



**Strand Associates, Inc.<sup>®</sup>**

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May 14, 2015

Mr. Deron Muehring, P.E.  
City of Dubuque  
50 West 13th Street  
Dubuque, IA 52001

Re: Upper Bee Branch Creek–Channel, Streets, and Utilities  
Contract No. 1-2015  
City of Dubuque, Iowa

Dear Mr. Muehring:

Bids for the above-referenced project were opened on May 7, 2015. Two bids were received for the project. The low base bid (plus Alternative Bid No. 1) of \$27,818,891 from Portzen Construction Inc. of Dubuque, Iowa was greater than ENGINEER's opinion of probable construction cost (OPCC) of \$18,518,000.

**Basis of ENGINEER's OPCC:**

The OPCC was developed in a unit price bid format similar to other municipal street and utility projects and very similar to the Lower Bee Branch Restoration project that was bid on May 25, 2010. The majority of the unit prices in the OPCC were developed from the bid results of the Lower Bee Branch Restoration project adjusted for inflation over the 5 year timeframe between projects. Adjustments were also made to account for the differences in proposed quantities, differences in the general nature of the work, and material supplier feedback.

During the bidding process it was discovered that the cost of the following items significantly exceeded our estimated costs:

Dewatering (Removal and pumping of groundwater below the proposed construction elevation):

OPCC = \$200,000  
Tricon Cost Bid = \$981,085  
Portzen Cost Bid = \$1,578,360

Temporary Soil Retention (Shoring/Sheet Pile, etc.):

OPCC = \$800,000  
Tricon Cost Bid = \$2,560,000  
Portzen Cost Bid = \$1,117,500

Erosion Control (Silt Fence, Storm sewer catch basin protection, etc.):

OPCC = \$10,000  
Tricon Cost Bid = \$222,000  
Portzen Cost Bid = \$78,225

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Traffic Control (Road closures, detour signage, etc.):

OPCC = \$50,000  
Tricon Cost Bid = \$213,790  
Portzen Cost Bid = \$127,050

Quarried Limestone Block–Low Flow Channel Base Layer:

OPCC = \$462,000  
Tricon Cost Bid = \$704,365  
Portzen Cost Bid = \$739,777

Quarried Limestone Block–Low Flow Channel Upper Layer:

OPCC = \$115,600  
Tricon Cost Bid = \$206,346  
Portzen Cost Bid = \$ 216,750

Quarry Limestone Blocks-Low Flow Channel Mid Layers:

OPCC = \$186,000  
Tricon Cost Bid = \$332,010  
Portzen Cost Bid = \$365,490

The above items, other than the quarried limestone, are traditionally challenging to quantify. The disparity between the two bids received for these items support this. The underestimation of the quarried limestone items is the result of an inaccurate estimated quantity in the engineer's OPCC in combination with higher than anticipated material prices for the limestone.

**Evaluation of Bids:**

The City received bids from Portzen Construction Inc. and Tricon Construction Group.

Tricon Construction is the apparent low bidder for Contract 2-2015 that was opened one week earlier on April 30, 2015. Based on the evaluation of bid items and feedback from Tricon Construction, it is apparent that Tricon did not decide to bid the project until approximately 5 days prior to the bid opening. Extremely high unit prices for channel excavation and removals (pavement removal, existing bee branch culvert removal, tree stump removal) suggested they had not identified all subcontractors or sources for the work. Tricon's roadway, landscaping, sanitary sewer, watermain, electrical (lighting), and fiber (security camera system) costs all were near or below the ENGINEER's OPCC.

The evaluation of Portzen's low bid for Contract 1-2015 identified that the channel excavation, removals (pavement removal, existing bee branch culvert removal) and major utilities (sanitary sewer, water main, storm sewer) unit bid costs were significantly higher than the unit costs in the ENGINEER's OPCC. In general, the bid items associated with removals and channel excavation increased approximately 70% from the low bids received on the Lower Bee Branch project from 5 years ago. Also, the bid items

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associated with the **sanitary sewer, water main, and storm sewer increased approximately 80%** from the low bids received on the Lower Bee Branch project from 5 years ago. Portzen's roadway, landscaping, and electrical/security utility costs all were near or below the ENGINEER's OPCC.

The Engineering News Record Construction Cost Index increased 14.8% from 2010 to present.

Below is a list of factors that may have influenced the bid costs received:

**Lack of Bidders/Competition:** A lack of bidders historically results in higher construction bid prices. Discussions with several potential bidders that did not submit bids suggested they were concerned that they could not compete with the Prime Bidder/Excavation Subcontractor tandem of Portzen Construction/Tschiggfrie Excavating given their access to soil disposal sites.

**Timing of Bidding:** Discussions with other potential bidders that did not submit bids suggested that the number of other projects currently bidding, current workloads, and bonding capacities for the 2015 construction season influenced their decision to not submit bids as a Prime Bidder or as an Excavation Subcontractor.

**Local Source Requirements:** Requirements for quarried limestone from Dubuque County and requirements for soil disposal in the state of Iowa are examples of local source requirements that contributed to the lack of competition on several bid items. Cost savings could be realized through value engineering.

**Discrepancies in Take-Offs:** The approximate quantities provided by the low bidder for the lump sum items of Excavation and Granular Backfill differ significantly from the ENGINEER's approximate quantities. Cost savings could be realized through value engineering.

**Risk:** Discussions with the bidders and potential bidders that did not submit bids suggested that the unique nature of the project combined with complexities with dewatering and soil retention adjacent to buildings during construction posed additional risk to the contractors. Line item No. 2 (Coordination, Administration, and Meetings) was added to the bid form, just prior to bidding, to help identify the administrative costs related to coordination and meetings required during construction.

Coordination, Administration, Meetings:  
OPCC = \$10,000  
Tricon Cost Bid = \$2,000,000  
Portzen Cost Bid = \$2,373,460

After discussions with the two bidding contractors, the following costs were included into this bid item:

- Profit
- Unknowns/Risk

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- Overall Contract Scheduling and Meeting Requirements
- Overall Contract Coordination (Contract 2-2015 and other Future contracts)

Historically, unit prices for the various elements of a construction project contain the profit and the risk associated with a specific project element (rather than including portions of that cost in a single item as described above).

Given the significant discrepancy in the ENGINEER's OPCC to the apparent low bidder costs, we would recommend the City evaluate the following options:

1. Award Contract 2-2015 and Contract 1-2015 to the respective low bidders.
2. Reject bids and consider rebidding smaller construction packages.
3. Reject bids and consider rebidding a larger (one contract) overall package.
4. Reject bids and consider rebidding the same contracts.

Please refer to the letter from IIW P.C. highlighting current and future construction cost trends when evaluating the options listed above. Feel free to contact me with any questions.

Sincerely,

STRAND ASSOCIATES, INC.<sup>®</sup>



Eric D. Vieth, P.E.