"RE-BUILDING THE CITY'S WATER SYSTEMS FOR THE 21ST CENTURY"

Sewerage & Water Board OF NEW ORLEANS

625 ST. JOSEPH STREET
NEW ORLEANS, LA 70165 • 504-529-2837 OR 52-WATER
www.swbno.org

Addendum No. 3

Date: 12/11/2024

Your reference is directed to **Contract Number:** 2024-SWB-97 for Grid Control System which is scheduled to open at **11:00 a.m. CST** on **January 07, 2025** for SWBNO Engineering Department.

This addendum provides for the following:

1) Second (2nd) Pre-Bid Site Visit
2) Section 3.2 Technical Evaluation Change
3) Attachments
   a) <Sht 45of72_1369 - 20191025 1369 AS BUILTS> (Page 2)
   b) <GCS_Add3Attach1_BidQuestionsV2> (Pages 3-14)
   c) RFP 2024-SWB-97 Grid Control System (GCS) Software and Services.xlsx (Pages 15-16)
      i) Link to Excel File found at https://www2.swbno.org/business_bidspecifications.asp
      ii) "Download Official Copy" will include "RFP 2024-SWB-97 Grid Control System (GCS) Software and Services.xlsx"

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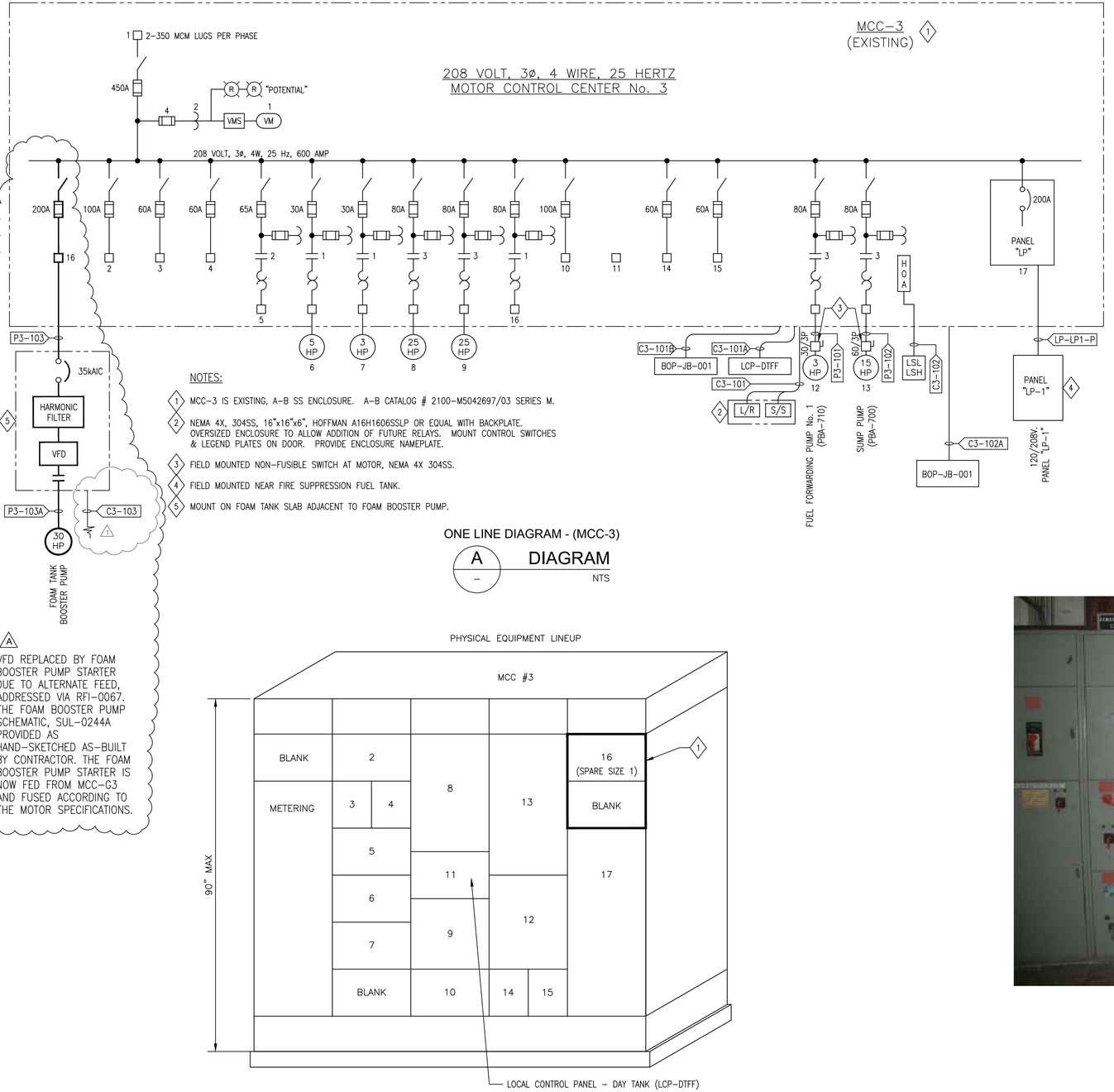
1. A second **voluntary** pre-bid site walkthrough is scheduled for Monday, December 16 2024 at 1:30pm. Location of walkthrough will be at the **SWBNO Carrollton Water Plant, 8800 S. Claiborne Ave., New Orleans, LA 70118**.
2. **REMOVE** Language:
   a. (0-25 points) Technology Solution's Ability to meet Functional Requirements Ability of chosen technology solution/OEM platform to meet functional requirements. This will be measured on:
      - Responses to RFP 2024-SWB-XX Grid Control System(GCS) Software and Services.xlsx
      - Section 4.5: Proposer Technical Value

