

Only Practicable Alternative Finding

A finding of the Alaska Department of Transportation and Public Facilities and the Federal Highway Administration

The Federal Highway Administration (FHWA) and Alaska Department of Transportation and Public Facilities (DOT&PF) are pursuing the West Dowling Road Connection Project. Executive Order (E.O.) 11990, "Protection of Wetlands," mandates that federally funded projects are to avoid construction in wetlands unless (1) there is no practicable alternative and (2) the proposed action includes all practicable measures to minimize harm to wetlands. In compliance with E.O. 11990, the FHWA and DOT&PF have determined that the Proposed Action is the only practicable alternative for the West Dowling Road Connection Project. Information about alternatives and their impacts provided in this document summarizes information provided in the West Dowling Road Connection Project Environmental Assessment.

Need for Project

The purpose of the West Dowling Road Connection project is to provide a continuous east-west arterial roadway connection between International Airport Road and Dimond Boulevard that connects the Old Seward Highway to Minnesota Drive. DOT&PF, in cooperation with Anchorage Metropolitan Area Transportation Solutions (AMATS), has identified the need to construct roadway connectivity and accessibility improvements in the West Dowling Road Connection Project area. The arterial network in the project area is poor. Of the roads that are classified as arterials, none connect continuously east-west across the project area. The road network that does exist (minor arterials and collectors that feed traffic to the arterials) is discontinuous, which limits accessibility and mobility within and through the project area. In urban areas, the roadway network should contain arterials every 0.5 to 1 mile. The nearest east-west arterials are International Airport Road and Dimond Boulevard, which are approximately 2 miles apart. To improve the arterial network, there should be one to three more arterials between these two roads.

Alternatives

The project began with six alternatives including two that avoided wetland impacts. Four of these alternatives, including both that avoided wetlands, did not meet the purpose and need for the project and were eliminated from further study. The remaining two alternatives, the No Build and Rovenna Dowling (Proposed Action) were evaluated in the EA. The FHWA and DOT&PF have determined that the Proposed Action is the only practicable alternative based on the West Dowling Road Connection Project's purpose and need.

For more information of the concepts that were not evaluated in the EA, a discussion of each concept and the reasons why it did not meet the project's purpose and need can be found in Section 2.0 of the EA.

The Proposed Action is to construct a five-lane arterial road (four travel lanes and a median turn lane) connecting Old Seward Highway to Minnesota Drive. The

Proposed Action includes a six-foot sidewalk and a 12-foot separated multi-use pathway along its entire length. The Proposed Action will upgrade the existing two-lane Dowling Road between Old Seward Highway and B Street. The intersection of Dowling Road and Old Seward Highway will be reconfigured to accommodate the additional lanes. The intersection at Potter Drive will be reconfigured into a T-intersection. The intersections at A and B Streets will be reconfigured.

The existing bridge over Campbell Creek will be replaced by a structure that is approximately 100-feet long, 92-feet wide, and 12-feet above the creek banks. As a result of agency and public consultation, the Campbell Creek trail will be redesigned so the trail goes under the Campbell Creek bridge.

Between B Street and Raspberry Road, a new five-lane road will be constructed. A new intersection will be created at Dowling Road and C Street. This intersection will have right turn and dual left turn lanes in every direction. The existing trails paralleling C Street will be modified so trail users will cross at the intersection.

A new at-grade intersection will be created at C Street. The project will connect West Dowling Road to Arctic Boulevard via a two-lane collector road. A bridge will cross Arctic Boulevard and the Alaska Railroad mainline. This structure is approximately 500-feet long and 100-feet wide, with a clearance height of approximately 22-feet over the Alaska Railroad tracks.

The project will connect to 68th Avenue by creating a T-intersection. The intersections of 68th Avenue and Rovenna, Cheryl and Chad Streets, will be reconfigured.

Wetlands

There are two jurisdictional wetland areas in the project corridor. These wetlands are shown on Figure 3.13 of the EA. The Campbell Creek bridge has been designed to avoid fill of the Class A creek-fringe wetland adjacent to Campbell Creek so no impacts to these wetlands are anticipated.

