

**CONSULTANT AGREEMENT BETWEEN THE CITY OF SANTA ANA AND  
NORTHERN DIGITAL, INC. TO PROVIDE ON-CALL ENGINEERING SERVICES**

THIS AGREEMENT is made and entered into on this 19th day of September, 2023 by and between Northern Digital, Inc. (“Consultant”), and the City of Santa Ana, a charter city and municipal corporation organized and existing under the Constitution and laws of the State of California (“City”).

**RECITALS**

- A. On February 14, 2023 the City issued Request for Proposal (“RFP”) No. 23-026 by which it desired to retain a consultant having special skill and knowledge in the field of: engineering services to prepare functional specifications and to provide SCADA source control and change control services on an on-call basis for the City’s Public Works Agency.
- B. Consultant submitted a responsive proposal that was among those selected by the city. Consultant represents that it is able and willing to provide such services described in the scope of work that was included in the RFP No. 23-026.
- C. In undertaking the performance of this Agreement, Consultant represents that it is knowledgeable in its field and that any services performed by Consultant under this Agreement will be performed in compliance with such standards as may reasonably be expected from a professional consulting firm in the field.

**NOW THEREFORE**, in consideration of the mutual and respective promises, and subject to the terms and conditions hereinafter set forth, the parties agree as follows:

**1. SCOPE OF SERVICES**

Consultant shall perform the services that were described in the scope of work included in the RFP No. 23-026, during the term of this Agreement, the tasks and obligations including all labor, materials, tools, equipment, and incidental customary work required to fully and adequately complete the services described and set forth in “**Scope of Services - Exhibit A**”, attached hereto and incorporated by reference, and as further described in Consultant’s Proposal, attached hereto and incorporated herein by this reference as “**Consultant’s Proposal - Exhibit B**”.

**2. COMPENSATION**

- a. City neither warrants nor guarantees any minimum or maximum compensation to Consultant under this Agreement. Consultant shall be paid only for actual services performed under this Agreement at the rates and charges identified in Consultant’s Fee Proposal, which is attached hereto and fully incorporated herein by this reference as “**Compensation - Exhibit C**”. Consultant is one of three (3) separate consultants selected to provide services on an on-call basis under RFP 23-026. The total compensation for services provided by all consultants selected under RFP 23-026 shall not exceed the shared aggregate amount of \$1,250,000.00 during the term of this Agreement, including any extension periods, as set forth in Section 3, below.

- b. Payment by City shall be made within forty-five (45) days following receipt of proper invoice evidencing work performed, subject to City accounting procedures. Payment need not be made for work which fails to meet the standards of performance set forth in the Recitals which may reasonably be expected by City.
- c. Notwithstanding any contrary terms contained within Consultant's Fee Proposal, Consultant's fees shall not increase by more than 3% annually over the term of this Agreement, including any extension periods, unless directly affected by Prevailing Wage laws, if applicable.

### **3. TERM**

This Agreement shall commence on September 19, 2023 and end on September 18, 2026, with the option for the City to grant up to one (1), two-year extension, exercisable by a writing by the City Manager and the City Attorney, unless terminated earlier in accordance with Section 16, below.

### **4. PREVAILING WAGES**

Consultant is aware of the requirements of California Labor Code Section 1720, et seq., and 1770, et seq., as well as California Code of Regulations, Title 8, Section 16000, et seq., ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on "public works" and "maintenance" projects. If the services being performed are part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and the total compensation is \$1,000 or more, Consultant agrees to fully comply with such Prevailing Wage Laws. Consultant shall defend, indemnify and hold the City, its elected officials, officers, employees and agents free and harmless from any claim or liability arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

### **5. INDEPENDENT CONTRACTOR**

Consultant shall, during the entire term of this Agreement, be construed to be an independent contractor and not an employee of the City. This Agreement is not intended nor shall it be construed to create an employer-employee relationship, a joint venture relationship, or to allow the City to exercise discretion or control over the professional manner in which Consultant performs the services which are the subject matter of this Agreement; however, the services to be provided by Consultant shall be provided in a manner consistent with all applicable standards and regulations governing such services. Consultant shall pay all salaries and wages, employer's social security taxes, unemployment insurance and similar taxes relating to employees and shall be responsible for all applicable withholding taxes.

### **6. OWNERSHIP OF MATERIALS**

This Agreement creates a non-exclusive and perpetual license for City to copy, use, modify, reuse, or sublicense any and all copyrights, designs, and other intellectual property

embodied in plans, specifications, studies, drawings, estimates, and other documents or works of authorship fixed in any tangible medium of expression, including but not limited to, physical drawings or data magnetically or otherwise recorded on computer diskettes, which are prepared or caused to be prepared by Consultant under this Agreement (“Documents & Data”). Consultant shall require all subcontractors to agree in writing that City is granted a non-exclusive and perpetual license for any Documents & Data the subcontractor prepares under this Agreement. Consultant represents and warrants that Consultant has the legal right to license any and all Documents & Data. Consultant makes no such representation and warranty in regard to Documents & Data which were provided to Consultant by the City. City shall not be limited in any way in its use of the Documents and Data at any time, provided that any such use not within the purposes intended by this Agreement shall be at City’s sole risk.

## **7. INSURANCE**

Consultant shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder and the results of that work by the Consultant, its agents, representatives, employees or subcontractors.

- a. Consultant shall not commence work for the City until it has provided evidence satisfactory to the City that it has secured all insurance required under this Section. In addition, Consultant shall not allow any subconsultant to commence work on any subcontract until it has secured all insurance required under this Section.
- b. Insurance coverage shall be at least as broad as:
  - (i) Commercial General Liability (CGL): Insurance Services Office Form CG 00 01 covering CGL on an “occurrence” basis, including products and completed operations, property damage, bodily injury and personal & advertising injury with limits no less than \$2,000,000.00 per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (ISO CG 25 03 or 25 04) or the general aggregate limit shall be twice the required occurrence limit.
  - (ii) Automobile Liability: Insurance Services Office Form Number CA 0001 covering, Code 1 (any auto), or if Consultant has no owned autos, Code 8 (hired) and 9 (non-owned), with limit no less than \$1,000,000.00 per accident for bodily injury and property damage.
  - (iii) Workers’ Compensation insurance as required by the State of California, with Statutory Limits, and Employer’s Liability Insurance with limit of no less than \$1,000,000.00 per accident for bodily injury or disease.

