

Business Item: 2021-63

**Electrical Maintenance Services at MCES
Facilities, Contract 20P205**

Charles LaPierre, Manager, Electrical Maintenance

Environment Committee: March 9, 2021



Preventive Maintenance

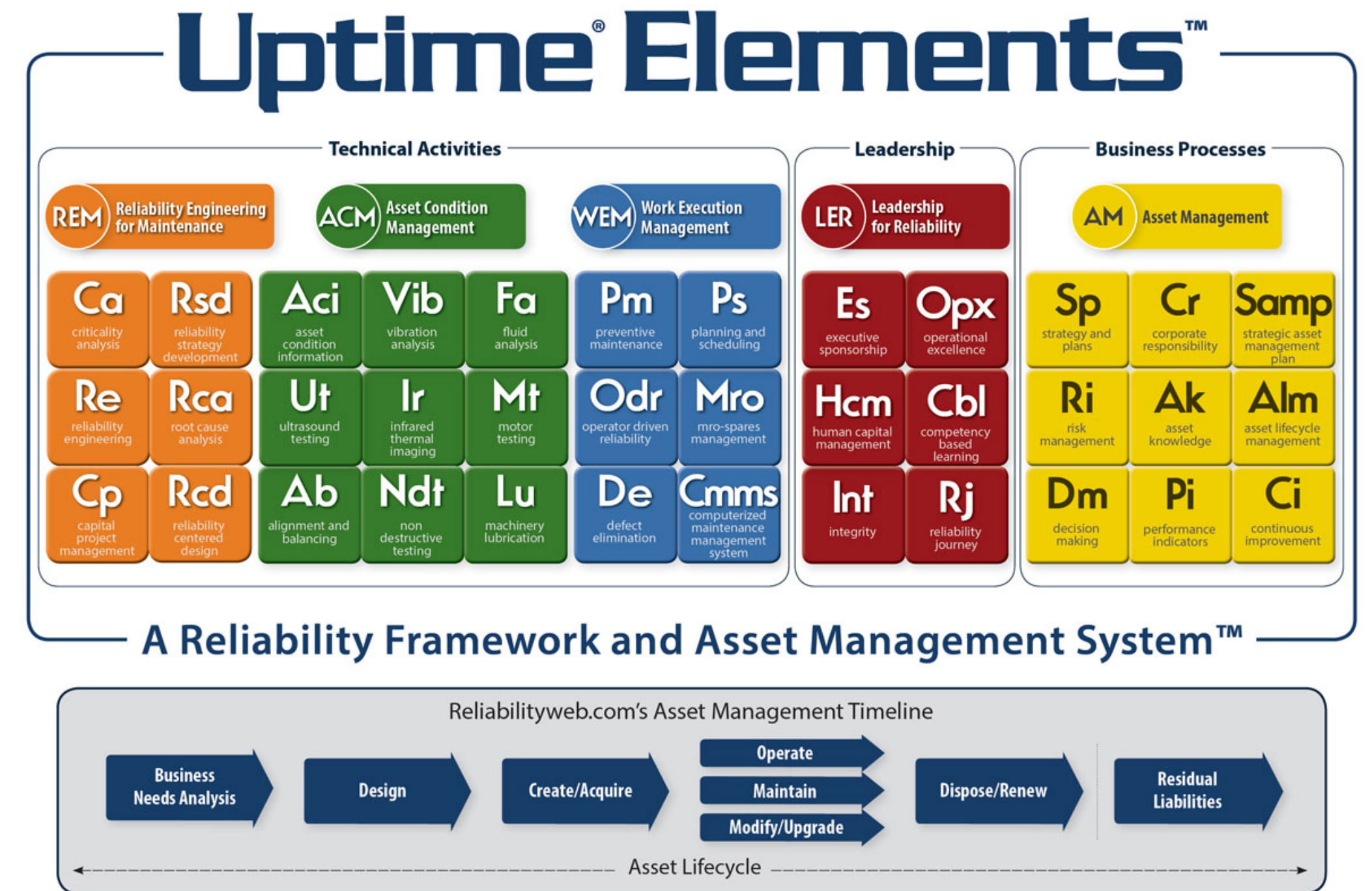
Preventive Maintenance (PM) of electrical systems is critical to the successful and safe operation of Metropolitan Council treatment processes.

