

Survey Report

TIP Number:
77-0223

Project Number:
17BP.6.R.77

Bridge# 223, Division 6, Robeson County

August 12, 2016

Submitted by:



1025 Wade Avenue | Raleigh, NC 27605

919.789.9977 | sepiengineering.com



PROJECT DESCRIPTION

The purpose of this project was to provide survey data for Bridge #223 over Gum Swamp on SR 1303 (Old Red Springs Road). The limits for this project are 300' Northwest and Southeast of centerline bridge along SR 1955 (Old Red Springs Road), and 75' from centerline on each side of road. The hydrographic survey extended 125' upstream and downstream from edge of bridge. All data was collected and processed electronically following guidelines set forth by Location and Surveys unit.

Dates of survey: July 6, 2016 – Aug 10, 2016

CONTROL

Horizontal

Control was established on this project utilizing GPS points (BL-1 and 77-0223-1) established by NCDOT. The localized coordinate system developed for this project is based on the State Plane Coordinates established for monument 77-0223-1 with NAD 83 NA 2011 State Plane Grid Coordinates of Northing: 368674.430 (ft.) Easting: 1917721.936 (ft.). Site scale factor= 1.0000951800 AVCGF= 0.9999048291. All linear dimensions are localized horizontal distances. A control traverse was run through the project resulting in a raw, unadjusted closure of 1: 58288.

Vertical

- The vertical datum is based on NCDOT monument "77-0223-1" (ELEV. 194.74') NAVD 88, Geoid G12NC (provided).
- All baseline control elevations were established using differential leveling, and found to meet Class A standards per NC General Statutes, Chapter 89C Section 21 NCAC 56.1605.

BASELINE DESCRIPTIONS

- All baselines were established by SEPI Engineering.
- Baseline points set on this project were 77-0223-1, BL-1, BL-2 and BL-3. These points are numbered 101, 1, 2 and 3 in the submitted GPK file.

EXISTING ALIGNMENTS

Line -EL-

- Follows the centerline of SR 1303 (Old Red Springs Road).
- This is a geometric best-fit representation of the existing roadway.
- No centerline points were set.

UTILITIES

- SEPI Engineering collected all utility poles within the project limits.
- SUE by others.

EXISTING RIGHT-OF-WAY

Existing Right-of-way as shown in FS file was determined by SEPI Engineering using the most current retrievable deed descriptions and survey plats.

PROPERTY

- All parcels adjoining Gum Swamp call for the centerline of the creek as the property line.
- Property lines along Gum Swamp were calculated using the center of main channel as surveyed.

PROPERTY OWNER CONTACTS

Property owners affected by this project were contacted via mailed letter produced using Propcon Reporter (Bridge Replacement Letter). No comments were received from any of the property owners contacted.

DTM SETTINGS & NOTES

Curve stroke tolerance: 0.15
Minimum linear distance: 30
Dissolve option: SIDE
Side length: 100

- Some connected breaklines resulted in duplicate points with the same elevation. No errors were found.

FS FILE

- For this project the edge of vegetation/scour line was used for the Jurisdictional Stream line shown in the FS file.

DELIVERABLES

77-0223_NCDOT_FS_160812.DGN

77-0223_LS_DTM_160812.DGN

77-0223_LS_GPK_160812.GPK

77-0223_LS_TNL_160812.TIN

77-0223_LS_BASELINE_160812.TXT

77-0223_LS_DEEDBOOK_160812.PDF

77-0223_LS_PLATBOOK_160812.PDF

77-0223_LS_POC_160812.MDB

77-0223_LS_PDF_160812.TXT

77-0223_LEAST SQUARES REPORT_160812.RPT

77-0223_LEVEL LOOPS_160812.PDF

77-0223_LS_SR_160812.PDF

77-0223_LS_SURVEYCERT_160812.PDF



Old Red Springs Road (Facing North)



Old Red Springs Road (Facing South)



Gum Swamp (on bridge, facing Northerly)



Gum Swamp (on bridge, facing Southerly)



Underside of bridge (facing Northerly)



Underside of bridge (facing Southerly)