. Agencies often incorporate these performance measures into their mobility standards. Descriptions are given below:

- **Level of service (LOS):** A "report card" rating (A through F) based on the average delay experienced by vehicles at the intersection. LOS A, B, and C indicate conditions where traffic moves without significant delays over periods of peak hours travel demand. LOS D and E are progressively worse operation conditions. LOS F represents conditions where average vehicle delay has become excessive and demand has exceeded capacity.
- **Volume-to-capacity (v/c) ratio:** A decimal representation (typically between 0.00 and 1.00) of the proportion of capacity that is being used at a turn movement, approach leg, or intersection. It is determined by dividing the peak hour traffic volume by the hourly capacity of a given intersection or movement. A lower ratio indicates smooth operations and minimal delays. As the ratio approaches 1.00, congestion increases, and performance is reduced. If the ratio is greater than 1.00, the turn movement, approach leg, or intersection is oversaturated and usually results in excessive queues and long delays.

#### Jurisdictional Mobility Standards

The mobility standards for the study intersections vary according to the agency of jurisdiction for each roadway. One of the study intersections is under City jurisdiction (Sequoia Parkway/S Township Road), the OR 99E / N Redwood Street / Sequoia Parkway intersection is under ODOT jurisdiction and the remaining study intersections along S Mulino Road are under the jurisdiction of Clackamas County.

ODOT requires a volume to capacity ratio of 0.85 or less, Clackamas County requires a volume to capacity ratio of 0.95 or less[4], and the City of Canby operating standards require that a level of service "E" or better and a volume to capacity ratio of 0.90 or less be maintained for all unsignalized intersections[5].

[4] Clackamas County Comprehensive Plan, Chapter 5. Retrieved November 2019.
[5] Canby Transportation System Plan, December 2010. Retrieved November 20182019.

### Existing Operating Conditions

Motor vehicle conditions were evaluated during the peak hours at the study intersections (see Table 2) using 2000 Highway Capacity Manual methodology for signalized and 2010 Highway Capacity Manual methodology for unsignalized intersections[6]. During the peak hours, all study intersections operate well within the adopted mobility standards (see Table 2).

**Table 2: Existing 2019 Study Intersection Operations**

| Intersection | Traffic Control | Jurisdiction | Mobility Standard | AM Peak | | | PM Peak | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | *Delay* | *LOS* | *v/c* | *Delay* | *LOS* | *v/c* |
| SE 13th Avenue / S Mulino Road | AWSC | County | 0.95 V/C | 7.9 | A | 0.16 | 8.0 | A | 0.17 |
| S Township Road / S Mulino Road | AWSC | County | 0.95 V/C | 9.2 | A | 0.31 | 9.2 | A | 0.30 |
| 4th Avenue extension / S Mulino Road * | TWSC | County | 0.95 V/C | - | - | - | - | - | - |
| SE 1st Avenue / S Mulino Road | TWSC | County | 0.95 V/C | 8.9 | A/A | 0.13 | 9.1 | A/A | 0.10 |
| Sequoia Parkway / S Township Road | AWSC | City | LOS E, 0.90 V/C | 9.7 | A | 0.36 | 10.6 | B | 0.36 |
| OR 99E / N Redwood Street / Sequoia Parkway | Signal | ODOT | 0.85 V/C | 19.0 | B | 0.42 | 33.0 | C | 0.67 |

Note: * Future Intersection with Proposed Project

**Two-Way Stop Controlled (TWSC) intersections:**
v/c = Volume-to-Capacity Ratio of Worst Movement
Delay = Average Intersection Delay (sec.) of Worst Approach
LOS = Level of Service of Major Street/Minor Street

**All Way Stop Controlled (AWSC) Intersections:**
v/c = Volume-to-Capacity Ratio of Worst Movement
LOS & Delay = Reported for entire intersection

### *Safety Analysis*

The most recent three years of available collision data (2015 – 2017) for the study area was obtained from Oregon Department of Transportation (ODOT) and used to evaluate the collision history[7]. Eighteen crashes were recorded at the study intersections over the three-year period, with the most crashes occurring at the OR 99E / N Redwood St / Sequoia Parkway intersection.

[6] 2016 Highway Capacity Manual 6th Edition, Transportation Research Board, Washington DC, 2016.
[7] ODOT reported collisions for January 1, 2015 through December 31, 2017.

Crash rates at study intersections were calculated to identify problem areas in need of mitigation. The total number of crashes experienced at an intersection is typically proportional to the number of vehicles entering it, therefore, a crash rate describing the frequency of crashes per million entering vehicles (MEV) is used to determine if the number of crashes should be considered high. Using this technique, a collision rate of 1.0 MEV or greater is commonly used to identify when collision occurrences are higher than average and should be further evaluated. As shown in Table 3, crash rates calculated at all study intersections are well below this threshold, indicating the frequency of collisions is typical for the volume of traffic served.

**Table 3: Crash Data Summary (2015 - 2017)**

| Intersection | Total Crashes | Crash Type | | | Crash Severity | | | Collision Rate |
|---|---|---|---|---|---|---|---|---|
| | | *Angle or Turn* | *Rear End* | *Fixed Object* | *PDO** | *Minor Injury* | *Major Injury* | |
| SE 13th Avenue / S Mulino Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| S Township Road / S Mulino Road | 2 | 2 | 0 | 0 | 1 | 1 | 0 | 0.19 |
| SE 1st Avenue / S Mulino Road | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sequoia Parkway / S Township Road | 4 | 4 | 0 | 0 | 2 | 2 | 0 | 0.29 |
| OR 99E / N Redwood Street / Sequoia Parkway | 12 | 5 | 5 | 2 | 4 | 7 | 1 | 0.24 |

*PDO = Property Damage Only

# SECTION 3. ASSUMPTIONS AND METHODOLOGIES

This section outlines key assumptions and methodologies that were used to analyze future conditions and identify any potential impacts at study intersections. Areas of interest covered in this section are trip generation, trip distribution and background traffic growth.

## Project Description

The proposed project will consist of a building with approximately 150,350 square feet, including 73,575 square feet of manufacturing, 73,575 square feet of warehouse and 3,200 square feet of office space. The proposed site is located south of the proposed 4th Avenue extension, between Sequoia Parkway and S Mulino Road and is currently used for agricultural purposes. The site plan can be seen in Figure 3.

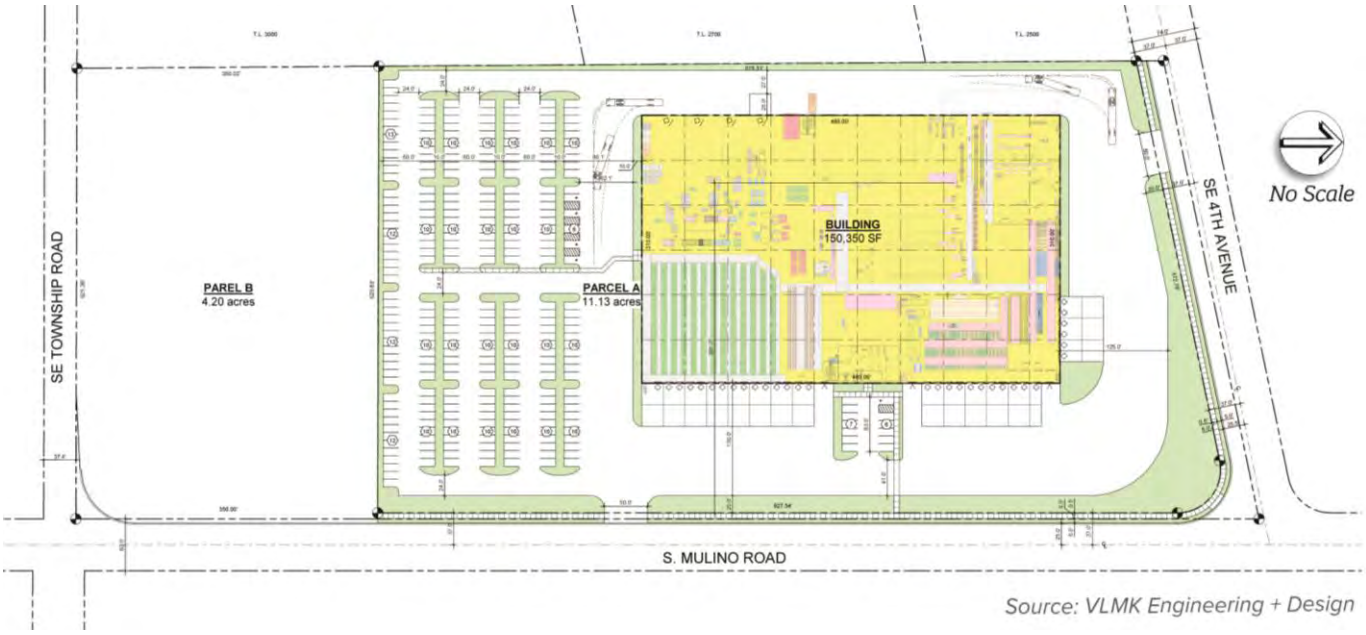


**Figure 3: Site Plan**

## Site Access

Access to the site is proposed via one driveway to S Mulino Road and one driveway to the extension of 4th Avenue from S Mulino Road. S Mulino Road is a collector and the 4th Avenue extension is proposed to be a collector. The minimum spacing between accesses on the same side of a collector in the Industrial Overlay Zone is 200 feet[8]. The proposed driveway to the 4th Avenue extension will be approximately 480 feet from S Mulino Road, complying with the spacing standard.

[8] Canby Municipal Code 16.35.050.F. Retrieved November 2019.

According to the Clackamas County roadway standards, the minimum spacing between accesses on a collector is 150 feet[9]. The distance between the proposed access to S Mulino Road and the nearest access to the north (4th Avenue extension) is approximately 700 feet, which meets the access spacing standard. The distance between the proposed access and the closest access to the south (S Township Road) is about 700 feet, which also meets the spacing standard.

### *Sight Distance Review*

The sight triangle at intersections should be clear of objects (large signs, landscaping, parked cars, etc.) that could potentially limit vehicle sight distance. In addition, all proposed accesses should meet AASHTO sight distance requirements as measured from 15 feet back from the edge of pavement[10].

The proposed access to S Mulino Road would require a minimum of 665 feet of sight distance based on an assumed 60-mph design speed. Preliminary sight distance evaluation from the access indicates that it would be expected to provide sight distance beyond 1,000 feet looking to the north and south. Sight distance could not be verified at the future access to the 4th Avenue extension, but it is expected that they will require a minimum of 280 feet of sight distance based on an assumed posted speed of 25-mph.

Prior to occupancy, sight distance at all access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon.

### *Internal Sight Circulation*

Access to the site is proposed via one driveway to S Mulino Road and one driveway to the extension of 4th Avenue from S Mulino Road. Parking will be primarily located on the south side of the building, with some additional parking spots located on the east side. Vehicles will primarily enter the site through the S Mulino Road driveway to access this parking. Trucks will access the project site through either of the two driveways, with the site designed to allow full circulation around the building to the loading docks located on the north and east side of the building. Both driveways are shown with 50-foot widths on the site plan to accommodate truck maneuvers.

The proposed site also includes a sidewalk connection from S Mulino Road to the building, and sidewalks connecting the parking lot to the building. Until parcels surrounding this site develop, the frontage improvements along S Mulino Road and the 4th Avenue extension will not connect to other nearby facilities. The proposed on-site pedestrian facilities and their connection to surrounding facilities appear to be adequate.

[9] Clackamas County Roadway Standards 220.5. Retrieved November 2019.
[10] *AASHTO – Geometric Design of Highways and Streets, 6th edition, 2011.*

## Trip Generation

Trip generation is the method used to estimate the number of vehicles that are added to the surrounding roadway network as a result of proposed project. The trip generation was estimated using similar land uses as reported by the Institute of Transportation Engineers (ITE)[11]. The trip generation was conducted for the a.m. and p.m. peak hours using the Manufacturing (ITE Code 140), Warehousing (ITE Code 150) and General Office Building (ITE Code 710) land uses.

Table 4 summarizes the expected trip generation for the proposed project. As shown, the proposed site is expected to generate approximately 64 (49 in, 15 out) a.m. peak hour trips, 69 (20 in, 49 out) p.m. peak hour trips, and 460 daily trips. The proportion of trucks associated with the proposed project was estimated using data from the operations at the current Stanton Furniture facility. This data indicated trucks represent about 9 percent of the current daily site generated trips, which would mean the proposed project would generate around 40 trucks per day assuming the same spilt between vehicle types.

**Table 4: Trip Generation for the Proposed Project**

| Land Use (ITE Code) | Size (sq. ft.) | AM Peak | | | PM Peak | | | Daily Trips |
|---|---|---|---|---|---|---|---|---|
| | | In | Out | Total | In | Out | Total | |
| **Manufacturing (140)** | 73,575 | 35 | 11 | 46 | 15 | 35 | 50 | 291 |
| **Warehousing (150)** | 73,575 | 10 | 3 | 13 | 4 | 10 | 14 | 129 |
| **General Office Building (710)** | 3,200 | 4 | 1 | 5 | 1 | 4 | 5 | 40 |
| | **Total** | **49** | **15** | **64** | **20** | **49** | **69** | **460** |

## Trip Distribution

Trip distribution involves estimating how project generated traffic will leave and arrive at the proposed site and what roads those trips will take. The trip distribution for the proposed project was estimated based on the City of Canby travel demand model[12]. It is estimated that 35 percent of the trips will originate from the west on S Township Road, 30 percent from the west on OR 99E, 10 percent from the east on OR 99E, 20 percent from the north on Haines Road, and 5 percent from the south along Mulino Road. It is estimated that 40 percent of the trips will leave the project site to destinations to the west on S Township Road, 25 percent to the west on OR 99E, 10 percent to the east on OR 99E, 20 percent to the north on Mulino Road, and 5 percent to the south along Mulino Road. The assumed trip distribution for the proposed project can be seen in Figure 4.

[11] *Trip Generation Manual*, Institute of Transportation Engineers, 10th Edition.
[12] *City of Canby Travel Forecast Tool*, select zone model run for Traffic Analysis Zone 162.

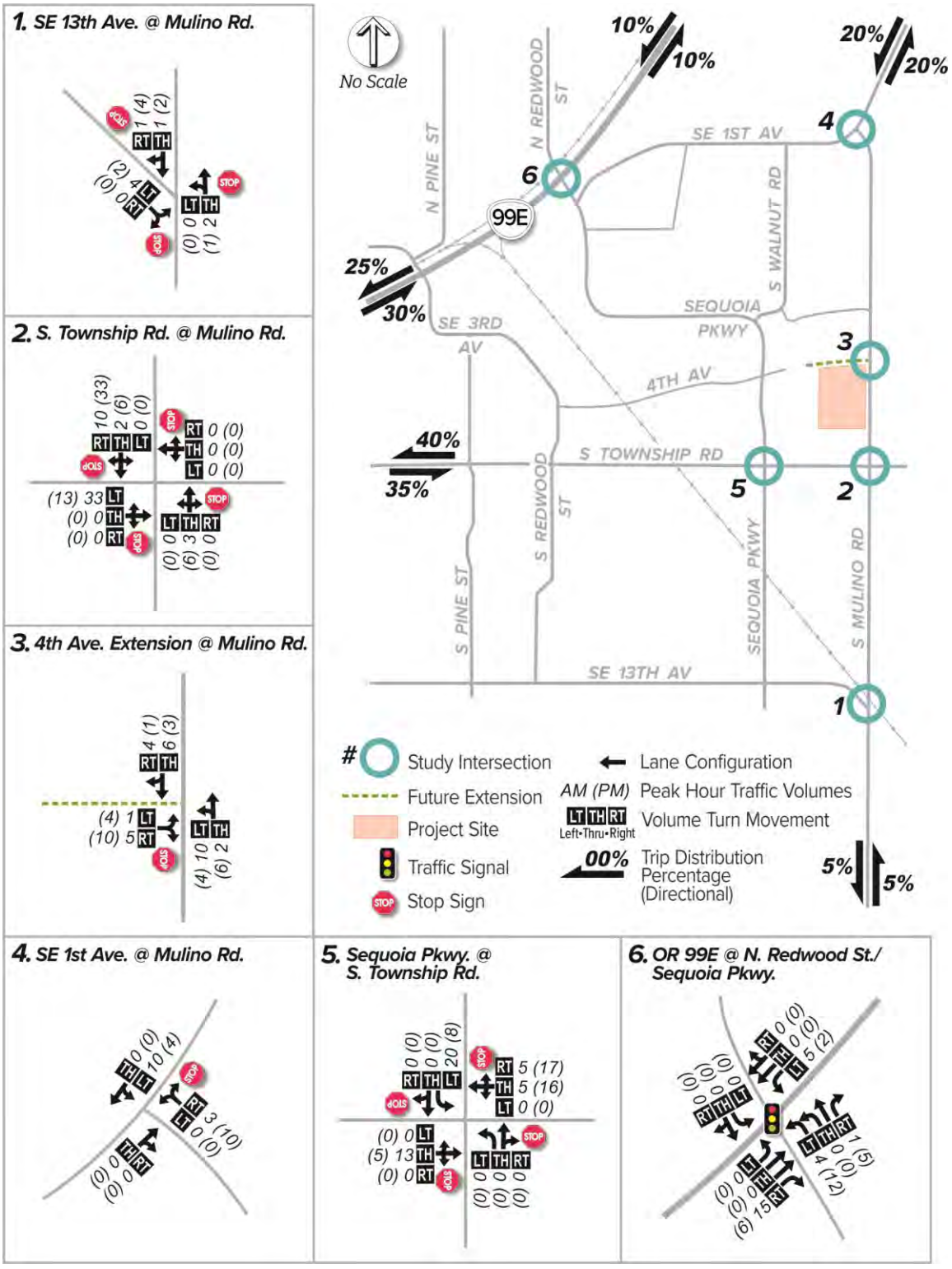


**Figure 4: Distribution of Site Generated Trips**

## Background Traffic

In addition to the trips generated from the proposed project, trips from nearby approved but unconstructed developments were added as background traffic. Trips added as background traffic included those from the following developments:

1. Alpha Scents: 7,500 square foot corporate headquarters building including warehouse/ shipping area
2. Canby Active Water Sports: 25,000 square foot building including boat sales, display, and warehousing plus 35,000 square foot outdoor display area
3. BBC Steel Expansion: 31,050 square foot building including storage, office, and manufacturing space
4. Reimers Industrial: 17,400 and 24,000 square foot buildings including flexible industrial space (*80% occupied*)
5. Project Shakespeare: 514,500 square foot warehouse, which includes supporting office space

## Planning Horizons

The planning horizon year selected for analysis is 2020, which represents the expected year of build-out and occupancy for the proposed project. Two scenarios were evaluated to allow for the identification of capacity constraints associated with proposed project, including:

- **2020 Background Conditions** – Existing traffic volumes plus background traffic growth.
- **2020 Project Conditions** – Existing traffic volumes plus background traffic growth, with the added traffic associated with the proposed Stanton Furniture Development.

An additional sensitivity option was tested for the 2020 Project Conditions Scenario that assumed the planned segment of 4th Avenue between the project site and Sequoia Parkway would be completed to allow for two-way traffic flow. This scenario also includes the trips associated with the proposed but not yet approved Caruso Produce Distribution Facility (85,250 square foot building) on the opposite side of the 4th Avenue extension from the Stanton Furniture Development.

Figures 5 and 6 summarize the traffic volumes for the a.m. and p.m. peak hours at study intersections.

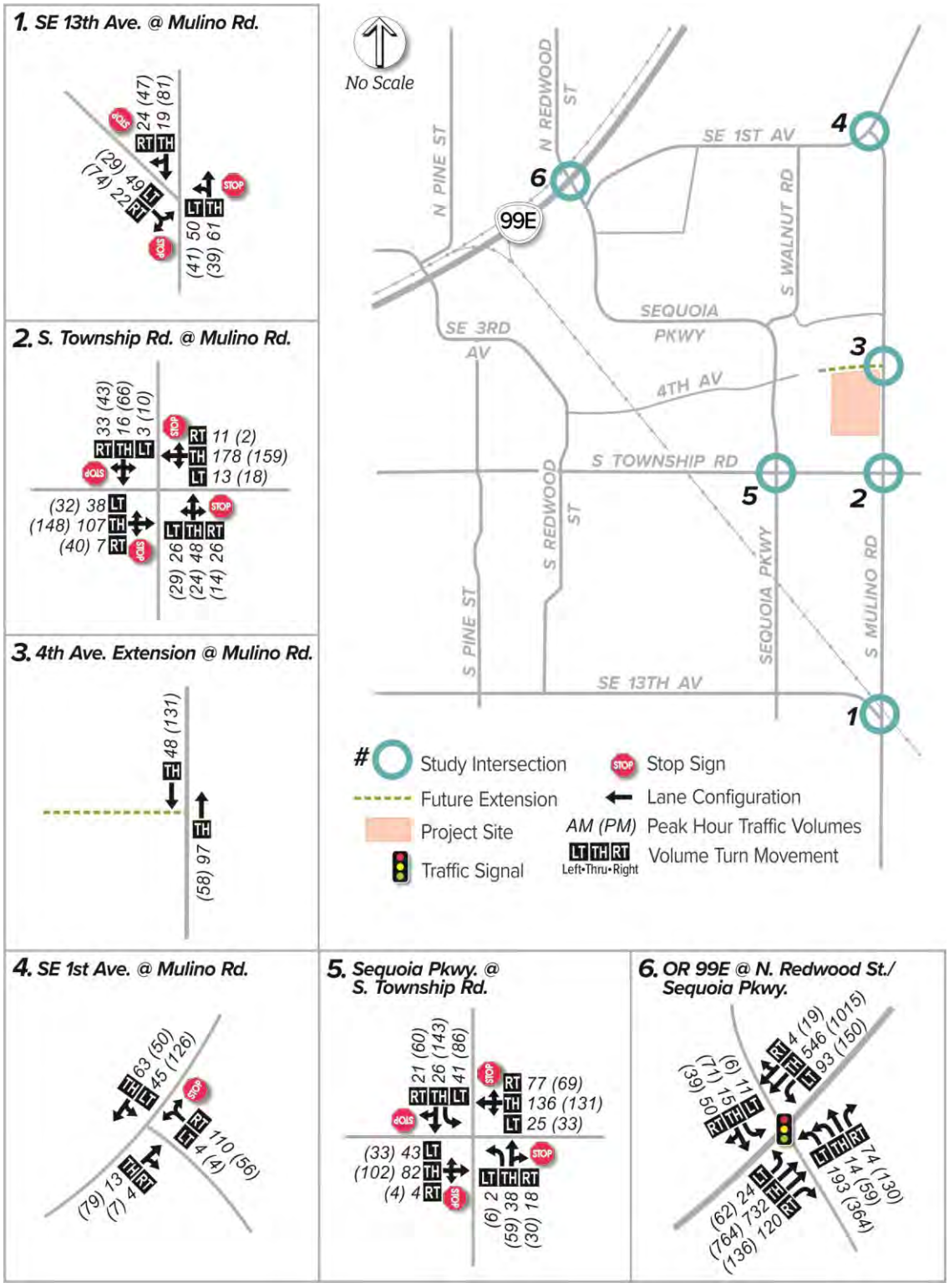


**Figure 5: 2020 Background Conditions Traffic Volumes**

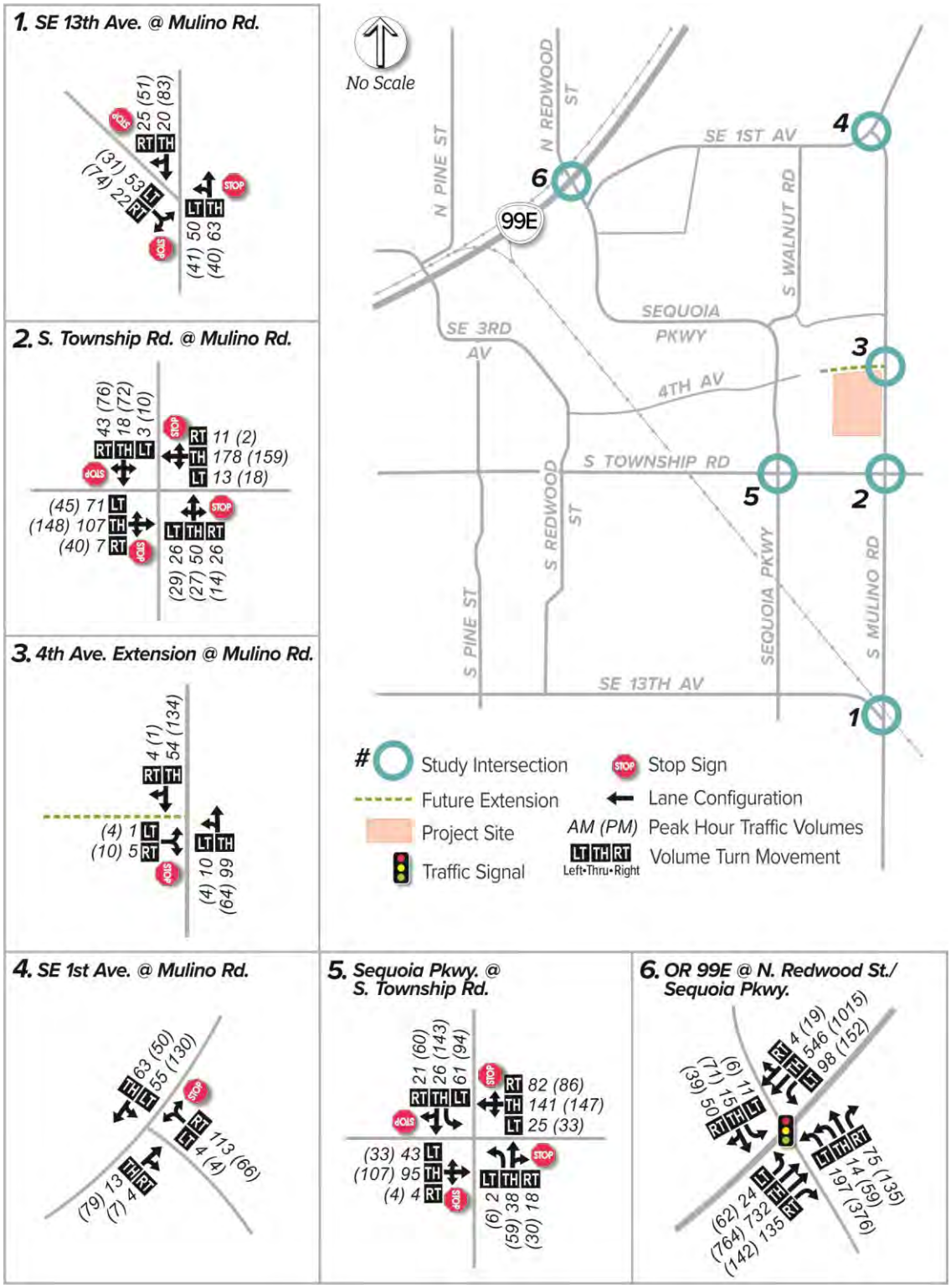


**Figure 6: 2020 Project Conditions Traffic Volumes**

# SECTION 4. FUTURE CONDITIONS

The following section summarizes the peak hour transportation operating conditions for the planning horizon year of 2020. Future traffic operating conditions were analyzed at the study intersections to determine if the transportation network can support traffic generated by the proposed project. If intersection mobility standards are not met, then mitigations may be necessary to improve network performance.

## 2020 Background Conditions Intersection Operations

Table 5 shows the future 2020 intersection operations at study intersections, without the proposed project. As shown, the background traffic growth is expected to have little impact on traffic operations. All study intersections are expected to operate with a level of service "D" or better and a v/c ratio of 0.70 or better.

**Table 5: Background Conditions Intersection Operations**

| Intersection | Traffic Control | Jurisdiction | Mobility Standard | AM Peak | | | PM Peak | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | *Delay* | *LOS* | *v/c* | *Delay* | *LOS* | *v/c* |
| SE 13th Avenue / S Mulino Road | AWSC | County | 0.95 V/C | 7.9 | A | 0.16 | 8.0 | A | 0.17 |
| S Township Road / S Mulino Road | AWSC | County | 0.95 V/C | 9.2 | A | 0.31 | 9.2 | A | 0.30 |
| 4th Avenue extension / S Mulino Road * | TWSC | County | 0.95 V/C | - | - | - | - | - | - |
| SE 1st Avenue / S Mulino Road | TWSC | County | 0.95 V/C | 8.9 | A/A | 0.13 | 9.3 | A/A | 0.10 |
| Sequoia Parkway / S Township Road | AWSC | City | LOS E, 0.90 V/C | 9.8 | A | 0.37 | 10.7 | B | 0.36 |
| OR 99E / N Redwood Street / Sequoia Parkway | Signal | ODOT | 0.85 V/C | 21.6 | C | 0.46 | 35.4 | D | 0.70 |

Note: * Future Intersection with Proposed Project

**Two-Way Stop Controlled (TWSC) intersections:**
v/c = Volume-to-Capacity Ratio of Worst Movement
Delay = Average Intersection Delay (sec.) of Worst Approach
LOS = Level of Service of Major Street/Minor Street

**All Way Stop Controlled (AWSC) Intersections:**
v/c = Volume-to-Capacity Ratio of Worst Movement
LOS & Delay = Reported for entire intersection

## 2020 Project Conditions Intersection Operations

The 2020 project conditions peak hour operations at study intersection are shown in Table 6 and Table 7. As shown, the added traffic associated with the proposed project is expected to have little impact on traffic operations when compared to the background conditions without the project (see Table 5 earlier in this document). All study intersections are still expected to operate with a level of service "C" and a v/c ratio of 0.57 or better.

### *4th Avenue Extension*

The planned segment of the 4th Avenue extension west of the project site to Sequoia Parkway will not be completed concurrent with the proposed project due to existing development along the future alignment. Only the eastern portion of the planned extension will be constructed, adjacent to the project site and connecting to S Mulino Road. The project generated traffic in the 2020 Project Conditions scenario is assumed to route to S Mulino Road from the project driveways. Therefore, to ensure the future roadway can accommodate potential growth, the future volumes and study intersection operations under the 2020 Project Conditions with this segment of the 4th Avenue extension were reviewed. This scenario also includes the trips associated with the proposed but not yet approved Caruso Produce Distribution Facility (85,250 square foot building) on the opposite side of the 4th Avenue extension from the Stanton Furniture Development.

As shown in Table 6 and Table 7, the re-routed traffic associated with completion of the segment of the planned 4th Avenue extension west of the project site to Sequoia Parkway and additional trips associated with the proposed but not yet approved Caruso Produce Distribution Facility is expected to have little impact on intersection operations when compared to the scenario without the segment. The change to study intersection operations is mostly a result of the additional trips associated with the Caruso Produce Distribution Facility on the opposite side of the 4th Avenue extension.

**Table 6: 2020 Project Conditions Intersection Operations (AM Peak)**

| Intersection | Traffic Control | Jurisdiction | Mobility Standard | 2020 Project Conditions (without 4th Avenue extension segment near Sequoia Parkway) | | | 2020 Project Conditions (with 4th Avenue extension segment near Sequoia Parkway) | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | *Delay* | *LOS* | *v/c* | *Delay* | *LOS* | *v/c* |
| SE 13th Avenue / S Mulino Road | AWSC | County | 0.95 V/C | 7.9 | A | 0.16 | 7.9 | A | 0.16 |
| S Township Road / S Mulino Road | AWSC | County | 0.95 V/C | 9.6 | A | 0.31 | 9.3 | A | 0.31 |
| 4th Avenue extension / S Mulino Road | TWSC | County | 0.95 V/C | 9.6 | A/A | 0.01 | 10.0 | A/B | 0.02 |
| SE 1st Avenue / S Mulino Road | TWSC | County | 0.95 V/C | 9.0 | A/A | 0.14 | 9.0 | A/A | 0.14 |
| Sequoia Parkway / S Township Road | AWSC | City | LOS E, 0.90 V/C | 10.2 | B | 0.39 | 10.0 | A | 0.38 |
| OR 99E / N Redwood Street / Sequoia Parkway | Signal | ODOT | 0.85 V/C | 21.9 | C | 0.46 | 22.0 | C | 0.47 |

**Table 7: 2020 Project Conditions Intersection Operations (PM Peak)**

| Intersection | Traffic Control | Jurisdiction | Mobility Standard | 2020 Project Conditions (without 4th Avenue extension segment near Sequoia Parkway) | | | 2020 Project Conditions (with 4th Avenue extension segment near Sequoia Parkway) | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | *Delay* | *LOS* | *v/c* | *Delay* | *LOS* | *v/c* |
| SE 13th Avenue / S Mulino Road | AWSC | County | 0.95 V/C | 8.0 | A | 0.18 | 8.0 | A | 0.18 |
| S Township Road / S Mulino Road | AWSC | County | 0.95 V/C | 9.5 | A | 0.33 | 9.4 | A | 0.31 |
| 4th Avenue extension / S Mulino Road | TWSC | County | 0.95 V/C | 9.9 | A/A | 0.01 | 10.5 | A/B | 0.03 |
| SE 1st Avenue / S Mulino Road | TWSC | County | 0.95 V/C | 9.3 | A/A | 0.10 | 9.3 | A/A | 0.10 |
| Sequoia Parkway / S Township Road | AWSC | City | LOS E, 0.90 V/C | 11.1 | B | 0.42 | 11.0 | B | 0.38 |
| OR 99E / N Redwood Street / Sequoia Parkway | Signal | ODOT | 0.85 V/C | 35.9 | D | 0.70 | 36.1 | D | 0.70 |

## Transportation System Context

The traffic volumes resulting from the proposed project on S Mulino Road (the nearest collector roadway to the project site) were compared to existing traffic volumes, as well as the projected volumes from the City's Transportation System Plan (TSP) to provide an evaluation of growth on the roadway compared to planned conditions. A 24-hour weekday traffic volume was collected on S Mulino Road near the proposed site[13]. A comparison of the traffic volumes along this segment can be seen in Table 8. As shown, the annual growth that has occurred on S Mulino Road between 2009 and 2019 is slightly lower than the annual growth that was projected in the City's TSP through 2030.

S Mulino Road does not currently meet the cross-section requirements for standard collector streets, but once improved it should safely accommodate additional vehicle traffic consistent with the TSP forecast. Planned projects along key corridors in the area will also help serve growth. These projects include:

- Extending Walnut Road between SE 1st Avenue and OR 99E
- Upgrading SE 1st Avenue between Hazel Dell Way and S Mulino Road
- Constructing a roundabout at the S Mulino Road/SE 1st Avenue/S Bremer Road/S Haines Road intersection
- Constructing a roundabout at the S Township Road / S Mulino Road intersection
- Extending SE 4th Avenue between S. Sequoia Parkway and S Mulino Road

**Table 8: Volume Growth Comparison along S Mulino Road**

| Period | Estimated Site Trips | Current Volume (2019) | TSP Volume (2009) * | TSP Estimated Future Volume (2030) * | TSP Forecasted Annual Growth Rate (2030-2009) | Realized Annual Growth Rate (2019-2009) |
|---|---|---|---|---|---|---|
| Daily | 368 | 1,880 | -- | -- | -- | -- |
| AM Peak Hour | 51 | 155 | -- | -- | -- | -- |
| PM Peak Hour | 55 | 177 | 170 | 910 | 21% | 14% |

* Year 2009 and 2030 volumes are from 2010 City of Canby Transportation System Plan

[13] Count data collected on October 22nd, 2019 along S Mulino Road near the proposed site.

# SECTION 5. RECOMMENDATIONS

The following section summarizes the key findings and recommendations related to the proposed project.

## Motor Vehicle Improvements

None of the study intersections were identified as having an impact based on projected growth from the proposed project. However, a few improvements are recommended to support the proposed project.

### *Site Access Recommendations*

Access to the site is proposed via one driveway to S Mulino Road (classified as a collector) and one driveway to the extension of 4th Avenue (to be classified as a collector) from S Mulino Road. Although S Mulino Road is under County jurisdiction, it should be constructed to the City collector standard. It does not currently meet the City's cross-section requirements for standard collector streets (34-50 feet paved with 50-80 feet of ROW). The 4th Avenue extension should also be constructed as a standard collector street (34-50 feet paved with 50-80 feet of ROW). It is assumed that the City and the developer will work together determine required frontage improvements and right-of-way dedications.

### *Sight Distance Recommendations*

Preliminary sight distance evaluation from the S Mulino Road access indicates that the proposed connection would be expected to provide adequate sight distance looking to the north and south. Sight distance could not be verified at the future access to the 4th Avenue extension, but it is expected that they will require a minimum of 280 feet of sight distance based on an assumed posted speed of 25-mph.

Prior to occupancy, sight distance at all access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon.

## Pedestrian/Bicycle Improvements

Sidewalks and bike lanes will be included along the site frontage of the 4th Avenue extension and S Mulino Road. The proposed site also includes a sidewalk connection from S Mulino Road to the building, and sidewalks connecting the parking lot to the building.

