



DATE: May 25, 2023

TO: Shane Witham / City of Keizer

FROM: Tegan Enloe, PE / Enloe Consulting, LLC

SUBJECT: Zone Change Request for 1141 Chemawa Rd N – Traffic Analysis

Background

The applicant seeks to partition their property located at 1141 Chemawa Rd N in Keizer. The current tax lot is 4.4 acres in size. The partition would create a new one-acre parcel on the north side of the property. The property would be served via a single access point on Willow Lake Rd N. The applicant intends to position the driveway as the south leg of the existing intersection of Willow Lake Rd N and Bobbie Ct N.

The property is currently zoned as commercial general. The applicant would like for the new one-acre partition to be zoned as medium density residential. This is consistent with adjacent zoning located immediately to the east of the property. The applicant intends to build multi-family housing on the site.

Table 1: Property Details

Characteristics	Information
Existing Conditions	
Property Address	1141 Chemawa Rd N, Keizer
Property Size	4.4 acres
Zoning	CG
Land Use	Sanitation and Recycling Center
Proposed Use	
Zoning	RM
Land Use	Multi-family housing

Zone Change Analysis

The applicant seeks to convert one acre of commercial general (CG) zoning to medium density residential (RM). Commercial general zoning allows for “warehousing, wholesale commercial sales and services with related outdoor storage or retail sales”. A change to medium density residential would allow for multi-family housing. **Table 2** below provides a comparison of possible worst-case scenario developments under both zoning categories. For the purposes of comparison, a maximum lot coverage of 70% is used to estimate usable building SQFT. For multifamily, a density of 25 units per acre is assumed.

Table 2: Trip Generation Estimates

Land Use (Code)	Size	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
Commercial General Zoning				
Building Materials and Lumber Store (812)	30,492 SQFT	520	48	69
Nursery Garden Center (817)		2,077	244	255
Shopping Center (820)		1,129	26	104
Medium Density Residential Zoning				
Multi-family Low-Rise (220)	25 units	169	10	13

Vehicle trip estimates are generated using the Institute of Transportation Engineers Trip Generation Manual, 11th Edition

Multiple uses under the existing commercial general zoning generate more trips than would be allowed under the proposed medium density residential zoning worst-case scenario. This means the zone change could be approved without creating and increase in allowed vehicle trips to the surrounding roadway network.

Pedestrian Access

The City requested consideration as to how a proposed multi-family development would connect pedestrians to the surrounding transportation network. The property in question is located on the south side of Willow Lake Rd N and would have a proposed driveway at the existing intersection of Willow Lake Rd N and Bobbie Ct N. Willow Lake Rd N lacks sidewalk connectivity on the south side of the roadway, but has a complete connection along the north side that would allow pedestrians to access the surrounding sidewalk network on Windsor Island Rd N to reach local destinations.

Sidewalk Extension

The applicant reviewed the option of building a sidewalk connection on the south side of Willow Lake Rd N from the project parcel to Windsor Island Rd N, but determined it was non-viable because of house placement at 1156 Willow Lake Rd N. This property has a covered garage area that extends to the edge of the right-of-way and would require the taking of the building to be able to complete sidewalk along its frontage. The most feasible option for pedestrian connectivity is for pedestrians to cross at the existing intersection of Willow Lake Rd N and Bobbie Ct N to access the north sidewalk.

Existing Crossing Opportunities

The north side of Willow Lake Rd N is fully developed with single family housing between Woodwind Ct N and Windsor Island Rd N. There are intersections located approximately every 230 feet along the corridor. The presence of an intersection creates a legal crossing opportunity for pedestrians, and none of the north/south crossings at these intersections have been marked as closed, which means pedestrians are currently free to use them all as crossing locations for Willow Lake Rd N. The introduction of the driveway at the intersection of Willow Lake Rd N and Bobbie Ct N would not create a new crossing location since one already legally exists.

Existing Traffic Volumes

Traffic counts were collected for the project on April 4th, 2023. A 24-hour tube count was positioned on Willow Lake Rd N between Todd Ct N and Bobbie Ct N to measure speed, volume and vehicle breakdown. AM Peak Hour was measured as 7:30 AM – 8:30 AM with a volume of 120 vehicles/hour. The PM Peak Hour is identified as 5:00 PM to 6:00 PM with a volume of 121 vehicles/hour.

Crossing Needs

Figure 1 is taken from NCHRP 562 and ODOT’s Unsignalized Intersection Pedestrian Crossing Calculator. The counts collected on April 4th show the peak hour vehicle volume on Willow Lake Rd N to be 121 vehicles/hour. The hourly volume would have to significantly increase before treatment beyond a crosswalk would be recommended.

The ITE Trip Generation Manual, 11th Ed, is used to forecast the number of pedestrian trips associated with the proposed development. With 25 units of multi-family, the expected walk/bike/transit trips in the AM and PM Peak hours are one trip per hour. The combination of low pedestrian trips and low vehicles per hour indicates no treatment is recommended as a result of the proposed zone change.

