

# 2018-2021 Alaska Statewide Transportation Improvement Program

Alaska Department of Transportation & Public Facilities

*Division of Program Development and Statewide Planning*

---

## Introduction to the STIP

The Alaska Statewide Transportation Improvement Program (STIP) is the state's four-year program for transportation system preservation and development. Federal statutes (23 USC 135) require that in order to use federal transportation funding, the state must develop a STIP. The STIP must cover all surface transportation improvements for which partial or full federal funding is approved and that are expected to take place during the four-year duration of the STIP. Alaska's surface transportation program is mostly driven by federal funds and requirements and includes interstate, state and some local highways, bridges, ferries and public transportation.

There are many projects that are not required to be in the STIP. The STIP does not include aviation projects because Federal Aviation Administration (FAA) has its own similar system of project evaluation and fund distribution. Ports and harbors projects are not included in the STIP since financial assistance for ports and harbors is provided through the state-funded Municipal Harbor Facility Grant Program. Also, it is not required for the STIP to include wholly state-funded projects, or other projects that do not require action from the U.S. Department of Transportation.

## Overview

This document is the 2018-2021 STIP. It meets the requirements of Title 23 United States Code, Title 23 Code of Federal Regulations, and Title 17 of the Alaska Administrative Code. It is fiscally constrained based upon reasonably expected funding. Staff reviews projects in the STIP for consistency with local land-use and transportation plans, as well as with applicable state policies and plans including the Statewide Long Range Transportation Policy Plan, the Highway Safety Improvement Plan, the State Bicycle and Pedestrian Plan, regional transportation plans and others.

Projects in the STIP are consistent with, and implement, the policies of *Let's Keep Moving 2036*, the Statewide Long Range Transportation Policy Plan. Following a risk-based analytical approach, the plan articulates policies for new facilities, modernization, system preservation, system management and operations, economic development, safety & security, livability, community & environment, and transportation system performance. It identifies action steps for each of the policy areas and identifies transportation performance measures. Plan documents include a Policy Plan, a Trends and System Analysis, and a Freight Element. The Statewide Long-Range Transportation Policy Plan: *Let's Keep Moving 2036*, is available on the DOT&PF website at <http://dot.alaska.gov/stwdplng/areaplans/>

The STIP is consistent with other planning efforts, including DOT's Highway Safety Improvement Plan, approved regional transportation plans (components of the Long Range Transportation Policy Plan), Transportation

Improvement Programs (TIPs) prepared by Metropolitan Planning Organizations (MPO) in both Anchorage and Fairbanks, municipal comprehensive plans and tribal transportation plans.

The STIP also reflects the goals of the state administration to support economic development, and seeks opportunities to link resource-rich areas to the state's highway, port and rail system.

## **STIP Revisions**

STIP projects do not always proceed on schedule, so in order to maximize the state's ability to use its federal spending authority, projects not ready to advance at a critical time yield their place in the schedule to other projects that are ready to go. Such changes require amendments to the STIP using procedures established in state and federal law and, except for minor or administrative changes, require a public notice and comment period. All revisions to the STIP have specific approval, review and public notice requirements; all of which are reviewed, tracked and approved by Alaska DOT&PF, Federal Highway Administration (FHWA), and Federal Transit Administration (FTA). There are three main types of STIP revisions: an Amendment, an Administrative Modification, and Incorporation by Reference.

**Amendment (AMD):** An amendment is a formal, publically noticed revision of the STIP required when making certain types of changes. Amendments are not complete until they are approved by FHWA and FTA. The Department provides notice of a proposed amendment by publication of a notice in a newspaper of general circulation and by written notice informing MPO's, Tribes and others affected by the amendment. The notice describes the amendment and the effect of the amendment on the STIP, solicits comments, and provides for a comment period of 30 days following publication of the notice. An amendment is required when adding or removing a project from the STIP, when making changes to a project that have a significant increase or decrease in funding amount, a major change in fund scheduling, when adding a phase to a project, or when making major changes to the description and/or title of a project.