# Appendix

## Peak Hour Traffic Count Data

## Tube Count Data

## HCM Analysis Reports

# Peak Hour Traffic Count Data

K-D-N
KEY DATA NETWORK

| Data Provided by K-D-N.com 503-594-4224 | |
|---|---|
| **N/S street:** | ***Sequoia Pkwy*** |
| **E/W street:** | ***S Township Rd*** |
| **City, State** | Canby OR |
| **Study ID #** | |
| **Location** | 45.259422 - -122.666145 |
| **Start Date** | Tuesday, October 22, 2019 |
| **Start Time** | 07:00:00 AM |
| **Peak Hour Start** | 07:00:00 AM |
| **Peak 15 Min Start** | 07:30:00 AM |
| **PHF (15-Min Int)** | 0.81 |

Peak-Hour Volumes (PHV)

| Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Entering | | | | Leaving | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | NB | SB | EB | WB | NB | SB | EB | WB |
| 2 | 36 | 18 | 0 | 35 | 25 | 21 | 0 | 40 | 82 | 4 | 0 | 25 | 136 | 76 | 0 | 56 | 81 | 126 | 237 | 54 | 152 | 159 | 135 |
| Percent Heavy Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0% | 11.1% | 16.7% | 0.0% | 8.6% | 24.0% | 9.5% | 0.0% | 32.5% | 4.9% | 25.0% | 0.0% | 0.0% | 5.1% | 1.3% | 0.0% | 12.5% | 13.6% | 14.3% | 3.4% | 13.0% | 11.8% | 5.7% | 7.4% |

| PHV- Bicycles | | | | | | | | | | | | | | | | | PHV - Pedestrians | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | in Crosswalk | | | | | |
| Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | **Sum** | NB | SB | EB | WB | **Sum** |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 2 |

All Vehicle Volumes

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sequoia Pkwy | | | | Sequoia Pkwy | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 07:00:00 AM | 0 | 2 | 0 | 0 | 2 | 2 | 1 | 0 | 2 | 2 | 0 | 0 | 1 | 14 | 9 | 0 | | |
| 07:05:00 AM | 0 | 4 | 2 | 0 | 1 | 2 | 1 | 0 | 4 | 9 | 1 | 0 | 2 | 15 | 7 | 0 | | |
| 07:10:00 AM | 0 | 2 | 0 | 0 | 4 | 1 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 10 | 6 | 0 | 112 | |
| 07:15:00 AM | 0 | 6 | 0 | 0 | 2 | 3 | 4 | 0 | 4 | 3 | 0 | 0 | 2 | 9 | 3 | 0 | 113 | |
| 07:20:00 AM | 0 | 1 | 0 | 0 | 5 | 1 | 4 | 0 | 0 | 7 | 0 | 0 | 2 | 9 | 6 | 0 | 100 | |
| 07:25:00 AM | 0 | 2 | 1 | 0 | 2 | 3 | 1 | 0 | 6 | 3 | 0 | 0 | 4 | 12 | 3 | 0 | 108 | |
| 07:30:00 AM | 1 | 3 | 3 | 0 | 4 | 3 | 3 | 0 | 9 | 9 | 0 | 0 | 3 | 19 | 8 | 0 | 137 | |
| 07:35:00 AM | 0 | 2 | 5 | 0 | 2 | 1 | 3 | 0 | 5 | 15 | 0 | 0 | 2 | 7 | 6 | 0 | 150 | |
| 07:40:00 AM | 0 | 2 | 2 | 0 | 2 | 3 | 0 | 0 | 5 | 7 | 0 | 0 | 2 | 9 | 9 | 0 | 154 | |
| 07:45:00 AM | 0 | 3 | 1 | 0 | 1 | 5 | 0 | 0 | 0 | 11 | 0 | 0 | 2 | 11 | 3 | 0 | 126 | |
| 07:50:00 AM | 1 | 2 | 1 | 0 | 8 | 1 | 0 | 0 | 1 | 3 | 2 | 0 | 2 | 10 | 10 | 0 | 119 | |
| 07:55:00 AM | 0 | 7 | 3 | 0 | 2 | 0 | 2 | 0 | 2 | 11 | 1 | 0 | 3 | 11 | 6 | 0 | 126 | 500 |
| 08:00:00 AM | 0 | 4 | 0 | 0 | 6 | 3 | 0 | 0 | 3 | 5 | 0 | 0 | 0 | 6 | 2 | 0 | 118 | 494 |
| 08:05:00 AM | 1 | 4 | 3 | 0 | 4 | 2 | 0 | 0 | 2 | 3 | 1 | 0 | 3 | 5 | 7 | 0 | 112 | 481 |
| 08:10:00 AM | 0 | 3 | 2 | 0 | 1 | 1 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 5 | 7 | 0 | 90 | 478 |
| 08:15:00 AM | 0 | 6 | 3 | 0 | 2 | 0 | 1 | 0 | 0 | 6 | 0 | 0 | 1 | 5 | 7 | 0 | 92 | 473 |
| 08:20:00 AM | 0 | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 6 | 0 | 0 | 0 | 7 | 8 | 0 | 83 | 464 |
| 08:25:00 AM | 1 | 2 | 3 | 0 | 3 | 4 | 1 | 0 | 0 | 9 | 1 | 0 | 0 | 5 | 3 | 0 | 89 | 459 |
| 08:30:00 AM | 0 | 5 | 4 | 0 | 1 | 5 | 1 | 0 | 0 | 6 | 0 | 0 | 2 | 4 | 6 | 0 | 92 | 428 |
| 08:35:00 AM | 1 | 1 | 2 | 0 | 4 | 5 | 0 | 0 | 1 | 11 | 0 | 0 | 1 | 10 | 5 | 0 | 107 | 421 |
| 08:40:00 AM | 0 | 0 | 1 | 0 | 2 | 3 | 1 | 0 | 2 | 2 | 0 | 0 | 1 | 9 | 5 | 0 | 101 | 406 |
| 08:45:00 AM | 0 | 3 | 2 | 0 | 3 | 2 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 5 | 8 | 0 | 98 | 400 |
| 08:50:00 AM | 1 | 3 | 1 | 0 | 3 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 2 | 6 | 4 | 0 | 82 | 384 |
| 08:55:00 AM | 0 | 4 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 4 | 1 | 0 | 1 | 8 | 17 | 0 | 96 | 376 |

Bicycles on Road

K-D-N
KEY DATA NETWORK

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sequoia Pkwy | | | | Sequoia Pkwy | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 07:00:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 07:05:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 07:10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:15:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:20:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:25:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:30:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:35:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:40:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:45:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 07:50:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 07:55:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 08:00:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:05:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:15:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:20:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:25:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:30:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:35:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:40:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:45:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:50:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:55:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Passenger vehicles and light trucks

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sequoia Pkwy | | | | Sequoia Pkwy | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 07:00:00 AM | 0 | 2 | 0 | 0 | 2 | 2 | 1 | 0 | 2 | 2 | 0 | 0 | 1 | 14 | 9 | 0 | | |
| 07:05:00 AM | 0 | 3 | 2 | 0 | 1 | 2 | 1 | 0 | 3 | 9 | 0 | 0 | 2 | 13 | 7 | 0 | | |
| 07:10:00 AM | 0 | 2 | 0 | 0 | 3 | 1 | 2 | 0 | 2 | 2 | 0 | 0 | 0 | 8 | 5 | 0 | 103 | |
| 07:15:00 AM | 0 | 5 | 0 | 0 | 2 | 1 | 3 | 0 | 4 | 3 | 0 | 0 | 2 | 9 | 3 | 0 | 100 | |
| 07:20:00 AM | 0 | 1 | 0 | 0 | 5 | 0 | 4 | 0 | 0 | 7 | 0 | 0 | 2 | 8 | 6 | 0 | 90 | |
| 07:25:00 AM | 0 | 2 | 1 | 0 | 2 | 3 | 1 | 0 | 2 | 3 | 0 | 0 | 4 | 12 | 3 | 0 | 98 | |
| 07:30:00 AM | 1 | 3 | 2 | 0 | 4 | 2 | 3 | 0 | 9 | 9 | 0 | 0 | 3 | 19 | 8 | 0 | 129 | |
| 07:35:00 AM | 0 | 2 | 5 | 0 | 2 | 1 | 3 | 0 | 1 | 15 | 0 | 0 | 2 | 7 | 6 | 0 | 140 | |
| 07:40:00 AM | 0 | 2 | 0 | 0 | 1 | 3 | 0 | 0 | 2 | 6 | 0 | 0 | 2 | 9 | 9 | 0 | 141 | |
| 07:45:00 AM | 0 | 3 | 1 | 0 | 1 | 3 | 0 | 0 | 0 | 10 | 0 | 0 | 2 | 10 | 3 | 0 | 111 | |
| 07:50:00 AM | 1 | 1 | 1 | 0 | 7 | 1 | 0 | 0 | 1 | 3 | 2 | 0 | 2 | 10 | 10 | 0 | 106 | |
| 07:55:00 AM | 0 | 6 | 3 | 0 | 2 | 0 | 1 | 0 | 1 | 9 | 1 | 0 | 3 | 10 | 6 | 0 | 114 | 456 |
| 08:00:00 AM | 0 | 4 | 0 | 0 | 4 | 3 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 6 | 2 | 0 | 106 | 446 |
| 08:05:00 AM | 0 | 4 | 3 | 0 | 2 | 2 | 0 | 0 | 2 | 3 | 0 | 0 | 3 | 5 | 7 | 0 | 98 | 434 |
| 08:10:00 AM | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 6 | 0 | 0 | 0 | 4 | 6 | 0 | 77 | 430 |
| 08:15:00 AM | 0 | 5 | 3 | 0 | 2 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 1 | 4 | 7 | 0 | 79 | 425 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08:20:00 AM | 0 | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 6 | 0 | 0 | 0 | 7 | 8 | 0 | 74 | 418 |
| 08:25:00 AM | 1 | 2 | 2 | 0 | 2 | 4 | 1 | 0 | 0 | 7 | 1 | 0 | 0 | 4 | 3 | 0 | 80 | 412 |
| 08:30:00 AM | 0 | 4 | 4 | 0 | 1 | 5 | 1 | 0 | 0 | 6 | 0 | 0 | 2 | 4 | 6 | 0 | 86 | 382 |
| 08:35:00 AM | 0 | 1 | 2 | 0 | 4 | 4 | 0 | 0 | 1 | 11 | 0 | 0 | 1 | 10 | 5 | 0 | 99 | 377 |
| 08:40:00 AM | 0 | 0 | 1 | 0 | 2 | 3 | 1 | 0 | 2 | 2 | 0 | 0 | 1 | 9 | 5 | 0 | 98 | 369 |
| 08:45:00 AM | 0 | 3 | 2 | 0 | 3 | 2 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 4 | 8 | 0 | 95 | 366 |
| 08:50:00 AM | 1 | 2 | 1 | 0 | 3 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 2 | 6 | 4 | 0 | 80 | 351 |
| 08:55:00 AM | 0 | 4 | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 4 | 1 | 0 | 1 | 8 | 8 | 0 | 85 | 340 |

FHWA 4-13 -Truck/Multi-Unit/Heavy Trucks

| | **Northbound** | | | | **Southbound** | | | | **Eastbound** | | | | **Westbound** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sequoia Pkwy | | | | Sequoia Pkwy | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 07:00:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 07:05:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | | |
| 07:10:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 9 | |
| 07:15:00 AM | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | |
| 07:20:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 10 | |
| 07:25:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| 07:30:00 AM | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | |
| 07:35:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| 07:40:00 AM | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | |
| 07:45:00 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 15 | |
| 07:50:00 AM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | |
| 07:55:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 12 | 44 |
| 08:00:00 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 48 |
| 08:05:00 AM | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 14 | 47 |
| 08:10:00 AM | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 13 | 48 |
| 08:15:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 13 | 48 |
| 08:20:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 46 |
| 08:25:00 AM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 9 | 47 |
| 08:30:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 46 |
| 08:35:00 AM | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 44 |
| 08:40:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 37 |
| 08:45:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 34 |
| 08:50:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 33 |
| 08:55:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 11 | 36 |

| Pedestrians Crossing | | | | | 15 Min | 1 HR |
|---|---|---|---|---|---|---|
| Time | NB | SB | EB | WB | Sum | Sum |
| 07:00:00 AM | 0 | 0 | 0 | 0 | | |
| 07:05:00 AM | 0 | 0 | 0 | 0 | | |
| 07:10:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:15:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:20:00 AM | 0 | 0 | 1 | 0 | 1 | |
| 07:25:00 AM | 0 | 0 | 0 | 0 | 1 | |
| 07:30:00 AM | 0 | 0 | 0 | 0 | 1 | |
| 07:35:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:40:00 AM | 0 | 0 | 0 | 0 | 0 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 07:45:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:50:00 AM | 0 | 0 | 1 | 0 | 1 | |
| 07:55:00 AM | 0 | 0 | 0 | 0 | 1 | 2 |
| 08:00:00 AM | 0 | 0 | 0 | 0 | 1 | 2 |
| 08:05:00 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 08:10:00 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 08:15:00 AM | 0 | 0 | 0 | 0 | 0 | 2 |
| 08:20:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:25:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:30:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:35:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:40:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:45:00 AM | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:50:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:55:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |

K-D-N
KEY DATA NETWORK

| Data Provided by K-D-N.com 503-594-4224 | |
|---|---|
| **N/S street:** | ***S Mulino Rd*** |
| **E/W street:** | ***S Township Rd*** |
| **City, State** | Canby OR |
| **Study ID #** | |
| **Location** | 45.259372 - -122.66114 |
| **Start Date** | Tuesday, October 22, 2019 |
| **Start Time** | 07:00:00 AM |
| **Peak Hour Start** | 07:00:00 AM |
| **Peak 15 Min Start** | 07:30:00 AM |
| **PHF (15-Min Int)** | 0.85 |

Peak-Hour Volumes (PHV)

| Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Entering | | | | Leaving | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | NB | SB | EB | WB | NB | SB | EB | WB |
| 26 | 48 | 26 | 0 | 3 | 16 | 33 | 0 | 38 | 107 | 7 | 0 | 13 | 178 | 11 | 0 | 100 | 52 | 152 | 202 | 36 | 97 | 237 | 136 |
| Percent Heavy Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0% | 6.3% | 0.0% | 0.0% | 0.0% | 6.3% | 9.1% | 0.0% | 2.6% | 9.3% | 14.3% | 0.0% | 7.7% | 2.8% | 0.0% | 0.0% | 3.0% | 7.7% | 7.9% | 3.0% | 8.3% | 4.1% | 3.4% | 7.4% |

| PHV- Bicycles | | | | | | | | | | | | | | | | | PHV - Pedestrians | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | in Crosswalk | | | | | |
| Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | **Sum** | NB | SB | EB | WB | **Sum** |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

All Vehicle Volumes

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 07:00:00 AM | 5 | 1 | 2 | 0 | 0 | 1 | 4 | 0 | 1 | 4 | 0 | 0 | 0 | 14 | 1 | 0 | | |
| 07:05:00 AM | 2 | 1 | 2 | 0 | 0 | 0 | 3 | 0 | 9 | 3 | 0 | 0 | 2 | 21 | 1 | 0 | | |
| 07:10:00 AM | 1 | 2 | 1 | 0 | 0 | 0 | 4 | 0 | 1 | 7 | 1 | 0 | 1 | 7 | 1 | 0 | 103 | |
| 07:15:00 AM | 0 | 4 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 5 | 1 | 0 | 3 | 14 | 0 | 0 | 101 | |
| 07:20:00 AM | 0 | 6 | 2 | 0 | 0 | 2 | 2 | 0 | 2 | 11 | 1 | 0 | 3 | 18 | 1 | 0 | 105 | |
| 07:25:00 AM | 3 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 6 | 1 | 0 | 2 | 16 | 2 | 0 | 116 | |
| 07:30:00 AM | 2 | 11 | 2 | 0 | 0 | 1 | 4 | 0 | 4 | 8 | 0 | 0 | 1 | 21 | 1 | 0 | 140 | |
| 07:35:00 AM | 0 | 3 | 4 | 0 | 2 | 3 | 3 | 0 | 7 | 19 | 0 | 0 | 0 | 12 | 0 | 0 | 145 | |
| 07:40:00 AM | 4 | 5 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 11 | 0 | 0 | 0 | 14 | 2 | 0 | 149 | |
| 07:45:00 AM | 2 | 7 | 5 | 0 | 0 | 1 | 6 | 0 | 6 | 10 | 1 | 0 | 1 | 8 | 1 | 0 | 142 | |
| 07:50:00 AM | 5 | 2 | 3 | 0 | 0 | 4 | 3 | 0 | 2 | 11 | 0 | 0 | 0 | 17 | 1 | 0 | 137 | |
| 07:55:00 AM | 2 | 3 | 1 | 0 | 0 | 2 | 1 | 0 | 3 | 12 | 2 | 0 | 0 | 16 | 0 | 0 | 138 | 506 |
| 08:00:00 AM | 1 | 6 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 7 | 1 | 0 | 0 | 4 | 0 | 0 | 114 | 497 |
| 08:05:00 AM | 4 | 6 | 1 | 0 | 0 | 1 | 2 | 0 | 2 | 6 | 2 | 0 | 0 | 11 | 1 | 0 | 102 | 489 |
| 08:10:00 AM | 4 | 3 | 1 | 0 | 0 | 5 | 1 | 0 | 3 | 4 | 0 | 0 | 1 | 7 | 0 | 0 | 89 | 492 |
| 08:15:00 AM | 5 | 3 | 1 | 0 | 0 | 2 | 1 | 0 | 3 | 8 | 1 | 0 | 0 | 6 | 2 | 0 | 97 | 493 |
| 08:20:00 AM | 1 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 5 | 1 | 0 | 0 | 14 | 3 | 0 | 93 | 477 |
| 08:25:00 AM | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 7 | 0 | 0 | 0 | 6 | 1 | 0 | 85 | 461 |
| 08:30:00 AM | 0 | 6 | 0 | 0 | 0 | 1 | 1 | 0 | 4 | 10 | 1 | 0 | 1 | 11 | 0 | 0 | 88 | 441 |
| 08:35:00 AM | 1 | 4 | 2 | 0 | 1 | 1 | 1 | 0 | 0 | 16 | 1 | 0 | 0 | 16 | 1 | 0 | 100 | 432 |
| 08:40:00 AM | 1 | 3 | 3 | 0 | 0 | 2 | 1 | 0 | 1 | 7 | 0 | 0 | 0 | 12 | 1 | 0 | 110 | 422 |
| 08:45:00 AM | 4 | 5 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 10 | 0 | 0 | 0 | 7 | 2 | 0 | 108 | 407 |
| 08:50:00 AM | 1 | 3 | 1 | 0 | 0 | 2 | 2 | 0 | 1 | 4 | 1 | 0 | 1 | 8 | 1 | 0 | 89 | 384 |
| 08:55:00 AM | 0 | 1 | 0 | 0 | 0 | 2 | 3 | 0 | 2 | 6 | 0 | 0 | 1 | 25 | 0 | 0 | 98 | 382 |

Bicycles on Road

K-D-N
KEY DATA NETWORK

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 07:00:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 07:05:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 07:10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:15:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:20:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:25:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:30:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:35:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:40:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:45:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:50:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:55:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:00:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:05:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:15:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:20:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:25:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 08:30:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 08:35:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 08:40:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 08:45:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| 08:50:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 08:55:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |

Passenger vehicles and light trucks

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 07:00:00 AM | 5 | 1 | 2 | 0 | 0 | 1 | 4 | 0 | 1 | 4 | 0 | 0 | 0 | 14 | 1 | 0 | | |
| 07:05:00 AM | 2 | 1 | 2 | 0 | 0 | 0 | 3 | 0 | 9 | 3 | 0 | 0 | 2 | 19 | 1 | 0 | | |
| 07:10:00 AM | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 7 | 0 | 0 | 1 | 6 | 1 | 0 | 97 | |
| 07:15:00 AM | 0 | 4 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 5 | 1 | 0 | 3 | 14 | 0 | 0 | 95 | |
| 07:20:00 AM | 0 | 6 | 2 | 0 | 0 | 2 | 2 | 0 | 2 | 11 | 1 | 0 | 3 | 17 | 1 | 0 | 100 | |
| 07:25:00 AM | 3 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 6 | 1 | 0 | 2 | 16 | 2 | 0 | 115 | |
| 07:30:00 AM | 2 | 11 | 2 | 0 | 0 | 1 | 4 | 0 | 3 | 8 | 0 | 0 | 0 | 21 | 1 | 0 | 137 | |
| 07:35:00 AM | 0 | 3 | 4 | 0 | 2 | 3 | 3 | 0 | 7 | 19 | 0 | 0 | 0 | 12 | 0 | 0 | 143 | |
| 07:40:00 AM | 4 | 5 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 8 | 0 | 0 | 0 | 14 | 2 | 0 | 143 | |
| 07:45:00 AM | 2 | 5 | 5 | 0 | 0 | 1 | 5 | 0 | 6 | 7 | 1 | 0 | 1 | 8 | 1 | 0 | 132 | |
| 07:50:00 AM | 5 | 2 | 3 | 0 | 0 | 4 | 3 | 0 | 2 | 9 | 0 | 0 | 0 | 17 | 1 | 0 | 125 | |
| 07:55:00 AM | 2 | 2 | 1 | 0 | 0 | 2 | 1 | 0 | 3 | 10 | 2 | 0 | 0 | 15 | 0 | 0 | 126 | 481 |
| 08:00:00 AM | 1 | 6 | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 7 | 1 | 0 | 0 | 4 | 0 | 0 | 107 | 471 |
| 08:05:00 AM | 4 | 6 | 1 | 0 | 0 | 1 | 2 | 0 | 2 | 5 | 0 | 0 | 0 | 11 | 1 | 0 | 94 | 462 |
| 08:10:00 AM | 4 | 3 | 1 | 0 | 0 | 3 | 1 | 0 | 3 | 4 | 0 | 0 | 1 | 5 | 0 | 0 | 81 | 465 |
| 08:15:00 AM | 5 | 3 | 1 | 0 | 0 | 1 | 1 | 0 | 3 | 7 | 1 | 0 | 0 | 5 | 2 | 0 | 87 | 463 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08:20:00 AM | 1 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 4 | 1 | 0 | 0 | 14 | 3 | 0 | 85 | 447 |
| 08:25:00 AM | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 3 | 0 | 0 | 0 | 6 | 1 | 0 | 77 | 427 |
| 08:30:00 AM | 0 | 4 | 0 | 0 | 0 | 1 | 1 | 0 | 4 | 10 | 1 | 0 | 1 | 11 | 0 | 0 | 81 | 407 |
| 08:35:00 AM | 1 | 4 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 16 | 1 | 0 | 0 | 16 | 1 | 0 | 93 | 397 |
| 08:40:00 AM | 1 | 3 | 3 | 0 | 0 | 2 | 1 | 0 | 1 | 7 | 0 | 0 | 0 | 12 | 1 | 0 | 107 | 391 |
| 08:45:00 AM | 4 | 5 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 10 | 0 | 0 | 0 | 7 | 2 | 0 | 107 | 382 |
| 08:50:00 AM | 1 | 3 | 1 | 0 | 0 | 2 | 2 | 0 | 1 | 4 | 1 | 0 | 1 | 8 | 1 | 0 | 89 | 361 |
| 08:55:00 AM | 0 | 1 | 0 | 0 | 0 | 1 | 3 | 0 | 2 | 6 | 0 | 0 | 1 | 16 | 0 | 0 | 88 | 353 |

FHWA 4-13 -Truck/Multi-Unit/Heavy Trucks

| | **Northbound** | | | | **Southbound** | | | | **Eastbound** | | | | **Westbound** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 07:00:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 07:05:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | | |
| 07:10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 6 | |
| 07:15:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| 07:20:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 5 | |
| 07:25:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 07:30:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | |
| 07:35:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| 07:40:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | |
| 07:45:00 AM | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | |
| 07:50:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | |
| 07:55:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 12 | 25 |
| 08:00:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 26 |
| 08:05:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 8 | 27 |
| 08:10:00 AM | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 27 |
| 08:15:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 10 | 30 |
| 08:20:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 30 |
| 08:25:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 34 |
| 08:30:00 AM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 34 |
| 08:35:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 35 |
| 08:40:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 31 |
| 08:45:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 25 |
| 08:50:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 |
| 08:55:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 10 | 29 |

| Pedestrians Crossing | | | | | 15 Min | 1 HR |
|---|---|---|---|---|---|---|
| Time | NB | SB | EB | WB | Sum | Sum |
| 07:00:00 AM | 0 | 0 | 0 | 0 | | |
| 07:05:00 AM | 0 | 0 | 0 | 0 | | |
| 07:10:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:15:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:20:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:25:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:30:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:35:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:40:00 AM | 0 | 0 | 0 | 0 | 0 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 07:45:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:50:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:55:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:00:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:05:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:15:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:20:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:25:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:30:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:35:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:40:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:45:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:50:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:55:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |

K-D-N
KEY DATA NETWORK

| Data Provided by K-D-N.com 503-594-4224 | |
|---|---|
| **N/S street:** | ***S Mulino Rd*** |
| **E/W street:** | ***SE 13th Ave*** |
| **City, State** | Canby WA |
| **Study ID #** | |
| **Location** | 45.25123 - -122.661352 |
| **Start Date** | Tuesday, October 22, 2019 |
| **Start Time** | 07:00:00 AM |
| **Peak Hour Start** | 07:15:00 AM |
| **Peak 15 Min Start** | 07:20:00 AM |
| **PHF (15-Min Int)** | 0.84 |

Peak-Hour Volumes (PHV)

| Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Entering | | | | Leaving | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | NB | SB | EB | WB | NB | SB | EB | WB |
| 50 | 61 | 0 | 0 | 0 | 19 | 24 | 0 | 49 | 0 | 22 | 0 | 0 | 0 | 0 | 0 | 111 | 43 | 71 | 0 | 41 | 110 | 74 | 0 |
| Percent Heavy Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| 2.0% | 1.6% | 0.0% | 0.0% | 0.0% | 21.1% | 4.2% | 0.0% | 0.0% | 0.0% | 4.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1.8% | 11.6% | 1.4% | 0.0% | 12.2% | 0.9% | 2.7% | 0.0% |

| PHV- Bicycles | | | | | | | | | | | | | | | | | PHV - Pedestrians | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | in Crosswalk | | | | | |
| Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | **Sum** | NB | SB | EB | WB | **Sum** |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

All Vehicle Volumes

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | SE 13th Ave | | | | - | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 07:00:00 AM | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | | |
| 07:05:00 AM | 8 | 6 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | |
| 07:10:00 AM | 5 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | |
| 07:15:00 AM | 6 | 2 | 0 | 0 | 0 | 1 | 3 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | |
| 07:20:00 AM | 8 | 4 | 0 | 0 | 0 | 2 | 5 | 0 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 52 | |
| 07:25:00 AM | 5 | 6 | 0 | 0 | 0 | 2 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 65 | |
| 07:30:00 AM | 5 | 6 | 0 | 0 | 0 | 1 | 3 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 67 | |
| 07:35:00 AM | 5 | 3 | 0 | 0 | 0 | 2 | 1 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 60 | |
| 07:40:00 AM | 6 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 55 | |
| 07:45:00 AM | 1 | 5 | 0 | 0 | 0 | 2 | 1 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 51 | |
| 07:50:00 AM | 3 | 6 | 0 | 0 | 0 | 0 | 4 | 0 | 5 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 58 | |
| 07:55:00 AM | 4 | 5 | 0 | 0 | 0 | 3 | 1 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 58 | 222 |
| 08:00:00 AM | 2 | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 56 | 219 |
| 08:05:00 AM | 2 | 7 | 0 | 0 | 0 | 1 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 216 |
| 08:10:00 AM | 3 | 7 | 0 | 0 | 0 | 3 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | 225 |
| 08:15:00 AM | 2 | 6 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45 | 219 |
| 08:20:00 AM | 4 | 3 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 47 | 211 |
| 08:25:00 AM | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 41 | 201 |
| 08:30:00 AM | 4 | 4 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 47 | 199 |
| 08:35:00 AM | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 39 | 190 |
| 08:40:00 AM | 2 | 5 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 40 | 186 |
| 08:45:00 AM | 8 | 6 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 43 | 191 |
| 08:50:00 AM | 2 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 46 | 178 |
| 08:55:00 AM | 5 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 45 | 173 |

Bicycles on Road

K-D-N
KEY DATA NETWORK

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | SE 13th Ave | | | | - | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 07:00:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 07:05:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 07:10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:15:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:20:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:25:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:30:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:35:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:40:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:45:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:50:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 07:55:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:00:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:05:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:15:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:20:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:25:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:30:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:35:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:40:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:45:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:50:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:55:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Passenger vehicles and light trucks

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | SE 13th Ave | | | | - | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 07:00:00 AM | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | | |
| 07:05:00 AM | 7 | 6 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | |
| 07:10:00 AM | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | |
| 07:15:00 AM | 6 | 2 | 0 | 0 | 0 | 1 | 3 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | |
| 07:20:00 AM | 8 | 4 | 0 | 0 | 0 | 2 | 5 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 49 | |
| 07:25:00 AM | 5 | 6 | 0 | 0 | 0 | 2 | 0 | 0 | 6 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 64 | |
| 07:30:00 AM | 5 | 6 | 0 | 0 | 0 | 1 | 2 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 65 | |
| 07:35:00 AM | 5 | 3 | 0 | 0 | 0 | 2 | 1 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 59 | |
| 07:40:00 AM | 6 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 54 | |
| 07:45:00 AM | 1 | 4 | 0 | 0 | 0 | 2 | 1 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 50 | |
| 07:50:00 AM | 3 | 6 | 0 | 0 | 0 | 0 | 4 | 0 | 5 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 57 | |
| 07:55:00 AM | 3 | 5 | 0 | 0 | 0 | 3 | 1 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 56 | 215 |
| 08:00:00 AM | 2 | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 55 | 212 |
| 08:05:00 AM | 2 | 7 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 209 |
| 08:10:00 AM | 3 | 7 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 217 |
| 08:15:00 AM | 2 | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 210 |

K-D-N
KEY DATA NETWORK

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08:20:00 AM | 4 | 3 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 43 | 203 |
| 08:25:00 AM | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 39 | 192 |
| 08:30:00 AM | 3 | 4 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 45 | 190 |
| 08:35:00 AM | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 37 | 181 |
| 08:40:00 AM | 2 | 5 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 39 | 177 |
| 08:45:00 AM | 8 | 6 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 43 | 183 |
| 08:50:00 AM | 2 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 46 | 170 |
| 08:55:00 AM | 5 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 45 | 166 |

FHWA 4-13 -Truck/Multi-Unit/Heavy Trucks

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | SE 13th Ave | | | | - | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 07:00:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 07:05:00 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 07:10:00 AM | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| 07:15:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| 07:20:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | |
| 07:25:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 07:30:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| 07:35:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 07:40:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 07:45:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 07:50:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 07:55:00 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 |
| 08:00:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 |
| 08:05:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 |
| 08:10:00 AM | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 8 |
| 08:15:00 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 9 |
| 08:20:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 8 |
| 08:25:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 9 |
| 08:30:00 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 9 |
| 08:35:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 9 |
| 08:40:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 |
| 08:45:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 08:50:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 08:55:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |

| Pedestrians Crossing | | | | | 15 Min | 1 HR |
|---|---|---|---|---|---|---|
| Time | NB | SB | EB | WB | Sum | Sum |
| 07:00:00 AM | 0 | 0 | 0 | 0 | | |
| 07:05:00 AM | 0 | 0 | 0 | 0 | | |
| 07:10:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:15:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:20:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:25:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:30:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:35:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:40:00 AM | 0 | 0 | 0 | 0 | 0 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 07:45:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:50:00 AM | 0 | 0 | 0 | 0 | 0 | |
| 07:55:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:00:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:05:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:15:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:20:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:25:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:30:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:35:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:40:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:45:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:50:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:55:00 AM | 0 | 0 | 0 | 0 | 0 | 0 |

K-D-N
KEY DATA NETWORK

| Data Provided by K-D-N.com 503-594-4224 | |
|---|---|
| **N/S street:** | ***Sequoia Pkwy*** |
| **E/W street:** | ***S Township Rd*** |
| **City, State** | Canby OR |
| **Study ID #** | |
| **Location** | 45.259422 - -122.666145 |
| **Start Date** | Tuesday, October 22, 2019 |
| **Start Time** | 04:00:00 PM |
| **Peak Hour Start** | 04:35:00 PM |
| **Peak 15 Min Start** | 04:55:00 PM |
| **PHF (15-Min Int)** | 0.92 |

Peak-Hour Volumes (PHV)

| Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Entering | | | | Leaving | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | NB | SB | EB | WB | NB | SB | EB | WB |
| 6 | 58 | 30 | 0 | 85 | 141 | 57 | 0 | 27 | 102 | 4 | 0 | 33 | 131 | 69 | 0 | 94 | 283 | 133 | 233 | 178 | 154 | 194 | 217 |
| Percent Heavy Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| 16.7% | 8.6% | 0.0% | 0.0% | 2.4% | 2.8% | 1.8% | 0.0% | 0.0% | 1.0% | 0.0% | 0.0% | 0.0% | 0.0% | 5.8% | 0.0% | 6.4% | 2.5% | 0.8% | 1.7% | 2.2% | 5.8% | 1.0% | 1.4% |

| PHV- Bicycles | | | | | | | | | | | | | | | | | PHV - Pedestrians | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | in Crosswalk | | | | |
| Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | **Sum** | NB | SB | EB | WB | **Sum** |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 5 |

All Vehicle Volumes

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sequoia Pkwy | | | | Sequoia Pkwy | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 04:00:00 PM | 0 | 4 | 3 | 0 | 11 | 10 | 2 | 0 | 0 | 5 | 0 | 0 | 2 | 3 | 1 | 0 | | |
| 04:05:00 PM | 1 | 1 | 4 | 0 | 6 | 11 | 1 | 0 | 0 | 8 | 0 | 0 | 2 | 8 | 6 | 0 | | |
| 04:10:00 PM | 1 | 4 | 1 | 0 | 10 | 9 | 1 | 0 | 0 | 8 | 0 | 0 | 3 | 8 | 5 | 0 | 139 | |
| 04:15:00 PM | 1 | 2 | 1 | 0 | 12 | 8 | 3 | 0 | 3 | 5 | 0 | 0 | 3 | 13 | 4 | 0 | 153 | |
| 04:20:00 PM | 0 | 11 | 1 | 0 | 4 | 10 | 4 | 0 | 5 | 7 | 1 | 0 | 1 | 14 | 7 | 0 | 170 | |
| 04:25:00 PM | 0 | 5 | 1 | 0 | 13 | 5 | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 6 | 7 | 0 | 163 | |
| 04:30:00 PM | 0 | 7 | 1 | 0 | 6 | 9 | 1 | 0 | 2 | 9 | 1 | 0 | 0 | 5 | 8 | 0 | 157 | |
| 04:35:00 PM | 0 | 5 | 2 | 0 | 10 | 9 | 4 | 0 | 6 | 12 | 2 | 0 | 0 | 11 | 11 | 0 | 164 | |
| 04:40:00 PM | 1 | 7 | 2 | 0 | 9 | 12 | 4 | 0 | 2 | 8 | 0 | 0 | 3 | 14 | 3 | 0 | 186 | |
| 04:45:00 PM | 0 | 6 | 4 | 0 | 9 | 8 | 6 | 0 | 2 | 8 | 0 | 0 | 4 | 7 | 6 | 0 | 197 | |
| 04:50:00 PM | 0 | 5 | 2 | 0 | 10 | 9 | 2 | 0 | 3 | 10 | 0 | 0 | 4 | 13 | 3 | 0 | 186 | |
| 04:55:00 PM | 2 | 7 | 4 | 0 | 8 | 10 | 3 | 0 | 1 | 6 | 0 | 0 | 0 | 14 | 11 | 0 | 187 | 675 |
| 05:00:00 PM | 0 | 5 | 3 | 0 | 3 | 16 | 4 | 0 | 2 | 10 | 0 | 0 | 2 | 13 | 7 | 0 | 192 | 699 |
| 05:05:00 PM | 2 | 4 | 3 | 0 | 6 | 11 | 7 | 0 | 3 | 11 | 0 | 0 | 5 | 11 | 7 | 0 | 201 | 721 |
| 05:10:00 PM | 1 | 1 | 1 | 0 | 4 | 14 | 9 | 0 | 1 | 9 | 0 | 0 | 3 | 8 | 9 | 0 | 195 | 731 |
| 05:15:00 PM | 0 | 8 | 4 | 0 | 3 | 14 | 2 | 0 | 4 | 2 | 2 | 0 | 2 | 10 | 2 | 0 | 183 | 729 |
| 05:20:00 PM | 0 | 2 | 1 | 0 | 5 | 8 | 6 | 0 | 1 | 6 | 0 | 0 | 3 | 11 | 5 | 0 | 161 | 712 |
| 05:25:00 PM | 0 | 7 | 2 | 0 | 11 | 16 | 3 | 0 | 0 | 6 | 0 | 0 | 5 | 9 | 3 | 0 | 163 | 731 |
| 05:30:00 PM | 0 | 1 | 2 | 0 | 7 | 14 | 7 | 0 | 2 | 14 | 0 | 0 | 2 | 10 | 2 | 0 | 171 | 743 |
| 05:35:00 PM | 0 | 2 | 3 | 0 | 7 | 8 | 5 | 0 | 3 | 6 | 0 | 0 | 3 | 6 | 10 | 0 | 176 | 724 |
| 05:40:00 PM | 0 | 2 | 4 | 0 | 10 | 10 | 6 | 0 | 3 | 10 | 0 | 0 | 3 | 9 | 4 | 0 | 175 | 720 |
| 05:45:00 PM | 1 | 4 | 1 | 0 | 7 | 10 | 5 | 0 | 2 | 10 | 0 | 0 | 7 | 8 | 2 | 0 | 171 | 717 |
| 05:50:00 PM | 2 | 4 | 1 | 0 | 9 | 12 | 3 | 0 | 1 | 11 | 0 | 0 | 5 | 15 | 1 | 0 | 182 | 720 |
| 05:55:00 PM | 0 | 7 | 1 | 0 | 5 | 8 | 1 | 0 | 1 | 9 | 0 | 0 | 0 | 11 | 5 | 0 | 169 | 702 |

Bicycles on Road

K-D-N
KEY DATA NETWORK

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sequoia Pkwy | | | | Sequoia Pkwy | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 04:00:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 04:05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 04:10:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:15:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 04:20:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 04:25:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 04:30:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 04:35:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 04:40:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 04:45:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:50:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:55:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 05:00:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 05:05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 05:10:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 05:15:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:20:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:25:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 05:30:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 05:35:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 05:40:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:45:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:50:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:55:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

Passenger vehicles and light trucks

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sequoia Pkwy | | | | Sequoia Pkwy | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 04:00:00 PM | 0 | 4 | 3 | 0 | 11 | 9 | 1 | 0 | 0 | 4 | 0 | 0 | 2 | 3 | 1 | 0 | | |
| 04:05:00 PM | 1 | 1 | 4 | 0 | 6 | 11 | 1 | 0 | 0 | 8 | 0 | 0 | 2 | 8 | 6 | 0 | | |
| 04:10:00 PM | 1 | 3 | 1 | 0 | 9 | 9 | 1 | 0 | 0 | 8 | 0 | 0 | 3 | 8 | 5 | 0 | 134 | |
| 04:15:00 PM | 1 | 1 | 1 | 0 | 12 | 8 | 3 | 0 | 3 | 5 | 0 | 0 | 3 | 12 | 4 | 0 | 149 | |
| 04:20:00 PM | 0 | 9 | 1 | 0 | 4 | 9 | 4 | 0 | 5 | 7 | 1 | 0 | 1 | 14 | 5 | 0 | 161 | |
| 04:25:00 PM | 0 | 1 | 1 | 0 | 13 | 5 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 5 | 6 | 0 | 148 | |
| 04:30:00 PM | 0 | 7 | 1 | 0 | 5 | 8 | 1 | 0 | 2 | 8 | 1 | 0 | 0 | 5 | 5 | 0 | 138 | |
| 04:35:00 PM | 0 | 5 | 2 | 0 | 8 | 9 | 4 | 0 | 6 | 12 | 2 | 0 | 0 | 11 | 9 | 0 | 146 | |
| 04:40:00 PM | 0 | 5 | 2 | 0 | 9 | 11 | 4 | 0 | 2 | 8 | 0 | 0 | 3 | 14 | 3 | 0 | 172 | |
| 04:45:00 PM | 0 | 5 | 4 | 0 | 9 | 8 | 6 | 0 | 2 | 8 | 0 | 0 | 4 | 7 | 6 | 0 | 188 | |
| 04:50:00 PM | 0 | 5 | 2 | 0 | 10 | 9 | 2 | 0 | 3 | 10 | 0 | 0 | 4 | 13 | 3 | 0 | 181 | |
| 04:55:00 PM | 2 | 6 | 4 | 0 | 8 | 10 | 3 | 0 | 1 | 6 | 0 | 0 | 0 | 14 | 10 | 0 | 184 | 638 |
| 05:00:00 PM | 0 | 5 | 3 | 0 | 3 | 16 | 4 | 0 | 2 | 10 | 0 | 0 | 2 | 13 | 7 | 0 | 190 | 665 |
| 05:05:00 PM | 2 | 3 | 3 | 0 | 6 | 10 | 7 | 0 | 3 | 10 | 0 | 0 | 5 | 11 | 7 | 0 | 196 | 684 |
| 05:10:00 PM | 1 | 1 | 1 | 0 | 4 | 13 | 9 | 0 | 1 | 9 | 0 | 0 | 3 | 8 | 8 | 0 | 190 | 694 |
| 05:15:00 PM | 0 | 8 | 4 | 0 | 3 | 14 | 2 | 0 | 4 | 2 | 2 | 0 | 2 | 10 | 2 | 0 | 178 | 694 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05:20:00 PM | 0 | 2 | 1 | 0 | 5 | 8 | 5 | 0 | 1 | 6 | 0 | 0 | 3 | 11 | 5 | 0 | 158 | 681 |
| 05:25:00 PM | 0 | 7 | 2 | 0 | 11 | 15 | 3 | 0 | 0 | 6 | 0 | 0 | 5 | 9 | 3 | 0 | 161 | 707 |
| 05:30:00 PM | 0 | 1 | 2 | 0 | 7 | 14 | 7 | 0 | 2 | 14 | 0 | 0 | 2 | 10 | 2 | 0 | 169 | 725 |
| 05:35:00 PM | 0 | 2 | 3 | 0 | 7 | 8 | 5 | 0 | 3 | 6 | 0 | 0 | 3 | 6 | 10 | 0 | 175 | 710 |
| 05:40:00 PM | 0 | 2 | 4 | 0 | 10 | 10 | 6 | 0 | 3 | 8 | 0 | 0 | 3 | 9 | 4 | 0 | 173 | 708 |
| 05:45:00 PM | 1 | 4 | 1 | 0 | 7 | 10 | 5 | 0 | 2 | 10 | 0 | 0 | 7 | 8 | 2 | 0 | 169 | 706 |
| 05:50:00 PM | 2 | 4 | 1 | 0 | 8 | 12 | 3 | 0 | 1 | 11 | 0 | 0 | 5 | 14 | 1 | 0 | 178 | 707 |
| 05:55:00 PM | 0 | 7 | 1 | 0 | 5 | 8 | 1 | 0 | 1 | 9 | 0 | 0 | 0 | 10 | 5 | 0 | 166 | 690 |