   REPLACE Language With:
   b. (0-25 points) Technology Solution's Ability to meet Functional Requirements Ability of chosen technology solution/OEM platform to meet functional requirements. This will be measured on:
      - Responses to RFP 2024-SWB-97 Grid Control System(GCS) Software and Services.xlsx

The above revisions shall be incorporated in and take precedence over any conflicting part of the original proposal documents. This addendum is hereby officially made a part of the referenced proposal.

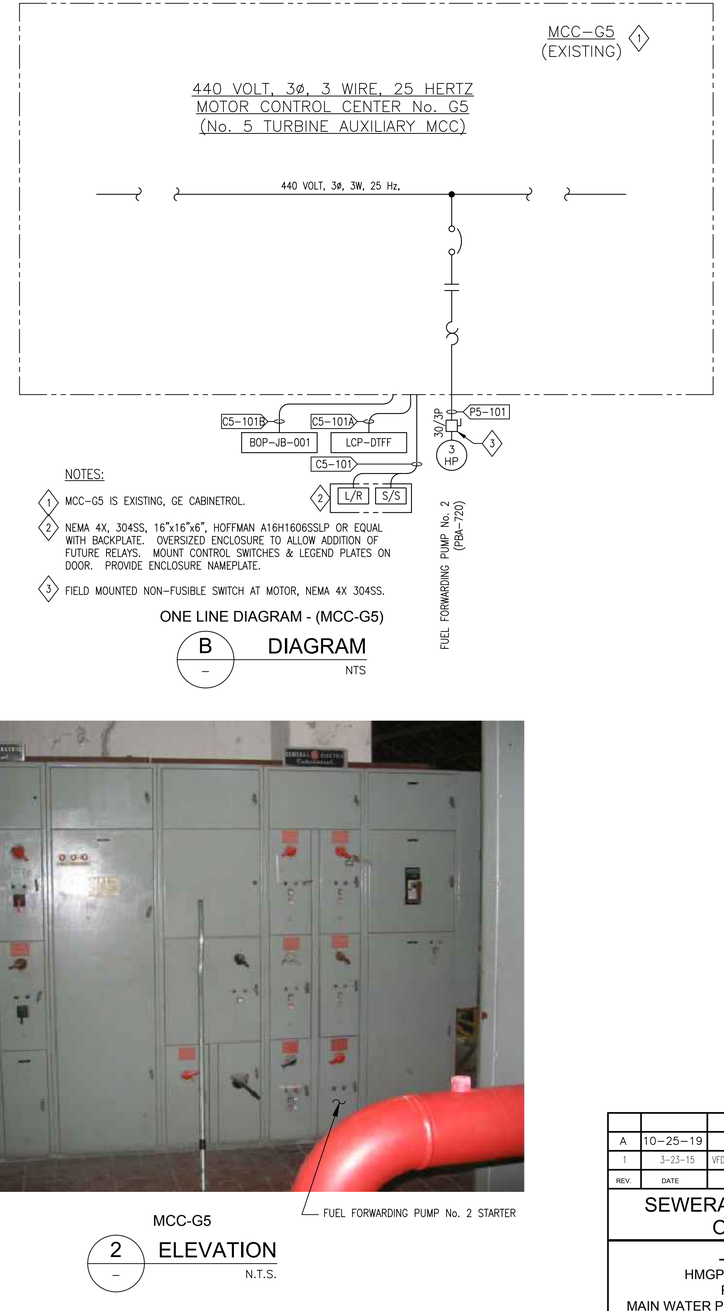
This addendum consists of Sixteen (16) pages.