Preventive Maintenance is:

- Inspection
- Cleaning
- Testing
- Adjustment to specification
- Repair as needed

Preventative Maintenance

- Planned preventive maintenance aligns with MCES adopted maintenance program
- Asset Condition Management (ACM) monitors asset condition through lifecycle of equipment
- Early defect detection allows for planned maintenance over reactive (WEM)
- Data collection and review is used to determine proper preventive maintenance schedule (REM)
- Asset Management allows for cross functional business practices (AM)

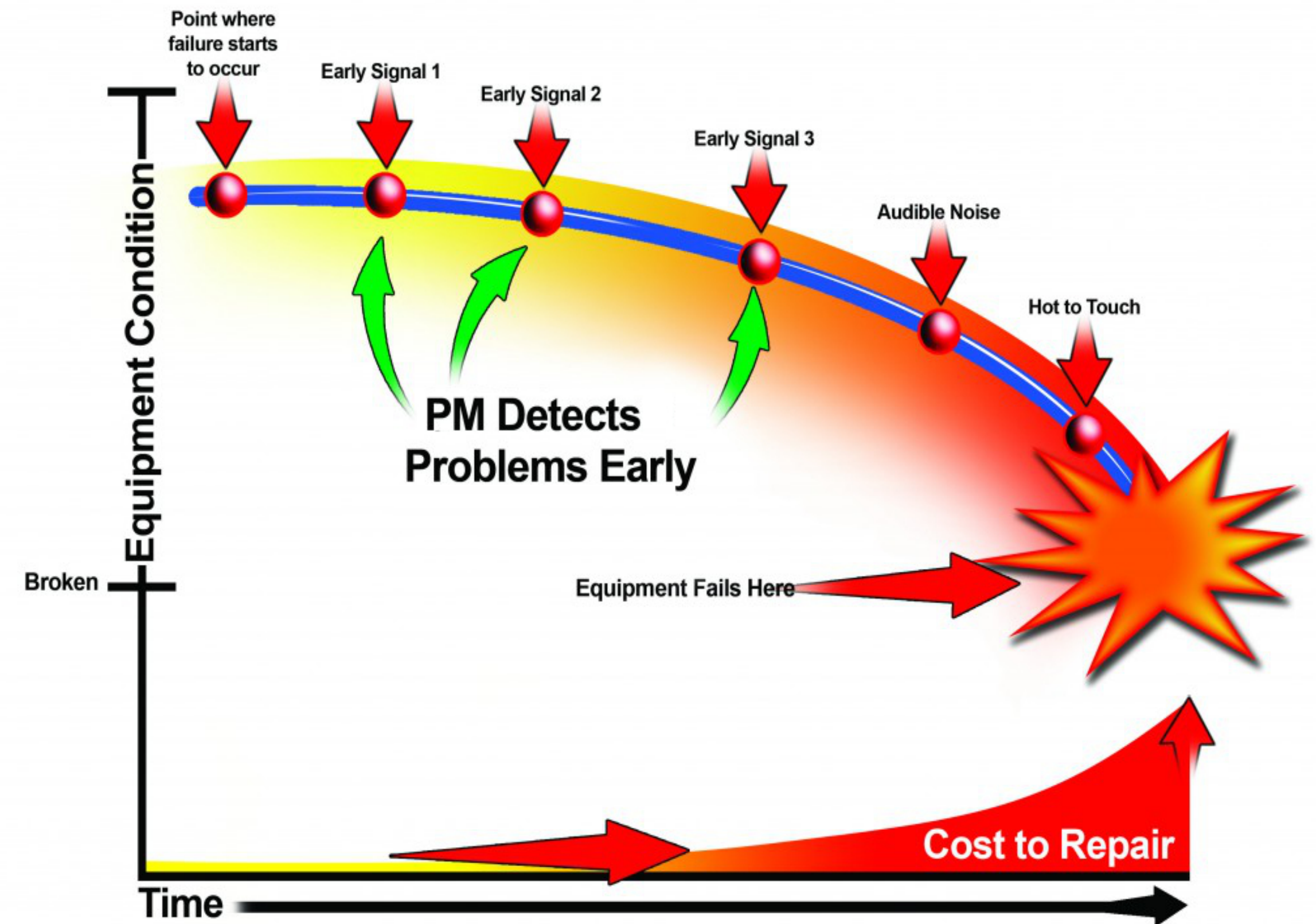


Reprinted with permission from NetexpressUSA Inc. d/b/a Reliabilityweb.com. Copyright © 2016-2017. All rights reserved. No part of