

TYLIN INTERNATIONAL



Frank J. Wood Bridge Public Meeting

April 5, 2017
WIN 22603.00



Project Area

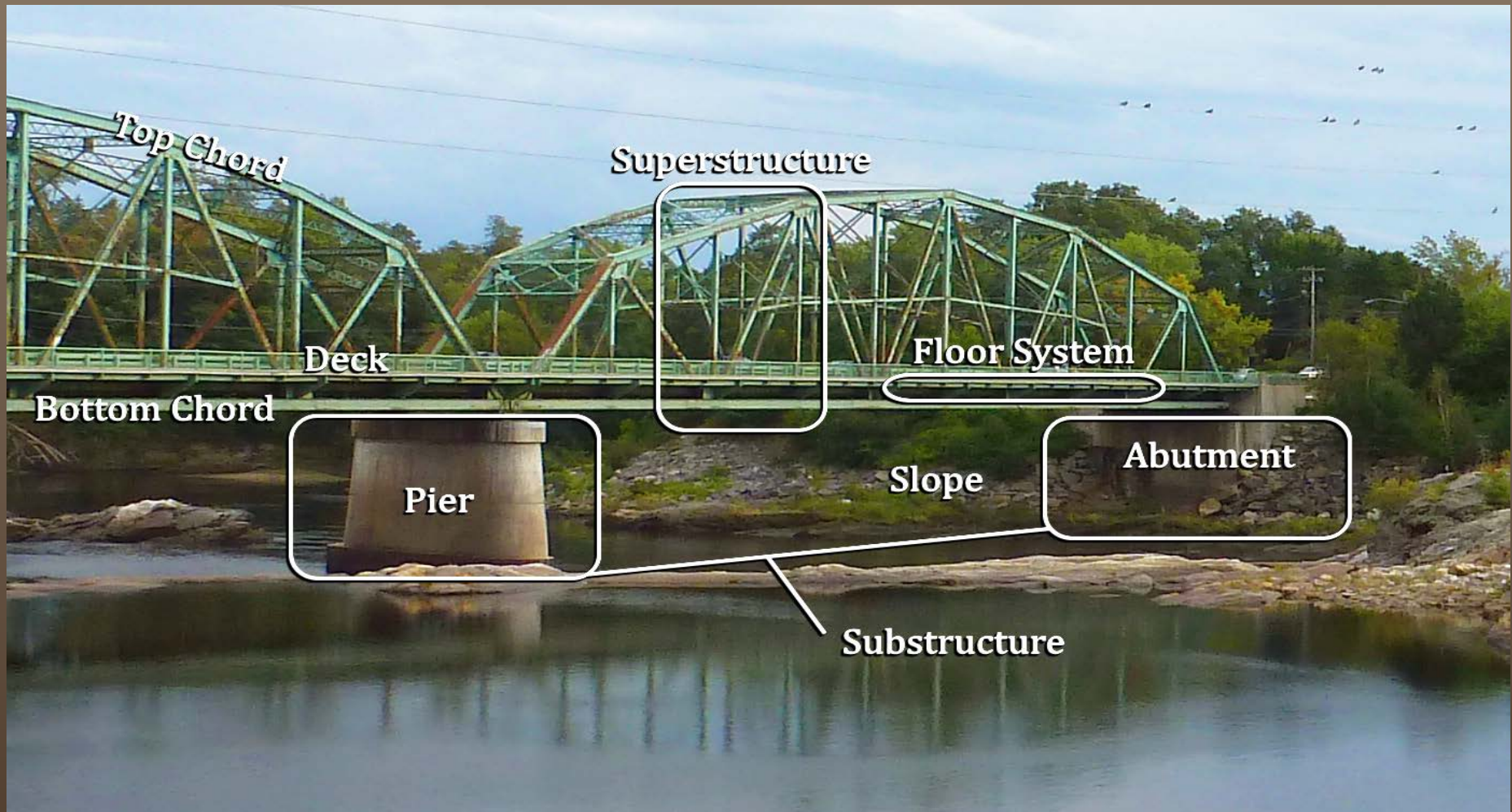


Frank J. Wood Bridge

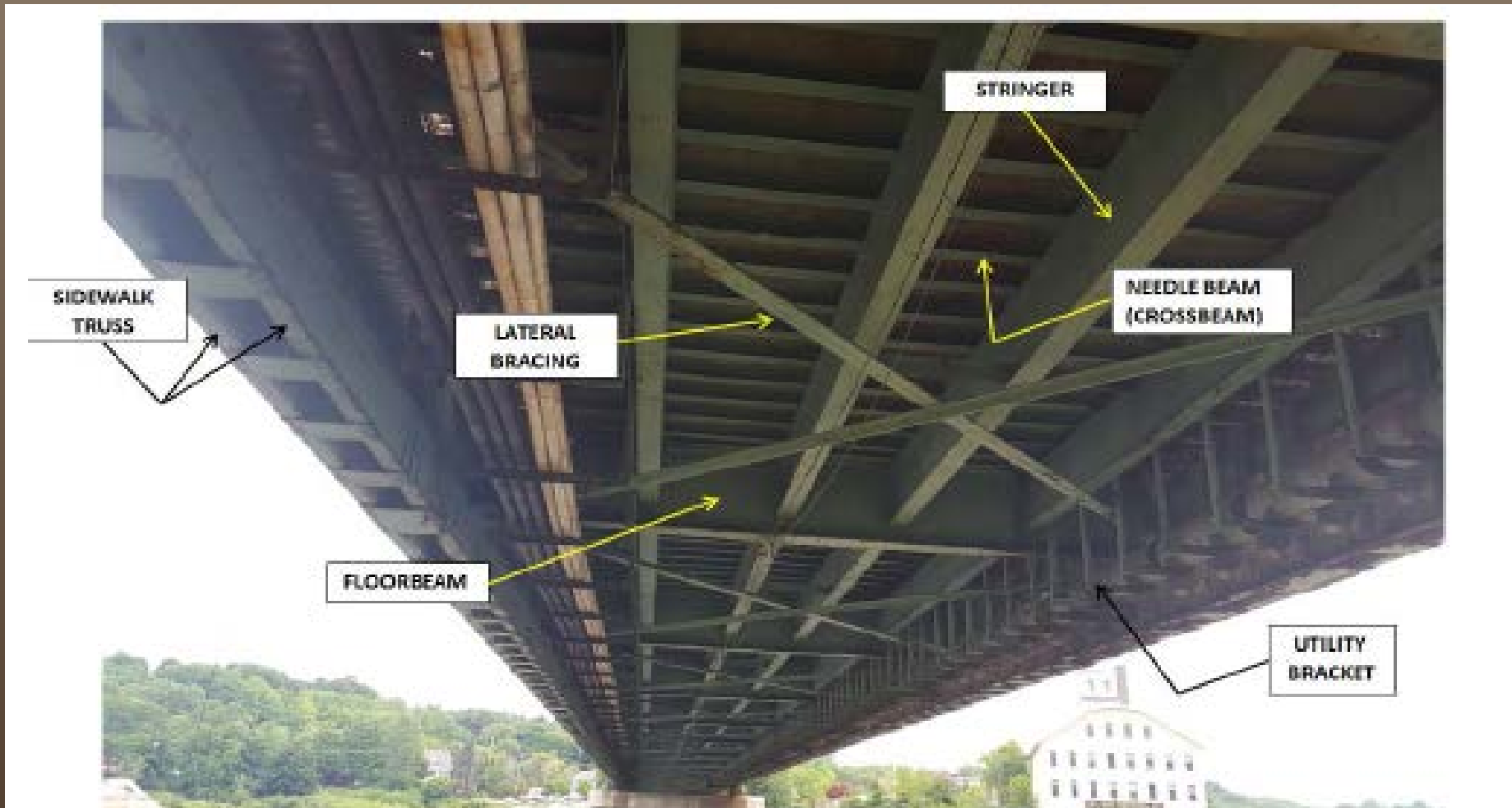


- 805 ft, three-span steel truss