FHWA 4-13 -Truck/Multi-Unit/Heavy Trucks

| | **Northbound** | | | | **Southbound** | | | | **Eastbound** | | | | **Westbound** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sequoia Pkwy | | | | Sequoia Pkwy | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 04:00:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 04:05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 04:10:00 PM | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| 04:15:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | |
| 04:20:00 PM | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 9 | |
| 04:25:00 PM | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 15 | |
| 04:30:00 PM | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 19 | |
| 04:35:00 PM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 18 | |
| 04:40:00 PM | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | |
| 04:45:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | |
| 04:50:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| 04:55:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 37 |
| 05:00:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 34 |
| 05:05:00 PM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 37 |
| 05:10:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 37 |
| 05:15:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 35 |
| 05:20:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 31 |
| 05:25:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 24 |
| 05:30:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 18 |
| 05:35:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 14 |
| 05:40:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 12 |
| 05:45:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 11 |
| 05:50:00 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 13 |
| 05:55:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 12 |

| Pedestrians Crossing | | | | | 15 Min | 1 HR |
|---|---|---|---|---|---|---|
| Time | NB | SB | EB | WB | Sum | Sum |
| 04:00:00 PM | 0 | 0 | 0 | 0 | | |
| 04:05:00 PM | 0 | 0 | 0 | 0 | | |
| 04:10:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:15:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:20:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:25:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:30:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:35:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:40:00 PM | 0 | 0 | 0 | 0 | 0 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 04:45:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:50:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:55:00 PM | 0 | 1 | 0 | 1 | 2 | 2 |
| 05:00:00 PM | 0 | 0 | 0 | 0 | 2 | 2 |
| 05:05:00 PM | 0 | 0 | 0 | 0 | 2 | 2 |
| 05:10:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 05:15:00 PM | 0 | 0 | 0 | 0 | 0 | 2 |
| 05:20:00 PM | 0 | 0 | 1 | 0 | 1 | 3 |
| 05:25:00 PM | 0 | 0 | 0 | 0 | 1 | 3 |
| 05:30:00 PM | 1 | 0 | 1 | 0 | 3 | 5 |
| 05:35:00 PM | 0 | 0 | 0 | 0 | 2 | 5 |
| 05:40:00 PM | 0 | 0 | 1 | 0 | 3 | 6 |
| 05:45:00 PM | 0 | 0 | 0 | 0 | 1 | 6 |
| 05:50:00 PM | 0 | 0 | 0 | 0 | 1 | 6 |
| 05:55:00 PM | 0 | 0 | 0 | 0 | 0 | 4 |

K-D-N
KEY DATA NETWORK

| Data Provided by K-D-N.com 503-594-4224 | |
|---|---|
| **N/S street:** | ***S Mulino Rd*** |
| **E/W street:** | ***S Township Rd*** |
| **City, State** | Canby OR |
| **Study ID #** | |
| **Location** | 45.259372 - -122.66114 |
| **Start Date** | Tuesday, October 22, 2019 |
| **Start Time** | 04:00:00 PM |
| **Peak Hour Start** | 04:50:00 PM |
| **Peak 15 Min Start** | 04:50:00 PM |
| **PHF (15-Min Int)** | 0.94 |

Peak-Hour Volumes (PHV)

| Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Entering | | | | Leaving | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | NB | SB | EB | WB | NB | SB | EB | WB |
| 29 | 24 | 14 | 0 | 10 | 66 | 43 | 0 | 32 | 148 | 40 | 0 | 18 | 159 | 2 | 0 | 67 | 119 | 220 | 179 | 124 | 58 | 231 | 172 |
| Percent Heavy Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1.5% | 0.0% | 0.0% | 3.1% | 1.4% | 0.0% | 0.0% | 0.0% | 1.9% | 0.0% | 0.0% | 0.0% | 0.8% | 1.4% | 1.7% | 0.8% | 1.7% | 1.3% | 1.2% |

| PHV- Bicycles | | | | | | | | | | | | | | | | | PHV - Pedestrians | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | in Crosswalk | | | | | |
| Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | **Sum** | NB | SB | EB | WB | **Sum** |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

All Vehicle Volumes

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 04:00:00 PM | 1 | 1 | 2 | 0 | 0 | 4 | 3 | 0 | 0 | 9 | 10 | 0 | 3 | 3 | 0 | 0 | | |
| 04:05:00 PM | 0 | 2 | 2 | 0 | 1 | 8 | 4 | 0 | 2 | 13 | 1 | 0 | 2 | 10 | 0 | 0 | | |
| 04:10:00 PM | 1 | 2 | 0 | 0 | 1 | 5 | 5 | 0 | 3 | 9 | 7 | 0 | 0 | 11 | 0 | 0 | 125 | |
| 04:15:00 PM | 0 | 3 | 0 | 0 | 0 | 6 | 4 | 0 | 4 | 15 | 2 | 0 | 1 | 15 | 0 | 0 | 139 | |
| 04:20:00 PM | 0 | 4 | 0 | 0 | 0 | 6 | 7 | 0 | 1 | 8 | 2 | 0 | 3 | 13 | 1 | 0 | 139 | |
| 04:25:00 PM | 4 | 3 | 0 | 0 | 0 | 7 | 2 | 0 | 1 | 15 | 2 | 0 | 1 | 8 | 0 | 0 | 138 | |
| 04:30:00 PM | 2 | 1 | 0 | 0 | 0 | 4 | 2 | 0 | 1 | 13 | 2 | 0 | 1 | 9 | 1 | 0 | 124 | |
| 04:35:00 PM | 1 | 1 | 1 | 0 | 0 | 14 | 4 | 0 | 2 | 17 | 2 | 0 | 1 | 12 | 0 | 0 | 134 | |
| 04:40:00 PM | 1 | 3 | 0 | 0 | 0 | 7 | 5 | 0 | 6 | 13 | 2 | 0 | 1 | 12 | 0 | 0 | 141 | |
| 04:45:00 PM | 2 | 0 | 0 | 0 | 2 | 7 | 3 | 0 | 3 | 11 | 4 | 0 | 1 | 11 | 0 | 0 | 149 | |
| 04:50:00 PM | 3 | 0 | 1 | 0 | 0 | 5 | 8 | 0 | 2 | 18 | 5 | 0 | 1 | 15 | 0 | 0 | 152 | |
| 04:55:00 PM | 2 | 2 | 0 | 0 | 1 | 3 | 4 | 0 | 2 | 8 | 4 | 0 | 2 | 14 | 0 | 0 | 144 | 548 |
| 05:00:00 PM | 5 | 1 | 0 | 0 | 0 | 9 | 3 | 0 | 2 | 11 | 7 | 0 | 3 | 13 | 2 | 0 | 156 | 568 |
| 05:05:00 PM | 4 | 0 | 0 | 0 | 1 | 4 | 2 | 0 | 5 | 14 | 1 | 0 | 0 | 16 | 0 | 0 | 145 | 570 |
| 05:10:00 PM | 5 | 3 | 1 | 0 | 2 | 9 | 1 | 0 | 1 | 14 | 2 | 0 | 1 | 13 | 0 | 0 | 155 | 578 |
| 05:15:00 PM | 1 | 0 | 1 | 0 | 1 | 5 | 3 | 0 | 1 | 11 | 2 | 0 | 5 | 12 | 0 | 0 | 141 | 570 |
| 05:20:00 PM | 1 | 2 | 2 | 0 | 2 | 7 | 0 | 0 | 1 | 11 | 1 | 0 | 1 | 16 | 0 | 0 | 138 | 569 |
| 05:25:00 PM | 0 | 3 | 1 | 0 | 0 | 8 | 7 | 0 | 3 | 7 | 5 | 0 | 1 | 14 | 0 | 0 | 135 | 575 |
| 05:30:00 PM | 0 | 5 | 1 | 0 | 0 | 2 | 5 | 0 | 4 | 17 | 3 | 0 | 1 | 7 | 0 | 0 | 138 | 584 |
| 05:35:00 PM | 7 | 2 | 1 | 0 | 1 | 4 | 6 | 0 | 3 | 11 | 2 | 0 | 1 | 14 | 0 | 0 | 146 | 581 |
| 05:40:00 PM | 0 | 1 | 2 | 0 | 2 | 6 | 2 | 0 | 4 | 14 | 6 | 0 | 0 | 10 | 0 | 0 | 144 | 578 |
| 05:45:00 PM | 1 | 5 | 4 | 0 | 0 | 4 | 2 | 0 | 4 | 12 | 2 | 0 | 2 | 15 | 0 | 0 | 150 | 585 |
| 05:50:00 PM | 1 | 1 | 1 | 0 | 0 | 2 | 7 | 0 | 1 | 11 | 8 | 0 | 1 | 14 | 0 | 0 | 145 | 574 |
| 05:55:00 PM | 2 | 3 | 2 | 0 | 0 | 7 | 3 | 0 | 0 | 10 | 5 | 0 | 2 | 7 | 1 | 0 | 140 | 574 |

Bicycles on Road

K-D-N
KEY DATA NETWORK

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 04:00:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 04:05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 04:10:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:15:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:20:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:25:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:30:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:35:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:40:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:45:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 04:50:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 04:55:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 05:00:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:10:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:15:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:20:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:25:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:30:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:35:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:40:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:45:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:50:00 PM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 05:55:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |

Passenger vehicles and light trucks

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 04:00:00 PM | 1 | 1 | 2 | 0 | 0 | 4 | 3 | 0 | 0 | 9 | 10 | 0 | 3 | 3 | 0 | 0 | | |
| 04:05:00 PM | 0 | 2 | 2 | 0 | 1 | 8 | 4 | 0 | 2 | 12 | 1 | 0 | 2 | 10 | 0 | 0 | | |
| 04:10:00 PM | 1 | 2 | 0 | 0 | 1 | 5 | 4 | 0 | 3 | 8 | 7 | 0 | 0 | 11 | 0 | 0 | 122 | |
| 04:15:00 PM | 0 | 2 | 0 | 0 | 0 | 6 | 4 | 0 | 4 | 15 | 2 | 0 | 1 | 15 | 0 | 0 | 135 | |
| 04:20:00 PM | 0 | 3 | 0 | 0 | 0 | 6 | 6 | 0 | 1 | 8 | 2 | 0 | 3 | 12 | 1 | 0 | 133 | |
| 04:25:00 PM | 4 | 3 | 0 | 0 | 0 | 7 | 2 | 0 | 1 | 14 | 2 | 0 | 1 | 6 | 0 | 0 | 131 | |
| 04:30:00 PM | 2 | 1 | 0 | 0 | 0 | 4 | 2 | 0 | 1 | 12 | 1 | 0 | 1 | 6 | 1 | 0 | 113 | |
| 04:35:00 PM | 0 | 1 | 1 | 0 | 0 | 14 | 3 | 0 | 2 | 15 | 2 | 0 | 1 | 12 | 0 | 0 | 122 | |
| 04:40:00 PM | 1 | 3 | 0 | 0 | 0 | 7 | 5 | 0 | 6 | 13 | 2 | 0 | 1 | 12 | 0 | 0 | 132 | |
| 04:45:00 PM | 2 | 0 | 0 | 0 | 2 | 7 | 3 | 0 | 3 | 11 | 4 | 0 | 1 | 11 | 0 | 0 | 145 | |
| 04:50:00 PM | 3 | 0 | 1 | 0 | 0 | 5 | 8 | 0 | 2 | 18 | 5 | 0 | 1 | 14 | 0 | 0 | 151 | |
| 04:55:00 PM | 2 | 2 | 0 | 0 | 1 | 3 | 4 | 0 | 2 | 8 | 4 | 0 | 2 | 14 | 0 | 0 | 143 | 528 |
| 05:00:00 PM | 5 | 1 | 0 | 0 | 0 | 9 | 3 | 0 | 2 | 11 | 7 | 0 | 3 | 13 | 2 | 0 | 155 | 548 |
| 05:05:00 PM | 4 | 0 | 0 | 0 | 1 | 4 | 2 | 0 | 5 | 13 | 1 | 0 | 0 | 16 | 0 | 0 | 144 | 550 |
| 05:10:00 PM | 5 | 3 | 1 | 0 | 2 | 9 | 1 | 0 | 1 | 14 | 2 | 0 | 1 | 12 | 0 | 0 | 153 | 559 |
| 05:15:00 PM | 1 | 0 | 1 | 0 | 1 | 5 | 3 | 0 | 1 | 11 | 2 | 0 | 5 | 12 | 0 | 0 | 139 | 552 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05:20:00 PM | 1 | 2 | 2 | 0 | 2 | 7 | 0 | 0 | 1 | 11 | 1 | 0 | 1 | 16 | 0 | 0 | 137 | 554 |
| 05:25:00 PM | 0 | 3 | 1 | 0 | 0 | 8 | 7 | 0 | 3 | 7 | 5 | 0 | 1 | 14 | 0 | 0 | 135 | 563 |
| 05:30:00 PM | 0 | 5 | 1 | 0 | 0 | 2 | 5 | 0 | 4 | 17 | 3 | 0 | 1 | 7 | 0 | 0 | 138 | 577 |
| 05:35:00 PM | 7 | 2 | 1 | 0 | 1 | 4 | 6 | 0 | 3 | 11 | 2 | 0 | 1 | 13 | 0 | 0 | 145 | 577 |
| 05:40:00 PM | 0 | 1 | 2 | 0 | 2 | 6 | 2 | 0 | 3 | 13 | 6 | 0 | 0 | 10 | 0 | 0 | 141 | 572 |
| 05:45:00 PM | 1 | 5 | 4 | 0 | 0 | 3 | 2 | 0 | 4 | 12 | 2 | 0 | 2 | 15 | 0 | 0 | 146 | 578 |
| 05:50:00 PM | 1 | 1 | 1 | 0 | 0 | 2 | 7 | 0 | 1 | 11 | 7 | 0 | 1 | 12 | 0 | 0 | 139 | 565 |
| 05:55:00 PM | 2 | 3 | 2 | 0 | 0 | 7 | 3 | 0 | 0 | 10 | 5 | 0 | 2 | 7 | 1 | 0 | 136 | 565 |

FHWA 4-13 -Truck/Multi-Unit/Heavy Trucks

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | S Township Rd | | | | S Township Rd | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 04:00:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 04:05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 04:10:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| 04:15:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| 04:20:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 6 | |
| 04:25:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 7 | |
| 04:30:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 0 | 0 | 11 | |
| 04:35:00 PM | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | |
| 04:40:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | |
| 04:45:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| 04:50:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | |
| 04:55:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 20 |
| 05:00:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 20 |
| 05:05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 20 |
| 05:10:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 19 |
| 05:15:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 18 |
| 05:20:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 15 |
| 05:25:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 05:30:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 05:35:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 4 |
| 05:40:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 6 |
| 05:45:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7 |
| 05:50:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 6 | 9 |
| 05:55:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 9 |

| Pedestrians Crossing | | | | | 15 Min | 1 HR |
|---|---|---|---|---|---|---|
| Time | NB | SB | EB | WB | Sum | Sum |
| 04:00:00 PM | 0 | 0 | 0 | 0 | | |
| 04:05:00 PM | 0 | 0 | 0 | 0 | | |
| 04:10:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:15:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:20:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:25:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:30:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:35:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:40:00 PM | 0 | 0 | 0 | 0 | 0 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 04:45:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:50:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:55:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:00:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:10:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:15:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:20:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:25:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:30:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:35:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:40:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:45:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:50:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:55:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |

K-D-N
KEY DATA NETWORK

| Data Provided by K-D-N.com 503-594-4224 | |
|---|---|
| **N/S street:** | ***S Mulino Rd*** |
| **E/W street:** | ***SE 13th Ave*** |
| **City, State** | Canby WA |
| **Study ID #** | |
| **Location** | 45.25123 - -122.661352 |
| **Start Date** | Tuesday, October 22, 2019 |
| **Start Time** | 04:00:00 PM |
| **Peak Hour Start** | 05:00:00 PM |
| **Peak 15 Min Start** | 05:00:00 PM |
| **PHF (15-Min Int)** | 0.91 |

Peak-Hour Volumes (PHV)

| Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Entering | | | | Leaving | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | NB | SB | EB | WB | NB | SB | EB | WB |
| 41 | 39 | 0 | 0 | 0 | 81 | 47 | 0 | 29 | 0 | 74 | 0 | 0 | 0 | 0 | 0 | 80 | 128 | 103 | 0 | 155 | 68 | 88 | 0 |
| Percent Heavy Vehicles | | | | | | | | | | | | | | | | | | | | | | | |
| 0.0% | 7.7% | 0.0% | 0.0% | 0.0% | 1.2% | 0.0% | 0.0% | 0.0% | 0.0% | 1.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 3.8% | 0.8% | 1.0% | 0.0% | 1.3% | 4.4% | 0.0% | 0.0% |

| PHV- Bicycles | | | | | | | | | | | | | | | | | PHV - Pedestrians | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | in Crosswalk | | | | |
| Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | **Sum** | NB | SB | EB | WB | **Sum** |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |

All Vehicle Volumes

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | SE 13th Ave | | | | - | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 04:00:00 PM | 3 | 5 | 0 | 0 | 0 | 12 | 7 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | | |
| 04:05:00 PM | 5 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | | |
| 04:10:00 PM | 3 | 2 | 0 | 0 | 0 | 8 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 80 | |
| 04:15:00 PM | 1 | 1 | 0 | 0 | 0 | 6 | 3 | 0 | 4 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 68 | |
| 04:20:00 PM | 5 | 4 | 0 | 0 | 0 | 9 | 2 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 69 | |
| 04:25:00 PM | 4 | 3 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 66 | |
| 04:30:00 PM | 0 | 3 | 0 | 0 | 0 | 8 | 6 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 68 | |
| 04:35:00 PM | 3 | 3 | 0 | 0 | 0 | 8 | 9 | 0 | 3 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 72 | |
| 04:40:00 PM | 1 | 3 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 75 | |
| 04:45:00 PM | 5 | 4 | 0 | 0 | 0 | 6 | 5 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 78 | |
| 04:50:00 PM | 6 | 4 | 0 | 0 | 0 | 8 | 4 | 0 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 76 | |
| 04:55:00 PM | 1 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 3 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 71 | 292 |
| 05:00:00 PM | 4 | 6 | 0 | 0 | 0 | 13 | 6 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 79 | 293 |
| 05:05:00 PM | 3 | 5 | 0 | 0 | 0 | 2 | 5 | 0 | 1 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 73 | 290 |
| 05:10:00 PM | 2 | 6 | 0 | 0 | 0 | 8 | 4 | 0 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 85 | 297 |
| 05:15:00 PM | 4 | 1 | 0 | 0 | 0 | 5 | 6 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 73 | 298 |
| 05:20:00 PM | 5 | 1 | 0 | 0 | 0 | 5 | 5 | 0 | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 72 | 293 |
| 05:25:00 PM | 5 | 2 | 0 | 0 | 0 | 7 | 4 | 0 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 69 | 300 |
| 05:30:00 PM | 2 | 3 | 0 | 0 | 0 | 5 | 2 | 0 | 5 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 73 | 303 |
| 05:35:00 PM | 6 | 7 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 77 | 298 |
| 05:40:00 PM | 2 | 0 | 0 | 0 | 0 | 8 | 3 | 0 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 80 | 305 |
| 05:45:00 PM | 4 | 2 | 0 | 0 | 0 | 6 | 2 | 0 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 83 | 308 |
| 05:50:00 PM | 2 | 4 | 0 | 0 | 0 | 7 | 2 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 76 | 298 |
| 05:55:00 PM | 2 | 2 | 0 | 0 | 0 | 11 | 4 | 0 | 3 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 77 | 311 |

Bicycles on Road

K-D-N
KEY DATA NETWORK

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | SE 13th Ave | | | | - | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 04:00:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 04:05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 04:10:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:15:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:20:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 04:25:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 04:30:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 04:35:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:40:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:45:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:50:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:55:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:00:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:10:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:15:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:20:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:25:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:30:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:35:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:40:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:45:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:50:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:55:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Passenger vehicles and light trucks

| | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | SE 13th Ave | | | | - | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 04:00:00 PM | 3 | 4 | 0 | 0 | 0 | 12 | 7 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | | |
| 04:05:00 PM | 5 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | | |
| 04:10:00 PM | 3 | 2 | 0 | 0 | 0 | 8 | 4 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 79 | |
| 04:15:00 PM | 1 | 0 | 0 | 0 | 0 | 6 | 3 | 0 | 4 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 67 | |
| 04:20:00 PM | 4 | 3 | 0 | 0 | 0 | 9 | 2 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 66 | |
| 04:25:00 PM | 3 | 3 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 62 | |
| 04:30:00 PM | 0 | 3 | 0 | 0 | 0 | 7 | 6 | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 63 | |
| 04:35:00 PM | 3 | 1 | 0 | 0 | 0 | 8 | 9 | 0 | 3 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 67 | |
| 04:40:00 PM | 1 | 3 | 0 | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 71 | |
| 04:45:00 PM | 5 | 4 | 0 | 0 | 0 | 6 | 5 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 76 | |
| 04:50:00 PM | 6 | 4 | 0 | 0 | 0 | 8 | 4 | 0 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 76 | |
| 04:55:00 PM | 1 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 3 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 71 | 283 |
| 05:00:00 PM | 4 | 6 | 0 | 0 | 0 | 13 | 6 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 79 | 285 |
| 05:05:00 PM | 3 | 4 | 0 | 0 | 0 | 2 | 5 | 0 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 71 | 280 |
| 05:10:00 PM | 2 | 6 | 0 | 0 | 0 | 8 | 4 | 0 | 1 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 83 | 287 |
| 05:15:00 PM | 4 | 1 | 0 | 0 | 0 | 5 | 6 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 71 | 289 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05:20:00 PM | 5 | 1 | 0 | 0 | 0 | 5 | 5 | 0 | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 72 | 286 |
| 05:25:00 PM | 5 | 2 | 0 | 0 | 0 | 7 | 4 | 0 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 69 | 294 |
| 05:30:00 PM | 2 | 2 | 0 | 0 | 0 | 5 | 2 | 0 | 5 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 72 | 298 |
| 05:35:00 PM | 6 | 7 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 76 | 295 |
| 05:40:00 PM | 2 | 0 | 0 | 0 | 0 | 8 | 3 | 0 | 6 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 79 | 302 |
| 05:45:00 PM | 4 | 2 | 0 | 0 | 0 | 6 | 2 | 0 | 5 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 83 | 305 |
| 05:50:00 PM | 2 | 3 | 0 | 0 | 0 | 6 | 2 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 74 | 293 |
| 05:55:00 PM | 2 | 2 | 0 | 0 | 0 | 11 | 4 | 0 | 3 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 75 | 306 |

FHWA 4-13 -Truck/Multi-Unit/Heavy Trucks

| | **Northbound** | | | | **Southbound** | | | | **Eastbound** | | | | **Westbound** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S Mulino Rd | | | | S Mulino Rd | | | | SE 13th Ave | | | | - | | | | 15 Min | 1 HR |
| Time | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Left | Thru | Right | Uturn | Sum | Sum |
| 04:00:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 04:05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 04:10:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 04:15:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | |
| 04:20:00 PM | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | |
| 04:25:00 PM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| 04:30:00 PM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | |
| 04:35:00 PM | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | |
| 04:40:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | |
| 04:45:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | |
| 04:50:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 04:55:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 05:00:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 05:05:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 10 |
| 05:10:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 10 |
| 05:15:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 9 |
| 05:20:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 05:25:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 05:30:00 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 |
| 05:35:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 05:40:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 05:45:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 05:50:00 PM | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 |
| 05:55:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 |

| Pedestrians Crossing | | | | | 15 Min | 1 HR |
|---|---|---|---|---|---|---|
| Time | NB | SB | EB | WB | Sum | Sum |
| 04:00:00 PM | 0 | 0 | 0 | 0 | | |
| 04:05:00 PM | 0 | 0 | 0 | 0 | | |
| 04:10:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:15:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:20:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:25:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:30:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:35:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:40:00 PM | 0 | 0 | 0 | 0 | 0 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 04:45:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:50:00 PM | 0 | 0 | 0 | 0 | 0 | |
| 04:55:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:00:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:10:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:15:00 PM | 0 | 0 | 0 | 0 | 0 | 0 |
| 05:20:00 PM | 0 | 1 | 0 | 0 | 1 | 1 |
| 05:25:00 PM | 0 | 0 | 0 | 0 | 1 | 1 |
| 05:30:00 PM | 0 | 0 | 0 | 0 | 1 | 1 |
| 05:35:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:40:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:45:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:50:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |
| 05:55:00 PM | 0 | 0 | 0 | 0 | 0 | 1 |

Study Nam 99E at Sequoia Pkwy-Redwood St
Start Date ########
Start Time 7:00 AM
Site Code

Location 45.26904 -122.676

Lights

| | Northbound 99E | | | | | Southbound 99E | | | | | Eastbound N Redwood St | | | | | Westbound Sequoia Pkwy | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Right on R | U-Turn | Left | Thru | Right | Right on R | U-Turn | Left | Thru | Right | Right on R | U-Turn | Left | Thru | Right | Right on R | U-Turn |
| 7:00 AM | 1 | 63 | 4 | 0 | 0 | 3 | 39 | 0 | 0 | 0 | 1 | 4 | 0 | 3 | 0 | 4 | 0 | 0 | 1 | 0 |
| 7:05 AM | 1 | 55 | 2 | 0 | 0 | 2 | 30 | 1 | 0 | 0 | 1 | 0 | 4 | 2 | 0 | 10 | 0 | 1 | 2 | 0 |
| 7:10 AM | 2 | 68 | 9 | 1 | 0 | 4 | 41 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 9 | 1 | 2 | 1 | 0 |
| 7:15 AM | 0 | 46 | 4 | 0 | 0 | 3 | 36 | 0 | 1 | 0 | 1 | 1 | 2 | 4 | 0 | 11 | 1 | 1 | 2 | 0 |
| 7:20 AM | 2 | 65 | 1 | 4 | 0 | 6 | 48 | 0 | 0 | 0 | 2 | 2 | 4 | 1 | 0 | 9 | 1 | 0 | 3 | 0 |
| 7:25 AM | 1 | 67 | 3 | 2 | 0 | 8 | 42 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 7 | 0 | 0 | 2 | 0 |
| 7:30 AM | 2 | 54 | 9 | 0 | 0 | 5 | 33 | 0 | 0 | 0 | 4 | 0 | 0 | 2 | 0 | 18 | 0 | 1 | 1 | 0 |
| 7:35 AM | 0 | 50 | 5 | 2 | 0 | 4 | 39 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 14 | 1 | 1 | 5 | 0 |
| 7:40 AM | 2 | 63 | 8 | 1 | 0 | 8 | 55 | 0 | 1 | 0 | 0 | 1 | 1 | 2 | 0 | 14 | 1 | 1 | 6 | 0 |
| 7:45 AM | 6 | 56 | 5 | 1 | 0 | 3 | 47 | 1 | 0 | 0 | 1 | 3 | 3 | 1 | 0 | 19 | 1 | 3 | 0 | 0 |
| 7:50 AM | 5 | 43 | 9 | 0 | 0 | 2 | 44 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 4 | 3 | 0 | 2 | 0 |
| 7:55 AM | 1 | 46 | 7 | 0 | 0 | 5 | 43 | 0 | 0 | 0 | 0 | 3 | 1 | 6 | 0 | 8 | 2 | 1 | 0 | 0 |
| 8:00 AM | 2 | 47 | 8 | 0 | 0 | 4 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 10 | 1 | 1 | 3 | 0 |
| 8:05 AM | 0 | 40 | 0 | 1 | 0 | 4 | 43 | 0 | 0 | 0 | 0 | 3 | 4 | 2 | 0 | 8 | 2 | 3 | 2 | 0 |
| 8:10 AM | 4 | 38 | 2 | 2 | 0 | 3 | 34 | 1 | 0 | 0 | 2 | 5 | 2 | 1 | 0 | 8 | 1 | 2 | 4 | 0 |
| 8:15 AM | 0 | 49 | 7 | 2 | 0 | 4 | 31 | 0 | 0 | 0 | 3 | 2 | 2 | 1 | 0 | 11 | 1 | 2 | 2 | 0 |
| 8:20 AM | 3 | 37 | 5 | 4 | 0 | 6 | 49 | 2 | 0 | 0 | 1 | 0 | 2 | 3 | 0 | 11 | 3 | 1 | 1 | 0 |
| 8:25 AM | 0 | 38 | 5 | 3 | 0 | 5 | 41 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 20 | 2 | 0 | 4 | 0 |
| 8:30 AM | 2 | 29 | 3 | 2 | 0 | 1 | 30 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 18 | 4 | 1 | 4 | 0 |
| 8:35 AM | 4 | 52 | 5 | 2 | 0 | 5 | 43 | 1 | 0 | 0 | 1 | 3 | 3 | 1 | 0 | 8 | 1 | 2 | 2 | 0 |
| 8:40 AM | 3 | 42 | 2 | 0 | 0 | 3 | 29 | 1 | 1 | 0 | 0 | 4 | 1 | 3 | 0 | 9 | 0 | 0 | 0 | 0 |
| 8:45 AM | 1 | 36 | 3 | 0 | 0 | 3 | 26 | 0 | 0 | 0 | 1 | 5 | 4 | 2 | 0 | 16 | 2 | 0 | 1 | 0 |
| 8:50 AM | 3 | 34 | 6 | 0 | 0 | 3 | 32 | 0 | 0 | 0 | 3 | 2 | 2 | 2 | 0 | 11 | 3 | 1 | 3 | 0 |
| 8:55 AM | 7 | 37 | 5 | 1 | 0 | 2 | 34 | 1 | 0 | 0 | 1 | 0 | 3 | 4 | 0 | 10 | 1 | 1 | 3 | 0 |
| 4:00 PM | 4 | 58 | 6 | 0 | 0 | 7 | 68 | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 30 | 7 | 1 | 6 | 0 |
| 4:05 PM | 3 | 78 | 7 | 0 | 0 | 8 | 90 | 2 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 46 | 3 | 3 | 6 | 0 |
| 4:10 PM | 10 | 60 | 8 | 3 | 0 | 14 | 98 | 3 | 0 | 0 | 1 | 6 | 1 | 1 | 0 | 17 | 2 | 2 | 4 | 0 |
| 4:15 PM | 7 | 64 | 4 | 6 | 0 | 10 | 73 | 2 | 2 | 0 | 1 | 8 | 7 | 2 | 0 | 29 | 6 | 4 | 2 | 0 |
| 4:20 PM | 3 | 52 | 6 | 3 | 0 | 6 | 87 | 0 | 0 | 0 | 1 | 14 | 2 | 0 | 0 | 32 | 6 | 0 | 9 | 0 |
| 4:25 PM | 7 | 61 | 9 | 0 | 0 | 15 | 107 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 19 | 3 | 2 | 5 | 0 |
| 4:30 PM | 4 | 67 | 6 | 4 | 0 | 8 | 82 | 2 | 0 | 0 | 1 | 7 | 2 | 0 | 0 | 26 | 7 | 0 | 4 | 0 |
| 4:35 PM | 5 | 75 | 9 | 2 | 0 | 14 | 76 | 0 | 0 | 0 | 0 | 4 | 2 | 3 | 0 | 25 | 6 | 3 | 6 | 0 |
| 4:40 PM | 2 | 52 | 11 | 0 | 0 | 8 | 80 | 1 | 1 | 0 | 0 | 4 | 1 | 3 | 0 | 21 | 4 | 3 | 1 | 0 |
| 4:45 PM | 6 | 38 | 4 | 1 | 0 | 14 | 67 | 2 | 0 | 0 | 0 | 6 | 4 | 1 | 0 | 27 | 2 | 6 | 6 | 0 |
| 4:50 PM | 1 | 55 | 6 | 5 | 0 | 6 | 64 | 1 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 29 | 10 | 2 | 6 | 0 |
| 4:55 PM | 5 | 80 | 7 | 0 | 0 | 15 | 78 | 0 | 1 | 0 | 1 | 2 | 1 | 0 | 0 | 19 | 3 | 0 | 4 | 0 |
| 5:00 PM | 9 | 43 | 5 | 4 | 0 | 12 | 71 | 1 | 0 | 0 | 1 | 10 | 0 | 0 | 0 | 27 | 7 | 5 | 6 | 0 |
| 5:05 PM | 11 | 81 | 7 | 3 | 0 | 6 | 76 | 1 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | 15 | 6 | 2 | 3 | 0 |
| 5:10 PM | 8 | 48 | 7 | 1 | 0 | 12 | 79 | 3 | 0 | 0 | 0 | 4 | 3 | 3 | 0 | 23 | 7 | 3 | 3 | 0 |
| 5:15 PM | 5 | 76 | 13 | 4 | 0 | 9 | 87 | 0 | 1 | 0 | 0 | 6 | 2 | 3 | 0 | 27 | 6 | 3 | 2 | 0 |
| 5:20 PM | 6 | 66 | 11 | 1 | 0 | 14 | 90 | 2 | 0 | 0 | 0 | 3 | 3 | 2 | 0 | 17 | 5 | 0 | 6 | 0 |
| 5:25 PM | 7 | 59 | 5 | 3 | 0 | 15 | 81 | 3 | 0 | 0 | 1 | 5 | 2 | 0 | 0 | 31 | 6 | 2 | 7 | 0 |
| 5:30 PM | 5 | 56 | 7 | 3 | 0 | 12 | 75 | 0 | 0 | 0 | 0 | 4 | 2 | 3 | 0 | 20 | 3 | 3 | 3 | 0 |
| 5:35 PM | 3 | 65 | 7 | 5 | 0 | 11 | 93 | 1 | 0 | 0 | 0 | 5 | 2 | 1 | 0 | 22 | 5 | 1 | 3 | 0 |
| 5:40 PM | 7 | 56 | 8 | 5 | 0 | 18 | 45 | 4 | 0 | 0 | 1 | 4 | 1 | 1 | 0 | 25 | 3 | 0 | 3 | 0 |
| 5:45 PM | 5 | 66 | 3 | 1 | 0 | 11 | 96 | 1 | 0 | 0 | 1 | 2 | 5 | 2 | 0 | 19 | 3 | 1 | 4 | 0 |
| 5:50 PM | 3 | 55 | 6 | 5 | 0 | 9 | 57 | 1 | 0 | 0 | 0 | 6 | 4 | 0 | 0 | 27 | 5 | 1 | 1 | 0 |
| 5:55 PM | 6 | 60 | 9 | 0 | 0 | 11 | 83 | 2 | 0 | 0 | 2 | 6 | 0 | 2 | 0 | 33 | 5 | 2 | 3 | 0 |

Other Vehicles

| | Northbound 99E | | | | | Southbound 99E | | | | | Eastbound N Redwood St | | | | | Westbound Sequoia Pkwy | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Right on R | U-Turn | Left | Thru | Right | Right on R | U-Turn | Left | Thru | Right | Right on R | U-Turn | Left | Thru | Right | Right on R | U-Turn |
| 7:00 AM | 1 | 6 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:05 AM | 0 | 3 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 7:10 AM | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 3 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:20 AM | 0 | 4 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 1 | 0 |
| 7:25 AM | 0 | 6 | 0 | 1 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 2 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 7:35 AM | 0 | 4 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:40 AM | 0 | 7 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 10 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| 7:50 AM | 0 | 3 | 0 | 0 | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| 7:55 AM | 0 | 4 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| 8:00 AM | 0 | 8 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| 8:05 AM | 1 | 9 | 1 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:10 AM | 0 | 6 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 9 | 0 | 1 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 8:20 AM | 1 | 5 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 8:25 AM | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 8:30 AM | 0 | 3 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 8:35 AM | 0 | 5 | 0 | 0 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 0 |
| 8:40 AM | 0 | 2 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 6 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 8:50 AM | 0 | 4 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:55 AM | 2 | 5 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 4:00 PM | 1 | 3 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 4:05 PM | 0 | 8 | 1 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 4:10 PM | 0 | 4 | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 |
| 4:20 PM | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:25 PM | 0 | 6 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 4:30 PM | 0 | 3 | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:35 PM | 0 | 3 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4:40 PM | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 2 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| 4:50 PM | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:55 PM | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 4 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:05 PM | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:10 PM | 0 | 0 | 1 | 0 | 0 | 1 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 2 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 5:20 PM | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:25 PM | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 5:35 PM | 0 | 1 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:40 PM | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 5:45 PM | 0 | 4 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |
| 5:50 PM | 0 | 3 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:55 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Bicycles on Road

| | Northbound 99E | | | | | Southbound 99E | | | | | Eastbound N Redwood St | | | | | Westbound Sequoia Pkwy | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Start Time | Left | Thru | Right | Right on R | U-Turn | Left | Thru | Right | Right on R | U-Turn | Left | Thru | Right | Right on R | U-Turn | Left | Thru | Right | Right on R | U-Turn |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:55 PM | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

All Pedestrians

| | Northbound 99E | | Southbound 99E | | Eastbound N Redwood St | | Westbound Sequoia Pkwy | |
|---|---|---|---|---|---|---|---|---|
| Start Time | Peds CCW | Peds CW | Peds CCW | Peds CW | Peds CCW | Peds CW | Peds CCW | Peds CW |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:25 AM | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:10 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:30 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 8:35 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 8:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8:55 AM | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 4:00 PM | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 4:05 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 4:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 4:15 PM | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:30 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 4:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 4:45 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 4:50 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:15 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 5:25 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:35 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:50 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

# Tube Count Data

**KEY DATA NETWORK**
K-D-N.com
Tualatin, OR 97062
503-804-3294

Mulino Rd North of Township Rd

Latitude: 45' 15.7372 North
Longitude: 122' 39.6648 West

| Start Time | 22-Oct-19 Tue | NB | SB | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | | 0 | 0 | | | | | | | 0 |
| 12:15 | | 0 | 1 | | | | | | | 1 |
| 12:30 | | 1 | 2 | | | | | | | 3 |
| 12:45 | | 1 | 0 | | | | | | | 1 |
| 01:00 | | 0 | 1 | | | | | | | 1 |
| 01:15 | | 0 | 1 | | | | | | | 1 |
| 01:30 | | 1 | 0 | | | | | | | 1 |
| 01:45 | | 0 | 0 | | | | | | | 0 |
| 02:00 | | 0 | 2 | | | | | | | 2 |
| 02:15 | | 0 | 0 | | | | | | | 0 |
| 02:30 | | 0 | 0 | | | | | | | 0 |
| 02:45 | | 0 | 0 | | | | | | | 0 |
| 03:00 | | 0 | 1 | | | | | | | 1 |
| 03:15 | | 1 | 2 | | | | | | | 3 |
| 03:30 | | 1 | 0 | | | | | | | 1 |
| 03:45 | | 1 | 1 | | | | | | | 2 |
| 04:00 | | 1 | 0 | | | | | | | 1 |
| 04:15 | | 3 | 1 | | | | | | | 4 |
| 04:30 | | 7 | 4 | | | | | | | 11 |
| 04:45 | | 3 | 0 | | | | | | | 3 |
| 05:00 | | 4 | 3 | | | | | | | 7 |
| 05:15 | | 5 | 5 | | | | | | | 10 |
| 05:30 | | 6 | 2 | | | | | | | 8 |
| 05:45 | | 6 | 3 | | | | | | | 9 |
| 06:00 | | 11 | 4 | | | | | | | 15 |
| 06:15 | | 26 | 2 | | | | | | | 28 |
| 06:30 | | 27 | 9 | | | | | | | 36 |
| 06:45 | | 26 | 10 | | | | | | | 36 |
| 07:00 | | 19 | 11 | | | | | | | 30 |
| 07:15 | | 20 | 7 | | | | | | | 27 |
| 07:30 | | **35** | 16 | | | | | | | **51** |
| 07:45 | | **27** | 17 | | | | | | | **44** |
| 08:00 | | **22** | 12 | | | | | | | **34** |
| 08:15 | | **24** | 7 | | | | | | | **31** |
| 08:30 | | 18 | 9 | | | | | | | 27 |
| 08:45 | | 19 | 12 | | | | | | | 31 |
| 09:00 | | 15 | 17 | | | | | | | 32 |
| 09:15 | | 22 | 11 | | | | | | | 33 |
| 09:30 | | 13 | 7 | | | | | | | 20 |
| 09:45 | | 11 | 13 | | | | | | | 24 |
| 10:00 | | 8 | 7 | | | | | | | 15 |
| 10:15 | | 10 | 9 | | | | | | | 19 |
| 10:30 | | 12 | 12 | | | | | | | 24 |
| 10:45 | | 5 | 10 | | | | | | | 15 |
| 11:00 | | 16 | **13** | | | | | | | 29 |
| 11:15 | | 14 | **16** | | | | | | | 30 |
| 11:30 | | 11 | **14** | | | | | | | 25 |
| 11:45 | | 6 | **15** | | | | | | | 21 |
| Total | | 458 | 289 | | | | | | | 747 |
| Percent | | 61.3% | 38.7% | | | | | | | |
| Peak | - | 07:30 | 11:00 | - | - | - | - | - | - | 07:30 |
| Vol. | - | 108 | 58 | - | - | - | - | - | - | 160 |
| P.H.F. | | 0.771 | 0.906 | | | | | | | 0.784 |

