



A3 Problem Solving January 2016

Use this report when solving a problem or concern (\$1200 or more in value, 104 or more hours of increased capacity)
Use the Process Review Report to identify waste and update processes

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|---|--|---|---|
| Department, Division, Functional Work Unit | Public Works/General Services/Central Garage/Fuel Site | | |
| CONCERN/PROBLEM | The old fuel dispensing system was installed in August 1992 and required frequent maintenance due to its age and condition. The pump assemblies had extensive corrosion and reached the end of their usable life according to common industry practice. Typically, the life expectancy of these pumps is 12-15 years; however, through consistent maintenance and repair, staff was able to extend their use by 8-11 years. | | |
| Date | 3/8/2016 | | |
| Originator(s) | Bob Peck | | |
| Team Members | Bob Peck, Brent Buchwald, Ian Tinsley and Jim Teutsch | | |
| DESCRIBE <i>Describe the current situation in detail; include flowchart and Excel charts as needed</i> | <p>The city's fuel site located at 315 E. Elm provides fuel services for all city and county vehicles and equipment and is capable of dispensing fuel for emergency response and other vehicles during power outages. It consists of two diesel and two unleaded dispenser pumps that connect to FuelMaster® software located at General Services and Central Garage for fuel management purposes.</p> <p>The fuel site is 23 years old and in need of attention. The concrete around the perimeter of the fuel pump island had been deteriorating and breaking away in large pieces, causing a safety hazard for employees using the facility. Additionally, the pumps were requiring increased maintenance and repair. The concrete driveway pads were cracking and breaking apart. The diesel fill spout was bent underground and required removal and replacement. Overall the fuel site was becoming unsafe, unsightly and in need of remodeled.</p> | | |
| ANALYZE <i>Identify Root Cause(s); include additional data or charts as needed</i> | <p>Staff identified a need to remodel and repair the fuel island. The table below depicts the staff analysis for contractor's responsibilities.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"> <p><i>Contractor's Primary Responsibilities</i></p> <ul style="list-style-type: none"> • Remove existing Fuel Master pedestal & two (2) single-product suction pumps (dispensers), two (2) hoses with pulsers • Provide and install new metal fuel island form 4' x 20' • Provide and install two (2) new single-product suction pumps (dispensers), two (2) hoses with pulsers (safe suction system) • Reinstall existing Fuel Master pedestal to the new fuel island • Complete installation, calibrate pumps, make final adjustments and remove debris • Test and ensure successful operation of all new equipment </td> </tr> <tr> <td style="text-align: center;"> <p><i>Option 1 Responsibilities</i></p> <ul style="list-style-type: none"> • Remove and replace spill bucket and drop tube </td> </tr> </table> | <p><i>Contractor's Primary Responsibilities</i></p> <ul style="list-style-type: none"> • Remove existing Fuel Master pedestal & two (2) single-product suction pumps (dispensers), two (2) hoses with pulsers • Provide and install new metal fuel island form 4' x 20' • Provide and install two (2) new single-product suction pumps (dispensers), two (2) hoses with pulsers (safe suction system) • Reinstall existing Fuel Master pedestal to the new fuel island • Complete installation, calibrate pumps, make final adjustments and remove debris • Test and ensure successful operation of all new equipment | <p><i>Option 1 Responsibilities</i></p> <ul style="list-style-type: none"> • Remove and replace spill bucket and drop tube |
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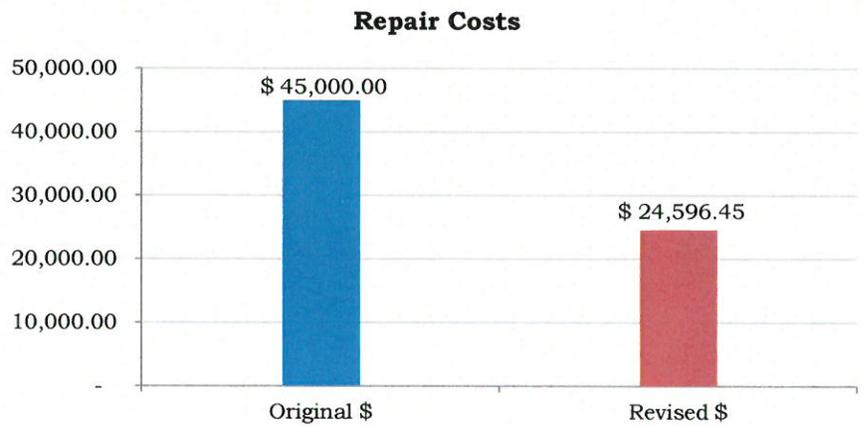
- Requested and received approval in the budget for \$24,596.45 to rebuild the fuel island
- Went out for bid and received three bids with P.B. Hoidale Company being the low bid

