



## Technical Memorandum #5

**Date:** February 12, 2025

Kittelson Project No: 30287

---

**To:** Project Management Team (PMT)

---

**From:** Matt Hughart, AICP and Eza Gaigalas

---

**Subject:** Future Conditions Analysis DRAFT

---

### Introduction

This memorandum summarizes future (no-build) transportation system conditions in Boardman for the Boardman Transportation System Plan (TSP) update. The information provided in this memorandum is based on assumed new residential and commercial development and corresponding growth in multimodal traffic throughout the city. The future deficiencies identified in this memorandum will serve as the basis for developing transportation system alternatives and improvement projects for the TSP update.

The analysis assumes that the transportation system will serve the urban area's continued economic growth that is consistent with its Comprehensive Plan land use designations as well as regional needs. The TSP addresses transportation needs for people walking, rolling, taking transit, biking, and driving within the Urban Growth Boundary (UGB), namely, the study area, illustrated in Figure 1.

**Figure 1. Study Area**

## Future System Conditions Analysis

The future system conditions analysis assesses how the current transportation system in the Boardman urban area is anticipated to perform through the planning horizon year 2045 with assumed continued growth and if no changes occur to the existing transportation network other than what is currently planned and funded.

### Future Travel Forecasts

---

Land use forecasting and the associated travel activity that occurs from development of vacant/underdeveloped lands is a key component in understanding how to plan for an efficient multimodal transportation system.

Consistent with a land use methodology initially created for the 2009 Main Street IAMP and expanded upon in the more recent 2023 Main Street Circulation Assessment, a larger land development assessment was performed for the entire city. This effort included identifying all vacant/underdeveloped parcels within the city, working with City staff to identify those parcels that are reasonably likely to develop over the next 20 years, reviewing the underlying zoning and development regulations for those parcels, and preparing future development assumptions for those parcels. *Attachment A contains a detailed description of assumed future developments for these parcels and their trip generation estimate.*

From this land use forecast, a future trip generation profile was developed for each vacant parcel with anticipated weekday AM and PM peak hour trips distributed to/from the development and the various study intersections. This distribution was based on the type of land use (highway-oriented commercial/retail uses with a focus to/from the I-84 corridor, Boardman supporting commercial/retail uses with a focus to/from local residential neighborhoods, and residential uses with a commuting focus to/from local and regional employment centers). *Attachment B contains the development-generated traffic volumes assigned to the study intersections for the weekday AM and PM peak hours.*

