

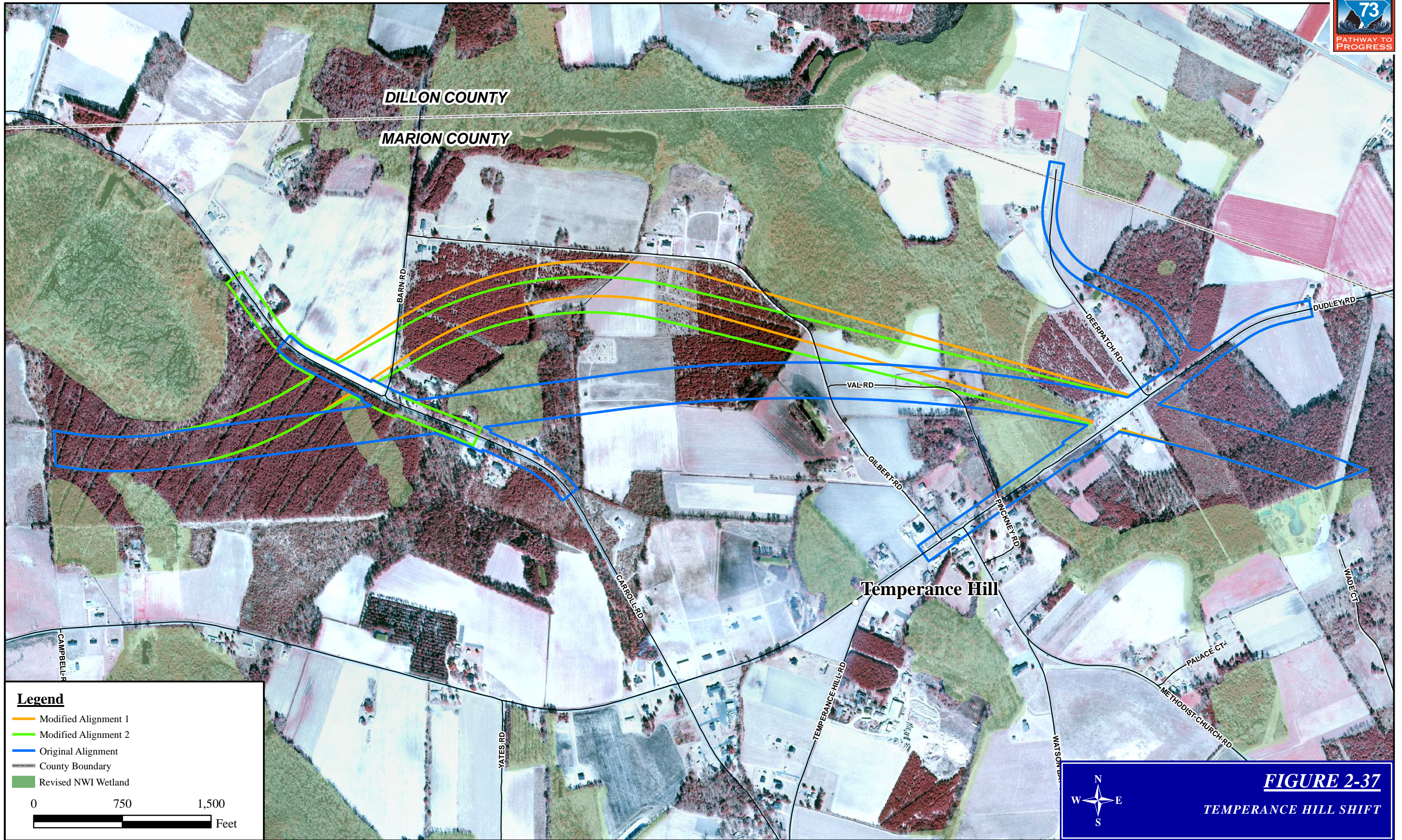


Legend

- Segment J1
- Segment U-J2-B3
- Preliminary Segments
- Constraint

0 3,000 6,000
 Feet

FIGURE 2-36
 TEMPERANCE HILL SEGMENTS





or SCDOT and would not be consistent with driver expectancy. The American Association of State Highway and Transportation Officials (AASHTO), SCDOT, other state departments of transportation, and industry professionals recognize that this combination of curves are design elements that present safety and operational concerns. While the combination of design elements in Modified Alignments 1 and 2 meet minimum design criteria, they have undesirable geometric characteristics that may have the potential to be an operationally inefficient design. The SCDOT Highway Design Manual guidelines state that this combination of curves should only be used in limited circumstances and avoided when possible. Based on these guidelines and concerns regarding driver expectancy and overall safety of the traveling public, SCDOT and FHWA design engineers determined to proceed with adding an overpass to the original alignment at Carroll Road to provide connectivity to the Temperance Hill community.

Driver Expectancy

Driver Expectancy is a safety concern and is always a factor during highway design. However, the speeds at which motorists operate on rural interstates make meeting driver expectations much more critical than on lower speed urban routes.

