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Acknowledgments Contractor: Kubricky Construction Corporation | Designer: VHB, Vanasse Hangen Brustlin, Inc.

Project Purpose

The purpose of the project is to address the structural deficiencies of two rail-highway bridges in downtown Middlebury. Additionally, this project addresses rail safety concerns, drainage issues, rail vertical and horizontal alignment, and clearances for the design life (100 years).



Figures: Old Bridge Deterioration, Pour Drainage of Old Rail

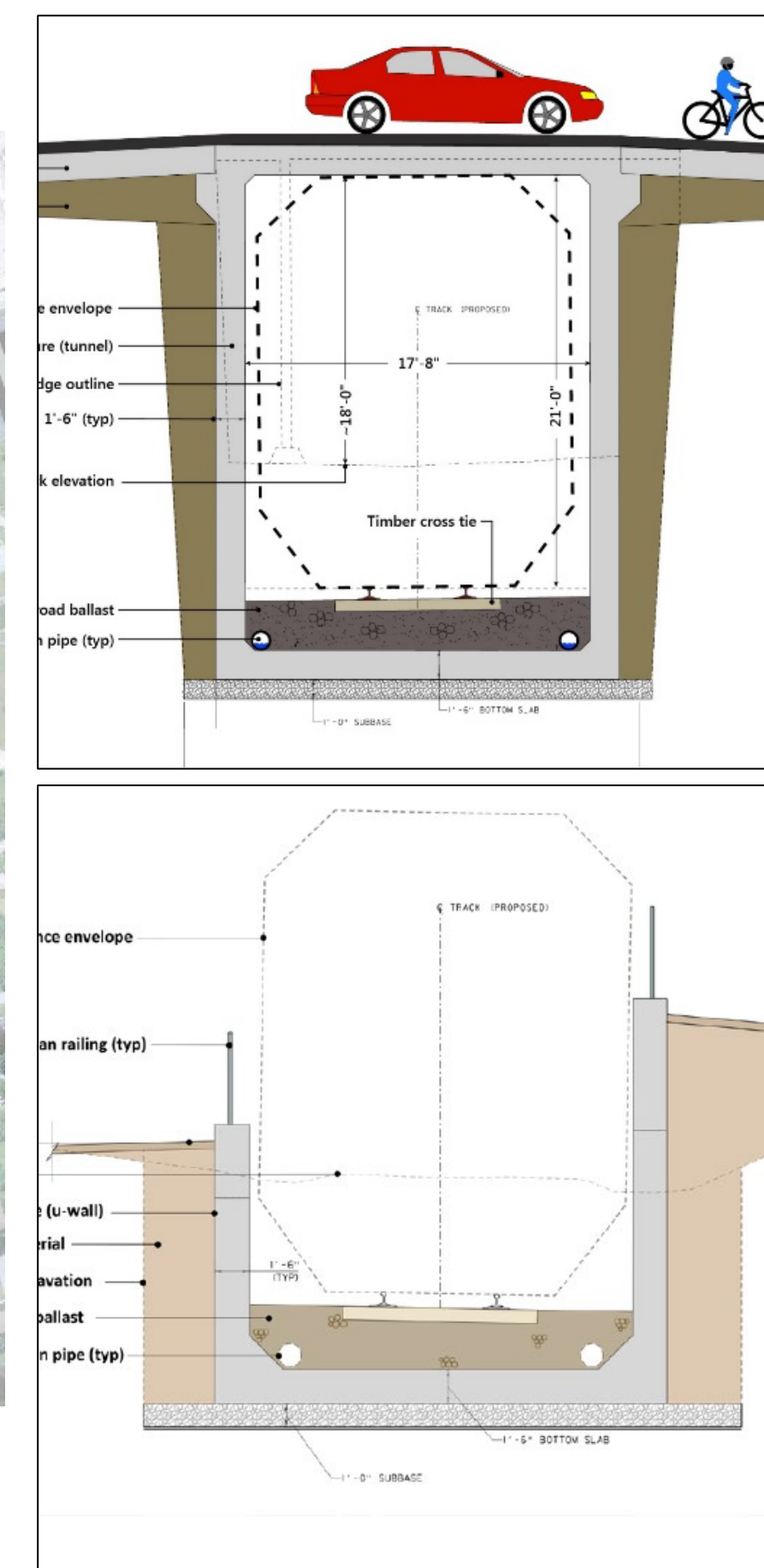
Planning

Replacing the bridges with a 350-foot tunnel, able to run under both roads and expand the town's Park between the roads, created a safer alignment for the rail, provided appropriate vertical and horizontal rail clearances, provided soil contamination clean up, mitigated storm water drainage issues, and increased the Park size downtown.