**Administrative Modification (AM):** An administrative modification is an informal revision of the STIP where the changes are minor and public notification is not required. An administrative modification may not affect fiscal constraint. Administrative modifications do not require FHWA or FTA approval.

**Incorporation by Reference (INC):** Transportation Improvement Programs (TIPs) are incorporated into the STIP by reference. Typically, the STIP will incorporate TIPs from Metropolitan Planning Organization's (MPO), (See "Metropolitan Areas" below) and Federal agencies such as Western Federal Lands (WFL) and the Bureau of Indian Affairs (BIA).

## **Public Involvement**

Federal regulation, state regulation, state statute and Department policies and procedures govern public involvement in the transportation planning process. These laws and procedures guide the consultation and coordination required with Tribes, with MPO's, with other (non-MPO) municipalities and communities. DOT&PF solicits and evaluates public involvement during the project nomination period, during the public review period of the Draft STIP, and when amending an approved STIP. Interested parties may submit comments via the internet at [www.dot.alaska.gov/stip](http://www.dot.alaska.gov/stip) or to the planners in Anchorage, Fairbanks or Juneau. A Regional Area Planner map can be found at the STIP website.

The Department updates the STIP website often, making it the best place to check the dates for online meetings and public comment opportunities. <http://www.dot.alaska.gov/stip>.

## **Fixing America's Surface Transportation (FAST) Act**

On December 4, 2015, President Obama signed the Fixing America's Surface Transportation (FAST) Act (Pub. L. No. 114-94) into law—the first federal law in over a decade to provide long-term funding certainty for surface transportation infrastructure planning and investment. The FAST Act authorizes \$305 billion over federal fiscal years 2016 through 2020 for highway, highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail, research, technology, and statistics programs. It is anticipated that available funding will continue to increase at a rate of 2% annually.

The FAST Act maintains performance-based multimodal programs and reforms established under the Moving Ahead for Progress in the 21st Century (MAP-21) Act by focusing on safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the system and freight movement, protecting the environment, reducing delays in project delivery and, for the first time, providing a dedicated source of funding for freight projects.

The FAST Act provides for a predictable, long-term funding certainty for surface transportation infrastructure planning and investment through core formula programs such as:

- National Highway Performance Program (NHPP),
- Surface Transportation Block Grant Program (STGP),
- Congestion Mitigation and Air Quality Improvement Program (CMAQ),
- Highway Safety Improvement Program (HSIP),
- Railway-Highway Crossings (set-aside from HSIP),
- Metropolitan Planning,
- National Highway Freight Program, and the
- Ferry Boat Formula Program.

For more detailed information regarding the FAST Act, please visit the web site: <http://www.fhwa.dot.gov/fastact/>

## **Other Project Categories**

**Illustrative List (ILLU)** - This STIP includes additional projects that could proceed if additional funding becomes available. The additional projects constitute the “illustrative” list of projects allowed under federal regulation 23 CFR 450.216(l). Should a scheduled project encounter delays and be unable to advance as proposed, if actual project bids come in lower than what we have estimated, or if sufficient funds are identified for other reasons, we may select a project from the illustrative list in order to make maximum use of the funds. If a project is selected from the illustrative list to move ahead, it must receive formal approval action from the FHWA or FTA before work can proceed.

**Highway and Transit Maintenance and Operations (M&O)** - After a project is completed and opened to public use, it is included in the department’s routine maintenance schedule. Federal planning regulations require the STIP demonstrate that appropriate funds are available to adequately maintain and operate the surface transportation system as a whole. Most of the funds used to pay for maintenance and operations are state funds in the annual state operating budget.

Maintenance and operation forces are organized geographically into regions, with field offices in Fairbanks, Anchorage and Juneau. The field offices manage highway maintenance stations distributed along the highway system and at key airports. Each region is staffed to adequately operate and maintain Alaska’s highways. Maintenance is the responsibility of the state or local agencies that own and operate the roads and typically is not eligible for federal funding assistance, although certain types of preventive maintenance activities are eligible for federal funding.

