

## **OFF-SYSTEM BRIDGE PROGRAM**



## **Guidelines**

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## PURPOSE

These Guidelines were developed in order to assist Local Agencies and Tribal Governments (Project Sponsors) with the ADOT process for federal funding of Off-System Bridge (OSB) structures.

The OSB Subprogram guidelines describe the basis of eligibility and project selection, which will follow a performance-based approach to project programming. Each project will be rated by the ADOT Bridge Group and a Selection Committee based on criteria and a prioritization method that are described within this document. Programming of selected projects will follow established ADOT policy and procedures.

The Purpose of the OSB Program is to fund the Design and/or Construction for replacement, rehabilitation, preservation and protection of roadway bridges over waterways, other topographical barriers, other roadways, railroads, canals, ferry landings, etc. on bridges that are not on the Federal-aid highway system (local roads or rural minor collectors).

## FUNDING PROGRAMS

There are two separate funding programs available for use on OSB Projects.

### **SURFACE TRANSPORTATION BLOCK GRANT PROGRAM (STBGP)**

[764 - Off System Bridge with Match- STBGP-Off Sys Br](#)

On December 4, 2015, the President signed the FAST Act into law (Pub. L. 114-94). The FAST Act amended the Surface Transportation Program (STP) contained in 23 U.S.C. 133, and changed the program name to the Surface Transportation Block Grant Program (STBG). As part of the STBG program, a special set-aside was designated for the funding of the OSB Program.

As a result of updates to the STBG program under the Infrastructure Investment and Jobs Act (IIJA), the amount is to be not less than 20% of the State's FY 2009 Highway Bridge Program apportionment. The funding set aside in ADOT's construction program for each FY can be found in ADOT's Five Year Construction Program.

Under the STBG Program, eligible project costs will be funded at 94.3% federal share with a 5.7% local match.

### **BRIDGE FORMULA PROGRAM (BFP)**

[763 – Off System Bridge with 100% Federal-Bridge FP OSB](#)

On November 15, 2021 the President signed into law the Infrastructure Investment and Jobs Act (IIJA) (Bipartisan Infrastructure Law), Public Law (Pub. L.) 117-58, which appropriated funding for Highway Infrastructure Programs (HIP) for FY 2022 thru FY 2026. The funding set aside in ADOT's construction program for each FY can be found in ADOT's Five Year Construction Program.

Under the Bridge Formula Program (BFP), eligible project costs will be funded with 100% federal share with no local match requirement.

## CALL FOR PROJECTS APPLICATION PROCESS

Project selection for new proposed projects is competitive and done through a “Call for Projects” application process. Projects are selected by the OSB Selection Committee and approved through the State Transportation Board (Board). The application shall identify the requested program funding (STBG, BFP, or a combination thereof) the project sponsor wishes to apply for to fund the project.

A project that has already been selected for scoping under the STBG program in a previous year’s call, may submit an application for funding final design and construction, at any point during the year, once the scoping document has been completed. The applications will be reviewed and eligibility determined, based on available funding for the upcoming funding years.

The “Call for Projects” notice will be sent by the ADOT LPA Section through the Council of Governments (COG) and Metropolitan Planning Organizations (MPO). Entities submitting multiple applications will need to regionally prioritize projects and submit justification for the selected bridges

Types of applications include:

- Scoping Preliminary Engineering (STBG Only): If applying for scoping, the application must be for scoping only and include an anticipated plan to complete the project. Only STBG funding can be used for scoping only requests.
- Design and Construction: Applications for Design and Construction phases will require a minimum 15% level design plans and a scoping document that includes a detailed description of work that includes scope of work, justification (system prioritization), schedule, and detailed itemized cost estimates for both design costs and construction costs.
- Construction: If the application is for the Construction phase only, applications shall include preliminary or final design plans that are at or beyond 95% (Stage IV) and include an itemized construction costs estimate.