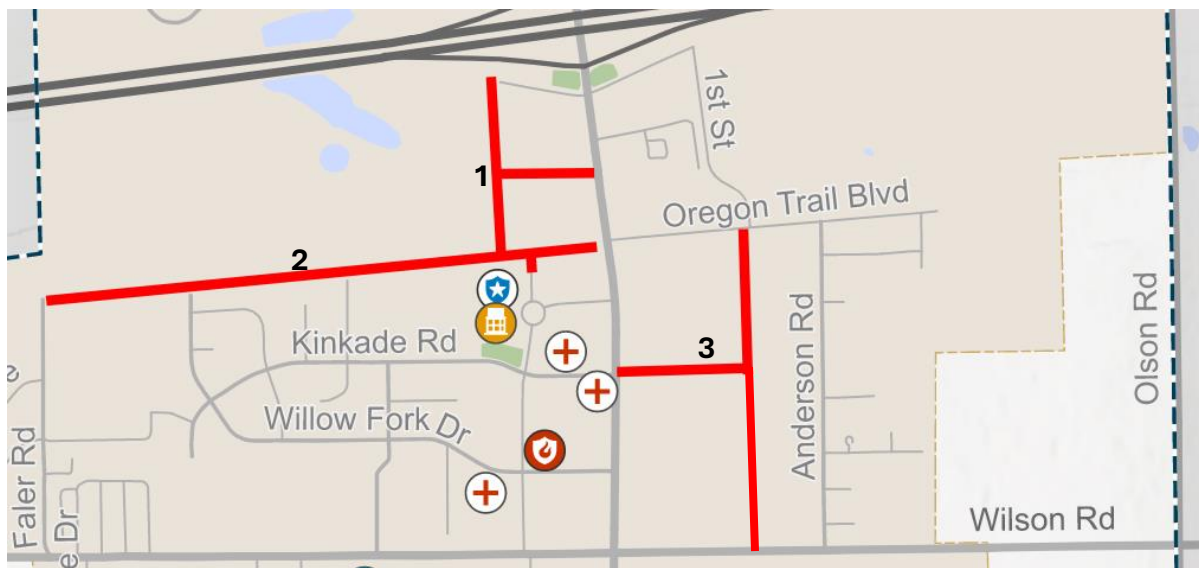
### Planned Transportation Improvements

---

While the future system conditions analysis is essentially an assessment of conditions under the existing multimodal infrastructure, the analysis does take into consideration future improvements that are on the Boardman Capital Improvement Program (CIP) and future improvements that are reasonably likely to be implemented through other means such as expected private development projects. Based on discussions with City planning and engineering staff, the following roadway projects and connections were assumed to be included in the future no-build analysis as depicted in Exhibit 1.

1. A new backage road connection linking SW Front Street to a future westerly extension of Oregon Trail Boulevard and S Main Street. This project is anticipated to be completed as part of near-term private developments on the underlying parcels.
2. A westerly extension of Oregon Trail Boulevard from S Main Street to Faler Road. This project is included on the City CIP and is expected to be completed through a combination of capital expenditures and near-term private development projects.
3. A new local street on the east side of S Main Street connecting Oregon Trail Boulevard to S Main Street.

**Exhibit 1 – Assumed Future Roadway Network Projects Completed as Part of Capital Expenditures or Private Development**



## Future No-Build Traffic Operations

The traffic operations analysis helps identify study intersections that are expected to exceed applicable v/c and LOS thresholds in 2045. This analysis helps inform transportation projects, policies, and programs needed to support economic growth through the planning horizon.

Future Year 2045 No-Build weekday AM and PM peak hour traffic volumes were determined by applying the development-related trips to the existing traffic network. Future traffic volumes for Laurel Lane/Columbia Boulevard, Laurel Lane/I-84 WB Ramp, and Laurel Lane/I-84 EB Ramp were taken from the 2020 Port of Morrow IAMP update as this previous planning effort involved a much greater level of detail surrounding future Port of Morrow land development patterns. Assumed lane configurations for the 2045 No-Build scenario are illustrated in Figure 2. Projected Year 2045 No-Build traffic volumes at the study intersections and the resultant v/c ratios, delay, and level of service (LOS) for the weekday AM and PM peak hour are shown in Figure 3 and Figure 4 respectively.

**Figure 2. Year 2045 Assumed Lane Configurations & Traffic Control Devices**

**Figure 3. Year 2045 Intersection Operations, Weekday AM Peak Hour**

**Figure 4. Year 2045 Intersection Operations, Weekday PM Peak Hour**

Figure 5 and Figure 6 illustrate weekday AM and weekday PM operational results at the study intersections based on their respective performance thresholds. Table 1 identifies the intersections from Figure 5 and Figure 6 that are exceeding their performance thresholds (mobility targets) in 20 years.

As shown, the results indicate that seven study intersections are forecast to exceed their performance thresholds during the weekday AM and PM peak hour. This includes N Main Street/Boardman Avenue (#3), N Main Street/Front Street (#4), N Main Street/I-84 WB (#5), S Main Street/I-84 EB Ramp(#6), S Main Street/Front Street (#7), S Main Street/ Oregon Trail Boulevard (#8), S Main Street /Kinkade Road (#9). The Laurel Lane/Columbia Avenue (#10) intersection does not meet the City's operational standard in only the AM peak hour.