**KEY DATA NETWORK**
K-D-N.com
Tualatin, OR 97062
503-804-3294

Mulino Rd North of Township Rd

Latitude: 45' 15.7372 North
Longitude: 122' 39.6648 West

| Start Time | 22-Oct-19 Tue | NB | SB | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 12:00 PM | | 10 | 17 | | | | | | | 27 |
| 12:15 | | 15 | 14 | | | | | | | 29 |
| 12:30 | | 9 | 8 | | | | | | | 17 |
| 12:45 | | 12 | 15 | | | | | | | 27 |
| 01:00 | | 10 | 14 | | | | | | | 24 |
| 01:15 | | 8 | 7 | | | | | | | 15 |
| 01:30 | | 11 | 15 | | | | | | | 26 |
| 01:45 | | 15 | 11 | | | | | | | 26 |
| 02:00 | | 13 | 12 | | | | | | | 25 |
| 02:15 | | 16 | 24 | | | | | | | 40 |
| 02:30 | | 15 | 18 | | | | | | | 33 |
| 02:45 | | 11 | 18 | | | | | | | 29 |
| 03:00 | | 11 | 18 | | | | | | | 29 |
| 03:15 | | 8 | 28 | | | | | | | 36 |
| 03:30 | | **17** | 26 | | | | | | | 43 |
| 03:45 | | **14** | 28 | | | | | | | 42 |
| 04:00 | | **12** | 34 | | | | | | | 46 |
| 04:15 | | **19** | 33 | | | | | | | **52** |
| 04:30 | | 14 | **39** | | | | | | | **53** |
| 04:45 | | 11 | **35** | | | | | | | **46** |
| 05:00 | | 15 | **35** | | | | | | | **50** |
| 05:15 | | 8 | **34** | | | | | | | 42 |
| 05:30 | | 20 | 26 | | | | | | | 46 |
| 05:45 | | 13 | 26 | | | | | | | 39 |
| 06:00 | | 10 | 17 | | | | | | | 27 |
| 06:15 | | 9 | 26 | | | | | | | 35 |
| 06:30 | | 17 | 18 | | | | | | | 35 |
| 06:45 | | 9 | 11 | | | | | | | 20 |
| 07:00 | | 8 | 10 | | | | | | | 18 |
| 07:15 | | 6 | 11 | | | | | | | 17 |
| 07:30 | | 7 | 7 | | | | | | | 14 |
| 07:45 | | 3 | 5 | | | | | | | 8 |
| 08:00 | | 5 | 4 | | | | | | | 9 |
| 08:15 | | 5 | 10 | | | | | | | 15 |
| 08:30 | | 3 | 9 | | | | | | | 12 |
| 08:45 | | 7 | 10 | | | | | | | 17 |
| 09:00 | | 2 | 8 | | | | | | | 10 |
| 09:15 | | 1 | 5 | | | | | | | 6 |
| 09:30 | | 2 | 4 | | | | | | | 6 |
| 09:45 | | 0 | 2 | | | | | | | 2 |
| 10:00 | | 2 | 3 | | | | | | | 5 |
| 10:15 | | 4 | 3 | | | | | | | 7 |
| 10:30 | | 0 | 6 | | | | | | | 6 |
| 10:45 | | 4 | 2 | | | | | | | 6 |
| 11:00 | | 3 | 5 | | | | | | | 8 |
| 11:15 | | 0 | 2 | | | | | | | 2 |
| 11:30 | | 1 | 1 | | | | | | | 2 |
| 11:45 | | 2 | 2 | | | | | | | 4 |
| Total | | 417 | 716 | | | | | | | 1133 |
| Percent | | 36.8% | 63.2% | | | | | | | |
| Peak | - | 15:30 | 16:30 | - | - | - | - | - | - | 16:15 |
| Vol. | - | 62 | 143 | - | - | - | - | - | - | 201 |
| P.H.F. | | 0.816 | 0.917 | | | | | | | 0.948 |
| Total | | 875 | 1005 | | | | | | | 1880 |
| Percent | | 46.5% | 53.5% | | | | | | | |

ADT ADT 1,880 AADT 1,880

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Mulino Rd North of Township Rd

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NB

| Start Time | Bikes | Cars & Trailer | 2 Axle Long | Buses | 2 Axle 6 Tire | 3 Axle Single | 4 Axle Single | <5 Axl Double | 5 Axle Double | >6 Axl Double | <6 Axl Multi | 6 Axle Multi | >6 Axl Multi | Not Classe | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/22/19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 00:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 00:30 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 00:45 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 01:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:30 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 01:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 02:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:15 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 03:30 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 03:45 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 04:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 04:15 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 04:30 | 0 | 4 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 04:45 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | 0 | 8 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 05:00 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 05:15 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 |
| 05:30 | 0 | 1 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 05:45 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | 0 | 7 | 9 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 21 |
| 06:00 | 0 | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 06:15 | 0 | 22 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| 06:30 | 0 | 19 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 06:45 | 0 | 21 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| | 0 | 71 | 15 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90 |
| 07:00 | 0 | 13 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 19 |
| 07:15 | 0 | 18 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| 07:30 | 0 | 25 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 35 |
| 07:45 | 2 | 15 | 7 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| | 2 | 71 | 19 | 1 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 101 |
| 08:00 | 0 | 17 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 08:15 | 0 | 15 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 08:30 | 0 | 10 | 4 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 08:45 | 0 | 15 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| | 0 | 57 | 20 | 1 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 83 |
| 09:00 | 0 | 10 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 09:15 | 2 | 17 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| 09:30 | 0 | 8 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 13 |
| 09:45 | 0 | 5 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 11 |
| | 2 | 40 | 8 | 0 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 61 |
| 10:00 | 0 | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 10:15 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 10 |
| 10:30 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 10:45 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| | 0 | 25 | 6 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 35 |
| 11:00 | 5 | 2 | 4 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 16 |
| 11:15 | 0 | 9 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 11:30 | 0 | 7 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 11:45 | 0 | 4 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | 5 | 22 | 12 | 0 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 47 |
| Total | 9 | 307 | 92 | 3 | 30 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 9 | 458 |
| Percent | 2.0% | 67.0% | 20.1% | 0.7% | 6.6% | 0.0% | 0.7% | 1.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 2.0% | |

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| Start Time | Bikes | Cars & Trailer | 2 Axle Long | Buses | 2 Axle 6 Tire | 3 Axle Single | 4 Axle Single | <5 Axl Double | 5 Axle Double | >6 Axl Double | <6 Axl Multi | 6 Axle Multi | >6 Axl Multi | Not Classe | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 PM | 0 | 6 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 12:15 | 0 | 10 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 12:30 | 0 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 12:45 | 2 | 5 | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| | 2 | 27 | 9 | 1 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| 13:00 | 2 | 4 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 10 |
| 13:15 | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 13:30 | 0 | 6 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 13:45 | 0 | 10 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| | 2 | 26 | 9 | 0 | 4 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 44 |
| 14:00 | 0 | 7 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 14:15 | 3 | 5 | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 |
| 14:30 | 2 | 8 | 3 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 14:45 | 0 | 7 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| | 5 | 27 | 15 | 0 | 4 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 55 |
| 15:00 | 0 | 6 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 15:15 | 0 | 5 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 15:30 | 0 | 7 | 7 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 17 |
| 15:45 | 0 | 10 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 14 |
| | 0 | 28 | 9 | 3 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 50 |
| 16:00 | 0 | 6 | 4 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 16:15 | 1 | 10 | 4 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 19 |
| 16:30 | 0 | 10 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 16:45 | 0 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| | 1 | 36 | 11 | 1 | 2 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 56 |
| 17:00 | 0 | 12 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 17:15 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 17:30 | 0 | 10 | 5 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| 17:45 | 0 | 11 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| | 0 | 41 | 8 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 56 |
| 18:00 | 0 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 18:15 | 0 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 18:30 | 0 | 14 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 18:45 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 |
| | 0 | 35 | 7 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 45 |
| 19:00 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 19:15 | 0 | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 19:30 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 19:45 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| | 0 | 18 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 24 |
| 20:00 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 20:15 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 20:30 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 20:45 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| | 0 | 16 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 20 |
| 21:00 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 21:15 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 21:30 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 21:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 22:00 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 22:15 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 22:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22:45 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | 0 | 7 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 23:00 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 23:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23:30 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 23:45 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Total | 10 | 271 | 75 | 5 | 36 | 4 | 3 | 5 | 1 | 0 | 0 | 0 | 0 | 7 | 417 |
| Percent | 2.4% | 65.0% | 18.0% | 1.2% | 8.6% | 1.0% | 0.7% | 1.2% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 1.7% | |
| Grand Total | 19 | 578 | 167 | 8 | 66 | 4 | 6 | 10 | 1 | 0 | 0 | 0 | 0 | 16 | 875 |
| Percent | 2.2% | 66.1% | 19.1% | 0.9% | 7.5% | 0.5% | 0.7% | 1.1% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 1.8% | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/22/19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 00:15 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 00:30 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 00:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 01:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 01:15 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 01:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 01:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 02:00 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 02:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 03:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 03:15 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 03:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 03:45 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 04:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:15 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 04:30 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 04:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 05:00 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 05:15 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 |
| 05:30 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 05:45 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | 0 | 9 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 13 |
| 06:00 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 06:15 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 06:30 | 0 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 06:45 | 0 | 7 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| | 0 | 18 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| 07:00 | 0 | 4 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 11 |
| 07:15 | 0 | 5 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 07:30 | 0 | 5 | 8 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| 07:45 | 0 | 14 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| | 0 | 28 | 12 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 51 |
| 08:00 | 0 | 6 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 12 |
| 08:15 | 0 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 08:30 | 0 | 6 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 |
| 08:45 | 0 | 7 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| | 0 | 24 | 8 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 40 |
| 09:00 | 0 | 9 | 4 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 09:15 | 0 | 6 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 09:30 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 |
| 09:45 | 0 | 8 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 13 |
| | 0 | 25 | 11 | 0 | 6 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 2 | 48 |
| 10:00 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 10:15 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 9 |
| 10:30 | 0 | 8 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 10:45 | 0 | 3 | 4 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| | 0 | 22 | 9 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 38 |
| 11:00 | 0 | 6 | 4 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 11:15 | 0 | 8 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 16 |
| 11:30 | 0 | 7 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 11:45 | 0 | 11 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| | 0 | 32 | 14 | 1 | 8 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 58 |
| Total | 0 | 169 | 65 | 4 | 33 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 4 | 10 | 289 |
| Percent | 0.0% | 58.5% | 22.5% | 1.4% | 11.4% | 0.0% | 0.0% | 1.4% | 0.0% | 0.0% | 0.0% | 0.0% | 1.4% | 3.5% | |

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K-D-N.com
Tualatin, OR 97062
503-804-3294

Mulino Rd North of Township Rd

Latitude: 45' 15.7372 North
Longitude: 122' 39.6648 West

SB

| Start Time | Bikes | Cars & Trailer | 2 Axle Long | Buses | 2 Axle 6 Tire | 3 Axle Single | 4 Axle Single | <5 Axl Double | 5 Axle Double | >6 Axl Double | <6 Axl Multi | 6 Axle Multi | >6 Axl Multi | Not Classe | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 PM | 1 | 10 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 12:15 | 0 | 9 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 12:30 | 0 | 4 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 12:45 | 0 | 10 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| | 1 | 33 | 13 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 |
| 13:00 | 0 | 4 | 1 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 14 |
| 13:15 | 0 | 4 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 13:30 | 0 | 6 | 5 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 13:45 | 1 | 5 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| | 1 | 19 | 10 | 1 | 10 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 47 |
| 14:00 | 0 | 6 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 |
| 14:15 | 1 | 13 | 3 | 0 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 24 |
| 14:30 | 0 | 9 | 7 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 14:45 | 0 | 11 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 18 |
| | 1 | 39 | 17 | 1 | 10 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 72 |
| 15:00 | 0 | 8 | 6 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 15:15 | 0 | 11 | 11 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| 15:30 | 0 | 15 | 5 | 0 | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 26 |
| 15:45 | 0 | 19 | 7 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| | 0 | 53 | 29 | 0 | 12 | 1 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 100 |
| 16:00 | 0 | 22 | 8 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| 16:15 | 0 | 23 | 6 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 33 |
| 16:30 | 1 | 28 | 7 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 39 |
| 16:45 | 1 | 26 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| | 2 | 99 | 28 | 1 | 8 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 141 |
| 17:00 | 0 | 25 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| 17:15 | 0 | 28 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 |
| 17:30 | 0 | 14 | 7 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| 17:45 | 0 | 19 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| | 0 | 86 | 23 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 121 |
| 18:00 | 0 | 13 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 18:15 | 0 | 20 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| 18:30 | 0 | 13 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 18:45 | 0 | 9 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| | 0 | 55 | 6 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 72 |
| 19:00 | 0 | 7 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 19:15 | 0 | 8 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 19:30 | 0 | 4 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 19:45 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 |
| | 0 | 23 | 7 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 33 |
| 20:00 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 20:15 | 0 | 7 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 20:30 | 0 | 6 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 20:45 | 0 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| | 0 | 24 | 7 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 |
| 21:00 | 0 | 4 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 21:15 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 21:30 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 21:45 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | 0 | 13 | 4 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 22:00 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 22:15 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 22:30 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 22:45 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | 0 | 10 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 23:00 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 23:15 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 23:30 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 23:45 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | 0 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| Total | 5 | 462 | 148 | 3 | 76 | 3 | 0 | 8 | 1 | 0 | 0 | 0 | 3 | 7 | 716 |
| Percent | 0.7% | 64.5% | 20.7% | 0.4% | 10.6% | 0.4% | 0.0% | 1.1% | 0.1% | 0.0% | 0.0% | 0.0% | 0.4% | 1.0% | |
| Grand Total | 5 | 631 | 213 | 7 | 109 | 3 | 0 | 12 | 1 | 0 | 0 | 0 | 7 | 17 | 1005 |
| Percent | 0.5% | 62.8% | 21.2% | 0.7% | 10.8% | 0.3% | 0.0% | 1.2% | 0.1% | 0.0% | 0.0% | 0.0% | 0.7% | 1.7% | |

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NB, SB

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10/22/19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 00:15 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 00:30 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 00:45 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 01:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 01:15 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 01:30 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 01:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 02:00 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 02:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 02:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 03:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 03:15 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 03:30 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 03:45 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 04:00 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 04:15 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 04:30 | 0 | 6 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 04:45 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| | 0 | 11 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 05:00 | 0 | 5 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 05:15 | 0 | 4 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 10 |
| 05:30 | 0 | 2 | 4 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 05:45 | 0 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| | 0 | 16 | 11 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 34 |
| 06:00 | 0 | 11 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 06:15 | 0 | 24 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 |
| 06:30 | 0 | 26 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| 06:45 | 0 | 28 | 6 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| | 0 | 89 | 20 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 115 |
| 07:00 | 0 | 17 | 2 | 2 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 30 |
| 07:15 | 0 | 23 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 07:30 | 0 | 30 | 16 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 51 |
| 07:45 | 2 | 29 | 10 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 44 |
| | 2 | 99 | 31 | 3 | 11 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 152 |
| 08:00 | 0 | 23 | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 34 |
| 08:15 | 0 | 20 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| 08:30 | 0 | 16 | 5 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 27 |
| 08:45 | 0 | 22 | 7 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 |
| | 0 | 81 | 28 | 2 | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 123 |
| 09:00 | 0 | 19 | 6 | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| 09:15 | 2 | 23 | 4 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 |
| 09:30 | 0 | 10 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 20 |
| 09:45 | 0 | 13 | 5 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 24 |
| | 2 | 65 | 19 | 0 | 14 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 1 | 4 | 109 |
| 10:00 | 0 | 11 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 10:15 | 0 | 11 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 19 |
| 10:30 | 0 | 19 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 10:45 | 0 | 6 | 6 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| | 0 | 47 | 15 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 73 |
| 11:00 | 5 | 8 | 8 | 0 | 3 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 29 |
| 11:15 | 0 | 17 | 7 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 30 |
| 11:30 | 0 | 14 | 8 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| 11:45 | 0 | 15 | 3 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 |
| | 5 | 54 | 26 | 1 | 12 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 2 | 2 | 105 |
| Total | 9 | 476 | 157 | 7 | 63 | 0 | 3 | 9 | 0 | 0 | 0 | 0 | 4 | 19 | 747 |
| Percent | 1.2% | 63.7% | 21.0% | 0.9% | 8.4% | 0.0% | 0.4% | 1.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.5% | 2.5% | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 PM | 1 | 16 | 7 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 12:15 | 0 | 19 | 4 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| 12:30 | 0 | 10 | 4 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 12:45 | 2 | 15 | 7 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| | 3 | 60 | 22 | 1 | 12 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 |
| 13:00 | 2 | 8 | 2 | 1 | 5 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 24 |
| 13:15 | 0 | 10 | 1 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 13:30 | 0 | 12 | 9 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| 13:45 | 1 | 15 | 7 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 |
| | 3 | 45 | 19 | 1 | 14 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 91 |
| 14:00 | 0 | 13 | 9 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |
| 14:15 | 4 | 18 | 9 | 0 | 5 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 40 |
| 14:30 | 2 | 17 | 10 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 33 |
| 14:45 | 0 | 18 | 4 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 29 |
| | 6 | 66 | 32 | 1 | 14 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 3 | 127 |
| 15:00 | 0 | 14 | 7 | 2 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| 15:15 | 0 | 16 | 11 | 0 | 7 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| 15:30 | 0 | 22 | 12 | 0 | 5 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 43 |
| 15:45 | 0 | 29 | 8 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 42 |
| | 0 | 81 | 38 | 3 | 20 | 1 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 3 | 150 |
| 16:00 | 0 | 28 | 12 | 0 | 4 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| 16:15 | 1 | 33 | 10 | 2 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 52 |
| 16:30 | 1 | 38 | 9 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 53 |
| 16:45 | 1 | 36 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| | 3 | 135 | 39 | 2 | 10 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 3 | 197 |
| 17:00 | 0 | 37 | 7 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 |
| 17:15 | 0 | 36 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| 17:30 | 0 | 24 | 12 | 0 | 9 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| 17:45 | 0 | 30 | 6 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| | 0 | 127 | 31 | 0 | 18 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 177 |
| 18:00 | 0 | 21 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 18:15 | 0 | 28 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| 18:30 | 0 | 27 | 5 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| 18:45 | 0 | 14 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 20 |
| | 0 | 90 | 13 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 117 |
| 19:00 | 0 | 14 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 19:15 | 0 | 11 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| 19:30 | 0 | 10 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 19:45 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 8 |
| | 0 | 41 | 10 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 57 |
| 20:00 | 0 | 7 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| 20:15 | 0 | 12 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| 20:30 | 0 | 8 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 12 |
| 20:45 | 0 | 13 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| | 0 | 40 | 8 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 53 |
| 21:00 | 0 | 6 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 21:15 | 0 | 4 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 21:30 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 21:45 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | 0 | 17 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 22:00 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 22:15 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 22:30 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 22:45 | 0 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| | 0 | 17 | 4 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 24 |
| 23:00 | 0 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 23:15 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 23:30 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 23:45 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| | 0 | 14 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| Total | 15 | 733 | 223 | 8 | 112 | 7 | 3 | 13 | 2 | 0 | 0 | 0 | 3 | 14 | 1133 |
| Percent | 1.3% | 64.7% | 19.7% | 0.7% | 9.9% | 0.6% | 0.3% | 1.1% | 0.2% | 0.0% | 0.0% | 0.0% | 0.3% | 1.2% | |
| Grand Total | 24 | 1209 | 380 | 15 | 175 | 7 | 6 | 22 | 2 | 0 | 0 | 0 | 7 | 33 | 1880 |
| Percent | 1.3% | 64.3% | 20.2% | 0.8% | 9.3% | 0.4% | 0.3% | 1.2% | 0.1% | 0.0% | 0.0% | 0.0% | 0.4% | 1.8% | |

# HCM Analysis Reports

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 7.9 |
| Intersection LOS | A |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 49 | 22 | 50 | 61 | 19 | 24 |
| Future Vol, veh/h | 49 | 22 | 50 | 61 | 19 | 24 |
| Peak Hour Factor | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Heavy Vehicles, % | 0 | 5 | 2 | 2 | 21 | 4 |
| Mvmt Flow | 58 | 26 | 60 | 73 | 23 | 29 |
| Number of Lanes | 1 | 0 | 0 | 1 | 1 | 0 |

| Approach | EB | NB | SB |
|---|---|---|---|
| Opposing Approach | | SB | NB |
| Opposing Lanes | 0 | 1 | 1 |
| Conflicting Approach Left | SB | EB | |
| Conflicting Lanes Left | 1 | 1 | 0 |
| Conflicting Approach Right | NB | | EB |
| Conflicting Lanes Right | 1 | 0 | 1 |
| HCM Control Delay | 7.7 | 8.1 | 7.5 |
| HCM LOS | A | A | A |

| Lane | NBLn1 | EBLn1 | SBLn1 |
|---|---|---|---|
| Vol Left, % | 45% | 69% | 0% |
| Vol Thru, % | 55% | 0% | 44% |
| Vol Right, % | 0% | 31% | 56% |
| Sign Control | Stop | Stop | Stop |
| Traffic Vol by Lane | 111 | 71 | 43 |
| LT Vol | 50 | 49 | 0 |
| Through Vol | 61 | 0 | 19 |
| RT Vol | 0 | 22 | 24 |
| Lane Flow Rate | 132 | 85 | 51 |
| Geometry Grp | 1 | 1 | 1 |
| Degree of Util (X) | 0.155 | 0.098 | 0.059 |
| Departure Headway (Hd) | 4.212 | 4.167 | 4.171 |
| Convergence, Y/N | Yes | Yes | Yes |
| Cap | 846 | 845 | 848 |
| Service Time | 2.269 | 2.264 | 2.251 |
| HCM Lane V/C Ratio | 0.156 | 0.101 | 0.06 |
| HCM Control Delay | 8.1 | 7.7 | 7.5 |
| HCM Lane LOS | A | A | A |
| HCM 95th-tile Q | 0.5 | 0.3 | 0.2 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.2 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 38 | 107 | 7 | 13 | 178 | 11 | 26 | 48 | 26 | 3 | 16 | 33 |
| Future Vol, veh/h | 38 | 107 | 7 | 13 | 178 | 11 | 26 | 48 | 26 | 3 | 16 | 33 |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Heavy Vehicles, % | 3 | 9 | 14 | 8 | 3 | 0 | 0 | 6 | 0 | 0 | 6 | 9 |
| Mvmt Flow | 45 | 126 | 8 | 15 | 209 | 13 | 31 | 56 | 31 | 4 | 19 | 39 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 9.1 | 9.8 | 8.8 | 8.1 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 26% | 25% | 6% | 6% |
| Vol Thru, % | 48% | 70% | 88% | 31% |
| Vol Right, % | 26% | 5% | 5% | 63% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 100 | 152 | 202 | 52 |
| LT Vol | 26 | 38 | 13 | 3 |
| Through Vol | 48 | 107 | 178 | 16 |
| RT Vol | 26 | 7 | 11 | 33 |
| Lane Flow Rate | 118 | 179 | 238 | 61 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.158 | 0.233 | 0.307 | 0.079 |
| Departure Headway (Hd) | 4.846 | 4.681 | 4.655 | 4.662 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 738 | 765 | 770 | 765 |
| Service Time | 2.894 | 2.721 | 2.694 | 2.715 |
| HCM Lane V/C Ratio | 0.16 | 0.234 | 0.309 | 0.08 |
| HCM Control Delay | 8.8 | 9.1 | 9.8 | 8.1 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.6 | 0.9 | 1.3 | 0.3 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.8 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 110 | 11 | 3 | 45 | 57 |
| Future Vol, veh/h | 3 | 110 | 11 | 3 | 45 | 57 |
| 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 | 82 | 82 | 82 | 82 | 82 | 82 |
| Heavy Vehicles, % | 0 | 0 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 134 | 13 | 4 | 55 | 70 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 194 | 15 | 0 | 0 | 17 | 0 |
| Stage 1 | 15 | - | - | - | - | - |
| Stage 2 | 179 | - | - | - | - | - |
| 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 | 799 | 1070 | - | - | 1600 | - |
| Stage 1 | 1013 | - | - | - | - | - |
| Stage 2 | 857 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 770 | 1070 | - | - | 1600 | - |
| Mov Cap-2 Maneuver | 770 | - | - | - | - | - |
| Stage 1 | 1013 | - | - | - | - | - |
| Stage 2 | 826 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.9 | 0 | 3.2 |
| HCM LOS | A | | |

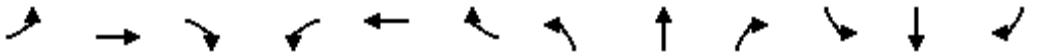
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1059 | 1600 | - |
| HCM Lane V/C Ratio | - | - | 0.13 | 0.034 | - |
| HCM Control Delay (s) | - | - | 8.9 | 7.3 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.4 | 0.1 | - |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.7 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 40 | 82 | 4 | 25 | 136 | 76 | 2 | 36 | 18 | 35 | 25 | 21 |
| Future Vol, veh/h | 40 | 82 | 4 | 25 | 136 | 76 | 2 | 36 | 18 | 35 | 25 | 21 |
| Peak Hour Factor | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| Heavy Vehicles, % | 32 | 5 | 25 | 0 | 5 | 1 | 0 | 11 | 17 | 9 | 24 | 10 |
| Mvmt Flow | 49 | 101 | 5 | 31 | 168 | 94 | 2 | 44 | 22 | 43 | 31 | 26 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 1 | 1 |
| HCM Control Delay | 9.9 | 9.9 | 9.1 | 9.3 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | NBLn2 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 32% | 11% | 100% | 0% |
| Vol Thru, % | 0% | 67% | 65% | 57% | 0% | 54% |
| Vol Right, % | 0% | 33% | 3% | 32% | 0% | 46% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 2 | 54 | 126 | 237 | 35 | 46 |
| LT Vol | 2 | 0 | 40 | 25 | 35 | 0 |
| Through Vol | 0 | 36 | 82 | 136 | 0 | 25 |
| RT Vol | 0 | 18 | 4 | 76 | 0 | 21 |
| Lane Flow Rate | 2 | 67 | 156 | 293 | 43 | 57 |
| Geometry Grp | 7 | 7 | 2 | 2 | 7 | 7 |
| Degree of Util (X) | 0.004 | 0.105 | 0.229 | 0.358 | 0.076 | 0.09 |
| Departure Headway (Hd) | 6.199 | 5.646 | 5.289 | 4.409 | 6.303 | 5.732 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 574 | 630 | 677 | 813 | 565 | 621 |
| Service Time | 3.975 | 3.422 | 3.342 | 2.452 | 4.076 | 3.504 |
| HCM Lane V/C Ratio | 0.003 | 0.106 | 0.23 | 0.36 | 0.076 | 0.092 |
| HCM Control Delay | 9 | 9.1 | 9.9 | 9.9 | 9.6 | 9.1 |
| HCM Lane LOS | A | A | A | A | A | A |
| HCM 95th-tile Q | 0 | 0.4 | 0.9 | 1.6 | 0.2 | 0.3 |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 24 | 732 | 79 | 59 | 546 | 4 | 172 | 14 | 57 | 11 | 15 | 50 |
| Future Volume (vph) | 24 | 732 | 79 | 59 | 546 | 4 | 172 | 14 | 57 | 11 | 15 | 50 |
| Ideal Flow (vphpl) | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Total Lost time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.88 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1662 | 3325 | 1458 | 1583 | 3318 | | 3101 | 1620 | 1444 | 1511 | 1517 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1662 | 3325 | 1458 | 1583 | 3318 | | 3101 | 1620 | 1444 | 1511 | 1517 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 27 | 813 | 88 | 66 | 607 | 4 | 191 | 16 | 63 | 12 | 17 | 56 |
| RTOR Reduction (vph) | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 56 | 0 | 53 | 0 |
| Lane Group Flow (vph) | 27 | 813 | 53 | 66 | 611 | 0 | 191 | 16 | 7 | 12 | 20 | 0 |
| Heavy Vehicles (%) | 0% | 0% | 2% | 5% | 0% | 18% | 4% | 8% | 3% | 10% | 9% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | Perm | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | | | | 8 | | | |
| Actuated Green, G (s) | 4.6 | 63.9 | 63.9 | 8.2 | 67.5 | | 11.9 | 11.9 | 11.9 | 6.1 | 6.1 | |
| Effective Green, g (s) | 4.6 | 63.9 | 63.9 | 8.2 | 67.5 | | 11.9 | 11.9 | 11.9 | 6.1 | 6.1 | |
| Actuated g/C Ratio | 0.04 | 0.60 | 0.60 | 0.08 | 0.63 | | 0.11 | 0.11 | 0.11 | 0.06 | 0.06 | |
| Clearance Time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 71 | 1998 | 876 | 122 | 2106 | | 347 | 181 | 161 | 86 | 87 | |
| v/s Ratio Prot | 0.02 | c0.24 | | c0.04 | c0.18 | | c0.06 | 0.01 | | 0.01 | c0.01 | |
| v/s Ratio Perm | | | 0.04 | | | | | | 0.00 | | | |
| v/c Ratio | 0.38 | 0.41 | 0.06 | 0.54 | 0.29 | | 0.55 | 0.09 | 0.04 | 0.14 | 0.23 | |
| Uniform Delay, d1 | 49.5 | 11.2 | 8.8 | 47.2 | 8.7 | | 44.7 | 42.3 | 42.1 | 47.6 | 47.9 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 3.4 | 0.6 | 0.1 | 4.8 | 0.3 | | 1.9 | 0.2 | 0.1 | 0.7 | 1.4 | |
| Delay (s) | 52.8 | 11.8 | 8.9 | 52.1 | 9.0 | | 46.6 | 42.5 | 42.2 | 48.4 | 49.2 | |
| Level of Service | D | B | A | D | A | | D | D | D | D | D | |
| Approach Delay (s) | | 12.7 | | | 13.2 | | | 45.3 | | | 49.1 | |
| Approach LOS | | B | | | B | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.42 | | |
| Actuated Cycle Length (s) | 106.3 | Sum of lost time (s) | 16.2 |
| Intersection Capacity Utilization | 47.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8 |
| Intersection LOS | A |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 29 | 74 | 41 | 39 | 81 | 47 |
| Future Vol, veh/h | 29 | 74 | 41 | 39 | 81 | 47 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles, % | 0 | 5 | 2 | 2 | 21 | 4 |
| Mvmt Flow | 32 | 81 | 45 | 43 | 89 | 52 |
| Number of Lanes | 1 | 0 | 0 | 1 | 1 | 0 |

| Approach | EB | NB | SB |
|---|---|---|---|
| Opposing Approach | | SB | NB |
| Opposing Lanes | 0 | 1 | 1 |
| Conflicting Approach Left | SB | EB | |
| Conflicting Lanes Left | 1 | 1 | 0 |
| Conflicting Approach Right | NB | | EB |
| Conflicting Lanes Right | 1 | 0 | 1 |
| HCM Control Delay | 7.6 | 8 | 8.3 |
| HCM LOS | A | A | A |

| Lane | NBLn1 | EBLn1 | SBLn1 |
|---|---|---|---|
| Vol Left, % | 51% | 28% | 0% |
| Vol Thru, % | 49% | 0% | 63% |
| Vol Right, % | 0% | 72% | 37% |
| Sign Control | Stop | Stop | Stop |
| Traffic Vol by Lane | 80 | 103 | 128 |
| LT Vol | 41 | 29 | 0 |
| Through Vol | 39 | 0 | 81 |
| RT Vol | 0 | 74 | 47 |
| Lane Flow Rate | 88 | 113 | 141 |
| Geometry Grp | 1 | 1 | 1 |
| Degree of Util (X) | 0.106 | 0.127 | 0.168 |
| Departure Headway (Hd) | 4.346 | 4.047 | 4.305 |
| Convergence, Y/N | Yes | Yes | Yes |
| Cap | 813 | 891 | 824 |
| Service Time | 2.436 | 2.047 | 2.382 |
| HCM Lane V/C Ratio | 0.108 | 0.127 | 0.171 |
| HCM Control Delay | 8 | 7.6 | 8.3 |
| HCM Lane LOS | A | A | A |
| HCM 95th-tile Q | 0.4 | 0.4 | 0.6 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.2 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 32 | 148 | 40 | 18 | 159 | 2 | 29 | 24 | 14 | 10 | 66 | 43 |
| Future Vol, veh/h | 32 | 148 | 40 | 18 | 159 | 2 | 29 | 24 | 14 | 10 | 66 | 43 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles, % | 3 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Mvmt Flow | 34 | 157 | 43 | 19 | 169 | 2 | 31 | 26 | 15 | 11 | 70 | 46 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 9.6 | 9.3 | 8.6 | 8.8 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 43% | 15% | 10% | 8% |
| Vol Thru, % | 36% | 67% | 89% | 55% |
| Vol Right, % | 21% | 18% | 1% | 36% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 67 | 220 | 179 | 119 |
| LT Vol | 29 | 32 | 18 | 10 |
| Through Vol | 24 | 148 | 159 | 66 |
| RT Vol | 14 | 40 | 2 | 43 |
| Lane Flow Rate | 71 | 234 | 190 | 127 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.099 | 0.297 | 0.247 | 0.168 |
| Departure Headway (Hd) | 5.008 | 4.575 | 4.665 | 4.774 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 711 | 782 | 767 | 748 |
| Service Time | 3.068 | 2.621 | 2.712 | 2.826 |
| HCM Lane V/C Ratio | 0.1 | 0.299 | 0.248 | 0.17 |
| HCM Control Delay | 8.6 | 9.6 | 9.3 | 8.8 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.3 | 1.2 | 1 | 0.6 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 4.9 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 56 | 69 | 5 | 126 | 45 |
| Future Vol, veh/h | 3 | 56 | 69 | 5 | 126 | 45 |
| 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 | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 0 | 0 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 3 | 65 | 80 | 6 | 147 | 52 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 428 | 83 | 0 | 0 | 86 | 0 |
| Stage 1 | 83 | - | - | - | - | - |
| Stage 2 | 345 | - | - | - | - | - |
| 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 | 588 | 982 | - | - | 1510 | - |
| Stage 1 | 945 | - | - | - | - | - |
| Stage 2 | 722 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 529 | 982 | - | - | 1510 | - |
| Mov Cap-2 Maneuver | 529 | - | - | - | - | - |
| Stage 1 | 945 | - | - | - | - | - |
| Stage 2 | 650 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.1 | 0 | 5.6 |
| HCM LOS | A | | |