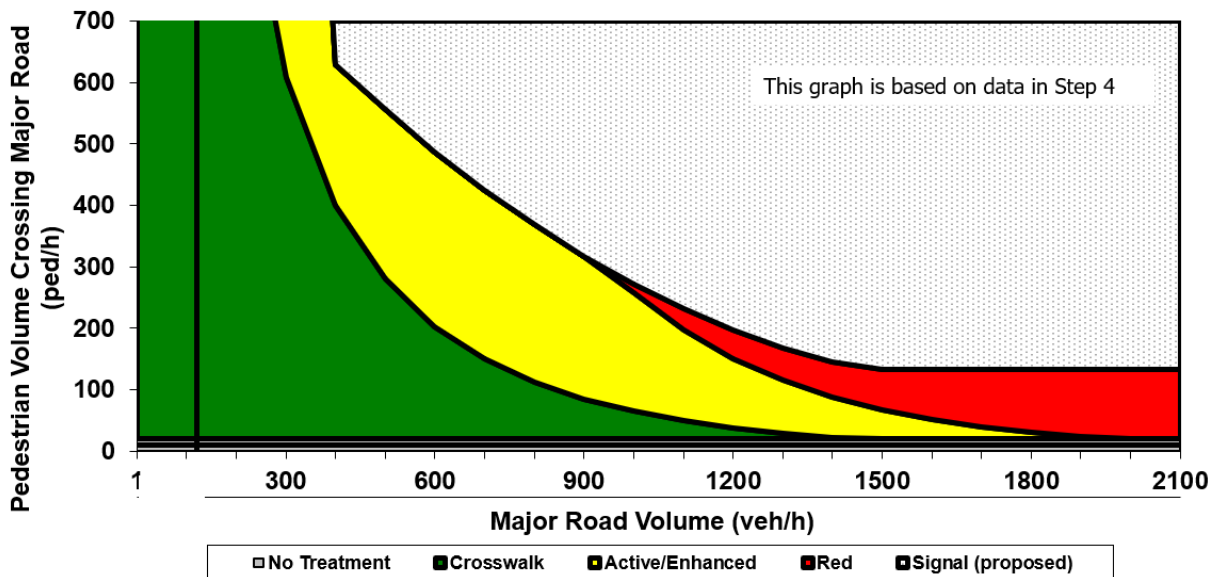


Figure 1: NCHRP 562 Chart

Speed

A speed study was also completed as part of the April 4th data collection. The average speed was recorded at 25 mph with an 85th percentile speed of 30 mph. These values are in line with expectations for a posted 25 mph roadway and do not indicate an issue with speeding.

Vehicle Class Distribution

The April 4th data collection also includes a vehicle classification breakdown. **Table 3** outlines the distribution. The roadway has a higher percentage of heavy vehicles. Quality Concrete and Knife River both have yards located on the western end of Willow Lake Rd N and send their trucks to and from their sites via Willow Lake Rd N.

Table 3: Vehicle Classification Distribution

Vehicle Classification	Distribution
Bicycles	0.1%
Cars & Trailers	59.9%
2 Axle Long	19.6%
Buses	1.4%
2 Axle 6 Tire	10.8%
Misc.	8.2%
Total	100%

Higher percentages of heavy vehicles can increase safety concerns for pedestrian crossings. It will be important to make sure the final design provides adequate site distance for approaching vehicles to see crossing pedestrians, and for pedestrians to safely identify vehicle gaps in which to cross. Willow Lake Rd N is relatively straight near the proposed project site, which should lend itself to a functional design. There are also several existing pedestrian crossings along the stretch of Willow Lake Rd N and a review of the most recent five years of crash data (2017-2021) does not show any crash records involving pedestrians along the corridor.

Crash Data

Crash data records were retrieved for Willow Lake Rd N from 2017 to 2021. Only one crash is recorded during this timeframe. It occurred at the intersection of Willow Lake Rd N and Lacey St N in 2020. The crash involved a parked motor vehicle and is coded as a sideswipe overtaking collision. The crash was an Injury B collision and occurred late morning on a dry and foggy day.

Safe Routes to School

The project site is located within the Keizer Elementary School boundary. The Safe Routes to School (SRTS) program for Keizer Elementary directs students to walk on Winsor Island Rd N and then cross at Koala St N to head to campus. There is a marked, designated school crosswalk at the intersection of Windsor Island Rd N and Koala St N. Students from the proposed multi-family development would use the existing intersection crossing at Willow Lake Rd N and Bobbie Ct N, then travel east on the sidewalk

along the north side of Willow Lake Rd N to connect with Windsor Island Rd N. This would put them on the designated SRTS walk route and able to make their way to the school campus.

Conclusion

Data provided in this memorandum indicates the zone change can be approved without a significant increase in vehicle trips. In addition, there is an existing pedestrian crossing at the intersection of Willow Lake Rd N and Bobbie Ct N that would allow for pedestrians to connect into the sidewalk network to complete their trips.

Attachments:

