

PBOT

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From: Nick Falbo, Sr. Transportation Planner, Portland Bureau of Transportation

Subject: **DRAFT SW Capitol Highway Rose Lane Project
– Impact Monitoring & Mitigation Memo**

Introduction

Through the [Rose Lane Project](#), the Portland Bureau of Transportation (PBOT) is giving buses and streetcars priority on the road, helping more Portlanders get where they need to go more reliably and quickly. The Rose Lane Project was adopted by City Council in February 2020.^{1,2}

This memo documents a monitoring and mitigation approach for to the [SW Capitol Highway Rose Lane Project](#), which has been a publicly proposed component of the citywide Rose Lane Project since its concept phase in 2019.³

The project will add Bus and Turn (BAT) lanes in both east and west directions on Capitol Highway approaching SW Sunset Boulevard through reallocation of general-purpose travel lanes. People driving may still use these lanes to turn into driveways and intersections along the street.

This proposal was designed to help buses bypass congestion on SW Capitol Highway, and it is expected to support bus speed and reliability as travel activity continues to grow into the future from the impacts of COVID-19. The design also prioritizes local access to businesses, residences, the library, Ida B. Wells High School, and other important destinations in Hillsdale Town Center.

PBOT is taking a pilot approach to the Rose Lane vision.

This Rose Lane Project will be tested with low-cost, quick build implementation, then its performance will be tracked to measure success. This way, PBOT can easily change or remove pilots that don't meet the project's goals. We will also learn if travel behavior changes in response to faster, more reliable transit.

Most Rose Lane pilots will be in place for three to five years, though we may make successful pilots

¹ PBOT. About the Rose Lane Project. 2022. <https://www.portland.gov/transportation/rose-lanes/about-rose-lanes>

² City of Portland Archives. 37481: Rose Lane Project Recommendations Resolution. 2020. <https://efiles.portlandoregon.gov/Record/13520882/>

³ PBOT. SW Capitol Highway Rose Lane Project. 2022. <https://www.portland.gov/transportation/pbot-projects/construction/sw-capitol-highway-rose-lane-project>



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Impacts of COVID-19 on travel activity

Since 2020, COVID-19 has impacted travel activity, traffic volumes, and transit ridership. These have been influenced by stay-at-home orders that limit mobility, remote-work and remote-school policies that reduce common commute trips, and transit service cuts and staffing limitations that restrict transit utility and ridership.⁴

- Traffic counts conducted in 2021 showed a 49% decrease in traffic volume in 2021 on SW Capitol Highway compared to pre-COVID-19 conditions.⁵
- 2021 transit ridership volume on the nine buses that serve SW Capitol Highway decreased 50-60% compared to pre-COVID-19 levels.

Since the initial downturn in travel activity, PBOT has observed increases in both traffic volumes and transit ridership.

- Traffic counts conducted at the same location on SW Capitol Highway in 2022 showed a 13% traffic volume increase from 2021 levels.⁶
- Transit ridership volume in Spring 2022 has increased 14% from Fall 2021 on the nine buses that serve SW Capitol Highway.^{7,8}

As workplaces continue to institute in-person work policies and schools resume on-site learning, we expect to see continued increases in travel activity. However, the speed, scale, and characteristics of the increases are uncertain.

- The scope of the economic downturn, increasing fuel prices, ongoing staffing challenges, and the extent of continued remote or hybrid work are all likely to shape the future of travel behavior.
- This project is a down payment on the future we want, helping our most important transit lines to keep running smoothly as traffic returns and demand grows.
- Transit remains one of the most efficient, sustainable, and equitable ways to move people around our growing city. Making transit better and getting more people to choose the bus or train over driving alone is critical for achieving our climate and transportation justice goals.

Summary of community engagement

The SW Capitol Highway Rose Lane Project proposal emerged in the citywide Rose Lane Project concept in 2019 at a community open house. PBOT consultants identified this segment because of its significant transit delay for a high number of buses and riders, and they proposed potential design solutions to reduce this delay.

