

GORHAM CONNECTOR

PROJECT SUMMARY TECHNICAL MEMO

January 2024

A. THE PROJECT

A new limited access, tolled roadway, called the Gorham Connector, is proposed to link the southern terminus of the Gorham Bypass on Routes 112 and 114 in Gorham and Exit 45 on the Maine Turnpike in South Portland. The Gorham Connector will improve decades-old mobility and safety deficiencies in the region, and the project will respond directly to requests by the municipalities of Gorham, Scarborough, South Portland, and Westbrook and the Maine State Legislature for Maine Turnpike Authority to advance this project as a tolled facility. Numerous evaluations, including the most recent in 2023, have validated the continued need for the Gorham Connector project.

The design that best meets the project purpose and need – to improve mobility and safety deficiencies related to the transportation network west of Portland – is a 4-lane facility with interchanges at Route 22/County Road and Running Hill Road. Details include converting the roundabout on Routes 112 and 114 to a full intersection, a full interchange at Route 22/County Road, a full interchange at Running Hill Road with access to Gannett Drive, and conversion of the Exit 45 diamond interchange to a diverging diamond interchange.

Alternatives were evaluated based on functionality, environmental constraints, potential community impacts, and highway design standards. These evaluations resulted in a study corridor for the preferred alternative shown in Figure 1.



FIGURE 1. STUDY CORRIDOR FOR THE PROPOSED GORHAM CONNECTOR.

B. BACKGROUND: YEARS OF CONTINUING STUDY

The proposed Gorham Connector is the culmination of over 35 years of planning and study by local municipalities, regional planning organizations, and state agencies. As part of continued efforts to understand and resolve persistent congestion and safety challenges in the region, the Maine State Legislature passed LD 1720 in 2007, directing the Maine Turnpike Authority (MTA) and Maine Department of Transportation (MaineDOT) to undertake a collaborative process to develop effective, long-term solutions. The resulting 2012 Gorham East-West Feasibility Study (2012 Study) included a comprehensive analysis of potential roadway improvement scenarios to achieve significant improvements in mobility, safety, and congestion. At its conclusion, the 2012 Study recommended an integrated strategy of implementing a Hybrid Urban and Rural form of land use development, expanding transit services, and expanding roadway capacity by either widening existing roadways or developing a new roadway. A detailed discussion of the process and scenarios considered can be found in the 2012 Study.¹

Coordinated by the Portland Area Comprehensive Transportation System (PACTS), the 2015 Transit Supportive Development Study (2015 TSD Study) explored best practices and options for community-centered planning that could, over time, provide transportation choices beyond automobile travel in the study area. Designed to be the second phase of the 2012 Study, the 2015 TSD study included PACTS and the six municipalities of Gorham, Portland, Scarborough, South Portland, Standish, and Westbrook. The study focused on using policy to concentrate development into specific growth centers and compared each municipality's land use and infrastructure policies with the public's land use and infrastructure preferences. The 2015 TSD Study identified potential growth centers and characteristics that could make these locations attractive to higher density and transit-supportive development. One of the deficiencies noted for many of these potential growth centers was addressing existing vehicle congestion to encourage alternate modes, such as bus transit or safe bicycle/pedestrian access.

Based on the 2012 Study and 2015 TSD Study findings, the 2017 Maine Legislature approved LD 905, P.L. 68, *An Act to Authorize the Construction of a Maine Turnpike Connector to Gorham*, which directed MTA to advance the study of whether widening existing roadways or building a new roadway would result in the greatest improvements to repeatedly documented and persistent mobility and safety deficiencies in the project area. Subsequently, on September 6, 2018, the MTA Board approved the *Resolution Relating to the Proposed Gorham Connector*, which authorized additional studies to define potential corridor options, evaluate locations, determine the financial feasibility of operation, engage with landowners, complete desktop resource analyses, and engage with the affected communities.

Traffic studies conducted in 2019 demonstrated a continued need to add new road capacity despite municipal growth management and transit expansion throughout the study area. The four municipalities of Gorham, Scarborough, South Portland, and Westbrook continue to advocate for new road capacity, underlined by their renewal of a Memorandum of Agreement in 2017 and 2022. These municipalities look to the Gorham Connector to relieve pass-through traffic in their designated downtown and village areas, enabling

¹ Maine Turnpike Authority, *Gorham East-West Corridor Feasibility Study* (Portland, ME, 2012), <https://www.maineturnpike.com/Projects-Planning/Planning-Projects/The-Gorham-East-West-Planning-Project.aspx>

bicycle/pedestrian improvements and additional transit services currently hobbled by safety and mobility challenges. Due to shifts in travel behavior related to the COVID-19 pandemic, the purpose and need for new capacity was re-confirmed in 2023 using PACTS growth forecasts and an updated travel demand model.