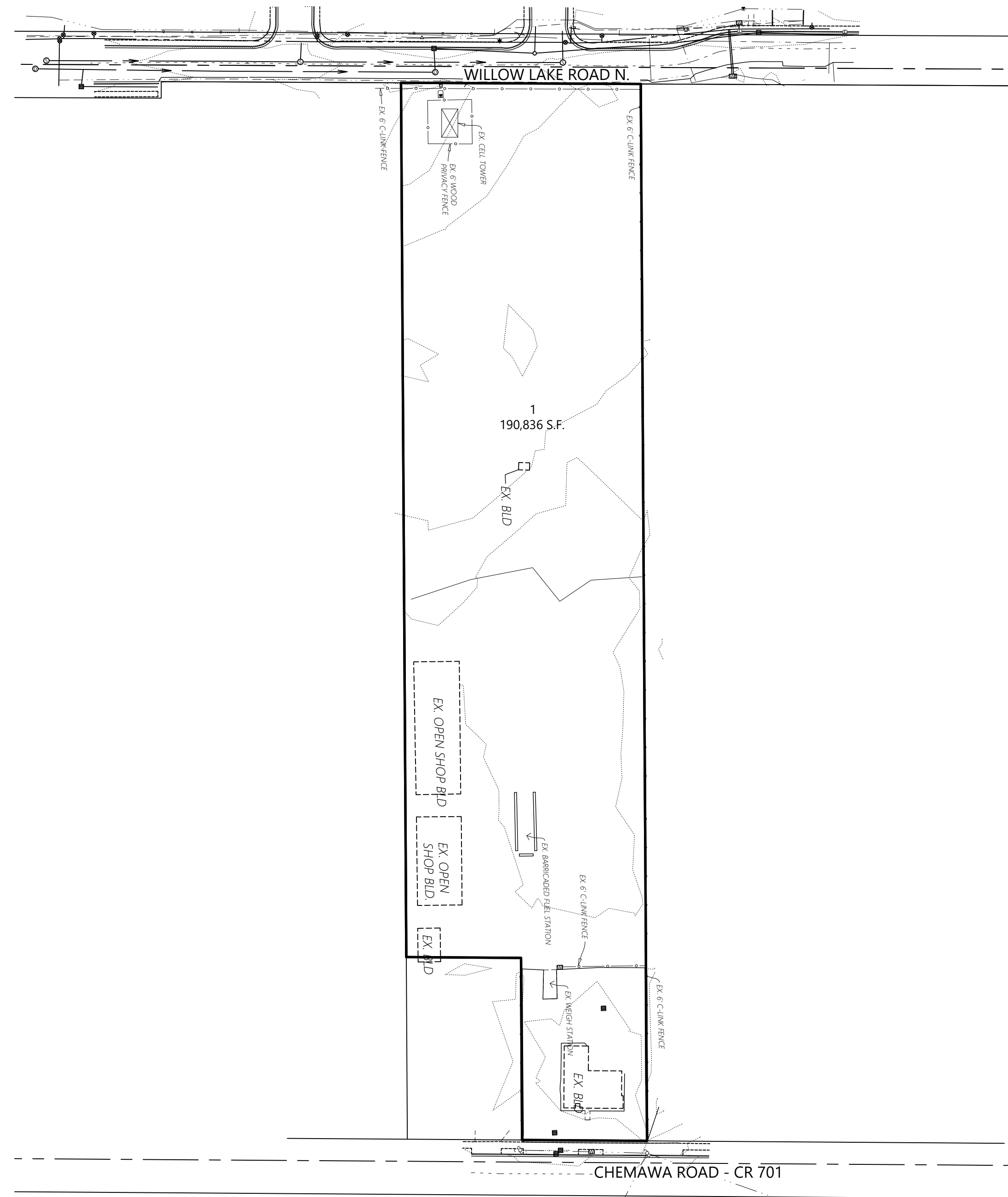
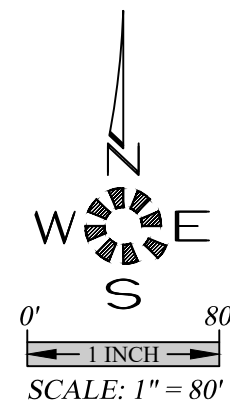
Site Plan
Traffic Counts
Crash Data
School Attendance Boundary Map
SRTS Walk Route Map

CHEMAWA PARTITION

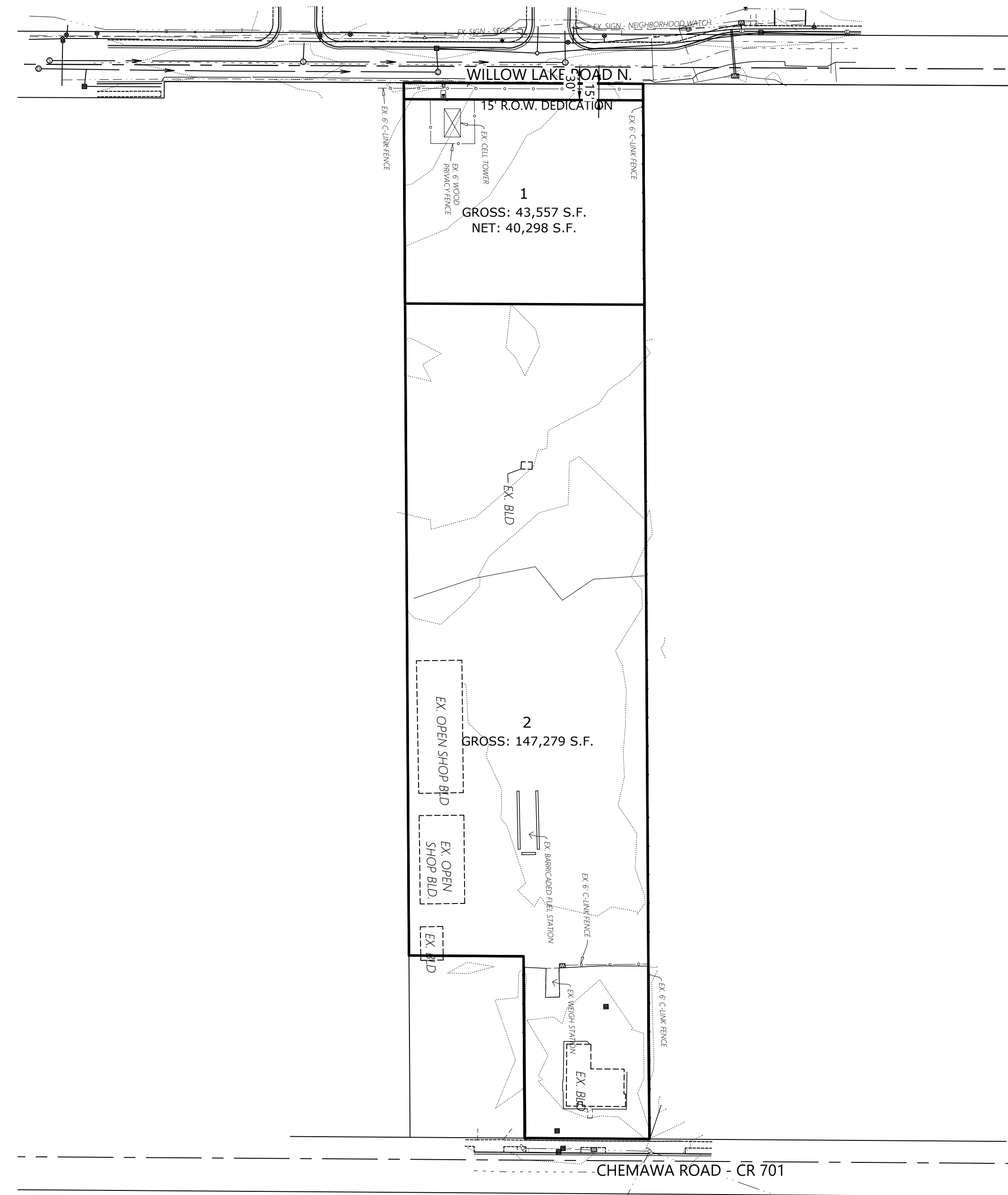
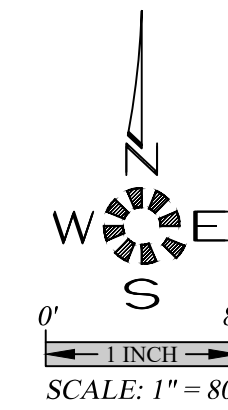
SEC. 3, T. 7 S., R. 3 W., & SEC. 34, T. 6 S., R. 3 W., W.M.
CITY OF KEIZER
MARION COUNTY, OREGON