⁴ The data in this section can be found in [PBOT's Response to Hillsdale Community Stakeholder Questions](#), unless indicated.

⁵ PBOT conducted 24-hour traffic counts on SW Capitol Highway east of SW Terwilliger. October 2014 traffic counts recorded 20,564 vehicles/day. May 2021 traffic counts recorded 10,400 vehicles per day, a reduction of 49%.

⁶ In May 2022, traffic counts recorded 11,740 vehicles per day, an increase of 13% compared to 2021.

⁷ This increase was calculated by comparing the compiled weekly ridership counts for the nine bus lines that serve SW Capitol Highway (bus lines 39, 44, 54, 55, 56, 61, 64, and 92) in Fall 2021 and Spring 2022. The increase occurred in around six months.

⁸ TriMet. Ridership and Performance Statistics: Route Ridership Reports. <https://trimet.org/about/performance.htm#route>

Community engagement timeline

- **December 2019:** Rose Lane Project open houses available online and in person shared the vision publicly for review and comment. The vision included the SW Capitol Highway Rose Lane corridor concept.
- **Winter 2019-20:** An online survey also available in hard copy at the open houses collected public feedback on Rose Lanes from more than 2,000 people.
- **February 2020:** City Council Adoption of the Rose Lane Project secured support for the initiative, bolstered by broad community support.
- **Winter 2020-21:** The Rose Lane Project online open house introduced more details about proposed Rose Lanes, including the SW Capitol Highway Rose Lane Project. A public survey gathered feedback from more than 1,300 people.
- **March 2021:** Meetings with the Southwest, Neighborhoods, Inc. (SWNI) Transportation Committee shared the proposal with local Southwest Portland stakeholders and solicited feedback.
- **March-April 2022:** Presentations to specific stakeholder groups in Hillsdale informed PBOT of key community concerns to be addressed through monitoring and mitigation.

What we learned

Community feedback identified key concerns related to the project that we hope to address in this memo:

- **Concerns about impacts during construction.** Many in the local business community have concerns about the construction process impacting business access during the construction phase of the project.
- **Concerns about traffic operations at key intersections.** Community members have concerns about congestion and long traffic queues resulting in unwanted behavior or excessive delays. In particular, the intersections of SW Terwilliger Boulevard & Capitol Highway; and SW Sunset Boulevard & Capitol Highway are key areas of concern.
- **Concerns about traffic routing onto local neighborhood streets.** Several residents have experienced cut-through traffic resulting from system disruptions (such as crashes or downed trees), have expressed concerns that changes to the street may result in excessive use of local streets by drivers avoiding travel delays on SW Capitol Highway.

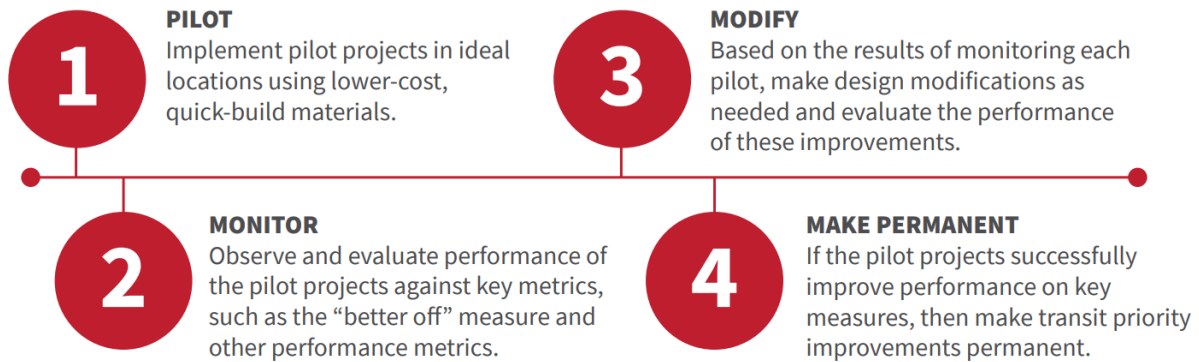
In a letter to PBOT, Hillsdale community stakeholders raised additional questions and concerns about the project, including questions about the fundamental need for the project and concerns regarding the balance of benefits and impacts. We responded to the community's questions, and we included additional traffic data to support ongoing understanding of the project, context, and opportunity.