- Built in 1931

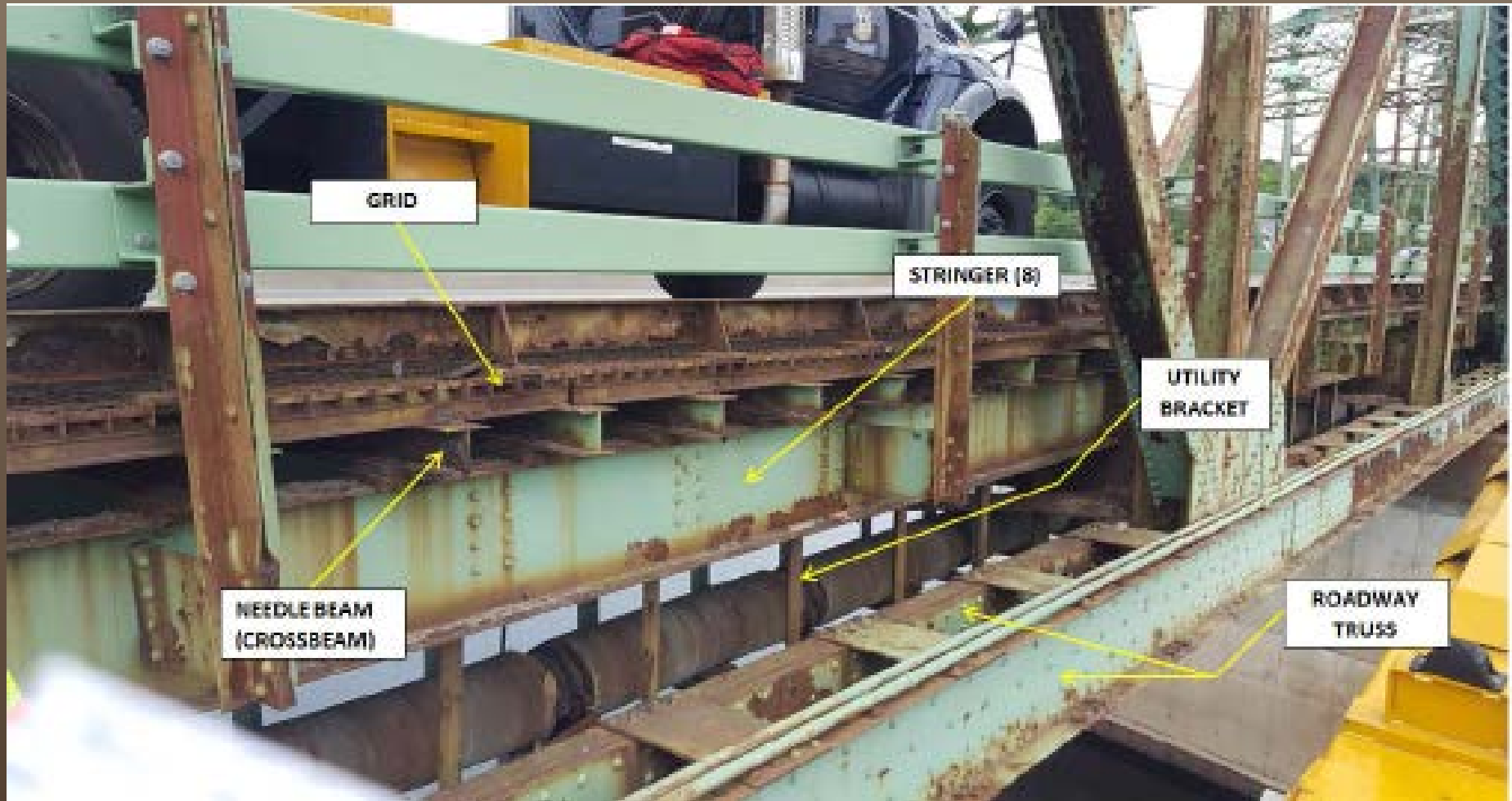
Bridge Terms



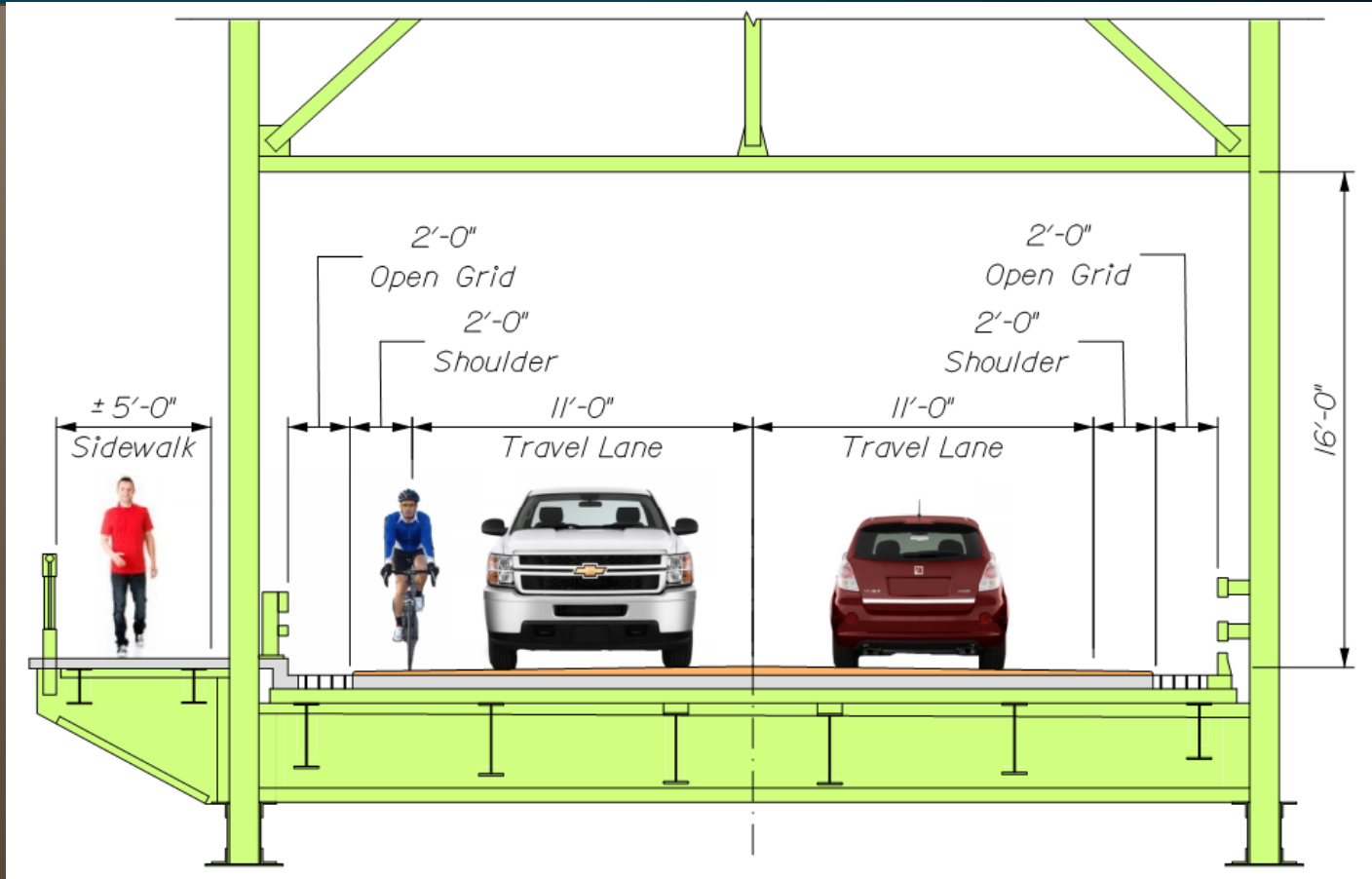
Bridge Terms



Bridge Terms



Project Background Information



Existing Bridge Section

Project Background Information

- 2012 & 2014 Routine and Fracture Critical Inspection
 - Deck & superstructure condition “Fair”
- June 2016 Routine and Fracture Critical Inspection
 - Deck & superstructure condition “Poor”
- August 2016 Special Inspection
 - Load posting to 25 tons