*** END OF ADDENDUM ***



ONE LINE DIAGRAM - (MCC-3)

A – DIAGRAM NTS



ONE LINE DIAGRAM - (MCC-G5)

B – DIAGRAM NTS

PHYSICAL EQUIPMENT LINEUP

MCC-3

1 – ELEVATION SCALE: 3/4"=1'–0"

NOTES:

1 REMOVE SPARE SIZE 1 & BLANK DOOR. INSTALL MCC BUCKET WITH 200AMP/3P FUSED SWITCH. FUSE WITH 200AMP CLASS R FUSES. OBTAIN SERVICES OF AB FIELD ENGINEER TO MAKE ALL MCC MODIFICATIONS.

MCC-G5

2 – ELEVATION N.T.S.

REV.	DATE	DESCRIPTION	BY
A	10–25–19	AS–BUILT MARKUPS	LHN
1	3–23–15	VFD SPACE HEATER REVISION, DIAGRAM "A" (ADD.3)	HGH

SEWERAGE AND WATER BOARD OF NEW ORLEANS

CONTRACT No. 1369

HMGP EMERGENCY FUEL STORAGE
RETROFIT POWER PLANT
MAIN WATER PURIFICATION PLANT POWER COMPLEX

MCC-3 & G5 ONE LINE DIAGRAMS & EQUIPMENT LAYOUT

THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY HENRY G. HAWNEY, LICENCE No. 19229 ON 2-6-15.

E

Trigon Quality ▲ Commitment ▲ Client Service

TRIGON DWG. NO. EA-03

TRIGON ASSOCIATES, LLC
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LAST EDIT:	
SCALE:	NOT TO SCALE
DATE:	JANUARY 28, 2015

GENERAL SUPERINTENDENT

DWG. No. 12098-W8

SET NO: SHEET NO: 45 OF 72

Solicitation 2024-SWB-97 – Grid Control System (GCS)

Questions and Responses During Bidding

Version 2, Dated: December 11, 2024 [Questions 44-46]

BIDDER QUESTION #1	Do we have any leeway with regards to the SEL components that are specified in the spec?
RESPONSE #1	**Bidders may propose vendor hardware of any reputable OEM provided that it meets the RFP requirements and is capable of the required integration into the existing PDCS system. The proposed hardware capabilities will be evaluated as part of the RFP award process.**
BIDDER QUESTION #2	Should the FEED Study be used as a part of the design specification for the GCS or is the FEED study only to be used as a "reference"?
RESPONSE #2	**Reference only, the requirements are as defined in the RFP.**
BIDDER QUESTION #3	Please confirm is the ECS (Electrical Control System) is existing or to be included with the GCS system deliverable.
RESPONSE #3	**The ECS system is existing as defined in the RFP. Any augmentations to the ECS to achieve the RFP objectives are the responsibility of the Supplier.**
BIDDER QUESTION #4	Will the GCS supplier be responsible for installation, wiring and testing of any newly identified and required I/O devices, fiber/ethernet cabling, controllers, control racks, etc?
RESPONSE #4	**Yes.**

BIDDER QUESTION #5	Will the GCS supplier be responsible for updating existing AVEVA HMI screens in use by the Customer to incorporate necessary GCS screens, or will GCS supplier provide a new AVEVA license and dedicated GCS screens, or will customer modify existing AVEVA HMI screens to incorporate GCS screens?
RESPONSE #5	**The GCS Supplier will be required to updated existing AVEVA HMI screens for integration of the GCS into the overall PDCS environment. Supplier will be given access to the existing software to make the upgrades.**
BIDDER QUESTION #6	Will electrical single lines be made available to bidders, denoting existing IED, breakers, fuses, transformers, etc?
RESPONSE #6	**The one line included in Appendix A of the RFP package shall be used for bidding purposes. No additional information beyond that defined or included with the RFP will be provided. As necessary, the respondent shall detail assumptions or basis for their offering that are not sufficiently defined in the RFP. Additional detailed drawings will be provided to the successful bidder.**
BIDDER QUESTION #7	Will IED control drawings be made available to bidder, reflecting all existing IED control wiring, Axion I/O wiring, RTU wiring, network communications drawings, etc?
RESPONSE #7	**No additional information beyond that defined or included with the RFP will be provided for bidding purposes. As necessary, the respondent shall detail assumptions or basis for their offering that are not sufficiently defined in the RFP. Detailed information will be provided to the successful bidder.**
BIDDER QUESTION #8	Several sections identify that the system will be evaluated again RMF Level 1 or 2. Does this indicate that customer cybersecurity personnel will be responsible for RMF evaluation process and will the system undergo a Authority to Operate (ATO) criteria?
RESPONSE #8	**The reference to RMF is principally for common basis of understanding and a starting point for interoperability. Owner will review Suppliers design for integration into existing infrastructure as defined in the RFP.**