- For more information, read [PBOT's Response to Hillsdale Community Stakeholder Questions](#).⁹

⁹ PBOT. SW Capitol Highway Rose Lane Project – Response to Community Questions. 2022.
<https://www.portland.gov/sites/default/files/2022/pbot-response-to-hna-stakeholders-march-2022.pdf>

Monitoring and mitigation

The SW Capitol Highway Rose Lane Project will be implemented using an incremental pilot approach. The pilot approach is an opportunity to deploy change quickly with low-cost treatments, anticipate and monitor real-world impacts, and respond with design modifications as needed.



Monitoring and mitigation schedule

PBOT expects to collect monitoring data on the following schedule:¹⁰

- **Pre-construction data collection.** Prior to project construction, PBOT will conduct intersection turning movement counts and traffic speed and volume counts at key monitoring locations.
- **Initial post-project data collection.** Two to three months after construction is completed, the same data collection will be gathered and compared to pre-construction data. This data will be used to flag any early signs of unwanted behavior.
- **Follow-up post-project data collection.** Six months after construction is completed, the same counts will be conducted and compared to pre-construction data. PBOT will use the results of this comparison to spot any locations that have passed thresholds for mitigation and identify potential modifications to address those impacts. PBOT will share this information with the community for review and discussion.

Post-project monitoring may inform how long the pilot phase should last and what modifications are needed to make the project permanent. The pilot is expected to be in place for three to five years, but PBOT may make a successful Rose Lane pilot permanent sooner.

¹⁰ PBOT is committed to collecting necessary and useful monitoring data during the pilot phase of this project. We will conduct counts both prior to construction and after construction is completed, but the monitoring schedule and frequency may be adjusted based on what we observe, what we find out from local stakeholders, and any modifications we may make. We will also conduct in-person observations as needed.

Construction phase accommodations

Construction is expected to be relatively quick, completed within two months. Construction is limited to striping and signage changes in the existing roadway. There is no pavement or concrete work associated with this project, and private properties will not be physically impacted by construction.

Accommodations

- Weekly construction updates will be sent to community and business organizations and interested parties via email.
- During construction, driveways and sidewalks will remain open to the greatest extent possible.
- Construction will be prioritized for off-peak hours to minimize disruptions.
- Construction on the commercial main street portion of SW Capitol Highway will be done within four weeks, weather dependent.

Monitoring traffic operations on major streets and at key intersections

As part of implementation, PBOT will collect traffic counts and intersection movement data to monitor traffic on key arterial and collector streets and at key intersections to understand overall traffic patterns now and in the future.

Monitoring traffic on major streets

Traffic monitoring on arterial streets is intended to help PBOT understand and document traffic flow changes after construction. Traffic volume changes on major streets are possible, and some are anticipated in pre-project traffic modeling. Adopted City transportation policies allow for re-routing of traffic on collector and arterial streets, and changes to travel routes on these streets are not considered impacts that require mitigation. People self-select routes for many reasons, including changes in where they travel to and from, to avoid construction, or to avoid traffic in general.

PBOT will conduct 24 hour counts of traffic volume and speed on the following street segments prior to construction and at necessary intervals after construction is completed:¹¹

- SW Barbur Blvd north of Capitol Hwy
- SW Capitol Hwy east of Terwilliger Blvd
- SW Capitol Hwy west of Sunset Blvd
- SW Terwilliger Blvd north of Capitol Hwy
- SW Terwilliger Blvd north of Burlingame Ter
- SW Bertha Blvd south of Bertha Ct
- SW Sunset Blvd north of Capitol Hwy

¹¹ Based on community feedback and observations post-project, PBOT may collect data at additional locations if necessary.