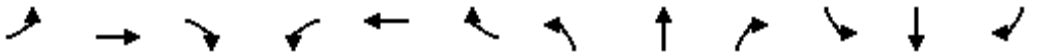
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 941 | 1510 | - |
| HCM Lane V/C Ratio | - | - | 0.073 | 0.097 | - |
| HCM Control Delay (s) | - | - | 9.1 | 7.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.3 | - |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 10.6 |
| Intersection LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 27 | 102 | 4 | 33 | 131 | 69 | 6 | 58 | 30 | 85 | 141 | 57 |
| Future Vol, veh/h | 27 | 102 | 4 | 33 | 131 | 69 | 6 | 58 | 30 | 85 | 141 | 57 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 0 | 1 | 0 | 0 | 0 | 6 | 17 | 9 | 0 | 2 | 3 | 2 |
| Mvmt Flow | 29 | 111 | 4 | 36 | 142 | 75 | 7 | 63 | 33 | 92 | 153 | 62 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 1 | 1 |
| HCM Control Delay | 10 | 11 | 9.8 | 10.8 |
| HCM LOS | A | B | A | B |

| Lane | NBLn1 | NBLn2 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 20% | 14% | 100% | 0% |
| Vol Thru, % | 0% | 66% | 77% | 56% | 0% | 71% |
| Vol Right, % | 0% | 34% | 3% | 30% | 0% | 29% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 6 | 88 | 133 | 233 | 85 | 198 |
| LT Vol | 6 | 0 | 27 | 33 | 85 | 0 |
| Through Vol | 0 | 58 | 102 | 131 | 0 | 141 |
| RT Vol | 0 | 30 | 4 | 69 | 0 | 57 |
| Lane Flow Rate | 7 | 96 | 145 | 253 | 92 | 215 |
| Geometry Grp | 7 | 7 | 2 | 2 | 7 | 7 |
| Degree of Util (X) | 0.012 | 0.158 | 0.218 | 0.361 | 0.161 | 0.333 |
| Departure Headway (Hd) | 6.825 | 5.937 | 5.434 | 5.125 | 6.271 | 5.578 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 525 | 605 | 661 | 707 | 573 | 646 |
| Service Time | 4.562 | 3.673 | 3.468 | 3.125 | 4.001 | 3.307 |
| HCM Lane V/C Ratio | 0.013 | 0.159 | 0.219 | 0.358 | 0.161 | 0.333 |
| HCM Control Delay | 9.6 | 9.8 | 10 | 11 | 10.2 | 11.1 |
| HCM Lane LOS | A | A | A | B | B | B |
| HCM 95th-tile Q | 0 | 0.6 | 0.8 | 1.6 | 0.6 | 1.5 |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 62 | 764 | 114 | 131 | 1015 | 19 | 321 | 59 | 93 | 6 | 71 | 39 |
| Future Volume (vph) | 62 | 764 | 114 | 131 | 1015 | 19 | 321 | 59 | 93 | 6 | 71 | 39 |
| Ideal Flow (vphpl) | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Total Lost time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.95 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1662 | 3292 | 1417 | 1646 | 3313 | | 3101 | 1667 | 1430 | 1646 | 1615 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1662 | 3292 | 1417 | 1646 | 3313 | | 3101 | 1667 | 1430 | 1646 | 1615 | |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 68 | 840 | 125 | 144 | 1115 | 21 | 353 | 65 | 102 | 7 | 78 | 43 |
| RTOR Reduction (vph) | 0 | 0 | 64 | 0 | 0 | 0 | 0 | 0 | 86 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 68 | 840 | 61 | 144 | 1136 | 0 | 353 | 65 | 16 | 7 | 107 | 0 |
| Heavy Vehicles (%) | 0% | 1% | 5% | 1% | 0% | 4% | 4% | 5% | 4% | 1% | 4% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | Perm | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | | | | 8 | | | |
| Actuated Green, G (s) | 9.1 | 62.7 | 62.7 | 15.8 | 69.4 | | 20.3 | 20.3 | 20.3 | 13.9 | 13.9 | |
| Effective Green, g (s) | 9.1 | 62.7 | 62.7 | 15.8 | 69.4 | | 20.3 | 20.3 | 20.3 | 13.9 | 13.9 | |
| Actuated g/C Ratio | 0.07 | 0.49 | 0.49 | 0.12 | 0.54 | | 0.16 | 0.16 | 0.16 | 0.11 | 0.11 | |
| Clearance Time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 117 | 1601 | 689 | 201 | 1783 | | 488 | 262 | 225 | 177 | 174 | |
| v/s Ratio Prot | 0.04 | 0.26 | | c0.09 | c0.34 | | c0.11 | 0.04 | | 0.00 | c0.07 | |
| v/s Ratio Perm | | | 0.04 | | | | | | 0.01 | | | |
| v/c Ratio | 0.58 | 0.52 | 0.09 | 0.72 | 0.64 | | 0.72 | 0.25 | 0.07 | 0.04 | 0.61 | |
| Uniform Delay, d1 | 58.1 | 22.8 | 17.8 | 54.4 | 20.9 | | 51.6 | 47.6 | 46.3 | 51.5 | 54.9 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 7.2 | 1.2 | 0.3 | 11.5 | 1.8 | | 5.3 | 0.5 | 0.1 | 0.1 | 6.3 | |
| Delay (s) | 65.2 | 24.1 | 18.0 | 65.9 | 22.7 | | 56.9 | 48.1 | 46.4 | 51.6 | 61.2 | |
| Level of Service | E | C | B | E | C | | E | D | D | D | E | |
| Approach Delay (s) | | 26.0 | | | 27.5 | | | 53.7 | | | 60.7 | |
| Approach LOS | | C | | | C | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 33.0 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.67 | | |
| Actuated Cycle Length (s) | 128.9 | Sum of lost time (s) | 16.2 |
| Intersection Capacity Utilization | 61.6% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 7.9 |
| Intersection LOS | A |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 49 | 22 | 50 | 61 | 19 | 24 |
| Future Vol, veh/h | 49 | 22 | 50 | 61 | 19 | 24 |
| Peak Hour Factor | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Heavy Vehicles, % | 0 | 5 | 2 | 2 | 21 | 4 |
| Mvmt Flow | 58 | 26 | 60 | 73 | 23 | 29 |
| Number of Lanes | 1 | 0 | 0 | 1 | 1 | 0 |

| Approach | EB | NB | SB |
|---|---|---|---|
| Opposing Approach | | SB | NB |
| Opposing Lanes | 0 | 1 | 1 |
| Conflicting Approach Left | SB | EB | |
| Conflicting Lanes Left | 1 | 1 | 0 |
| Conflicting Approach Right | NB | | EB |
| Conflicting Lanes Right | 1 | 0 | 1 |
| HCM Control Delay | 7.7 | 8.1 | 7.5 |
| HCM LOS | A | A | A |

| Lane | NBLn1 | EBLn1 | SBLn1 |
|---|---|---|---|
| Vol Left, % | 45% | 69% | 0% |
| Vol Thru, % | 55% | 0% | 44% |
| Vol Right, % | 0% | 31% | 56% |
| Sign Control | Stop | Stop | Stop |
| Traffic Vol by Lane | 111 | 71 | 43 |
| LT Vol | 50 | 49 | 0 |
| Through Vol | 61 | 0 | 19 |
| RT Vol | 0 | 22 | 24 |
| Lane Flow Rate | 132 | 85 | 51 |
| Geometry Grp | 1 | 1 | 1 |
| Degree of Util (X) | 0.155 | 0.098 | 0.059 |
| Departure Headway (Hd) | 4.212 | 4.167 | 4.171 |
| Convergence, Y/N | Yes | Yes | Yes |
| Cap | 846 | 845 | 848 |
| Service Time | 2.269 | 2.264 | 2.251 |
| HCM Lane V/C Ratio | 0.156 | 0.101 | 0.06 |
| HCM Control Delay | 8.1 | 7.7 | 7.5 |
| HCM Lane LOS | A | A | A |
| HCM 95th-tile Q | 0.5 | 0.3 | 0.2 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.2 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 38 | 107 | 7 | 13 | 178 | 11 | 26 | 48 | 26 | 3 | 16 | 33 |
| Future Vol, veh/h | 38 | 107 | 7 | 13 | 178 | 11 | 26 | 48 | 26 | 3 | 16 | 33 |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Heavy Vehicles, % | 3 | 9 | 14 | 8 | 3 | 0 | 0 | 6 | 0 | 0 | 6 | 9 |
| Mvmt Flow | 45 | 126 | 8 | 15 | 209 | 13 | 31 | 56 | 31 | 4 | 19 | 39 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 9.1 | 9.8 | 8.8 | 8.1 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 26% | 25% | 6% | 6% |
| Vol Thru, % | 48% | 70% | 88% | 31% |
| Vol Right, % | 26% | 5% | 5% | 63% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 100 | 152 | 202 | 52 |
| LT Vol | 26 | 38 | 13 | 3 |
| Through Vol | 48 | 107 | 178 | 16 |
| RT Vol | 26 | 7 | 11 | 33 |
| Lane Flow Rate | 118 | 179 | 238 | 61 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.158 | 0.233 | 0.307 | 0.079 |
| Departure Headway (Hd) | 4.846 | 4.681 | 4.655 | 4.662 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 738 | 765 | 770 | 765 |
| Service Time | 2.894 | 2.721 | 2.694 | 2.715 |
| HCM Lane V/C Ratio | 0.16 | 0.234 | 0.309 | 0.08 |
| HCM Control Delay | 8.8 | 9.1 | 9.8 | 8.1 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.6 | 0.9 | 1.3 | 0.3 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.6 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 110 | 13 | 4 | 45 | 63 |
| Future Vol, veh/h | 4 | 110 | 13 | 4 | 45 | 63 |
| 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 | 82 | 82 | 82 | 82 | 82 | 82 |
| Heavy Vehicles, % | 0 | 0 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 134 | 16 | 5 | 55 | 77 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 205 | 18 | 0 | 0 | 21 | 0 |
| Stage 1 | 18 | - | - | - | - | - |
| Stage 2 | 187 | - | - | - | - | - |
| 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 | 788 | 1066 | - | - | 1595 | - |
| Stage 1 | 1010 | - | - | - | - | - |
| Stage 2 | 850 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 760 | 1066 | - | - | 1595 | - |
| Mov Cap-2 Maneuver | 760 | - | - | - | - | - |
| Stage 1 | 1010 | - | - | - | - | - |
| Stage 2 | 819 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.9 | 0 | 3.1 |
| HCM LOS | A | | |

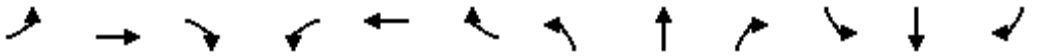
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1051 | 1595 | - |
| HCM Lane V/C Ratio | - | - | 0.132 | 0.034 | - |
| HCM Control Delay (s) | - | - | 8.9 | 7.3 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.5 | 0.1 | - |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.8 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 43 | 82 | 4 | 25 | 136 | 77 | 2 | 38 | 18 | 41 | 26 | 21 |
| Future Vol, veh/h | 43 | 82 | 4 | 25 | 136 | 77 | 2 | 38 | 18 | 41 | 26 | 21 |
| Peak Hour Factor | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| Heavy Vehicles, % | 32 | 5 | 25 | 0 | 5 | 1 | 0 | 11 | 17 | 9 | 24 | 10 |
| Mvmt Flow | 53 | 101 | 5 | 31 | 168 | 95 | 2 | 47 | 22 | 51 | 32 | 26 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 1 | 1 |
| HCM Control Delay | 10 | 10 | 9.2 | 9.4 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | NBLn2 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 33% | 11% | 100% | 0% |
| Vol Thru, % | 0% | 68% | 64% | 57% | 0% | 55% |
| Vol Right, % | 0% | 32% | 3% | 32% | 0% | 45% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 2 | 56 | 129 | 238 | 41 | 47 |
| LT Vol | 2 | 0 | 43 | 25 | 41 | 0 |
| Through Vol | 0 | 38 | 82 | 136 | 0 | 26 |
| RT Vol | 0 | 18 | 4 | 77 | 0 | 21 |
| Lane Flow Rate | 2 | 69 | 159 | 294 | 51 | 58 |
| Geometry Grp | 7 | 7 | 2 | 2 | 7 | 7 |
| Degree of Util (X) | 0.004 | 0.109 | 0.236 | 0.363 | 0.089 | 0.093 |
| Departure Headway (Hd) | 6.232 | 5.687 | 5.33 | 4.447 | 6.326 | 5.761 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 570 | 625 | 670 | 805 | 563 | 617 |
| Service Time | 4.014 | 3.468 | 3.389 | 2.493 | 4.103 | 3.538 |
| HCM Lane V/C Ratio | 0.004 | 0.11 | 0.237 | 0.365 | 0.091 | 0.094 |
| HCM Control Delay | 9 | 9.2 | 10 | 10 | 9.7 | 9.1 |
| HCM Lane LOS | A | A | A | A | A | A |
| HCM 95th-tile Q | 0 | 0.4 | 0.9 | 1.7 | 0.3 | 0.3 |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 24 | 732 | 120 | 93 | 546 | 4 | 193 | 14 | 74 | 11 | 15 | 50 |
| Future Volume (vph) | 24 | 732 | 120 | 93 | 546 | 4 | 193 | 14 | 74 | 11 | 15 | 50 |
| Ideal Flow (vphpl) | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Total Lost time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.88 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1662 | 3325 | 1458 | 1583 | 3318 | | 3101 | 1620 | 1444 | 1511 | 1517 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1662 | 3325 | 1458 | 1583 | 3318 | | 3101 | 1620 | 1444 | 1511 | 1517 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 27 | 813 | 133 | 103 | 607 | 4 | 214 | 16 | 82 | 12 | 17 | 56 |
| RTOR Reduction (vph) | 0 | 0 | 57 | 0 | 0 | 0 | 0 | 0 | 72 | 0 | 53 | 0 |
| Lane Group Flow (vph) | 27 | 813 | 76 | 103 | 611 | 0 | 214 | 16 | 10 | 12 | 20 | 0 |
| Heavy Vehicles (%) | 0% | 0% | 2% | 5% | 0% | 18% | 4% | 8% | 3% | 10% | 9% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | Perm | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | | | | 8 | | | |
| Actuated Green, G (s) | 4.8 | 63.8 | 63.8 | 12.6 | 71.6 | | 13.3 | 13.3 | 13.3 | 6.2 | 6.2 | |
| Effective Green, g (s) | 4.8 | 63.8 | 63.8 | 12.6 | 71.6 | | 13.3 | 13.3 | 13.3 | 6.2 | 6.2 | |
| Actuated g/C Ratio | 0.04 | 0.57 | 0.57 | 0.11 | 0.64 | | 0.12 | 0.12 | 0.12 | 0.06 | 0.06 | |
| Clearance Time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 71 | 1892 | 829 | 177 | 2119 | | 367 | 192 | 171 | 83 | 83 | |
| v/s Ratio Prot | 0.02 | c0.24 | | c0.07 | 0.18 | | c0.07 | 0.01 | | 0.01 | c0.01 | |
| v/s Ratio Perm | | | 0.05 | | | | | | 0.01 | | | |
| v/c Ratio | 0.38 | 0.43 | 0.09 | 0.58 | 0.29 | | 0.58 | 0.08 | 0.06 | 0.14 | 0.24 | |
| Uniform Delay, d1 | 52.2 | 13.8 | 11.0 | 47.2 | 9.0 | | 46.8 | 44.0 | 43.8 | 50.4 | 50.7 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 3.4 | 0.7 | 0.2 | 4.8 | 0.3 | | 2.4 | 0.2 | 0.1 | 0.8 | 1.5 | |
| Delay (s) | 55.6 | 14.5 | 11.2 | 52.1 | 9.3 | | 49.1 | 44.2 | 44.0 | 51.2 | 52.2 | |
| Level of Service | E | B | B | D | A | | D | D | D | D | D | |
| Approach Delay (s) | | 15.2 | | | 15.5 | | | 47.5 | | | 52.1 | |
| Approach LOS | | B | | | B | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 21.6 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.46 | | |
| Actuated Cycle Length (s) | 112.1 | Sum of lost time (s) | 16.2 |
| Intersection Capacity Utilization | 50.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8 |
| Intersection LOS | A |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 29 | 74 | 41 | 39 | 81 | 47 |
| Future Vol, veh/h | 29 | 74 | 41 | 39 | 81 | 47 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles, % | 0 | 5 | 2 | 2 | 21 | 4 |
| Mvmt Flow | 32 | 81 | 45 | 43 | 89 | 52 |
| Number of Lanes | 1 | 0 | 0 | 1 | 1 | 0 |

| Approach | EB | NB | SB |
|---|---|---|---|
| Opposing Approach | | SB | NB |
| Opposing Lanes | 0 | 1 | 1 |
| Conflicting Approach Left | SB | EB | |
| Conflicting Lanes Left | 1 | 1 | 0 |
| Conflicting Approach Right | NB | | EB |
| Conflicting Lanes Right | 1 | 0 | 1 |
| HCM Control Delay | 7.6 | 8 | 8.3 |
| HCM LOS | A | A | A |

| Lane | NBLn1 | EBLn1 | SBLn1 |
|---|---|---|---|
| Vol Left, % | 51% | 28% | 0% |
| Vol Thru, % | 49% | 0% | 63% |
| Vol Right, % | 0% | 72% | 37% |
| Sign Control | Stop | Stop | Stop |
| Traffic Vol by Lane | 80 | 103 | 128 |
| LT Vol | 41 | 29 | 0 |
| Through Vol | 39 | 0 | 81 |
| RT Vol | 0 | 74 | 47 |
| Lane Flow Rate | 88 | 113 | 141 |
| Geometry Grp | 1 | 1 | 1 |
| Degree of Util (X) | 0.106 | 0.127 | 0.168 |
| Departure Headway (Hd) | 4.346 | 4.047 | 4.305 |
| Convergence, Y/N | Yes | Yes | Yes |
| Cap | 813 | 891 | 824 |
| Service Time | 2.436 | 2.047 | 2.382 |
| HCM Lane V/C Ratio | 0.108 | 0.127 | 0.171 |
| HCM Control Delay | 8 | 7.6 | 8.3 |
| HCM Lane LOS | A | A | A |
| HCM 95th-tile Q | 0.4 | 0.4 | 0.6 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.2 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 32 | 148 | 40 | 18 | 159 | 2 | 29 | 24 | 14 | 10 | 66 | 43 |
| Future Vol, veh/h | 32 | 148 | 40 | 18 | 159 | 2 | 29 | 24 | 14 | 10 | 66 | 43 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles, % | 3 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Mvmt Flow | 34 | 157 | 43 | 19 | 169 | 2 | 31 | 26 | 15 | 11 | 70 | 46 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 9.6 | 9.3 | 8.6 | 8.8 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 43% | 15% | 10% | 8% |
| Vol Thru, % | 36% | 67% | 89% | 55% |
| Vol Right, % | 21% | 18% | 1% | 36% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 67 | 220 | 179 | 119 |
| LT Vol | 29 | 32 | 18 | 10 |
| Through Vol | 24 | 148 | 159 | 66 |
| RT Vol | 14 | 40 | 2 | 43 |
| Lane Flow Rate | 71 | 234 | 190 | 127 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.099 | 0.297 | 0.247 | 0.168 |
| Departure Headway (Hd) | 5.008 | 4.575 | 4.665 | 4.774 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 711 | 782 | 767 | 748 |
| Service Time | 3.068 | 2.621 | 2.712 | 2.826 |
| HCM Lane V/C Ratio | 0.1 | 0.299 | 0.248 | 0.17 |
| HCM Control Delay | 8.6 | 9.6 | 9.3 | 8.8 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.3 | 1.2 | 1 | 0.6 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 4.7 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 56 | 79 | 7 | 126 | 50 |
| Future Vol, veh/h | 4 | 56 | 79 | 7 | 126 | 50 |
| 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 | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 0 | 0 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 65 | 92 | 8 | 147 | 58 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 447 | 96 | 0 | 0 | 100 | 0 |
| Stage 1 | 96 | - | - | - | - | - |
| Stage 2 | 351 | - | - | - | - | - |
| 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 | 573 | 966 | - | - | 1493 | - |
| Stage 1 | 933 | - | - | - | - | - |
| Stage 2 | 717 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 515 | 966 | - | - | 1493 | - |
| Mov Cap-2 Maneuver | 515 | - | - | - | - | - |
| Stage 1 | 933 | - | - | - | - | - |
| Stage 2 | 644 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.3 | 0 | 5.5 |
| HCM LOS | A | | |

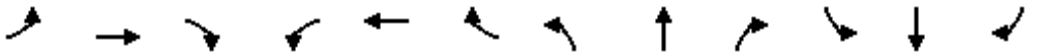
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 913 | 1493 | - |
| HCM Lane V/C Ratio | - | - | 0.076 | 0.098 | - |
| HCM Control Delay (s) | - | - | 9.3 | 7.7 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.3 | - |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 10.7 |
| Intersection LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 33 | 102 | 4 | 33 | 131 | 69 | 6 | 59 | 30 | 86 | 143 | 60 |
| Future Vol, veh/h | 33 | 102 | 4 | 33 | 131 | 69 | 6 | 59 | 30 | 86 | 143 | 60 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 0 | 1 | 0 | 0 | 0 | 6 | 17 | 9 | 0 | 2 | 3 | 2 |
| Mvmt Flow | 36 | 111 | 4 | 36 | 142 | 75 | 7 | 64 | 33 | 93 | 155 | 65 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 1 | 1 |
| HCM Control Delay | 10.1 | 11.1 | 9.9 | 10.9 |
| HCM LOS | B | B | A | B |

| Lane | NBLn1 | NBLn2 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 24% | 14% | 100% | 0% |
| Vol Thru, % | 0% | 66% | 73% | 56% | 0% | 70% |
| Vol Right, % | 0% | 34% | 3% | 30% | 0% | 30% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 6 | 89 | 139 | 233 | 86 | 203 |
| LT Vol | 6 | 0 | 33 | 33 | 86 | 0 |
| Through Vol | 0 | 59 | 102 | 131 | 0 | 143 |
| RT Vol | 0 | 30 | 4 | 69 | 0 | 60 |
| Lane Flow Rate | 7 | 97 | 151 | 253 | 93 | 221 |
| Geometry Grp | 7 | 7 | 2 | 2 | 7 | 7 |
| Degree of Util (X) | 0.012 | 0.161 | 0.23 | 0.361 | 0.164 | 0.343 |
| Departure Headway (Hd) | 6.863 | 5.977 | 5.47 | 5.135 | 6.299 | 5.6 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 522 | 600 | 656 | 702 | 570 | 642 |
| Service Time | 4.599 | 3.712 | 3.503 | 3.165 | 4.026 | 3.327 |
| HCM Lane V/C Ratio | 0.013 | 0.162 | 0.23 | 0.36 | 0.163 | 0.344 |
| HCM Control Delay | 9.7 | 9.9 | 10.1 | 11.1 | 10.3 | 11.2 |
| HCM Lane LOS | A | A | B | B | B | B |
| HCM 95th-tile Q | 0 | 0.6 | 0.9 | 1.6 | 0.6 | 1.5 |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 62 | 764 | 136 | 150 | 1015 | 19 | 364 | 59 | 130 | 6 | 71 | 39 |
| Future Volume (vph) | 62 | 764 | 136 | 150 | 1015 | 19 | 364 | 59 | 130 | 6 | 71 | 39 |
| Ideal Flow (vphpl) | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Total Lost time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.95 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1662 | 3292 | 1417 | 1646 | 3313 | | 3101 | 1667 | 1430 | 1646 | 1615 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1662 | 3292 | 1417 | 1646 | 3313 | | 3101 | 1667 | 1430 | 1646 | 1615 | |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 68 | 840 | 149 | 165 | 1115 | 21 | 400 | 65 | 143 | 7 | 78 | 43 |
| RTOR Reduction (vph) | 0 | 0 | 79 | 0 | 0 | 0 | 0 | 0 | 119 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 68 | 840 | 70 | 165 | 1136 | 0 | 400 | 65 | 24 | 7 | 107 | 0 |
| Heavy Vehicles (%) | 0% | 1% | 5% | 1% | 0% | 4% | 4% | 5% | 4% | 1% | 4% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | Perm | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | | | | 8 | | | |
| Actuated Green, G (s) | 9.2 | 62.5 | 62.5 | 17.2 | 70.5 | | 22.3 | 22.3 | 22.3 | 14.0 | 14.0 | |
| Effective Green, g (s) | 9.2 | 62.5 | 62.5 | 17.2 | 70.5 | | 22.3 | 22.3 | 22.3 | 14.0 | 14.0 | |
| Actuated g/C Ratio | 0.07 | 0.47 | 0.47 | 0.13 | 0.53 | | 0.17 | 0.17 | 0.17 | 0.11 | 0.11 | |
| Clearance Time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 115 | 1556 | 669 | 214 | 1766 | | 523 | 281 | 241 | 174 | 171 | |
| v/s Ratio Prot | 0.04 | 0.26 | | c0.10 | c0.34 | | c0.13 | 0.04 | | 0.00 | c0.07 | |
| v/s Ratio Perm | | | 0.05 | | | | | | 0.02 | | | |
| v/c Ratio | 0.59 | 0.54 | 0.11 | 0.77 | 0.64 | | 0.76 | 0.23 | 0.10 | 0.04 | 0.62 | |
| Uniform Delay, d1 | 59.7 | 24.7 | 19.3 | 55.6 | 21.9 | | 52.4 | 47.5 | 46.5 | 53.1 | 56.6 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 7.9 | 1.3 | 0.3 | 15.7 | 1.8 | | 6.6 | 0.4 | 0.2 | 0.1 | 6.9 | |
| Delay (s) | 67.6 | 26.0 | 19.7 | 71.3 | 23.7 | | 59.0 | 48.0 | 46.6 | 53.2 | 63.5 | |
| Level of Service | E | C | B | E | C | | E | D | D | D | E | |
| Approach Delay (s) | | 27.8 | | | 29.8 | | | 54.9 | | | 62.9 | |
| Approach LOS | | C | | | C | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 35.4 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.70 | | |
| Actuated Cycle Length (s) | 132.2 | Sum of lost time (s) | 16.2 |
| Intersection Capacity Utilization | 63.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 7.9 |
| Intersection LOS | A |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 53 | 22 | 50 | 63 | 20 | 25 |
| Future Vol, veh/h | 53 | 22 | 50 | 63 | 20 | 25 |
| Peak Hour Factor | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Heavy Vehicles, % | 0 | 5 | 2 | 2 | 21 | 4 |
| Mvmt Flow | 63 | 26 | 60 | 75 | 24 | 30 |
| Number of Lanes | 1 | 0 | 0 | 1 | 1 | 0 |

| Approach | EB | NB | SB |
|---|---|---|---|
| Opposing Approach | | SB | NB |
| Opposing Lanes | 0 | 1 | 1 |
| Conflicting Approach Left | SB | EB | |
| Conflicting Lanes Left | 1 | 1 | 0 |
| Conflicting Approach Right | NB | | EB |
| Conflicting Lanes Right | 1 | 0 | 1 |
| HCM Control Delay | 7.8 | 8.1 | 7.5 |
| HCM LOS | A | A | A |

| Lane | NBLn1 | EBLn1 | SBLn1 |
|---|---|---|---|
| Vol Left, % | 44% | 71% | 0% |
| Vol Thru, % | 56% | 0% | 44% |
| Vol Right, % | 0% | 29% | 56% |
| Sign Control | Stop | Stop | Stop |
| Traffic Vol by Lane | 113 | 75 | 45 |
| LT Vol | 50 | 53 | 0 |
| Through Vol | 63 | 0 | 20 |
| RT Vol | 0 | 22 | 25 |
| Lane Flow Rate | 135 | 89 | 54 |
| Geometry Grp | 1 | 1 | 1 |
| Degree of Util (X) | 0.158 | 0.104 | 0.062 |
| Departure Headway (Hd) | 4.22 | 4.189 | 4.183 |
| Convergence, Y/N | Yes | Yes | Yes |
| Cap | 842 | 841 | 844 |
| Service Time | 2.282 | 2.288 | 2.267 |
| HCM Lane V/C Ratio | 0.16 | 0.106 | 0.064 |
| HCM Control Delay | 8.1 | 7.8 | 7.5 |
| HCM Lane LOS | A | A | A |
| HCM 95th-tile Q | 0.6 | 0.3 | 0.2 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.6 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 71 | 107 | 7 | 13 | 178 | 11 | 26 | 54 | 26 | 3 | 18 | 43 |
| Future Vol, veh/h | 71 | 107 | 7 | 13 | 178 | 11 | 26 | 54 | 26 | 3 | 18 | 43 |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Heavy Vehicles, % | 3 | 9 | 14 | 8 | 3 | 0 | 0 | 6 | 0 | 0 | 6 | 9 |
| Mvmt Flow | 84 | 126 | 8 | 15 | 209 | 13 | 31 | 64 | 31 | 4 | 21 | 51 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 9.8 | 10 | 9.1 | 8.4 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 25% | 38% | 6% | 5% |
| Vol Thru, % | 51% | 58% | 88% | 28% |
| Vol Right, % | 25% | 4% | 5% | 67% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 106 | 185 | 202 | 64 |
| LT Vol | 26 | 71 | 13 | 3 |
| Through Vol | 54 | 107 | 178 | 18 |
| RT Vol | 26 | 7 | 11 | 43 |
| Lane Flow Rate | 125 | 218 | 238 | 75 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.172 | 0.289 | 0.315 | 0.1 |
| Departure Headway (Hd) | 4.978 | 4.779 | 4.766 | 4.759 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 716 | 749 | 751 | 747 |
| Service Time | 3.04 | 2.832 | 2.818 | 2.826 |
| HCM Lane V/C Ratio | 0.175 | 0.291 | 0.317 | 0.1 |
| HCM Control Delay | 9.1 | 9.8 | 10 | 8.4 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.6 | 1.2 | 1.4 | 0.3 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.8 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 113 | 13 | 4 | 55 | 63 |
| Future Vol, veh/h | 4 | 113 | 13 | 4 | 55 | 63 |
| 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 | 82 | 82 | 82 | 82 | 82 | 82 |
| Heavy Vehicles, % | 0 | 0 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 138 | 16 | 5 | 67 | 77 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 229 | 18 | 0 | 0 | 21 | 0 |
| Stage 1 | 18 | - | - | - | - | - |
| Stage 2 | 211 | - | - | - | - | - |
| 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 | 764 | 1066 | - | - | 1595 | - |
| Stage 1 | 1010 | - | - | - | - | - |
| Stage 2 | 829 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 730 | 1066 | - | - | 1595 | - |
| Mov Cap-2 Maneuver | 730 | - | - | - | - | - |
| Stage 1 | 1010 | - | - | - | - | - |
| Stage 2 | 793 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9 | 0 | 3.4 |
| HCM LOS | A | | |

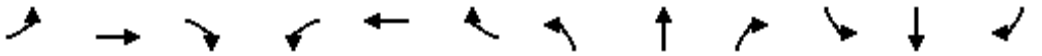
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1049 | 1595 | - |
| HCM Lane V/C Ratio | - | - | 0.136 | 0.042 | - |
| HCM Control Delay (s) | - | - | 9 | 7.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.5 | 0.1 | - |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 10.2 |
| Intersection LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 43 | 95 | 4 | 25 | 141 | 82 | 2 | 38 | 18 | 61 | 26 | 21 |
| Future Vol, veh/h | 43 | 95 | 4 | 25 | 141 | 82 | 2 | 38 | 18 | 61 | 26 | 21 |
| Peak Hour Factor | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| Heavy Vehicles, % | 32 | 5 | 25 | 0 | 5 | 1 | 0 | 11 | 17 | 9 | 24 | 10 |
| Mvmt Flow | 53 | 117 | 5 | 31 | 174 | 101 | 2 | 47 | 22 | 75 | 32 | 26 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 1 | 1 |
| HCM Control Delay | 10.5 | 10.5 | 9.4 | 9.8 |
| HCM LOS | B | B | A | A |

| Lane | NBLn1 | NBLn2 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 30% | 10% | 100% | 0% |
| Vol Thru, % | 0% | 68% | 67% | 57% | 0% | 55% |
| Vol Right, % | 0% | 32% | 3% | 33% | 0% | 45% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 2 | 56 | 142 | 248 | 61 | 47 |
| LT Vol | 2 | 0 | 43 | 25 | 61 | 0 |
| Through Vol | 0 | 38 | 95 | 141 | 0 | 26 |
| RT Vol | 0 | 18 | 4 | 82 | 0 | 21 |
| Lane Flow Rate | 2 | 69 | 175 | 306 | 75 | 58 |
| Geometry Grp | 7 | 7 | 2 | 2 | 7 | 7 |
| Degree of Util (X) | 0.004 | 0.114 | 0.264 | 0.387 | 0.134 | 0.094 |
| Departure Headway (Hd) | 6.459 | 5.913 | 5.426 | 4.545 | 6.405 | 5.84 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 557 | 610 | 657 | 787 | 554 | 607 |
| Service Time | 4.159 | 3.613 | 3.505 | 2.608 | 4.205 | 3.639 |
| HCM Lane V/C Ratio | 0.004 | 0.113 | 0.266 | 0.389 | 0.135 | 0.096 |
| HCM Control Delay | 9.2 | 9.4 | 10.5 | 10.5 | 10.2 | 9.3 |
| HCM Lane LOS | A | A | B | B | B | A |
| HCM 95th-tile Q | 0 | 0.4 | 1.1 | 1.8 | 0.5 | 0.3 |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 24 | 732 | 135 | 98 | 546 | 4 | 197 | 14 | 75 | 11 | 15 | 50 |
| Future Volume (vph) | 24 | 732 | 135 | 98 | 546 | 4 | 197 | 14 | 75 | 11 | 15 | 50 |
| Ideal Flow (vphpl) | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Total Lost time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.88 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1662 | 3325 | 1458 | 1583 | 3318 | | 3101 | 1620 | 1444 | 1511 | 1517 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1662 | 3325 | 1458 | 1583 | 3318 | | 3101 | 1620 | 1444 | 1511 | 1517 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 27 | 813 | 150 | 109 | 607 | 4 | 219 | 16 | 83 | 12 | 17 | 56 |
| RTOR Reduction (vph) | 0 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 73 | 0 | 53 | 0 |
| Lane Group Flow (vph) | 27 | 813 | 85 | 109 | 611 | 0 | 219 | 16 | 10 | 12 | 20 | 0 |
| Heavy Vehicles (%) | 0% | 0% | 2% | 5% | 0% | 18% | 4% | 8% | 3% | 10% | 9% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | Perm | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | | | | 8 | | | |
| Actuated Green, G (s) | 4.7 | 63.7 | 63.7 | 13.1 | 72.1 | | 13.5 | 13.5 | 13.5 | 6.2 | 6.2 | |
| Effective Green, g (s) | 4.7 | 63.7 | 63.7 | 13.1 | 72.1 | | 13.5 | 13.5 | 13.5 | 6.2 | 6.2 | |
| Actuated g/C Ratio | 0.04 | 0.57 | 0.57 | 0.12 | 0.64 | | 0.12 | 0.12 | 0.12 | 0.06 | 0.06 | |
| Clearance Time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 69 | 1879 | 824 | 184 | 2122 | | 371 | 194 | 172 | 83 | 83 | |
| v/s Ratio Prot | 0.02 | c0.24 | | c0.07 | 0.18 | | c0.07 | 0.01 | | 0.01 | c0.01 | |
| v/s Ratio Perm | | | 0.06 | | | | | | 0.01 | | | |
| v/c Ratio | 0.39 | 0.43 | 0.10 | 0.59 | 0.29 | | 0.59 | 0.08 | 0.06 | 0.14 | 0.24 | |
| Uniform Delay, d1 | 52.6 | 14.1 | 11.3 | 47.3 | 9.0 | | 47.0 | 44.1 | 44.0 | 50.7 | 51.0 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 3.6 | 0.7 | 0.3 | 5.0 | 0.3 | | 2.5 | 0.2 | 0.1 | 0.8 | 1.5 | |
| Delay (s) | 56.2 | 14.8 | 11.6 | 52.3 | 9.3 | | 49.5 | 44.3 | 44.1 | 51.5 | 52.5 | |
| Level of Service | E | B | B | D | A | | D | D | D | D | D | |
| Approach Delay (s) | | 15.5 | | | 15.8 | | | 47.8 | | | 52.4 | |
| Approach LOS | | B | | | B | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 21.9 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.46 | | |
| Actuated Cycle Length (s) | 112.7 | Sum of lost time (s) | 16.2 |
| Intersection Capacity Utilization | 50.8% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.7 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 1 | 5 | 10 | 99 | 54 | 4 |
| Future Vol, veh/h | 1 | 5 | 10 | 99 | 54 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 100 | 0 | 100 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 85 | 85 | 85 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 1 | 6 | 12 | 116 | 64 | 5 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 206 | 66 | 68 | 0 | - | 0 |
| Stage 1 | 66 | - | - | - | - | - |
| Stage 2 | 140 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 782 | 998 | 1533 | - | - | - |
| Stage 1 | 957 | - | - | - | - | - |
| Stage 2 | 887 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 776 | 998 | 1533 | - | - | - |
| Mov Cap-2 Maneuver | 776 | - | - | - | - | - |
| Stage 1 | 957 | - | - | - | - | - |
| Stage 2 | 880 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.8 | 0.7 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1533 | - | 776 | 998 | - | - |
| HCM Lane V/C Ratio | 0.008 | - | 0.002 | 0.006 | - | - |
| HCM Control Delay (s) | 7.4 | - | 9.6 | 8.6 | - | - |
| HCM Lane LOS | A | - | A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0 | 0 | - | - |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8 |
| Intersection LOS | A |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 31 | 74 | 41 | 40 | 83 | 51 |
| Future Vol, veh/h | 31 | 74 | 41 | 40 | 83 | 51 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles, % | 0 | 5 | 2 | 2 | 21 | 4 |
| Mvmt Flow | 34 | 81 | 45 | 44 | 91 | 56 |
| Number of Lanes | 1 | 0 | 0 | 1 | 1 | 0 |

| Approach | EB | NB | SB |
|---|---|---|---|
| Opposing Approach | | SB | NB |
| Opposing Lanes | 0 | 1 | 1 |
| Conflicting Approach Left | SB | EB | |
| Conflicting Lanes Left | 1 | 1 | 0 |
| Conflicting Approach Right | NB | | EB |
| Conflicting Lanes Right | 1 | 0 | 1 |
| HCM Control Delay | 7.7 | 8 | 8.3 |
| HCM LOS | A | A | A |

| Lane | NBLn1 | EBLn1 | SBLn1 |
|---|---|---|---|
| Vol Left, % | 51% | 30% | 0% |
| Vol Thru, % | 49% | 0% | 62% |
| Vol Right, % | 0% | 70% | 38% |
| Sign Control | Stop | Stop | Stop |
| Traffic Vol by Lane | 81 | 105 | 134 |
| LT Vol | 41 | 31 | 0 |
| Through Vol | 40 | 0 | 83 |
| RT Vol | 0 | 74 | 51 |
| Lane Flow Rate | 89 | 115 | 147 |
| Geometry Grp | 1 | 1 | 1 |
| Degree of Util (X) | 0.108 | 0.131 | 0.176 |
| Departure Headway (Hd) | 4.354 | 4.076 | 4.301 |
| Convergence, Y/N | Yes | Yes | Yes |
| Cap | 810 | 885 | 823 |
| Service Time | 2.45 | 2.076 | 2.383 |
| HCM Lane V/C Ratio | 0.11 | 0.13 | 0.179 |
| HCM Control Delay | 8 | 7.7 | 8.3 |
| HCM Lane LOS | A | A | A |
| HCM 95th-tile Q | 0.4 | 0.5 | 0.6 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.5 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 45 | 148 | 40 | 18 | 159 | 2 | 29 | 27 | 14 | 10 | 72 | 76 |
| Future Vol, veh/h | 45 | 148 | 40 | 18 | 159 | 2 | 29 | 27 | 14 | 10 | 72 | 76 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles, % | 3 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Mvmt Flow | 48 | 157 | 43 | 19 | 169 | 2 | 31 | 29 | 15 | 11 | 77 | 81 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 10 | 9.5 | 8.8 | 9.2 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 41% | 19% | 10% | 6% |
| Vol Thru, % | 39% | 64% | 89% | 46% |
| Vol Right, % | 20% | 17% | 1% | 48% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 70 | 233 | 179 | 158 |
| LT Vol | 29 | 45 | 18 | 10 |
| Through Vol | 27 | 148 | 159 | 72 |
| RT Vol | 14 | 40 | 2 | 76 |
| Lane Flow Rate | 74 | 248 | 190 | 168 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.106 | 0.324 | 0.254 | 0.222 |
| Departure Headway (Hd) | 5.12 | 4.707 | 4.8 | 4.754 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 694 | 758 | 743 | 750 |
| Service Time | 3.197 | 2.767 | 2.864 | 2.82 |
| HCM Lane V/C Ratio | 0.107 | 0.327 | 0.256 | 0.224 |
| HCM Control Delay | 8.8 | 10 | 9.5 | 9.2 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.4 | 1.4 | 1 | 0.8 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 4.9 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 66 | 79 | 7 | 130 | 50 |
| Future Vol, veh/h | 4 | 66 | 79 | 7 | 130 | 50 |
| 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 | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 0 | 0 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 77 | 92 | 8 | 151 | 58 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 456 | 96 | 0 | 0 | 100 | 0 |
| Stage 1 | 96 | - | - | - | - | - |
| Stage 2 | 360 | - | - | - | - | - |
| 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 | 566 | 966 | - | - | 1493 | - |
| Stage 1 | 933 | - | - | - | - | - |
| Stage 2 | 710 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 507 | 966 | - | - | 1493 | - |
| Mov Cap-2 Maneuver | 507 | - | - | - | - | - |
| Stage 1 | 933 | - | - | - | - | - |
| Stage 2 | 635 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.3 | 0 | 5.5 |
| HCM LOS | A | | |

