Hillsboro
Community Development

Purpose and Need:

The 185th Avenue MAX grade separation project has been pending for Washington County, the Cities of Beaverton and Hillsboro and TriMet ever since the Westside MAX line opened in September 1998. According to the 1994 Environmental Impact Statement (EIS), Westside MAX light rail trains could safely cross SW 185th Avenue at-grade until about 2015. After 2015 the combination of vehicular traffic, pedestrian crossings and train traffic signal pre-emption would increase to the point that the intersection of SW 185th Avenue and W Baseline Road would fail.

Fast forward to the 2024 MAX Better Red transit project, which increased the rush hour train crossing frequency from 8-9 trains per hour to 16 trains per hour. Current traffic analysis is showing an unmitigated double digit increase in bus, pedestrian and vehicles delays and queues in the corridor.

While the permanent solution for the at-grade crossing would be to construct a MAX overcrossing of SW 185th Avenue, the project partners propose to construct a technological solution with Transit Signal Priority and a Better Bus southbound slip lane that can reduce pedestrian, bicycle, train, bus and vehicle delays in the 185th Avenue corridor through the implementation of an intelligent AI-powered interconnected traffic and rail controller signaling system. The interconnected traffic and rail signaling system will help to extend the useful life of the at-grade crossing and maintain pedestrian and bicycle safety until such a time as the permanent solution is funded, designed and constructed.

Project Elements:

1. Install intelligent sensors, radars and cameras on 34 existing traffic signal mast arms along a 7,500-foot section of the SW 185th Avenue and W Baseline Road corridors. Use existing fiber cabling where possible, fill known fiber cabling gaps and upgrade network infrastructure hardware as required.
2. Hardwire 8 traffic signals together into a coordinated signaling system that can operate independently according to traffic signal advance detection sensors.
3. Conduct a traffic signal and rail controller network diagnostic to bench test traffic and rail controller programming for both pre-preemption and post-preemption events.
4. Reconstruct the northwest corner of the SW 185th Avenue and W Baseline Road to build a bus preferential treatment and slip lane to allow southbound through bus movements out of the right turn lane.
5. Implement Transit Signal Priority along the SW 185th Avenue corridor throughout the project area.
6. Implement new pre-preemption and/or post-preemption traffic controller signal programming. Monitor results and refine programming as necessary. Conduct a before and after study to report on findings and results.

Objectives:

1. Adjust traffic signal cycle lengths in real time to reduce delay for all users
2. Ensure pedestrians are not stranded on corners during pre-emption events
3. Allow southbound through bus movements in the right turn lane
4. Evaluate pre-preemption and post-preemption strategies and bench test appropriate solutions.

TABLE 1. PROJECT FINANCIALS

FUNDING SOURCE	AMOUNT
RFFA Grant	$4,572,741
City of Hillsboro Local Match	$175,000
MSTIP Opportunity Fund Match	$175,000
TriMet Local Match	$350,000
TOTAL PROJECT COST	**$5,272,740**

Effective Local Match = 13.28%

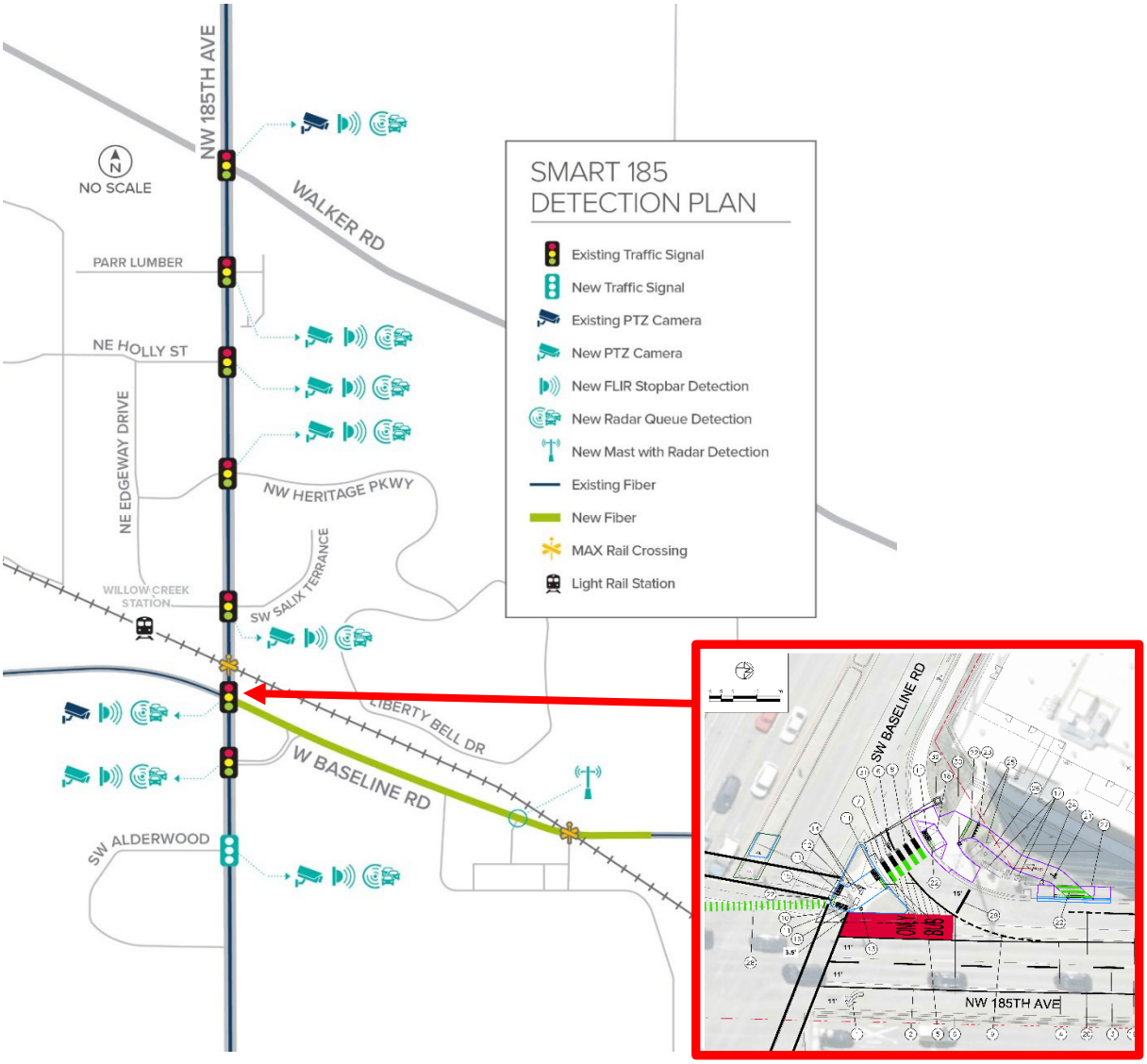

FIGURE 1. CONCEPTUAL DESIGN