- (iv) Professional Liability (Errors and Omissions) Insurance appropriate to the Consultant's profession, with limit no less than \$1,000,000.00 per occurrence or claim, \$2,000,000.00 aggregate.
  - (v) If the Consultant maintains broader coverage and/or higher limits than the minimums shown above, the City requires and shall be entitled to the broader coverage and/or the higher limits maintained by the Consultant. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the City.
- c. Other Insurance Provisions. The insurance policies are to contain, or be endorsed to contain, the following provisions:
  - (i) **Additional Insured Status.** The City, its officers, officials, employees, and volunteers are to be covered as additional insureds on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of the Consultant including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Consultant's insurance (at least as broad as ISO Form CG 20 10 11 85 or both CG 20 10, CG 20 26, CG 20 33, or CG 20 38; and CG 20 37 forms if later revisions used).
  - (ii) **Primary Coverage.** For any claims related to this contract, the Consultant's insurance coverage shall be primary insurance primary coverage at least as broad as ISO CG 20 01 04 13 as respects the City, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, employees, or volunteers shall be excess of the Consultant's insurance and shall not contribute with it.
  - (iii) **Notice of Cancellation.** Each insurance policy required above shall state that coverage shall not be canceled, except with notice to the City.
  - (iv) **Waiver of Subrogation.** Consultant hereby grants to City a waiver of any right to subrogation which any insurer of said Consultant may acquire against the City by virtue of the payment of any loss under such insurance. Consultant agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the City has received a waiver of subrogation endorsement from the insurer.
  - (v) **Self-Insured Retentions.** Self-insured retentions must be declared to and approved by the City. The City may require the Consultant to purchase coverage with a lower retention or provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. The policy language shall provide, or be



endorsed to provide, that the self-insured retention may be satisfied by either the named insured or City.

(vi) **Acceptability of Insurers.** Insurance is to be placed with insurers authorized to conduct business in the state with a current A.M. Best's rating of no less than A:VII, unless otherwise acceptable to the City.

(vii) **Claims Made Policies.** If any of the required policies provide coverage on a claims-made basis:

- The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.
- Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the contract of work.
- If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the Consultant must purchase "extended reporting" coverage for a minimum of five (5) years after completion of contract work.

(viii) **Verification of Coverage.** Consultant shall furnish the City with original Certificates of Insurance including all required amendatory endorsements (or copies of the applicable policy language effecting coverage required by this clause) and a copy of the Declarations and Endorsement Page of the CGL policy listing all policy endorsements to City before work begins. However, failure to obtain the required documents prior to the work beginning shall not waive the Consultant's obligation to provide them. The City reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

(ix) **Subcontractors.** Consultant shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and Consultant shall ensure that City is an additional insured on insurance required from subcontractors.

(x) **Special Risks or Circumstances.** City reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstances.

## **8. INDEMNIFICATION**

Consultant agrees to defend, and shall indemnify and hold harmless the City, its officers, agents, employees, contractors, special counsel, and representatives from liability: (1) for personal

injury, damages, just compensation, restitution, judicial or equitable relief arising out of claims for personal injury, including death, and claims for property damage, which may arise from the negligent operations of the Consultant, its subcontractors, agents, employees, or other persons acting on its behalf which relates to the services described in section 1 of this Agreement; and (2) from any claim that personal injury, damages, just compensation, restitution, judicial or equitable relief is due by reason of the terms of or effects arising from this Agreement. This indemnity and hold harmless agreement applies to all claims for damages, just compensation, restitution, judicial or equitable relief suffered, or alleged to have been suffered, by reason of the events referred to in this Section or by reason of the terms of, or effects, arising from this Agreement. The Consultant further agrees to indemnify, hold harmless, and pay all costs for the defense of the City, including fees and costs for special counsel to be selected by the City, regarding any action by a third party challenging the validity of this Agreement, or asserting that personal injury, damages, just compensation, restitution, judicial or equitable relief due to personal or property rights arises by reason of the terms of, or effects arising from this Agreement. City may make all reasonable decisions with respect to its representation in any legal proceeding. Notwithstanding the foregoing, to the extent Consultant's services are subject to Civil Code Section 2782.8, the above indemnity shall be limited, to the extent required by Civil Code Section 2782.8, to claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Consultant.

## **9. INTELLECTUAL PROPERTY INDEMNIFICATION**

Consultant shall defend and indemnify the City, its officers, agents, representatives, and employees against any and all liability, including costs, for infringement of any United States' letters patent, trademark, or copyright infringement, including costs, contained in the work product or documents provided by Consultant to the City pursuant to this Agreement.

## **10. RECORDS**

Consultant shall keep records and invoices in connection with the work to be performed under this Agreement. Consultant shall maintain complete and accurate records with respect to the costs incurred under this Agreement and any services, expenditures, and disbursements charged to the City for a minimum period of three (3) years, or for any longer period required by law, from the date of final payment to Consultant under this Agreement. All such records and invoices shall be clearly identifiable. Consultant shall allow a representative of the City to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement during regular business hours. Consultant shall allow inspection of all work, data, documents, proceedings, and activities related to this Agreement for a period of three (3) years from the date of final payment to Consultant under this Agreement.

## **11. CONFIDENTIALITY**

If Consultant receives from the City information which due to the nature of such information is reasonably understood to be confidential and/or proprietary, Consultant agrees that it shall not use or disclose such information except in the performance of this Agreement, and further agrees to exercise the same degree of care it uses to protect its own information of like importance, but in no event less than reasonable care. "Confidential Information" shall include all

nonpublic information. Confidential information includes not only written information, but also information transferred orally, visually, electronically, or by other means. Confidential information disclosed to either party by any subsidiary and/or agent of the other party is covered by this Agreement. The foregoing obligations of non-use and nondisclosure shall not apply to any information that (a) has been disclosed in publicly available sources; (b) is, through no fault of the Consultant disclosed in a publicly available source; (c) is in rightful possession of the Consultant without an obligation of confidentiality; (d) is required to be disclosed by operation of law; or (e) is independently developed by the Consultant without reference to information disclosed by the City.

## **12. CONFLICT OF INTEREST CLAUSE**

Consultant covenants that it presently has no interests and shall not have interests, direct or indirect, which would conflict in any manner with performance of services specified under this Agreement.

## **13. NON-DISCRIMINATION**

Consultant shall not discriminate because of race, color, creed, religion, sex, marital status, sexual orientation, gender identity, gender expression, gender, medical conditions, genetic information, or military and veteran status, age, national origin, ancestry, or disability, as defined and prohibited by applicable law, in the recruitment, selection, teaching, training, utilization, promotion, termination or other employment related activities or any services provided under this Agreement. Consultant affirms that it is an equal opportunity employer and shall comply with all applicable federal, state and local laws and regulations.

## **14. EXCLUSIVITY AND AMENDMENT**

This Agreement represents the complete and exclusive statement between the City and Consultant, and supersedes any and all other agreements, oral or written, between the parties. In the event of a conflict between the terms of this Agreement and any attachments hereto, the terms of this Agreement shall prevail. This Agreement may not be modified except by written instrument signed by the City and by an authorized representative of Consultant. The parties agree that any terms or conditions of any purchase order or other instrument that are inconsistent with, or in addition to, the terms and conditions hereof, shall not bind or obligate Consultant or the City. Each party to this Agreement acknowledges that no representations, inducements, promises or agreements, orally or otherwise, have been made by any party, or anyone acting on behalf of any party, which is not embodied herein.

## **15. ASSIGNMENT**

Inasmuch as this Agreement is intended to secure the specialized services of Consultant, Consultant may not assign, transfer, delegate, or subcontract any interest herein without the prior written consent of the City and any such assignment, transfer, delegation or subcontract without the City's prior written consent shall be considered null and void. Nothing in this Agreement shall be construed to limit the City's ability to have any of the services which are the subject to this

Agreement performed by City personnel or by other consultant and/or contractors retained by City.