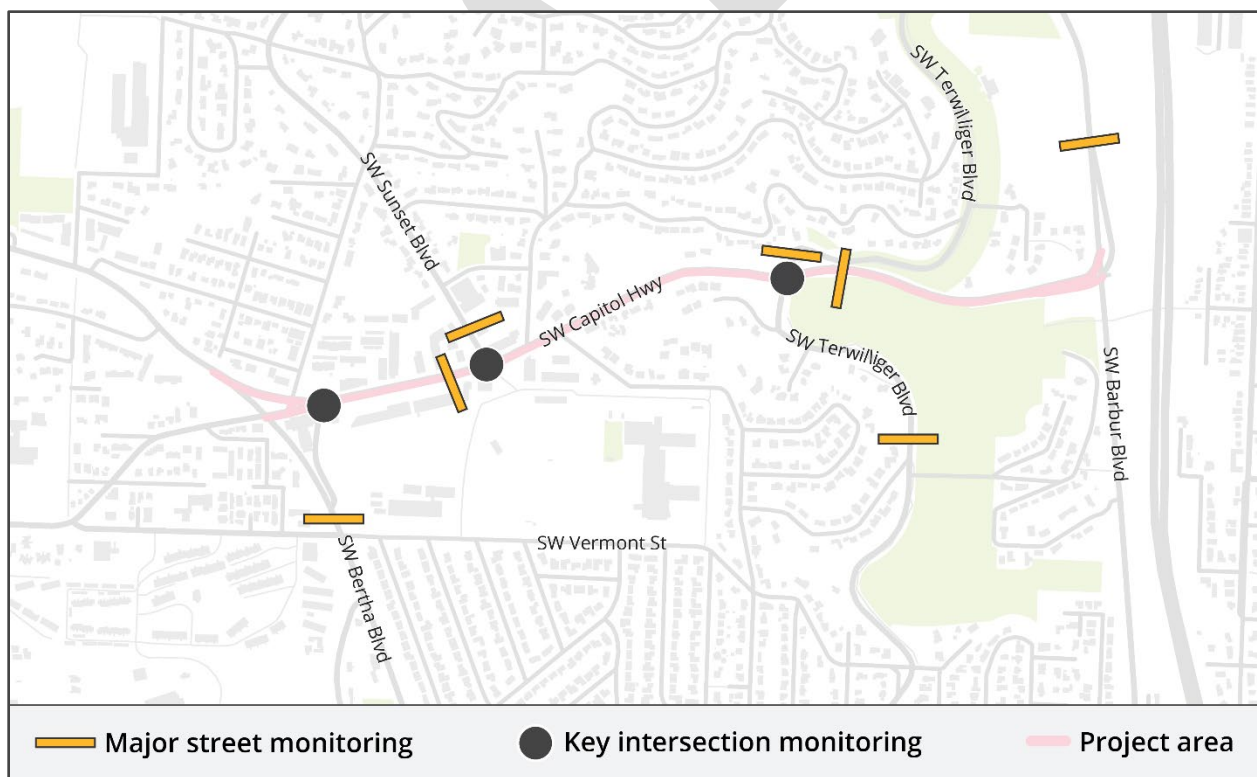
Monitoring movements at key intersections

By monitoring intersection operations, PBOT will identify major changes to turning movements or any potential operational issues. Additional on-site observation may be necessary to verify intersection delay or problematic queue lengths. Monitoring key intersections will inform our understanding of changes to traffic flows during peak hour travel and the impacts of those changes on street traffic volumes.

PBOT will conduct peak hour turning movement counts at the following intersections prior to construction and at necessary intervals after construction is completed:¹²

- SW Capitol Hwy & Terwilliger Blvd
- SW Capitol Hwy & Sunset Blvd
- SW Capitol Hwy & Bertha Ct

Map of major street and key intersection monitoring locations



¹² Based on community feedback and observations post-project, PBOT may collect data at additional locations if necessary.