Owner / Developer:

BACKUS INVESTMENTS LLC
2415 PERKINS STREET
KEIZER, OREGON 97303



EXISTING CONDITIONS



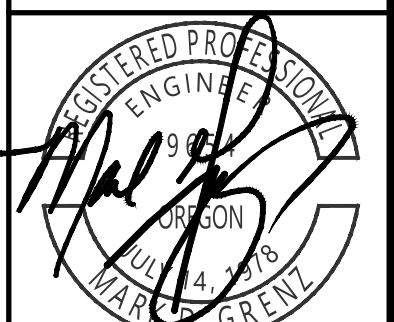
PROPOSED CONDITIONS

COVER SHEET

CHEMAWA PARTITION

NO CHANGES, MODIFICATIONS
OR REPRODUCTIONS TO BE
MADE TO THESE DRAWINGS
WITHOUT WRITTEN
AUTHORIZATION FROM THE
DESIGN ENGINEER.
DIMENSIONS & NOTES TAKE
PRECEDENCE OVER
GRAPHICAL REPRESENTATION.

Design: M.D.G.
Drawn: C.F.G.
Checked: J.G.G.
Date: ---
Scale: AS SHOWN
As-Built: ---



EXPIRES: 06-30-2023

JOB # 7511

1 OF 2

Type of report: Tube Count - Speed Data

LOCATION: Willow Lake Rd N btwn Todd Ct N and Bobbie Ct N
SPECIFIC LOCATION:
CITY/STATE: Keizer, OR

QC JOB #: 16120101
DIRECTION: EB, WB
DATE: Apr 4 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	26-35	2
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
01:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
02:15 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
02:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
02:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	11-20	1
03:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	21-30	1
03:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	26-35	1
03:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
03:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
04:00 AM	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3	26-35	3
04:15 AM	0	0	1	2	0	0	0	0	0	0	0	0	0	0	3	21-30	3
04:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	31-40	1
04:45 AM	0	1	1	1	1	0	0	0	0	0	0	0	0	0	4	16-25	2
05:00 AM	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3	21-30	2
05:15 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3	16-25	3
05:30 AM	0	1	1	3	1	1	1	0	0	0	0	0	0	0	8	23-32	4
05:45 AM	0	0	1	5	4	0	0	0	0	0	0	0	0	0	10	26-35	9
Day Total Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	
<i>Comments:</i>																	