## **16. TERMINATION**

This Agreement may be terminated by the City upon thirty (30) days written notice of termination. In such event, Consultant shall be entitled to receive and the City shall pay Consultant compensation for all services performed by Consultant prior to receipt of such notice of termination, subject to the following conditions:

- a. As a condition of such payment, the Executive Director may require Consultant to deliver to the City all work product(s) completed as of such date, and in such case such work product shall be the property of the City unless prohibited by law, and Consultant consents to the City's use thereof for such purposes as the City deems appropriate.
- b. Payment need not be made for work which fails to meet the standard of performance specified in the Recitals of this Agreement.

## **17. WAIVER**

No waiver of breach, failure of any condition, or any right or remedy contained in or granted by the provisions of this Agreement shall be effective unless it is in writing and signed by the party waiving the breach, failure, right or remedy. No waiver of any breach, failure or right, or remedy shall be deemed a waiver of any other breach, failure, right or remedy, whether or not similar, nor shall any waiver constitute a continuing waiver unless the writing so specifies.

## **18. JURISDICTION - VENUE**

This Agreement has been executed and delivered in the State of California and the validity, interpretation, performance, and enforcement of any of the clauses of this Agreement shall be determined and governed by the laws of the State of California. Both parties further agree that Orange County, California, shall be the venue for any action or proceeding that may be brought or arise out of, in connection with or by reason of this Agreement.

## **19. PROFESSIONAL LICENSES**

Consultant shall, throughout the term of this Agreement, maintain all necessary licenses, permits, approvals, waivers, and exemptions necessary for the provision of the services hereunder and required by the laws and regulations of the United States, the State of California, the City of Santa Ana and all other governmental agencies. Consultant shall notify the City immediately and in writing of its inability to obtain or maintain such permits, licenses, approvals, waivers, and exemptions. Said inability shall be cause for termination of this Agreement.

## **20. NOTICE**

Any notice, tender, demand, delivery, or other communication pursuant to this Agreement shall be in writing and shall be deemed to be properly given if delivered in person or mailed by

first class or certified mail, postage prepaid, or sent by fax or other telegraphic communication in the manner provided in this Section, to the following persons:

To City:

Jennifer L. Hall  
City Clerk  
City of Santa Ana  
20 Civic Center Plaza (M-30)  
P.O. Box 1988  
Santa Ana, CA 92702-1988  
Fax: 714- 647-6956

With courtesy copies to:

Nabil Saba  
Executive Director, Public Works Agency  
City of Santa Ana  
20 Civic Center Plaza  
P.O. Box 1988  
Santa Ana, California 92702  
Fax:

To Consultant:

Joseph Marcus  
Manager, Business Development  
Northern Digital, Inc.  
4701 Corporate Court  
Bakersfield, CA 93311

A party may change its address by giving notice in writing to the other party. Thereafter, any communication shall be addressed and transmitted to the new address. If sent by mail, communication shall be effective or deemed to have been given three (3) days after it has been deposited in the United States mail, duly registered or certified, with postage prepaid, and addressed as set forth above. If sent by fax, communication shall be effective or deemed to have been given twenty-four (24) hours after the time set forth on the transmission report issued by the transmitting facsimile machine, addressed as set forth above. For purposes of calculating these time frames, weekends, federal, state, County or City holidays shall be excluded.

## **21. MISCELLANEOUS PROVISIONS**

- a. Each undersigned represents and warrants that its signature herein below has the power, authority and right to bind their respective parties to each of the terms of this Agreement, and shall indemnify City fully, including reasonable costs and attorney's fees, for any injuries or damages to City in the event that such authority

or power is not, in fact, held by the signatory or is withdrawn.

- b. All Exhibits referenced herein and attached hereto shall be incorporated as if fully set forth in the body of this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the date and year first above written.

**ATTEST:**

**CITY OF SANTA ANA**

\_\_\_\_\_  
JENNIFER L. HALL  
City Clerk

\_\_\_\_\_  
KRISTINE RIDGE  
City Manager

**APPROVED AS TO FORM:**  
SONIA R. CARVALHO  
City Attorney

**CONSULTANT:**

By:   
\_\_\_\_\_  
JONATHAN T. MARTINEZ  
Assistant City Attorney

  
\_\_\_\_\_  
JOSEPH MARCUS  
Manager, Business Development

RECOMMENDED FOR APPROVAL:

\_\_\_\_\_  
NABIL SABA  
Executive Director  
Public Works Agency

## **EXHIBIT A**

### **SCOPE OF SERVICES**

**CITY OF SANTA ANA**  
RFP NO.: 23-026  
WATER RESOURCES FUNCTIONAL SPECIFICATIONS DEVELOPMENT AND SCADA  
PROGRAMMING SERVICES

**Appendix**  
**ATTACHMENT 1: SCOPE OF WORK**



**CITY OF SANTA ANA**  
RFP NO.: 23-026  
WATER RESOURCES FUNCTIONAL SPECIFICATIONS DEVELOPMENT AND SCADA  
PROGRAMMING SERVICES

**SCOPE OF WORK**

**A. INTRODUCTION AND BACKGROUND**

The City of Santa Ana Public Works Agency – Water Resources Division oversees and maintains the daily operations of the Water System and Sanitary Sewer System. The City's water system has an average day demand of about 30 million gallons (MG) with 45,000 service connections. It is comprised of approximately 478 miles of water main, 45 MG of storage at five (5) sites, seven (7) MWD connections, 21 groundwater wells, seven (7) pump stations, four (4) pressure regulating stations and utilizes two (2) pressure zones.

**B. CONSULTANT RESPONSIBILITIES**

**The City desires to retain a qualified Consultant to prepare functional specifications, control panel drawings, programming and testing specifications and provide SCADA systems source control and change control services for the City's water production facilities.** The selected vendor is intended to, among other items previously stated, provide and institute oversight mechanisms for the City's contracted controls programmers. The City's facilities are controlled by the Dynac ES SCADA software as provided by Kapsch TrafficCom USA, Inc. The City is also utilizing Wonderware by AVEVA.

The Consultant shall provide all labor, materials, services, and equipment necessary for the services described herein. The Consultant shall possess all Federal, State and Local permits, licenses, and approvals necessary to provide good/services required in the Scope of Work.

**C. SCOPE OF SERVICES**

The City is seeking qualified Consultants to provide (1) control panel drawings, (2) functional specifications, (3) programming and testing specifications, (4) source control, and (5) change control described in the following sections:

**1. CONTROL PANEL DRAWINGS**

The Consultant shall be capable of providing and reviewing control panel drawings as they relate to the City's instrumentation and electrical components. The City's water production sites utilize the following components:

- Modicon Momentum Programmable Logic Computers (PLC) – (Modicon M340 and M580 and other various models)
- Variable Frequency Drives (VFD) – (Various models such as ABB and Danfoss)
- Limitorque and AUMA motor operated valves (MOV)
- Mag meters (various brands) and other related appurtenances
- Magelis human machine interfaces (HMI) or a Unitronics display

The Consultant shall have experience working with the aforementioned instruments and shall recommend retrofits when applicable. It is the City's desire that all site control reside within

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the site PLC with the HMI acting primarily as a site control interface relaying operator commands to the site PLC.