C. THE ENVIRONMENTAL REGULATORY PROCESS

For the Gorham Connector, MTA has applied an evaluation framework that satisfies requirements relevant to evaluating potential alternatives under Maine’s Natural Resources Protection Act (NRPA) and Stormwater Management Law as well as Section 404(b) of the federal Clean Water Act and National Environmental Policy Act (NEPA). MTA used a sequential approach of first analyzing a range of alternatives.² This constitutes Phase I Avoidance under the U.S. Army Corps of Engineers’ (USACE) Highway Methodology, which involves considering potential alternative alignments against the Overall Project Purpose, a series of constraint map overlays, and a test of practicability.³

Alternatives found to be practicable were carried forward to Phase II Avoidance and compared quantitatively based on existing desktop-level constraint overlays for the project area. This analysis was followed by field delineation and will culminate in applying avoidance, minimization, and mitigation measures to the applicant’s preferred alternative. Because the proposed project will not use any federal funds but does require a federal permit, USACE is the lead NEPA agency. So, the conclusion of Phase II will be USACE’s determination of the Least Environmentally Damaging Practicable Alternative (LEDPA).

D. EARLY PUBLIC OUTREACH

Since 2019, over a dozen coordination meetings have been held with state and federal regulatory and resource agencies. In addition, all landowners potentially affected by a new roadway have been engaged via mail and in face-to-face, door-to-door conversations. Groups such as GPCOG/PACTS, Portland Trails, Bicycle Coalition of Maine, GrowSmart, western municipalities (including Buxton, Hollis, Limington, and Standish), and planners from the four MOA signatory municipalities have received numerous briefings on the proposed project. As the project approaches its permitting stage, a new round of constituent group and public meetings will be held in person and virtually. Interested parties can submit comments or questions via MTA’s web portal (<https://www.maineturnpike.com/gorhamconnector>).

E. DEFINING PURPOSE AND NEED FOR THE PROJECT

For actions subject to NEPA, where USACE is the lead federal agency, an Overall Project Purpose must be included in environmental documentation (40 CFR §1500). Under the USACE NEPA process, the alternative that the applicant deems best meets the Overall Project Purpose is put forth as the preferred alternative, which USACE evaluates as the potential LEDPA. In a November 30, 2020, meeting between MTA, USACE, U.S. Fish & Wildlife Service, and the Environmental Protection Agency, the overall project purpose for a proposed Gorham Connector is:

² AASHTO, *Assessing Indirect Effects and Cumulative Impacts Under NEPA*. Washington, D.C.: American Association of State Highway and Transportation Officials. (Washington, D.C. 2016).

To address demonstrated transportation safety and mobility deficiencies within the Gorham-Portland corridor by implementing improvements that maximize public safety, the sustainable mobility of people and goods, and minimize adverse community and environmental impacts”.

F. EVALUATING A RANGE OF ALTERNATIVES

Many non-roadway alternatives were considered during the 2012 and 2015 TSD Studies (specifically transit and land use solutions); however, in response to LD 905 and the 2018 MTA Board directive, the MTA advanced *no build*, *widen roadway*, and *new roadway* scenarios to identify a preferred alternative. Establishing reasonable alternatives for evaluation was the first step in this process. Widen roadway alternatives were established based on existing state and local road locations. In contrast, potential new roadway alternatives were determined by highway design criteria that minimize impacts to residences and businesses and by desktop-level review of GIS-based siting constraints, including wetlands and other natural resources. The endpoints of potential alternatives were fixed at the roundabout on Route 114 at the terminus of the Gorham Bypass and Exit 44 or Exit 45 on the Maine Turnpike (Figure 2).



FIGURE 2: ALTERNATIVES EVALUATED FOR A GORHAM CONNECTOR

Assessment of alternatives for the Gorham Connector followed the 1993 USACE Highway Methodology and the 1999 Highway Methodology Workbook Supplement.^{4,5} The eight alternatives shown in Figure 2 and the no-build alternative were evaluated for “practicability”, based on the 40 CFR 2303(q) criteria of availability (i.e., legally acquirable), cost (i.e., financially feasible for construction and operation), feasible given logistics and existing technology (i.e., cost-effective design/ safety criteria, existing infrastructure constraints), and the degree

⁴ USACE. *The Highway Methodology Workbook: Integrating Corps Section 404 Permit Requirements with Highway Planning and Engineering and the NEPA EIS Process* (Concord, MA, 1993)

<https://www.nae.usace.army.mil/Portals/74/docs/regulatory/Forms/HighwayMethodBook.pdf>

⁵ USACE. *The Highway Methodology Workbook Supplement: New England Division* (Concord, MA, 1999)

<https://www.nae.usace.army.mil/Portals/74/docs/regulatory/Forms/HighwaySupplement6Apr2015.pdf>

to which an alternative meets the overall project purpose. To determine whether an alternative met the project purpose and need statement, desk-top screening for specific community and environmental impacts was included.