A lot of planning and preparation was needed to minimize the rail and road closure duration. Outside of the closure work included bridge demolition, sewer work, stormwater drainage work, support of the tunnel banks to carry large crane loads, identification of contaminated soils, ledge removal.



Figures: Full project extents, Tunnel & U-wall Typical



10 Week / 24 Hour Closure

Accelerated construction techniques reduced the closure duration. Such as, precast concrete tunnel pieces, post-tensioned tunnel wall connections, and 24-hour construction



Figure Tunnel excavation

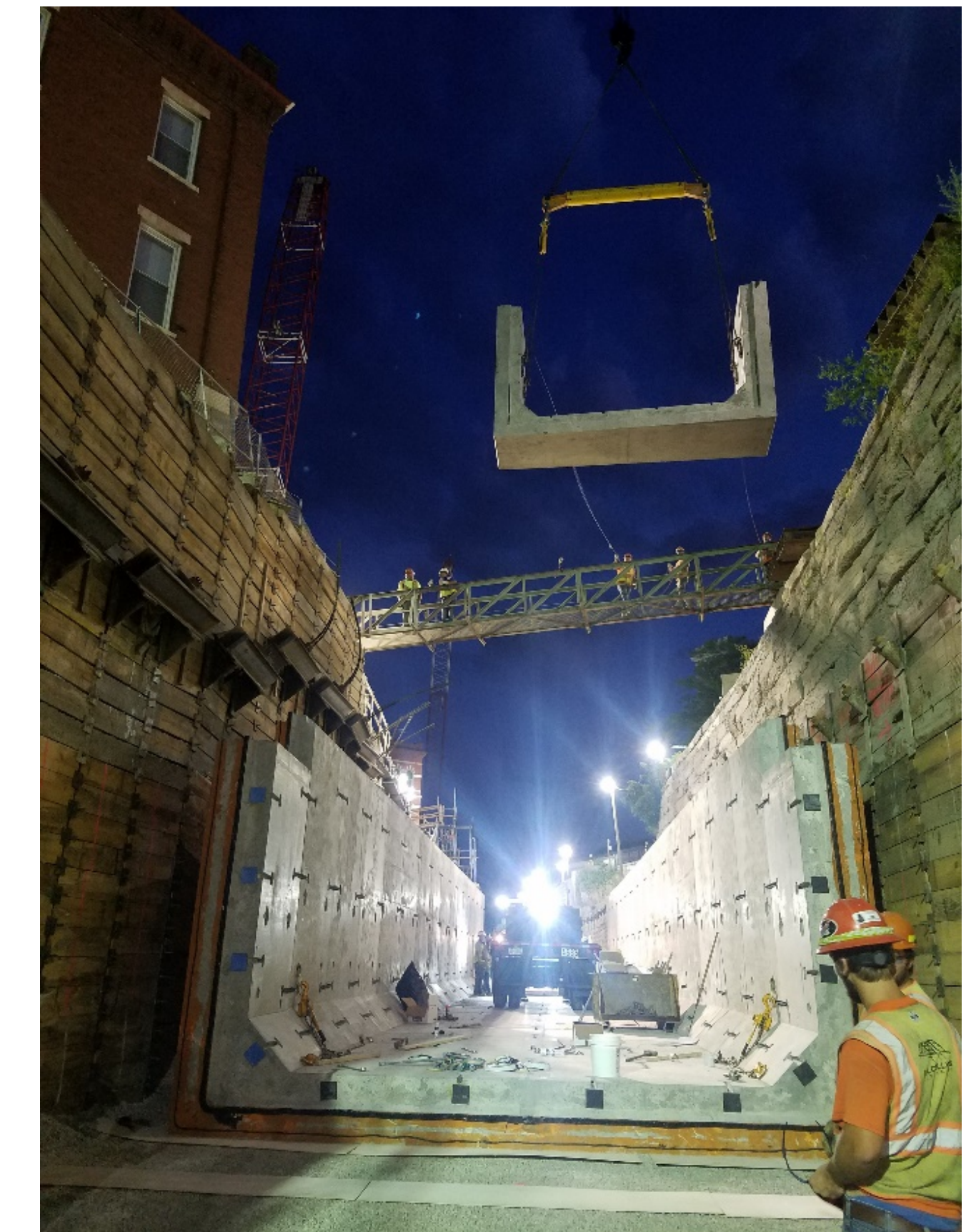


Figure Tunnel placement

Conclusion

With significant planning and coordination, the closure work was completed on time and the road and rail were open on time in the summer of 2020. In 2021 work continued in the parks and tunnel cap walls were poured. As planned, the tunnel was constructed, replacing the deteriorating road bridges, increasing rail safety and capacity, alleviating drainage issues, and upgrading the appealing downtown park area.



Figure: Final Project Simulated Photo