

# 2018 Competitive Highway Bridge Program

## Benefit-Cost Analysis for Bridge Projects

# Benefit-Cost Analysis Resources

USDOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs

<https://www.transportation.gov/office-policy/transportation-policy/benefit-cost-analysis-guidance>

2018 BUILD Grant Program BCA Webinars (recorded)

<https://www.transportation.gov/BUILDgrants/outreach>

# Key Considerations for Highway Bridge BCAs

- Baselines
- Functional Issues
- Operations and Maintenance
- Posting and Detours
- Bundled Bridges

# Functional Issues

- Impacts on user costs often similar to other highway improvements
  - Travel speeds
  - Vehicle operating costs
  - Safety performance
- May be due to capacity constraints, alignment deficiencies, etc.

# Baselines

- What would happen in the absence of the proposed improvement
- Bridges
  - Increased user costs (functional)
  - Increasing operations and maintenance costs (structural)
  - Load posting or closure (structural)
- Should not assume the same (or more aggressive) improvement at a later date in the baseline
- Benefits are calculated as differences between the “build” case and the baseline

# Operations and Maintenance

- Aging, deficient bridges may require increasing operations and maintenance expenditures to remain in service
- May include user cost impacts from temporary partial or full closures during maintenance activities

# Posting and Detours

- Deficient bridges may eventually require load posting or full closure if rehabilitation or replacement needs are left unaddressed
- Can cause significant increases in user costs due to detours
- Would need info on
  - Traffic levels and mix
  - Detour lengths
  - Expected posting or closure dates under no-build baseline
- Assumptions should be consistent with NBI detour and conditions data (or explain why not)

# Bundled Bridges

- Include NBI bridge identifier for each bridge
- Report results for each bridge individually as well as totaling up benefits and costs for overall project
- Present results for all bridges in a common spreadsheet if at all possible



# Contact Information

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