G. SUMMARY OF ALTERNATIVES EVALUATION

The alternatives analysis can be summarized as follows:

- The No Build alternative is not practicable because it does not meet the Overall Project Purpose, specifically criteria related to improved connectivity, safety, lifespan, and inconsistency with local land use plans.
- Widening existing roadway alternatives are not practicable because they also do not meet the project purpose and need; they are inconsistent with local land use planning, do not improve connections to I-295, and lifespans are limited to a few years beyond the 20-year design life. After this time, additional capacity would need to be added to the widened road, or the New Road alternatives would need to be revisited. In addition, given the disturbance of existing infrastructure and the high number of properties impacted, funding, logistics, and community impacts are significant.
- Two of the five new roadway alternatives are not practicable due to their location over closed cells at the Ecomaine landfill and ashfill facility. In addition to being barred by state law, co-locating with landfill cells poses a high risk to project costs due to the potential for geotechnical instability and associated frequent maintenance of the settling roadway over the long term.
- Three of the five new roadway alternatives are practicable because MTA has the authority and financial means to control access, acquire properties before constructing a new roadway, and fund ongoing operations via tolls. The three practicable alternatives provide the greatest level of safety and mobility benefits through additional capacity and the resulting volume reduction on most existing roads within the Study Area. They are consistent with transportation goals articulated in current comprehensive land use plans for the municipalities of Gorham, Scarborough, South Portland, and Westbrook. New capacity provided by New Road alternatives will not affect the character of existing road networks because of greatly reduced property impacts and the siphoning of truck traffic and congestion away from areas designated for economic and multi-unit housing development. These benefits are projected to extend 73 years post-opening or 53 years beyond the design life of a widened roadway, providing the best continued and sustainable mobility of people, goods, and services among the alternatives. While effects on existing residential and commercial infrastructure will be reduced, more wetlands and streams are likely to be impacted by the construction of a new roadway.
- Further evaluation of the three practicable alternatives was based on field data collected between the Gorham Country Club and Saco Street, the location where the three alignments differ. Comparing estimated impacts to natural resources, undeveloped land, property, and cost, NR-5 emerged as the preferred alternative.

H. SUMMARY OF IMPACTS, AVOIDANCE & MINIMIZATION, COMPENSATION

The proposed Gorham Connector is designed to avoid impacts to community and environmental resources in the project area and beyond to the extent practicable during construction and operation. The construction of new infrastructure components is not anticipated to disrupt existing traffic patterns significantly, given that existing roadways will be minimally disturbed. The alignment of the new road will only intersect with the existing traffic Constructing interchanges proposed at Running Hill Road and County Road, as well as work at Saco Street, will intersect with, necessitating plans to manage the movement of traffic during construction. To date, property negotiations have been amiable and voluntary.

Avoidance and minimization measures are being applied to reduce impacts to natural resources. These measures include but are not limited to, lowering vertical road profiles, designing stream crossings to provide habitat connectivity, maintaining surface water drainage patterns, applying geotechnical solutions in lieu of permanent fill, and alignment shifts to maintain forested buffers. As of the date of this memo, rigorous assessment of a new roadway has resulted in the following findings relative to impacts.

- The Gorham Connector will provide sustainable, effective safety and mobility improvements that dovetail with ongoing land use management and transit expansion.
- The Gorham Connector will be consistent with municipal land use plans in the project area, enabling these communities to continue toward goals relating to growth management.
- The Gorham Connector will only minimally contribute to residential growth within the expanded project area.
- The Gorham Connector project will include components that will result in a decrease in greenhouse gas emissions. This reduction is consistent with *Maine Won't Wait*, Maine's 2020 Climate Action Plan.
- The Gorham Connector will have unavoidable adverse effects on wetlands and non-significant vernal pools. Compensation for these adverse effects will occur via a robust and multifaceted mitigation plan currently being developed. It will focus on local actions that apply local, regional, and state-wide environmental priorities.
- The Gorham Connector will create opportunities to reduce congestion along other key east-west regional routes and improve bus rapid transit opportunities, either along the connector or other transit-feasible routes. This will help preserve the life of the Gorham Connector.
- The Maine Department of Transportation, in parallel with the Gorham Connector project, will seek to advance multimodal and bicycle/pedestrian opportunities along or adjacent to the Gorham Connector.