

Design Objective

Provide safe alternative transportation for people to get from downtown Marquette to key locations.

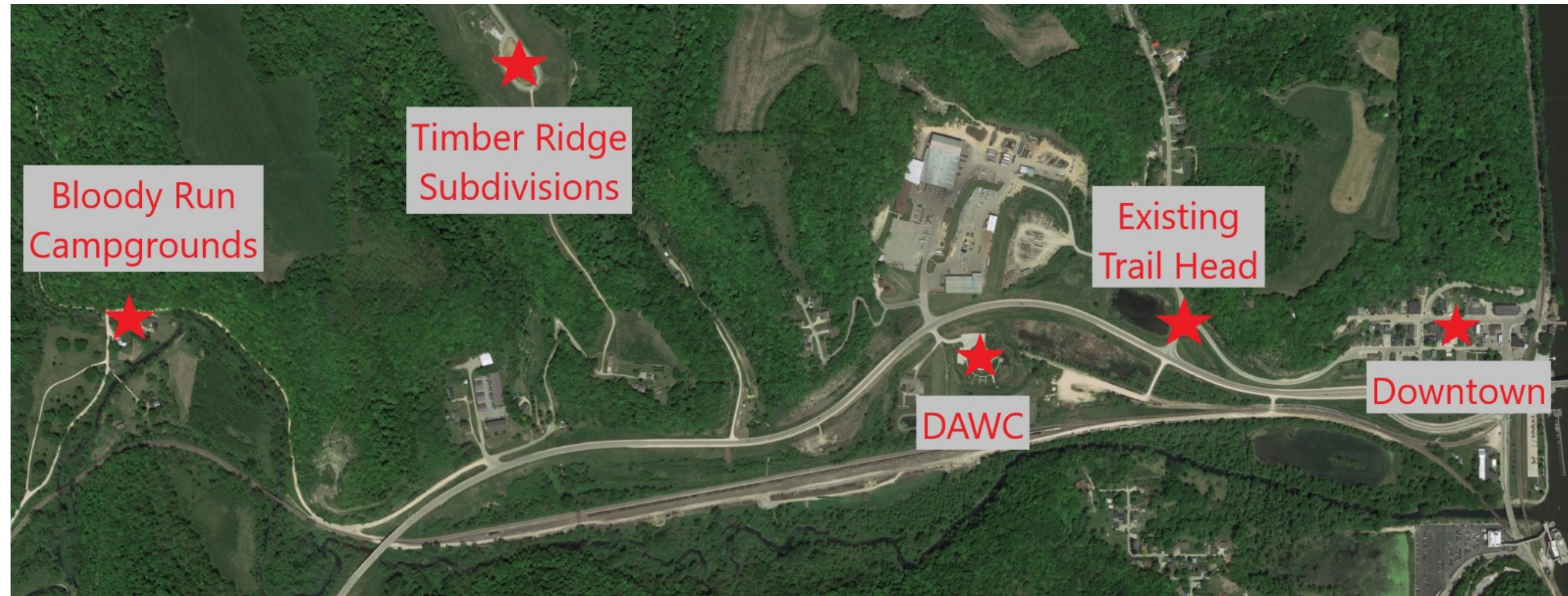


Figure 1. Key locations to increase connectivity in Marquette.

Highway Crossing Alternatives

A key challenge presented in routing our trail was figuring out how to cross HW18. Three viable crossing alternatives were designed and priced out for comparison and budget-based flexibility.

Existing Culvert



Figure 4: Existing Culvert. Structural modifications are necessary for use in our trail system.

Figure 5: Existing Culvert Location.

Trail Design

Our trail was designed in accordance with Iowa DOT 12B-2 design guidelines.

