**Cable-Stayed**

This bridge type spans the navigation opening using an arch that supports the roadway deck by using vertical cables. The entire arch is self-equilibrating, meaning the entire span may be lifted into place as a unit during construction. This bridge type is quite economical for the span length needed for this crossing.

**Advantages**
- Economical for this span length
- Minimal structure depth maintains roadway profile
- Can be built off-site and moved into place
- Construction with minimal navigation interference

**Disadvantages**
- Most difficult bridge type to construct
- Design of tower and cables is more difficult than other bridge types
- Inspection more difficult than other bridge types
- Highest cost

**True Arch**

Similar to the Deck Tied Arch except the foundation supports the arch that supports the roadway deck. This design adds considerably to the size of the foundations. A temporary tie can be constructed for this bridge allowing it to be lifted into place during construction. The cost is somewhat greater than the Deck Tied Arch.

**Advantages**
- Minimal structure depth maintains roadway profile
- Ease of deck replacement
- Can be built off-site and moved into place
- Construction with minimal navigation interference

**Disadvantages**
- Design of foundation support is more complex than other bridge types
- Arch construction and connection to the foundation is challenging

**Deck Tied Arch**

This bridge type is generally used for longer spans than can be achieved with either arches or girders. An example would be the Golden Gate Bridge in San Francisco, California. The roadway deck is supported by high strength cables that originate from towers. The cost is high compared to other bridge types.

**Advantages**
- Minimal structure depth maintains roadway profile
- Construction without navigation interference
- Ease of deck replacement

**Disadvantages**
- Highest cost
- Inspection more difficult than other bridge types
- Design of tower and cables is more difficult than other bridge types
- Most difficult bridge type to construct
These bridge types were eliminated due to structure depth, impacts to the interchanges and cost. The depth to support the bridge deck requires the roadway elevation to increase to maintain the river channel navigation clear height of 66.4'.