this graphic may be reproduced or transmitted in any form or by any means without the prior express written consent of NetexpressUSA Inc. Uptime™, Reliability™, Certified Reliability Leader™, Reliabilityweb.com™, A Reliability Framework and Asset Management System™ and Uptime® Elements™ are trademarks and registered trademarks of NetexpressUSA Inc. in the U.S. and several other countries.

reliabilityweb.com • maintenance.org • reliabilityleadership.com

Preventive Maintenance

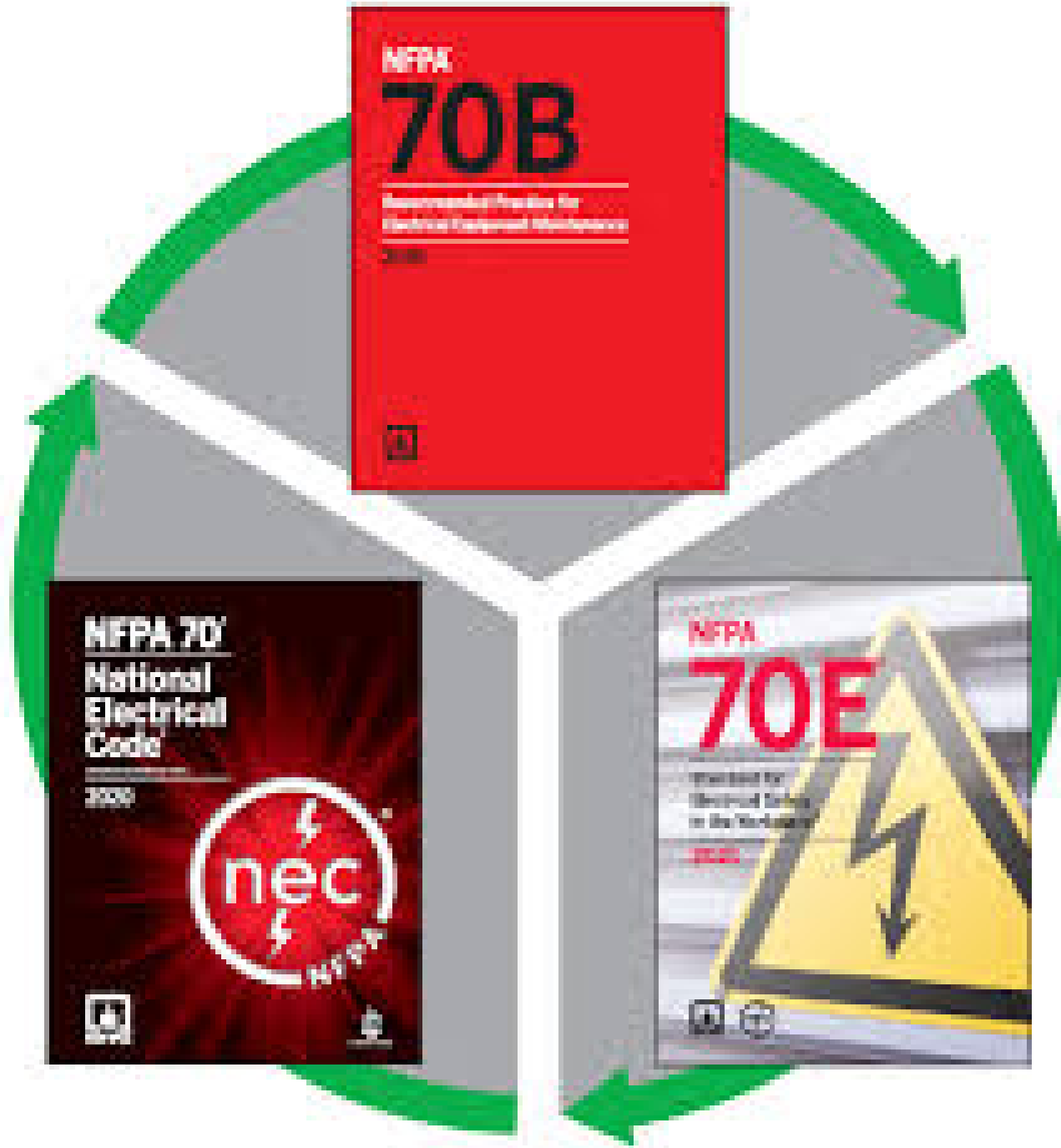
- Preventive Maintenance detects potential failures before they become catastrophic and will decrease down time and cost to repair.
- \$1 spent preventing failure = \$10 spent repairing after failure