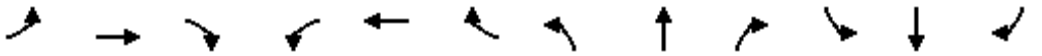
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 918 | 1493 | - |
| HCM Lane V/C Ratio | - | - | 0.089 | 0.101 | - |
| HCM Control Delay (s) | - | - | 9.3 | 7.7 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.3 | - |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 11.1 |
| Intersection LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 33 | 107 | 4 | 33 | 147 | 86 | 6 | 59 | 30 | 94 | 143 | 60 |
| Future Vol, veh/h | 33 | 107 | 4 | 33 | 147 | 86 | 6 | 59 | 30 | 94 | 143 | 60 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 0 | 1 | 0 | 0 | 0 | 6 | 17 | 9 | 0 | 2 | 3 | 2 |
| Mvmt Flow | 36 | 116 | 4 | 36 | 160 | 93 | 7 | 64 | 33 | 102 | 155 | 65 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 1 | 1 |
| HCM Control Delay | 10.4 | 11.8 | 10.1 | 11.2 |
| HCM LOS | B | B | B | B |

| Lane | NBLn1 | NBLn2 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 23% | 12% | 100% | 0% |
| Vol Thru, % | 0% | 66% | 74% | 55% | 0% | 70% |
| Vol Right, % | 0% | 34% | 3% | 32% | 0% | 30% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 6 | 89 | 144 | 266 | 94 | 203 |
| LT Vol | 6 | 0 | 33 | 33 | 94 | 0 |
| Through Vol | 0 | 59 | 107 | 147 | 0 | 143 |
| RT Vol | 0 | 30 | 4 | 86 | 0 | 60 |
| Lane Flow Rate | 7 | 97 | 157 | 289 | 102 | 221 |
| Geometry Grp | 7 | 7 | 2 | 2 | 7 | 7 |
| Degree of Util (X) | 0.013 | 0.165 | 0.242 | 0.415 | 0.182 | 0.351 |
| Departure Headway (Hd) | 7.02 | 6.132 | 5.571 | 5.167 | 6.425 | 5.725 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 510 | 584 | 643 | 697 | 559 | 629 |
| Service Time | 4.764 | 3.876 | 3.614 | 3.204 | 4.16 | 3.459 |
| HCM Lane V/C Ratio | 0.014 | 0.166 | 0.244 | 0.415 | 0.182 | 0.351 |
| HCM Control Delay | 9.9 | 10.1 | 10.4 | 11.8 | 10.6 | 11.5 |
| HCM Lane LOS | A | B | B | B | B | B |
| HCM 95th-tile Q | 0 | 0.6 | 0.9 | 2 | 0.7 | 1.6 |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 62 | 764 | 142 | 152 | 1015 | 19 | 376 | 59 | 135 | 6 | 71 | 39 |
| Future Volume (vph) | 62 | 764 | 142 | 152 | 1015 | 19 | 376 | 59 | 135 | 6 | 71 | 39 |
| Ideal Flow (vphpl) | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Total Lost time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.95 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1662 | 3292 | 1417 | 1646 | 3313 | | 3101 | 1667 | 1430 | 1646 | 1615 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1662 | 3292 | 1417 | 1646 | 3313 | | 3101 | 1667 | 1430 | 1646 | 1615 | |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 68 | 840 | 156 | 167 | 1115 | 21 | 413 | 65 | 148 | 7 | 78 | 43 |
| RTOR Reduction (vph) | 0 | 0 | 83 | 0 | 0 | 0 | 0 | 0 | 123 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 68 | 840 | 73 | 167 | 1136 | 0 | 413 | 65 | 25 | 7 | 107 | 0 |
| Heavy Vehicles (%) | 0% | 1% | 5% | 1% | 0% | 4% | 4% | 5% | 4% | 1% | 4% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | Perm | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | | | | 8 | | | |
| Actuated Green, G (s) | 9.3 | 62.5 | 62.5 | 17.4 | 70.6 | | 22.8 | 22.8 | 22.8 | 14.0 | 14.0 | |
| Effective Green, g (s) | 9.3 | 62.5 | 62.5 | 17.4 | 70.6 | | 22.8 | 22.8 | 22.8 | 14.0 | 14.0 | |
| Actuated g/C Ratio | 0.07 | 0.47 | 0.47 | 0.13 | 0.53 | | 0.17 | 0.17 | 0.17 | 0.11 | 0.11 | |
| Clearance Time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 116 | 1548 | 666 | 215 | 1759 | | 532 | 285 | 245 | 173 | 170 | |
| v/s Ratio Prot | 0.04 | 0.26 | | c0.10 | c0.34 | | c0.13 | 0.04 | | 0.00 | c0.07 | |
| v/s Ratio Perm | | | 0.05 | | | | | | 0.02 | | | |
| v/c Ratio | 0.59 | 0.54 | 0.11 | 0.78 | 0.65 | | 0.78 | 0.23 | 0.10 | 0.04 | 0.63 | |
| Uniform Delay, d1 | 59.9 | 25.0 | 19.7 | 55.9 | 22.2 | | 52.6 | 47.5 | 46.4 | 53.4 | 57.0 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 7.4 | 1.4 | 0.3 | 16.0 | 1.8 | | 7.0 | 0.4 | 0.2 | 0.1 | 7.1 | |
| Delay (s) | 67.3 | 26.4 | 20.0 | 71.9 | 24.1 | | 59.6 | 47.9 | 46.6 | 53.5 | 64.0 | |
| Level of Service | E | C | B | E | C | | E | D | D | D | E | |
| Approach Delay (s) | | 28.1 | | | 30.2 | | | 55.3 | | | 63.4 | |
| Approach LOS | | C | | | C | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 35.9 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.70 | | |
| Actuated Cycle Length (s) | 132.9 | Sum of lost time (s) | 16.2 |
| Intersection Capacity Utilization | 63.3% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.7 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 10 | 4 | 64 | 134 | 1 |
| Future Vol, veh/h | 4 | 10 | 4 | 64 | 134 | 1 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 100 | 0 | 100 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 85 | 85 | 85 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 12 | 5 | 75 | 158 | 1 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 243 | 158 | 159 | 0 | - | 0 |
| Stage 1 | 158 | - | - | - | - | - |
| Stage 2 | 85 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 745 | 887 | 1420 | - | - | - |
| Stage 1 | 871 | - | - | - | - | - |
| Stage 2 | 938 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 742 | 887 | 1420 | - | - | - |
| Mov Cap-2 Maneuver | 742 | - | - | - | - | - |
| Stage 1 | 871 | - | - | - | - | - |
| Stage 2 | 935 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.3 | 0.4 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1420 | - | 742 | 887 | - | - |
| HCM Lane V/C Ratio | 0.003 | - | 0.006 | 0.013 | - | - |
| HCM Control Delay (s) | 7.5 | - | 9.9 | 9.1 | - | - |
| HCM Lane LOS | A | - | A | A | - | - |
| HCM 95th %tile Q(veh) | 0 | - | 0 | 0 | - | - |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 7.9 |
| Intersection LOS | A |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 53 | 22 | 50 | 64 | 20 | 25 |
| Future Vol, veh/h | 53 | 22 | 50 | 64 | 20 | 25 |
| Peak Hour Factor | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| Heavy Vehicles, % | 0 | 5 | 2 | 2 | 21 | 4 |
| Mvmt Flow | 63 | 26 | 60 | 76 | 24 | 30 |
| Number of Lanes | 1 | 0 | 0 | 1 | 1 | 0 |

| Approach | EB | NB | SB |
|---|---|---|---|
| Opposing Approach | | SB | NB |
| Opposing Lanes | 0 | 1 | 1 |
| Conflicting Approach Left | SB | EB | |
| Conflicting Lanes Left | 1 | 1 | 0 |
| Conflicting Approach Right | NB | | EB |
| Conflicting Lanes Right | 1 | 0 | 1 |
| HCM Control Delay | 7.8 | 8.1 | 7.5 |
| HCM LOS | A | A | A |

| Lane | NBLn1 | EBLn1 | SBLn1 |
|---|---|---|---|
| Vol Left, % | 44% | 71% | 0% |
| Vol Thru, % | 56% | 0% | 44% |
| Vol Right, % | 0% | 29% | 56% |
| Sign Control | Stop | Stop | Stop |
| Traffic Vol by Lane | 114 | 75 | 45 |
| LT Vol | 50 | 53 | 0 |
| Through Vol | 64 | 0 | 20 |
| RT Vol | 0 | 22 | 25 |
| Lane Flow Rate | 136 | 89 | 54 |
| Geometry Grp | 1 | 1 | 1 |
| Degree of Util (X) | 0.159 | 0.104 | 0.062 |
| Departure Headway (Hd) | 4.219 | 4.191 | 4.184 |
| Convergence, Y/N | Yes | Yes | Yes |
| Cap | 843 | 840 | 844 |
| Service Time | 2.282 | 2.29 | 2.268 |
| HCM Lane V/C Ratio | 0.161 | 0.106 | 0.064 |
| HCM Control Delay | 8.1 | 7.8 | 7.5 |
| HCM Lane LOS | A | A | A |
| HCM 95th-tile Q | 0.6 | 0.3 | 0.2 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.3 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 43 | 107 | 7 | 13 | 178 | 11 | 26 | 55 | 26 | 3 | 18 | 36 |
| Future Vol, veh/h | 43 | 107 | 7 | 13 | 178 | 11 | 26 | 55 | 26 | 3 | 18 | 36 |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Heavy Vehicles, % | 3 | 9 | 14 | 8 | 3 | 0 | 0 | 6 | 0 | 0 | 6 | 9 |
| Mvmt Flow | 51 | 126 | 8 | 15 | 209 | 13 | 31 | 65 | 31 | 4 | 21 | 42 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 9.3 | 9.9 | 8.9 | 8.2 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 24% | 27% | 6% | 5% |
| Vol Thru, % | 51% | 68% | 88% | 32% |
| Vol Right, % | 24% | 4% | 5% | 63% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 107 | 157 | 202 | 57 |
| LT Vol | 26 | 43 | 13 | 3 |
| Through Vol | 55 | 107 | 178 | 18 |
| RT Vol | 26 | 7 | 11 | 36 |
| Lane Flow Rate | 126 | 185 | 238 | 67 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.171 | 0.242 | 0.31 | 0.087 |
| Departure Headway (Hd) | 4.881 | 4.725 | 4.7 | 4.696 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 731 | 757 | 763 | 758 |
| Service Time | 2.932 | 2.772 | 2.745 | 2.753 |
| HCM Lane V/C Ratio | 0.172 | 0.244 | 0.312 | 0.088 |
| HCM Control Delay | 8.9 | 9.3 | 9.9 | 8.2 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.6 | 0.9 | 1.3 | 0.3 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5.8 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 114 | 13 | 4 | 58 | 63 |
| Future Vol, veh/h | 4 | 114 | 13 | 4 | 58 | 63 |
| 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 | 82 | 82 | 82 | 82 | 82 | 82 |
| Heavy Vehicles, % | 0 | 0 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 139 | 16 | 5 | 71 | 77 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 236 | 18 | 0 | 0 | 21 | 0 |
| Stage 1 | 18 | - | - | - | - | - |
| Stage 2 | 218 | - | - | - | - | - |
| 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 | 757 | 1066 | - | - | 1595 | - |
| Stage 1 | 1010 | - | - | - | - | - |
| Stage 2 | 823 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 722 | 1066 | - | - | 1595 | - |
| Mov Cap-2 Maneuver | 722 | - | - | - | - | - |
| Stage 1 | 1010 | - | - | - | - | - |
| Stage 2 | 785 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9 | 0 | 3.5 |
| HCM LOS | A | | |

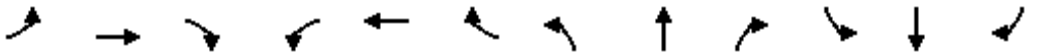
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1049 | 1595 | - |
| HCM Lane V/C Ratio | - | - | 0.137 | 0.044 | - |
| HCM Control Delay (s) | - | - | 9 | 7.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.5 | 0.1 | - |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 10 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 56 | 87 | 4 | 25 | 139 | 77 | 2 | 38 | 18 | 41 | 26 | 25 |
| Future Vol, veh/h | 56 | 87 | 4 | 25 | 139 | 77 | 2 | 38 | 18 | 41 | 26 | 25 |
| Peak Hour Factor | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| Heavy Vehicles, % | 32 | 5 | 25 | 0 | 5 | 1 | 0 | 11 | 17 | 9 | 24 | 10 |
| Mvmt Flow | 69 | 107 | 5 | 31 | 172 | 95 | 2 | 47 | 22 | 51 | 32 | 31 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 1 | 1 |
| HCM Control Delay | 10.4 | 10.2 | 9.3 | 9.5 |
| HCM LOS | B | B | A | A |

| Lane | NBLn1 | NBLn2 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 38% | 10% | 100% | 0% |
| Vol Thru, % | 0% | 68% | 59% | 58% | 0% | 51% |
| Vol Right, % | 0% | 32% | 3% | 32% | 0% | 49% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 2 | 56 | 147 | 241 | 41 | 51 |
| LT Vol | 2 | 0 | 56 | 25 | 41 | 0 |
| Through Vol | 0 | 38 | 87 | 139 | 0 | 26 |
| RT Vol | 0 | 18 | 4 | 77 | 0 | 25 |
| Lane Flow Rate | 2 | 69 | 181 | 298 | 51 | 63 |
| Geometry Grp | 7 | 7 | 2 | 2 | 7 | 7 |
| Degree of Util (X) | 0.004 | 0.111 | 0.271 | 0.372 | 0.09 | 0.101 |
| Departure Headway (Hd) | 6.312 | 5.767 | 5.367 | 4.499 | 6.397 | 5.801 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 562 | 615 | 666 | 794 | 556 | 612 |
| Service Time | 4.106 | 3.56 | 3.431 | 2.55 | 4.186 | 3.59 |
| HCM Lane V/C Ratio | 0.004 | 0.112 | 0.272 | 0.375 | 0.092 | 0.103 |
| HCM Control Delay | 9.1 | 9.3 | 10.4 | 10.2 | 9.8 | 9.3 |
| HCM Lane LOS | A | A | B | B | A | A |
| HCM 95th-tile Q | 0 | 0.4 | 1.1 | 1.7 | 0.3 | 0.3 |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 24 | 732 | 139 | 100 | 546 | 4 | 198 | 14 | 75 | 11 | 15 | 50 |
| Future Volume (vph) | 24 | 732 | 139 | 100 | 546 | 4 | 198 | 14 | 75 | 11 | 15 | 50 |
| Ideal Flow (vphpl) | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Total Lost time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.88 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1662 | 3325 | 1458 | 1583 | 3318 | | 3101 | 1620 | 1444 | 1511 | 1517 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1662 | 3325 | 1458 | 1583 | 3318 | | 3101 | 1620 | 1444 | 1511 | 1517 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 27 | 813 | 154 | 111 | 607 | 4 | 220 | 16 | 83 | 12 | 17 | 56 |
| RTOR Reduction (vph) | 0 | 0 | 67 | 0 | 0 | 0 | 0 | 0 | 73 | 0 | 53 | 0 |
| Lane Group Flow (vph) | 27 | 813 | 87 | 111 | 611 | 0 | 220 | 16 | 10 | 12 | 20 | 0 |
| Heavy Vehicles (%) | 0% | 0% | 2% | 5% | 0% | 18% | 4% | 8% | 3% | 10% | 9% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | Perm | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | | | | 8 | | | |
| Actuated Green, G (s) | 4.7 | 63.7 | 63.7 | 13.2 | 72.2 | | 13.5 | 13.5 | 13.5 | 6.2 | 6.2 | |
| Effective Green, g (s) | 4.7 | 63.7 | 63.7 | 13.2 | 72.2 | | 13.5 | 13.5 | 13.5 | 6.2 | 6.2 | |
| Actuated g/C Ratio | 0.04 | 0.56 | 0.56 | 0.12 | 0.64 | | 0.12 | 0.12 | 0.12 | 0.05 | 0.05 | |
| Clearance Time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 69 | 1877 | 823 | 185 | 2123 | | 371 | 193 | 172 | 83 | 83 | |
| v/s Ratio Prot | 0.02 | c0.24 | | c0.07 | 0.18 | | c0.07 | 0.01 | | 0.01 | c0.01 | |
| v/s Ratio Perm | | | 0.06 | | | | | | 0.01 | | | |
| v/c Ratio | 0.39 | 0.43 | 0.11 | 0.60 | 0.29 | | 0.59 | 0.08 | 0.06 | 0.14 | 0.24 | |
| Uniform Delay, d1 | 52.7 | 14.1 | 11.4 | 47.3 | 9.0 | | 47.0 | 44.1 | 44.0 | 50.8 | 51.0 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 3.6 | 0.7 | 0.3 | 5.2 | 0.3 | | 2.5 | 0.2 | 0.1 | 0.8 | 1.5 | |
| Delay (s) | 56.3 | 14.9 | 11.6 | 52.5 | 9.3 | | 49.6 | 44.3 | 44.2 | 51.6 | 52.6 | |
| Level of Service | E | B | B | D | A | | D | D | D | D | D | |
| Approach Delay (s) | | 15.5 | | | 15.9 | | | 47.9 | | | 52.4 | |
| Approach LOS | | B | | | B | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 22.0 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.47 | | |
| Actuated Cycle Length (s) | 112.8 | Sum of lost time (s) | 16.2 |
| Intersection Capacity Utilization | 50.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.8 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 10 | 10 | 25 | 99 | 54 | 15 |
| Future Vol, veh/h | 10 | 10 | 25 | 99 | 54 | 15 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 100 | 0 | 100 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 85 | 85 | 85 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 12 | 12 | 29 | 116 | 64 | 18 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 247 | 72 | 81 | 0 | - | 0 |
| Stage 1 | 72 | - | - | - | - | - |
| Stage 2 | 175 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 741 | 990 | 1517 | - | - | - |
| Stage 1 | 951 | - | - | - | - | - |
| Stage 2 | 855 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 727 | 990 | 1517 | - | - | - |
| Mov Cap-2 Maneuver | 727 | - | - | - | - | - |
| Stage 1 | 951 | - | - | - | - | - |
| Stage 2 | 839 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.4 | 1.5 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1517 | - | 727 | 990 | - | - |
| HCM Lane V/C Ratio | 0.019 | - | 0.016 | 0.012 | - | - |
| HCM Control Delay (s) | 7.4 | - | 10 | 8.7 | - | - |
| HCM Lane LOS | A | - | B | A | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0 | 0 | - | - |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8 |
| Intersection LOS | A |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 31 | 74 | 41 | 40 | 84 | 51 |
| Future Vol, veh/h | 31 | 74 | 41 | 40 | 84 | 51 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles, % | 0 | 5 | 2 | 2 | 21 | 4 |
| Mvmt Flow | 34 | 81 | 45 | 44 | 92 | 56 |
| Number of Lanes | 1 | 0 | 0 | 1 | 1 | 0 |

| Approach | EB | NB | SB |
|---|---|---|---|
| Opposing Approach | | SB | NB |
| Opposing Lanes | 0 | 1 | 1 |
| Conflicting Approach Left | SB | EB | |
| Conflicting Lanes Left | 1 | 1 | 0 |
| Conflicting Approach Right | NB | | EB |
| Conflicting Lanes Right | 1 | 0 | 1 |
| HCM Control Delay | 7.7 | 8 | 8.3 |
| HCM LOS | A | A | A |

| Lane | NBLn1 | EBLn1 | SBLn1 |
|---|---|---|---|
| Vol Left, % | 51% | 30% | 0% |
| Vol Thru, % | 49% | 0% | 62% |
| Vol Right, % | 0% | 70% | 38% |
| Sign Control | Stop | Stop | Stop |
| Traffic Vol by Lane | 81 | 105 | 135 |
| LT Vol | 41 | 31 | 0 |
| Through Vol | 40 | 0 | 84 |
| RT Vol | 0 | 74 | 51 |
| Lane Flow Rate | 89 | 115 | 148 |
| Geometry Grp | 1 | 1 | 1 |
| Degree of Util (X) | 0.108 | 0.131 | 0.177 |
| Departure Headway (Hd) | 4.354 | 4.078 | 4.303 |
| Convergence, Y/N | Yes | Yes | Yes |
| Cap | 810 | 885 | 823 |
| Service Time | 2.451 | 2.078 | 2.385 |
| HCM Lane V/C Ratio | 0.11 | 0.13 | 0.18 |
| HCM Control Delay | 8 | 7.7 | 8.3 |
| HCM Lane LOS | A | A | A |
| HCM 95th-tile Q | 0.4 | 0.5 | 0.6 |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.4 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 35 | 148 | 40 | 18 | 159 | 2 | 29 | 27 | 14 | 10 | 73 | 55 |
| Future Vol, veh/h | 35 | 148 | 40 | 18 | 159 | 2 | 29 | 27 | 14 | 10 | 73 | 55 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles, % | 3 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Mvmt Flow | 37 | 157 | 43 | 19 | 169 | 2 | 31 | 29 | 15 | 11 | 78 | 59 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 9.8 | 9.4 | 8.7 | 9 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 41% | 16% | 10% | 7% |
| Vol Thru, % | 39% | 66% | 89% | 53% |
| Vol Right, % | 20% | 18% | 1% | 40% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 70 | 223 | 179 | 138 |
| LT Vol | 29 | 35 | 18 | 10 |
| Through Vol | 27 | 148 | 159 | 73 |
| RT Vol | 14 | 40 | 2 | 55 |
| Lane Flow Rate | 74 | 237 | 190 | 147 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.105 | 0.306 | 0.25 | 0.195 |
| Departure Headway (Hd) | 5.055 | 4.641 | 4.733 | 4.771 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 704 | 771 | 754 | 747 |
| Service Time | 3.123 | 2.694 | 2.788 | 2.831 |
| HCM Lane V/C Ratio | 0.105 | 0.307 | 0.252 | 0.197 |
| HCM Control Delay | 8.7 | 9.8 | 9.4 | 9 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.4 | 1.3 | 1 | 0.7 |

| Intersection | |
|---|---|
| Int Delay, s/veh | 5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 69 | 79 | 7 | 131 | 50 |
| Future Vol, veh/h | 4 | 69 | 79 | 7 | 131 | 50 |
| 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 | 86 | 86 | 86 | 86 | 86 | 86 |
| Heavy Vehicles, % | 0 | 0 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 80 | 92 | 8 | 152 | 58 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 459 | 96 | 0 | 0 | 100 | 0 |
| Stage 1 | 96 | - | - | - | - | - |
| Stage 2 | 363 | - | - | - | - | - |
| 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 | 564 | 966 | - | - | 1493 | - |
| Stage 1 | 933 | - | - | - | - | - |
| Stage 2 | 708 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 505 | 966 | - | - | 1493 | - |
| Mov Cap-2 Maneuver | 505 | - | - | - | - | - |
| Stage 1 | 933 | - | - | - | - | - |
| Stage 2 | 634 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.3 | 0 | 5.6 |
| HCM LOS | A | | |

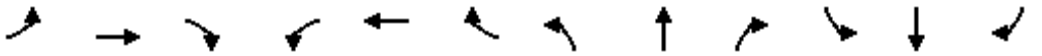
| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 920 | 1493 | - |
| HCM Lane V/C Ratio | - | - | 0.092 | 0.102 | - |
| HCM Control Delay (s) | - | - | 9.3 | 7.7 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.3 | - |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 11 |
| Intersection LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 37 | 105 | 4 | 33 | 143 | 69 | 6 | 59 | 30 | 86 | 143 | 69 |
| Future Vol, veh/h | 37 | 105 | 4 | 33 | 143 | 69 | 6 | 59 | 30 | 86 | 143 | 69 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, % | 0 | 1 | 0 | 0 | 0 | 6 | 17 | 9 | 0 | 2 | 3 | 2 |
| Mvmt Flow | 40 | 114 | 4 | 36 | 155 | 75 | 7 | 64 | 33 | 93 | 155 | 75 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 2 | 2 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 2 | 2 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 2 | 2 | 1 | 1 |
| HCM Control Delay | 10.4 | 11.4 | 10 | 11.3 |
| HCM LOS | B | B | A | B |

| Lane | NBLn1 | NBLn2 | EBLn1 | WBLn1 | SBLn1 | SBLn2 |
|---|---|---|---|---|---|---|
| Vol Left, % | 100% | 0% | 25% | 13% | 100% | 0% |
| Vol Thru, % | 0% | 66% | 72% | 58% | 0% | 67% |
| Vol Right, % | 0% | 34% | 3% | 28% | 0% | 33% |
| Sign Control | Stop | Stop | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 6 | 89 | 146 | 245 | 86 | 212 |
| LT Vol | 6 | 0 | 37 | 33 | 86 | 0 |
| Through Vol | 0 | 59 | 105 | 143 | 0 | 143 |
| RT Vol | 0 | 30 | 4 | 69 | 0 | 69 |
| Lane Flow Rate | 7 | 97 | 159 | 266 | 93 | 230 |
| Geometry Grp | 7 | 7 | 2 | 2 | 7 | 7 |
| Degree of Util (X) | 0.013 | 0.163 | 0.244 | 0.384 | 0.165 | 0.362 |
| Departure Headway (Hd) | 6.956 | 6.069 | 5.536 | 5.192 | 6.369 | 5.648 |
| Convergence, Y/N | Yes | Yes | Yes | Yes | Yes | Yes |
| Cap | 515 | 591 | 647 | 692 | 564 | 638 |
| Service Time | 4.697 | 3.809 | 3.574 | 3.227 | 4.101 | 3.379 |
| HCM Lane V/C Ratio | 0.014 | 0.164 | 0.246 | 0.384 | 0.165 | 0.361 |
| HCM Control Delay | 9.8 | 10 | 10.4 | 11.4 | 10.4 | 11.6 |
| HCM Lane LOS | A | A | B | B | B | B |
| HCM 95th-tile Q | 0 | 0.6 | 1 | 1.8 | 0.6 | 1.6 |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 62 | 764 | 144 | 152 | 1015 | 19 | 380 | 59 | 137 | 6 | 71 | 39 |
| Future Volume (vph) | 62 | 764 | 144 | 152 | 1015 | 19 | 380 | 59 | 137 | 6 | 71 | 39 |
| Ideal Flow (vphpl) | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 | 1750 |
| Total Lost time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | | 0.97 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Frt | 1.00 | 1.00 | 0.85 | 1.00 | 1.00 | | 1.00 | 1.00 | 0.85 | 1.00 | 0.95 | |
| Flt Protected | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1662 | 3292 | 1417 | 1646 | 3313 | | 3101 | 1667 | 1430 | 1646 | 1615 | |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1662 | 3292 | 1417 | 1646 | 3313 | | 3101 | 1667 | 1430 | 1646 | 1615 | |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 68 | 840 | 158 | 167 | 1115 | 21 | 418 | 65 | 151 | 7 | 78 | 43 |
| RTOR Reduction (vph) | 0 | 0 | 84 | 0 | 0 | 0 | 0 | 0 | 125 | 0 | 14 | 0 |
| Lane Group Flow (vph) | 68 | 840 | 74 | 167 | 1136 | 0 | 418 | 65 | 26 | 7 | 107 | 0 |
| Heavy Vehicles (%) | 0% | 1% | 5% | 1% | 0% | 4% | 4% | 5% | 4% | 1% | 4% | 0% |
| Turn Type | Prot | NA | Perm | Prot | NA | | Split | NA | Perm | Split | NA | |
| Protected Phases | 1 | 6 | | 5 | 2 | | 8 | 8 | | 4 | 4 | |
| Permitted Phases | | | 6 | | | | | | 8 | | | |
| Actuated Green, G (s) | 9.3 | 62.5 | 62.5 | 17.4 | 70.6 | | 22.9 | 22.9 | 22.9 | 14.1 | 14.1 | |
| Effective Green, g (s) | 9.3 | 62.5 | 62.5 | 17.4 | 70.6 | | 22.9 | 22.9 | 22.9 | 14.1 | 14.1 | |
| Actuated g/C Ratio | 0.07 | 0.47 | 0.47 | 0.13 | 0.53 | | 0.17 | 0.17 | 0.17 | 0.11 | 0.11 | |
| Clearance Time (s) | 4.0 | 4.2 | 4.2 | 4.0 | 4.2 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 116 | 1545 | 665 | 215 | 1757 | | 533 | 286 | 246 | 174 | 171 | |
| v/s Ratio Prot | 0.04 | 0.26 | | c0.10 | c0.34 | | c0.13 | 0.04 | | 0.00 | c0.07 | |
| v/s Ratio Perm | | | 0.05 | | | | | | 0.02 | | | |
| v/c Ratio | 0.59 | 0.54 | 0.11 | 0.78 | 0.65 | | 0.78 | 0.23 | 0.11 | 0.04 | 0.62 | |
| Uniform Delay, d1 | 60.0 | 25.1 | 19.8 | 56.0 | 22.3 | | 52.7 | 47.5 | 46.5 | 53.4 | 57.0 | |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | |
| Incremental Delay, d2 | 7.4 | 1.4 | 0.3 | 16.0 | 1.9 | | 7.4 | 0.4 | 0.2 | 0.1 | 6.9 | |
| Delay (s) | 67.4 | 26.5 | 20.1 | 72.0 | 24.2 | | 60.2 | 47.9 | 46.7 | 53.5 | 63.9 | |
| Level of Service | E | C | C | E | C | | E | D | D | D | E | |
| Approach Delay (s) | | 28.2 | | | 30.3 | | | 55.7 | | | 63.3 | |
| Approach LOS | | C | | | C | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 36.1 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.70 | | |
| Actuated Cycle Length (s) | 133.1 | Sum of lost time (s) | 16.2 |
| Intersection Capacity Utilization | 63.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.8 |

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 15 | 15 | 25 | 64 | 134 | 15 |
| Future Vol, veh/h | 15 | 15 | 25 | 64 | 134 | 15 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 100 | 0 | 100 | - | - | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 85 | 85 | 85 | 85 | 85 | 85 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 18 | 18 | 29 | 75 | 158 | 18 |

| Major/Minor | Minor2 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 300 | 166 | 175 | 0 | - | 0 |
| Stage 1 | 166 | - | - | - | - | - |
| Stage 2 | 134 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | 4.12 | - | - | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | 2.218 | - | - | - |
| Pot Cap-1 Maneuver | 691 | 878 | 1401 | - | - | - |
| Stage 1 | 863 | - | - | - | - | - |
| Stage 2 | 892 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 677 | 878 | 1401 | - | - | - |
| Mov Cap-2 Maneuver | 677 | - | - | - | - | - |
| Stage 1 | 863 | - | - | - | - | - |
| Stage 2 | 874 | - | - | - | - | - |

| Approach | EB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.9 | 2.1 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | EBLn2 | SBT | SBR |
|---|---|---|---|---|---|---|
| Capacity (veh/h) | 1401 | - | 677 | 878 | - | - |
| HCM Lane V/C Ratio | 0.021 | - | 0.026 | 0.02 | - | - |
| HCM Control Delay (s) | 7.6 | - | 10.5 | 9.2 | - | - |
| HCM Lane LOS | A | - | B | A | - | - |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.1 | 0.1 | - | - |

# EXHIBIT F

## Pre-Application Meeting

**Stanton Company – Pacific Furniture**
**August 14, 2019**

**Attended by:**

Hassan Ibrahim, Curran-McLeod Engineering, 503-684-3478
Gary Stockwell, Canby Utility, Electric, 503-263-4307
Jonny Gish, Clackamas Co DTD, 503-742-4707
Matt English, Canby Fire, 503-878-0187
Jennifer Kimura, VLMK, 503-222-4454
Brad Rehm, Stanton, 503-538-1088
Bryan Brown, Planning, 503-266-0702
Joe Keppner, DirectLink, 503-348-6097
Jerry Nelzen, Public Works, 971-253-9173
Daryll Hughes, Wastewater Treatment, 503-266-0647
Ben Hagerman, VLMK, 503-222-4453
Jason Sahlin, VLMK, 503-222-4453
Nathan Hagglund, Stanton, 503-869-6749
Sandy Freund, Planning, 503-266-0775

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**VLMK, Jason Sahlin**

- Stanton Furniture is looking at a parcel of property fronting S Mulino Road and SE Township Road and they are proposing to build a 150,000 sq ft manufacturing building. They will be relocating from Tualatin and moving their operations here and they will have roughly 300 employees give or take depending on the day or night shifts. I am sure most of you familiar with the Stanton name for furniture.
- We are here to get the lay of the land on the improvements required by the City of Canby and Clackamas County's input for frontage on S Mulino Road.
- The parcel we are looking at has been divided into parcel A and B and I think you guys are still looking at taking down the whole site, but are only looking at developing a portion of it. On parcel B which fronts both SE Township and Mulino Road is yet to be determined. Last time we were here the cost of the development is going to push the limits of our client and if these frontage improvements can be deferred and I know with the land use and the partition to take place we are here to have it planned out.

**STANTON, Brad Rehm**

- If I were to characterize our biggest concern/question would be the infrastructure that needs to happen for them to develop the site.

**CURRAN-MCLEOD ENGINEERING, Hassan Ibrahim**

- Let us talk about SE 4th Avenue, it is a collector street and what needs to happen is to build half-street improvements along the entire frontage and you need to dedicate 37 ft from the centerline right-of-way (ROW) and build curb lines along the frontage, which are 25 ft from that centerline, 5 ft planter strip and 6 ft sidewalk that is the cross-section. On the west end, you will need to do a taper somehow from the half-street improvements and the options are barricades or a fog line at the very end.

- The driveways will have to be industrial and it looks like the spacing meets the 200 ft minimum spacing requirements. The industrial driveway has to be 8 inches of concrete with reinforcements and the curb radius at Mulino and SE 4th Avenue needs to be large enough to accommodate WB 67 at least because I do not know what type of vehicles will be coming in and out.
- S Mulino Road is a county road and I will let Jonny talk about that.
- The storm drainage will remain on site for the private side and for the public stormwater you have options of infiltration or drywells and I know Jerry prefers drywells.
- Sanitary sewer and water exist about 100 ft west of Sequoia Parkway. There is a 12 inch water and I believe there is a 10 or 12 inch sewer main we need to have extended to the site and along the frontage.

**CITY OF CANBY, PUBLIC WORKS, Jerry Nelzen**

- I think you are familiar with the other projects in our industrial park and we talked about the produce company wanting to build also along SE 4th Avenue and I wanted to hear what your thoughts are before we commit to anything or what we are going to do on SE 4th Avenue. Jason said I do not know if we have finally determined that and after the pre-application meeting we are sorting through site plans and prices for the project. I think they are aware of the SE 4th Avenue improvements and whether they extend all the way to S Mulino Road and I guess with the partition and whether the conditions of approval that require we take it all the way to S Mulino Road and then also do the S Mulino Road improvements have been yet to be determined. Hassan said there is a bottleneck coming into Sequoia Parkway as you know. Jerry said we were going to allow them to talk to Canby Fire and use it as an emergency exit only and Jason said they have not seen the full cost of all the improvements yet, but they had discussed taking the full improvement out to S Mulino Road along with SE 4th Avenue. Now, this project potentially coming in we would end up with a full street along that portion and then just the balance to the west would still be just a half street with that development. Jerry said I was thinking if there was a way to build SE 4th Avenue without having it all being chopped up. My thoughts were to have it bonded and do a lift asphalt and come back in and do the other lift making it a nice road. Jason said there is a house still there and you cannot go and Jerry said that is why we were going to have them use that as an emergency exit only and use S Mulino Road. Hassan said they cannot go to Sequoia on SE 4th Avenue it is only 10 ft or so wide and Jason said unless that project moves forward or not and under the assumption, they are first they would have to exit out to the east on S Mulino Road. The specifics of knowing who is going to arrive first in the area and ideally everything would be done and Jerry said everything is stubbed into their property off of S Walnut Street and they are ready to go. Jerry asked if parcel B was theirs too and Jason said yes and the intent would be to take down the entire property and the representative said it would be for future expansions. Jerry said you would be serving sewer off of SE 4th Avenue and Jason said we understand there are some challenges with trying to serve something off of SE Township Road. Hassan said it was not deep enough and Jerry said when I checked on it you have a foot of grade to play with on both of them. Jason said I am going off of what Greg Blefkin's involvement of this property and the development of the Columbia Distribution center and all of that needs to be verified, but ideally we would come off of SE 4th Avenue and if there are some shared costs between the two properties to help and it would be better

for both of them. Jerry said at this point though you guys build this half-street and use this as the main entrance for both of these to S Mulino Road and the answer was correct. Jerry said the sewer will be served off of SE 4th Avenue and the answer was correct. Hassan stated like you said we are going to do 3 inches of asphalt and bond the other 2 inch lifts for later and we will end up with a nice product.

- I do not want to speak for Jonny, but I liked how S Mulino Road turned out for the Columbia Distributing and if you are going to follow it and Jonny said that is our intention to have them do the same and how they reestablished the centerline also.
- At the Shakespeare project, they are running into rock issues with the drywells and if you start with the drywells at the lowest point, if you did run into rock you could get a Geotech to test them and you may not have to install a lot of the drywells because you might be able to connect them.
- The city will let you wait on the improvements on S Township Road until the parcel B is developed.

**CLACKAMAS COUNTY, DTD, Jonny Gish**

- We have the jurisdiction of S Mulino Road through to Township and on the other side, but Township Road is the city's jurisdiction. We essentially will follow the cross-section as they did at the Shakespeare project and the produce company can make it, all the same, all the way down with the same cross-section. The thickness will be 7-1/2 inches of A/C because it is commercial/industrial.
- I know we talked about UIC stormwater and as long as Canby wants to take it and maintain it we are okay with it being the ROW, but the county will not maintain them and we will need to have an agreement as we did from the Shakespeare project.
- A Development permit will be required and there will not be any on-site because that is the city, but it will be the 8.83% of the estimate of the public road improvements. The ROW is 60 ft and seems to be an ample amount of ROW with the easements for the cross-sections coming down S Mulino Road and I know you have a question about developing it and the requirements. The asphalt would have to be done, but the sidewalk and planter strip can be deferred for later for parcel B's development and whoever comes in and develops it will have to do the improvements. At the intersection of S Mulino and SE Township Roads there may be additional ROW needed for a turning radius and it depends upon what your use of your trucks and I am sure the city will require a traffic impact study, whatever you are going to bring out here there may be additional requirements for ROW and this would have to be constructed also. Just A/C, curb, storm and make sure all the utilities are underground, but in regards to the planter strip and sidewalk it can be done when this parcel develops and Jason said you do want us to do the curb and gutter and the sidewalk and planter strip can be deferred and the answer was correct. Jonny said we put it in the conditions that it will all be constructed, but it could be done at a later time also, this way if any potential buyer looks at the land use and see what is to be required.
- We want a 25 ft radius at S Mulino and S Township Road and S Mulino and SE 4th Avenue, but if the city wants a larger turning radius we will defer to them.
- You can have this access on S Mulino Road as long as it is 155 ft away from here.
- We would like to see the stormwater drainage report to make sure it will accommodate a 25-year storm with a safe overflow path for the 100-year storm.

- Adequate sight distance should be good since it is pretty flat in this area. Make sure on the corner vision there are no plants above 30 inches and have street trees set back far enough to where you can still see.
- We will need additional striping 200 ft past each side and Jason asked if they needed to strip beyond the intersection 200 ft and Jonny said to show it on the plans and since it is a stop-controlled intersection I do not see any additional striping required on here since there will not be any tapers, but at least on this side we would like to see these are aligned.
- You will need Utility Placement permit as well, you know they will be required for S Mulino Road, there is no cost for this permit, it is a way for us to track who is in the ROW.
- The engineer's cost estimate is due when you submit the plans after land use but we need a cost estimate for the cost for the development permit. You can bond it if you want or if you want to construct it, it is your choice.
- If any ROW dedication is needed on the corner and it will need to be completed before any permits will be issued.
- We will need a traffic control plan for S Mulino Road and I am assuming you will want to close down S Mulino Road like you did with the Shakespeare project. You would use the same approved detour for that section as you did before and we need to approve it before development permit issuance.
- You will need to require liability insurance naming the county as the additionally insured.

**CANBY UTILITY, ELECTRIC DEPARTMENT, Gary Stockwell**

- The power is located at Sequoia Parkway and power will need to be extended from there.
- Any of the frontages for the road improvements we will install street lighting per the city standard, which would require trenching.
- Do you have any ideas of your power requirements and the answer was 2,000 amps should be more than enough. Gary said this will be mostly for warehouse space and the representative said it would be lots of air and manufacturing and Gary said that should be more than enough.
- We place all of our underground utilities in easements and we stay out of the ROW when possible.
- Gary handed out a pre-app checklist to the Stanton representatives.

**CANBY FIRE DEPARTMENT, Matt English**

- The address will need to have 16 to 20 inch numbers on the address side of the building, follow what you will be doing for the Shakespeare project.
- Place a hydrant at the entry and a hydrant within 50 ft of the fire department connection (FDC) and depending on the spacing we would like to have a hydrant every 300 ft around the building due to the foam occupancy load that will be stored inside.
- Will this building be fire sprinkled and the answer was yes.
- I will need a site plan for our pre-fire plan in a .pdf format sent to us.
- Any landscaping in front of the FDC or hydrants needs to be a low grow as to never obstruct the visual. The FDC will need to have address number labeled on it.
- We have the mobile emergency radio repeater program just like we did with Shakespeare project.

- A representative asked Matt about their dust container and Matt said is this for fire protection for dust explosions and the answer was yes. Matt said he will need to talk more to them and do some research and get back to them.

**DIRECTLINK, Joe Keppner**

- Our utilities are in Sequoia Parkway also and we would follow the power in the joint trench and when they will be open we would appreciate you notifying us.

**WASTEWATER TREATMENT, Daryll Hughes**

- Daryll handed out the survey to be completed and for them to be sent it back to him.
- Do you anticipate generating any processed wastewater and the answer was no. Daryll asked if it will all be domestic and the answer was yes.
- Will you have any floor drains and the answer was no.
- Just like all the other projects in our commercial/industrial areas we require a sampling manhole to be installed because we do not know who may be there in the future if the process changes. Jerry asked when the contractor is doing the sampling manhole they contact him because he wants them to do a doghouse style over it and he will answer any questions they may have. The representative said they will have approximately 300 employees and it should not be a problem. Daryll asked if they will be running 24/7 and the answer was they would be running two shifts 6:30 am to midnight.
- I will stop by and inspect once you are up and running to verify everything.