**A. DELIVERABLES**

Upon request, the Consultant shall prepare detailed control panel drawings and specifications for City water production sites. Control panel drawings shall be complete and sufficiently detailed to provide to panel manufacturers and obtain bids for their construction. Control panel drawings shall be in conformance with the City's Control Panel Standards and Specifications and include at a minimum the following:

1. Front Panel Layout Drawing
2. Back Panel Layout Drawing
3. Power Distribution Drawing
4. Communication Network Drawing
5. Analog Inputs/Outputs Drawing
6. Digital Inputs/Outputs Drawing
7. Bill of Materials
8. I/O List with Tag Names
9. Specifications for:
  - a. DC Power Components (standard provided by City)
  - b. Ethernet and Networking Components (standard provided by City)
  - c. Telemetry Components (standard provided by City)
  - d. Control Panel Construction (standard provided by City)

In addition, the consultant shall provide the following for each requested site:

1. I/O List
2. Complete set of Drawings
3. Complete set of associate specification

**2. FUNCTIONAL SPECIFICATIONS**

The Consultant shall develop functional specifications based on the future/proposed operation/capabilities gained from updating instrumentation and control devices for the Water Production sites upon request from the City. The Functional Specifications are intended to reflect the ultimate desired operation of each site and not be limited to the operation as it exists currently. The Consultant shall be capable of performing the following tasks:

1. Conduct existing condition work sessions with the City Water Production Team to identify existing operational settings, hardware and controls equipment for the Sites. The Consultant shall catalogue all existing controls and equipment and provide recommendations for enhancement and conformance to City's standards.
  - a. The Consultant shall create an I/O database to catalogue all system I/O and communications, which shall include summaries of the use and function of each. The format and fields shall be developed in collaboration with the City Water Production

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- Team. The type of I/O captured in this database shall include, but not be limited to, PLCs, local and remote HMIs, remote I/O modules, radio transmitter modems, backup power, wiring and termination blocks.
- b. The Consultant shall provide recommendations for control hardware upgrades and standardization.
  - c. The purpose of this task is to document existing I/O, configurations and Site equipment for use in preparing the proposed/future I/O list, control panel drawings, functional specifications and related documents.
2. Conduct operations workshops with the City Water Production Team to develop and document operating procedures for the Sites. The Consultant shall provide recommendations for enhancement to operational practices based on currently available technologies and industry best practices.
- a. The Consultant is expected to develop a detailed understanding of each of the Site's operational function including all equipment, controls, instrumentation, and communication systems. Consultant shall research as necessary to fully understand the capabilities and limitation of the Sites.
  - b. It is anticipated that one (1) workshop per pump station Site (8 hours each) will be needed to complete this task. In addition, the City may request the following additional trainings:
    - i. Field testing and training for staff
    - ii. Detailed workshops per functional specification
3. Create Functional Specifications for each Site that includes at minimum the following:
- a. Narrative overview of the function and operation of the Site;
  - b. Identification of all component of the Site (i.e., equipment, instrumentation, etc.)
  - c. Narrative description of the functionality of each component of the Site (e.g., pumps, tanks, VFDs, valves, meters, sensors/transmitters, monitors, etc.);
  - d. Narrative description of all operational modes for the Site;
  - e. Description of the process control strategies for the Site
  - f. Narrative description of each process control strategy;
  - g. Identification of the specific I/O, setpoints, commands, and communications associated with each strategy;
  - h. Detailed description of the control logic for each component/strategy, including permissives, interlocks, PID controls, etc.;
  - i. Description of the SCADA interfaces (Dynac ES provided by Kapsch TrafficCom USA, Inc. and Wonderware provided by AVEVA)
  - j. Narrative and detailed description of system alarms and other notification functionality.

Prior to finalizing the functional specification, the Consultant shall host a functional specification review workshop to review the content of the documents and receive City's approval to finalize. Upon request, the Consultant shall also be able to provide field testing and training for staff.

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**3. PROGRAMMING AND TESTING SPECIFICATIONS**

Upon request, the Consultant shall develop programming and testing specifications based on City standards for the new control panels. The Consultant shall perform the following tasks:

1. Consultant shall develop comprehensive Factory Acceptance Test (FAT) and Site Acceptance Test (SAT) protocols for the new control panels and related components. Consultant will be tasked with reviewing, enhancing and providing approval recommendations for test protocols and other control system submittals associated with the planned Site improvements to ensure that the panel manufacturer and the City's integrators deliverables and tasks are being executed in compliance with the accepted specifications.
2. Act as the City's agent during factory and on-site functional and performance acceptance testing. Consultant shall document and identify all functional and performance discrepancies and coordinate corrective actions to resolve identified discrepancies prior to City acceptance.
3. On an as-needed basis, Consultant shall provide on-site support for commissioning (start-up) activities, in close coordination with the City's integrator. Consultant shall be present during system commissioning to verify all aspects of the control system and associated process equipment are exercised and to ensure deficiencies are corrected by the Contractor/Integrator as they are found. Commissioning will not be considered complete until the Consultant has determined that all of the system requirements have been met.

**A. DELIVERABLES**

The Consultant shall provide the following:

1. Control Panel FAT/SAT Protocols
2. Control Panel FAT/SAT Results Report
3. Commissioning/Start-up Report

**4. SCADA SOURCE CONTROL**

The Consultant shall implement, manage and maintain a source control system and establish procedures to track all changes to the SCADA configurations, PLC programs, firewall configurations, smart field device configurations and related devices. The goal of the Source Control service is to track and store SCADA system configurations and history.

The Consultant shall collect existing programs from field PLC devices to populate the existing source control database. The City has approximately 45 PLC devices located throughout the City. The Consultant shall maintain a master source control database and provide periodic backups to the City. As updates are required to the PLC programs, the Consultant shall provide a copy of the most up to date PLC programs to the City's contract PLC integrators via a documented check-in, check-out process. Consultant shall develop and document rules, standards and procedures for database structure and program check-in, check-out processes.

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PROGRAMMING SERVICES

**5. SCADA CHANGE CONTROL**

The Consultant shall implement, manage and maintain a robust change control system and establish procedures to provide governance and structure over proposed SCADA system and site local control programming changes and associated integrator activities. The goal of Change Control services is to prevent ad-hoc SCADA configuration changes, ad-hoc PLC programming changes, properly document new instrumentation additions and ensure proper documentation is kept regarding the nature and reason for the desired system changes. Consultant shall propose a change control platform and methodology. Change requests may be initiated by City, City's contract integrators or Consultant. The City will have final say as to what change requests are approved.

**D. CODE COMPLIANCE**

All materials and workmanship shall be in strict conformity with federal, state and local codes, requirements, standards of the latest editions, and guidelines including revisions of the following:

- International Society of Automation (ISA)
- California Building Code (CBC)
- American National Standards Institute (ANSI)
- American Society of Testing and Materials (ASTM)
- Department of Transportation (DOT)
- California State Water Resources Control Board
- Department of Drinking Water
- South Coast Air Quality Management District (SCAQMD)
- Environmental Protection Agency (EPA)
- Occupational Safety and Health Administration (OSHA)

**E. PROJECT MANAGEMENT AND COORDINATION**

When a request for service is issued to the City, the Consultant shall issue an estimate to the City's designated Project Manager. The Consultant shall not proceed with any work without the approval of the City's designated Project Manager in the form of a Notice to Proceed.