Maintenance and operation responsibilities include all the activities to keep our state highways, bridges, airports, buildings and harbors in good condition and safe for the traveling public. These include pavement repair, snowplowing, snow hauling, brush cutting, guardrail repair, sign maintenance, street/traffic light repair, drainage structures, fence maintenance, airport light repair, airport safety, security and facility repairs.

**Metropolitan Planning Organizations (MPOs)** - Federal regulation requires that each state transportation department develop a STIP for all areas of the state outside of MPOs. For metropolitan areas, the MPOs develop their own TIPs (Transportation Improvement Programs), which are approved by the Governor or his/her delegate and are incorporated by reference into the STIP. Alaska has two MPOs: Anchorage Metropolitan Area Transportation Solutions (AMATS) and Fairbanks Metropolitan Area Transportation System (FMATS). Each TIP and all amendments are incorporated by reference into the STIP and are linked to the STIP website at [www.dot.alaska.gov/stip](http://www.dot.alaska.gov/stip).

**Public and Human Service Transportation (Transit) projects in the STIP** - The Federal Transit Administration (FTA) administers several public and human services transportation grant programs that provide financial assistance to develop new transit systems and to improve, maintain, and operate existing systems. Like highway federal-aid programs, each public transportation program has different requirements intended to meet specific needs as determined by Congress. While some funds flow directly from FTA to designated recipients with the legal authority to receive and dispense federal funds, such as cities, towns, regional governments, Alaska railroad or transit authorities, DOT&PF administers many of the grant programs in Alaska according to the specific requirements of each.

### **EPA Air Quality Issues and Congestion Mitigation and Air Quality (CMAQ) Projects**

Alaska has air quality nonattainment areas and maintenance areas. “Nonattainment” areas are those areas that fall below air quality standards. “Maintenance areas” are those that now meet air quality standards, but need funds to maintain the improvements and programs that brought their air quality up to acceptable standards.

- Portions of Anchorage and the Fairbanks North Star Borough are classified as maintenance areas for carbon monoxide (CO).
- Juneau’s Mendenhall Valley and portions of Eagle River are currently classified as coarse particulate matter (PM-10) maintenance areas.
- A portion of the Fairbanks North Star Borough has been classified as a nonattainment area for fine particulate matter (PM-2.5).

While the air quality of Alaska cities has improved dramatically for CO and PM-10 since the early 1980s, Anchorage, Fairbanks and Juneau are required to continue to measure air quality impacts of transportation projects under the federal Clean Air Act. These communities, with assistance from the Alaska Department of Environmental Conservation (ADEC), must periodically prepare updates to the State Implementation Plan (SIP) that demonstrates maintenance of CO and PM air quality standards.

The Clean Air Act prohibits federal actions that could cause new air quality violations or otherwise jeopardize attainment of air quality standards. This policy requires a review of all planned transportation projects in Alaska’s nonattainment and maintenance areas to ensure they will not lead to decreased air quality. This analysis, known as “transportation conformity,” requires a demonstration that highway and transit projects are consistent with the most recently approved maintenance SIP emissions budget for CO and/or PM, now and in the future.

Metropolitan Transportation Plans (MTP) and Transportation Improvement Program (TIP) projects proposed for construction within air quality nonattainment and maintenance areas must undergo regional and project-level analysis to make sure they conform to the SIP. Regional analysis looks at the combined emission impacts of all projects in an area for each year within the TIP timeframe, an approximately twenty-year period. The regional analysis must consider all transportation projects, regardless of funding source. Project-level analysis looks at the

emission impacts at the project location to ensure no new localized “hot-spot” violations of the air quality standards will result.