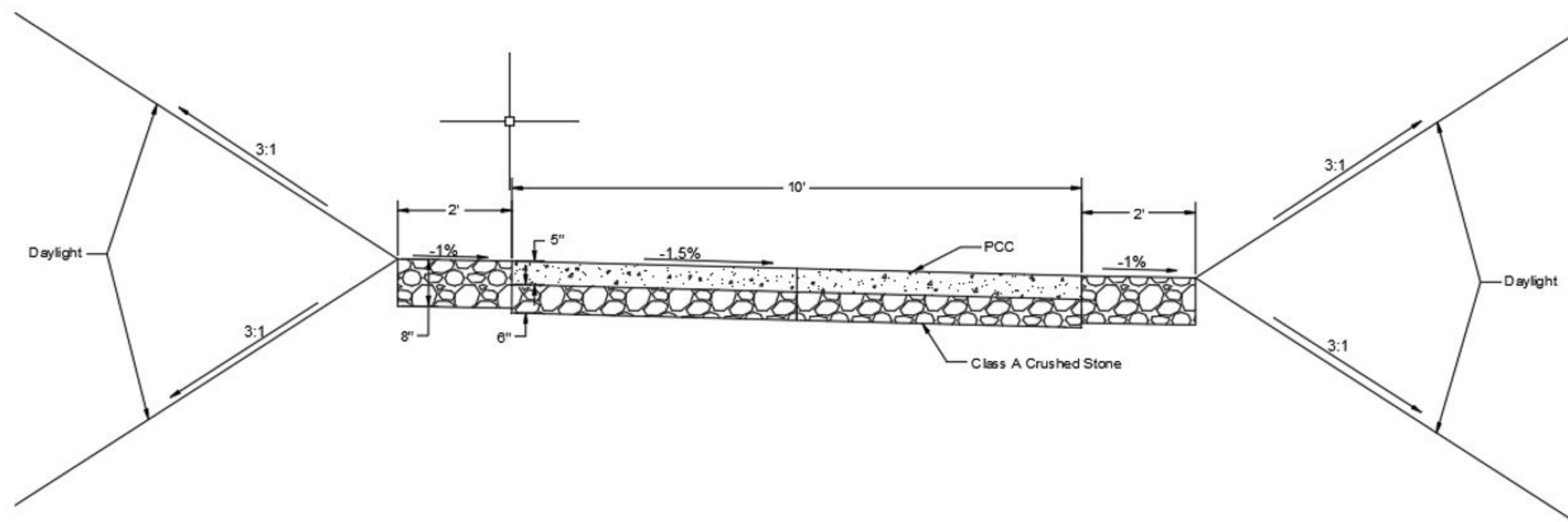


Figure 2. Typical cross section for trail.

New Underpass (Recommended Alternative)

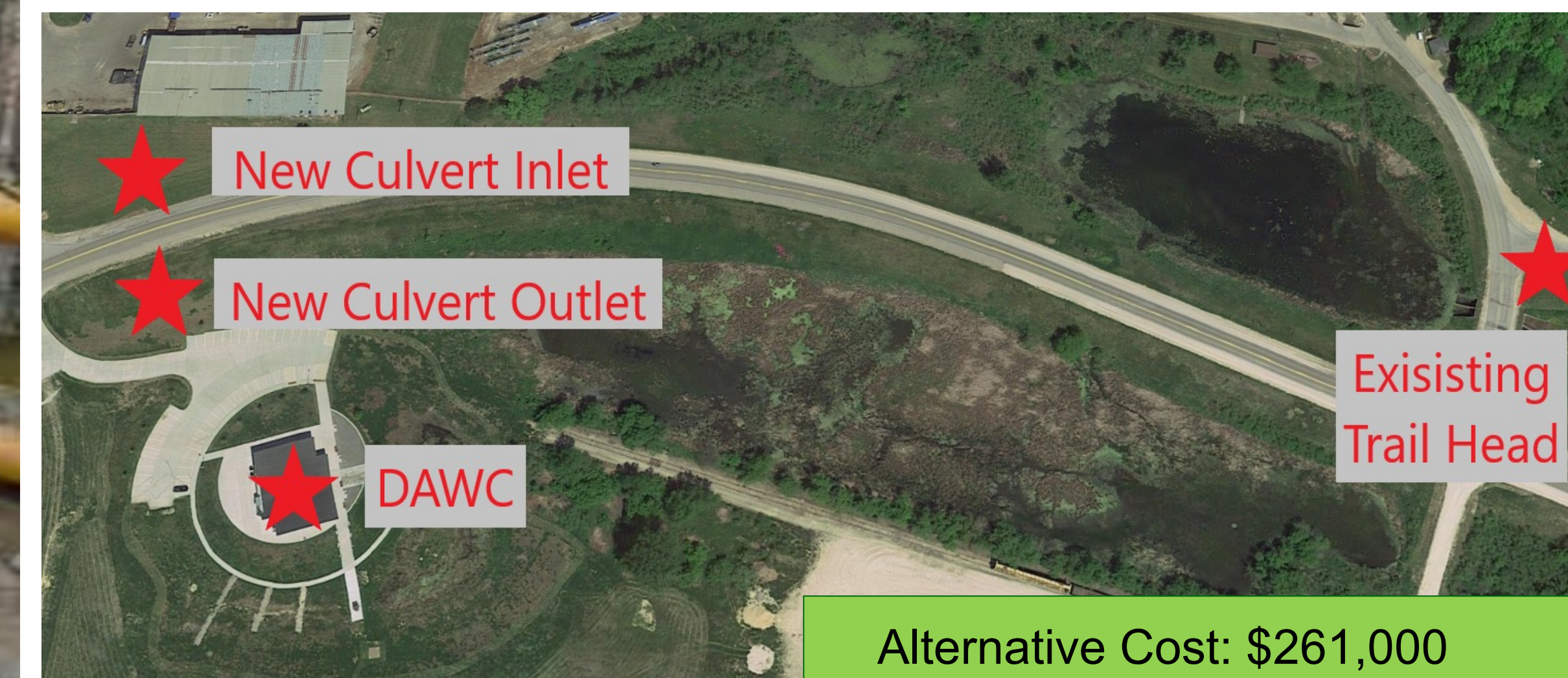


Figure 6: Example Culvert Installation.