BIDDER QUESTION #9	Does customer have an identified list of prioritized loads, or load list that should be included in the Fast Load Shed design, and for load restoration during black-start? a. Fast Load Shed schedule/load list for 60Hz b. Fast Load Shed schedule/load list for 25Hz
RESPONSE #9	**The load shed design will be part of the Supplier required system development in collaboration with the Customer.**
BIDDER QUESTION #10	The FEED Study references IED password management, is this required for the GCU scope?
RESPONSE #10	**Not directly; the Supplier will work with the Owner during implementation within the Owner's IED password policy.**
BIDDER QUESTION #11	Given the age of some infrastructure, please identify those devices and equipment for which adequate documentation is not presently available to model the equipment; ie: generators, SFC, RCV, relay, etc.
RESPONSE #11	**Supplier shall assume documentation is available for all major GCS controlled equipment. During execution, Supplier shall coordinate with Owner's team to identify any additional parameters for infrastructure assets to implement a fully functional GCS system.**
BIDDER QUESTION #12	If additional I/O points are identified to complete the GCS installation, is the GCS supplier required to use SEL Axion platform or will a GCS supplier I/O platform be considered without negative scoring?
RESPONSE #12	**Bidders may propose vendor hardware of any reputable OEM provided that it meets the RFP requirements and is capable of the required integration into the existing PDCS system. The proposed hardware capabilities will be evaluated as part of the RFP award process.**
BIDDER QUESTION #13	SDN ethernet switches are specified in the RFP, is the Customer using SDN software applications for the SDN switches, or is "deny by default" the primary reason for the SDN switches? Will customer consider other Layer3 switches which are "deny by default"?
RESPONSE #13	**SDN network topology is for multiple reasons, the primary is pre-defined network pathways for electrical-protection-speed restoration. Additional security features are of additional inherent benefit. SDN switches are a requirement and considered the base design, utilization of a non-SDN switch would be considered an alternate would have to be evaluated as an alternate during Supplier's detailed design.**

BIDDER QUESTION #14	Please confirm desired network redundancy; PRP, RSTP, or HSTP. Or if network redundancy will be performed by others.
RESPONSE #14	**The PDCS network is a mesh that is based on software-defined network (SDN) pre-defined network paths. The network redundancy is based on hardware redundancy within the SDN pre-defined network paths. The IED network redundancy is moderately dependent on the selected IED, but a majority of existing IED's are SEL 751 that support PRP as well as other dual-ethernet port solutions.**
BIDDER QUESTION #15	Will GCU supplier or Others be responsible for any IED settings changed required for successful operations of GCU and LS system.
RESPONSE #15	**The GCS supplier will be responsible for any IED settings changes required for successful operation of GCS.**
BIDDER QUESTION #16	Will GCS commissioning testing be done during normal business hours or off hours?
RESPONSE #16	**The Supplier shall assume GCS commissioning testing will generally be performed during normal business hours, noting the RFP defined 'continuation of operations' requirements. It is emphasized in many locations in the RFP that the SWBNO is a 24/7/365 operation and that extensive coordination will be required to perform system testing.**
BIDDER QUESTION #17	Do the existing generator have auto-synchronizers installed and operational?
RESPONSE #17	**Yes.**
BIDDER QUESTION #18	Please describe the existing method of generator synchronization.
RESPONSE #18	**All generators, rotating or virtual (SFC's), have auto-synchronization to their 'generator bus'. Any interconnection beyond that 'generator bus' is, at this time, manual synchronization to that other source.**
BIDDER QUESTION #19	Are the 24Hz RFC to be replaced by 25Hz SFC's?
RESPONSE #19	**The existing 24-hz RFCs will be retired in the future**
BIDDER QUESTION #20	What is the Overtime rate for Customer staff, if afterhours support is needed during installation and SAT.
RESPONSE #20	**Customer operations staff supporting the installation and SAT would not be the liability of the Supplier.**

