

IDOT BRIDGE BUNDLING FEASIBILITY ANALYSIS

THE CHALLENGE

IDOT will need to significantly increase the rate of replacement of bridges and culverts in order to achieve the performance targets detailed in their *Transportation Asset Management Plan*. Due to these circumstances, IDOT is exploring opportunities to support the maintenance and rehabilitation of the nearly 8,000 state bridges.

CURRENT CONDITIONS



Nearly 1,000 bridges "load posted" in Illinois



Nearly 2,500 structurally deficient bridges in Illinois

- **14%** of the deck area on structures maintained by IDOT are classified as structurally deficient*



PROGRAM OVERVIEW

IDOT is evaluating the feasibility of bundling focused on bridge and culvert replacement. It is anticipated that a bridge and culvert bundling effort may help the department complete **more projects in less time at lower costs, leverage increased revenues** to deliver additional projects beyond the bundling effort, and create new, innovative opportunities for **DBE engagement and growth**.

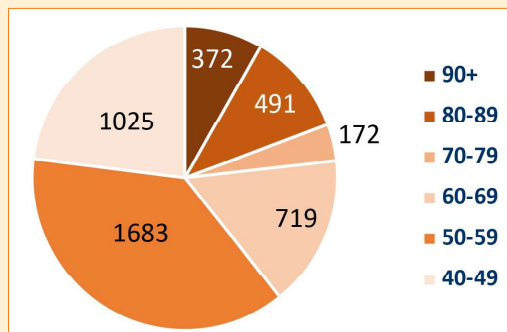
Results from the project will assist IDOT with understanding the benefits and considerations of establishing a bundling demonstration project and ongoing program. Such a demonstration may include any number of state structures procured in one or more bundle(s) delivered in 2-3 years.

BACKGROUND

The IDOT Bureau of Innovative Project Delivery is leading a Bridge Bundling Feasibility Analysis, which will evaluate bundling for state-owned bridges and culverts throughout Illinois. The data compiled, related analysis derived from associated data, and final Bridge Bundling Quantitative Analysis report is to assist IDOT with understanding the benefits and considerations for establishing a bundling program.

**Structurally deficient: a classification given to a bridge which has any component elements—the deck, superstructure, substructure or culverts—rated in poor or worse condition (a rating code of 4 or less).*

of IDOT Maintained Structures over 40 years old



- **43%** of structures maintained by IDOT are over 50 years old
- **7,859** state bridges have an average age of **44**
- **18,972** local bridges have an average age of **41**

PROGRAM GOALS:

- Create new opportunities and work experiences for DBEs to grow and thrive
- Improve the safety of the traveling public
- Improve the condition of the overall bridge inventory
- Expedite the delivery of bridges and culverts
- Ensure financial stewardship of public funds through optimal delivery of bundled structures
- Improve the connectivity of the transportation network



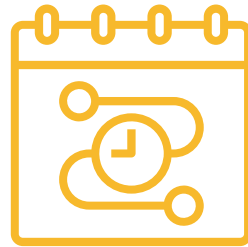
HOW IT WORKS

Multiple projects are bundled into several procurements to expedite improvements, saving money and time.

The proposed program may advance the construction of additional state structures procured into bundles, which could deliver more bridges per year than IDOT typically delivers (~80 state structures annually). The economic benefits of bundling include increased investment in disadvantaged communities across the state, improved safety and connectivity, reduction in costs, and additional projects utilizing existing allocated funding.



TIMELINE AND NEXT STEPS



The feasibility analysis underway is being conducted in two phases, qualitative and quantitative. The project is currently in the quantitative analysis phase to identify potential structures to bundle and recommend the optimal delivery approach. As part of the quantitative analysis, the program team would like to hear from industry on the feasibility of bridge bundling. There are multiple webinars anticipated in Summer 2021 and a final report is anticipated by early 2022.

For more information please visit the [IDOT Bureau of Innovative Project Delivery webpage](#) or email the program team at: DOT.InnovativeProjectDelivery@Illinois.gov

OPPORTUNITIES FOR ILLINOIS

1



Increased **investment in disadvantaged communities** and across the state via additional projects and jobs

2



Improved **safety and connectivity** of the transportation network

3



Bundled delivery **reduces costs**, due to economies of scale, reducing deferred maintenance, and avoiding cost escalation and inflation; also provides opportunities for reduced staff time

4



Financing bundled bridges means **additional projects** can be built now through *Rebuild Illinois*