Corporate Headquarters
South Building Main Electrical System Upgrade

"Promoting financial success by creating a safe, productive work environment through customer satisfaction, effective asset management, and diligent risk mitigation."

Description: The Main Electrical Switchgear and Distribution System provides power to the south headquarters building, including the company's call center, executives, lobby/visitor entrance, and security. System needs to be upgraded in the coming months.

Current Condition: Poor/At Risk

The condition of the system is as follows:

- ***Beyond typical life expectancy*** for this system type
  - System is 36 years old; replacement is recommended at 30 years
- ***Manufacturer no longer supports*** installed equipment
- ***Replacement parts are not readily available***
- ***Recommended maintenance has not been performed*** due to limited parts and high cost

Risk: High

The risk associated with the performance of the system is based on the following, in addition to the aforementioned condition:

- Recent infrared thermography indicates ***high temperature on C-phase of a main breaker*** which is of concern
- ***No assurance that breakers will function*** as designed
  - Failed/tripped breaker may not be able to reset and restore power
  - Breaker may not trip as required
- Studies report that **breakers have 50% probability of failure** if not maintained within last five years – these breakers have never been maintained per industry standards.

Impact: High

Given the business units supported by this main electrical system, failure to operate could have significant impact to safety, business, and customer satisfaction. Potential impacts include:

- Catastrophic failure could lead to ***loss of life or injury*** to occupants and ***damage to the building*** and/or systems
- ***Mulit-day business outage*** impacting key business units and functions
  - Employee productivity costs of nearly $400,000*
  - Impact to revenue of $976,000*

  *assumes three-day outage due to lead-time on parts

Cost Estimate: $150,000

Timeline: Thanksgiving Weekend (start at the closing of stores on Thanksgiving)

System replacement requires a minimum ***two-day outage to the south building***. The four-day weekend would provide the necessary time for preparation, testing, and allow for contingencies. Alternate would be Christmas weekend, but has increased concern given potential for cold weather.

Commented [JR1]: Verify burdened rate per employee; take burdened rate multiplied by number of potentially affected employees and the number of days potential outage could extend; divide by the number of working days in a year.

Commented [JR2]: Determine avg revenue generation per FTE; perform similar math as for the productivity costs

Critical Decision Points:

Below is a list key decision milestones and required timelines to meet the project target date.

- 8/1/14 – Approval by management to proceed with further investigation of project and coordination with affected stakeholders
- 9/1/14 – Refined project estimate submitted to management
- 9/15/14 – Management approval of project and ordering of parts
- 9/15/14 – Order parts; minimum eight-week lead-time
- 10/1/14 – Management & stakeholder approval of plan, including temporary business operations during shutdown

High-Level Project Plan:

A high-level project plan is provided below:

- Obtain approval to proceed
- Identify Stakeholders
- Determine operating requirements of stakeholders for Thanksgiving weekend
- Identify temporary space and setup needed in North to accommodate stakeholders
- Revise estimate per support required of stakeholders
- Obtain management approval
- Order parts
- Coordinate with affected stakeholders in preparation of outage
- Communicate plan & timeline to affected parties
- Setup/implement temporary business operations plan
- Execute system replacement and conduct testing
- Restore normal operations
- Conduct project post-mortem and close-out

(Include picture of electrical switch gear)

(Include IR picture)

(Should deliver this with CRP Summary to put in context of other upcoming capital expenditures)