



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PATRICK L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

February 11, 2015

MEMORANDUM TO: Rob Hanson, PE
Project Development Section Head
PDEA Project Development – Eastern Region

ATTENTION: Kim Gillespie, PE
Project Development Engineer

FROM: Charles W. Brown, PE, PLS
State Location & Surveys Engineer

STATE PROJECT: 55007.1.1 (B-5507)
F.A. PROJECT: N/A
COUNTY: Chowan
DESCRIPTION: Bridge No. 24 over Warwick Swamp, Bridge No. 20 over Dillard Creek and Bridge No. 21 over Sand Run on NC 32

SUBJECT: Location & Surveys Scoping Report for Planning

The Location & Surveys Unit has completed its review and presents the following information.

Bridge No. 20 Utilities

Aerial telephone is located on the eastern shoulder of NC 32. A buried gas line and aerial power is located along the western shoulder of NC 32. The gas line owner is unknown at this time, the power is maintained by VEPCO and the telephone is maintained by Embarq.

There is no evidence of cable TV, water, storm sewer or sanitary sewer at or near the project. I would rate the utility conflict low.

Bridge No. 20 General Comments

The existing structure contains four spans in the main unit and is 60.9 ft. in length. The existing structure entails a continuous monolithic slab superstructure. The substructure is a variety of reinforced concrete capped timber piles and concrete encased timber piles in addition to steel capped steel piles for reinforcement. The bridge deck is 26.2 ft. curb to curb and is currently not posted.

The impact of an on-site detour both in cost and environmentally would be significant. However, bypassing this route is approximately a 4 mile detour and would cause a minimal amount of travel time for current residents and passing vehicular traffic. In order to not change the tangent ingress and egress of the existing bridge and minimize the environmental impact of the project, Location

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FAX: 919-250-4223
www.ncdot.gov/doh/preconstruction/location

LOCATION:
CENTURY CENTER COMPLEX
BUILDING B -ENTRANCE B4
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

& Surveys recommends that a new bridge be placed on the same alignment while utilizing a proposed detour route to maintain vehicular traffic during construction.

The existing right of way appears to be 60' (30' each side). NC 32 is level from both approaches, with no vertical site distance concerns. The existing horizontal alignment is tangent to the proposed bridge entering from both approaches and does not appear to cause any sight distance concerns. The posted speed limit for NC 32 is 55 mph.

Bridge No. 21 Utilities

Aerial telephone and a buried gas line are located on the western shoulder of NC 32. Aerial power is located along the western shoulder of NC 32. The gas line owner is unknown at this time, the power is maintained by VEPCO and the telephone is maintained by Embarq.

There is no evidence of cable TV, water, storm sewer or sanitary sewer at or near the project. I would rate the utility conflict low.

Bridge No. 21 General Comments

The existing structure contains two spans in the main unit and is 28.0 ft. in length. The existing structure entails a continuous monolithic slab superstructure. The substructure is a variety of reinforced concrete capped timber piles in addition to steel capped steel piles for reinforcement. The bridge deck is 27.8 ft. curb to curb and is currently not posted.

The impact of an on-site detour both in cost and environmentally would be significant. However, bypassing this route is approximately a 3 mile detour and would cause a minimal amount of travel time for current residents and passing vehicular traffic. In order to not change the tangent ingress and egress of the existing bridge and minimize the environmental impact of the project, Location & Surveys recommends that a new bridge be placed on the same alignment while utilizing a proposed detour route to maintain vehicular traffic during construction.

The existing right of way appears to be 60' (30' each side). NC 32 is level from both approaches, with no vertical site distance concerns. The existing horizontal alignment is tangent to the proposed bridge entering from both approaches and does not appear to cause any sight distance concerns. The posted speed limit for NC 32 is 55 mph.

Bridge No. 24 Utilities

Aerial telephone and a buried gas line are located on the western shoulder of NC 32. Aerial power is located along the western shoulder of NC 32. The gas line owner is unknown at this time, the power is maintained by VEPCO and the telephone is maintained by Embarq.

There is no evidence of cable TV, water, storm sewer or sanitary sewer at or near the project. I would rate the utility conflict low.

