



Minnesota's Experience with Accelerated Bridge Construction

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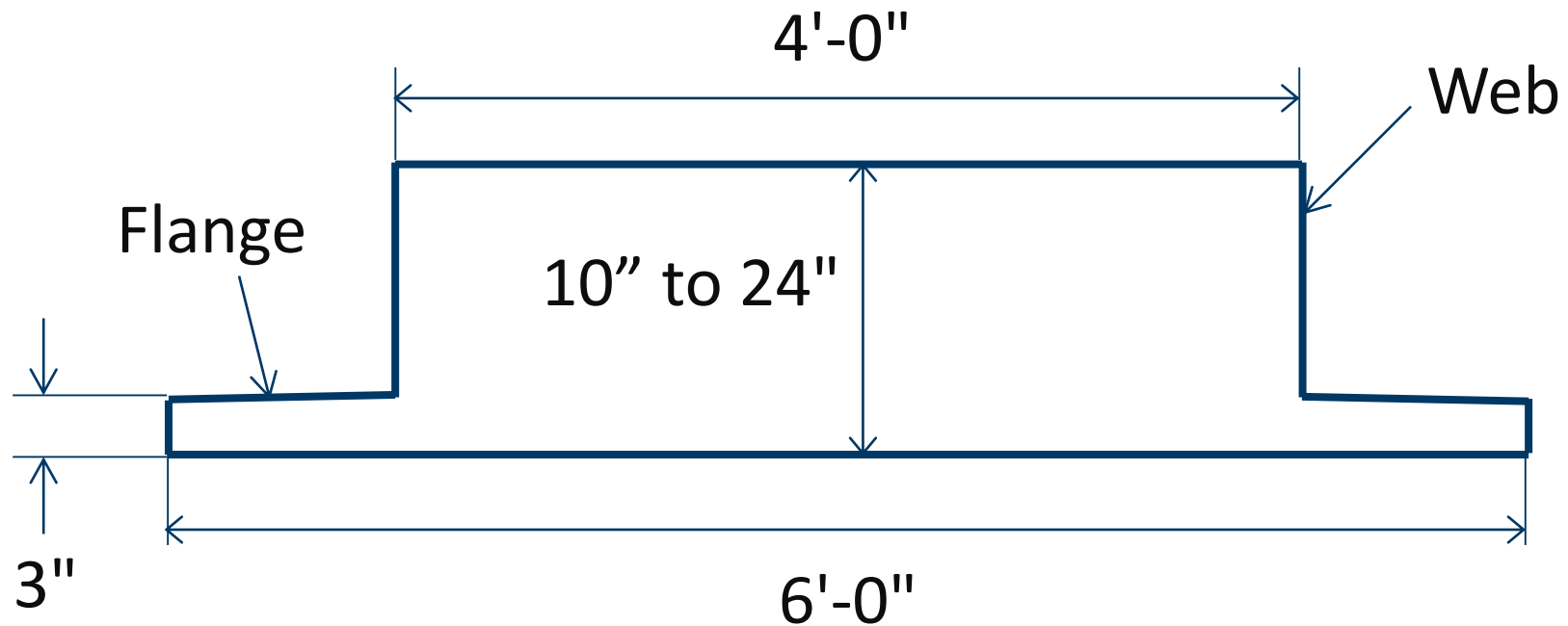
Implementation of ABC