Project Background Information



- Bridge posted for 25 tons

- Deck, floor system & truss bottom chord are in poor condition



Current Maintenance Project

- Provides temporary repairs needed to maintain 25 ton weight limit
- A short-term 5 year fix
- Long-term solution needed

Purpose and Need

- Address poor structural conditions and load capacity issues
- Address pedestrian and bicycle mobility and safety concerns

Environmental Considerations

- Historic Resources
- Parks & Recreational Areas
- Endangered Species
- Impacts to Fisheries
- Impacts to the Androscoggin River
- Public Comment

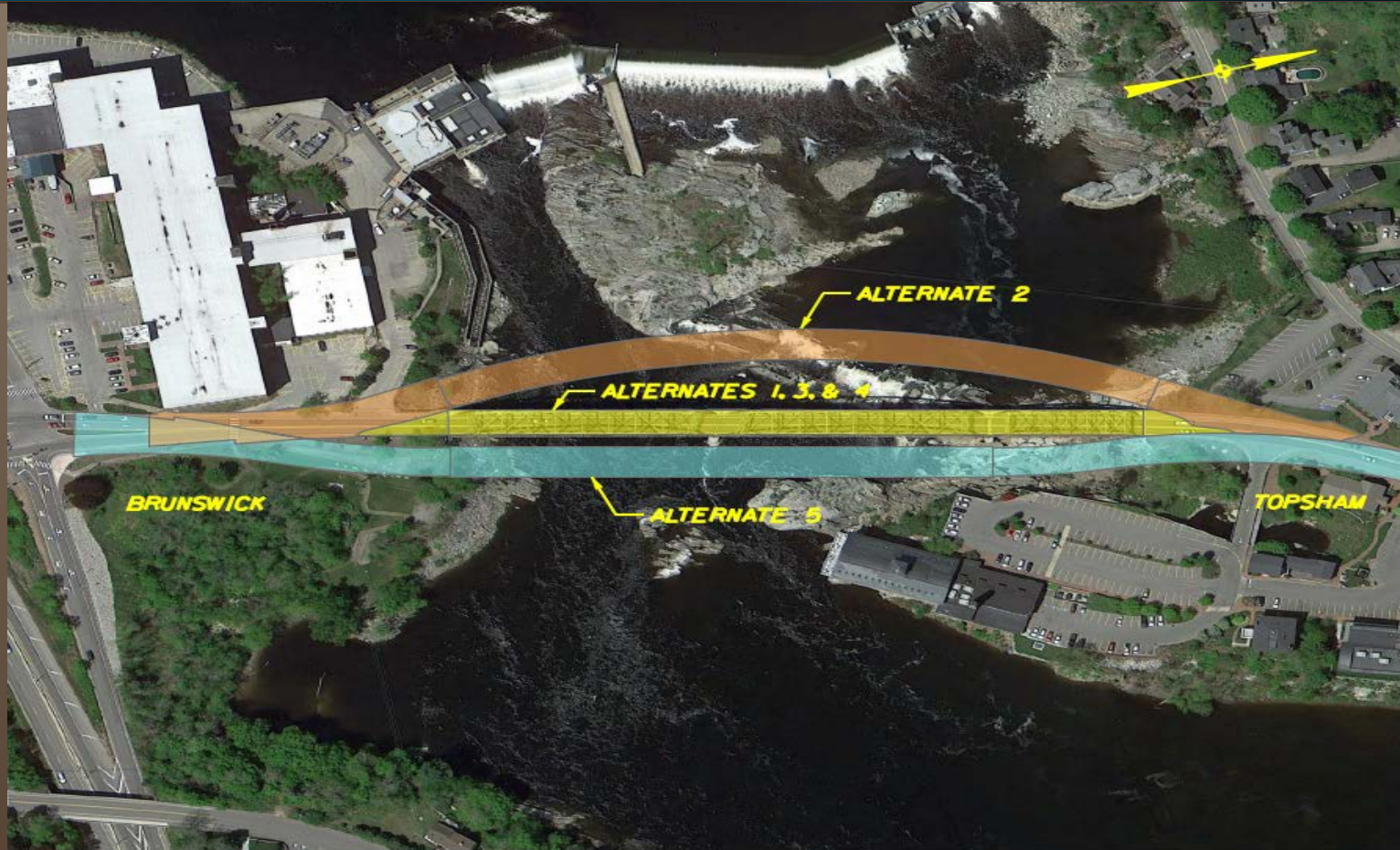
Other Considerations

- Construction Duration
- Traffic Impacts
- Utility Impacts
- ROW Impacts
- Construction Cost
- Life Cycle Cost

