

PBOT

PORTLAND BUREAU OF TRANSPORTATION

1120 SW Fifth Ave, Suite 1331, Portland OR 97204

Main: 503-823-5185 TTY: 503-823-6868 Fax: 503-823-7576 Portland.gov/Transportation

Jo Ann Hardesty Commissioner **Chris Warner** Director

Memorandum

To: Eric Engstrom, Principal Planner
From: Bob Kellett, Transportation Planner
RE: Shelter to Housing Continuum Project Transportation Analysis
Date: March 1, 2021

This memorandum summarizes Portland Bureau of Transportation (PBOT) staff's review of the potential impacts to the transportation system resulting from the Shelter to Housing Continuum (S2HC) project. PBOT concurs with the legislative findings related to transportation that have been submitted for the project. While S2HC makes changes to the zoning code that could expand housing choices, the project is not anticipated to significantly impact the transportation system. Any transportation impacts that are likely to occur because of S2HC can be sufficiently managed through current and planned projects and programs that have already been identified in the 2035 Transportation System Plan (TSP).

Project Overview

The S2HC project is intended to remove zoning code barriers to opening homeless shelters, expand housing choices, and facilitate the production of affordable housing. The project has four primary components: 1) Zoning code changes to make it easier to site homeless shelters and associated services in zones citywide; 2) A new community service use in the zoning code for outdoor shelters; 3) Increased flexibility for Group Living configurations to allow for housing such as dormitories, senior care facilities, co-housing, and single-room occupancy apartments; 4) Allowance of occupancy of a recreation vehicle or a tiny house on wheels on residential property.

Impacts to the Transportation System

When examining potential impacts from land use zoning and code changes, PBOT considers peak PM hour congestion in relation to "areas of concern" that were identified as part of the development of the 2035 Comprehensive Plan. At that time, the City completed an analysis of the transportation system, including assessing the traffic impacts of the new land use map being adopted with the new plan. To accomplish this analysis, the City worked with Metro to run the regional travel demand model. That assessment was acknowledged by DLCDC with Task 3 of Portland's Periodic Review process (DLCDC Order 001882).¹

¹ Analysis memo and data in Portland Periodic Review Task 3 record, Vol. 1.4.B, page 3511.



Transportation modeling done with the 2035 Comprehensive Plan assumed the citywide 20-year growth allocation taken from the 2012 Metro Urban Growth Report.² At that time Metro planning assumptions allocated approximately 123,000 additional households and 142,000 additional jobs to Portland through 2035. The City relied on its Buildable Lands Inventory and a GIS-based Allocation Model to estimate the distribution of the expected growth across the City. This inventory and model were also acknowledged by the state with Task 3 of Portland's Periodic Review process and revised with Task 4 (DLCD Order 001892).³

When analyzing the potential transportation impacts from S2HC, PBOT compared the underlying assumptions of this regional travel demand modeling with anticipated changes from S2HC to determine if there would be any significant changes that could impact the transportation system.

Key Findings

1. **S2HC trips already accounted for in transportation model:** The regional travel demand model that PBOT uses to evaluate transportation impacts from land use changes does not differentiate between people living outside and those living in shelters. The model is built on population and employment projections. It assumes that everyone in the population projection is housed. Based on the location, zoning allowances, and projected employment, the transportation model projects the number of automobile trips during the PM peak hours and those trips are distributed throughout the transportation network to determine network capacity and adequacy.

The S2HC modifies the zoning code to make it easier to site homeless shelters and to facilitate different group living arrangements. While these changes may have the effect of moving people from unsheltered living arrangements to housed environments, this does not impact the inputs of the travel demand model because the model already assumes people living in the various zones identified in S2HC and that the associated jobs already exist. As such, the model also already accounts for the transportation trips that may result from S2HC and, as detailed above, the transportation system can adequately support these trips through the programs and projects that have been identified in the 2035 Transportation System Plan.

2. **S2HC facilities expected to generate fewer trips than other land use types:** Different land use types generate different amounts of automobile trips. One method of quantifying these differences is the Institute of Transportation Engineers (ITE) trip generation manual. Using data that is based on survey collection, it estimates the number of daily automobile trips and AM/PM peak hour trips that can be expected based on the land use type in a location.

While the ITE manual does not specifically have a category for homeless shelters and the other group housing arrangements that may result from S2HC, it does have trip generation estimates for similar types of congregate group living and assisted living arrangements. As seen in Table 1 below, the weekday and AM/PM peak trips generated from congregate and other group living land use types all generate significantly fewer trips than single family and multifamily land uses on both a daily basis and during the peak hours.

² Metro Council Ordinance No. 12-1292A

³ Growth Scenarios Report July 2015, Portland Periodic Review Task 3 record, Vol. 1.1.K, page 166.

It would be anticipated that facilities that result from S2HC would also generate fewer trips than housing and employment uses that are currently allowed in the zones that are proposed for code changes.

Table 1: Trip Generation by Land Use

ITE Land Use Type	Average Weekday trips per dwelling unit	AM Peak	PM Peak
210: Single Family Home	9.44	0.74	0.99
220: Multifamily, low rise (1-2 floors)	7.32	0.46	0.56
221: Multifamily, mid-rise (3-10 floors)	5.44	0.36	0.44
225: Off-Campus Student Housing	3.15	0.12	0.25
240: Mobile Home Park	5	0.26	0.46
253: Congregate Care Facility	2.02	0.07	0.18
254 Assisted Living (beds)	2.6	0.19	0.26
255: Continuing Care Retirement Community	2.4	0.14	0.16
620: Nursing Home (beds)	3.06	0.17	0.22

Source: ITE Trip Generation Manual, 10th Edition

- 3. S2HC trips likely to be dispersed throughout the transportation network:** In Portland, homelessness is not concentrated in one area of the city, but rather is dispersed throughout the city (see: One Point of Contact Campsite Reports <https://pdx.maps.arcgis.com/apps/TimeAware/index.html?appid=ac6a6abf1092482190984a5df9dfacb0>). S2HC identifies the need to make it easier to site shelters and facilities throughout the city to provide services close to where people are sheltering outside. The zoning code changes include zones that are represented in all parts of the city. It is anticipated that housing types that develop from S2HC will also be dispersed. This also means that any trips that are generated from these housing types will be spread across the transportation network, minimizing the potential traffic impacts to the system and to areas that have been identified as “areas of concern”.
- 4. S2HC will be located near frequent transit service:** As part of an overall strategy to support the mobility needs of those experiencing homelessness, S2HC identifies the need to site shelter and

other facilities near frequent transit service and other essential services. Proximity to transit and services will serve to further reduce potential automobile impacts.

Conclusion

The changes to the zoning code that result from the Shelter to Housing Continuum project are intended make it easier to site homeless shelters and increase housing options for people experiencing homelessness. The changes are not anticipated to have a significant impact on the transportation system. Shelters, congregate care, and other group living arrangements are expected to generate fewer transportation trips than uses that are presently allowed in the zoning code. S2HC sites are anticipated to be dispersed throughout the city near transit lines and trips that result from these sites will be spread across the transportation networks. Existing projects and programs identified in the 2035 Transportation System Plan can adequately support the trips that are expected to occur from S2HC sites.