Staff Report

Date: 8/24/2020

TO: Mayor and City Council

THROUGH: Steve Powers, City Manager

FROM: Peter Fernandez, PE, Public Works Director

SUBJECT:

Supplemental Report
Additional information regarding right-turn lane on Broadway Street NE at Pine Street NE.

Ward(s): 1, 5
Councilor(s): Kaser, Ausec
Neighborhood(s): Highland
Result Area(s): Safe and Reliable Infrastructure

ISSUE:

Additional information regarding right-turn lane on Broadway Street NE at Pine Street NE.

RECOMMENDATION:

Information only.

SUMMARY:

Council requested additional information in response to issues raised at the August 10, 2020, meeting regarding the proposed northbound to eastbound right-turn lane at the intersection of Broadway Street NE at Pine Street NE.

FACTS AND FINDINGS:

History
The proposal for the right-turn lane at Broadway Street NE and Pine Street NE began in 2010 when

staff received a request from a resident, Gary Obery, to consider a road diet on Broadway Street NE between Pine Street NE and Salem Parkway NE. The City was preparing to repave Broadway Street NE (funded through the 2008 Transportation Bond) and Mr. Obery asked if the existing four-lane undivided striping could be replaced with a three-lane configuration consisting of one travel lane in each direction, a center left-turn lane, and bike lanes. While staff was supportive of the proposal, there was concern that the proposed striping change had not been analyzed and that costs to make changes to the traffic signals on each end of the street segment were not included in the original repaving project costs.

Staff agreed to work with Mr. Obery-an engineer with the Oregon Department of Transportation (ODOT)-to analyze the road diet concept. Staff conducted traffic counts and Mr. Obery provided the intersection capacity analysis. Based on the analysis, a northbound right-turn lane was needed to mitigate the capacity impact of the road diet to avoid backing up northbound traffic on Broadway Street NE. Staff agreed to look for funding and, when funding became available, to construct the road diet and right-turn lane.

In 2015, ODOT's All Roads Transportation Study (ARTS) program identified this section of Broadway Street NE as a safety concern and allocated federal funding to construct the project. The City Council adopted the project in its entirety into the Capital Improvement Plan and Construction Budget in 2017, including allocation of matching funds. The City and ODOT entered into an Intergovernmental Agreement (IGA) which includes the following description:

> Under such authority, State and Agency agree to Agency delivering the Broadway Street at Pine Street (Salem) project, hereinafter referred to as "Project." Project includes modifying left turn signal heads to protected permissive (flashing yellow arrow); converting the four (4) lanes roadway to three (3) lanes with a center turn lane between Tryon Street and Pine Street; and installing a right-turn lane on the south leg of the Broadway Street at Pine Street intersection.

If Council chooses not to proceed with construction of the right-turn lane, staff will engage with ODOT to amend the project IGA to approve the reduction in scope. Staff anticipates that ODOT will approve the revised project scope but does not know if it will result in reduced funding for the project.

The proposed project in its entirety was presented to the Highland Neighborhood Association at their October 10, 2019, meeting. Staff did not receive any formal comments on the project from the neighborhood association. The meeting minutes indicate that there was concern expressed about the compatibility of the right-turn lane with the area; however the minutes indicate that "after having researched and looked at the future growth of the area, [the Neighborhood Association] felt that it will help with the capacity at [the intersection]."

Benefits of the Project

1. The American Association of State Highway Transportation Officials (AASHTO) *Highway Safety Manual* considers a right-turn lane a safety improvement. ODOT considers a right-turn lane a crash reduction improvement and gives credit when evaluating and scoring projects for use of their Highway Safety Funding.

2. The right-turn lane will help reduce congestion at the intersection, which reduces the likelihood of cut-through traffic into the neighborhood.

3. Providing a right-turn lane on only one leg of the intersection to address the turning movement most impacted by the conversion of Broadway Street NE from four lanes to three lanes limits the overall width of the intersection and minimizes impacts to the surrounding properties and the neighborhood.

Question Raised

At the August 10, 2020, Council meeting, Mr. Obery and his wife, Angela Obery, raised concerns about the proposed right-turn lane portion of the Broadway Street NE road diet project. They provided a letter of concerns and expressed additional concerns to Council during the meeting. No other questions or concerns have been received as of the writing of this staff report. The following is a listing of those concerns and staff's response:

1. Concern - Less space for Josey's Café, significant impacts to the parking lot.

   Staff Response - The café currently has 17 marked parking spaces. The project will remove 4 parking spaces. Based on the size of the café, City code requires a minimum of 6 parking spaces.

2. Concern - Less space for trees, sidewalks, benches, etc. that might otherwise be built.

   Staff Response - The project proposes to purchase the least amount of right-of-way to minimize impact to the adjacent properties. Two street trees will be removed due to construction of the project, and no additional street trees are planned. If additional space is desired for trees within the right-of-way, additional right-of-way will be needed. The sidewalk will be constructed the same width that currently exists and will meet City standards. The intersection ADA facilities will also be upgraded with the project.

3. Concern - More impermeable surface and higher stormwater runoff flows.

   Staff Response - Much of the widening for the right-turn lane is already an impermeable surface (Josie's parking lot). The amount of new impermeable surface is very small.

4. Concern - Higher speeds for northbound through and right turning vehicles, which is a hazard for bicyclists and pedestrians.

Staff Response - The right-turn lane is relatively short to minimize property impacts. Vehicles will be slowing to enter the turn lane and make the turn. There will be no impact to vehicle speeds. Per the AASHTO *Highway Safety Manual*, construction of a right-turn lane is considered a crash safety measure and will have a positive effect on bicycle and pedestrians using the intersection.

