

MEMORANDUM

TO: Roger L. Stancil, Town Manager

FROM: Lance Norris, Public Works Director
Sue Burke, P.E., Stormwater Engineer
Christopher Jensen, P.E., Stormwater Engineer

SUBJECT: Bids – Burning Tree Drive Drainage Improvements Project Contract Award

DATE: February 8, 2010

PURPOSE

The attached resolution would authorize the Town Manager to negotiate and execute a contract with the lowest responsive bidder, Hannah Utilities, Inc., general contractor, in an amount not to exceed \$509,062.50 for the construction of the Burning Tree Drive Drainage Improvements Project.

Further, the resolution would authorize the Manager to approve change orders for this project as necessary, not to exceed the combined total project cost of \$554,314.00 (authorized contract amount plus contingency), without additional Council action.

BACKGROUND

In 2001, the owner of 1016 Pinehurst Drive contacted Town staff about an ongoing drainage problem affecting her property. After an isolated thunderstorm in August 2001, floodwaters had entered her home at the ground level to a depth of approximately three feet, causing damage to the house and a parked vehicle in the garage. Subsequently, property owners on the north side of Burning Tree Drive contacted Town staff about drainage and flooding problems they were experiencing.

This property is located on the southwest corner of the intersection of Burning Tree Drive and Pinehurst Drive in The Oaks subdivision. An unnamed tributary to Little Creek flows along the western boundary of the property and crosses under Burning Tree Drive. Because of backwater effects, the property is located in the 100-year floodplain of Little Creek also.

Town staff analyzed the problem and recommended replacement of the Burning Tree Drive culvert and widening of the channel immediately downstream of the culvert. This approach would affect several properties and the Town was not able to secure construction easements from all owners. A second alternative was to construct a low berm along the property to keep runoff away from the structure. This option did not address the downstream problems and during large storms, runoff trapped behind the berm would have no release point. Because of a lack of funding, the project did not proceed.

DISCUSSION AND EVALUATION

In 2006, Town staff reevaluated the site and concluded that replacing the Burning Tree Drive culvert would not address the source of the problem, which was the increased volume of stormwater runoff from recent upstream development. The Town contracted with Mulkey, Inc., a consulting engineering firm, to assist the Town in developing design options for improving the stormwater conveyance and mitigating the drainage problems that had caused flooding in adjacent residential structures, scour holes at conveyance pipe inlets and outlets, and stream channel scour during even moderate storm events.

Mulkey Inc. conducted field data collection and performed preliminary hydrologic and hydraulic modeling analyses. After completing the engineering modeling, the Mulkey staff then evaluated 16 alternatives and assessed each option on the reduction in flood depths and rates it provided to upstream and downstream properties. The Stormwater staff reviewed these options and identified the three solutions that provided the most benefit. Stormwater staff then met with the affected property owners and presented its recommendation. The property owners agreed with the Town's recommendation and the Town authorized Mulkey, Inc. to prepare the construction plans and specifications, permit applications, and bid documents.

Overall Project Description: The project will be performed along Pinehurst Drive, two residential properties on Burning Tree Drive, and portions of the Chapel Hill Country Club's golf course.

The work on Pinehurst Drive consists of the installation of 804 feet of 60-inch, 368 feet of 48-inch, 276 feet of 36-inch, and 36 feet of 18-inch of reinforced concrete pipe, 13 associated drainage structures, and a double 36-inch pipe outlet with headwall discharging into the Chapel Hill Country Club's pond system on the east side of Pinehurst Drive. This conveyance system will collect stormwater runoff traveling along Pinehurst Drive and a portion of the golf course, surface water that overtops a tributary to Little Creek, and an ephemeral stream that is currently piped through the golf course.

The project work at the properties on Burning Tree Drive involves the installation of a 42" headwall and a rock cross vane to stabilize the culvert outlet. Additionally, two small floodplain drains will be installed to assist yard drainage if the stream overtops its banks and inundates the yard. Plantings will be installed to help stabilize the stream banks.

Two existing 24-inch pipes under the golf cart path immediately downstream of the Burning Tree Drive culvert will be replaced with a 6' x 3' concrete box culvert. The culvert replacement is intended to reduce incidences of blockage and increase the flow under the cart path.

Bids: Based on the plans and specifications for this project prepared by Mulkey, Inc., formal bids were solicited from general contractors. The notice to bidders was published on December 9, 2009 and a pre-bid meeting was held on December 18, 2009. Six responsive bids were received and opened on January 14, 2010 at 3:00 p.m. The bid results are as follows:

Hannah Utilities, Inc.	\$509,062.50
Terry's Plumbing & Utilities, Inc.	\$519,434.00
Sullivan Eastern, Inc.	\$548,024.20
Triangle Grading and Paving, Inc.	\$574,690.00
Sanford Contractors, Inc	\$588,256.79
Narron Contracting, Inc.	\$731,980.60

We have reviewed the bids concluded that the lowest responsive bidder is Hannah Utilities, Inc. for the bid of \$509,062.50.

The project will be funded by the Stormwater Fund.

RECOMMENDATION

That the Council adopt the attached resolution, which would authorize the Manager to negotiate and execute a contract with the lowest responsive bidder, Hannah Utilities, Inc., in an amount not to exceed \$509,062.50 for the construction of the Burning Tree Drive Drainage Improvements Project and to approve change orders not to exceed the total project cost of \$554,314.00 (bid plus contingency) without additional Council action.