BIDDER QUESTION #21	The phrase of “Ethernet/IP” is referenced in the RFP document, please confirm or define if this is the Allen-Bradley protocol, or just a reference to IP based communications over ethernet connectivity.
RESPONSE #21	**This is a generic term and not Vendor specific.**
BIDDER QUESTION #22	Can we have a 3 week extension for the bid?
RESPONSE #22	**An extension to the bid period has been considered and we will extend the bidding period to December 3, 2024. Please refer to Addendum 1 for additional details.**

End Bidder Questions V0

BIDDER QUESTION #23 **RESPONSE #23**	2024-SWB-97 RFP references "Attachment C" - Economically Disadvantaged Business Participation Summary Sheet on page 30. Can you please provide this form? It is not included in the RFP. **Refer to Addendum No. 1 dated 11/1/2024**
BIDDER QUESTION #24 **RESPONSE #24**	We have not seen the attendee list nor the meeting recording from the "Pre-Proposal Meeting" held on October 22nd. Can you please provide? **Refer to Addendum No. 1 dated 11/1/2024**
BIDDER QUESTION #25A	Per these sections of the RFP, the supplier must use an integrator with extensive experience specific to the SEL RTAC / Powermax hardware. Based on other previous load shed projects with their Powermax team as well as the proprietary software and coding of their system, Enginuity Global would choose to subcontract SEL for the controller programming. This would require a quote directly from SEL for this, is that what is expected? RFP reference to the above: Multiple sections reference this L. Supplier shall obtain PDCS Systems Integrator services from demonstrated established experienced specialty PDCS Systems Integrator with electrical protection control system design experience including a minimum 100,000 points and ten 50MW each, or greater, electrical network projects experience utilizing the hardware, software, and configuration specified for the Work. Selected Systems Integrator to provide field support during Construction, Startup, and Commissioning. Selection of the PDCS Systems Integrator is subject to approval by the Engineer based on substantiating proven experience meeting the Specified requirements. Additionally, resumes of key PDCS Systems Integrator personnel performing no less than 60 percent of the Work shall also be the basis of PDCS Systems Integrator selection approval. Non-approval of underqualified PDCS Systems Integrator requiring an alternate qualified PDCS Systems Integrator is not basis for a contract change. Specific hardware reference 2.05 CONTROLLERS A. The controllers shall be from Schweitzer Engineering Laboratory (SEL) Real Time Automation Controller (RTAC) or approved equal. The system design is based on SEL RTAC. B. A single RTAC shall be provided per electrical distribution system 'logical' node; essentially per functional switchgear assembly. The RTAC shall facilitate system wide communication from the intelligent electronic devices (IEDs) in the 'logical' via the PDCS communications architecture. The RTAC shall manage multi-IED sequential logic sequences, such as primary source fail over, primary source restoration, and others as required for safe and functional operation of the logical and the wider SWBNO managed electrical network. The operation of the IEDs shall not be dependent on the health of the RTAC, such that the RTAC can fail and not impact the IED point of service protection functionality.

RESPONSE #25A	**Bidders may propose vendor hardware of any reputable OEM provided that it meets the RFP requirements and is capable of the required integration into the existing PDCS system. The integration skills shall meet the specified requirements for the hardware/software solution proposed. The basis of design was the SEL PowerMAX solution and thus the qualifications are based on the basis of design solution. An approved alternate per the specification requirements can be evaluated as part of the RFP award process. Subcontracting to a specification compliant entity is within the requirements of the specification. Use of an experienced integrator is optional and available to a supplier should they choose to subcontract all, some, or part of the contract. The submitted solutions proposal should be on supplier letterhead in accordance with the bid specifications.**
BIDDER QUESTION #25B **RESPONSE #25B**	Note for question 1: This would need to be subcontracted to SEL (we would need costs for this for equal bidding between vendors) • 40 94 23 (controller) parts 2.01-L, 2.01-N, and all of 2.09, 2.10, 2.11 • 40 94 24 (HMI) parts 1.01 through 1.05, 2.01-F, 2.05-G,H, 2.06, 2.10 through 2.11 • All Data Exchange Requirements per 40 94 25 • All GCS programming requirements per 40 94 26 • Additional time for warranty requirements • Additional time in the proposal on recommended installation practices of all control system design hardware prior to and during design, FAT, SAT, and commissioning. **Not necessarily, SEL hardware or equivalent hardware from a reputable OEM would be acceptable as long as solution meets the functional design requirements outlined in the bid specifications. Bidders may choose to subcontract all, some, or parts of the work to one or more subcontractors.**
BIDDER QUESTION #26 **RESPONSE #26**	Are there any specific billing requirements to be included in the proposal? **Bidder shall provide milestone dates in accordance with Specification 01 32 00 included in the RFP which shall be used for payment dates.**
BIDDER QUESTION #27 **RESPONSE #27**	Does the design and engineering scope include upgrading the partially controlled breakers (identified in yellow/orange on the feed package one-line) to new SEL relays with IEC 61850 monitoring and control over Ethernet? (p. 504 of the PDF). **Only if required by the bidder to achieve the requirements of the specification. Generally, the expectation is that the load serving feeder breakers will be used primarily for load shedding operations by the GCS. Control of mains/ties to be as required by the bidder to meet the requirements of the specification.**

