

OR18 McMinnville Spur: South Yamhill River Bridge

OVERCOMING UTILITY CONFLICTS AND SUPPLY CHAIN CONSTRAINTS

AGC | ODOT Annual Meeting

February 9, 2024

Presenters:

Scott Nelson, ODOT

Eric Holland, Wildish





PROJECT BUSINESS CASE

- Originally constructed in 1951
- 990' total length
- 32 timber spans and 120 timber piles
- Considerable deterioration of timber structure
- Narrow width limited ability to improve railing
- Critical link to McMinnville Hospital

PROJECT OVERVIEW

- Highway to remain open during construction
- Highway alignment unchanged
- Detour bridge constructed on west side
- Work bridge constructed on east side
- New structure length of 970'
- 5 span steel bridge (250' center span)
- New structure to support hung 12" water line and 16" sanitary force main



WORK BRIDGE AND EXISTING SANITARY FORCE MAIN CONFLICT IDENTIFIED

- Existing sanitary planned to remain until new system under bridge was complete.
- High risk of damage to existing line with the work bridge pile installation.



WORK BRIDGE CONSTRUCTION ON HOLD WHILE A SOLUTION WAS FOUND



Alternative Analysis

Multiple alternative considered, including a new structure for the force main.



Location

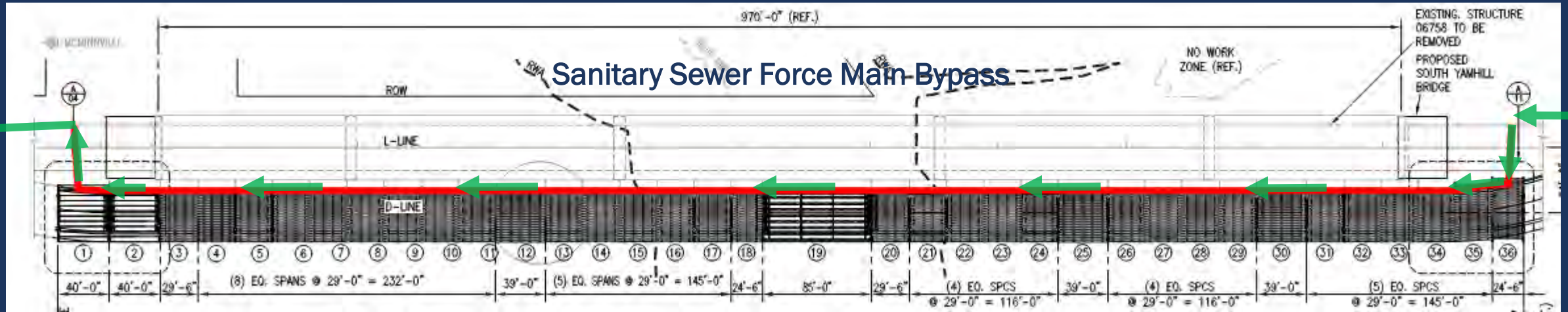
Line needed to run between Cumulus and Brooks St, approx 2,360 ft.



Material Sourcing

Pipe materials were in short supply with long lag times.

DETERMINING THE BEST SOLUTION FOR THE TEMPORARY LINE



Temp pipe location needed to minimize wasted material and maximize protection from traffic.

CROSSING CONFLICTS AND TRAFFIC CONTROL

- Connections from permanent to temporary line needed to consider existing and future conflicts
- One lane of traffic required to remain open



CONNECTION AND TESTING OF TEMPORARY LINE TO EXISTING



Many Fused Joints and Complex Coupling.



Difficult Connections and Multi-stage Testing.

LIMITED ROOM FOR NEW CONSTRUCTION

Permanent piles were very close to the bypass.



DISASTER AVOIDED



Pile driver found the abandoned force main.



Bank scour exposed the abandoned force main.

NEW FORCE MAIN INSTALLED AND OPERATIONAL IN 2024





Questions...