Consultants shall invoice the City on a monthly basis for all work performed during the period or provide a one-time invoice at the completion of work issued. Each invoice shall be accompanied by a summary of tasks performed, contract agreement number, results and progress on long-term tasks if any.

**F. VALUE ADDED RELATED SERVICES**

The Consultant may propose additional related services that the City has not specifically identified in this RFP to accomplish the stated goals of this RFP. Value added related services will be considered by the City and may or may not be incorporated in the agreement. All parts and materials must be supplied new and factory approved.

**CITY OF SANTA ANA**  
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**G. MARKUP**

The following markup percentages shall be added to the Consultant's costs and shall constitute the markup for all overhead and profits (to the sum of the costs and markups, one (1) percent shall be added as compensation for bonding):

1)	Labor .....	20
2)	Materials .....	15
3)	Equipment Rental .....	15
4)	Other Items and Expenditures .....	15

**H. MINIMUM QUALIFICATIONS**

The City is searching for a highly experienced professional firm with specific experience in control system, HMI, and SCADA system development, test, integration, and commissioning. At a minimum, proposers shall demonstrate certification, accreditation and/or competence as follows:

1. California Registered Engineer as either:
  - a. Control Systems Engineer, or
  - b. Electrical Engineer, or
2. International Society of Automation, Certified Automation Professional certification required.
3. Provide license/certification holder information (i.e., name, license#, etc.).
4. Project Experience:
  - a. Demonstrated experience with PLC, HMI, RTU and communication processors (e.g., Schneider/ Telemecanique Modicon PLCs, and Magelis HMI, etc.) in a variety of development environments (e.g., Concept v2.6, Advantys, UnityPro and Visilogic, etc.).
  - b. Proven experience with SCADA communication protocols and concepts.
  - c. Demonstrated experience in the area of control systems design, development, integration, acceptance testing and commissioning.
  - d. Minimum of three projects of similar scale and scope in the municipal water production/distribution industry within the past five years.
5. Provide detailed project descriptions for representative projects; include contact information for client/customer personnel (project manager, engineer, etc.) involved with each representative project.
6. Sufficient resources to staff this project. Provide resumes for key personnel/sub-contractors and a resource table summarizing the availability of assigned individuals for the project.
7. All work is to be performed in compliance with all applicable codes, ordinances, laws, standards, due care, and Occupational Safety and Health Administration (OSHA) safety requirements.
8. The Contractor shall have a minimum of five (5) years of experience in providing the services described in ATTACHMENT 1: SCOPE OF SERVICES.
9. The Contractor shall possess state and local permits, licenses and certificates required by law to commence, carry, and complete the work.



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10. Provide all necessary equipment to competently perform and complete work as specified.

**I. SAFETY**

Proposer shall be solely and completely responsible for the condition of the project site, including safety of all persons and properties during the performance of the work. In addition, proper safety equipment must be worn at all times. These requirements shall apply continuously until the contract is terminated and shall not be limited to normal working hours.

The Consultant shall assure that each employee or subcontractor under the contractor's supervision is trained in the work practices necessary to safely perform his or her job.

The Consultant's drivers/delivery crews shall be HAZMAT trained and certified in safety measures to prevent accidents endangering personnel and property. Hazardous Materials shall be clearly marked with the proper shipping name and identification number as required by the Department of Transportation. The Consultant shall provide current, applicable and required Material Safety Data Sheets (MSDS) at any time during the contract as requested by the City of Santa Ana.

**J. INSURANCE REQUIREMENTS**

The successful bidders shall furnish the City with original copies of valid insurance policies herein required upon execution of the contract and shall maintain said policies in full force and effect at all times during the term of this contract. Said insurance policies shall comply with all requirements set forth in these specifications. Consultant(s) shall keep a current certificate of insurance at the City of Santa Ana at all times and shall immediately report any changes to the City.

**K. FEE SCHEDULE**

The Consultant shall submit a fee schedule and labor rates as described in Section III.B.3 of RFP. The Consultant shall refer to **APPENDIX A and APPENDIX B** for additional information regarding Crooke Station and Cambridge Station respectively. No separately stated freight or deliveries will be considered. Bidders shall include all costs in the unit price bid. The Consultant's delivered product pricing shall be inclusive of all freight/unloading/handling and delivery charged.

The City intends to replace the control panels and related instrumentation and electrical components at the sites described below (work to be performed by a separate Contract):

- 1. Crooke Pump Station consisting of (detailed plansets provided in Appendix A):**
  - a. 3 Booster pumps
  - b. 1 Reservoir
  - c. 2 Groundwater wells

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**2. Cambridge Pump Station consisting of (detailed plansets provided in Appendix B):**

- a. 3 Booster pumps
- b. 1 Reservoir

The fee proposal shall be outlined as follows for Crooke Station and for Cambridge Station:

- 1. Control Panel Drawings
  - a. Fee per Site
- 2. Functional Specifications
  - b. Fee per Site
- 3. Programming and Testing Specifications
  - c. Fee per Site
  - d. Assume 20 hours of witness testing/on-site services per site
- 4. Source Control
  - a. Fee for initial PLC program collection
  - b. Fee for establishing functioning Source Control database, standards and procedures
  - c. Annual budget for processing check-in/check-out requests
    - i. Assume 4 requests per month
- 5. Change Control
  - a. Fee for establishing functioning Change Control forms, standards and procedures
  - b. Annual budget for processing/documenting change control requests
    - i. Assume 4 requests per month
- 6. Firm's standard hourly fee schedules

**Furthermore, the Consultant shall submit additional labor, material and rental equipment rates along with fee schedule.** Consultant's labor and equipment rate sheet shall list rates for all labor designations, equipment, rentals, and materials. The bid items specified in the fee schedule are for reference purposes only. Labor increases shall be subject to mutually agreeable terms between the City and the Consultant. The City may request related services that will be paid at the vendor's standard labor and equipment rate submitted. Fee proposal shall be outlined as follows:

**---End of SCOPE OF WORK Section---**



## **EXHIBIT B**

### **CONSULTANT'S PROPOSAL**

# Technical Proposal

City of Santa Ana  
Public Works Agency

## Water Resources Functional Specifications Development and SCADA Programming Services

NDI Reference #80008-53

March 09, 2023



**Northern** Digital, Inc.

4701 Corporate Ct.  
Bakersfield, CA 93311

**Joseph Marcus**

661.322.6044 (259)  
joseph.marcus@ndi.us

March 9, 2023

City of Santa Ana  
Public Works Agency  
ATTN: James Burk, P.E., Project Manager

**RE: QUALIFICATION PACKAGE TO PERFORM CONSULTING ENGINEERING SERVICES, CONTROL SYSTEM DESIGN SERVICES, FUNCTIONAL SPECIFICATION DEVELOPMENT, AND SCADA SYSTEM SOURCE & CHANGE CONTROL SERVICES FOR THE CITY OF SANTA.**

NDI is pleased to submit this Qualification Package for the City of Santa Ana, Public Works Agency. NDI provides consulting engineering, control system design, and system integration services to our valued clients. Our company's business model is relationship-driven, and we strive to establish strong partnerships with both our new and existing clients. NDI is an **AVEVA-Wonderware Certified System Integrator Partner**, Schneider Electric Modicon Alliance Partner, Inductive Automation Ignition Partner, as well as a Rockwell Automation / Allen Bradley Certified System Integrator. NDI is also **part of the AVEVA-Wonderware Beta Testing Team** and helps in developing new solutions with AVEVA-Wonderware's Development team. We have a unique set of qualifications and skills that we bring to the table, and we would truly value an opportunity to work with the City of Santa Ana. This qualification package describes NDI's experience and expertise.

