



Date: December 21, 2010

To: Thomas J. Bonfield, City Manager
Through: Theodore L. Voorhees, Deputy City Manager
From: Mark D. Ahrendsen, Transportation Director
Pete Nicholas, P.E., Traffic Operations Engineer
Subject: Agenda Item – Contract for Installation of Traffic Signals with Mast Arms and Inductive Loop Upgrades with ALS of NC, Inc.

Executive Summary

The City of Durham Transportation Department is requesting authorization to award construction contracts for the installation of permanent mast arm traffic signals with streetlights at Broad Street at Perry Street, and Carver Street at Stadium Drive. The contract also includes the installation of inductive loop vehicle detection to replace existing inefficient detection at NC 54 at South Alston Avenue, Guess Road at Horton Road, Garret Road at Old Chapel Hill Road and Miami Boulevard at Angier Avenue.

The Transportation Department recommends that the City Council authorize the City Manager to execute a contract with ALS of North Carolina, Inc. to install mast arm traffic signals with streetlights and inductive loop upgrades in the amount of \$283,710.50 with a 15% construction contingency of \$42,556.58. This results in a total project amount of \$326,267.08. Funds are budgeted for these improvements in the Capital Improvements Program Miscellaneous Thoroughfares and Street Improvements Account.

Upon completion of the project the City will maintain the traffic signals, streetlights and inductive loops.

Recommendation

The Transportation Department recommends that the City Council:

1. Authorize the City Manager to execute a contract with ALS of North Carolina, Inc. in the amount of \$283,710.50 for the installation of a traffic signals with mast arms at Broad Street at Perry Street and Carver Street at Stadium Drive and inductive loop upgrades;
2. Establish a project contingency fund in the amount of \$42,556.58; and
3. Authorize the City Manager to negotiate change orders to the project provided the cost of all change orders does not exceed \$42,556.58 and the total project cost does not exceed \$326,267.08.

Background

In 2007, City staff determined the stop-controlled intersections of Broad Street at Perry Street and Carver Street at Stadium Drive warranted traffic signals following an increase in high severity accidents. City staff designed and installed temporary wood pole signals at each

intersection. The temporary wood pole installations were intended to remain in place until funding was identified for permanent designs and construction. Funding for the design of permanent traffic signals was identified in April 2008. A consultant, AECOM, was selected from the City of Durham Professional Services On-Call Master Agreement to design each installation. Final plans were approved by NCDOT in May 2010. During the design process City Transportation worked in conjunction with NCDOT staff for final plan approval.

Transportation is recommending that a construction contract be awarded to replace the temporary wood pole traffic signals with mast arms and streetlights at the two intersections. Upgrading each traffic signal will enhance safety for motorists and pedestrians, reduce maintenance costs and enhance aesthetics at each installation.

The contract also includes the replacement of inductive loop vehicle detection to replace poorly functioning video detection at the following intersections:

- NC 54 at South Alston Avenue
- Guess Road at Horton Road
- Garret Road at Old Chapel Hill Road
- Miami Boulevard at Angier Avenue

City Transportation staff worked in conjunction with NCDOT to redesign signal plans for the vehicle detection upgrade. This enhancement will increase the reliability of vehicle detection, increase traffic signal operational efficiency by reducing vehicle delays and reduce maintenance costs at the noted intersections.

Issues and Analysis

City Transportation analyzed the physical constraints of the intersections and the overall benefits of mast arm traffic signal installations with streetlights. It was concluded that permanent installations will offer the safest, lowest maintenance and most aesthetic form of traffic control to the traveling public. The installation of inductive loops offers a cost efficient method of reliably detecting vehicular traffic.

The following is a summary of bids received:

- Bid Opening on 11/22/2010:
 - ALS of North Carolina \$283,710.50
 - Traffic Control Devices \$316,732.60
 - Colter Electric \$319,554.25
 - Watson Electric \$355,250.00
 - Fulcher Electric of Fayetteville \$364,904.60

The Transportation Department recommends awarding the contract to ALS of North Carolina, Inc. in the amount \$283,710.50. This is less than the \$334,125.00 estimated probable cost.

Alternatives

- Approve the Construction Agreement with ALS of North Carolina, Inc. for \$283,710.50 to install traffic signals with streetlights at Broad Street at Perry Street and Carver Street at Stadium Drive and inductive loop vehicle detection upgrades.
- Do nothing, keeping the current temporary wood pole installation at each intersection, and video detection at each traffic signal.

Financial Impact

The cost to install traffic signals with streetlights at Broad Street at Perry Street and Carver Street at Stadium Drive and upgrade signals to inductive loops is \$283,710.50 with a 15% construction contingency of \$42,556.58. This results in a total project amount of \$326,267.08. The City is responsible for 100% of the total costs. The City funding source is the Miscellaneous Thoroughfares and Street Improvements Capital Project.

SDBE Summary

The Equal Opportunity/Equity Assurance Department reviewed the bid submitted by ALS of North Carolina, Inc. of Fayetteville, North Carolina to determine compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting. It was determined that ALS of North Carolina, Inc. was in compliance with the Ordinance to Promote Equal Business Opportunities in City Contracting.

SDBE Goals

There were no SDBE goals for this project.

WORKFORCE STATISTICS

The workforce statistics for ALS of North Carolina, Inc. are as follows:

Total Workforce	9	
Total Females	1	11%
Total Males	8	89%
Black Males	0	0%
White Males	8	89%
Other Males	0	0%
Black Females	0	0%
White Females	1	11%
Other Females	0	0%

Attachments

- A – Project Manual
- B – Construction Plans
- C – Construction Contract