Completely avoiding Tina Lake wetlands area was determined to be impracticable due to the additional construction cost associated with spanning the entire complex. The Tina Lake wetland complex is approximately 950 feet at its widest point. The proximity of the Alaska Railroad crossing requires a single structure spanning both the lake and the tracks. At approximately \$36 million, a bridge this length would be cost prohibitive. In addition, a bridge across Tina Lake would make it harder to provide access to Arctic Boulevard.

Given the configuration of the wetlands around Tina Lake, going around the entire wetland complex would have required shifting the alignment approximately 700 feet northward near Tina Lake. This was considered unreasonable because it would have unacceptable business impacts (approximately 60 additional business relocations), and right-of-way costs (approximately 37 acres of additional ROW).

An alternative that avoided all open water impacts was also examined (see Figure 1) This alignment had the least amount of wetland impact (0.18 acres), however, it was not considered practicable due to unacceptable intersection geometry at C Street, increased business impacts (approximately 16 additional business relocations), increased right-of-way (ROW) cost (approximately 15.2 acres of additional ROW), and an extremely long bridge over Arctic Blvd. These factors would have driven the project costs to an unacceptable level.

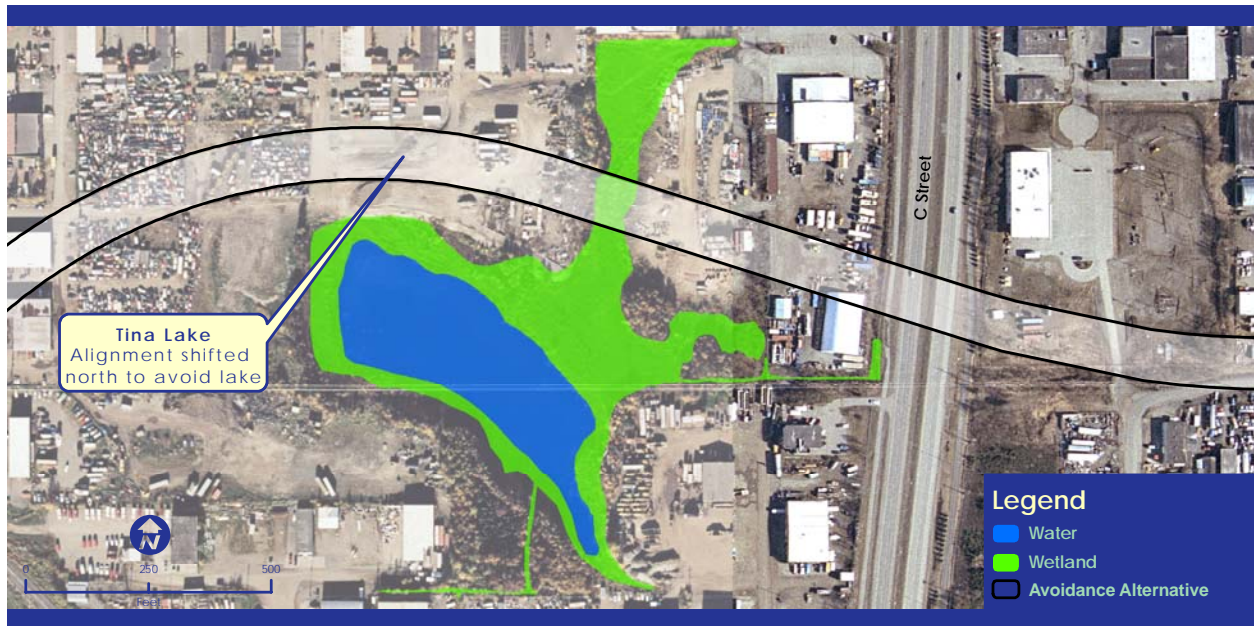


Figure 1. Open Water Avoidance Alternative

As completely avoiding Tina Lake and the adjacent wetlands was not practicable, an alternative that minimized wetland impacts was developed. To minimize wetland impacts, the portion of the alignment that crossed Tina Lake was progressively shifted to the north (See Figures 2, 3 and 4).