Potential Mitigation Tools

To address operational issues on major streets and at key intersections, the following mitigation tools may be appropriate:

- Traffic signal timing adjustments to accommodate changes in critical movements
- Traffic signal detection modifications to respond to observed operational issues
- Striping and marking adjustments to lane configurations

Monitoring and mitigation on local streets

PBOT cares about local streets and prioritizes them for both residential access and the comfort and safety of people walking, bicycling, and rolling. We understand the importance of lower traffic volumes and lower speeds on local streets, particularly when roadways are shared among all users.

Based on our traffic route modeling and because of the limited local service street connectivity in the area, changes in travel are not expected to increase traffic on local streets. However, as part of implementation, PBOT will perform traffic counts on key local streets of concerns. Counts will be conducted to identify any issues and guide potential mitigation needs.

Monitoring

Traffic monitoring on local streets will allow PBOT to identify unacceptable traffic flow changes onto local streets after construction is completed.

Control street monitoring

Select streets in the City of Portland will be monitored to help PBOT understand overall general traffic volume changes during these dynamic times. In Southwest, SW Shattuck Drive was selected as a control street monitoring location. These counts will be used as a benchmark for interpreting monitoring data on potentially impacted streets.

Impact monitoring

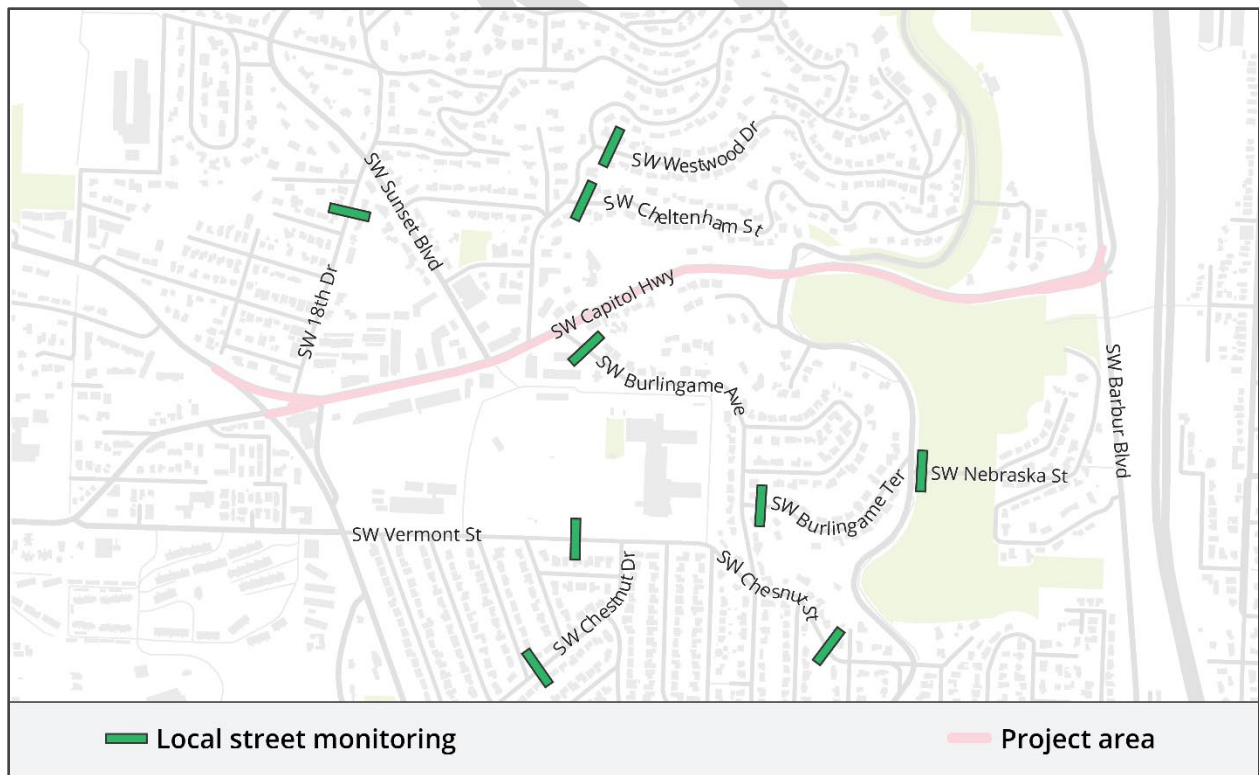
PBOT will conduct 24 hour counts of traffic volume and speed on the following street segments prior to construction and at necessary intervals after construction is completed.¹³

¹³ Based on community feedback and observations post-project, PBOT may collect data at additional locations if necessary.