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LOCATION: Willow Lake Rd N btwn Todd Ct N and Bobbie Ct N															QC JOB #: 16120101		
SPECIFIC LOCATION:															DIRECTION: EB, WB		
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Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 AM	0	0	3	7	5	0	0	0	0	0	0	0	0	0	15	26-35	12
06:15 AM	0	2	5	9	5	1	0	0	0	0	0	0	0	0	22	21-30	14
06:30 AM	1	0	6	6	3	2	0	0	0	0	0	0	0	0	18	21-30	12
06:45 AM	0	2	4	6	1	0	0	0	0	0	0	0	0	0	13	21-30	10
07:00 AM	0	0	4	12	1	1	0	0	0	0	0	0	0	0	18	21-30	16
07:15 AM	1	1	4	6	2	0	0	0	0	0	0	0	0	0	14	21-30	10
07:30 AM	2	4	9	9	3	0	0	0	0	0	0	0	0	0	27	21-30	18
07:45 AM	0	2	14	9	6	2	0	0	0	0	0	0	0	0	33	21-30	23
08:00 AM	1	2	7	8	6	2	0	0	0	0	0	0	0	0	26	21-30	15
08:15 AM	1	0	20	10	2	1	0	0	0	0	0	0	0	0	34	21-30	30
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09:00 AM	0	1	3	9	1	0	0	0	0	0	0	0	0	0	14	21-30	12
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09:30 AM	0	0	7	3	1	0	0	0	0	0	0	0	0	0	11	21-30	10
09:45 AM	0	0	12	4	0	1	0	0	0	0	0	0	0	0	17	21-30	16
10:00 AM	1	5	4	2	2	1	0	0	0	0	0	0	0	0	15	16-25	9
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10:30 AM	0	2	6	9	5	0	0	0	0	0	0	0	0	0	22	21-30	15
10:45 AM	0	0	7	8	6	0	0	0	0	0	0	0	0	0	21	21-30	15
11:00 AM	0	1	8	7	0	0	0	0	0	0	0	0	0	0	16	21-30	15
11:15 AM	0	1	2	9	6	0	0	0	0	0	0	0	0	0	18	26-35	15
11:30 AM	0	2	5	5	1	0	0	0	0	0	0	0	0	0	13	21-30	10
11:45 AM	0	0	8	4	3	0	0	0	0	0	0	0	0	0	15	21-30	12
Day Total Percent																	
AM Peak 15-min Vol																	
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12:00 PM	0	2	6	7	3	0	0	0	0	0	0	0	0	0	18	21-30	13
12:15 PM	1	2	9	8	2	2	0	0	0	0	0	0	0	0	24	21-30	17
12:30 PM	1	1	7	9	1	1	0	0	0	0	0	0	0	0	20	21-30	16
12:45 PM	0	4	5	7	2	0	0	0	0	0	0	0	0	0	18	21-30	12
01:00 PM	1	3	5	10	1	0	1	0	0	0	0	0	0	0	21	21-30	15
01:15 PM	1	2	8	8	6	1	0	0	0	0	0	0	0	0	26	21-30	16
01:30 PM	2	0	8	9	6	2	0	0	0	0	0	0	0	0	27	21-30	17
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02:00 PM	0	1	10	3	2	0	0	0	0	0	0	0	0	0	16	21-30	13
02:15 PM	0	0	15	13	5	0	0	0	0	0	0	0	0	0	33	21-30	28
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03:00 PM	1	1	5	9	4	0	0	0	0	0	0	0	0	0	20	21-30	14
03:15 PM	1	6	8	7	1	1	0	0	0	0	0	0	0	0	24	21-30	15
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03:45 PM	0	2	7	10	4	0	0	0	0	0	0	0	0	0	23	21-30	17
04:00 PM	1	3	9	9	3	0	0	0	0	0	0	0	0	0	25	21-30	18
04:15 PM	1	4	1	8	6	0	0	0	0	0	0	0	0	0	20	26-35	14
04:30 PM	1	2	8	8	3	1	0	0	0	0	0	0	0	0	23	21-30	16
04:45 PM	0	5	4	11	5	0	0	0	0	0	0	0	0	0	25	26-35	16
05:00 PM	0	5	14	15	8	0	0	0	0	0	0	0	0	0	42	21-30	29
05:15 PM	0	3	7	15	5	0	0	0	0	0	0	0	0	0	30	21-30	22
05:30 PM	0	1	8	9	4	0	0	0	0	0	0	0	0	0	22	21-30	17
05:45 PM	0	5	4	10	7	1	0	0	0	0	0	0	0	0	27	26-35	17
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06:00 PM	0	7	5	7	8	0	0	0	0	0	0	0	0	0	27	26-35	15
06:15 PM	0	0	2	12	10	0	0	0	0	0	0	0	0	0	24	26-35	22
06:30 PM	0	1	5	12	4	1	0	0	0	0	0	0	0	0	23	21-30	17
06:45 PM	1	0	8	8	0	0	0	0	0	0	0	0	0	0	17	21-30	16
07:00 PM	1	2	3	9	3	0	0	0	0	0	0	0	0	0	18	21-30	12
07:15 PM	0	1	5	7	2	0	0	0	0	0	0	0	0	0	15	21-30	12
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07:45 PM	0	0	4	5	1	0	0	0	0	0	0	0	0	0	10	21-30	9
08:00 PM	0	0	3	8	2	0	0	0	0	0	0	0	0	0	13	21-30	11
08:15 PM	0	1	0	5	0	0	0	0	0	0	0	0	0	0	6	21-30	5
08:30 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	16-25	4
08:45 PM	0	0	5	5	2	0	0	0	0	0	0	0	0	0	12	21-30	10
09:00 PM	0	1	2	0	1	0	0	0	0	0	0	0	0	0	4	16-25	3
09:15 PM	0	0	2	3	3	0	0	0	1	0	0	0	0	0	9	26-35	6
09:30 PM	0	2	2	1	3	0	0	0	0	0	0	0	0	0	8	26-35	4
09:45 PM	0	0	2	2	1	0	0	0	0	0	0	0	0	0	5	21-30	4
10:00 PM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3	16-25	2
10:15 PM	0	0	0	4	1	0	0	0	0	0	0	0	0	0	5	26-35	5
10:30 PM	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5	21-30	5
10:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
11:00 PM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	3	16-25	2
11:15 PM	0	1	0	3	0	0	0	0	0	0	0	0	0	0	4	21-30	3
11:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	16-25	2
11:45 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	26-35	2
Day Total	20	117	427	517	207	28	2	0	1	0	0	0	0	0	1319	21-30	944
Percent	1.5%	8.9%	32.4%	39.2%	15.7%	2.1%	0.2%	0%	0.1%	0%	0%	0%	0%	0%			
AM Peak 15-min Vol	7:30 AM	8:45 AM	8:15 AM	7:00 AM	7:45 AM	6:30 AM	5:30 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	8:15 AM	
	2	5	20	12	6	2	1	0	0	0	0	0	0	0	0	34	
PM Peak 15-min Vol	1:30 PM	6:00 PM	2:15 PM	2:30 PM	6:15 PM	12:15 PM	1:00 PM	12:00 PM	9:15 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	5:00 PM		
	2	7	15	18	10	2	1	0	1	0	0	0	0	0	42		
<i>Comments:</i>																	

Report generated on 4/7/2023 12:21 PM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>)

LOCATION: Willow Lake Rd N btwn Todd Ct N and Bobbie Ct N														QC JOB #: 16120101			
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CITY/STATE: Keizer, OR														DATE: Apr 4 2023			
Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	20	117	427	517	207	28	2	0	1	0	0	0	0	0	1319	21-30	944
Percent	1.5%	8.9%	32.4%	39.2%	15.7%	2.1%	0.2%	0%	0.1%	0%	0%	0%	0%	0%			
Cumulative Percent	1.5%	10.4%	42.8%	82%	97.6%	99.8%	99.9%	99.9%	100%	100%	100%	100%	100%	100%			
ADT 1319															85th Percentile: 30 MPH Mean Speed(Average): 25 MPH Median: 25 MPH Mode: 28 MPH		
<i>Comments:</i>																	