Bridge No. 24 General Comments

The existing structure contains four spans in the main unit and is 56 ft. in length. The existing structure entails a continuous monolithic slab superstructure. The substructure is a variety of reinforced concrete capped steel piles in addition to steel capped steel piles for reinforcement. The bridge deck is 27.7 ft. curb to curb and is currently not posted.

Warwick Swamp appears to flow west and the impact of an on-site detour both in cost and environmentally would be significant. However, bypassing this route is approximately a 17 mile

detour and would cause a minimal amount of travel time for current residents and passing vehicular traffic. In order to not change the tangent ingress and egress of the existing bridge and minimize the environmental impact of the project, Location & Surveys recommends that a new bridge be placed on the same alignment while utilizing a proposed detour route to maintain vehicular traffic during construction.

The existing right of way appears to be 60' (30' each side). NC 32 is level on all approaches with no vertical site distance concerns. The bridges horizontal alignment consists of a minimal amount of curvature entering from the north and departing to the south as a tangent. The minor amount of curvature does not appear to cause any site distance concerns. The posted speed limit for NC 32 is 55 mph.

There are no North Carolina Geodetic Survey control monuments that will be destroyed or disturbed as a result of the bridge replacements.

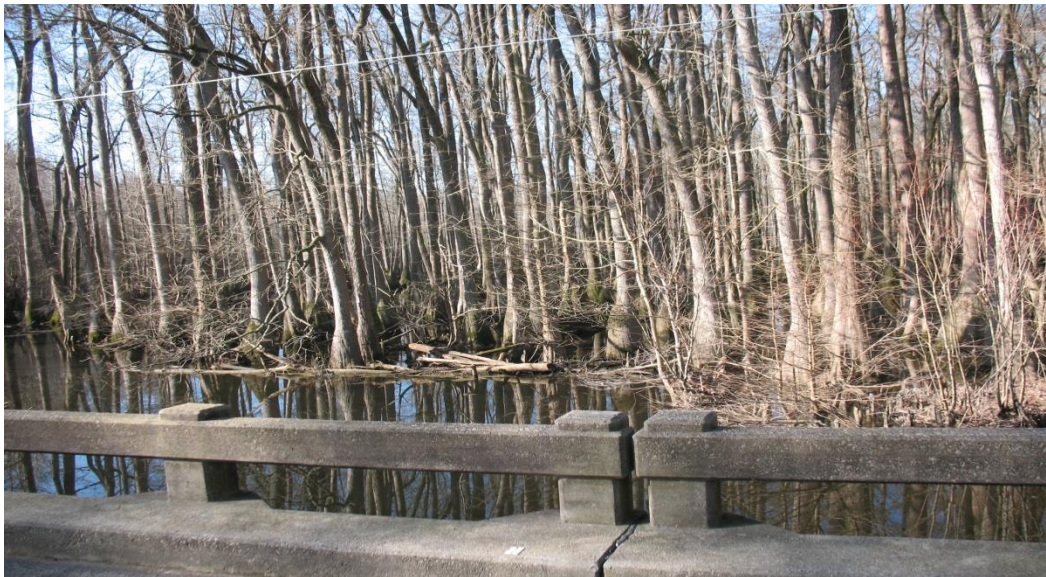
For Location & Surveys questions please contact Keith Honeycutt, PE, PLS at (919) 266-4078 or Casey Whitey, PE at (252) 791-0295.



Looking North along NC 32 from the south side of **Bridge No. 20**



Looking South along NC 32 from the North side of **Bridge No. 20**



Looking West Downstream Dillard Creek from **Bridge No. 20**



Looking East Upstream Dillard Creek from **Bridge No. 20**



West side of **Bridge No. 20**

Bridge No. 21



Looking North along NC 32 from the south side of **Bridge No. 21**



Looking South along NC 32 from the North side of **Bridge No. 21**



Looking West Downstream Sand Run from **Bridge No. 21**



Looking East Upstream Sand Run from **Bridge No. 21**



Bridge No. 21

Bridge No. 24



Looking North along NC 32 from the south side of **Bridge No. 24**



Looking South along NC 32 from the North side of **Bridge No. 24**



Looking West Downstream Warwick Swamp from **Bridge No. 24**



Looking East Upstream Warwick Swamp from **Bridge No. 24**



Bridge No. 24