*Attachment C contains the future traffic operations worksheets.*



**Figure 5. Year 2045 Traffic Operations, Weekday AM Peak Hour**

**Figure 6. Year 2045 Traffic Operations, Weekday PM Peak Hour**

**Table 1. Study Intersection Performance Summary – Future Traffic Operations**

ID	Intersection	Owner	Exceeds Operational Standard		
			Weekday AM Peak Hour	Weekday PM Peak Hour	Forecast Operational Challenge(s)
3	N Main Street / Boardman Avenue	City	✓	✓	Projected long-term growth in traffic demand along the Main Street corridor will increase vehicle delay for the Boardman Avenue approaches. During the weekday morning peak hour, the projected westbound left-turn demand will exceed its available capacity. Traffic control improvement options will need to be investigated in association with access restrictions at N Front Street (see below).
4	N Main Street / N Front Street	City	✓	✓	Anticipated highway-oriented development along the N Front Street corridor is forecast to generate a significant increase in traffic demand. The Main Street IAMP has previously identified the need for the N Front Street intersection approaches to N Main Street to be limited to right-in/right-out movements through median treatments.
5	N Main Street / I-84 Westbound Ramp Terminal	ODOT	✓	✓	The existing I-84/N Main Street interchange has limited capacity to serve anticipated long-term growth in local and freeway-oriented traffic demand. The Main Street IAMP has previously identified the need for ramp widening and traffic control improvements at the interchange ramp terminals.
6	S Main Street / I-84 Eastbound Ramp Terminal	ODOT	✓	✓	
7	S Main Street / S Front Street	City	✓	✓	Anticipated highway-oriented development along the S Front Street corridor is forecast to generate a significant increase in traffic demand. The Main Street IAMP has previously identified the need for the S Front Street intersection approaches to be limited to right-in/right-out movements through median treatments. The implementation of the access restricting medians is contingent upon the implementation of the local roadway improvements identified in Exhibit 1.
8	S Main Street / Oregon Trail Boulevard	City	✓	✓	The assumed westerly extension of Oregon Trail Boulevard west of S Main Street is forecast to accommodate a measurable amount of east-west traffic demand serving existing a new developments in southwest Boardman. This demand will necessitate lane widening and traffic control improvements at the S Main Street/Oregon Trail Boulevard intersection.
9	S Main Street / Kinkade Road	City	✓	✓	Anticipated residential and commercial growth in southwest Boardman is forecast to increase traffic demands along the Kinkade Road corridor. This demand will necessitate lane widening and potential traffic control improvements at the S Main Street/Kinkade Road intersection.

ID	Intersection	Owner	Exceeds Operational Standard		
			Weekday AM Peak Hour	Weekday PM Peak Hour	Forecast Operational Challenge(s)
12	Laurel Lane / Columbia Avenue	City	✓	✓	Long-term growth from the City of Boardman and Port of Morrow is forecast to result in over capacity conditions at the Laurel Lane/Columbia Avenue intersection. The POM IAMP has identified the need for a roundabout at this intersection to better accommodate the anticipated increase in freight and peak period traffic demands generated by POM businesses.

## Future Safety Conditions

---

The safety conditions summarized in the Existing Conditions Crash Analysis are expected to worsen over time if vehicular, pedestrian, and bicycle volumes increase and if no changes are made to the transportation system. The TSP Update will include site-specific countermeasures to address safety conditions. These treatments can be implemented as funding becomes available.

## Future Multimodal Conditions

---

The Existing Transportation Conditions Inventory & Analysis Memorandum identified notable gaps in infrastructure for people walking and rolling. These gaps are expected to remain as vehicular, pedestrian, and bicycle volumes increase and if no changes are made to the transportation system. Even if volumes were to remain constant, the quality of multimodal facilities would degrade over time without maintenance and improvements.

Improvements to the multimodal network should focus on the locations highlighted in the Pedestrian and Bicycle Level of Traffic Stress analysis from the Existing Transportation Conditions Inventory & Analysis Memorandum. This involves prioritizing areas for sidewalk and bike lanes.

## Attachments

- A. Land Use Projections and Trip Generation Estimate
- B. Development Generated Volumes
- C. Future Traffic Operations Worksheets

## Attachment A – Land Use Projections and Trip Generation Estimate

## Attachment B – Development Generated Volumes



# Attachment C – Future Traffic Operations Worksheet