Type of report: Tube Count - Vehicle Classification Data

LOCATION: Willow Lake Rd N btwn Todd Ct N and Bobbie Ct N

QC JOB #: 16120101

SPECIFIC LOCATION:

DIRECTION: EB, WB

CITY/STATE: Keizer, OR

DATE: Apr 4 2023

Start Time	Bikes	Cars & Trailers	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 Classed	Total
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
03:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	0	3
04:15 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
04:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:45 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
05:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	0	3
05:30 AM	0	4	3	0	0	0	0	1	0	0	0	0	0	0	8
05:45 AM	0	3	4	0	3	0	0	0	0	0	0	0	0	0	10
Day Total Percent															
ADT 1319															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Willow Lake Rd N btwn Todd Ct N and Bobbie Ct N

QC JOB #: 16120101

SPECIFIC LOCATION:

DIRECTION: EB, WB

CITY/STATE: Keizer, OR

DATE: Apr 4 2023

Start Time	Bikes	Cars & Trailers	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 Classed	Total
06:00 AM	0	5	3	0	5	2	0	0	0	0	0	0	0	0	15
06:15 AM	0	9	8	0	2	0	0	2	0	0	0	0	0	1	22
06:30 AM	0	9	3	1	5	0	0	0	0	0	0	0	0	0	18
06:45 AM	0	7	1	1	2	0	0	1	0	0	0	0	1	0	13
07:00 AM	0	10	2	0	3	1	0	1	0	1	0	0	0	0	18
07:15 AM	0	9	0	1	3	1	0	0	0	0	0	0	0	0	14
07:30 AM	0	15	5	0	2	1	1	0	0	1	0	0	0	2	27
07:45 AM	0	23	8	1	1	0	0	0	0	0	0	0	0	0	33
08:00 AM	0	13	4	1	3	1	1	1	0	2	0	0	0	0	26
08:15 AM	0	14	12	1	5	0	1	0	0	1	0	0	0	0	34
08:30 AM	0	10	5	0	4	1	0	0	0	1	0	0	0	0	21
08:45 AM	0	9	7	1	2	1	0	0	0	0	0	0	0	0	20
09:00 AM	0	8	2	1	1	1	0	0	0	1	0	0	0	0	14
09:15 AM	0	11	8	3	1	1	1	0	0	1	0	0	0	0	26
09:30 AM	0	3	3	0	1	1	1	1	0	0	0	0	1	0	11
09:45 AM	0	11	2	0	1	2	1	0	0	0	0	0	0	0	17
10:00 AM	0	10	3	0	0	1	0	1	0	0	0	0	0	0	15
10:15 AM	0	11	3	0	2	3	1	0	0	1	0	0	0	0	21
10:30 AM	0	11	5	1	3	0	1	0	0	1	0	0	0	0	22
10:45 AM	0	9	4	1	3	2	1	0	0	1	0	0	0	0	21
11:00 AM	0	7	6	0	2	1	0	0	0	0	0	0	0	0	16
11:15 AM	0	9	4	1	2	2	0	0	0	0	0	0	0	0	18
11:30 AM	0	8	1	0	2	0	2	0	0	0	0	0	0	0	13
11:45 AM	0	12	0	0	1	1	1	0	0	0	0	0	0	0	15
Day Total Percent															
ADT 1319															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Willow Lake Rd N btwn Todd Ct N and Bobbie Ct N

QC JOB #: 16120101

SPECIFIC LOCATION:

DIRECTION: EB, WB

CITY/STATE: Keizer, OR

DATE: Apr 4 2023

Start Time	Bikes	Cars & Trailers	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 Classed	Total
12:00 PM	0	8	5	1	1	1	0	0	0	2	0	0	0	0	18
12:15 PM	0	11	4	0	5	3	0	0	0	0	0	0	0	1	24
12:30 PM	0	10	6	1	3	0	0	0	0	0	0	0	0	0	20
12:45 PM	0	7	3	0	6	1	1	0	0	0	0	0	0	0	18
01:00 PM	0	12	1	0	3	1	1	1	0	1	0	0	0	1	21
01:15 PM	0	7	12	1	3	3	0	0	0	0	0	0	0	0	26
01:30 PM	0	17	4	0	0	2	0	1	0	1	0	0	0	2	27
01:45 PM	0	12	4	0	3	3	0	0	0	0	0	0	0	0	22
02:00 PM	0	10	2	0	1	0	2	0	0	0	0	0	1	0	16
02:15 PM	0	13	10	0	5	3	0	2	0	0	0	0	0	0	33
02:30 PM	0	15	6	1	2	2	2	2	0	0	0	0	0	0	30
02:45 PM	0	9	6	0	2	2	0	0	0	0	0	0	0	0	19
03:00 PM	0	12	5	0	2	0	1	0	0	0	0	0	0	0	20
03:15 PM	0	17	3	0	4	0	0	0	0	0	0	0	0	0	24
03:30 PM	0	17	4	0	2	0	0	0	0	0	0	0	0	0	23
03:45 PM	0	20	2	0	1	0	0	0	0	0	0	0	0	0	23
04:00 PM	0	18	4	0	1	0	1	0	0	0	0	0	0	1	25
04:15 PM	0	10	6	0	3	1	0	0	0	0	0	0	0	0	20
04:30 PM	0	15	5	1	1	0	0	1	0	0	0	0	0	0	23
04:45 PM	0	20	3	0	1	0	0	1	0	0	0	0	0	0	25
05:00 PM	0	31	8	0	3	0	0	0	0	0	0	0	0	0	42
05:15 PM	0	17	5	0	8	0	0	0	0	0	0	0	0	0	30
05:30 PM	0	15	4	0	3	0	0	0	0	0	0	0	0	0	22
05:45 PM	0	16	9	0	2	0	0	0	0	0	0	0	0	0	27
Day Total Percent															
ADT 1319															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Type of report: Tube Count - Vehicle Classification Data