Preliminary Design Alternatives

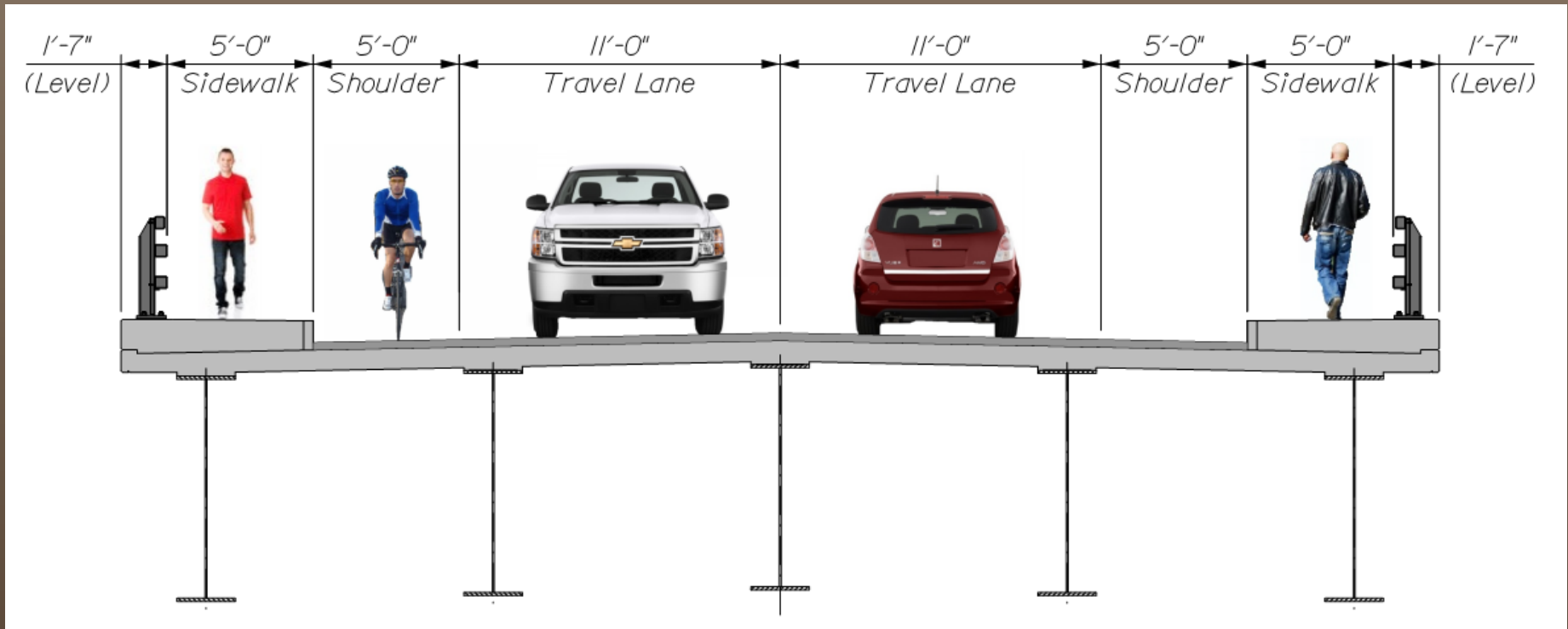
1. New bridge on the existing alignment
2. New bridge on a curved upstream alignment
3. Rehabilitation of the existing bridge
4. Rehabilitation of the existing bridge, with added second sidewalk
5. New bridge on a parallel downstream alignment