Local street impact monitoring locations

Monitoring location	Local street classification
	Planned Neighborhood Greenway
SW Burlingame Ave south of SW Capitol Hwy	○
SW Burlingame Ter west of Terwilliger Blvd	○
SW Cheltenham St east of Cheltenham Ct	
SW Chestnut Dr east of 13 th Ave	○
SW Vermont St west of Chestnut Dr	○
SW Nebraska St east of Terwilliger Blvd	○
SW 18 th Dr south of Sunset Blvd	
SW Westwood Dr east of Cheltenham Ct	○
SW Chestnut St west of Terwilliger Blvd	○

Map of local street impact monitoring locations



Impact Thresholds

Local Streets provide local access and circulation for traffic, while often functioning as through routes for pedestrians and bicyclists. These streets are not designed for through motor vehicle travel or to serve as alternative routes to arterial and collector streets.

To support safe and comfortable travel for pedestrians and bicyclists, PBOT has adopted speed and volume thresholds for our Neighborhood Greenway streets.¹⁴ Neighborhood Greenways are intended to prioritize people walking, bicycling, and rolling. Most local streets of concern are planned neighborhood greenway streets. For monitoring purposes as part of the SW Capitol Highway Rose Lane Project implementation, the adopted Neighborhood Greenway thresholds will be used to identify unacceptable traffic levels and speeds on local streets:

Traffic volume thresholds:

- Maximum traffic volume of 2,000 vehicles per day
- Preferred local street traffic volume of less than 1,000 vehicles per day

Traffic speed thresholds:

- 85 percent of monitored speeds at 20 miles per hour or lower

Many local streets in the project area do not have sidewalks. These roadways are shared among all users, so the impacts of traffic volume and speed may be more significant. To prioritize the comfort and safety of pedestrians and people bicycling on these shared streets, PBOT may consider lower thresholds based on adopted guidelines in certain locations if necessary.^{15,16}

Mitigation Tools

PBOT has a variety of tools to mitigate unacceptable impacts, and these tools are deployed depending on the nature and severity of an impact. We will consult with local stakeholders on the potential use of these tools to address issues as a part of post-implementation reporting.

The following mitigation tools may be appropriate, depending on the monitored impact:

¹⁴ PBOT. Portland's Neighborhood Greenway Assessment Report. 2015.

https://www.portland.gov/sites/default/files/2022/ng_assessment_report_web_0.pdf

¹⁵ PBOT. B.5.4.3: Pedestrian Shared Street. Portland Pedestrian Design Guide. 2022.

<https://www.portland.gov/sites/default/files/2022/PBOT%20Pedestrian%20Design%20Guide%202022.pdf>

¹⁶ Lower thresholds will be considered based on community feedback and PBOT observations after construction has been completed.

Monitoring and Mitigation Tools

Monitored impact			Mitigation tool
Traffic speed	Traffic volume	Other	
○	○		Pedestrian shoulder – area designated for pedestrians next to roadway
	○		Advisory shoulder (<i>pending FHWA approval and PBOT experimentation</i>)
○			Speed hump – reduces vehicle speeds
○			Chicane – forced horizontal shift in the roadway
○	○		Pinch point – strategic narrowing of the roadway to slow traffic
	○	○	Pedestrian crossing improvement – alerts vehicle and bicycle traffic of pedestrian crossing presence
○		○	Traffic control change – such as a stop sign
	○		Traffic diverter – discourages cut-through traffic
	○		One-way restriction – may limit overall traffic volume
	○	○	Minor signal improvement – such as detection or timing updates