All applications will require a cost estimate. Cost estimates should include a year of expenditure and show a fully funded project including all local funding amounts. This includes the ADOT Development Administration (PDA) fees to complete compliance reviews, obtain clearances, and finalize bid packages as part of the ADOT Development Process.

## ELIGIBILITY

Bridges are defined as any highway structure with an opening measured along the centerline of roadway of more than 20 feet (6.1 m) between under copings of abutments and spring lines of arches, or extreme ends of the openings of multiple boxes; it may include multiple pipes where the clear distance between openings is less than half of the smaller contiguous opening. Eligible bridges shall be inventoried as a National Bridge Inventory (NBI) structure with an assigned structure number in the National Bridge Inventory Database and be owned by a local public agency or federally recognized Tribe.

### ELIGIBLE ACTIVITIES

- Replacement (including replacement with fill material)
- Rehabilitation and/or strengthening
- Preservation/Preventative Maintenance (As identified under FHWA’s Bridge Preservation Guide)
- Protection (including painting, scour countermeasures, seismic retrofits, impact protection measures, security countermeasures, and protection against extreme events)
- Real Property Interest Rights for required access and permits or other uses as needed as part of the Right of Way requirements needed for the project

## **SURFACE TRANSPORTATION BLOCK GRANT PROGRAM (STBGP)**

- **Replacement, Rehabilitation and/or Strengthening:** The Bridge must be classified as either “Poor” or “Fair” or having a load capacity rating that requires the bridge to be posted for weight restrictions based on the National Bridge Inspection Standards (NBIS).
- **Preservation/Preventative Maintenance and Protection:** All bridges regardless of condition are eligible for Preservation/Preventative Maintenance or Protection measures.

## **BRIDGE FORMULA PROGRAM (BFP)**

- **Replacement, Rehabilitation and/or Strengthening:** The Bridge must be classified as either “Poor” or “Fair” or having a load capacity rating that requires the bridge to be posted for weight restrictions based on the National Bridge Inspection Standards (NBIS).
- **Preservation/Preventative Maintenance and Protection:** Protection activities as described above are also eligible to be funded under this program given that one of the above conditions or load capacity items are met.

## **ADDITIONAL ITEMS UNDER BOTH PROGRAMS**

- Reasonable touchdown points for bridge projects are recommended in order to keep the total length of approach work at less than 1,200 feet, not to exceed 15% of the total project cost. However, if the local agency determines that the required approach work total would exceed 1,200 feet, but all elements of the project were designed to the operating speed of the roadway (not exceeding the posted or statutory speed), a waiver request can be submitted, through the Department. Requests should be initiated through the ADOT LPA Section, and directed to the Bridge Group within ADOT.
- Long approach fills, connecting roadways, interchanges, ramps, and other extensive structures, when constructed beyond the attainable touchdown point are, in general, ineligible for program participation in the OSB program.
- An exception can be accepted to use program funds for more roadway work if FHWA representatives concur that the bridge replacement or rehabilitation project is an isolated project without any roadway improvement proposed in the vicinity of the project area. In order to satisfy AASHTO Design Criteria to current design standards for roadway and bridge requirements, the proposed roadway and bridge work may be paid fully by program funds.

## **DETERMINING BRIDGE STRUCTURE ELIGIBILITY**

The ADOT Bridge Group maintains a bridge inventory list of local agencies on its website <https://azdot.gov/business/engineering-and-construction/bridge/bridge-tunnel-inventory>. Coding based on the NBIS inspection that defines a bridge as Good, Fair and Poor and if they are on or off the federal-aid-system are provided in the list for reference.

A “Poor” bridge is defined as having one or more main bridge elements of the deck, superstructure, substructure or culvert with a condition rating of 4 or less based on the rating criteria defined in the National Bridge Inspection Standards (NBIS).

A “Fair” bridge is defined as having one or more main bridge elements of the deck, superstructure, substructure or culvert with a condition rating of 5 or 6, with no other of these elements with a rating of 4 or less, based on the rating criteria defined in the National Bridge Inspection Standards (NBIS).

