

S-1 COST: \$7.8 MILLION

DESCRIPTION

- · New bridge on existing alignment.
- A temporary two-lane bridge will be built prior to construction of the new bridge and will be removed once construction of the new bridge is complete.

SITE VICINITY

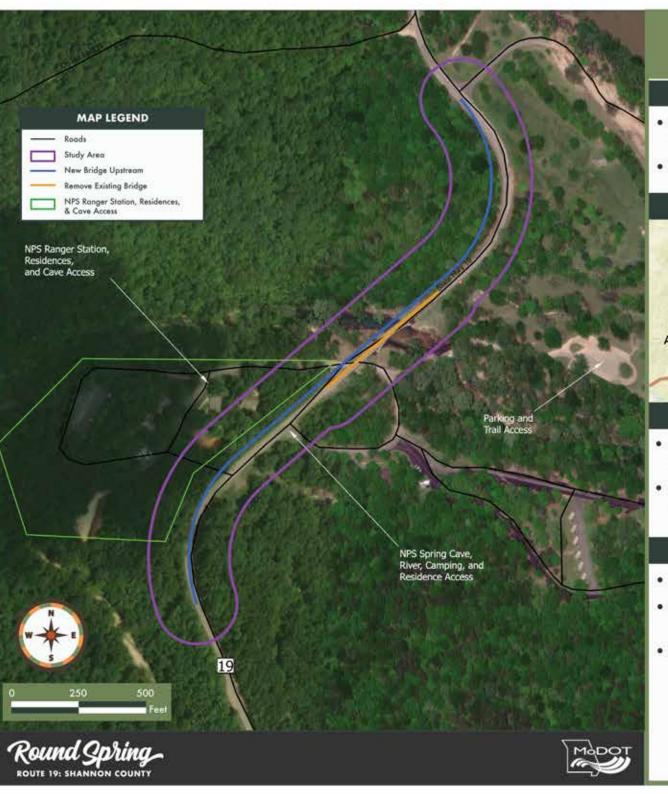


ADVANTAGES

- · Matches location of existing bridge.
- · Less permanent roadway work.
- Avoids retaining walls or reinforced slopes.

DISADVANTAGES

- · Additional cost for temporary bridge.
- Builds two bridges over the channel during construction.
- · Extensive formwork in the channel.



S-2 COST: \$7.4 MILLION

DESCRIPTION

- New bridge upstream (northwest) of the existing bridge.
- · No temporary bridge required.

SITE VICINITY



ADVANTAGES

- Final configuration is a single bridge over the channel.
- No temporary bridge required; cost savings.

DISADVANTAGES

- · More permanent roadway work.
- May need retaining walls or reinforced slopes.
- · Extensive formwork in the channel.

MAP LEGEND Roads Study Area Rehabilitate Existing Bridg Two-Lane Temporary Bridge NPS Ranger Station, Residences, & Cave Access NPS Ranger Station, Residences, and Cave Access NPS Spring Cave, River, Camping, and Residence Access ROUTE 19: SHANNON COUNTY

S-3COST: \$7 MILLION

DESCRIPTION

- · Rehabilitate the existing bridge.
- A temporary two-lane bridge will be built prior to rehabilitation of the existing bridge and will be removed once the rehabilitation of the existing bridge is complete.

SITE VICINITY



ADVANTAGES

- · Matches location of existing bridge.
- · Less permanent roadway work.
- · Avoids retaining wall or reinforced slopes.
- · Avoids extensive formwork in the channel.

DISADVANTAGES

- · Additional cost for temporary bridge.
- Builds two bridges over the channel during construction.
- Remediated concrete of the existing bridge is buried in the structure, possibly requiring further rehabilitation in the future.
- Shorter life expectancy compared to a new bridge.
- Cannot carry design loading but will not require load posting.