Project implementation timeline

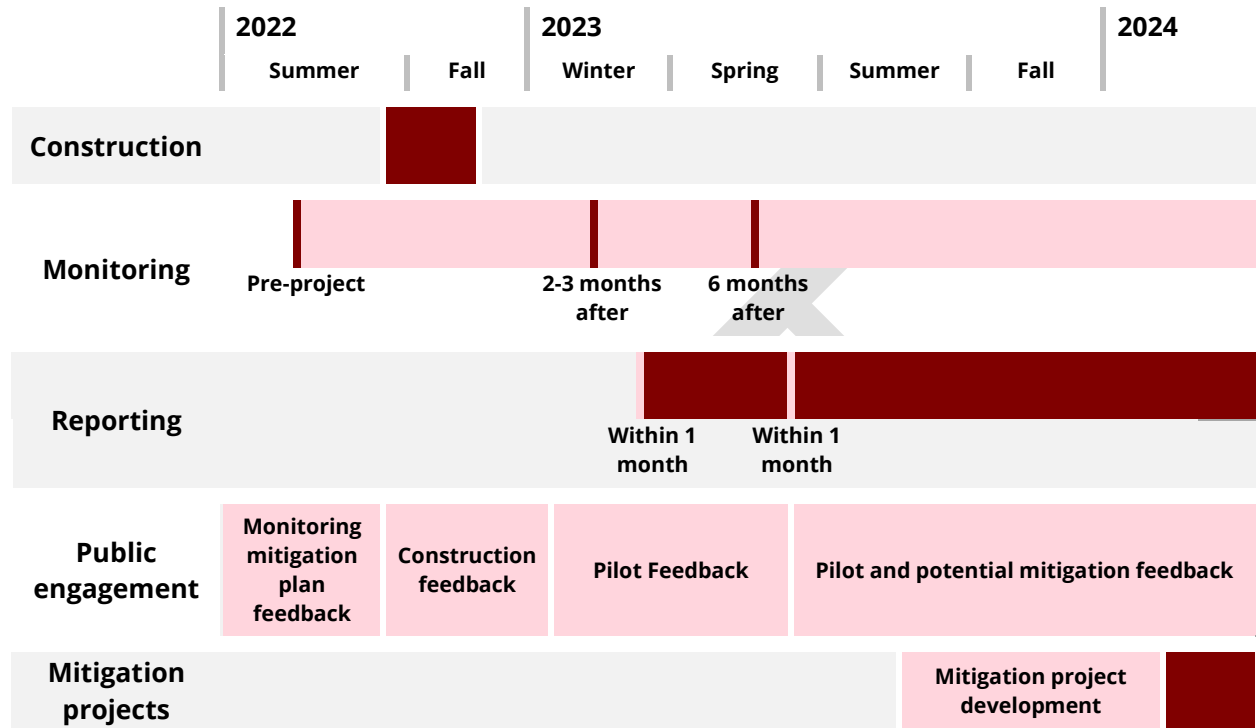
PBOT expects to conduct counts at the intervals described in this memo. We are committed to collecting data both prior to construction and after construction has been completed, but the monitoring schedule and frequency may be adjusted based on what we observe and what we learn from local stakeholders.

Within one month of completing post-project data collection, PBOT will publicly report the results. These results will be paired with an interpretation of the data and potential mitigation responses we have identified. This information will be shared with community organizations and interested stakeholders via the [SW Capitol Highway Rose Lane Project website](#), email updates to interested parties, and through attendance at community meetings.¹⁷ We will welcome community input on our reporting, interpretation, and any potential mitigation tools identified.

The expected timeline for project implementation, including monitoring and mitigation during the pilot phase, is below:

¹⁷ PBOT. SW Capitol Highway Rose Lane Project. 2022. <https://www.portland.gov/transportation/pbot-projects/construction/sw-capitol-highway-rose-lane-project>

Expected project implementation timeline¹⁸



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