Under both funding programs the decision to rehabilitate versus replace should be based on a study of alternatives considering cost, safety, service life, and level of service. Rehabilitation alternatives are necessary only when considered feasible. All deficiencies must be corrected including safety features; for example, bridge rail, approach rail, and transitions. (This requirement does not apply to projects which include only Preservation/Preventative Maintenance or Protection activities such as scour countermeasures, seismic retrofit, or structural steel painting, although FHWA recommends safety defects be corrected, if possible.)

The standards by which deficiencies are determined depend on the system.

- National Highway System (NHS) - State Standards (Meets or exceeds the American Association of State Highway and Transportation Officials (AASHTO) Standards)
- Other State Highways - State Standards (Meets or exceeds AASHTO)
- Local Agency Roads - AASHTO or ADOT approved Local Standards

Geometric and structural features must meet current standards for replacement or rehabilitation, or deviations must be documented for variance of current standards using performance based practical design methods. Whenever a bridge is replaced or alleviated by a new bridge, the existing bridge shall either be dismantled or demolished, or its use limited to the type and volume of traffic the structure can safely service over its remaining life.

## **FUNCTIONAL CLASSIFICATIONS**

Bridges are classified as "On" and "Off" the Federal-aid system by their functional classification. Local roads (National Bridge Inspection code 09 or 19) and rural minor collectors (NBI code 08) are "Off-System".

The functional classification of a road is the class or group of roads to which the road belongs. There are three main functional classes as defined by the United States Federal Highway Administration: arterial, collector, and local.

If an applicant has a dispute over the identified functional classification of a bridge within their jurisdiction, please refer to <https://azdot.gov/maps> and contact the ADOT LPA Section or ADOT Bridge Group for further guidance or clarification.

## **FUNCTIONAL CLASSIFICATION TYPES**

### **Arterial:**

Arterial roads generally provide the fastest method of travel and typically have low accessibility from neighboring roads. They are usually designed with long-distance travel in mind and are not as common as the other two functional classes of roads.

### **Codes and Definitions:**

- |    |  |
|----|--|
| 01 | Rural-Principal Arterial, Interstate                   |
| 02 | Rural-Principal Arterial, Other Freeways & Expressways |
| 06 | Rural-Minor Arterial                                   |
| 11 | Principal Arterial, Interstate                         |
| 12 | Principal Arterial, Other Freeways or Expressways      |
| 14 | Other Principal Arterial                               |
| 16 | Minor Arterial   |

**Collector:**

Collector roads are the second most common and are used as a connection between local roads and arterial roads. They provide a balance between access and mobility.

**Codes and Definitions:**

- 07 Rural-Major Collector
- 08 Rural-Minor Collector
- 17 Urban-Collector

**Local:**

Local roads are the most common roads by far, but are also the slowest for travel. They are designed specifically to have high accessibility and to connect to collector and arterial roads, and are typically not used for through traffic.

**Codes and Definitions:**

- 09 Local Rural
- 19 Local Urban

**FUNCTIONAL CLASSIFICATION TABLES**

Classification Code:	01	02	06	07	08	09	11	12	14	16	17	19
On-System:	X	X	X	X			X	X	X	X	X	
Off-System:					X	X						X

**PROJECT SELECTION**

**SELECTION COMMITTEE PRIORITIZATION**

The Selection Committee will review and prioritize all OSB projects based on the submitted applications and recommend projects based on scoring of each project application according to the rating factors that are described below. The prioritized projects are reviewed by the Priority Planning Advisory Committee and then presented to the Board for approval.

Projects are programmed according to rankings given to them by the Selection Committee, and available funding with the year identified in the application. Based on funding availability, certain phases of a project may have to move between fiscal years. Project Sponsors will be notified whether or not their project is selected for funding. Projects that are not selected may reapply for the program in a future “Call for Projects”.

