

# C-1

## DESCRIPTION

- New bridge on existing alignment.
- A grated two-lane temporary bridge will be built prior to construction of the new bridge and will be removed after the new bridge is constructed.
- Existing pedestrian bridge accessible during construction and will be removed after the new bridge is constructed.
- Bicyclists and pedestrians will be accommodated via the shoulder of the new bridge.

## SITE VICINITY



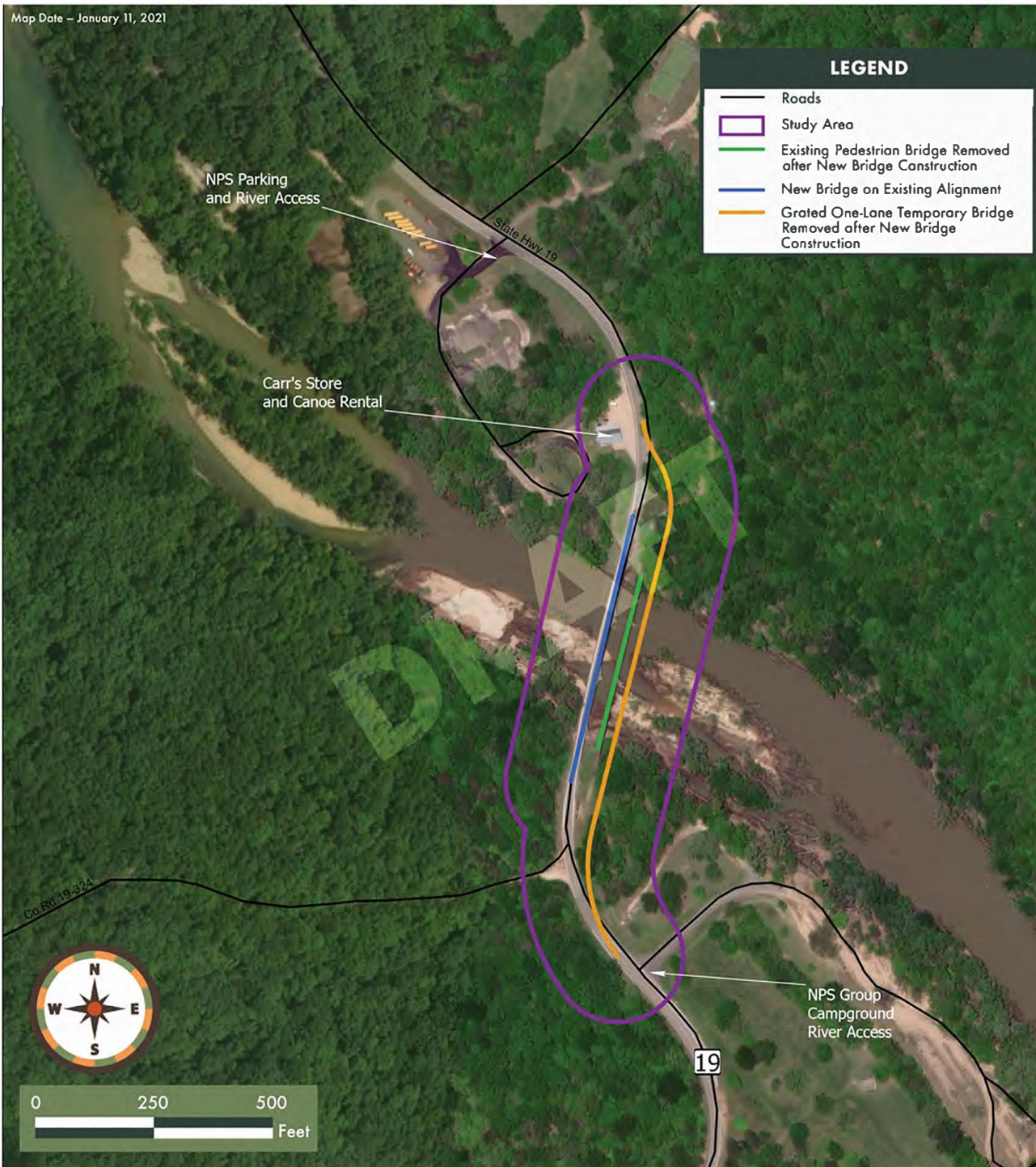
## ADVANTAGES

- Matches location of existing bridge.
- Less permanent roadway work.
- Uses a two-lane temporary bridge during construction.

## DISADVANTAGES

- Additional cost for temporary bridge.
- Utilities on the existing pedestrian bridge must be relocated.
- Longer construction period.
- Extensive formwork in the channel.





