



City Council Report

AGENDA
ITEM: 4j
DATE: 11-2-09

Date: November 2, 2009
To: City Council
Through: Jack Friedline, Deputy City Manager
From: Beth Huning, City Engineer
Subject: Fraser Electric Substation Upgrade
City Project 09-022-001
Council District 1

Strategic Initiatives



Purpose and Recommendation

The purpose of this report is to provide information to the Council on the results of the bids received for the Fraser Electric Substation Upgrade, located at 331 North Horne. (Refer to attached Exhibit "A" for the project location.)

Staff recommends that Council award this project to ESS International Corporation for a total award of \$273,512.80.

Background

Starting in the mid 1970's, the City's Electric Utility Division commenced a system wide distribution circuit upgrade from 4 kilovolt (kV) to 12 kV. The purpose of the upgrade is to increase electrical efficiency by reducing electrical losses and to provide 12 kV power in lieu of 4 kV power to the "downstream" connected electrical distribution circuits.

Discussion

Fraser Substation currently has one 4kV transformer-switchgear installation and one 12 kV transformer-switchgear installation. This project will upgrade the half of the substation that is 4kV to 12kV and will complete all of the work necessary to allow both halves of the Fraser Substation to provide 12kV power to the electric distribution circuits that are connected to it.

The transformer and switchgear have already been ordered under separate contract (awarded by Council at their May 4, 2009 meeting) and are being manufactured.

Community Impact – The work under this contract will be done inside the existing block walls of the Fraser Substation location and should have minimal impact on the public. The residential properties adjacent to the substation will be properly notified of work activities. Once started, it is estimated that all work will be completed with 120 calendar days.

Alternatives


An alternative is to not upgrade the substation to 12kV power. This is not recommended as multiple circuits connected to the substation have already been prepared for conversion to 12kV and are dependent upon completion of this project to make the final conversion. If the substation is not upgraded, the electrical efficiencies that would result from converting to 12 kV would not be realized. Additionally, since the transformer and switchgear (ordered under separate contract) are being manufactured specifically for this site's unique configuration, they are of limited usefulness elsewhere in the system. Not completing this project would also not provide system-wide substation 12 kV backup capacity, which this project will provide.

Fiscal Impact

The recommended total award amount for this project is \$273,512.80, based on the low bid of \$248,648 plus an additional \$24,864.80 (10% allowance for change orders). Funding is available in the adopted FY 09/10 Electric Capital Program.

Coordinated With

The Energy Resources Department concurs with this recommendation.

for 
Kelly Jensen, Assistant City Engineer

for 
Beth Huning, City Engineer

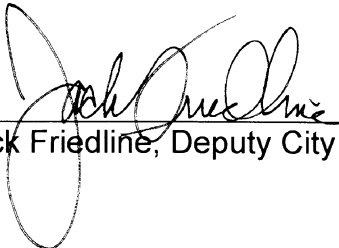
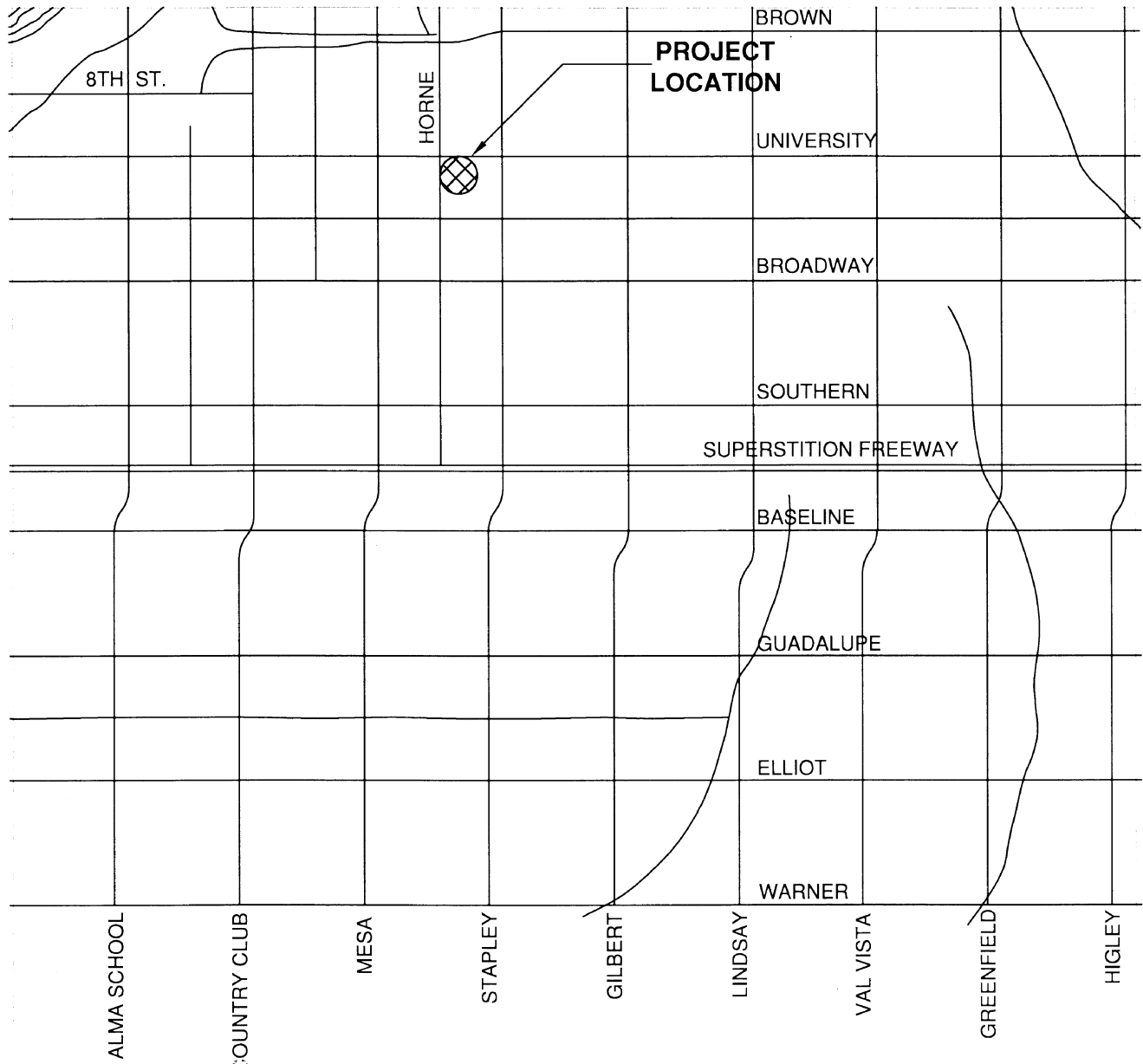

Jack Friedline, Deputy City Manager



EXHIBIT "A"



UPGRADE ELECTRICAL SUBSTATION FRASER NORTH PROJECT NO. 09-022-001



CITY OF MESA
MESA, ARIZONA

Upgrade Electrical Substation, Fraser North, 331 N. Horne

09-022-001

Tabulation of Bids Received, Thursday, October 15, 2009, at 1:00 P.M.

ENGINEER'S ESTIMATE	\$215,604.00
1. ESS International Corp.	\$248,648.00
2. Klondyke Inc.	\$273,301.00
3. Hamlin Electric Co. – Bid Not Read – Did Not Acknowledge Addendum	
4. Wilson Construction Co. – Bid Not Read – Took Exceptions	