**Air Quality Emission Caps** - In nonattainment and maintenance areas air quality emission budgets are required as part of approved State Implementation Plans (SIPs) for communities. These approved conformity caps or air emission “budgets” cannot be exceeded in future years. Conformity is a requirement where the TIPS and MTPs are shown to not exceed the emission budgets or that projects will not cause or increase any air quality problems. Federal rules require that conformity determinations on TIPS and MTPs be updated within 18 months of any newly approved emission budget. Federal rules also require that conformity determinations on TIPS and MTPs are updated every 4 years to incorporate the latest planning assumptions, growth projections, vehicle miles travelled (VMT) and fiscal constraint. Additionally, conformity determinations are required when changes or amendments to TIPS and MTPs trigger the requirement. Limited maintenance plans, such as those for carbon monoxide in Anchorage and Fairbanks, and particulate matter (PM10) in Eagle River and Juneau, do not require the emission budget test, but they still require a conformity determination.

**Rural Particulate Matter** - Recent air monitoring in rural areas of Alaska indicates that some areas experience high concentrations of particulate, mostly dust. One source of the particulate matter in these communities is the road dust from the use of vehicles (cars, trucks, and four-wheelers) on unpaved roads. DOT&PF and ADEC are working together to identify possible solutions to the problem. Community outreach is underway in some areas to bring local ideas into the process:

- watering roads during dry periods,
- use of chemical additives (salts) mixed with water to alleviate dust,
- speed limits and limiting mechanized travel,
- rerouting traffic away from elder’s homes or schools (areas with sensitive people: elders and children), and
- road paving.

All control options have both advantages and disadvantages. In order to find a practical option for each area, it will likely be necessary to tailor a specific solution to that area.

## **Project Programming in the STIP**

The STIP is made up of projects, divided into phases, scheduled according to the time estimated to accomplish each phase and the funding needed to complete it. Each funding source has different requirements or objectives, so the final selection of projects for the STIP depends on the available funding.

**Multi-Phase, Phase 0** – This phase identifies programs that have multiple projects and for individual projects where the phases of work required for the improvements have yet to be defined. Examples include;

- Anchorage Metropolitan Area Transportation Solutions (AMATS) and the Fairbanks Metropolitan Area Transportation System (FMATS) Community Transportation Program Allocations,
- Recreational Trails Program,
- Transportation Alternative Program,
- Pavement and Bridge Rehabilitation Program,
- Highway Safety Improvement Program, and the
- Alaska Railroad and Public Transit System Programs.

**Miscellaneous/Other, Phase 9** – This phase identifies projects which do not result in physical construction. Examples of projects include bridge inspections, workforce development, safety education programs, inventory and condition surveys, information technology, and planning activities not funded directly with dedicated planning funding.

**Statewide Planning and Research, Phase 8** – This phase is used for planning and research, development, and technology transfer (RD&T) activities.

Planning includes activities, programs, and studies necessary to evaluate transportation systems, identify project needs, develop preliminary scopes of work, and evaluate, rank and program projects. Project nominations may come from DOT&PF maintenance or other support personnel who encounter a problem in the field; through analyses from bridge, pavement management or highway safety programs; and from local governments, other state or federal agencies, and the general public. Projects to address specific problems may be combined with others in the same area or of the same type to address multiple roadway issues while reducing engineering and administration costs. As part of the planning process local, regional, statewide and modal plans and other sources are consulted to refine and justify the projects and preliminary cost estimates are prepared. Finally, the projects are evaluated and prioritized in accord with the Statewide Long-Range Transportation Plan, then scheduled into the program as funding permits.

Research, development, and technology transfer (RD&T) includes activities, programs, and studies necessary to gain greater scientific knowledge and understanding of transportation systems to address transportation concerns before they become critical problems. Technology transfer may lead to the adoption of new techniques or products to enhance the transportation systems. Under this program ADOT&PF may work with other State DOT's, the FHWA, and other agencies to promote, share, and apply transportation research results.