## LEGEND

- Roads
- Study Area
- Existing Pedestrian Bridge Removed after New Bridge Construction
- New Bridge on Existing Alignment
- Grated One-Lane Temporary Bridge Removed after New Bridge Construction

# C-2

## DESCRIPTION

- New bridge on existing alignment.
- A grated one-lane temporary bridge will be built prior to construction of the new bridge and will be removed after the new bridge is constructed.
- Existing pedestrian bridge accessible during construction and will be removed after the new bridge is constructed.
- Bicyclists and pedestrians will be accommodated via the shoulder of the new bridge.

## SITE VICINITY



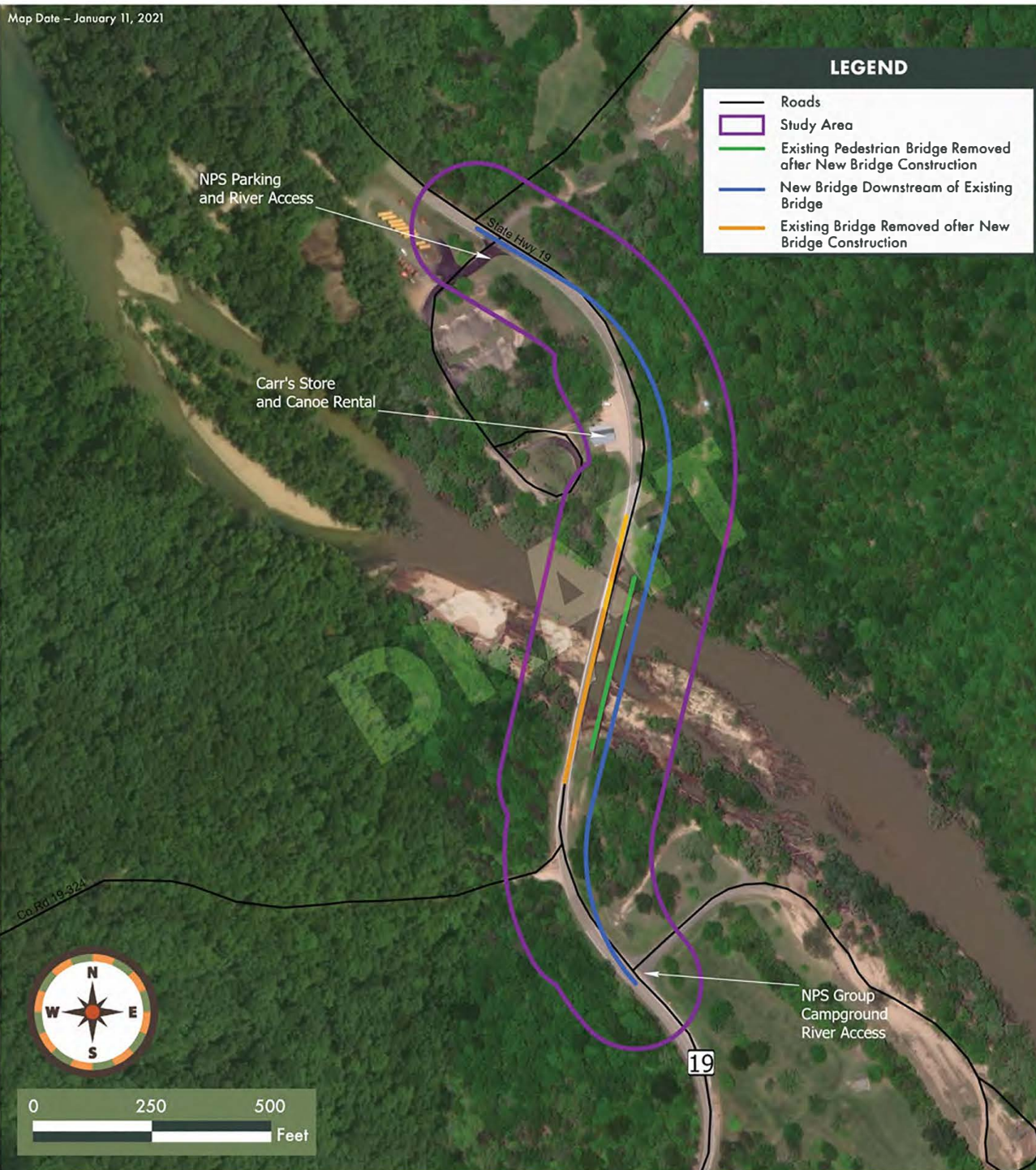
## ADVANTAGES

- Matches location of existing bridge.
- Less permanent roadway work.

## DISADVANTAGES

- Utilities on the existing pedestrian bridge must be relocated.
- Uses a one-lane temporary bridge during construction.
- Additional cost for temporary bridge.
- Longer construction period.
- Extensive formwork in the channel.