Preliminary Design Alternatives



Alignments

Alt. 1 - New Bridge on Existing Alignment

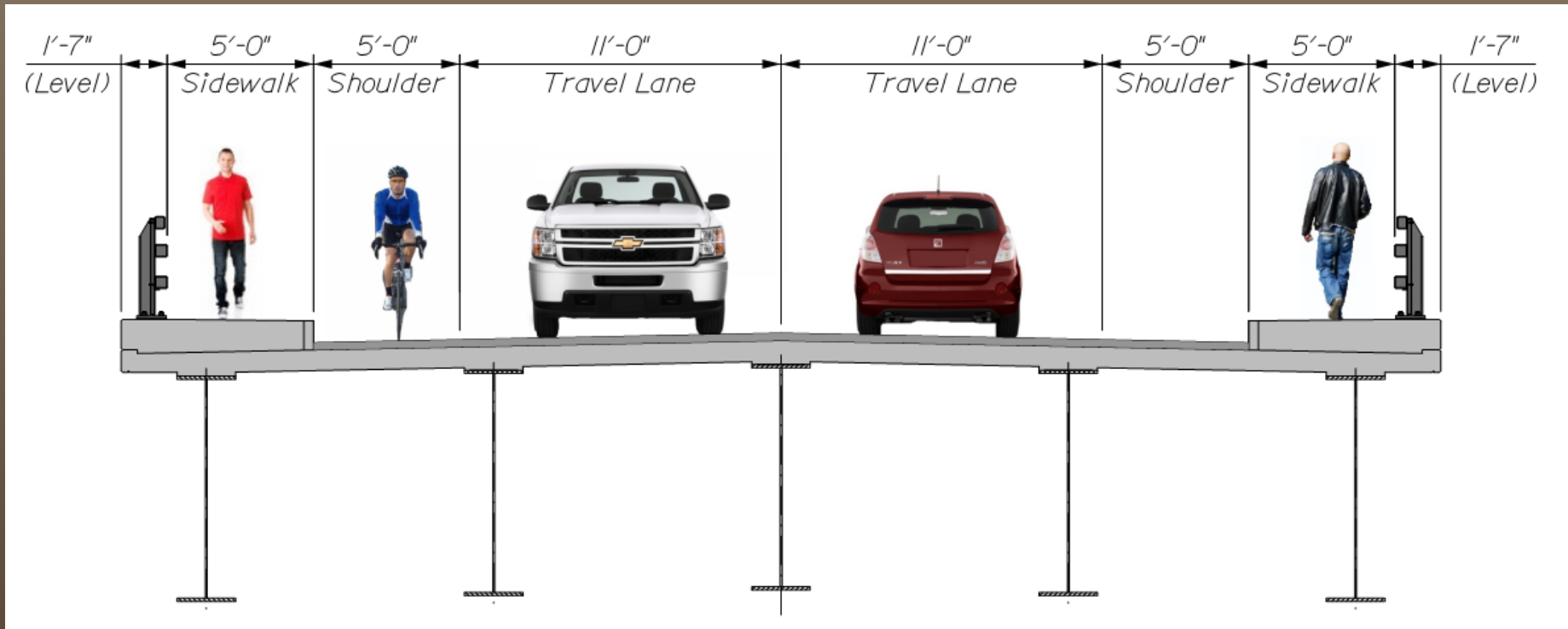


Proposed Bridge Section - Alternate 1

Alt. 1 - New Bridge on Existing Alignment

- Construction duration: 3½ years
- Traffic impacts: on-site temporary detour
- Utility impacts: relocate existing utilities to new bridge
- Construction cost: \$16 Million
- Life cycle cost: \$16.7 Million
- Cumulative service lifetime cost: not estimated