NDI has reviewed **Attachment 4, Standard Agreement** from the Appendix of this RFP, and NDI agrees with the terms and conditions listed in the document. Per the RFP requirements, this proposal will be valid for 120 calendar days starting from the date of submission of this proposal.

NDI has over **34+ years of industry experience** and has an extensive background in providing control system engineering services for numerous Water/Wastewater industry applications. **Northern Digital is an industry leader in providing technical solutions and integration services** to a wide variety of agencies including municipalities, districts, and independent water companies. Our core value of **relationships forged in commitment** aims to develop lasting partnerships with our clients. NDI strives to ensure that we meet or exceed all your project expectations. We are grateful for this opportunity to submit a Qualification Package to the City of Santa Ana and are excited at the prospect of working with you.

Sincerely,



**Joseph Marcus**  
Northern Digital, Inc.  
Manager, Business Development  
W: 661.322.6044  
M: 661.319.4015  
E: joseph.marcus@ndi.us

# Section 1

## Firm Qualifications and Team Experience

## NDI Company Information

### WHO WE ARE

**Northern Digital Inc. (NDI)** is a consulting engineering company who specializes in control systems design and integration. Established in 1988, NDI has been in business for over **34 years**. We believe in the importance of client relationships and detailed planning throughout the many stages of our projects. Our unwavering commitment to providing the highest-quality solutions in our industry helps us in achieving our vision of being the most well-known, highest-regarded, and most sought-after provider of technical solutions and controls systems engineering.

<b>CONTRACTOR LICENSES (C4, C10):</b>	<b>BUSINESS TYPE:</b>	<b>DIR:</b>
807306	S-Corporation	1000023326

### COMPANY OWNERSHIP

<b>Larry Vasquez</b>	President, CEO
<b>Martin Obermire</b>	Executive Vice President
<b>Odei Addo-Yobo</b>	Vice President, Engineering

### EMPLOYEES

NDI currently has **30+ employees** working at the Bakersfield office, with **16 degreed engineers**, consisting of various interdisciplinary backgrounds, including Control Systems Engineering, Electrical Engineering, Mechanical Engineering, and Industrial Engineering. NDI's Bakersfield office is a **14,000 sq. ft.** facility, which is home to the Engineering, Program Management, and Corporate Offices as well as a UL-508A Certified Panel Shop.

### COMPANY LOCATION

**Corporate Headquarters**  
4701 Corporate Court  
Bakersfield, CA 93311

**Panel Fabrication Facility (UL-508A)**  
4701 Corporate Court  
Bakersfield, CA 93311



## Capabilities

### EXPERIENCE

**Northern Digital Inc. (NDI)** is uniquely qualified to perform both the consulting engineering design and integration, as well as the specification development services for this Project. Our service capabilities include Control System Design, PLC, SCADA & HMI Program Design, System Integration, Control Panel Design & UL Panel Fabrication, System Commissioning & Startup, Specification Development, Technical Support & Maintenance and more.

#### Consulting Engineering Control Systems Engineering

#### Specification Development System Integration

#### 3D Modeling Facility Design Software Engineering

#### Control Systems Design and Consulting Engineering

- Specification Development
- Control Systems Design
- Process Flow Diagrams
- System Architecture
- Control Philosophy
- P&ID Development
- Control Narrative
- SCADA Master Planning
- Cybersecurity

#### Certifications, Memberships, Credentials

- Ignition Certified Integrator
- Wonderware Certifications:
  - Certified System Integrator
  - Certified InTouch
  - Certified System Platform
- Rockwell Automation
- CSIA Certified Company
- Minority Business Enterprise (MBE)
- Small Business Enterprise (SBE)
- System Platform/ArchestrA Certified Developer
- GE Fanuc Advanced HMI/SCADA iFix Developer
- ETAP certified engineers

#### Capabilities and Software

- Inductive Automation Ignition
- AVEVA Wonderware System Platform
- AVEVA Wonderware InTouch
- Schneider Electric Modicon
- GE iFix HMI/SCADA
- Rockwell RSView FactoryTalk HMI/SCADA
- RSLogix 5000
- SQL Database Development
- OSI Pi HMI/SCADA
- Computerized Maintenance Management Systems

#### Vendor Relationships

- Inductive Automation (5+ years)
- Rockwell Automation (25+ years)
- AVEVA Wonderware (28+ years)
- Schneider Electric (Alliance Partner)

#### Programmable Logic Controllers (PLCs)

- Schneider Electric Modicon
- GE
- Automation Direct
- Rockwell: Allen-Bradley
- Siemens

#### Networking and Communications (Radio/Telemetry)

- RF Engineering
- Cybersecurity
- Virtual Machines
- FCC Adherence/Coordination
- Firewall & Network Security
- Network Topology Architecture Design
- Radio Signal Path Analysis/Optimization
- Tower Design and Installation Supervision
- Dell Industrial Servers & Computers
- Cambium, Strix, GE Radio Systems

#### Integration & Maintenance Services

- Control Panel Design
- UL-508A Panel Fabrication
- PLC/OIT/HMI Programming
- Factory Acceptance Testing
- Instrumentation ISA Submittals
- ISA 5.4 Loop Drawings
- Instrument Calibrations
- Startup and Commissioning
- On-call Maintenance
- Technical Support
- On-call Emergency

## NDI's Team Experience

### KEY STAFF

**Odei Addo-Yobo, P.E., Consultant Engineer.** Odei will oversee the project from a technical perspective. NDI's designated project team will work together on the various project tasks and report all progress to NDI's assigned Consultant and Project Manager. The consultant will communicate and provide any technical content that needs to be transmitted to or requested from your organization to NDI's Project Manager, who will ultimately interface with the client. Odei is also the Vice President of Engineering at Northern Digital and holds a Professional Engineer (PE) License in Electrical Engineering as well as a BS and MS in Electrical Engineering. Odei has been with NDI for over 15 years.

**Linda Cederlof, Consultant Engineer.** Linda will provide engineering expertise and project support as-needed. Linda will work together with the engineering team to evaluate and assess your current water system to provide recommendations for SCADA program development and maintenance. Linda holds a BS in Applied Physics and an MS in Industrial Technology from CSU Fresno.

**Bob Soto, Project Manager.** Bob will serve as the interface between the Client and NDI's project team. Communication between the client's team and NDI is managed and facilitated by NDI's Project Manager. Bob holds a BS in Electrical Engineering from Grantham University and has over 30+ years of engineering and management experience, managing large-scale projects using Earned Value techniques. Bob also has experience in managing NDI's UL-508A control panel fabrication facility.