**CITY OF CANB Y PLANNING DEPARTMENT, Bryon Brown**

- We do not have any problems with the proposed use. In regards to the utility extension questions were one thing I had not heard from Jonny was, is the county entertaining utility lines down S Mulino Road or not and I did not hear Hassan state we did not necessarily need to have them. The issue from a planning standpoint is if you do a partition and create another lot we can delay the improvements for that parcel not being developed we need to have all confidences that utilities will be there for the parcel because right now it is a public hearing. We received information that they may make partitioning at an administrative level approval very soon, but right now it is a public hearing and we need assurances that we know how that extra parcel yet to be developed will be served with utilities so we need a design submitted stating this is how it will be served. It sounds like you are not positive if you are doing the partition and the representative said if we do not do the partition we do not have to do that, but to get the partition recorded we have to do that and Bryan said yes, we need to know how it will be served. Bryan said we are thinking to have the roadway completed because of the truck traffic and Jonny said the sidewalks and planter strip will not be required until they develop the lot and Bryan said we agree. Jonny explained the difficulty in having the road pavement widened and then shifted back in and at the intersection of S Mulino and S Township Roads with a 20 ft radius and trying to get truck traffic around there will be difficult. It seems like you will be high producers with furniture and it will not just be a couple of one-ton pickup trucks, you will want that turning radius widened to get around and out to 99E and Bryan said we might want to have a condition for that even if you partition or not and take care of that off-site improvement with the increased radius we will need at that intersection. Jason asked if we could discuss the ROW for S Township Road and Hassan

said it is a collector and they are all the same as S Mulino Road and SE 4th Avenue at 74 ft wide ROW. Bryan said I do not think we would require the ROW dedication the full width of S Township Road if you were not developing that parcel area. The radius would be helpful to get that dedication, but I do not think you would need ROW dedication the entire length of S Township Road and Jason said to the representative of Stanton that they would need to dedicate it now or later and if you are going to partition it getting all of those obstacles out of the way now will benefit us to not having to develop it and if the city is amendable to that it would be great, but to me if you get the radius in there that you want and then the alignment and dedication should take place and then you would not have to taper off the asphalt to get truck capability. Bryan said that is usually what we want to try to do is get ROW dedicated upfront and then it is more sellable.

- I heard from the property owner there is an existing home and he was interested in moving it to the area where you are not developing and the representative said they were told they will be moving the mobile home to the north. Bryan said the owner said he would be moving the mobile home to a parcel outside of the city, but then he talked about a stick built home on this site and the answer was no. The representative said they will retain a piece across, but to your point, it was a little bit confusing for everyone.
- The applications you will need are a type 3 Site and Design Review and it is a public hearing planning commission and they make the final decision unless it is appealed to the city council. The process takes approximately two months and then you would simultaneously do a partition application and is also through the planning commission or after next month be administrative review by the time you turn in this application.
- There will be a traffic study required and it will be in two steps and we often encourage people to have it started already if you are in a rush because the first page is doing a scope of work that we work with our traffic engineering to determine what the task of the study will be and our traffic engineering and city staff are in charge of making those determinations. You have the choice of using our traffic engineer to do the study and produce it with those tasks or choose your traffic engineer and if you choose your own then the scope of work will tell you how much it will cost you for our traffic engineer to review your traffic engineers results and make sure they did include all the tasks from the scope. We talked about the restrictions on SE 4th Avenue on the west end by Sequoia Parkway and I thought I heard to eliminate the trucks going that way, what about the employees going that way and Hassan said he did not know if there was enough width. Bryan said I see that being a big proponent of the traffic study and what that causes is not being able to have this many employees to utilize what would otherwise be the most direct route. Jason said we will be conscious of that and it may not be an issue. Bryan said to get the traffic study we need to either send this site plan or any updated one if this will change immediately and if you want to send it in an email to me indicating your anticipated truck traffic and we can share the employee count you shared here and the basic parameters they will use are the square footage of the building, site plan, truck traffic and if you have any specifics on traffic counts they can take it into account. You need to get them started on that and we usually require a minimum of a $600.00 deposit and it might be slightly below the cost for them to do the scope of work, but we start from there.
- You will need to think about the driveway accesses for the future parcel B because our spacing standards would be 200 ft between driveways and if you are thinking of another one

on S Mulino Road the county will also have input on that. Jason asked Jonny what was the county standard and Jonny said 155 ft. Jason said we will show our potential driveway approaches to demonstrate that compliance.

- I saw in your narrative you might be considering some metal panels for the walls or something. In the industrial park, the majority of buildings are concrete tilt-up and we do have a prohibition against metal walls in our industrial park. There was a company considering spay on type of material over the metal and we have decided it would be okay to do. Metal roofs are fine, but typically anything that looks like metal is not allowed on the walls. Jason said for the architectural panels is to stay away from metal buildings and single corrugation every 12 inches and Bryan said metal features are okay, but not walls. Jason said we will look into different options, but we will make sure we will be in compliance.

**CITY OF CANBY, PLANNING DEPARTMENT, Sandy Freund**

- The manufacturing is permitted on the M-1 zone, so it will just be a Site and Design Review application through the planning commission and we are going the city council on September 4th approve for us to do minor partitioning at an administrative review, but we can also piggyback these applications.
- I looked up the latest code on the landscaped area, which is 15% of the developable area and you can find that in our code 16.49.080 and in that code you will want to look at the landscaping requirements as well. Looks like you have it pretty laid out.
- The parking requirements are two spaces per 1,000 sq ft of office space plus an additional one space per 1,000 sq ft of manufacturing space. Jason said he thinks they are well over that for the count requirement for the warehouse manufacturing. Sandy said for the parking areas every eight parking spaces have to be split up with a landscape island.
- I did see you have three loading berths and they need to be 12 x 60.
- Parking lot and access in our code is 16.10.070.
- Bicycle spacing will be addressed by the planning department.

City of Canby
Planning Department
222 NE 2nd Avenue
P.O. Box 930
Canby, OR 97013
Ph: 503-266-7001
Fax: 503-266-1574

# PRE-APPLICATION SUMMARY

September 12, 2019

VLMK
Attn: Jennifer Kimura
3933 SW Kelly Avenue
Portland, OR 97239

Colliers International
Attn: Brad Christiansen
851 SW Sixth Avenue, Suite 1200
Portland, OR 97201

**Subject: Pre-Application Conference Summary Notes for Pacific Furniture (PRA 19-09)**

Dear Ms. Kimura and Mr. Christiansen,

Thank you for attending the Pre-Application (Pre-App) conference held on July 16, 2019. We are pleased to provide you with the following summary notes prepared in response to your proposal.

Comments prepared by staff are reflective of the proposal as discussed at the Pre-App conference. A copy of your proposal was also sent to other members of staff who did not attend the Pre-App conference, but may provide comments separate from this summary. Please feel free to contact anyone who provided comments. Contact names, telephone numbers and e-mail addresses are listed herein.

Following every Pre-App conference, staff understands that there may be changes to the plan or use considered. If these changes effectively re-design the site plan or involve a change to a use not discussed, please be advised that such a change could require different land use application(s) than were identified by staff at the Pre-App or herein. It is also possible that different issues or concerns may arise from such change. In these cases, we encourage applicants to request a second Pre-App conference for staff to consider the change and provide revised comments accordingly.

In part, the Pre-App conference is intended to assist you in preparing plans and materials for staff to determine your application(s) to be deemed "complete" as described in Section 16.89.080 of the Canby Land & Development Planning Ordinance. For your application(s) to be deemed complete on the first review, you must provide everything required as identified on the Application Checklist(s) found within the appropriate Land Use Application, in addition to any materials or special studies identified in the summery notes hereto. If you have questions as to the applicability of any item on the Application Checklist(s), or within this summary, please contact me directly.

On behalf of the staff who attended the Pre-App, we thank you for sharing your proposal with us. If we can be of further assistance, please do not hesitate to call.

Sincerely,

Sandy Freund, AICP
Senior Planner
(503) 266-0775

# PRE-APPLICATION CONFERENCE
## SUMMARY NOTES
## Prepared for
Stanton Company – Pacific Furniture

PRA 19-09

The following pre-application summary notes have been prepared by Planning staff in order to assist you with the application submittal process. All applicable standards, guidelines and policies of the Canby Land Development & Planning Ordinance, Comprehensive Plan, Transportation System Plan, and the Public Works Design Standards identified herein are available for review on the City's web site at: https://canbyoregon.gov/. Copies of these documents are also available for review at the City's Development Services Department.

The following is intended to identify applicable code sections, requirements and key issues for your proposed development application. Items checked are considered to be relevant to your proposed development.

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**PRE-APPLICATION CONFERENCE DATE:** August 14, 2019

**PROJECT INFORMATION:**

| | |
|---|---|
| Project Name: | Stanton Company – Pacific Furniture |
| Project Description: | To develop a new furniture manufacturing/warehouse facility of approximately 150,000 square feet in size, with associated office space, and vehicle and truck trailer parking and loading docks for said operations. |
| Property Owner(s): | Colliers International, Attn: Brad Christiansen |
| Project Site Address: | 23849 S. Mulino Road, Canby, OR 97013 |
| Tax Lot Number(s): | 31E34 03100 |
| Site Size: | ±15.847 acres |
| Zoning: | M-1 – Light Industrial (Canby Pioneer Industrial Park – Industrial Overlay I-O zone) |
| Comp. Plan Designation: | LI – Light Industrial |
| Use Type: | *Manufacturing* – Permitted outright in the M-1 zone (Section 16.32.010.A) |

**APPLICANT INFORMATION:**

| | |
|---|---|
| Applicant(s): | VLMK, Attn: Jennifer Kimura<br>3933 SW Kelly Avenue<br>Portland, OR 97239 |
| Phone / Email: | 503-222-4453 / jenniferk@vlmk.com |

**SECTION 16.89.080 (APPLICATION REQUIREMENTS AND COMPLETENESS):**

The completeness process is governed by Section 16.89 of the Canby Land Development and Planning Ordinance. The applicant is encouraged to contact staff to ask any questions or request clarification of any items found on the land use application checklists related to the proposed project.

**LAND USE APPLICATION(S) AND FEES:**

Based on the plans and materials provided, the identified applications for your proposal, and related fees are as follows:

| **Land Use Application(s)** | **Fees** | *Discount for Multiple Applications | Application fees w/discount applied |
|---|---|---|---|
| **Site and Design Review Application (Type III)** | $5,600 | -0- | $5,600.00 |
| **Land Division – Partition (Type II)** | $1,310 * | -$327.50 | $ 982.50 |
| **Total Fees** | | | **$6,582.50** |

*Multiple application discount = 25% off each lower cost application

**CLASSIFICATION OF APPLICATIONS:**

Applications are subject to the procedure (Type) specified in Table 16.89.020 *Land Use and Development Application Procedures.* When an applicant submits more than one complete application for a given proposal, and the applications are subject to different procedure types, all the applications will be subject to the procedure type which requires the broadest notice and opportunity to participate.

**SECTION 16.89.070 (A-F) (NEIGHBORHOOD MEETINGS and PUBLIC NOTICE):**

A meeting of the immediate neighborhood is required prior to accepting and/or deeming an application complete. Please notify and meet with the surrounding property owners within a 500-foot radius of the subject site.

**APPLICATION SUBMITTAL:**

Your application narrative will need to explain how and why the proposed application(s) will meet the approval standards and criteria for the proposed project. Approval standards and criteria in effect at the time an application is received will control. Approval standards and criteria are subject to change.

**In order for your application(s) to be deemed "complete" a written response is necessary, supported by substantial evidence in response to all applicable approval standards and criteria.**

**Please note: Applicant's written response should address each criterion.** If response to criterion is "Not Applicable", please explain why the criterion is not applicable.

The following Sections of the *Canby Land Development and Planning Ordinance* are subject to your proposed development project. Please review when preparing your land use application(s) written and plan information, as well as application narrative for the formal application submittal.

**APPLICABLE CODE SECTIONS / PLANNING DOCUMENTS:**

| Chapter | Section |
|---|---|
| | |
| **16.08 *General Provisions*** | 16.08.110 - *Fences* (F)<br>16.08.150 - *Traffic Impact Study (TIS)*<br>16.08.160 - *Safety and Functionality Standards* |
| | |
| **16.10 *Off-Street Parking and Loading*** | 16.10.030 - *General Requirements* (H)(1)<br>16.10.050 – *Parking Standards Table: Industrial: (a). Manufacturing*<br>16.10.060 – *Off-street loading facilities* (A)(B.2)(C)(D)(F)<br>16.10.070 – *Parking lots and access* (A)&(B) *as applicable*<br>16.10.100 – *Bicycle Parking* (A-C) and Table 16.10.100 Industrial Park |
| | |
| **16.35 *Industrial Area Overlay (I-O) Zone*** | 16.35.050 – *Development standards*<br>16.35.060 – *Design guidelines*<br>16.35.070 – *I-O Design review matrix (*use instead of matrix in 16.49) |
| | |
| **16.46 *Access Limitations on Project Density*** | 16.46.020 – *Ingress and egress*<br>16.46.030 – *Access connection*<br>16.46.060 – *Amount of access points* |
| | |
| **16.49 *Site and Design Review*** | 16.49.035 (B)<br>16.49.035 - *Application for Site and Design Review* (B)<br>16.49.080 -*General provisions for landscaping* (C.1) and A-P as applicable.<br>16.49.090 – *Specifications for tree and plant materials*<br>16.49.100 – *Landscaping installation and maintenance*<br>16.49.110 – Landscaping credit if applicable<br>16.49.120 – *Parking lot landscaping standards*<br>16.49.130 – *Revegetation in unlandscaped areas* |
| | |
| **16.60 *Partitions*** | 16.60.030 – *Partitions* (A-E) as applicable (Amended code section effective October 4, 2019)<br>16.60.050 – *Planning Director action*<br>16.60.060 – *Final procedures and recordation* |
| | |
| **16.88 *General Standards and Procedures*** | 16.88.030 *Application and Fees* |
| | |
| **16.89 *Application and Review Procedures*** | Table 16.89.020<br>16.89.040 – *Type II procedure* (for Partition, per amended code effective October 4, 2019)<br>16.89.050 - *Type III Decision* (A – H) |
| | |
| **Transportation System Plan (2010)** | As applicable |
| | |

**KEY ISSUES/CONSIDERATIONS**:

Staff has identified the following key development and/or procedural issues that you should be aware of as you prepare your formal application for submittal. The identification of these issues or considerations here does not preclude the future identification of other key issues or considerations:

1. **Partition**: Proposed partition of the subject property into two (2) tax lots (Parcel A and Parcel B):

    a. There is an opportunity to submit a Type II land use application for the partition. Recent Code amendments have categorized all divisions of property up to three (3) separate parcels as a Type II land use application. See new Chapter 16.60 *Partitions* (Attached) when reviewing application narrative for standards and criteria. Partition application can be submitted and reviewed concurrently with the Type III Site and Design Review application.

    b. Please submit a site plan/design and corresponding narrative as to how Parcel B will be served by required public utilities, as well as future access points and distances to Parcel A access points. Public facilities improvements for Parcel B may be delayed until Parcel B is developed. A *Partition Plat* shall be filed for all parcels. All public facilities improvements must be completed prior to Final Plat recordation for Parcel A.

2. **Right-of-Way Dedication/Half-Street Improvements:** It is preferable to have all right-of-way dedication completed upfront, with the partitioning of Parcel B. Half-street improvements shall be completed in accordance with City Engineer specifications as well as to the Public Works Design Standards manual. It is anticipated that half-street improvements will be required along S. Mulino Road and SE 4th Avenue, and a portion of S. Township Road near the intersection with S. Mulino Road, with right-of-way dedication preferred for the full frontage distance.

3. **Access Standards:** Driveway spacing and number of access points must comply with Section 16.46.060, as well as the Public Works Design Standards manual, and the Transportation Systems Plan, Appendix I; all driveway access points must have 200-foot separation from each other for designated *collector* streets in the I-O zone.

**Other Considerations**

4. **Traffic Impact Analysis (TIS)**. A Traffic Impact Study (TIS) will be required. An initial traffic scoping study (Section 16.08.150 (B & E) should be submitted as soon as possible in order to identify tasks for the subsequent Traffic Impact Study (Section 16.08.150 (A)).

5. **Fire Safety.** Be sure to contact Canby Fire District, for all fire safety requirements applicable to new residential subdivision. Matt English 503-266-5851, menglsih@canbyfire.org.

6. **Clackamas County**. Be sure to contact Clackamas County Development Services to coordinate all half-street improvement requirements pertaining to S. Mulino Road. We believe the County will be utilizing the City right-of-way and paving widths. Jonny Gish 503-742-4707, jgish@clackamas.us

7. **Continued Coordination:** Please do not hesitate to contact staff as you continue to refine your proposal. We are happy to answer questions and review the development proposal prior to formal application submittal.

# EXHIBIT G

VLMK ENGINEERING + DESIGN

## MEETING NOTES

| | | | |
|---|---|---|---|
| *Project:* | Stanton Furniture | *Date:* | September 25, 2019 |
| *Project Number:* | 20190255 | *Meeting Name:* | Neighborhood Meeting |
| *Address:* | 23849 S Mulino Rd.<br>Canby, OR | *Client:* | Pacific Furniture Industries |
| *Location:* | Canby Adult Center | | |
| *File Path:* | G:\Acad2019\20190255\Permits\Neighborhood Meeting\03 Meeting Minutes 09-25-2019\Stanton Furniture Neighborhood Meeting Minutes 09-25-19.docx | | |

These minutes reflect our understanding of the topics discussed during the meeting.

### PRESENT AT MEETING

Approximately (17) neighbors were represented at the meeting. Jason Sahlin and Colby Anderson from VLMK were present at the meeting, along with a representative from Stanton Furniture.

### THE FOLLOWING WAS DISCUSSED

Q: What will the expected impact to traffic along Haines Road?

A: At this time, the owner is investigating the feasibility of this property for the proposed project. Part of this due diligence includes performing a traffic study to determine the impact to neighboring roads and intersections.

Q: Will the intersection at Mulino/Township be upgraded to handle the increased traffic volume? Is it possible to consider roundabouts at these intersections to improve safety?

A: These items will be investigated during the traffic study. To understand the city's intent for future traffic plans, please reference the city of Canby's Transportation System Plan (TSP).

Q: Could the design team take the following suggestions into consideration as the planning for the project site and building develops?

- Consider mirroring the building such that the majority of the dock doors occur on the West side of the building, in lieu of the East side?
- Consider installing a landscaping berm along the Mulino road frontage to shield County neighbors across the road from noise and light?
- Consider installing shielded site lighting to reduce light pollution?
- Consider hard surface fencing around the perimeter of the project?
- Consider a dark, earth-toned paint color for the building?

A: These items will be taken into consideration. The proposed layout and use of this development will comply with local code requirements and be consistent with nearby developments within the industrial park.

Q: Is it possible to allow a road to the South of the proposed development (through Parcel B) to provide traffic access directly to Township road?
A: This will be taken into consideration. Parcel B is also under consideration by the client, but no firm decisions have been reached for the use of this property at this time.

Q: Is it possible to have the surrounding road and traffic improvements complete before this development takes place?
A: Pending the results of the traffic study, this development will likely be required to contribute funds towards the future development of impacted intersections/roads. It is not likely that the impacted areas will be improved before the development takes place. We do anticipate that half-street improvements will be required along the Mulino and 4th Avenue property frontage as a part of this development.

Q: Where will the utilities (power/water/sewer) for this property be coming from?
A: The utilities will likely be coming from the West along the proposed 4th Ave street.

Q: How will the storm water runoff be handled for this development?
A: The stormwater will be detained/treated/infiltrated on-site as required.

Q: What is the proposed timeline for this project?
A: Ideally, a start date would be targeted for Spring 2020 to start construction, and February 2021 for project completion.

Q: Will the neighbors be notified with the results of the traffic study once complete?
A: The results of the traffic study will become part of the public record once complete, so any neighbors who wish to view the results should be able to access the report with a public records request.

Q: What is the anticipated noise level for this facility? Neighbors are concerned about the noise level, particularly for trucks and forklifts.
A: This development will be required to comply with all city and county noise requirements and will be consistent with other developments in the industrial park. We do understand that the majority of the truck and forklift traffic is expected to occur during the daytime, with significantly less traffic anticipated during the evening hours.

## THE FOLLOWING ADDITIONAL QUESTIONS WERE RECEIVED IN ADVANCE OF THE MEETING

Q: Is the property sold or is it pending on approval?
A: The property sale is in the due diligence phase currently.

Q: Is 4th street approved to be put thru to Mulino rd.? And if so how soon till that would happen?
A: Half street improvements are being discussed as a part of this and other nearby developments. Anticipate the road will eventually be developed by others, but we do not have a specific timeline.

Q: Is the parking lot access to Mulino rd. approved?
A: The current site plan that was submitted for the Canby pre-app illustrates access along Mulino rd.

Q: Is the 4.2 acres to the south targeted for development? And who would own it?
A: This is unknown at this time.

Q: Would the factory/warehouse be operated 24 hrs?
A: Our understanding is that there will be a day shift and a swing shift during normal building operations.

Q: Would the parking lot or south end of building have bright night lights?
A: There will be lighting in the parking lot, but very low levels of light are allowed to extend over the property line. A more detailed lighting plan will be required throughout the planning/permitting phases of the project.

Q: Would there be loud backup beepers or intercoms operated outside at night?
A: Most of the anticipated trucks are not equipped with reverse beepers. The forklifts do have beepers, but are expected to have minimal trips at night.

Q: Would there be a loud dust collector or other machines operated outside at night & weekends?
A: The client does expect to have a dust collection system, but it is not expected to be overly loud. It will likely be placed on the North or Northwest side of the building.

Q: What about rain water runoff from parking lot. Would that be directed away from bordering properties?
A: Storm water runoff will be processed & infiltrated on site.

Q: Is VLMK talking to other land owners near lot #3000 about any future purchases or projects?

A: VLMK is working with clients in the area, but are not involved in discussions about land purchases or sales.

Q: The land owners have an Area Of Occupation Agreement in place. Would that be honored with this sale or how does that effect the property lines?
A: VLMK is working with clients in the area, but are not involved in discussions about land purchases or sales.

Q: Would it be possible to discuss possibly a cyclone fence around the parking lot? Preferably in person at the site in the future.
A: The client has not yet determined if any fencing is anticipated around the parking lot.

Q: What are the hours of operation for the proposed facility?
A: 1st shift starts between 5:30 - 6:30 am thru 2:00 - 3:00 pm 2nd shift starts at 3:30 pm thru midnight

Q: How many loading docks are being proposed and where?
A: Number of Loading Docks along S. Mulino Road - 26
Number of Loading Docks along SE 4th Ave - 6
Number of Loading Docks along West side of the site - 4

Submitted by,
VLMK Engineering + Design

VLMK
ENGINEERING + DESIGN

## MEETING SIGN IN SHEET

| | | | |
|---|---|---|---|
| ***Project:*** | Stanton/Pacific Furniture Industries | ***Date:*** | September 25th, 2019 |
| ***Project Number:*** | 20190255 | ***Meeting Name:*** | Neighborhood Meeting |
| ***Address:*** | 23849 S Mulino Rd<br>Canby, OR 97013 | ***Client:*** | Stanton |
| ***Location:*** | Canby Adult Center | | |

| Name | Company | Phone | E-mail |
|---|---|---|---|
| BRENDA GUNDERSEN | | [redacted] | |
| LYNN Wiltshire | | | |
| Scott BEAUDOIN | | | |
| Nancy Brawner | | | |
| Jean Kavel | | | |
| Lisa Weygandt | | | |
| Jerry Nolan | TN Tolls Company | | |
| Cliff Parsons | | | |
| Ed Montecucco | | | |
| Susan Gustafson | | | |
| Scott Gustafson | | | |
| Kirk Weedman | | | |
| Judy PERKINS | | | |
| Pat PERKINS | | | |
| KATERINA DE METZ | | | |
| JON DRAGT | | | |
| | | | |
| | | | |
| | | | |

CURRAN-McLEOD, INC.
CONSULTING ENGINEERS
6655 S.W. HAMPTON STREET, SUITE 210
PORTLAND, OREGON 97223

January 15, 2020

# MEMORANDUM

**TO:** Public Comments
City of Canby

**FROM:** Hassan Ibrahim, PE
Curran-Mcleod, Inc.

**RE:** **CITY OF CANBY**
**STANTON FURNITURE DEVELOPMENT**
**PRELIMINARY REVIEW**

We have reviewed the submitted application and plans for the above noted project and have the following comments which should be addressed in the final design:

SE 4th Avenue:

1. This roadway segment is under the jurisdiction of City of Canby. The City of Canby, Industrial Area Master Plan prepared by OTAK Engineering, dated October 1998 and the City Transportation System Plan refer to this roadway as a collector street section. We recommend this roadway be constructed to collector street standards as per the Public Works design Standards, chapter 2, section 2.207. As part of this development, the developer shall be required to dedicate 37 feet of right of way with an ultimate right of way of 74 feet. The centerline shall be located at the common property line with the adjoining properties. Half street improvements will be required to be constructed along the entire site frontage to S Mulino Road where the curb and gutter is placed at 25 feet from the right of way centerline with the appropriate 10:1 asphalt taper, 5-foot planter strip and 6-foot wide concrete sidewalk. Streets lights and street trees will also be required. We recommend the City require a minimum of 12-foot wide PUE.

2. Sanitary sewer and waterlines shall be designed and constructed along the entire site frontage based on the existing depth and alignment at the terminus of SE 4th Avenue. These utilities take into consideration the section of roadway between the westerly property line of this site and the utilities in existing street section connecting to Sequoia Parkway.

3. The curb return radii at intersection with Mulino Road and driveway wings or radii should be large enough to allow for AASHTO WB-67 vehicle turning movements. The property line should be concentric with this return. The applicant engineer shall submit to the City truck turning movements templates illustrating that the turning movement requirements are met.

PHONE: (503) 684-3478 E-MAIL: cmi@curran-mcleod.com FAX: (503) 624-8247

4. All driveways shall have an industrial driveway approach consisting of 8" minimum concrete thickness with reinforcements or mesh welded wire fabric.

5. The minimum access spacing between driveways along SE 4th Avenue or S Mulino Road is 200 feet as required by Industrial Area Master Plan prepared by OTAK, dated October 1998. The provided plans appear to meet this requirement but doesn't make any reference to the distance from the intersection with Sequoia Parkway or SE Township Road.

Mulino Road:

6. This road is under the jurisdiction of Clackamas County and all the design and construction are deferred to the comments and requirements of Clackamas County Department of Transportation and Development.

7. The City of Canby, Industrial Area Master Plan prepared by OTAK Engineering, dated October 1998 refers to Mulino Road as a 3-lane collector with continuous turn lane having a street width of 50 feet and required right-of-way width of 74 feet as opposed to 60 feet as proposed. The TSP requires the ultimate right of way width to range between 50 to 80 feet. Half street improvements shall be required along the entire site frontage where the curb and gutter are placed at 25 feet from the right of way centerline with the appropriate 10:1 asphalt taper, a 5-foot planter strip and 6-foot wide concrete sidewalk. Streets lights and street trees will also be required. We recommend the City require a minimum of 12-foot wide PUE.

8. Prior to occupancy, a demonstration of sight distance shall be verified, documented and stamped by a registered professional civil of traffic engineer licensed in the state of Oregon. The minimum sight distance in each direction on S Mulino Road and SE 4th Avenue shall be 335 feet based on 30-mph posted speed and 280 feet based on assumed posted speed of 25-mph.

9. SE 4th Avenue and Mulino Road intersection should be constructed to accommodate the curb return radii and allow for AASHTO WB-67 vehicle turning movements. The right of way dedication should be concentric with this curb return alignment. The applicant engineer shall submit to the City truck turning movements templates demonstrating that the turning movement requirements are met.

10. Street lighting shall be required along the entire site frontage with S Mulino Rd.

Future Township Road:

11. This roadway section is under the jurisdiction of City of Canby, it is classified as a Collector Road in the Canby Transportation System Plan (TSP). The existing right of way is 40 feet. The City of Canby, Industrial Area Master Plan prepared by OTAK Engineering, dated October 1998 refers to this road as a 3-lane collector with continuous turn lane having a street width of 50 feet and required right-of-way width of 74 feet. As

part of this development, the developer will be required to dedicate 17 feet of right of way and a radius to accommodate a minimum 40-foot turning curb radius.

The half street improvement along the entire site frontage will be deferred until the time the remainder of the property has been developed. Ultimately, the half street improvements will include curb and gutter located at 25 feet from the center line of the ultimate 74-foot right of way, 5-foot planter strip and a 6-foot wide concrete sidewalks, street lights and extend utilities (water , sanitary if gravity allows, an acceptable means of storm water disposal) and franchise utilities. The existing roadway section width to the west of the intersection with Sequoia Parkway is 44 feet and was reduced so that no encroachment is taking place at the cemetery. We would recommend that this roadway improvements between Sequoia Parkway and Mulino Road is constructed in conformance with the TSP and the Industrial Area Master Plan with 74-foot right of way, a 50-foot wide paved surface curb to curb, a 5-foot planter strip and a 6-foot wide concrete sidewalks. Additionally, a 12-foot wide PUE will be required.

12. The minimum access spacing between driveways along Township Rd is 200 feet as required by Industrial Area Master Plan prepared by OTAK, dated October 1998. The provided sketch appears to meet this requirement but doesn't make any reference to the distance from the intersection with Sequoia Parkway. All the existing driveways don't need to meet this requirement until future developments occur.

13. All access driveways shall be constructed to have industrial driveway approaches consisting of 8" thick concrete with reinforcements.

Miscellaneous:

14. All private storm drainage discharge shall be disposed on-site, the design methodology shall be in conformance with the City of Canby, Public Works Design Standards revised in December 2019.

15. A final storm drainage analysis shall be submitted with the final design. The developer's engineer will be required to demonstrate how the storm runoff generated from the new impervious surfaces will be disposed. If drywells (UIC) are used as a means to discharge storm runoff from the private streets, they must meet the following criteria: The UIC structures location shall meet at least one of the two conditions: (1) the vertical separation distance between the UIC and seasonal high groundwater is more than 2.5 feet or (2) the horizontal separation distance between the UIC and any water well is a minimum of 267 feet in accordance of the City of Canby Stormwater Master Plan, Appendix "C", Groundwater Protectiveness Demonstration and Risk Prioritization for Underground Injection Control (UIC) Devices. The storm drainage report shall be in conformance with the requirements as stated in Chapter 4 of the City of Canby Public Works Design Standards as revised in December 2019.

16. Any existing domestic or irrigation wells shall be abandoned in conformance with OAR 690-220-0030. A copy of Oregon water Rights Department (OWRD) abandonment certificate shall be submitted to the City.

17. Any existing on-site sewage disposal system shall be abandoned in conformance with DEQ and Clackamas County Water Environmental Services (WES) regulations. A copy of the septic tank removal certificate shall be submitted to the City.

18. Water Services/ Fire Protection shall also be constructed in conformance with Canby Utility and Canby Fire Department requirements.

Should you have any questions or need additional information, please let me know.

# MEMORANDUM

**TO:** City of Canby Planning Department

**FROM:** Jonny Gish Traffic Development Engineering

**DATE:** 1/9/2020

**RE:** Stanton Furniture Design Review
31E34 03100

Development Engineering staff has visited the site and reviewed this application with the attached site plan. We have the following comments:

**Facts and Findings:**

The applicant has proposed a Site Design Review for warehouse and manufacturing building. The existing use of the property is vacant farm land with frontage on County road S Mulino Rd, an Industrial Collector, and S Township Rd, a Minor Arterial. The applicant is proposing to partition the lot into two lots and develop the northern parcel.

The proposed development is subject to City of Canby standards and requirements for the on-site and SE 4th Ave development and Clackamas County standards and permitting for access and frontage improvements on SE Mulino Rd and S Township Rd. The project site also has frontage on SE 4th Ave, which will be a City of Canby Street. The access from SE 4th Ave to S Mulino Rd shall be permitted by Clackamas County.

Both S Township Rd and S Mulino Rd are listed on the Clackamas County Comprehensive Plan Map 5-2 Planned bikeway Network. S Township Rd, a minor arterial, requires an 8-foot striped bikeway and S Mulino Rd, a collector, requires a 6-foot striped bikeway.

Additionally, S Mulino Rd and S Township Rd are listed on the Capital Improvement Program list for adding turn lanes at major intersections. Section 120 of the Roadway Standards requires development abutting and impacting existing roads shall improve the frontages of the road in accordance with the Capital Improvement Program. The applicant will be required to dedicated additional right-of-way to accommodate the left turn lane and on both S Mulino Rd and S Township Rd and right turn maneuver southbound on S Mulino Rd to west bound S Township Rd.

S Mulino Rd is classified as a collector by Clackamas County Comprehensive Plan. Clackamas County has adopted Roadway Standards to pertain to the structural and cross section, minimum required right-of-way widths and access standards for collector roads. According to current tax maps, the existing right-of-way width for S Mulino Rd is 60 feet along the proposed development. Additional right-of-way dedication may be required to accommodate the required left turn lane and maneuverability.

S Township Rd is classified as a minor arterial by the Clackamas County Comprehensive Plan. Clackamas County has adopted Roadway Standards to pertain to the structural and cross section,

minimum required right-of-way widths and access standards for collector roads. The applicant will be required establish centerline and to dedicate a minimum 37 feet of right-of-way from centerline along S Township Rd to accommodate the required frontage improvements. This dedication will be required prior to occupancy.

Consistent with Clackamas County Comprehensive Plan S Mulino Rd minimum improvements will be required to design and construct half-street improvements with 18 feet of pavement (12 foot travel lane and 6 foot bikeway) from centerline of existing right-of-way, 12 foot left turn lane at S Township Rd, 6-inch standard or curb and gutter, 5-foot wide landscape strip with street trees and 5-foot wide sidewalk.

Consistent with Clackamas County Comprehensive Plan S Township Rd minimum improvements will be required to design and construct half-street improvements with 20 feet of pavement (12 foot travel land and 8 foot bikeway) from centerline of existing right-of-way, 12 foot left turn lane at S Mulino Rd, 6-inch standard or curb and gutter, 5-foot wide landscape strip with street trees and 5-foot wide sidewalk.

Private access to S Mulino Rd and S Township Rd will be subject to driveway access spacing standards in Section 220 of the Roadway Standards.

The intersection of S Mulino Rd and S Township Rd will be required to be designed and constructed with a minimum 30 foot radius, Per Table 2-15.

The intersection of S 4$^{th}$ Ave and S Mulino Rd will be required to be designed and constructed with a minimum 25 foot radius, per Table 2-15.

The applicant has submitted a Transportation Impact Analysis performed by DKS date January 2020. The TIA analyzed multiple intersection along S Mulino Rd and S Township Rd. All intersections are expected to operate at or below the approved *v/c* set forth in Section 295 of the Roadway Standards. The proposed development is expected to generate 64 am peak hour trips and 69 pm peak hour trips and 460 daily trips with about 9% of the daily trips resulting from truck traffic.

**Conclusion:**

The preface language in the three paragraphs which follow this paragraph shall not be interpreted as a condition of approval or included by Planning staff as a condition of approval.

If the Planning Section approves the request, the following conditions of approval are recommended. If the applicant is advised to or chooses to modify the proposal in terms of access location and or design following the preparation of these comments this office requests an opportunity to review and comment on such changes prior to decision being made.

The following items are project requirements from the Department of Transportation and Development's Development Engineering Division These conditions of approval are no intended to include every engineering requirement necessary for the successful completion of this project, but are provided to illustrate to the applicant specific details regarding the required improvements that my prove helpful in determining the cost and scope of the project. These conditions are based on upon the requirements detailed in the County's Compressive Plan (Comp Plan), the County's Zoning and Development Ordinance (ZDO) and the County's roadway

Standards. Additional requirements beyond those stated in the conditions of approval may be required. The applicant may discuss the requirements of the project with staff at any time.

The requirements specifically required by the Comp Plan and the ZDO cannot be modified by the Development Engineering Division. However, the requirements detailed in these conditions of approval, derived from the Development Standards, are based upon nationally accepted standards and engineering judgement and may be modified pursuant to Section 170 of the roadway Standards. The applicant is required to provide sufficient justification to staff in the request. Staff shall determine if a modification is warranted.

**Recommended Conditions of Approval:**

1. **Prior to site improvements:** a Development Permit is required from the Engineering Department for review and approval of frontage improvements, erosion control Best Management Practices implemented, sight distances and the driveway improvements. The permit shall be obtained prior to commencement of site work and Certificate of Occupancy. To obtain the permit, the applicant shall submit construction plans prepared and stamped by an Engineer registered in the State of Oregon, or plans acceptable to the Engineering Division, provide a performance guarantee equal to 125% of the estimated cost of the construction and pay a plan review and inspection fee. The fee will be calculated as a percentage of the construction costs if it exceeds the minimum permit fee. The minimum fee and the percentage will be determined by the current fee structure at the time of the Development Permit Application.

2. **Prior to Site Improvements:** Submit approvable construction Plans showing all required improvements. All required street, street frontage and related improvements shall comply with the standards and requirements of the Clackamas County Roadway Standards unless otherwise noted herein. All proposed and required improvements shall be designed, constructed, inspected and approved, or financially guaranteed, pursuant to *Clackamas County Roadway Standards*:
    a. Design and construct S Mulino Rd to Figure 5-1c and Standard Drawing C130:
        i. 18 feet of pavement from centerline with structural section meeting C100 for industrial collector roadway (12 foot travel land and 6 foot bikeway)
        ii. 12 foot left turn lane at S Township Rd
        iii. 6-inch curb and gutter per S150
        iv. 5 foot ADA compliant sidewalk per S960
        v. 5 foot planter strip with street trees
        vi. 8 foot Public utility easement
        vii. Dual ADA curb ramps at corners of SE 4th Ave and S Township Rd
        viii. Inbound asphalt taper shall be provided per Roadway Standards Section 250.6.4

    b. Design and construct S Township Rd to Figure 5-1b and Standard Drawing C140:
        i. 20 feet of pavement from centerline with structural section meeting C100 for minor arterial roadway (12 foot travel lane and 8 foot bikeway)

ii. 12 foot left turn lane at S Township Rd
iii. 6-inch curb and gutter per S150
iv. 5 foot ADA compliant sidewalk per S960
v. 5 foot planter strip with street trees
vi. 8 foot Public utility easement
vii. Dual ADA curb ramps at NW corner of S Mulino Rd
viii. Outbound asphalt taper shall be provided per Roadway Standards Section 250.6.4.

c. Design and construct the curb radius at S Mulino Rd and S Township Rd with a minimum 30 foot radius.
d. Design and construct curb radius at S Mulino Rd and SE 4th Ave with a minimum 25 foot radius.
e. All Private driveway access from S Mulino Rd and S Township Rd shall meet minimum spacing standards in Section 220.

f. The applicant shall design and construct stormwater drainage facilities in conformance with City of Canby Standards and *Clackamas County Roadway Standards* Chapter 4 for S Mulino Rd and S Township Rd. Any surface water runoff from the site to the S Mulino Rd and S Township Ave right-of-way shall be detained outside of the right-of-way in conformance with *Clackamas Roadway Standards*. Where there is no outfall for the storm system, detention and infiltration shall accommodate a 25-year storm, with a safe overflow path for the 100-year storm. The applicant and the city will be required to enter into a maintenance agreement for water quality facilities located within the public right-of-way. The agreement shall include a maintenance of operation plan, as approved by DTD Engineering and the City of Canby.

3. **Prior to placement of road striping:** The applicant shall submit striping plan for S Mulino Rd and S Township Rd to Clackamas County Traffic Engineering for approval of layout and materials.

4. **Prior to Placement of utility installation in County right-of-way:** the applicant shall obtain Utility Placement Permits for any utility work required within the right-of-way of S Mulino Rd and S Township Rd.