Alt. 2 - New Bridge on Curved Upstream Alignment



Proposed Bridge Section - Alternate 2

Alt. 2 - New Bridge on Curved Upstream Alignment



Rendering of Curved Upstream Bridge

Alt. 2 - New Bridge on Curved Upstream Alignment

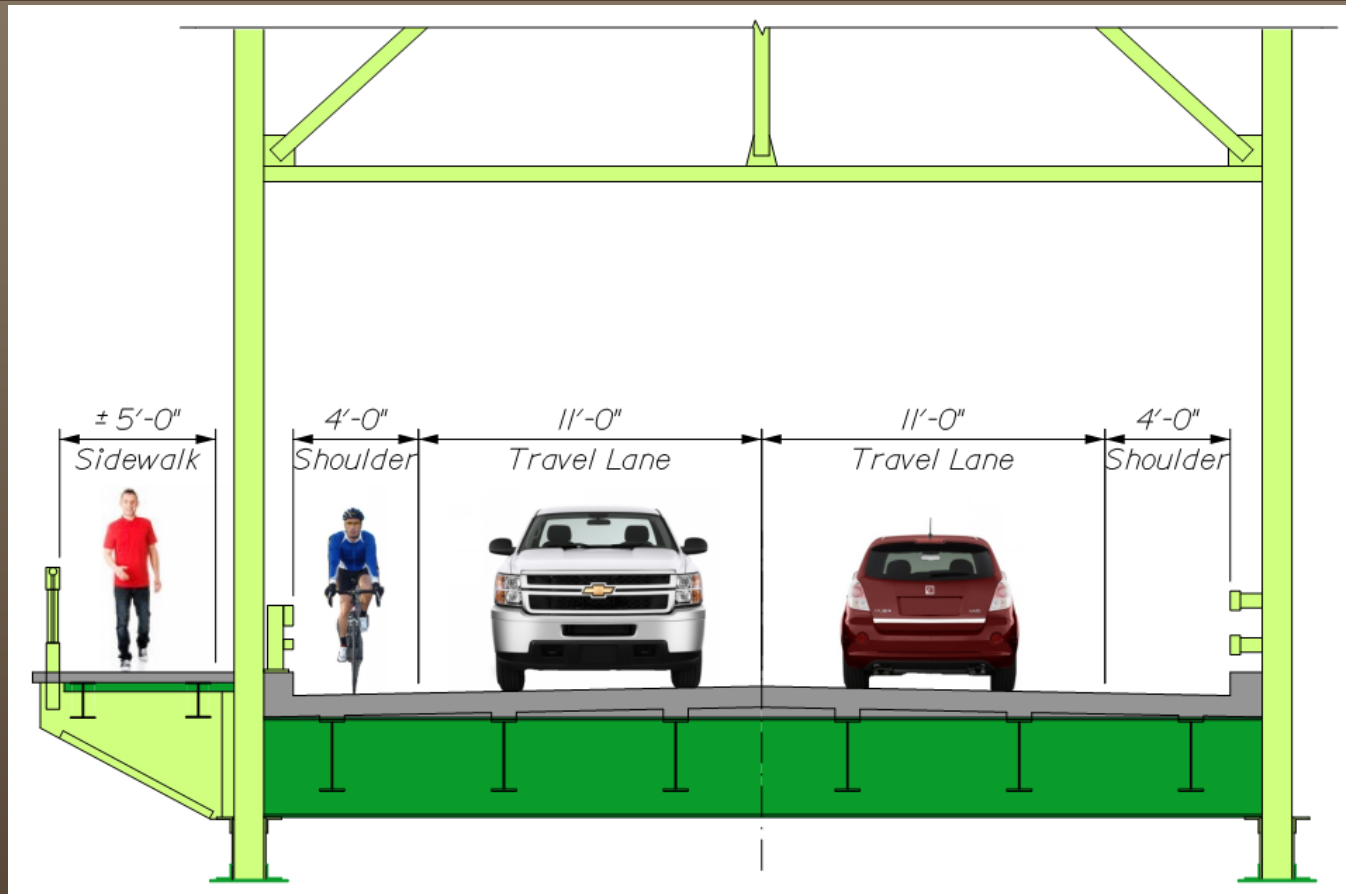


Rendering of Curved Upstream Bridge

Alt. 2 - New Bridge on Curved Upstream Alignment

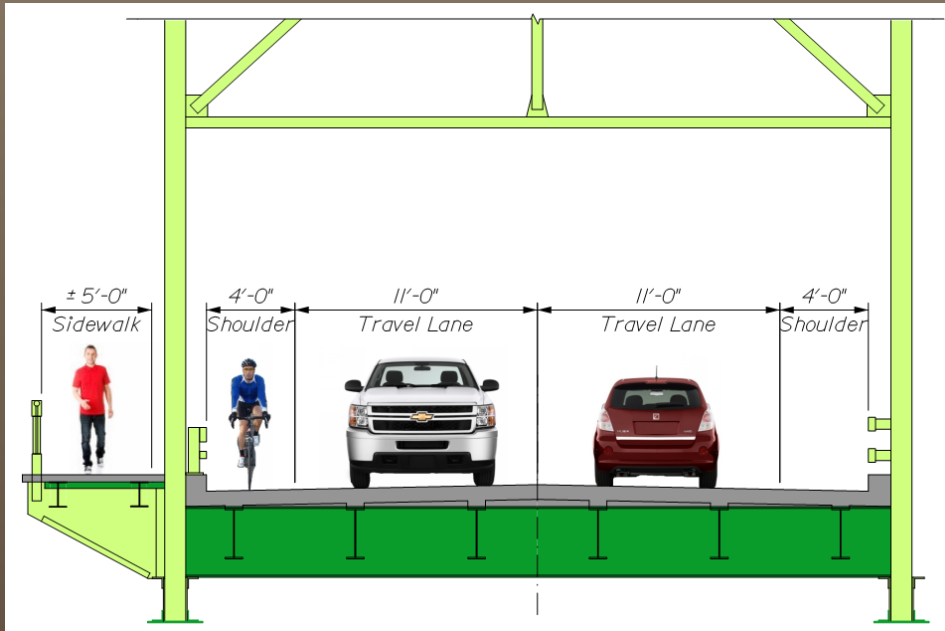
- Construction duration: 2½ years
- Traffic impacts: on existing bridge
- Utility impacts: relocate existing utilities to new bridge
- Right of way impacts: 3 properties
- Construction cost: \$13 Million
- Life cycle cost: \$13.7 Million
- Cumulative service lifetime cost: \$17.3 Million