**Design (Preliminary Engineering), Phase 2** - The design or preliminary engineering phase outlines a project and through increasingly detailed steps refines the project to develop highly specific project plans that construction contractors use to guide their work. A larger or more complex project may include a reconnaissance study to outline the issues involved, identify and analyze alternative solutions, and provide comparisons of the alternatives. Every

project will entail some level of environmental review; the more complex or controversial projects may need detailed environmental impact studies, while simpler, routine projects may qualify for categorical exclusions. During the environmental review, design staff develops practicable or reasonable alternatives to the extent necessary to evaluate environmental impacts and estimate costs. Not all costs can be identified at this point, however, that will come as the project is further developed.

The design process also includes preliminary right of way and utility identification and, if needed, detailed right of way and utility phases. Some projects may warrant a project-specific public involvement plan (PIP) to inform the public and to ensure that all reasonable alternatives are identified and that public and agency concerns are considered and addressed before committing to a preferred action. Support groups such as bridge, geotechnical/materials, hydrology, traffic, right-of-way, surveying, and utilities will also prepare specific studies, reports and design documents as needed as the project progresses.

**Right of Way, Phase 3** - During the design phase the right-of-way (ROW) staff review the preliminary plans for each alternative under consideration in the environmental process. The staff prepares base maps and estimates of the probable number of parcels for each alternative and their acquisition and relocation costs. Each alternative is also assessed in terms of the number and socio-economic effects of residential and business relocations it causes. The results are included in the project's environmental document.

After the design of the project is completed and approval is given to move ahead, the ROW staff appraise the fair market value of land needed, including affected improvements, negotiate property acquisitions, relocate any displaced families and businesses, and certify the department's ownership or land interest. They also are charged with controlling encroachments and disposing of lands no longer needed for public use.

**Construction, Phase 4** - The construction phase includes all activities involved in building or altering an existing road or structure, including clearing land, demolition, excavation, moving material to establish curve and grade, drainage, fill, pavement, erection of bridges, guardrails, traffic signals, lighting, culverts, and traffic control. Depending on the project and location, it may also include temporary detours, steps to prevent or mitigate environmental problems and landscaping. Construction may take anywhere from a few days or weeks to several years to complete.

**Utilities, Phase 7** - For each alternative under consideration in the design phase, the utilities engineer reviews preliminary plans that show line, grade, slope limits, and clear zone widths, and the plans are shared with the affected utility companies. The utility determines the adjustments and relocations necessary to avoid conflict with the project (which may warrant revising design plans), designs the changes to its facilities, and prepares plans and cost estimates to support the relocation agreement. In some cases, DOT&PF or a consultant performs the utility relocation design for relocation work to be included in the contract. The utilities engineer will verify adjustments or



relocations necessary for each alternative and rough cost estimates. If additional right-of-way is necessary to accommodate utility relocation, these requirements will be shared with the ROW section for inclusion into the ROW cost estimates. After the design is completed and the project is approved to proceed, utility relocations may begin. Relocation may be performed by the utility company, by a contractor managed by utility or the department, or as part of the department's highway contract.

Each of these phases may involve anywhere from a few months to many years to complete. Some projects require all of these phases, while others may need only design and construction phases. In addition, depending on the complexity of the project, each phase may consist of a number of intermediate stages. The life of a project, from identification to completion may range from a few months (rare) to many years.

## **The STIP Website**

[www.dot.alaska.gov/stip](http://www.dot.alaska.gov/stip) is where you will find the most current information on the STIP and the projects planned for your area.

**STIP and Project Reporting Tools** - There are several ways to view the current approved STIP and historical STIP documents, all of which are linked to the main STIP website. The official version of the STIP is the PDF version linked to the main site and the most recently approved on the revision summary table. The official version will be a complete packet including contact information, a table of contents, this introduction, project pages and other relevant information located in the appendices at the end. Every time the STIP is updated, the details will be added to the revision table along with a link to the approved STIP associated with that revision. The live search allows users to select STIP project information based on filters they choose. If no filters are chosen, all projects in the STIP will be listed. Using this tool, a user can get a custom list of STIP projects, choose how they are sorted and decide whether they want a report in Excel or HTML format.

If you have trouble accessing information, or want to report an issue, please contact the STIP office for assistance.