	Refer to Appendix A Scoping One Line for contract scope. FEED study is provided for reference only.
BIDDER QUESTION #28 **RESPONSE #28**	Are the blue-colored breakers shown on the existing one-line diagram currently integrated into the SCADA network? Additionally, will upgraded network cards with multiple ports be required to establish a standalone network? (40 94 23 1.01 B.1) **Per the legend on the referenced one-line, the blue-colored breakers are 'fully controlled / monitored' which indicates they are fully integrated into the PDCS. The network design is the responsibility of the bidder, including any upgrades required by the bidder's design. The expectation is that no upgrades to the existing network will be required unless required by the bidders design.**
BIDDER QUESTION #29 **RESPONSE #29**	Is any modification required for the existing Axion controllers or Wonderware at the PDCS nodes? **Modifications to the existing PDCS are dependent on the bidder's design. It is expected that configuration updates will be required at each of the PDCS nodes, both at the Axion and the local HMI to integrate the GCS functionality into the PDCS. Node Axion controller software may need to be modified to allow for network communications with upgraded breakers. Wonderware HMI may need to be modified to accommodate operator access to the new control interfaces available in the Grid Control System. Access to the PDCS project development files will be made available to the successful bidder.**
BIDDER QUESTION #30 **RESPONSE #30**	Will the new PDCS node locations require Axion control similar to the existing or use IEC61850? **Yes, but this work will be done by prior Contract Package and will be ready for integration into the GCS by the GCS bidder.**
BIDDER QUESTION #31 **RESPONSE #31**	If the answers to questions 4 and 5 are yes, will modifications be required to the existing PDCS nodes (e.g., SDN switches, etc.)? **See responses 28B, 29, and 30; the expectation is that there will be, at a minimum, configuration changes to existing PDCS nodes, with the degree and extent of modifications dependent on the bidder's design.**
BIDDER QUESTION #32	1.01 F – retrofit / upgrades required in scope. Please confirm these are protective relays? a. Does this include any existing SCADA or DCS networking/security interfaces?

	b. Is there a spec for the SEL relays and test switches required? c. Is procurement of this in scope?
RESPONSE #32	**The referenced specification section is unclear, however, objects that are indicated with a "PDCS" designator on one-line SWBNO-E-SK-30.00.20240910 are integrated into the PDCS. Objects beyond those indicated on the above referenced one-line if required to be integrated into the PDCS for GCS functionality are the responsibility of the bidder.**
BIDDER QUESTION #33	1.01 B.2 – Will SEL SDN design for block-by default be deemed acceptable?
RESPONSE #33	**The referenced specification section is unclear, however the bidder's network design shall follow all specification requirements, up to and including the deny-by-default aspect of SEL SDN switches.**
BIDDER QUESTION #34	Will the SCADA interface connection be routed through a security gateway? Should this use the existing computer system, or will a new rack/enclosure be required to connect to the GCS controller?
RESPONSE #34	**Any GCS hardware shall be fully integrated into the existing PDCS infrastructure within the PDCS architecture. The need for security gateway, new rack/enclosure is dependent on the bidder's design and would be the responsibility of the bidder if required per the bidder's design.**
BIDDER QUESTION #35	Should the estimate include all future points shown, or should this be excluded due to the uncertainty of the future WPC setup?
RESPONSE #35	**The bid should not include the physical infrastructure nor licensing for future points but should include scalability and computational capacity for future points per the requirements of the specification.**
BIDDER QUESTION #36	Section 3.01 – The installation of equipment is to be provided by a separate contractor based on the construction scope outlined in this document, correct? This cost should not be included in our proposal, correct? Additionally, "Manufacturer Services" is mentioned—please clarify what is required.
RESPONSE #36	**Incorrect, any hardware installation required by the bidder's design is the responsibility of the bidder. As noted in the RFP, substantial on-going work is being performed by other Contractors including additions to the PDCS that will be 'GCS ready' awaiting integration by the GCS Contractor per the GCS bidder's design.**

