

# Greater Cleveland Regional Transit Authority

## Summary of Proposed Award Supervisory Control & Data Acquisition (SCADA) System Replacement

Presented to: Operations Committee  
January 9, 2018

# SCADA Replacement

- Current SCADA System:
  - Used to remotely control power/electricity to catenary for train operations from ICC
  - Supervisory control for rail substation power
  - Mission critical for rail operations

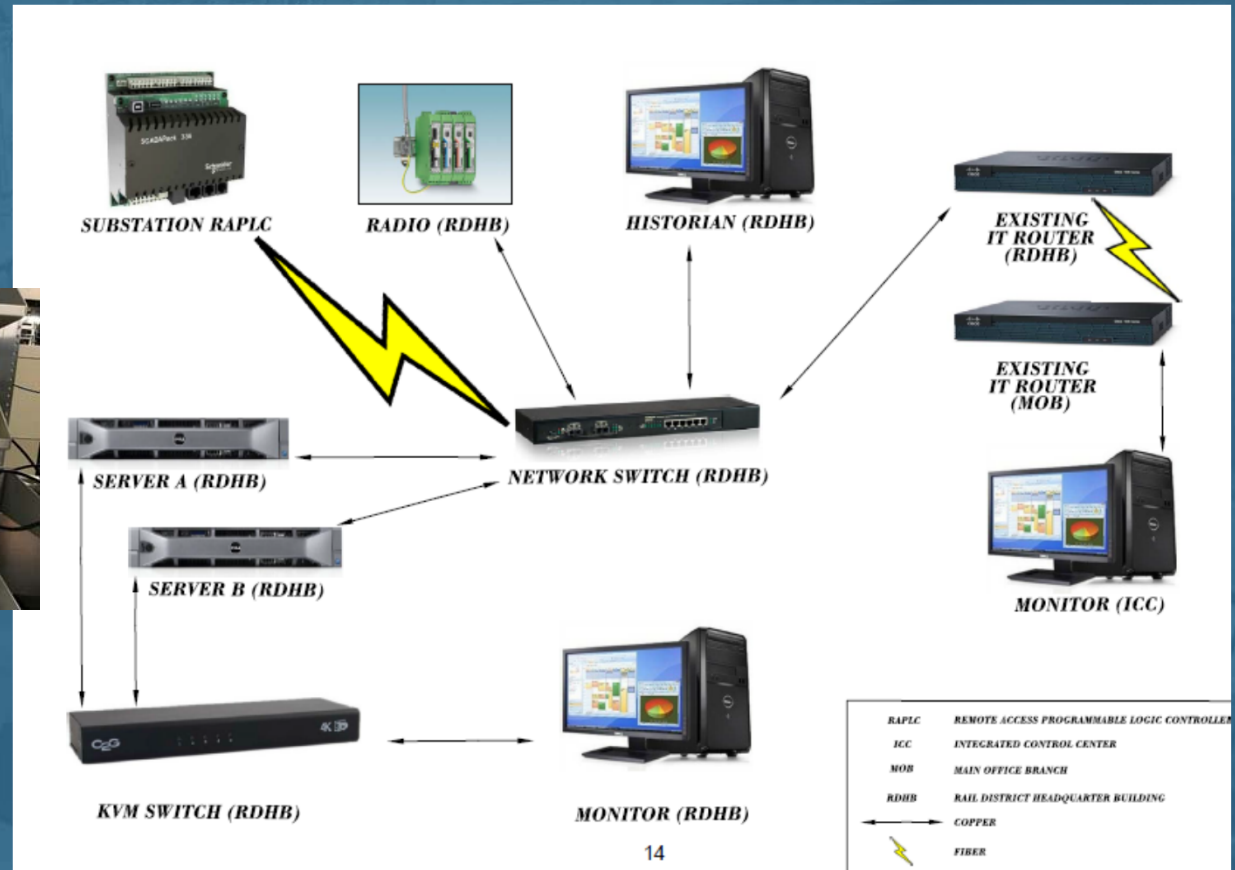
# SCADA Replacement

- Current SCADA System:
  - Manufactured by QEI and uses an antiquated machine language for communication
  - The system consists of a master station and 17 remote terminal units (RTU's)
  - The master station servers are approximately 17 years old and have reached the end of their service life