Figure 7: Proposed New Underpass Location.

Recommended Trail Route

Our recommended trail route includes the installation of a new box culvert and proceeds south of HW18.

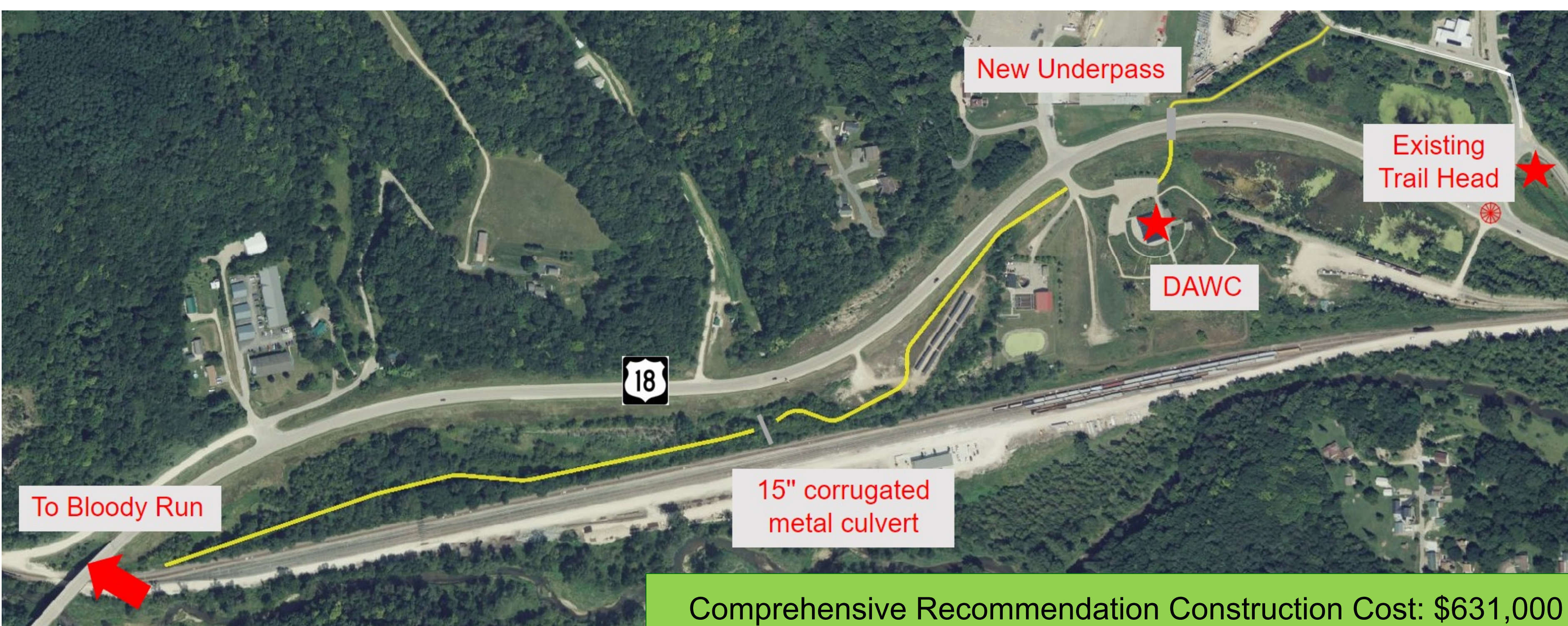


Figure 3. Recommended trail (path highlighted in yellow). Ties into the existing trailhead through utilization of a bike lane (highlighted in white).

Surface Crossing



Figure 8: Example Crosswalk.

Figure 9: Proposed Surface Crossing Location.

References

Cost Data : Iowa DOT bid tabs, example cost estimate (City of Iowa City), online vendors, RSMeans handbook 7-9.

Design Guidelines: Iowa SUDAS, AASHTO Greenbook, Manual on Uniform Traffic Control Devices, AASHTO LFRD Bridge Design Specifications 8th edition.