

## **Urbana Safe Routes to School, Phase 1 Addendum #2**

**To: All Bidders**

**From: Mike Heintz, City Engineer**

**Date: January 26, 2012**

**Re: Alternate Bid Price – Add/Deduct for School Zone Flashing Beacons with Internet-Based Remote Management**

**Alternate #1 – Add/Deduct to Item 631 School Speed Limit Sign Assembly with Warning Beacons, Solar Powered, As Per Plan**

On Page 39 of the Plans, Item 631 School Speed Limit Sign Assembly with Warning Beacon, Solar Powered, As Per Plan shall remain as written in the base bid. However, the contractor shall include within their bid Alternate #1 as described below. The Alternate #1 price shall be an add or deduct to the original Item 631 base bid price. A new bid form reflecting the inclusion of Alternate #1 is attached to replace Page 7 of the Bid Documents.

On the revised bid form, **circle add or deduct** based on how much higher or lower the total alternate bid price is compared to the base bid for Item 631. For example, if the bidder believes he/she can purchase and install all six (6) alternate signs for \$12,000.00 less than all six (6) base bid signs, circle “deduct” and list \$12,000.00 to the right.

The basic change made between the original Item 631 and Alternate #1 is the deletion of timers needed for each sign location. The timers are replaced by an internet-based remote management system for programming school schedules via the web and uploading those schedules to the signs. The alternate specification is as follows:

**ITEM 631 SCHOOL SPEED LIMIT SIGN ASSEMBLY WITH WARNING BEACON, SOLAR POWERED, REMOTELY MANAGED, AS PER PLAN**

This specification applies to school sign flashers powered by batteries, recharged by solar panels and remotely managed via the internet.

The entire school zone flasher and sign assembly shall meet the requirements set forth in the OMUTCD. The sign size shall be 24" x 48" and sign code S5-H3 to read: SCHOOL, SPEED LIMIT 20, DURING RESTRICTED HOURS. Dual yellow LED signal beacons shall be 12" in diameter. The flasher control and battery will be housed in one or more stainless steel or aluminum enclosures with a NEMA rating of at least 3R. Enclosure exterior surfaces shall be bare or powder coat aluminum or stainless steel. The enclosure interior surfaces shall be the same as the exterior.

If contained in a single enclosure, the control electronics and battery shall be separated in a manner to prevent damage to the control electronics if the battery envelope is compromised. Only sealed gel-cell lead acid or AGM (Absorbed Glass Mat) batteries will be used for power. LED signal beacons meeting the current ITE Vehicle Traffic Control Signal Heads (VTCSH) standard will be used unless otherwise specified. The manufacturer of the signal beacon shall be listed on the Department's Qualified Products List for LED vehicular signal heads.

The Solar Panel and/or Controller manufacturer will provide signed copies of calculations used to size the solar panel and batteries. Included in these calculations will be the insolation value used and its source, the solar panel efficiency, charger/controller efficiency, inverter efficiency, proposed LED lamp load, and a figure representing anticipated miscellaneous losses. Solar panel manufacturer must test panel according to IEC61215 or equivalent approved standard. Solar panel mounting must be rated for 90mph design wind.

Run requirements are 4 hours per day for two weeks under continuous worst-case (minimum) insolation figures (usually December) for the proposed geographic location, using a panel elevation angle appropriate to the site latitude, at a sustained temperature of 25 degrees Fahrenheit (-4 degrees Celsius).

If voltages over 50V AC or DC are present, grounding and bonding requirements specified in the ODOT CMS will be followed.

Central management of the flashing school zone beacons shall be provided via a remotely accessible, browser-based user-interface. Uploading and storing of at least one year's worth of scheduling to the sign controllers shall be required without having to travel to each beacon location for upload. Routine and emergency access to the scheduling shall be easily attainable via the internet to any authorized user. Password protection of this service is required. No software shall be needed.

Manufacturer's recommended pole and foundation for mounting the school sign flasher assembly shall be included in this item.

Payment for 631 School Speed Limit Sign Assembly, Solar Powered, As Per Plan, shall be made at the contract unit price bid per each. Payment shall be full compensation for all labor, materials, tools, equipment, testing, certifications and other incidentals necessary to furnish the solar powered school zone flasher complete in place, including all connections made, wiring complete, tested and accepted.