BIDDER QUESTION #37 **RESPONSE #37**	Have all the scenarios listed in the FEED been executed in ETAP, or do the stability (underfrequency) studies for each contingency, progressive, and underfrequency scenario fall within this scope? a. If studies are required, are governor and exciter impulse step test available for each generator and frequency converter? **The bidder shall assume any studies required to design and/or configure the GCS are required to be performed by the GCS supplier; with emphasis that the HIL testing is expected to utilize the GCS studies to inform required HIL test setup. The existing ETAP model can be provided to the successful bidder.**
BIDDER QUESTION #38 **RESPONSE #38**	For the implementation plan outlined on page 41, Will the scope of this project include all parts with different project starting and installation schedules? If so, how should "Part Future" be handled? **Part Future is NOT in the bidder's scope and is intended to indicate that future elements will be added to the GCS as the PDCS implementation progresses. All non-future 'parts' are to be scheduled within the bidder's project execution plan.**
BIDDER QUESTION #39 **RESPONSE #39**	Need Model # and firmware revision of each RTAC unit with its physical location in respect to the supplied electrical one line. **The requested information will be supplied to the successful bidder, any assumptions required by the bidder to submit their bid in this regard shall be listed.**
BIDDER QUESTION #40 **RESPONSE #40**	PDCS hardware that needs to be integrated into GCS, we request model numbers and firmware revisions. **The requested information will be supplied to the successful bidder, any assumptions required by the bidder to submit their bid in this regard shall be listed.**
BIDDER QUESTION #41 **RESPONSE #41**	How many physical operator stations that will be needed with the GCS? **No additional operator stations are expected to be supplied under the Work unless required by the bidder's design; all GCS operator interface shall be fully integrated into existing PDCS operator workstations per the specification. There are, or will be, nominally nine (9) PDCS operator workstations that are all the exact same form-factor into which the GCS interface shall be integrated.**
BIDDER QUESTION #42	Please provide photos of both existing PDCS servers showing all network connections.

RESPONSE #42	**Please see Addendum 2 “Reference Material”.**
BIDDER QUESTION #43	Please provide network architecture drawing/diagram for the IEDs and PDCS.
RESPONSE #43	**Please see Addendum 2 “Reference Material”.**

End Bidder Questions V1

BIDDER QUESTION #44	There are several PDCS HMI main nodes in the system, and (upto) nine operator interfaces as indicated in RFI . Can details be provided regarding the existing redundancy setup for the PDCS main nodes? Are they running in primary/backup mode of operation, or are they run standalone?
RESPONSE #44	**Standalone. Each main control room PDCS node (Central Control, Engineering, WPCAUX) can independently operate PDCS. The hardware infrastructure, databasing, and connections are redundant such that a catastrophic failure of a main control room PDCS node will not affect operations.**
BIDDER QUESTION #45	Please provide the referred to 3.2 Technical Evaluation RFP 2024-SWB-XX Grid Control System(GCS) Software and Services.xlsx
RESPONSE #45	**This document is included in Addendum 3. Please note the instructions on page one of the file and ensure the form is completed as requested and submitted with the proposal:** ***Each Proposer should review the outcomes in the requirements tab. The outcomes relate to the business function and use case in that row. The responses should be entered under the "Availability" column of each form as follows:***
BIDDER QUESTION #46	Sheet #45 of drawing 12098-W8 is missing (blank) in bid_2015_addendum_2 (page 58/702)
RESPONSE #46	**The missing sheet 45 of 72 is included in this Addendum 3.**