Alt. 3 - Rehabilitation of Existing Bridge



Proposed Bridge Section - Alternate 3

Alt. 3 - Rehabilitation of Existing Bridge

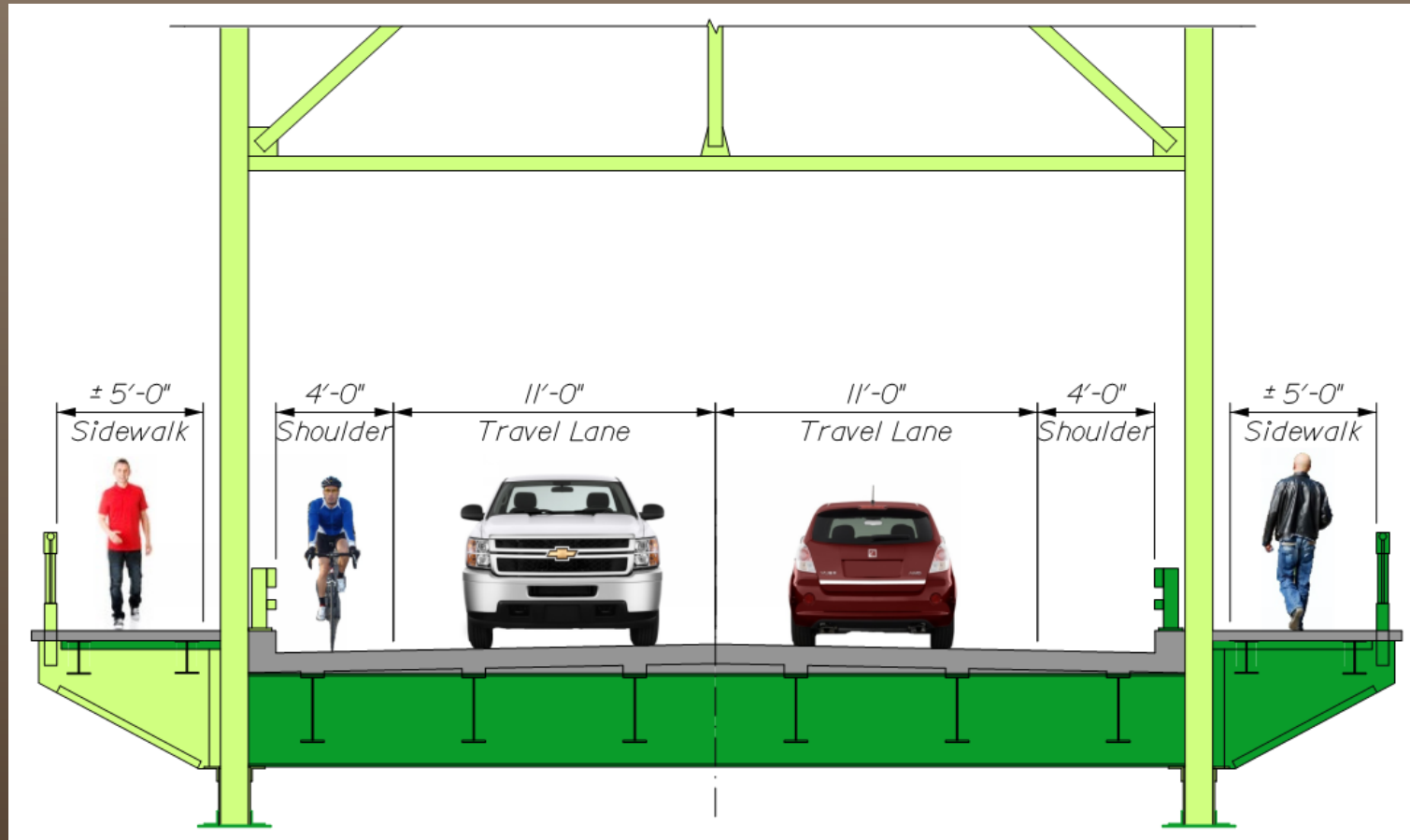


- New deck
- New floor framing
- Paint
- Sidewalk support framing repair
- Bottom chord repair

Alt. 3 - Rehabilitation of Existing Bridge

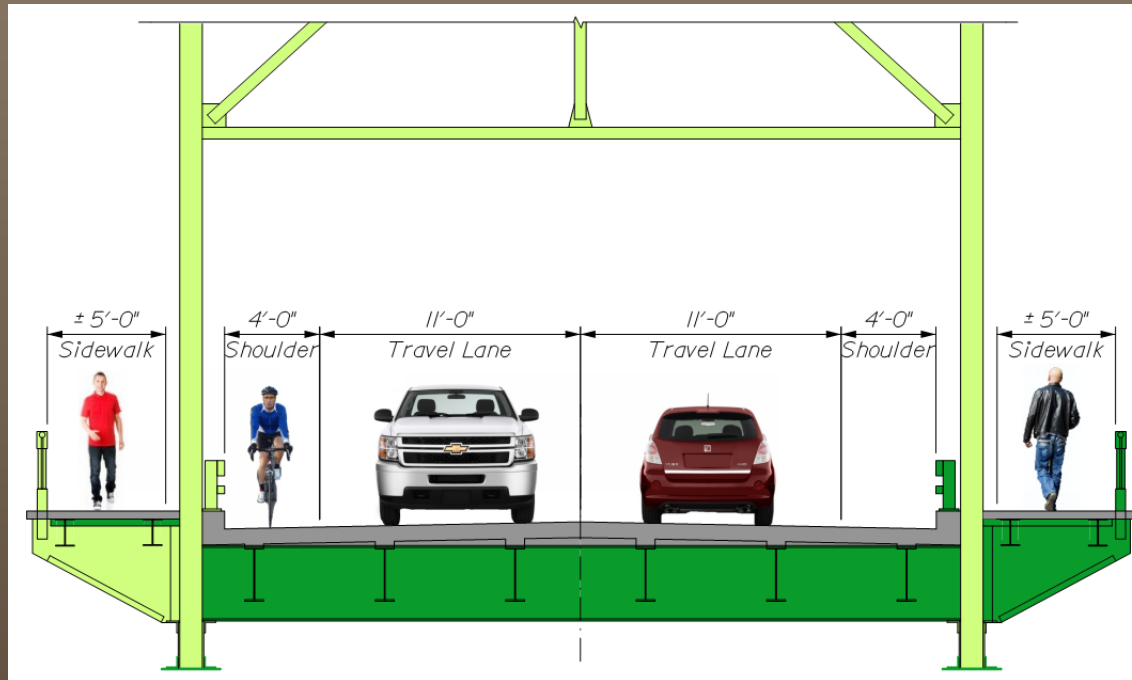
- Construction duration: 3 Years
- Traffic impacts: on-site temporary detour
- Does not address pedestrian mobility and safety concerns
- Construction cost: \$15 Million
- Life cycle cost: \$20.8 Million
- Cumulative service lifetime cost: \$35.2 Million

Alt. 4 - Rehabilitation of Existing Bridge With Added Sidewalk



Proposed Bridge Section - Alternate 4

Alt. 4 - Rehabilitation of Existing Bridge With Added Sidewalk



- Same as Alt. 3 except:
 - Added sidewalk
 - New lightweight deck

Alt. 4 - Rehabilitation of Existing Bridge With Added Sidewalk

- Construction duration: 3 Years
- Traffic impacts: on-site temporary detour
- Construction cost: \$17 Million
- Life cycle cost: \$23.2 Million
- Cumulative service lifetime cost: \$38.2 Million

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