MAP LEGEND Study Area Existing Pedestrian Bridge Removed NPS Parking New Bridge on Existing Alignment and River Access Two-Lane Temporary Bridge Removed After Construction of New Bridge Carr's Store and Canoe Rental Campgroun River Acces

ROUTE 19: SHANNON COUNTY

C-1A COST: \$12.7 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.
- · Existing pedestrian bridge removed.

SITE VICINITY



ADVANTAGES

- · Matches location of existing bridge.
- Final configuration is a single bridge over the channel.
- · Less permanent roadway work.
- Uses a two-lane bridge during construction.

- Additional cost for temporary bridge.
- Pedestrian bridge must be removed prior to construction of the two-lane temporary bridge.
- Utilities on the existing pedestrian bridge must be relocated.
- No separate pedestrian bridge.

MAP LEGEND Study Area Existing Pedestrian Bridge Removed NPS Parking New Bridge on Existing Alignment and River Access Two-Lane Temporary Bridge Retained as Pedestrian Bridge Carr's Store and Canoe Rental ROUTE 19: SHANNON COUNTY

C-1B COST: \$9.1 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 retained as a pedestrian bridge once construction of the new bridge is complete.
- Existing pedestrian bridge removed.

SITE VICINITY



ADVANTAGES

- Matches location of existing bridge.
- · Less permanent roadway work.
- Uses a two-lane bridge during construction.
- · Separate pedestrian bridge provided.

- Final configuration is two bridges over the channel.
- Pedestrian bridge must be removed prior to construction of the two-lane temporary bridge.
- Utilities on the existing pedestrian bridge must be relocated.
- Additional cost for temporary bridge.

MAP LEGEND Study Area Existing Pedestrian Bridge Removed NPS Parking New Bridge on Existing Alignment and River Access One-Lane Temporary Bridge Converted to Pedestrian Bridge Carr's Store and Canoe Rental Round Garina_ ROUTE 19: SHANNON COUNTY

C-2 COST: \$10.4 MILLION

DESCRIPTION

- · New bridge on existing alignment.
- A temporary one-lane bridge will be built prior to construction of the new bridge and will be retained as a pedestrian bridge once construction of the new bridge is complete.
- Existing pedestrian bridge removed.

SITE VICINITY



ADVANTAGES

- · Matches location of existing bridge.
- Less permanent roadway work.
- · Separate pedestrian bridge provided.

- Final configuration is two bridges over the channel.
- Pedestrian bridge must be removed prior to construction of the one-lane temporary bridge.
- Utilities on the existing pedestrian bridge must be relocated.
- Uses a one-lane bridge during construction.
- Additional cost for temporary bridge.

MAP LEGEND Roads Study Area Existing Pedestrian Bridge NPS Parking and River Access New Bridge Remove Existing Bridge Carr's Store and Canoe Rental Round Spring_ **ROUTE 19: SHANNON COUNTY**

C-3A COST: \$10.8 MILLION

DESCRIPTION

- New bridge downstream (east) of existing bridge.
- No temporary bridge.
- Existing pedestrian bridge removed.

SITE VICINITY



ADVANTAGES

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

- Pedestrian bridge must be removed prior to construction.
- Utilities on the existing pedestrian bridge must be relocated.
- · More permanent roadway work.
- Uses a one-lane bridge during construction.
- No separate pedestrian bridge.

MAP LEGEND Study Area Existing Pedestrian Bridge Removed NPS Parking and River Access New Bridge Remove Existing Bridge Carr's Store and Canoe Rental Round Spring_ ROUTE 19: SHANNON COUNTY

C-3B COST: \$11 MILLION

DESCRIPTION

- New bridge downstream (east) of the existing bridge.
- · No temporary bridge.
- · Existing pedestrian bridge retained.

SITE VICINITY



ADVANTAGES

- No temporary bridge required; cost savings.
- Existing pedestrian bridge usable during construction of new bridge.
- Separate pedestrian bridge provided.
- Utilities remain on the existing pedestrian bridge.

- Final configuration is two bridges over the channel.
- · More permanent roadway work.
- Uses a one-lane bridge during construction.

MAP LEGEND Roads Study Area (PS Parking River Access Existing Pedestrian Bridge Retained Phased Rehabilitation of **Existing Bridge** Carr's Store and Canoe Rental **ROUTE 19: SHANNON COUNTY**

C-4COST: \$8.6 MILLION

DESCRIPTION

- Multiple phase rehabilitation of the existing bridge.
- No temporary bridge.
- Existing pedestrian bridge retained.

SITE VICINITY



ADVANTAGES

- · Matches location of existing bridge.
- No temporary bridge required; cost savings.
- Existing pedestrian bridge usable during construction for new bridge.
- · Separate pedestrian bridge provided.
- Utilities remain on the existing pedestrian bridge.

- Final configuration is two bridges over the channel.
- · Uses a one-lane bridge during construction.
- Longer construction period.
- 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.

MAP LEGEND Roads Study Area Existing Pedestrian Bridge Removed NPS Parking Single Phase Rehabilitation of and River Access **Existing Bridge** Two-Lane Temporary Bridge Carr's Store and Canoe Rental Campground River Access **ROUTE 19: SHANNON COUNTY**

C-5A COST: \$10.4 MILLION

DESCRIPTION

- Single-phase rehabilitation of 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.
- · Existing pedestrian bridge removed.

Alternative Location 19 Winona

ADVANTAGES

- · Matches location of existing bridge.
- Final configuration is a single bridge over the channel.
- Less permanent roadway work.
- Uses a two-lane bridge during construction.

- Additional cost for temporary bridge.
- 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.
- Pedestrian bridge must be removed prior to construction of the two-lane temporary bridge.
- Utilities on the existing pedestrian bridge must be relocated.
- No separate pedestrian bridge.

MAP LEGEND Roads Study Area Existing Pedestrian Bridge NPS Parking Single Phase Rehabilitation of and River Access **Existing Bridge** Two-Lane Temporary Bridge Carr's Store and Canoe Rental Campground River Access **ROUTE 19: SHANNON COUNTY**

C-5B

COST: \$8.4 MILLION

DESCRIPTION

- Single phase rehabilitation of 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.
- Existing pedestrian bridge retained.



ADVANTAGES

- Matches location of existing bridge.
- Less permanent roadway work.
- Uses a two-lane bridge during construction.
- Existing pedestrian bridge usable during rehabilitation of the existing bridge.
- · Separate pedestrian bridge provided.
- · Utilities remain on the existing pedestrian bridge.

- Final configuration is two bridges over the channel.
- · Additional cost for temporary bridge.
- 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.