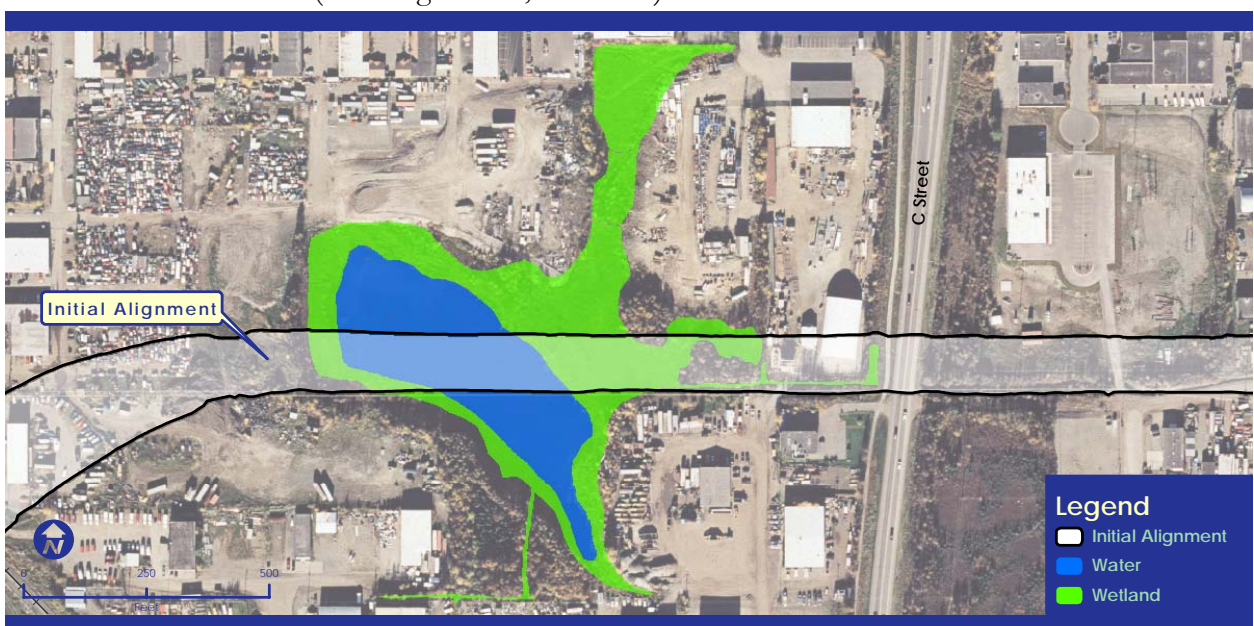


Figure 2. Original Alignment

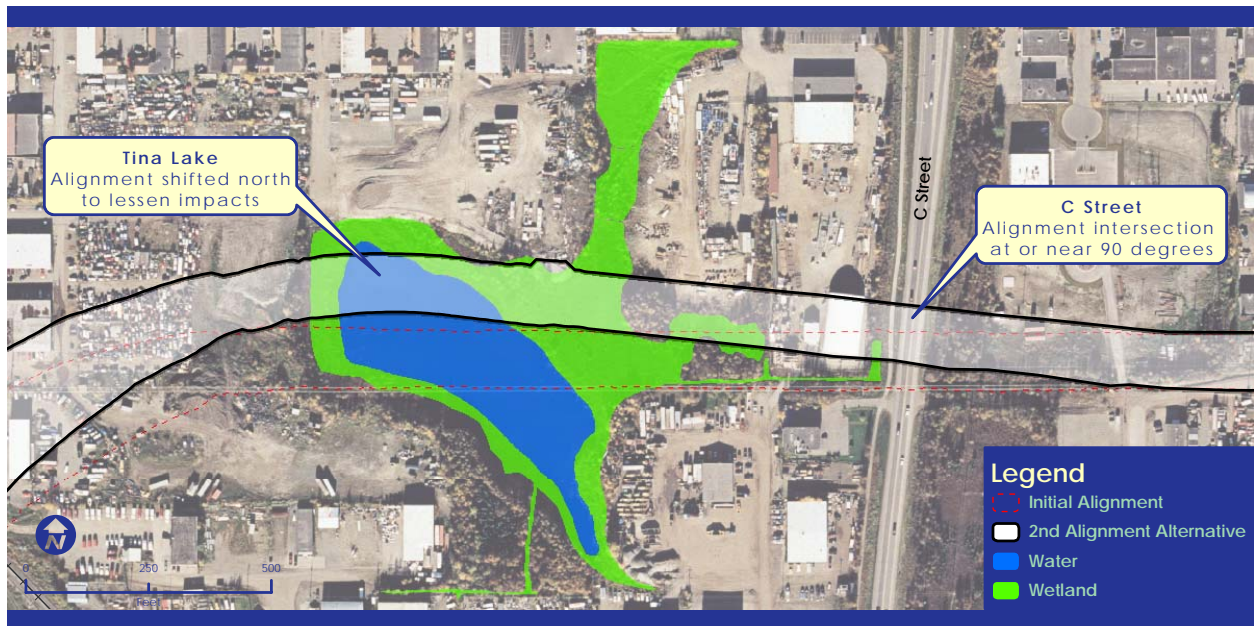


Figure 3. Minimization of Wetland Impacts in Tina Lake

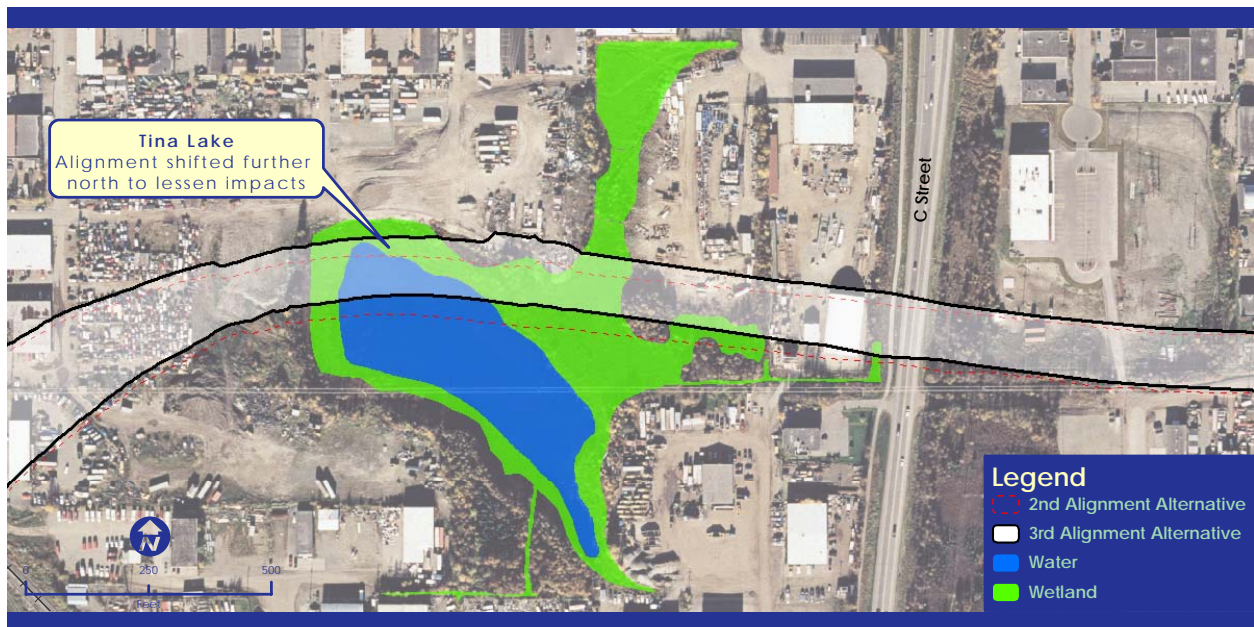


Figure 4. Further minimization of Wetland Impacts (Proposed Action)

Shifting the alignment slightly from the original alignment to the Proposed Action decreases the amount of fill required from approximately 22,145yd³ to 21,990yd³. It reduced the impacts to the open water by approximately 0.51 acres. However, shifting the alignment causes slightly more wetlands to be impacted (approximately 0.08 additional acres). The net result is approximately 0.43 acres of less impact to the Tina Lake wetland system.

By shifting the alignment, the project will need to acquire approximately 7.35 acres of additional right-of-way. This modification also caused a slight change in the intersection geometry at the intersection of Dowling Road and C Street.