End Bidder Questions V2

Vendor Name	Enter Proposer Name

Instructions	
The instructions provided in this section represent how Proposers should complete the Excel attachment provided. Together they define a system that will operate efficiently in the proposed computer environment while providing a high level of flexibility in meeting the City's current and future data needs. Proposers must replace cell C2 on this page with their company name.	
Each Proposer should review the outcomes in the requirements tab. The outcomes relate to the business function and use case in that row. The responses should be entered under the "**Availability"** column of each form as follows:	
Response Code	**Description**
Y	Functionality is provided out of the box through the completion of a task associated with a routine configurable area that includes, but is not limited to, user-defined fields, delivered or configurable workflows, alerts or notifications, standard import/export, table driven setups and standard reports with no changes. These configuration areas will not be affected by a future upgrade. The proposed services include implementation and training on this functionality, unless specifically excluded in the Statement of Work, as part of the deployment of the solution.
R	Functionality is provided through reports generated using proposed Reporting Tools.
T	Functionality is provided by proposed third party functionality (i.e., third party is defined as a separate software Proposer from the primary software Proposer). The pricing of all third-party products that provide this functionality MUST be included in the cost proposal.
M	Functionality is provided through customization to the application, including creation of a new workflow or development of a custom interface that may have an impact on future upgradability.
F	Functionality will be provided through a future general availability (GA) release that is scheduled to occur within 1 year of the proposal response.
N	Functionality is not provided
Use the Cost column for "M" or "R" responses to estimate the cost to be incurred by City to secure the specification/report. Use the Comment column to provide additional comments pertaining to your response for that item.	
The **Required Product(s)** column is to be used to specify what product (e.g. product name / software module) is proposed.	
Proposers proposing a multi-product solution should complete Technical business area specification response for each product.	

Vendor	#	Functional Area	Feature	Description	Priority	Availability	Required Product	Comments
Enter Proposer Name	1	Generation control	Automatic generation control	GCS is able to manage local power generation according to the load requirements	R			
Enter Proposer Name	2	Generation control	Voltage control	GCS is able to manage bus voltages according to the load requirements	R			
Enter Proposer Name	3	Generation control	Frequency Control	GCS is able to manage stable frequency according to the load requirements while facility operates in both 'Utility' and 'Islanded' mode	R			
Enter Proposer Name	4	Generation control	System Islanding	GCS is able to transistion from a utility supported 'shore-power' configuration to an 'islanded mode' of operation. GCS is able to support both planned and unplanned transistions.	R			
Enter Proposer Name	5	Generation control	Parallel System balancing	GCS is able to balance Generator/Load requirements between both 60Hz and 25Hz systems.	R			
Enter Proposer Name	6	Load Control	Contingency-based load shedding	Ability for GCS to shed any excess MW loads when a contingency triggers. This reduction is achieved by shedding loads in order of priorities set by the operator.	R			
Enter Proposer Name	7	Load Control	Underfrequency-based load shedding	GCS will act to shed load stage-wise when the frequency begins to drop below predetermined setpoint and restore frequency to nominal levels.	R			
Enter Proposer Name	8	Load Control	Progressive overload shedding	GCS will trip excess load in cases of detected overloads at utility incomers or SWBNO generating assets. Shedding priority programmable by the operator.	R			
Enter Proposer Name	9	Load Control	Black start and Load Restoration	Ability for GCS to initiate Black Start Restoration sequences of the SWBNO generating assets.	R			
Enter Proposer Name	10	Load Control	Autosynchronization with dissimmiliar islands	Ability for GCS to resynchronize back to the Electric Utility grid from an island mode of operation	R			
Enter Proposer Name	11	Load Control	Exercise Generator Mode	GCS to initiate a periodic trial operation of the generating assets to ensure equipment health. This mode shall be executed by the operators via HMI pushbutton.	D			
Enter Proposer Name	12	Load Control	Islanding and Decoupling from Electric Utility	Ability for GCS to decouple from the Electric Utility Grid to prevent any disturbance on the external grid from affecting the captive power generators onsite.	R			
Enter Proposer Name	13	Load Control	Unit commitment	GCS to track the hours of operation of each generator and decide which generator to be run or shut off, calculate the spinning reserve, and recommend to the operator which generator should be turned ON	R			
Enter Proposer Name	14	System Architecure	Automated Reporting	GCS is capable of generating Automated Reports based on pre-defined templates	R			
Enter Proposer Name	15	System Architecure	Automated Reporting	GCS is able to provide a 24-hour lookahead schedule	D			
Enter Proposer Name	16	System Architecure	Hardware Redundency	GCS is able to operate in a 'hot-standby' redundant controller schema	R			
Enter Proposer Name	17	System Architecure	Architecture Compatibility	GCS is compatible with existing SWBNO PDCS System.	R			
Enter Proposer Name	18	System Architecure	3rd party compatiability	GCS is capable of intergration with 3rd party devices.	D			
Enter Proposer Name	19	System Architecure	Energy Optimization	GCS is able to operate in profiles that: Maximum Economics, Minimize Emissions, Minimize Grid usage, Maximum Time of Life, etc.	D			
Enter Proposer Name	20							
Enter Proposer Name	21							
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