Preventive Maintenance

National Electrical Codes

Minnesota State Codes



International Standards



Maintenance, inspection and testing of electrical equipment is governed by multiple codes and standards

Preventive Maintenance

Electrical Equipment covered under contract includes:

13,800V Main Switches & Substations



480V Motor Control Centers



13,800V, 4,160V and 480V Transformers



20P205 Electrical Maintenance Services

- This will be the 4th Electrical Maintenance Services contract for electrical systems since 2006
- Successfully inspected, cleaned and tested 98% of the electrical systems at 9 wastewater treatment facilities and Interceptor Services facilities (Lift stations, Metering sites, Regional Maintenance)
- Addresses newly expanded code requirements for testing and documentation
- Service outages due to internal electrical equipment failure have dropped to near zero at the treatment facilities
- Initial Preventive maintenance program assets were tested and maintained on a 3-year testing cycle
- Preventive maintenance cycle has been adjusted to a 5-year cycle at most facilities based on proven increased asset reliability

Why contract inspection, cleaning and testing?

- **Flexibility to adjust staffing levels based on:**
 - The specialization, qualification and certifications required
 - Scope of work scheduled
 - Availability of equipment
- **The typical electrical PM**
 - Requires 8 to 12 qualified and certified personnel
 - Can take between 5 to 30 days based on the scope of the work.
- **Contractors own and maintain**
 - The specialized equipment for high voltage testing
 - Training, certification and qualification of technicians
 - Accreditation by NETA for electrical testing standards and protocols

Electrical Maintenance Services

Contractors were Qualified based on:

- Qualifications of the Contractor
 - Successful performance of electrical maintenance contracts in similar industrial setting
- Qualifications of the Contractor's Employees
 - High voltage experience and certification
 - Electrical Maintenance experience
- Qualifications for electrical testing
 - Current NETA accreditation of firm
 - Current NETA certification of Technicians
 - Testing experience in similar industries and equipment on similar sized contracts

Background

- Invitation for Bids advertised on December 11, 2020
- 12 plan holders, 5 identified as woman, minority, veteran or disadvantaged business enterprises
- Pre-bid meeting hosted by Council staff
- Bids included Cost of Services
 - Equipment servicing unit pricing
 - Cost reimbursable rates for miscellaneous work
 - Facility Management Services
- MCUB plan for meeting a 6% goal, approved by Office of Equal Opportunity

Background

- Public bid opening held on February 11, 2021
- Two bids received ranging from \$10,788,406.35 to \$12,377,000
- Premier Electric submitted the lowest responsive, responsible bid
- The contract has a term of 5 years with an amount not to exceed \$12,000,000

Proposed Action

- That the Metropolitan Council authorize the Regional Administrator to award and execute a contract with Premier Electrical Corporation to provide electrical maintenance services at Environmental Service facilities for an amount not to exceed \$12,000,000 for a term of 5 years.

Questions

Charles LaPierre, ME, CRL
Manager Electrical Maintenance
charles.lapierre@metc.state.mn.us
651-602-8214

Dan White
Director, Maintenance & Security
daniel.white@metc.state.mn.us
651-602-8299