LOCATION: Willow Lake Rd N btwn Todd Ct N and Bobbie Ct N **QC JOB #:** 16120101
SPECIFIC LOCATION: **DIRECTION:** EB, WB
CITY/STATE: Keizer, OR **DATE:** Apr 4 2023

Start Time	Bikes	Cars & Trailers	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 Classed	Total
06:00 PM	1	19	5	0	2	0	0	0	0	0	0	0	0	0	27
06:15 PM	0	12	6	0	6	0	0	0	0	0	0	0	0	0	24
06:30 PM	0	18	4	0	1	0	0	0	0	0	0	0	0	0	23
06:45 PM	0	15	2	0	0	0	0	0	0	0	0	0	0	0	17
07:00 PM	0	15	2	0	1	0	0	0	0	0	0	0	0	0	18
07:15 PM	0	11	4	0	0	0	0	0	0	0	0	0	0	0	15
07:30 PM	0	8	1	0	0	0	0	0	0	0	0	0	0	0	9
07:45 PM	0	9	0	0	1	0	0	0	0	0	0	0	0	0	10
08:00 PM	0	11	0	0	2	0	0	0	0	0	0	0	0	0	13
08:15 PM	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
08:30 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
08:45 PM	0	10	2	0	0	0	0	0	0	0	0	0	0	0	12
09:00 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
09:15 PM	0	7	1	0	1	0	0	0	0	0	0	0	0	0	9
09:30 PM	0	7	0	0	1	0	0	0	0	0	0	0	0	0	8
09:45 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
10:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
10:15 PM	0	4	0	0	1	0	0	0	0	0	0	0	0	0	5
10:30 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
10:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
11:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
11:15 PM	0	2	1	0	1	0	0	0	0	0	0	0	0	0	4
11:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
11:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Day Total	1	790	259	19	143	45	20	16	0	15	0	0	3	8	1319
Percent	0.1%	59.9%	19.6%	1.4%	10.8%	3.4%	1.5%	1.2%	0%	1.1%	0%	0%	0.2%	0.6%	
ADT 1319															
AM Peak 15-min Vol	12:00 AM	7:45 AM	8:15 AM	9:15 AM	6:00 AM	10:15 AM	11:30 AM	6:15 AM	12:00 AM	8:00 AM	12:00 AM	12:00 AM	6:45 AM	7:30 AM	8:15 AM
	0	23	12	3	5	3	2	2	0	2	0	0	1	2	34
PM Peak 15-min Vol	6:00 PM	5:00 PM	1:15 PM	12:00 PM	5:15 PM	12:15 PM	2:00 PM	2:15 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	2:00 PM	1:30 PM	5:00 PM
	1	31	12	1	8	3	2	2	0	2	0	0	1	2	42

Comments:

LOCATION: Willow Lake Rd N btwn Todd Ct N and Bobbie Ct N **QC JOB #:** 16120101
SPECIFIC LOCATION: **DIRECTION:** EB, WB
CITY/STATE: Keizer, OR **DATE:** Apr 4 2023

Start Time	Bikes	Cars & Trailers	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 Classed	Total
Grand Total	1	790	259	19	143	45	20	16	0	15	0	0	3	8	1319
Percent	0.1%	59.9%	19.6%	1.4%	10.8%	3.4%	1.5%	1.2%	0%	1.1%	0%	0%	0.2%	0.6%	



Comments:



Type of report: Tube Count - Volume Data

LOCATION: Willow Lake Rd N btwn Todd Ct N and Bobbie Ct N SPECIFIC LOCATION: CITY/STATE: Keizer, OR							QC JOB #: 16120101 DIRECTION: EB, WB DATE: Apr 4 2023 - Apr 4 2023			
Start Time	Mon	Tue 4 Apr 23	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		2				2			2	
12:15 AM		0				0			0	
12:30 AM		0				0			0	
12:45 AM		0				0			0	
01:00 AM		0				0			0	
01:15 AM		0				0			0	
01:30 AM		0				0			0	
01:45 AM		0				0			0	
02:00 AM		0				0			0	
02:15 AM		1				1			1	
02:30 AM		0				0			0	
02:45 AM		1				1			1	
03:00 AM		1				1			1	
03:15 AM		1				1			1	
03:30 AM		1				1			1	
03:45 AM		0				0			0	
04:00 AM		3				3			3	
04:15 AM		3				3			3	
04:30 AM		1				1			1	
04:45 AM		4				4			4	
05:00 AM		3				3			3	
05:15 AM		3				3			3	
05:30 AM		8				8			8	
05:45 AM		10				10			10	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

LOCATION: Willow Lake Rd N btwn Todd Ct N and Bobbie Ct N **QC JOB #:** 16120101
SPECIFIC LOCATION: **DIRECTION:** EB, WB
CITY/STATE: Keizer, OR **DATE:** Apr 4 2023 - Apr 4 2023

Start Time	Mon	Tue 4 Apr 23	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		15				15			15	
06:15 AM		22				22			22	
06:30 AM		18				18			18	
06:45 AM		13				13			13	
07:00 AM		18				18			18	
07:15 AM		14				14			14	
07:30 AM		27				27			27	
07:45 AM		33				33			33	
08:00 AM		26				26			26	
08:15 AM		34				34			34	
08:30 AM		21				21			21	
08:45 AM		20				20			20	
09:00 AM		14				14			14	
09:15 AM		26				26			26	
09:30 AM		11				11			11	
09:45 AM		17				17			17	
10:00 AM		15				15			15	
10:15 AM		21				21			21	
10:30 AM		22				22			22	
10:45 AM		21				21			21	
11:00 AM		16				16			16	
11:15 AM		18				18			18	
11:30 AM		13				13			13	
11:45 AM		15				15			15	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