The NRCS identified two conservation easements managed under the Farm and Ranch Lands Protection Program (FRPP) that would be crossed by the Preferred Alternative. One is located on a converted Carolina bay (Little Sister Bay) south of Mullins on U.S. Route 76 and the second is the McRae Farm, which is located southeast of Mullins on S-34-31 (Old Stage Road) (refer to Figure 2-38). The federal FRPP prohibits the development of protected properties for nonagricultural use. The State NRCS Office stated that there are no provisions for them to divest themselves of their conservation easements enrolled in the FRPP. They further suggested avoiding both easements as a resolution to the situation. The State is prohibited from condemning a federal interest in property, unless there is a power specifically reserved to the state in the language of the deed/easement/other instrument. The FRPP easements do not include the specific language to reserve this power and as such, the easements had to be avoided. Approximately 26 acres of additional wetlands would be impacted by avoiding the FRPP easement located within the Carolina bay south of Mullins on U.S. Route 76 (refer to Figure 2-39, page 2-80). The avoidance of the McRae Farm easement would lead to an impact of approximately 5.5 acres of additional wetlands.

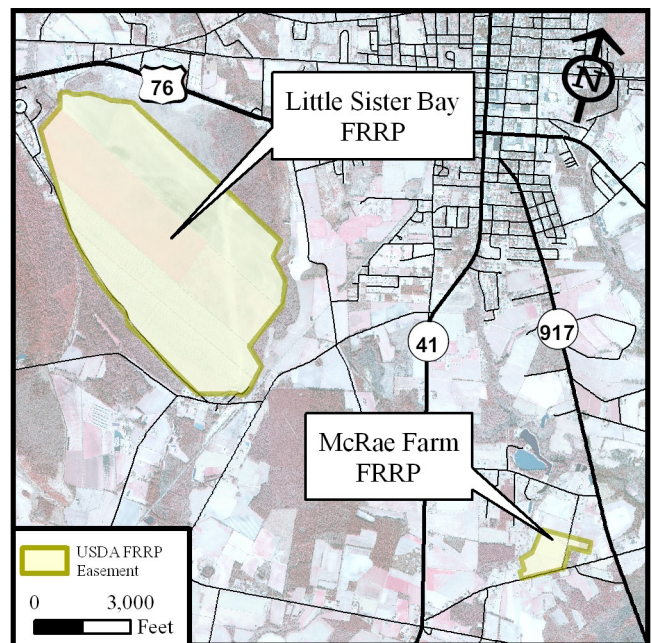


Figure 2-38 FRPP Sites

Many comments were received from residents of Pecan Pointe, a residential development located south of Mullins, South Carolina (refer to Figure 2-39, page 2-80). Due to the necessary avoidance of the FRPP easement at McRae Farm, the alignment in the vicinity of Pecan Pointe was subsequently relocated 400



feet to the south at S.C. Route 41. The residents in the vicinity of S.C. Route 41, southeast of Pecan Pointe, commented that I-73 should be elevated over S.C. Route 41 to prevent potential relocations (refer to Figure 2-39, page 2-80). As suggested, a modification was evaluated and the result would be three less residential relocations. The modification would cost an additional \$4 million, may increase potential noise impacts, and would result in an undesirable bridge structure that would be transitional and super-elevated, making it more difficult to maintain and widen. Furthermore, any future multimodal facility would have to be elevated, which would result in higher costs. It was determined that I-73 would not be elevated over S.C. Route 41.

Similar comments were received in the vicinity of Old Stage Road near Gapway, South Carolina (refer to Figure 2-39, page 2-80). Modifications were evaluated that elevated I-73 over Old Stage Road and that would cul-de-sac Old Stage Road. Elevating I-73 would cost an additional \$4 million, would be more difficult to maintain and to widen, and would require any future multimodal facility to also be elevated. In addition, the topographic depression near the Little Pee Dee River would require the structure to have a vertical curve. A cul-de-sac at Old Stage Road would reduce potential relocations by three residences and would cost \$6 million less than the original design. However, Old Stage Road had 2005 traffic volumes of 1,600 vehicles per day, which is higher than other secondary roads in the area. Due to Old Stage Road being frequently used, the Project Team decided to proceed with the original alignment that has Old Stage Road crossing over I-73 to maintain the existing traffic pattern.

Comments were received at the Public Hearing regarding the Preferred Alternative's disruption of traffic flow along S.C. Route 917 and State Road 23 (Nichols Highway), south of the Little Pee Dee River. A modification was also proposed in this area by agency representatives to parallel the existing crossing of Nichols Highway over Lake Swamp. The Project Team designed and evaluated a modification to address these concerns (refer to Figure 2-40, page 2-81). The original alignment would have 23 potential residential relocations, impact approximately 149.2 acres of wetlands, and cross Nichols Highway three times, while the modified alignment would impact 14 residences, 167.2 acres of wetlands, only cross Nichols Highway at one location, and parallel the existing Nichols Highway crossing of Lake Swamp. In addition, the modified alignment would be shorter and save approximately \$6.1 million. It was determined to proceed with the modified alignment with the addition of an overpass at Pee Dee Road to provide connectivity for area residents.

Comments were received that suggested relocating the proposed interchange at State Road 308 to interchange with Nichols Highway in the vicinity of Ketchuptown (refer to Figure 2-40, page 2-81). The proposed interchange at State Road 308 would be closer to the Cool Spring Business Park and would have no relocations. Relocating the interchange to Nichols Highway would result in two relocations, the realignment of Luck Road, and approximately \$600,000 in additional cost for right-of-way. In addition, the Nichols Highway interchange would be in close proximity to Mt. Pisgah Baptist Church and may result in the industrial traffic from Cool Spring Business Park traveling through Ketchuptown to access I-73. The Project Team proceed with the original interchange at State Road 308.