## C-3

### DESCRIPTION

- New bridge downstream (east) of existing bridge.
- No temporary bridge required.
- Existing pedestrian bridge accessible during construction and will be removed after the new bridge is constructed.
- Bicyclists and pedestrians will be accommodated via the shoulder of the new bridge.

### SITE VICINITY



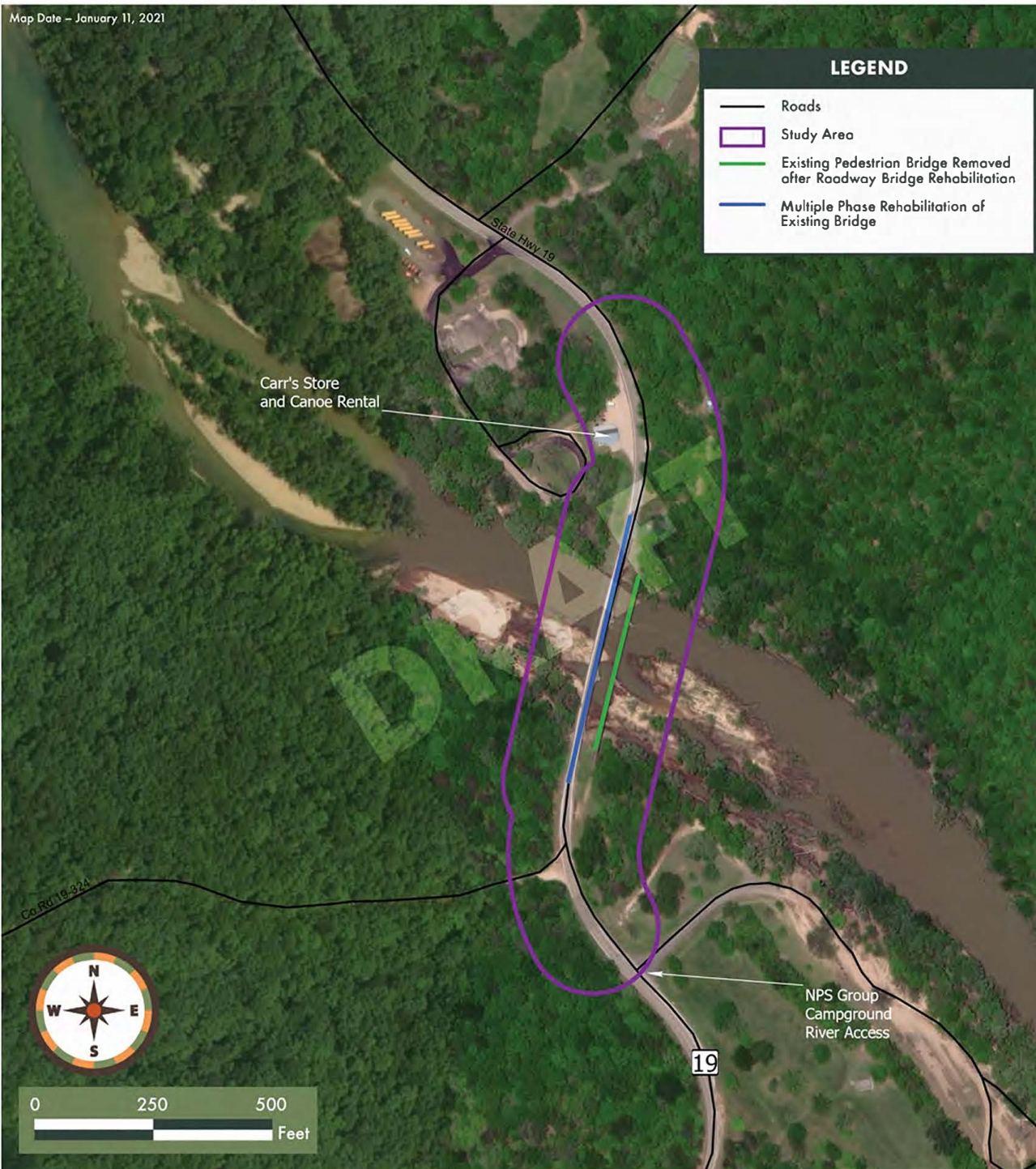
### ADVANTAGES

- No temporary bridge required; cost savings.
- Shorter construction period.

### DISADVANTAGES

- Utilities on the existing pedestrian bridge must be relocated.
- More permanent roadway work.
- Uses the existing one-lane bridge during construction.





## C-4

### DESCRIPTION

- Multiple phase rehabilitation of the existing bridge.
- No temporary bridge.
- Existing pedestrian bridge accessible during construction and will be removed after the roadway bridge is rehabilitated.
- Bicyclists and pedestrians will be accommodated via the shoulder of the rehabilitated bridge.