Projects will be prioritized (ranked) statewide by ADOT Bridge Group based on:

- Overall condition of the bridge (bridge inspection reports)
- Amount of traffic
- Accident rates
- Vertical clearance
- Bridge geometry
- Load carrying capacity
- Age of bridge
- Weight restriction

## **EVALUATION OF CANDIDATE BRIDGES**

The ADOT Bridge Group performs an initial review of the bridge data and ratings, the project prospectus and the preliminary estimate to resolve any insufficient and inconsistent data.

The Selection Committee will perform a preliminary ranking and review, and may perform an on-site review of selected bridges as necessary. The review consists of evaluating the project scoping document which identifies the replacement or rehabilitation needs of the project and recommended action.

The Selection Committee consists of bridge engineers from ADOT Bridge Group Administration, Bridge Design, Preservation, and Geotechnical services, and any others as appropriate.

## **PRIORITY RANKING OF CANDIDATE BRIDGES**

For local agencies, the bridge projects to be included in the annual program are to be selected in accordance with FHWA's "Guidelines for Administration of Local Government Federal Aid Improvement Programs".

The program consists of the following selection process and criteria:

Concurrently with updates to the five-year Federal Aid Program, each COG/MPO should notify its local jurisdictions of the current bridge listing and request which bridge(s) a project sponsor intends to nominate and submit an application. The listing will reflect ADOT file data by each summer with eligibility subject to cooperative confirmation by the FHWA.

A Project Sponsor submitting candidate projects to a COG/MPO for program inclusion will need to select from one of the two funding programs available (STBG or BFP).

Bridge needs are determined by program objectives; these objectives, in turn, form the basis of a priority ranking system. If objectives are not specifically stated, they are implied by the factors and methods used in determining needs and priorities.

These actions could be:

- Evaluating bridge problems
- Selecting bridge improvement projects
- Programming and initiating projects
- Inventorying and inspecting bridges
- Evaluating priorities
- Selecting and programming projects
- Improving bridges

## PROJECT SELECTION FOR EMERGENCY SITUATIONS

In the event a bridge has been destroyed or substantially damaged, causing an emergency situation, and no other state or federal funds are available for its replacement or restoration; the agency may apply to have the bridge replaced or restored with program funds.

The ADOT Bridge Group will conduct an on-site inspection of the Bridge and determine:

- That no reasonable alternate detours are available
- That the structure had a valid inspection in the last two years
- That the structure failed or received a three-ton or less load rating causing closure and barricading

Emergency structures will take priority over other projects. If the emergency request is approved, another project may have to be delayed.

## PROGRAMMING

The OSB funding programs are part of the ADOT Five Year Construction Program and will follow the federal-aid process. All awarded projects must be obligated by the end of the State Fiscal Year for each project phase programmed. Application must include a fiscally constrained program year for each phase of the project.

Selected projects require approval by the Board. Upon award by the Board, an eligibility letter will be sent to the Project Sponsor, COG/MPO, and ADOT Technical Groups letting them know that the project has been selected for funding. The Project Sponsor will need to work with their Regional COG/MPO to have the project programmed into a fiscally constrained program year in the Regional TIP.

Once the Regional TIP has been amended and submitted through ADOT and FHWA for approval, the Project Sponsor will need to work with the ADOT LPA Section to initiate the project within 30 days of being programmed in the regional TIP to begin the ADOT Development Process.

All design projects selected must complete construction within 3 years of selection.

## PROJECT DEVELOPMENT PROCESS

Once a project has been submitted and selected for OSB funding and programmed in the Regional COG/MPO TIP, Project Sponsors will need to follow the ADOT Project Development Process for federal-aid programs as outlined in the ADOT LPA Manual. You can find the ADOT LPA Manual, along with other OSB resources on the ADOT LPA Section's webpage <https://azdot.gov/business/programs-and-partnerships/local-public-agency>.

For more information about the BFP and other federal-aid programs included in the IJA Bill, please visit the FHWA Website <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/bridges.cfm>.