5. Concern - The right-turn lane works counter to the goals for pedestrian safety and neighborhood cohesiveness of the pedestrian safety.

   Staff Response - The ODOT ARTS program considers the right-turn lane and road diet as a safety improvement project based on the AASHTO *Highway Safety Manual*. The *Highway Safety Manual* indicates that adding a right-turn lane at the intersection will have a 4 to 9 percent reduction in all types of crashes (vehicle, pedestrian, and bicycle), and a road diet will have a 27 percent reduction in all types of crashes.

6. Concern - The right-turn lane encourages more traffic on Broadway and on Pine. Trips destined to Keizer or I-5 should use Liberty Street instead of Broadway.

   Staff Response - Staff does not agree that construction of the right-turn lane at the Pine Street NE intersection will encourage more traffic to use Broadway Street NE. No other changes to Broadway's current two-lane cross-section are proposed south of the Pine Street intersection to indicate to motorists that this is a preferred route to Liberty Street.

7. Concern - The right-turn lane pits the livability of the Highland neighborhood against the mobility of folks living outside the neighborhood if not outside of Salem.

   Staff Response -The City's *Neighborhood Traffic Management Plan* speaks to the desirability of improved capacity on arterial streets to reduce cut-through traffic on neighborhood streets. The proposed right-turn lane will reduce congestion at the intersection of two minor arterial streets. Congested intersections lead drivers to consider alternate routes, including using local streets as cut-through routes. Cut-through traffic tends to be higher speed traffic, adversely impacts livability of residential neighborhoods, and is a greater danger to residents.

8. Concern - Increased risk at the intersection for pedestrians. Many apartments where people walk to shopping and to the school.

   Staff Response - The proposed right-turn lane removes pressure to the driver to hurry the turn because they are blocking other through drivers. During school hours, Pine Street NE, at this intersection, is within the 20-mph school speed zone.

9. Concern - Financial impact of widening the road. Increase in paving maintenance, sweeping,

and plowing.

Staff Response - The basis for this concern is uncertain. The amount of new pavement is negligible.

10. Concern - The right-turn lane is part of a future plan to build a third bridge

Staff Response - This project is not-and never has been-associated with the Salem River Crossing project. The discussion for installing the right-turn lane began in 2010 to mitigate the traffic changes resulting from the proposed Broadway Street NE road diet.

11. Concern - Traffic analysis shows that even without the right-turn lane, the intersection will operate under maximum volume-to-capacity ratio of 0.90 specified in the *Salem Transportation System Plan*.

Staff Response - Per the Federal Highway Administration's *Traffic Monitoring Guide*, traffic volumes can vary 10 to 15 percent daily. ODOT also uses seasonal traffic trend factors to account for changes in monthly traffic volumes. When the traffic analysis was done in 2010, the right-turn lane was identified as a need. The latest analysis shows lower right-turn lane volumes. The fact that traffic volumes fluctuate shows that, depending on the day and month of the count, the need for the right-turn lane will still exist. With continued increases in Salem's population and vehicle miles traveled, staff expects the need to continue to grow.

12. Concern - Traffic volumes peaked on Broadway Street in 1999. Without additional lanes farther south on Broadway, there is no way for traffic volumes on Broadway up at Pine to increase significantly. The flow on northbound Broadway is limited by the left turns at Hood Street.

Staff Response - It is unclear if left turns at Hood Street NE have a significant impact to the Broadway at Pine intersection. The capacity of northbound traffic at Broadway and Pine is limited by the number of travel lanes approaching the intersection, and by downstream intersections like Hood Street NE, but not simply by the presence of the left turns. There is additional traffic capacity on Broadway Street NE and at the intersections to the south of Pine Street NE.

Staff is not aware of any data available from either the City or ODOT that supports the conclusion that traffic volumes peaked in 1999. In general, vehicle miles travelled in Oregon have increased over the years. According to ODOT, in 1999 there were 34,680,000,000 vehicle miles travelled in Oregon. In 2019 that number rose to 35,976,900,000. Traffic volumes are expected to grow on Broadway Street NE.

13. Concern - Overbuilt street and intersections offer no economic advantage for a city, even when

the projects are largely constructed with state or federal dollars. Overbuilt streets are associated with inefficient land use, higher crash rates, lower property values, lower tax revenue, and higher maintenance costs.

Staff Response - Staff agrees, which is why the project proposes a road diet. Staff are proposing a single right-turn lane on one of the four approaches to the intersection. The turn lane identified in the original analysis will help improve operation and safety at the intersection.

14. Concern - Three blocks from the Broadway at Pine intersection is the traffic calming project at Pine and Maple which was done to slow traffic. Seems like a conflict [in priorities].

Staff Response - The Pine Street NE and Maple Avenue NE project was not a traffic calming project. It was a project to improve pedestrian and bicycle crossing safety at the intersection. The median island may provide some speed reduction on Pine Street NE. The proposed project puts into place traffic calming and safety measure by reducing the number of through lanes and utilizing a right-turn lane to better project pedestrians and reduce the likelihood of traffic accidents.

15. Concern - The turn lane hurts livability of the neighborhood.

Staff Response - This project will help neighborhood livability by keeping vehicles on the arterial streets (both Broadway Street NE and Pine Street NE are minor arterials) and reduce potential for cut-thru traffic into the neighborhood to avoid congestion at the intersection.

BACKGROUND:

This report provides additional information requested by Council regarding the proposed northbound to eastbound right-turn lane at the intersection of Broadway Street NE at Pine Street NE.

Robert D. Chandler, PhD, PE
Assistant Public Works Director

Attachments:
None