**Ronne Abat, Lead Systems Engineer.** Ronne will be responsible for the execution of the required engineering tasks reporting to the Lead Consultant Engineer. Ronne will support the evaluation and assessment of your current water system to provide recommendations for the overall design. Ronne holds a BS Electrical Engineering from San Jose State University and has over **18+ years** of experience.

**Jesse Gamboa, Systems Engineer.** Jesse will aid in the engineering scope of work by supporting the Lead Systems Engineer. Jesse holds a BS in Business Administration with a Concentration in Management Information Systems from California State University, Bakersfield and has over **20+ years** of technical experience.

**Bill Hubert, Instrumentation & SCADA Technician.** Bill will be responsible for providing Subject-Matter Expertise with regard to end-user maintainability and usability. Bill will also provide insight regarding instrumentation, maintenance, and the end-user experience as well as testing requirements for verification, validation and startup. Bill has over 25 years of hands-on experience working with process controls equipment and instrumentation. He has served as a SCADA supervisor for a large oil & gas company as well as spent several years with Northern Digital, Inc. Bill brings a wealth of knowledge and expertise to the table and will be a critical piece of this project.

**Rafael Castellanos, Field Technician.** Rafael will provide support regarding instrumentation, calibration, maintenance and supportability requirements development. He will also support the testing and startup requirements development process. Rafael has over 15 years of hands-on experience working with process controls equipment and instrumentation. Prior to his time with Northern Digital, Rafael worked in the Automation industry with several other integration and control firms. Rafael is a valuable asset to the team and will help your organization reach its goals for maintenance, supportability and future growth.

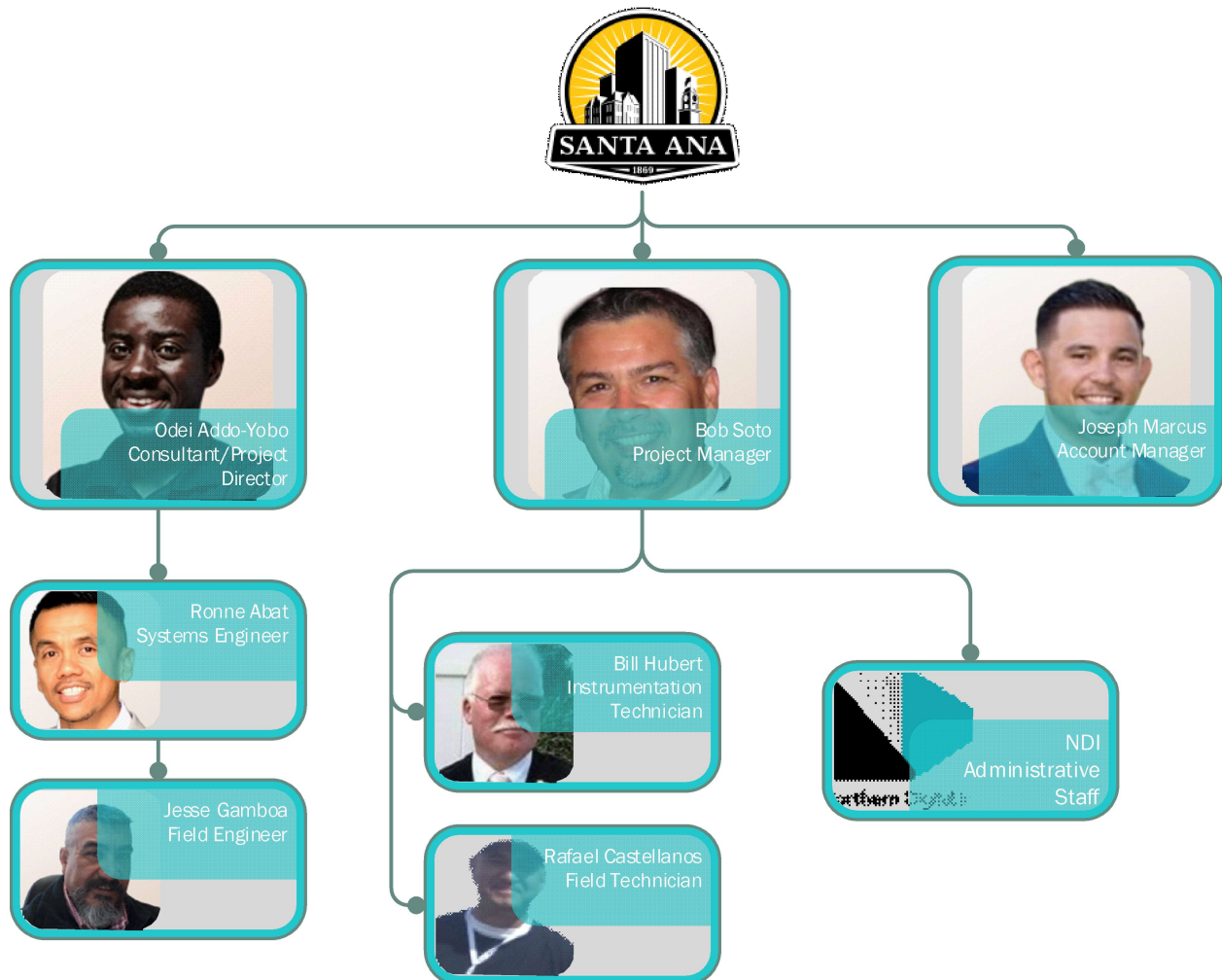
**Joe Marcus, Account Manager.** Joe is responsible for managing client relations and future business. Joe is the Business Development Manager at Northern Digital Inc. Joe holds a BS in Electrical Engineering from UC Santa Barbara and an MSE in Systems Engineering from the Johns Hopkins University. Joe also has over **10+ years** of technical and management experience.

We understand that any substitution of these key personnel is subject to written approval by the City. In addition to the key staff above, NDI has 30 employees in California who can support various aspects of this project. Should any staff be added, NDI will submit their resume and qualifications to the City of Santa Ana for approval.



## NDI's Project Team

### PROJECT ORGANIZATION CHART



See **Staff Resumes** in Appendix A



## MEMBERSHIPS & CERTIFICATIONS



This program is for Integrators who have proven project delivery using certain products, integrating solutions on our System Platform, or with particular vertical industry applications or technology toolkits. A Certified Partner has: Validated technical proficiency in one or more product categories, Multiple fully-trained and Certified Developers for at least two products with continued success.



Inductive Automation offers an official Integrator Program, which allows qualified Engineering companies to become a registered integrator of Ignition software and gain a partnership with Inductive Automation. NDI is a Certified Inductive Automation Integrator.



Northern Digital is currently a Recognized System Integrator (SI) as well as part of the Rockwell Automation Commercial Program as a Bronze level Partner.



Control System Integrators Association (CSIA) is a not-for-profit, global trade association that seeks to advance the industry of control system integration. With over 500+ members, CSIA integrators use their engineering, technical and business skills to help manufacturers and others automate their industrial equipment and systems. CSIA helps members improve their business skills, provides a forum to share industry expertise, and promotes the benefits of hiring a certified control system integrator.