Throughout the Project Delivery Process, Project Sponsors will need to have the below items completed:

**SCOPING DOCUMENT:** A scoping document that includes scope of work, justification, schedule, and detailed cost estimates for Design and Construction phases are required as part of the documentation needed for the project review and selection process. Guidance on preparing appropriate scoping documents for ADOT administered projects can be found on Roadway Engineering Group's Predesign webpage <https://azdot.gov/business/engineering-and-construction/roadway-engineering/roadway-predesign>.

**PROJECT INITIATION:** Project Sponsor will prepare and submit a Project Initiation request to the ADOT LPA Section to request an ADOT Project and Federal ID numbers. Project Initiation request forms and supporting documentation forms can be found on the ADOT LPA Section's webpage <https://azdot.gov/business/programs-and-partnerships/local-public-agency/project-initiation>.

**INTERGOVERNMENTAL AGREEMENT (IGA):** Execute Intergovernmental Agreement. ADOT will prepare an Intergovernmental Agreement which outlines the funding for the project based on the final cost estimate.

**PROJECT DEVELOPMENT ADMINISTRATION (PDA) FEES:** All local governments will have an executed IGA with ADOT that outlines procedures for ADOT to recover the design review and bid package preparation costs by ADOT to administer the development and advertisement for bid of local construction projects.

**ENVIRONMENTAL ANALYSIS:** An Environmental Determination will be made by ADOT regarding the type of Environmental Analysis required for the project. All federal-aid projects require an environmental analysis and an environmental clearance certification.

**DESIGN MEMORANDUM:** A Design Memorandum letter will be prepared and submitted by the Project Sponsor to the ADOT Project Manager after Environmental Clearance has been given for the project. After the Design Memorandum has been signed, final design work on the project can begin.

**STAGE SUBMITTALS: Submit 30%, 60%, and 95%, Plans, Specifications, and Estimate:** If the Project Sponsor is designing the project, requirements for the 30%, 60%, and 95% projects submittals are described in ADOT's Project Development Process.

**RIGHT OF WAY (ROW) CLEARANCE:** The Project Sponsor will provide the ADOT ROW Group with a Real Property Interest Certification upon completion for environmental clearance and completion of 95% plan submittal. All federal-aid projects regardless of new rights of way or not require a ROW clearance.

**FINAL PLANS PACKAGE:** Special Provisions shall be prepared in accordance with ADOT format and be submitted electronically. The ADOT Contracts and Specifications Section will prepare a PS&E package. Environmental Clearance, Right of Way Clearance and Utility Clearance letters should be submitted as part of the final plan package to ensure that the approval process will not delay bid advertisement.

**CONSTRUCTION MATCHING FUNDS:** The matching funds required for a local government project will be the amount shown on the project estimate recapitulation sheet provided by Contracts and Specifications Section in the project PS&E bid package plus a surcharge amount (for change order use).

**PROJECT BID ADVERTISEMENT AND AWARD:** Projects will be advertised for bid when Environmental Clearance, Right of Way and Utility Clearances are approved, PS&E package is approved and matching funds have been provided. Project is advertised, bid open, bids reviewed and certified and the project awarded by the Board. This process requires a minimum of 2 months.

**PROJECT CONSTRUCTION, POST DESIGN SERVICES:** A local jurisdiction who has hired a consultant engineering firm to prepare plans, specifications, and estimate for their federal-aid highway construction project must retain the firm for post design work that may be required during the construction phase of the project.

**CONSTRUCTION ADMINISTRATION CHANGE ORDERS:** During the administration of the construction project, change orders may be required due to unforeseen circumstances or changes in field conditions that require a change order to be processed and move the project forward. In the event contingency funding is exhausted to complete the project, a Local Agency may submit a request to fund the increase in construction costs through LPA Section from the eligible programs to supplement the increased costs. The Department will determine if program funds can be used in these instances and the Intergovernmental Agreement will require an amendment if deemed eligible.

**FINAL PROJECT COST ACCOUNTING:** At the conclusion of the construction phase of the project, a final accounting of project costs will be made. The local agency will be informed by the letter from ADOT Accounts Receivable Section, of the final construction costs for the project.