### SITE VICINITY



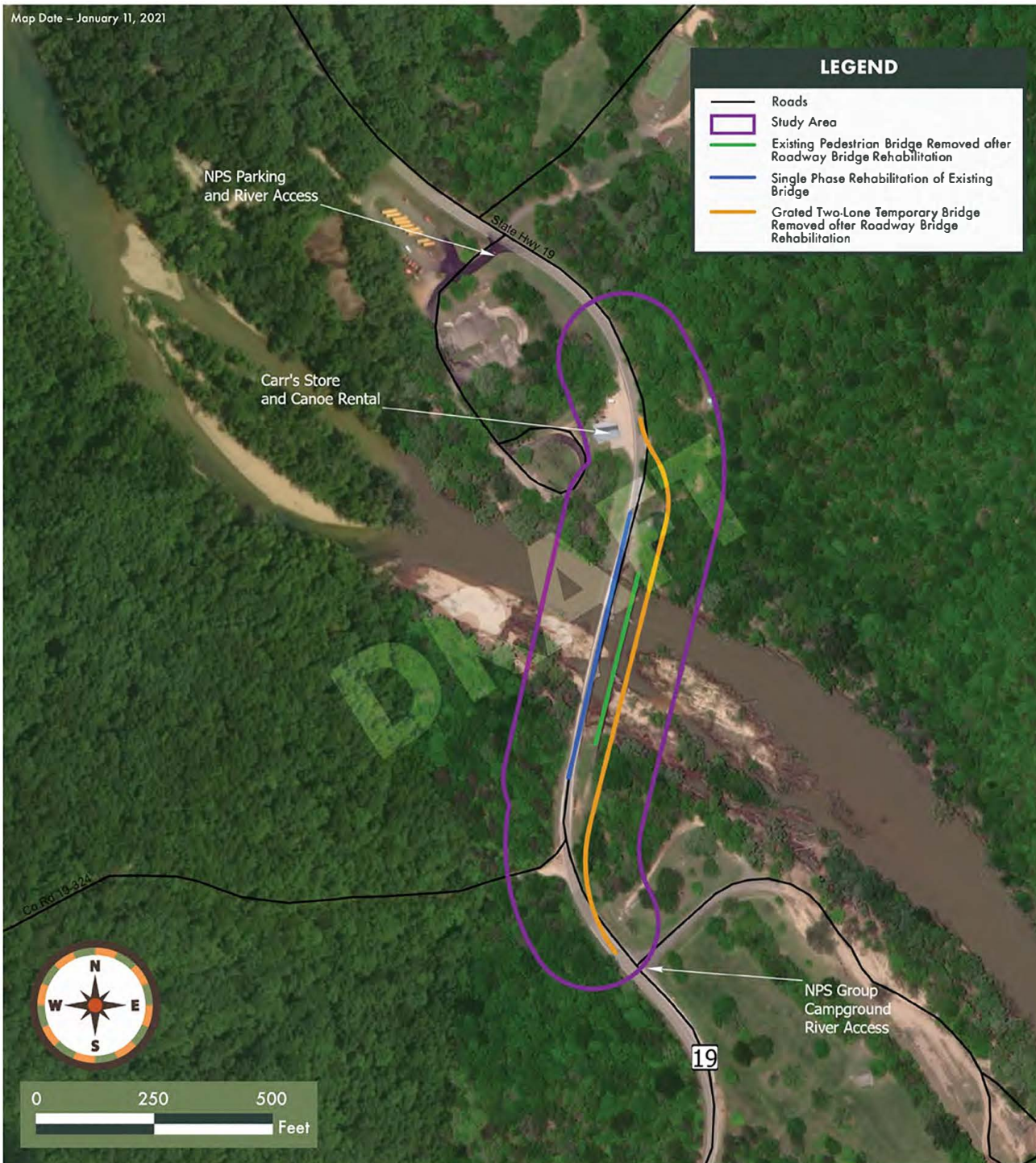
### ADVANTAGES

- Matches location of existing bridge.
- No temporary bridge required; cost savings.
- Less permanent roadway work.

### DISADVANTAGES

- Uses the existing one-lane bridge during construction.
- Utilities on the existing pedestrian bridge must be relocated.
- 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.





## C-5

### DESCRIPTION

- Single-phase rehabilitation of the existing bridge.
- A grated two-lane temporary bridge will be built and will be removed after the rehabilitation of the existing bridge is complete.
- Existing pedestrian bridge accessible during construction and will be removed after the roadway bridge is rehabilitated.
- Bicyclists and pedestrians will be accommodated via the shoulder of the rehabilitated bridge.

### SITE VICINITY



### ADVANTAGES

- Matches location of existing bridge.
- Less permanent roadway work.
- Uses a two-lane temporary bridge during construction.

### DISADVANTAGES

- 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.
- Utilities on the existing pedestrian bridge must be relocated.
- Extensive formwork in the channel.