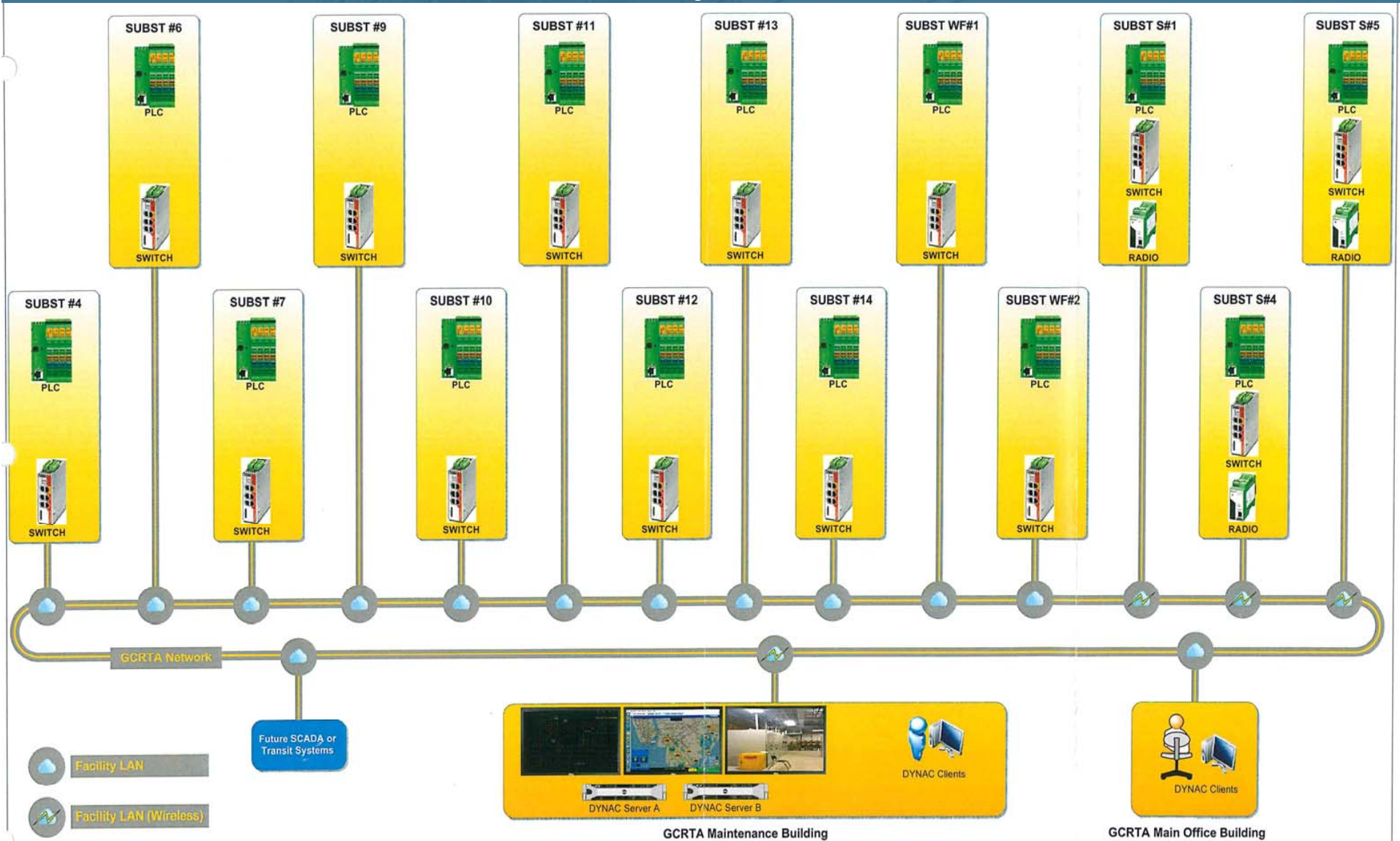
# SCADA Replacement

- Current SCADA System:
  - Seventeen (17) RTU's located at various substations communicate with the master station
  - Several of the RTU's have been in service for approximately 25 years and have reached the end of their service life
  - The master station and RTU's cannot support current technology

# SCADA Replacement



# SCADA Replacement



Greater Cleveland Regional Transit Authority



# SCADA Replacement

- Project Objectives:
  - Install a new SCADA system with the capability to monitor and control traction power substations and overhead catenary equipment
  - The new SCADA system shall be Ethernet based with an open architecture and make use of a standard machine language for communication

# SCADA Replacement

- Deliverables:
  - Installation of a new master station capable of two way communication with remote access programmable logic controllers (RAPLC's)
  - Replace existing RTU's in each substation with RAPLC's
  - Installation of workstation clients in the Rail District Headquarters Building and the Integrated Control Center



# SCADA Replacement

- Deliverables:
  - Installation and programming of the SCADA system software
  - GCRTA shall be provided with a non-exclusive license to use the SCADA software.
  - The software shall be scalable and have no license based limits on additional devices, workstations, graphics, and reports

# SCADA Replacement Procurement Overview

- RFP issued September 11, 2017
- Proposals due October 23, 2017
- 31 interested parties downloaded the solicitation from the website
- 7 firms submitted proposals

# SCADA Replacement Procurement Overview

- Evaluation Panel Members
  - Engineering
  - Transit Police
  - Safety
  - Information Technology
  - Rail Power & Way
  - Office of Business Development
  - Procurement

# SCADA Replacement Procurement Overview

- Evaluation Criteria
  - Technical/Functional Response to Requirements
  - Execution, Delivery, & Project Management
  - Qualifications and Experience
  - Cost

# SCADA Replacement Procurement Overview

- Recommended Vendor

- Kapsch TrafficCom USA, Inc.

- Extensive work with public transit agencies
    - Thorough understanding of transit operations
    - Over forty years experience delivering a wide-range of mission critical systems
    - Highly qualified team with proven project delivery process
    - Multiple regional offices with state-of-the-art staging areas
    - State-of-the-Art scalable and redundant system
    - Open architecture and no custom development

# SCADA Replacement Procurement Overview

- Firm's Transit Experience
  - Metropolitan Atlanta Rapid Transit Authority (MARTA), New York City Transit (NYCT), Bay Area Rapid Transit (BART), and Jacksonville Transportation Authority (JTA), among others
- A 10% DBE goal was assigned to this project
  - Power Mike and Co. (Bedford, OH)
  - Drive Engineering Corp. (Blue Bell, PA)

# SCADA Replacement Procurement Overview

- Project Funding
  - \$736,000.00 Federally funded
  - \$565,000.00 Locally funded
- Project Schedule
  - Estimated to be approximately one year

# SCADA Replacement Procurement Overview

- Recommendation
  - Staff requests that the Operations Committee recommend an award to Kapsch TrafficCom USA, Inc. to provide a SCADA Replacement solution in a total contract amount not to exceed \$1,300,045.29