- **Humble Beginnings...Precast Concrete Box Culverts**



Implementation of ABC

- In-house innovation: Inverted Tee Superstructure



Inverted Tee – Side-by-Side Installation



Inverted Tee – Cast-in-Place Deck



Precast Substructures



Precast Substructures

**Complete the
connection with
high strength grout**



Full Depth Deck Panels – New Construction



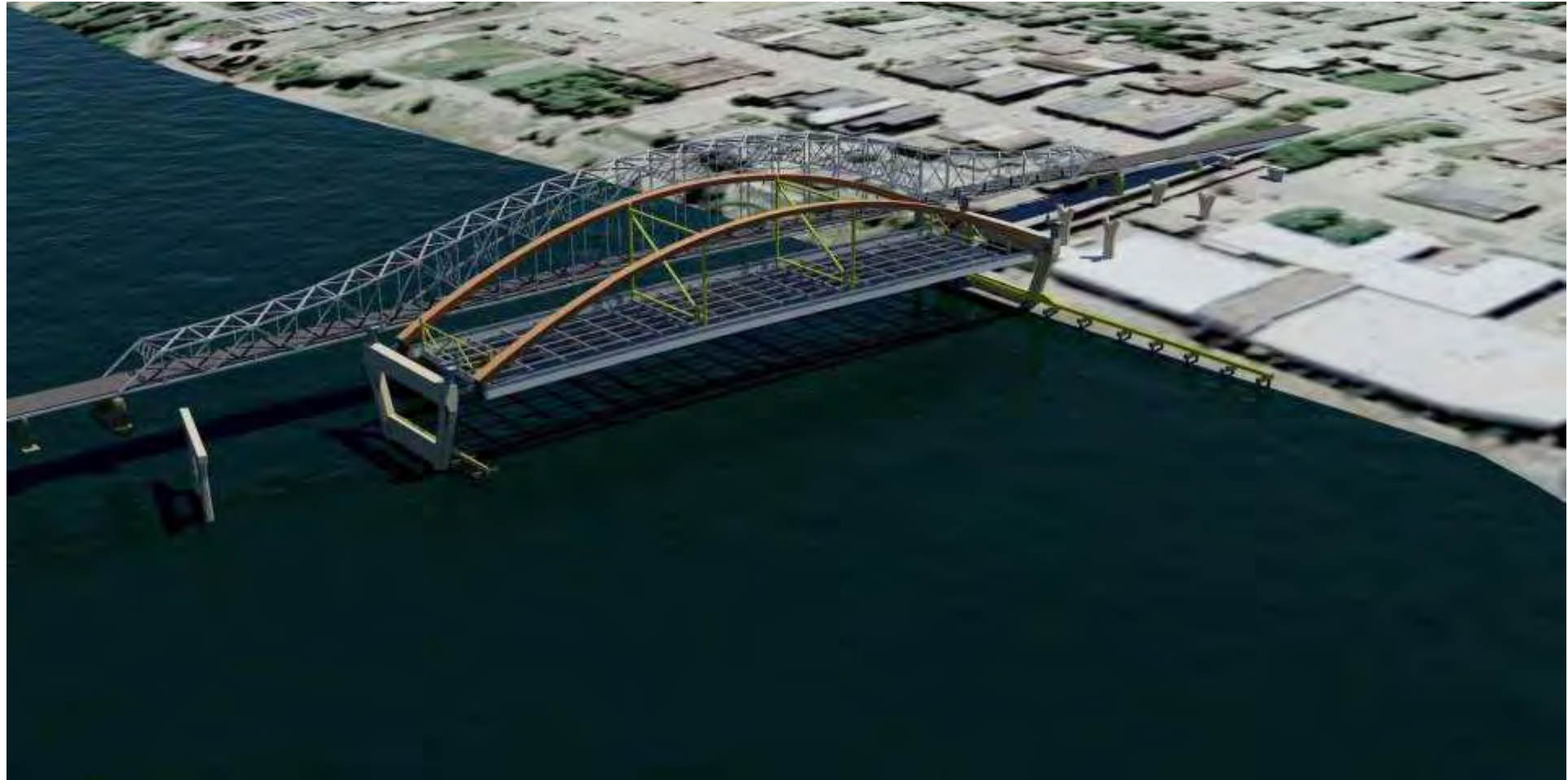
Full Depth Deck Panels - Rehabilitation



Self Propelled Modular Transporters (SPMT)



Hastings Bridge – SPMT & Vertical Lift



Lateral Bridge Slide



GRS-IBS



ABC Project Selection

3 Stage Process

Stage 1 – First Cut

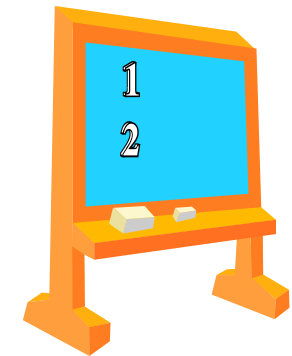
- Fully Automated
- Bridge Management Data
- Objective – no published scores

Stage 2 – Site specific

- Occurs in District – Multi Discipline
- Subjective
- Early Determination/Funding
- District signature/ownership

Stage 3 – Select Method/Technique

- Alternative Contracting Options



Alternative Delivery & Innovative Contracting

- **A+B bidding**
- **Lane rental**
- **Evening/weekend/non-peak/complete closure**
- **Incentive/Disincentive**
- **Value engineering workshops**
- **Performance specifications**
- **Design Build**
- **Construction Manager General Contractor – CMGC**
 - **Hybrid of DB & DBB**

Ultra High Performance Concrete



Thank you again!

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