5. **Prior to Certificate of Occupancy:** Applicant shall verify the public right-of-way width and location along the entire site frontage of S Mulino Rd and S Township Rd. The right-of-way and width shall be verified by a professional surveyor to the satisfaction of DTD Engineering, City of Canby and County Surveyor. The applicant shall dedicate adequate right-of-way for S Mulino Rd and S Township Rd to accommodate required improvements.

6. **Prior to Certificate of Occupancy:** The applicant shall submit an Engineer's cost estimate to be approved by Clackamas County Engineering for the asphalt concrete, aggregates, and any other required public improvement in S Mulino Road and S Township Rd right-of-way.

7. **Prior to Final Inspection:** the applicant shall provide and maintain minimum intersection sight distances at SE 4th Ave intersection with S Mulino Rd and S Mulino Rd with S Township Rd. Intersection sight distance shall restrict plantings at maturity, retaining wall, embankments, trees, fences or any other objects that obstruct vehicular sight distance. Minimum required intersection sight distance of 610 feet to the north and south Along Mulino Rd from SE 4th Ave. And 610 feet to the west and 500 feet to the east along S Township Rd from S Mulino Rd.

8. **Prior to Final Inspection:** The applicant shall submit as-built plans for all improvements showing all construction changes, added and deleted items, location of utilities, etc. A professional engineer, registered in the state of Oregon, shall stamp and sign as-built plans. Any plans for signals, signing and striping require both a paper copy (maximum size 11" x 17") and a .dwg version of the as-builts for our Traffic Engineering section.

CANBY FIRE DISTRICT

Commercial construction

A. The building shall incorporate Canby Fire District's requirements into their construction schedule for said project.
B. The most current Oregon Fire Code will be referenced.
C. The builder shall comply with the following items to be addressed and refer to the Authority having jurisdiction for compliance questions:

1. Chapter 33 of the most current Oregon Fire Code for construction needs to be reviewed prior to hydrant installation.
2. Fire flow GPM inspections and access shall be done prior to flammable construction materials being placed on site.
3. Chapter 22 of the Oregon Fire Code for Combustible Dust Producing operation.
4. Mobile Emergency Radio Communications plan for 50 K square feet and above. (MERCC) application shall be submitted with plans review.
5. Building Address numbers shall be @ 24-inch in size, and contrasting with numbers on corners of the building.
6. Alarm Panel enunciator shall be placed at the front entry of the building or near the Fire Riser door depending on building configuration.
7. Knox Box shall be placed at front entry or riser room doors. Area shall be determined during construction. Locate at https://www.knoxbox.com/.
8. Hydrant at the entry or entries and locations of the other hydrants shall be placed outside the collapse area of the structure when possible. Hydrants shall be placed at 300 feet center to center. Blue ground reflector for all hydrants for the project as soon as they are put in service. (Replaced if second lift of road surface is done later )
9. The structure shall be fully fire sprinklered including overhangs. Dust collection system duct work shall be protected with fire sprinkler heads to ensure suppression per Oregon Fire Code Chapter 22.
10. Fire department connection (FDC) within 50 feet of a hydrant dedicated to the FDC, with address number on the FDC pipe, FDC pipe painted red, BRASSB male plug for caps instead of plastic or pot metal caps for better security for the FDC head. FDC sign measured 12 x 18, shall also on the pipe.

11. Landscaping should be low growing vegetation to not block visibility of the Hydrant, FDC, or addressing.
12. The developer shall provide a PDF of approved prints for our Pre-Fire Plan program.
13. Fire sprinkler riser room door will be labeled with 8 inch label: “Fire Sprinkler Riser Room “Alarm Panel”.
14. Fire Lanes shall be painted red on curb with – “No Parking Fire Lane” in white - and signage at 40 feet apart.
15. Fire Extinguishers will have 3-d signage mounted for easy visibility.
16. C of O will be signed off by Canby Fire after a complete walk through and review for compliance.

Matt English, Division Chief/Paramedic
Canby Fire District
503.878.0187

Initial pre-application meeting -
Pacific Furniture Industries – 8.14.2019
10:30 at City Shops

# EXHIBIT I

## CITY OF CANBY –COMMENT FORM

If you are unable to attend the Public Hearings, you may submit written comments on this form or in a letter. Please send comments to the City of Canby Development Services:

**By mail:** Canby Development Services, PO Box 930, Canby, OR 97013
**In person:** Canby Development Services at 222 NE Second Street, Canby, OR 97013
**E-mail:** PublicComments@canbyoregon.gov

Written comments to be included in Planning Commission packet are due by Wednesday, January 15, 2020
Written and oral comments may be submitted up to the time of the Public Hearing, and may also be delivered in person during the Public Hearing.

***Application: DR 19-03 Site and Design Review, Stanton Company – Pacific Furniture***

**COMMENTS:**
A GREAT BUS FOR OUR INDUSTRIAL PARK, A CLEAN/ LOW IMPACK BUS FOR THIS AREA. CREATE ANOTHER GOOD TAX BASE BUSINESS CREATING MANY JOBS FOR THIS CANBY AREA. CANBY NEEDS TO THINK ABOUT BUYING LAND NOW FOR FUTURE SCHOOL EXPANSION WHILE FLAT LAND IS AVAILABLE KEEPING BUILDING COST DOWN. I BELIEVE AFTER THIS AREA IS COMPLETED, CANBY HAS DEVELOPED ENOUGH INDUSTRIAL LAND TO SUPPORT THIS TOWN. I OWN LAND ON BREMER RD AND WOULD LIKE TO SEE THIS AREA GO RESIDENTIAL AND MULINO ROAD BE THE DIVIDING LINE BETWEEN THE TWO THANK YOU

NAME: OLIVER KORSNESS
EMAIL: grandpa7gk@icloud.com
ORGANIZATION/BUSINESS/AGENCY:
ADDRESS: 747 N ASH ST, CANBY, OR
PHONE # (optional): 503-266-2387
DATE: 1/11/2020

**PLEASE EMAIL COMMENTS TO**
**PublicComments@canbyoregon.gov**

***Thank You!***

***AGENCIES: Please check one box and fill in your Name/Agency/Date below:***

☐ Adequate Public Services (of your agency) are available

☐ Adequate Public Services will become available through the development

☐ Conditions are needed, as indicated

☐ Adequate public services are not available and will not become available

☐ No Comments

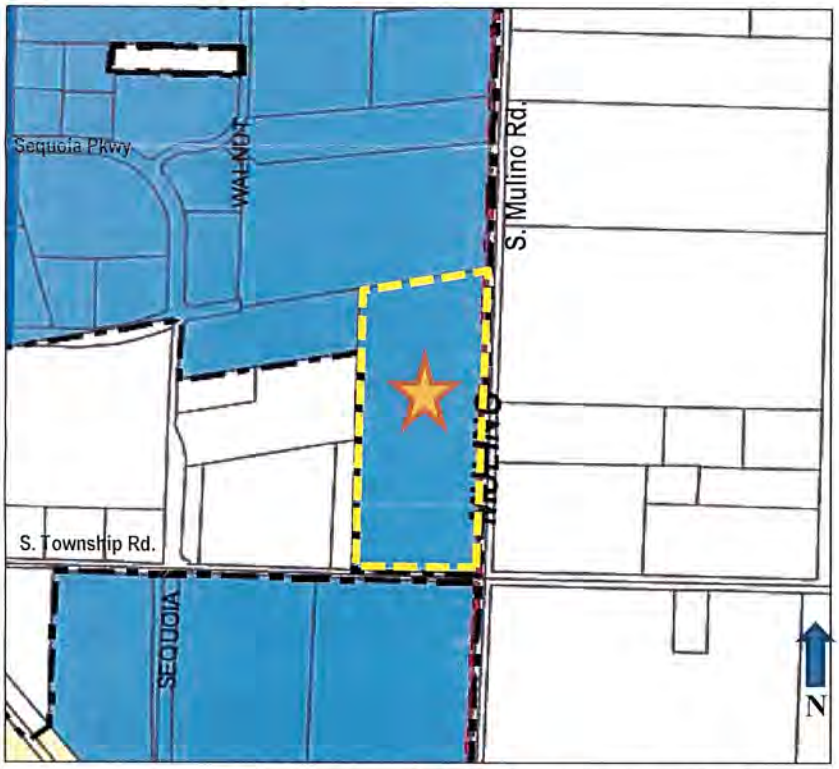
**NAME:** OLIVER KORSNESS
**AGENCY:**
**DATE:**

CITY OF CANBY RECEIVED JAN 16 2020 DEVELOPMENT SERVICES

# City of Canby

**PUBLIC HEARING NOTICE &**
**REQUEST FOR COMMENTS FORM**
City File No.: **DR 19-03**
Project Name: **Stanton Furniture**
**PUBLIC HEARING DATE: January 27, 2020**

The purpose of this notice is to invite you to a Planning Commission Public Hearing on **Monday, January 27, 2020 at 7:00 pm, City Council Chambers, 222 NE 2nd Avenue** to consider a Site and Design Review Application (City File #DR 19-03, Stanton Company – Pacific Furniture). The applicant is seeking approval to construct a 167,000 square foot manufacturing and distribution facility which includes 5,000 square feet of office space; associated employee parking, loading dock and yard area, as well as required landscaping, and all other associated development features for said project. The proposed facility is intended to allow Stanton Company – Pacific Furniture to relocate the entirety of its operations to the subject property.




**Location:** 23849 S Mulino Road
**Tax Lots:** 31E34 03100
**Property Size:** 15.84 acres
**Comprehensive Plan:** LI – Light Industrial
**Current Zoning:** M-1 – Light Industrial; I-O – Canby Industrial Area Overlay Zone
**Owner:** Parsons Family Trust
**Applicant:** VLMK Engineering + Design
**Application Type:** Site and Design Review (Type III)
**City File Number:** DR 19-03
**Contact:** Sandy Freund, AICP, Senior Planner, freunds@canbyoregon.gov, 503-266-0775

**Comments due** – If you would like your comments to be incorporated into the City's Staff Report, please return the Comment Form by Wednesday, January 15, 2020. Written and oral comments can also be submitted up to the time of the Public Hearing and may also be delivered in person during the Public Hearing.

**What is the Decision Process?** The Planning Commission will make a decision after the Public Hearing. The Planning Commission's decision may be appealed to the City Council.

**Where can I send my comments?** Written and oral comments can be submitted up to the time of the Public Hearing and may also be delivered in person during the Public Hearing. Prior to the Public Hearing comments may be mailed to the Canby Development Services, PO Box 930, Canby, OR 97013; delivered in person to 222 NE 2nd Ave; or emailed to PublicComments@canbyoregon.gov.

**How can I review the documents and staff report?** Weekdays from 8 AM to 5 PM at the Canby Development Services office. The staff report will be available for inspection starting Friday, January 17, 2020, and can be viewed on the City's website: at www.canbyoregon.gov. Copies are available at $0.25 per page or can be emailed to you upon request.

**Applicable Canby Municipal Code Chapters:**

- 16.08 General Provisions
- 16.10 Off-street Parking and Loading
- 16.32 M-1 Light Industrial Zone
- 16.35 I-O Canby Industrial Overlay Zone
- 16.43 Outdoor Lighting Standards
- 16.46 Access Limitations on Project Density
- 16.49 Site and Design Review
- 16.86 Street Alignments
- 16.89 Application & Review Procedures

***Please Note:*** ***Failure of an issue to be raised in a hearing, in person or by letter, or failure to provide statements or evidence sufficient to afford the decision maker an opportunity to respond to the issue precludes appeal to the board based on that issue.***

# CITY OF CANBY –COMMENT FORM

If you are unable to attend the Public Hearings, you may submit written comments on this form or in a letter. Please send comments to the City of Canby Development Services:

| | |
|---|---|
| **By mail:** | Canby Development Services, PO Box 930, Canby, OR 97013 |
| **In person:** | Canby Development Services at 222 NE Second Street, Canby, OR 97013 |
| **E-mail:** | PublicComments@canbyoregon.gov |

Written comments to be included in Planning Commission packet are due by Wednesday, January 15, 2020
Written and oral comments may be submitted up to the time of the Public Hearing, and may also be delivered in person during the Public Hearing.

***Application: DR 19-03 Site and Design Review, Stanton Company – Pacific Furniture***

**COMMENTS:** See attached letter

NAME: Scott + Susy Gustafson
EMAIL: scott@gustafsonins.com
ORGANIZATION/BUSINESS/AGENCY: Neighbor
ADDRESS: 23885 S Mount Rd. Canby, Or.
PHONE # (optional):
DATE: 1/13/2020

**PLEASE EMAIL COMMENTS TO**
**PublicComments@canbyoregon.gov**

***Thank You!***

***AGENCIES: Please check one box and fill in your Name/Agency/Date below:***

☐ Adequate Public Services (of your agency) are available

☐ Adequate Public Services will become available through the development

☐ Conditions are needed, as indicated

☐ Adequate public services are not available and will not become available

☐ No Comments

**NAME:**
**AGENCY:**
**DATE:**

Stanton Development, Neighbor input. 01/13/2020

Scott & Susy Gustafson
23885 S Blount Rd
Canby, OR 97013
scott@gustafsonins.com

Comments:

There are 6 residential properties located within 1500 feet of this development on the East side.

Suggestion:
Design a building to attenuate Manufacturing, Automobile and Employee noise and activity whose design captures them onsite or points those activities toward the Industrial Park and not toward the County and your residential neighbor properties to the East.

To Accomplish this:

1. Design the building with loading docks on West side of building to keep Automobile noise (back up beepers etc.) and loading activities facing into the Industrial Park and not into the County and your neighbors to the East.
2. Design property perimeter with an elevated dirt Berm e.g. Canby Disposal development.
3. Use Vegetation and Hard Surface Fencing to keep sound and light on premises.
4. Use exterior lighting sources that cast light down and not out horizontally.
5. Paint the building a darker earth tone shade which will essentially help it blend into the background of trees.

Thank you, Scott Gustafson

# BEFORE THE PLANNING COMMISSION
# OF THE CITY OF CANBY

| | | |
|---|---|---|
| **A REQUEST FOR SITE AND DESIGN REVIEW FOR A FURNITURE MANUFACTURING FACILITY AT 23849 S. MULINO ROAD** | ) ) ) ) | **FINDINGS, CONCLUSION & FINAL ORDER DR 19-03 STANTON FURNITURE** |

## NATURE OF THE APPLICATION

The Applicant has sought approval for Site and Design Review (**DR 19-03**) to construct a ±174,077 square foot manufacturing facility which includes ±160,885 square feet of warehouse, ±6,596 square feet of office space, and ±6,596 square feet of second floor storage area; associated employee parking, loading docks and yard area, as well as required landscaping, and all other associated development features for said project. The facility is anticipated to employee approximately 300 persons. The facility would be constructed on a ±15.84-acre.

The project site is located at 23849 S. Mulino Road and is described as Tax Map/Lot 31E34 03100, Clackamas County, Oregon. The property is zoned M-1, Light Industrial, under the Canby Municipal Code (CMC) and is also within the Canby Industrial Area (I-O) Overlay Zone.

## HEARINGS

The Planning Commission considered application **DR 19-03** after the duly noticed hearing on January 27, 2020 during which the Planning Commission approved **Stanton Furniture (City File DR 19-03)** by a vote of __/__. These Findings are entered to document the approval.

## CRITERIA AND STANDARDS

In judging whether or not the aforementioned application shall be approved, the Planning Commission determines whether criteria from the City of Canby Land Development and Planning Ordinance are met, or can be met by observance of conditions. Applicable code criteria and standards were reviewed in the Staff Report dated January 17, 2020 and presented at the January 27, 2020 meeting of the Canby Planning Commission.

## FINDINGS AND REASONS

The Staff Report was presented, and written and oral testimony was received at the public hearing. Staff recommended approval of the Site and Design Review application and applied Conditions of Approval in order to ensure that the proposed project will meet all required City of Canby Land Development and Planning Ordinance approval criteria.

## CONCLUSION

In summary, the Planning Commission adopted the findings contained in the Staff Report, concluding at the public hearing and noted herein, that the application met all applicable approval criteria, and recommending that **Stanton Furniture (City File DR 19-03)** be approved with the Conditions of Approval reflected in the written Order below.

## ORDER

The Planning Commission concludes that, with the following conditions, the application meets the requirements for Site and Design Review approval. Therefore, IT IS ORDERED BY THE PLANNING COMMISSION of the City of Canby that **Stanton Furniture (City File DR 19-03)** is approved, subject to the following conditions:

## CONDITIONS OF APPROVAL

### A. General Conditions:

1. The applicant shall ensure the pre-construction plans are consistent with the submitted plans or as approved by the decision-making authority. (Canby Planning – SF, shall determine compliance with this condition)
2. The applicant shall obtain a demolition permit from Clackamas County, (as well as Canby Planning) prior to demolition of on-site existing structures if applicable. (Canby Planning – SF, shall determine compliance with this condition)
3. The applicant shall obtain a grading permit from Clackamas County prior to any on-site disturbance. (Clackamas County Building Codes Division, shall determine compliance with this condition)
4. The applicant shall obtain the necessary Erosion Control permit(s) from the City of Canby. (Canby Planning-SF, and Public Works-JN, shall determine compliance with this condition.
5. The applicant shall provide, and have approved, a truck haul route, with flaggers as necessary, for all construction activity at said development site. The haul route shall be approved at the time of the pre-construction meeting by the Public Works Department. (Public Works – JN, shall determine compliance with this condition)

### B. Public Improvements:

6. Prior to the start of any public improvements work, the applicant shall schedule a pre-construction conference with the City of Canby and obtain construction plans approval and signatures from all applicable reviewing agencies. (Canby Planning – SF, shall determine compliance with this condition)
7. All public improvements shall comply with all applicable City of Canby Public Works Design Standards. (Public Works-JN, shall determine compliance with this condition)
8. All identified street improvements and right-of-way dedications must be designed and constructed (or bonded) to the satisfaction of the City Engineer. (City Engineer-HI & Public Works-JN, shall determine compliance with this condition)

**9.** All site development shall comply with applicable City of Canby Public Works Design Standards. (City Engineer-HI & Public Works-JN, shall determine compliance with this condition)

**SE 4th Avenue:**

**10.** Required half-street improvements to SE 4th Avenue along the project frontage shall be constructed to Collector street standards, per the Industrial Area Roadway Standard Cross-Section, Figure 7-7, the TSP, and Chapter 2, Section 2.207, of the Public Works Design Standards. (City Engineer-HI, shall determine compliance with this condition)

**11.** The applicant or developer shall be required to dedicate 37-feet of right-of-way with an ultimate right-of-way width of 74 feet. The centerline shall be located at the common property line with the adjoining properties. Half-street improvements will be required to be constructed along the entire site frontage to S. Mulino road where the curb and gutter is placed at 25-feet from the right-of-way centerline, with the appropriate 10:1 asphalt taper, 5-foot planter strip and 6-foot wide concrete sidewalk. Street lights and street trees shall be provided per City requirements. A 12-wide PUE shall be required. (City Engineer-HI, shall determine compliance with this condition)

**12.** All sanitary sewer and waterlines shall be designed and constructed along the entire site frontage based on the existing depth and alignment at the terminus of SE 4th Avenue. These utilities shall take into consideration the section of roadway between the westerly property line of the subject site and the utilities in existing street section connecting to Sequoia Parkway. (City Engineer-HI, shall determine compliance with this condition)

**13.** The curb return radii at the intersection with S. Mulino Road and driveway wings or radii shall be large enough to allow for AASHTO WB-67 vehicle turning movements. The property line shall be concentric with this return. The applicant's engineer shall submit to the City truck turning movement templates illustrating that the turning movement requirements are met. (City Engineer-HI, shall determine compliance with this condition)

**14.** All project driveways shall have an industrial driveway approach consisting of 8-inch minimum concrete thickness with reinforcements or mesh welded wire fabric. (City Engineer-HI, shall determine compliance with this condition)

**15.** The minimum access spacing between driveways along SE 4th Avenue or S. Mulino Road shall be 200 feet. (City Engineer-HI, shall determine compliance with this condition)

**16.** All access onto SE 4th Avenue shall be restricted to emergency access only until such time that full-width roadway improvements fronting the project site have been constructed. If usage occurs prior to completed road improvements, a barricade may be placed by either the City or County in order to prevent travel onto the roadway. (City Engineer-HI and/or Public Works-JN in cooperation with County Transportation-JG, shall determine compliance with this condition)

**S. Mulino Road:** (County owned right-of-way)

Although this road is owned and maintained by Clackamas County, the majority of road improvements shall be constructed and designed to City of Canby Public Works Design Standards, as agreed upon by Clackamas County Transportation Engineer and City of Canby, unless noted otherwise herein:

**17.** The applicant shall coordinate with County Transportation Engineer and City of Canby Engineer regarding the design, construction and striping applicability of a 12-foot left turn lane at S. Township Road, pursuant to *Clackamas County Roadway Standards.* (Clackamas County Transportation – JG, shall determine compliance with this condition)

**18.** The applicant shall install dual ADA curb ramps at the corners of SE 4th Avenue and S. Township Road. (Clackamas County Transportation – JG, in cooperation with City Engineer-HI, shall determine compliance with this condition)

**19.** The inbound asphalt taper of S. Mulino Road shall be provided per Roadway Standards, Section 250.6.4 of *Clackamas County Roadway Standards.* (Clackamas County Transportation – JG, shall determine compliance with this condition)

**20.** Half-street improvements shall be required along the entire site frontage where the curb and gutter are placed at 25-feet from the right-of-way centerline with the appropriate 10:1 asphalt taper, 5-foot planter strip and 6-foot concrete sidewalk. Street lights and street trees shall be provided per City requirements. A 12-foot wide PUE shall be provided. Six-foot bicycle lane placement to be determined by the City Engineer pursuant to the TSP. (City Engineer-HI, shall determine compliance with this condition)

**21.** Prior to occupancy, a demonstration of sight distance shall be verified, documented and stamped by a registered professional civil or traffic engineer, licensed in the State of Oregon. The minimum sight distance in each direction on S. Mulino Road and SE 4th Avenue shall be 335 feet based on 30-mph posted speed limit and 280 feet based on assumed posted speed of 25-mph. (City Engineer-HI, shall determine compliance with this condition)

**22.** The applicant/developer shall construct SE 4th Avenue and S. Mulino Road intersection that will accommodate the curb return radii and allow for AASHTO WB-67 vehicle turning movements. The right-of-way dedication shall be concentric with this curb return alignment. The applicant's engineer shall submit to the City truck turning movement templates illustrating that the turning movement requirements are met. (City Engineer-HI, shall determine compliance with this condition)

**23.** Street lighting shall be provided along the entire site (developed portion) frontage with S. Mulino Road. (City Engineer-HI, shall determine compliance with this condition, in coordination with Canby Utility as applicable)

**24.** The applicant shall design and construct stormwater drainage facilities in conformance with City of Canby Standards and *Clackamas County Roadway Standards* Chapter 4 for S. Mulino Road, and S. Township Road when that portion of the project site is developed. Where there is no outfall for the storm system, detention and infiltration shall accommodate a 25-year storm, with a safe overflow path for the 100-year storm. The applicant and the City shall enter into a maintenance agreement for water quality

facilities located within the public right-of-way. Said agreement shall include a Maintenance of Operation Plan, as approved by DTD Engineering and the City of Canby. (Clackamas County Transportation – JG, in cooperation with City Engineer-HI/Public Works - JN, shall determine compliance with this condition)

**25.** Prior to placement of road striping the applicant shall submit a striping plan for S. Mulino Road to Clackamas County Traffic Engineering for approval of layout and materials. (Clackamas County Transportation – JG)

**26.** Prior to placement of utility installation in County right-of-way, the applicant shall obtain Utility Placement Permits for any utility work required within the right-of-way of S. Mulino Road. (Clackamas County Transportation – JG)

**27.** Prior to Certificate of Occupancy, the applicant shall verify the public right-of-way width and location along the entire site frontage of S. Mulino Road. The right-of-way and width shall be verified by a professional surveyor to the satisfaction of DTD Engineering, City of Canby and County Surveyor. The applicant shall dedicate adequate right-of-way for S. Mulino Road to accommodate required improvements. (Clackamas County Transportation – JG, in cooperation with City Engineer-HI, and County Surveyor, shall determine compliance with this condition)

**28.** Prior to Certificate of Occupancy the applicant shall submit an Engineer's cost estimate to be approved by Clackamas County Engineering for the asphalt concrete, aggregates, and any other required public improvement in S. Mulino Road right-of-way. (Clackamas County Transportation – JG, in cooperation with City Engineer-HI, shall determine compliance with this condition)

**29.** Prior to Final Inspection the applicant shall provide and maintain minimum intersection sight distances at SE 4$^{th}$ Avenue intersection with S. Mulino Road, and S. Mulino Road with S. Township Road. Intersection sight distances shall restrict plantings at maturity, retaining wall, embankments, trees, fences or any other objects that obstruct vehicular site distance. Minimum required intersection sight distance of 610 feet to the north and south along S. Mulino Road from SE 4$^{th}$ Avenue, and 610 feet to the west and 500 feet to the east along S. Township Road from S. Mulino Road. (Clackamas County Transportation – JG, in cooperation with City Engineer-HI, shall determine compliance with this condition)

**30.** Prior to Final Inspection the applicant shall submit as-built plans for all improvements showing all construction changes, added and deleted items, location of utilities, etc. A professional engineer, registered in the state of Oregon, shall stamp and sign as-built plans. Any plans for signals, signing and striping require both a paper copy (maximum size of 11"x17") and a .dwg version of the as-builts for the Traffic Engineering Section. (Clackamas County Transportation–JG, in cooperation with City Engineer-HI, shall determine compliance with this condition)

**31.** Prior to Site Improvements the applicant shall provide a Development Permit to the County Engineering Department for review and approval of frontage improvements, erosion control Best Management Practices implemented, sight distances and the driveway improvements. The permit shall be obtained prior to commencement of site work and Certificate of Occupancy. To obtain the permit, the applicant shall submit construction plans prepared and stamped by an engineer registered in the state of Oregon, or plans acceptable to the Engineering Division, provide a performance guarantee equal to 125% of the estimated cost of the construction and pay a plan review and inspection fee. The fee with be calculated as a percentage of the

construction costs if it exceeds the minimum permit fee. The minimum fee and the percentage will be determined by the current fee structure at the time of Development Permit application. (Clackamas County Transportation – JG, shall determine compliance with this condition)

**32.** Prior to Site Improvements, the applicant shall submit an approvable construction plan set showing all requirement improvements. All required street, street frontage and related improvements shall comply with the standards and requirements of *Clackamas County Roadway Standards* unless otherwise noted herein. All proposed and required improvements shall be designed, constructed, inspected and approved, or financially guaranteed, pursuant to Clackamas County. (Clackamas County Transportation – JG, shall determine compliance with this condition)

**S. Township Road**

**33.** S. Township Road is classified as a Collector Road in the Canby Transportation System Plan (TSP), and under City jurisdiction, per City Annexation approved in 2019, finalized in 2020. The existing right-of-way is 40 feet. The Industrial Master Plan, dated October 1998, shows this road as a 3-lane collector with continuous turn lane having a street width of 50-feet and required right-of-way width of 75 feet. As part of this development, the applicant / developer shall be required to dedicate 17-feet of right-of-way and a radius to accommodate a minimum 40-foot turning curb radii. (City Engineer-HI, shall determine compliance with this condition, in coordination with Canby Utility as applicable)

**34.** Half-street improvements along the entire site frontage (except for the taper improvements referenced in Condition 32 above) will be deferred until such time that the remainder of the property has been developed, or prior to the recordation of a Partition of land of said undeveloped portion of the project site, whichever occurs first. Future half-street improvements between Sequoia Parkway and S. Mulino Road shall include curb and gutter located at 25-feet from the centerline of the ultimate 74-foot wide right-of-way, 5-foot planter strip, and a 6-foot wide concrete sidewalk; as well as street lights and extended utilities (water, sanitary sewer if gravity allows, and an acceptable means of storm water disposal) and franchise utilities. These improvements shall be constructed in conformance with the TSP and the Industrial Area Master Plan. 6-foot bicycle lane placement to be determined by City Engineer in accordance with the TSP. (City Engineer-HI, shall determine compliance with this condition, in coordination with Canby Utility as applicable)

**35.** The minimum access spacing between driveways along SE 4$^{th}$ Avenue or S. Mulino Road shall be 200 feet. (City Engineer-HI, shall determine compliance with this condition)

**36.** All project driveways shall have an industrial driveway approach consisting of 8-inch minimum concrete thickness with reinforcements or mesh welded wire fabric. (City Engineer-HI, shall determine compliance with this condition)

**37.** The applicant shall pay the city of Canby Master Fee authorized engineering plan review fee equal to 2% of public improvement costs prior to the construction of public improvements (approval of construction plans) as each phase of development occurs. (Canby Planning – SF, shall determine compliance with this condition)

**Sewer and Storm Drainage:**

**38.** All private storm drainage discharge shall be disposed on-site. Design methodology shall be in conformance with the City of Canby Public Works Design Standards revised in December 2019. (City Engineer-HI and Public Works-JN, shall determine compliance with this condition)

**39.** A final storm drainage analysis shall be submitted with the Final Design set. The applicant's/developer's engineer shall be required to demonstrate how the stormwater runoff generated from the new impervious surfaces will be disposed of. If drywells (UIC) are used as a means to discharge storm runoff from the private streets, they must meet the following criteria: The UIC structures location shall meet at least one of the two following conditions: (1) the vertical separation distance between the UIC and seasonal high groundwater is more than 2.5 feet or (2) the horizontal separation distance between the UIC and any water well is a minimum of 267 feet in accordance of the City of Canby Stormwater Master Plan, Appendix "C" Groundwater Protectiveness Demonstration and Risk Prioritization for Underground Injection Control (UIC) Devices. The storm drainage report shall be in conformance with the requirements as state in Chapter 4 of the City of Canby Public Works Design Standards as revised December 2019. (City Engineer-HI and Public Works-JN, shall determine compliance with this condition)

**40.** The applicant will be required to submit an updated Storm Drainage Report that provides detailed analysis as part of the storm report. Capacity analysis shall be required in order to verify that additional runoff will not impede or impound the existing system. The proposed drywell (UIC) must meet the following criteria" The UIC structures location shall meet at least one of the two following conditions: (1) the vertical separation distance between the UIC and seasonal high groundwater is more than 2.5 feet, or (2) the horizontal separation distance between the UIC and any water well is a minimum of 267 feet in accordance with the City of Canby Stormwater Master Plan, Appendix "C", Groundwater Protectiveness Demonstration and Risk Prioritization for Underground Injection Control (UIC) Devices. The storm drainage report shall be in conformance with the requirements as stated in Chapter 4 of the City of Canby Public Works Design Standards, dated June 2012. Additionally, the drywells must connect via a conveyance system as required by the City of Canby Public Works Department. (City Engineer – HI/Public Works JN)

**41.** The applicant shall abandon any existing domestic or irrigation wells on site, as applicable. Abandonment of said wells shall be in compliance with OAR 690-220-0030. A copy of Oregon Water Rights Department (OWRD) Abandonment Certificate shall be submitted to the City. (City Engineer-HI, shall determine compliance with this condition)

**42.** The applicant shall abandon any existing sewage disposal systems found on site, as applicable. Abandonment of said disposal systems shall be in compliance with DEQ and Clackamas County Water Environmental Services (WES) regulations. A copy of Septic Tank Removal Certificate shall be submitted to the City. (City Engineer-HI, shall determine compliance with this condition)

**43.** The applicant shall coordinate with Canby Utility and Canby Public Works Department in order to provide the appropriate connections to all required utilities, as well as demonstrate final utility easement placement. Final design shall be provided on the Civil Construction Plans set, and approved prior to or at the pre-construction meeting. (City Engineer – HI/Public Works – JN, and Canby Utility, shall determine compliance with this condition)

**44.** All “as-builts” of City public improvements installed shall be filed with Canby Public Works within sixty (60) days of completion of the improvements. (City Engineer – HI/Public Works – JN shall determine compliance with this condition)

**Utilities / Fire Protection**

**45.** The applicant shall work with Canby Utility and Canby Public Works Department in order to provide the appropriate connections to all required utilities as well as demonstrate final utility easement placement in design and City approval of the civil construction plans. (Public Works – JN, and Canby Utility, shall determine compliance with this condition)

**46.** Prior to the pre-construction meeting and issuance of grading permits, the applicant shall comply with all applicable Canby Fire District (CFD) requirements as identified in the memo received from CFD and attached herein. Please contact the CFD Division Chief at 503-266-5851 for further information.

**47.** All fire protection apparatus’s such as fire hydrants, etc., shall be placed in accordance with the requirements of the CFD codes and regulation. The most current Oregon Fire Code shall be referenced. (Canby Fire District – ME, shall determine compliance with this condition)

**48.** The developer shall comply with all conditions of approval, and all following items shall be addressed and referenced to the Authority having jurisdiction for compliance with all fire related questions.

**49.** Construction of the facility shall incorporate CFD requirements into their construction schedule for on-going inspections. (Canby Fire District – ME, shall determine compliance with this condition)

**50.** The applicant/developer shall reference Chapter 33 of the most current Oregon Fire Code for construction needs to be reviewed prior to fire hydrant installation. (Canby Fire District – ME, shall determine compliance with this condition)

**51.** Fire flow GPM inspections and access shall be done prior to flammable construction materials being place on site. (Canby Fire District – ME, shall determine compliance with this condition)

**52.** The applicant/developer shall reference Chapter 22 of the Oregon Fire Code for Combustible Dust Producing operation. (Canby Fire District – ME, shall determine compliance with this condition)

**53.** A Mobile Emergency Radio Communication (MERC) plan for 50k square feet and above, shall be submitted for review and approval. (Canby Fire District – ME, shall determine compliance with this condition)

**54.** All Building address numbers shall be @24-inch in size, and contrasting with numbers on corners of the building. (Canby Fire District – ME, shall determine compliance with this condition)

**55.** Alarm panel enunciator shall be placed at the front entry of the building or near the Fire Riser door depending on building configuration. (Canby Fire District – ME, shall determine compliance with this condition)

**56.** Knox Box shall be placed at front entry or riser room doors. Area shall be determined during construction. Locate at https://www.knoxbox.com/. (Canby Fire District – ME, shall determine compliance with this condition)

**57.** Hydrant at the entry, or entries and locations of the other hydrants shall be placed outside the collapse area of the structure when possible. Hydrants shall be placed at 300 feet center-to-center. Blue ground reflector for all hydrants for the project as soon as they are put in service. (Replaced if second lift of road surface is done later) (Canby Fire District – ME, shall determine compliance with this condition)

**58.** The structure shall be fully fire sprinklered including overhangs. Dust collection system duct work shall be protected with fire sprinkler heads to ensure suppression per Oregon Fire Code Chapter 22. (Canby Fire District – ME, shall determine compliance with this condition)

**59.** Fire department connection (FDC) within 50 feet of a hydrant dedicated to the FDC, with address number on the FDC pipe, FDC pipe painted red, BRASSB male plug for caps instead of plastic or pot metal caps for better security for the FDC head. FDC sign measured 12 x 18, shall also on the pipe. (Canby Fire District – ME, shall determine compliance with this condition)

**60.** Landscaping should be low growing vegetation to not block visibility of the Hydrant, FDC, or addressing. (Canby Fire District – ME, shall determine compliance with this condition)

**61.** The developer shall provide a PDF of approved prints for our Pre-Fire Plan program. (Canby Fire District – ME, shall determine compliance with this condition)

**62.** Fire sprinkler riser room door will be labeled with 8 inch label: “Fire Sprinkler Riser Room “Alarm Panel”. (Canby Fire District – ME, shall determine compliance with this condition)

**63.** Fire Lanes shall be painted red on curb with – “No Parking Fire Lane” in white - and signage. (Canby Fire District – ME, shall determine compliance with this condition)

**64.** Fire Extinguishers will have 3-D signage mounted for easy visibility. (Canby Fire District – ME, shall determine compliance with this condition)

**65.** Certificate of Occupancy will be signed off by CFD after a complete walk through and review for compliance with all Fire Code regulations. (Canby Fire District – ME, shall determine compliance with this condition)

**Project Design/ Site Plan Approval:**

**66.** The applicant shall provide a final photometrics plan, with elevations of all light poles, bollards, and wall fixtures at the time of building permit or pre-construction meeting, whichever occurs first. Outdoor lighting shall not produce light overspill glare and/or trespass onto surrounding properties. Said plan(s) shall be consistent with Chapter 16.43, *Outdoor Lighting Standards*, of the Municipal Code. Special consideration shall be given to the minimization of light and glare impacts to existing residential and agricultural land uses. (Canby Planning – SF, shall determine compliance with this condition in coordination with Canby Utility)

**67.** Consistent with Subsection 16.10.100, *Bicycle Parking*, of the Municipal Code, the majority of the proposed bicycle parking shall be located to within 50 feet of the main entrance of the building. Other bicycle parking locations can be adjacent to the north side of the building. Prior to site plan approval, the project applicant shall submit a final site plan demonstrating that the location and design of proposed bicycle parking conforming to the aforementioned code section. (Canby Planning – SF, shall determine compliance with this condition)

**Building Permits:**

**68.** The project applicant shall secure a Street Opening and/or Driveway Construction permit for all paved driveway or utility installations associated with the proposed development or offsite improvements. Said permits shall comply with the City's Public Works Design Standards. (Public Works – JN, shall determine compliance with this condition)

**69.** Prior to occupancy, sight distance at all access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon. (City Engineer – HI, in coordination with Clackamas County Transportation-JG, shall determine compliance with this condition)

**70.** The project applicant shall apply for a City of Canby Site Plan Permit and Erosion Control Permit from Canby Planning Department, and building permits at Clackamas County Building permits. (Canby Planning – SF and Public Works - JN shall determine compliance with this condition)

**71.** Clackamas County Building Codes Division will provide structural, electrical, plumbing, and mechanical plan review and inspection services for construction of the project.

**72.** The applicant shall file a sign permit for any future signs that shall be limited to the size and height standards applicable to the I-O (Canby Industrial Area Overlay Zone) as indicated in Section 16.42.050, Table 7, of the Sign Ordinance. Proposed signs, after having been found to conform to the sign ordinance, must secure a building permit from Clackamas County Building Inspection prior to their installation. (Canby Planning-SF, in coordination with Clackamas County Building Codes Division, shall determine compliance with this condition)

**Prior to Occupancy:**

**73.** Prior to the issuance of a Certificate of Occupancy, all landscaping plant material indicated on the submitted landscape plan shall either be installed and irrigated with a fully automatic designed and installed irrigation system as proposed, or with sufficient financial security (bonding, escrow, etc.) pursuant to the provisions of CMC 16.49.100 (B).

**Street Trees:**

**74.** The applicant should be aware that the City street tree fee is now $250 per tree if planted by the City, and the City recommends submittal of a separate Street Tree Plan to assist in the location, species, and total tree count. (Public Works – JN in cooperation with Canby Planning-SF, shall determine compliance with this condition)

**I CERTIFY THAT THIS ORDER** approving **DR 19-03 STANTON FURNITURE**, was presented to and **APPROVED** by the Planning Commission of the City of Canby.
**DATED** this 27th day of January, 2020.

_____
John Savory
Planning Commission Chair

_____
Bryan Brown
Planning Director

_____
Laney Fouse, Attest
Recording Secretary

**ORAL DECISION: January 27, 2020**

| *Name* | *Aye* | *No* | *Abstain* | *Absent* |
|---|---|---|---|---|
| ***John Savory*** | | | | |
| ***Larry Boatright*** | | | | |
| ***Derrick Mottern*** | | | | |
| ***Jennifer Trundy*** | | | | |
| ***Jeff Mills*** | | | | |
| ***Jason Taylor*** | | | | |
| ***Michael Hutchinson*** | | | | |

**WRITTEN DECISION: January 27, 2020**

| *Name* | *Aye* | *No* | *Abstain* | *Absent* |
|---|---|---|---|---|
| ***John Savory*** | | | | |
| ***Larry Boatright*** | | | | |
| ***Derrick Mottern*** | | | | |
| ***Jennifer Trundy*** | | | | |
| ***Jeff Mills*** | | | | |
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| ***Michael Hutchinson*** | | | | |