Moving the alignment further north is not feasible for several reasons. The constraints created by the Alaska Railroad mainline, Arctic Boulevard, and a Chugach Electric transmission line restrict where the bridge piers can be located. If the bridge piers were located elsewhere, the bridge would have to be approximately 100 feet longer which would increase the bridge cost by an estimated \$2 million. This bridge would also conflict with the Alaska Railroad crossing. The Arctic Boulevard crossing arm and the associated controller would have to be relocated because the bridge would prevent the arm from being able to fully extend. The replacement crossing arm would have to be moved approximately 50 feet northward creating a gap between the crossing arm and the tracks. This additional distance would make it possible for traffic to circumvent the crossing arm and drive around and possibly into, an oncoming train. Relocating these items would cost approximately \$300,000.

Shifting the bridge further north may require reconfiguring the intersection at West Dowling and Arctic Boulevard. This intersection was recently re-configured to address a safety problem. As these roads meet at odd angles, reconfiguring this intersection may re-introduce the safety concerns. Moving the bridge further north also makes it difficult to provide access to parcels south of Alaska Steel. Shifting the bridge would require placing fill on the existing, and only, access point to these parcels. If legal access to a parcel cannot be provided, DOT&PF must purchase the parcel resulting in higher ROW costs.

Driveway access will not be allowed from Dowling Road between C Street and Arctic Boulevard eliminating the possibility of the Proposed Action leading to future driveway connections and adjacent wetland development.

In addition to altering the alignment location, the Proposed Action includes other measures designed to minimize harm to wetlands within the project corridor.

Measures to Minimize Harm

The Proposed Action has been designed to minimize impacts to wetlands within the project corridor. The following measures have been included in the project to minimize wetland impacts:

- Based on consultation with the US Corps of Engineers (USACE) and other resource agencies, the Proposed Action will replace the stand pipe in Tina Lake. The new stand pipe will be set at a higher level so the lake level will rise by approximately 4 feet. This will keep water in the lake longer and increase the size of the lake. With the replacement stand pipe, the Proposed Action, will only reduced the size of Tina Lake by approximately 0.8 acres. The resulting size is approximately 2.4 acres.
- Putting approximately 0.8 acres wetlands and adjacent uplands into public ownership. Currently, Tina Lake is privately owned. Public ownership would prevent the future development of these wetlands.

- Improved water treatment of storm water runoff before it enters a water body. Storm water will be directed into drainage swales and will be cleaned before entering Tina Lake or Campbell Creek.
- Where practicable, the angle of fill slopes would be steepened to reduce encroachment into adjacent wetlands.
- BMPs, developed in accordance with EPA's "Storm Water Management for Construction Activities: Developing Pollution and Prevention Plans and Best Management Practices," EPA Document 832 R-92-005, will be employed to minimize the introduction of sediment and minimize siltation of ponds and streams during adjacent fill placement.
- All fueling and servicing operations will be conducted at least 100 feet away from all streams and water bodies, and fuel storage will be at least 100 feet away from all wetlands and water bodies.
- All necessary permits and agency approvals will be obtained prior to construction, and any permit stipulations will be incorporated into the contract specifications.
- Perimeter staking will be required on the outside of the disturbance area prior to construction to ensure that there is no additional impact from construction activities.
- Silt fences will be used adjacent to stream channels, just beyond the estimated toe of fill.

Compensatory mitigation is required by USACE and EPA for the unavoidable impacts to wetlands. The amount of compensatory mitigation is determined through the Anchorage Debit-Credit Methodology. The analysis shows that the Proposed Action would incur approximately 1.51 debits. Based on discussions with EPA, it is anticipated that wetland protection measures included in the Proposed Action will receive more than 1.51 credits. As a result, no compensatory mitigation is anticipated. The final determination of specific wetlands mitigation will be made, in consultation with the Corps and other resource agencies, during the USACE permit process.

Only Practicable Alternative Finding

The FHWA and DOT&PF have determined there is no practicable alternative to the proposed construction in wetlands. No substantial impacts from the proposed action are likely to occur due to the inclusion of avoidance and minimization measures, and the remaining wetland impacts will be offset by compensatory mitigation. Based on these considerations, the Proposed Action is determined to be in compliance with E.O. 11990.