LOCATION: Willow Lake Rd N btwn Todd Ct N and Bobbie Ct N **QC JOB #:** 16120101
SPECIFIC LOCATION: **DIRECTION:** EB, WB
CITY/STATE: Keizer, OR **DATE:** Apr 4 2023 - Apr 4 2023

Start Time	Mon	Tue 4 Apr 23	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		18				18			18	
12:15 PM		24				24			24	
12:30 PM		20				20			20	
12:45 PM		18				18			18	
01:00 PM		21				21			21	
01:15 PM		26				26			26	
01:30 PM		27				27			27	
01:45 PM		22				22			22	
02:00 PM		16				16			16	
02:15 PM		33				33			33	
02:30 PM		30				30			30	
02:45 PM		19				19			19	
03:00 PM		20				20			20	
03:15 PM		24				24			24	
03:30 PM		23				23			23	
03:45 PM		23				23			23	
04:00 PM		25				25			25	
04:15 PM		20				20			20	
04:30 PM		23				23			23	
04:45 PM		25				25			25	
05:00 PM		42				42			42	
05:15 PM		30				30			30	
05:30 PM		22				22			22	
05:45 PM		27				27			27	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

LOCATION: Willow Lake Rd N btwn Todd Ct N and Bobbie Ct N							QC JOB #: 16120101			
SPECIFIC LOCATION:							DIRECTION: EB, WB			
CITY/STATE: Keizer, OR							DATE: Apr 4 2023 - Apr 4 2023			
Start Time	Mon	Tue 4 Apr 23	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		27				27			27	
06:15 PM		24				24			24	
06:30 PM		23				23			23	
06:45 PM		17				17			17	
07:00 PM		18				18			18	
07:15 PM		15				15			15	
07:30 PM		9				9			9	
07:45 PM		10				10			10	
08:00 PM		13				13			13	
08:15 PM		6				6			6	
08:30 PM		4				4			4	
08:45 PM		12				12			12	
09:00 PM		4				4			4	
09:15 PM		9				9			9	
09:30 PM		8				8			8	
09:45 PM		5				5			5	
10:00 PM		3				3			3	
10:15 PM		5				5			5	
10:30 PM		5				5			5	
10:45 PM		1				1			1	
11:00 PM		3				3			3	
11:15 PM		4				4			4	
11:30 PM		2				2			2	
11:45 PM		2				2			2	
Day Total		1319				1319			1319	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak 15-min Vol		8:15 AM 34				8:15 AM 34			8:15 AM 34	
PM Peak 15-min Vol		5:00 PM 42				5:00 PM 42			5:00 PM 42	

Comments:

CITY OF KEIZER, MARION COUNTY

WILLOW LAKE RD and Intersectional Crashes at WILLOW LAKE RD, City of Keizer, Marion County, 01/01/2017 to 12/31/2021

1 - 1 of 1 Crash records shown.

SER#	S	D	M	P	R	J	S	W	DATE	CLASS	CITY STREET	INT-TYPE	SPCL USE																				
INVEST	E	A	U	I	C	O	DAY	DIST	FIRST STREET	RD CHAR	(MEDIAN)	INT-REL	OFFRD	WTHR	CRASH	TRLR QTY	MOVE	A S															
RD DPT	E	L	G	N	H	R	TIME	FROM	SECOND STREET	DIRECT	LEGS	TRAF-	RNDBT	SURF	COLL	OWNER	FROM	PRTC	INJ	G	E	LICNS	PED										
UNLOC?	D	C	S	V	L	K	LAT	LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE				
02727	N	N	N	N	N	N	09/08/2020	19	WILLOW LAKE RD N	STRGHT		N	N	FOG	PRKD MV	01	NONE	0	STRGHT														
CITY							TU	54	LACEY ST N	E	(NONE)	UNKNOWN	N	DRY	SS-O		PRVTE	W -E															
N							10A			07			N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	82	F	OR-Y		026,017	000		00				
N							44 59 59.5	-123 2 45.91			(02)																						
																02	NONE	0	PRKD-P														
																	PRVTE	W -E															
																	PSNGR CAR																

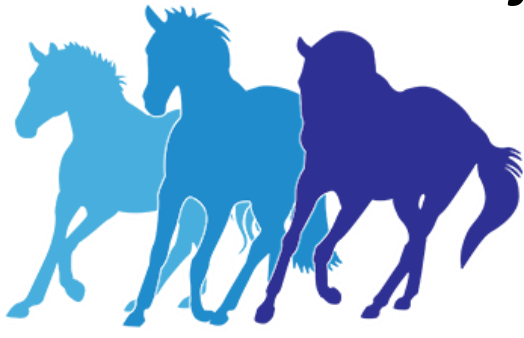
Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers.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


CITY OF KEIZER, MARION COUNTY

WILLOW LAKE RD and Intersectional Crashes at WILLOW LAKE RD, City of Keizer, Marion County, 01/01/2017 to 12/31/2021

Keizer Elementary School


Home of the Colts!




 Routes with Sidewalks /
Rutas con Banquetas




 Crossing Guards /
Guardias de Cruce

 Routes with Sidewalks & High Traffic /
Rutas con Banquetas y Alto Tráfico


 Routes without Sidewalks /
Rutas sin Banquetas

 Crosswalks / Cruces Peatonales



 School Location /
Ubicación de la Escuela

 20-mph School Zone /
Zona Escolar de 20 mph

 Walk Zone / Zona de Caminata

 Parks / Parques