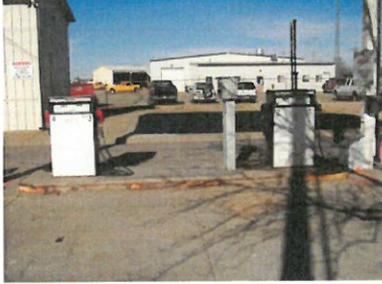
| Bid Tabulation | | | | | | | |
|-----------------------|--------------------------------|-----------------|--------------|--------------------------|--------------|--------------|--------------|
| # | Vendor Name | Pre-bid Meeting | Mfg's Specs. | Warranty & Delivery Date | Fuel Pumps | Spill Bucket | Total |
| 1 | Broyles Petroleum Equipment | - | - | - | - | - | - |
| 2 | Double Check Company, Inc. | ✓ | N | N | \$ 19,487.00 | \$ 831.00 | \$ 20,318.00 |
| 3 | KC Petroleum | - | - | - | - | - | - |
| 4 | P.B. Hoidale Company, Inc. | ✓ | Y | Y | \$ 22,732.60 | \$ 1,863.85 | \$ 24,596.45 |
| 5 | Stan's Petroleum Equipment Co. | ✓ | N | Y | \$ 21,850.75 | \$ 1,350.22 | \$ 23,200.97 |

Notes:

- Double Check Company, Inc. failed to provide manufacturer's specs & literature, warranty information and date of delivery.
 - Stan's Petroleum Equipment Co. failed to provide manufacturer's specifications and descriptive literature.
 - Staff recommends awarding bid to P.B. Hoidale Company, Inc. for the *Fuel Pump and Spill Bucket Replacement* contract. This was the only vendor to meet all bid requirements.
- P.B. Hoidale Company, the City Street Department, the City electrician, and Precision Electric all worked together to remove the old fuel island and replaced it with new concrete, new fuel pumps, and new electrical service.
 - This project was originally approved in the 2014 Sub-CIP budget at \$45,000, but was extended into 2015 to allow completion of tank tightness testing, FuelMaster® totalizer calibration and tank float replacement. The following responsibilities were internally completed to reduce the overall cost of this project.

- City's Responsibilities*
- Remove and replace the existing fuel island and debris (concrete structure)
 - Remove and replace the existing concrete around the spill bucket
 - Provide a master electrician licensed with the City to obtain the appropriate permit and pay the applicable fees associated with the permit
 - Any other work that is not listed in Contractor Responsibilities



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| <p>IMPROVE <i>Identify improvements that can be made that will prevent this problem from happening again</i></p> | <ul style="list-style-type: none"> Through a consistent and proactive maintenance program, staff extended the life of the original pumps by 8-11 years. Staff will continue this level of oversight for the new system. |
| <p>Labor and Cost Savings</p> | <p><u>Equipment purchase costs or other expense:</u> \$24,596.45</p> <p><u>Annual dollar savings:</u> \$45,000.00</p> <p><u>Annual net savings (savings - expenses):</u> \$20,403.55/20 = \$1,020.18 (annual cost avoidance)</p> <p><u>Is this a one-time benefit, or for how many years, or is it indefinite?</u> One time.</p> |
| | <p><u>Annual hours of increased capacity:</u> None</p> <p><u>Is this a one-time benefit, or for how many years, or is it indefinite?</u> N/A</p> |
| | <p><u>Use bullet points to identify customer service or employee benefits:</u></p> |
| <p>IMPLEMENT <i>Use PDCA/PDSA cycle to develop an action plan</i></p> | <ul style="list-style-type: none"> Received bids from Double Check Company, Stan's Petroleum, and P.B. Hoidale Company Arranged demolition with the Street Department and P.B. Hoidale The Street Department replaced concrete in the fuel island, the diesel fill spout, and the driveway pads around the fuel island P.B. Hoidale Company replaced the fuel pumps and Precision Electric replaced and installed new electrical service P.B. Hoidale Company calibrated all fuel pumps and released them for service City staff will continue to provide consistent and proactive maintenance and repair |
| <p>Attachments</p> | <p>(include current and proposed process documentation forms, or before and after photos, or other before and after descriptions as appropriate)</p> <div style="display: flex; flex-wrap: wrap; justify-content: space-around;">     </div> |

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| Approval Process | |
| Supervisor's Review and others in the Chain of Command | Instructions: This form is submitted through the chain of command to the Director <u>Date:</u> 3/24/16 <u>Name:</u> Jim Teutsch James E. Teutsch <u>Comments:</u> Much-needed improvement for all City employees. |
| Director's Approval | Instructions: Approval authority is delegated to each Director for all recommendations that results in \$15,000 or less in annual savings, or 250 hours or less of annual increased capacity. <u>Date:</u> <u>Name:</u> <u>Approved/Denied:</u> <u>Comments:</u> |
| Process Improvement Director's Approval | <u>Date:</u> <u>Approved/Denied:</u> <u>Comments:</u> |
| City Manager's Approval | Instructions: Final sign off for all recommendations that exceed \$15,000 in annual savings, or 250 hours of annual increased functional capacity is by the City Manager, who also signs off on any plans to convert hours to budgetary savings. The CMO Executive Assistant converts the approved form into a pdf file that is saved on the P drive and in Laserfiche. <u>Date:</u> <u>Approved/Denied:</u> <u>Comments:</u> |