Minority business enterprise (MBE) is an American designation for businesses which are at least 51% owned, operated, and controlled on a daily basis by one or more (in combination) American citizens of a qualified ethnic minority and/or gender group **Registration No:** SC19650. An SBE is a Business Enterprise that meets specific economic criteria and is owned, operated, and controlled by one or more persons. The business must be independently owned/operated, not dominant in field of operation, principal office in California, owners domiciled in California, have fewer than 100 employees, and gross receipts of less than \$15M over the last 3 tax years. **Registration No:** 32381

# Section 2

## Understanding Scope of Services

## Project Understanding

### OVERVIEW

**City of Santa Ana** is seeking consulting engineering design services in support of developing bid specifications and drawings to upgrade the City's Water Production Facilities. The desired contract is estimated to last through May of 2026 with the option to extend the agreement for up to (1) additional two-year term. To support the scope of this RFP, NDI will prepare functional specifications, control panel design drawings, programming and testing specifications and provide SCADA source control and change control services to the City's team. Although the span of the City's Water Distribution system consists of 5 storage facilities, 7 MWD connections, 21 groundwater wells, 7 pump stations, 4 pressure regulating stations, and 2 pressure zones, this project will focus on performing the scope of work outlined in RFP NO : 23-026 for two stations: Crooke Station and for the Cambridge Station.

### DETAILED SCOPE OF SERVICES

NDI's scope for this project involves Control System design engineering services in support of the City of Santa Ana's Water Distribution SCADA System improvements. The effort will ultimately involve NDI's development of bid specifications and drawings in collaboration with the City's project team and stakeholders. The overall scope involves replacement and upgrades of PLC control panels, instrumentation and PLC, OIT and SCADA application programs. NDI has an extensive background in performing the scope of services described in this RFP. We encourage the City to contact our references listed in this proposal. NDI has long-established relationships with municipalities such as yourselves and a history of providing high-quality services.

During the planning, and phased design development, NDI will generate a number of design submittals, all subject to review and approval by the City. NDI, with support from the City, will perform all necessary and required investigations of the two existing facilities to construct complete and accurate design submittals. NDI will prepare documentation to include in the bid package as a separate attachment or any supplemental documentation as required by the City.

NDI will work with the City's Project Manager during the bidding and construction periods to resolve technical discrepancies and/or interpretations of the contract documents. This may include supplemental Addenda, responses to Requests for Information, and/or support for any possible Change Orders. NDI will prepare the necessary drawings, sketches, and specifications required to make changes to the design due to conditions encountered during construction. NDI will review Shop Drawings and other Submittals for design intent and compliance with the contract documents. NDI will review construction sequencing, cost, and schedules. NDI must attend and participate in planning and design meetings, pre-construction conferences, and progress meetings as requested by the City. NDI will provide project inspection, start-up and commissioning, testing, and closeout support. The Contractor will be required to provide redlined contract drawings, reflecting the As-Built configuration of the new system. NDI will review the final redlined as-built drawings provided by the Contractor.

After reviewing the RFP, NDI has outlined our understanding of the scope of services based on our experience. The scope is broken down into a Work Breakdown Structure found below.

## WORK BREAKDOWN STRUCTURE (WBS)

NDI will perform the following labor tasks identified in the WBS below per the RFP. The WBS shows the budgeted hours for each task as well as the labor code of the project team member performing the task.

Task List	Labor Code	Budget Hrs.
<b>Crooke Pump Station System (3 Booster Pumps, 1 Reservoir, 2 Wells) and the Cambridge Pump Station System (3 Booster Pumps and 1 Reservoir)</b>		
<b>Data Gathering and System Analysis:</b>		
a. Develop Data Gathering Plan including objectives and checklists for site visits	C	32.00
b. Gather Existing Modicon PLC Programs & SCADA HMI Platforms/Databases	C	16.00
c. Gather Existing documentation relating to PLC Control Panels and field instrumentation (Pressure, Level, Flow, Analyzers & VFD's)	C	32.00
d. Gather documentation on any Major Skid-Mounted/OEM systems (Chlorination & Filter Systems) - as applicable	SE	8.00
e. Gather documentation and information on Site surveillance cameras (as applicable)	SE	8.00
f. Gather information pertaining to Telemetry Networks (radio / antenna / tower / network gears / communication panel)	C	8.00
<b>Workshops with City of Santa Ana's (COSA) Project Team</b>		
a. Conduct Fact Finding Workshop with COSA to discuss the existing Crooke & Cambridge Systems.	C	24.00
b. Findings Report compiled from the System Analysis and Fact-Finding Workshop	C	32.00
c. Conduct an Operations Workshop with COSA to discuss system improvements, recommendations, and enhancements	C	24.00
<b>Project Specification Development</b>		
Develop Project Specifications for the Crooke System and the Cambridge System		
a. Develop Detailed Control Narrative Document for the Crooke System	C	120.00
b. Develop a Detailed Control Narrative for the Cambridge System	C	96.00
c. Develop Detailed PLC Control Panel Design Drawings Package for the Crooke System	SE	200.00
d. Develop Detailed PLC Control Panel Design Drawings Package for the Cambridge System	SE	100.00
e. Develop Written I&C Specifications for the Crooke System	SE	96.00
f. Develop Written I&C Specifications for the Cambridge System	SE	96.00
g. Conduct an 90% Design review Workshop with COSA to review Crooke System Design Specification Package	C	32.00

Task List	Labor Code	Budget Hrs.
h. Conduct an 90% Design review Workshop with COSA to review Cambridge System Design Specification Package	C	32.00
i. Finalize 100% Design Specification Package for the Crooke & Cambridge Systems based on final concurrence from City during 90% Workshop Review	C	32.00
j. Technical Meetings and Conference Calls	C	16.00
<b>Programming and Testing Specifications</b>		
a. Control Panels Test Documentation development (FAT & SAT)	SE	48.00
b. Owner's Representative Services: Perform reviews of Contractors' Hardware Submittals for the Crooke System and the Cambridge System: Review / Comment / Approval	SE	48.00
c. Owner's Representative Services: Review and witnessing of FAT & SAT of the Control Panels associated with the Crooke System and the Cambridge System	SE	64.00
d. Owner's Representative Services: Review and witnessing of System FAT of the PLC Program, OIT Program and Central SCADA Modifications.	C	24.00
e. Owner's Representative Services for System Commissioning & Startup Support	C	32.00
<b>SCADA Source &amp; Change Control System</b>		
a. Develop Source and Change Control System requirements with City's team and perform Needs' Analysis. Determine available software packages, perform trade studies with pros/cons, and determine path forward for Source and Change Control System design.	C	48.00
b. Gather current PLC programs (43 programs, excluding Crooke and Cambridge) for Source Control Systems	SE	80.00
c. Develop Standard Operating Procedures (SOPs) for SCADA Source Control	C	80.00
d. Develop Standard Operating Procedures (SOPs) for SCADA Change Control	C	40.00
<b>Program Management &amp; Coordination</b>		
Project Planning and Mobilization	C	40.00
Project Kick-off	C	24.00
Project Management	PM	120.00
	<b>Total</b>	1,652

## HOURS SUMMARY BY LABOR CLASSIFICATION

Code	Project Manager (PM)	Consultant (C)	Systems Engineer (SE)
Hrs.	120.00	784.00	748.00

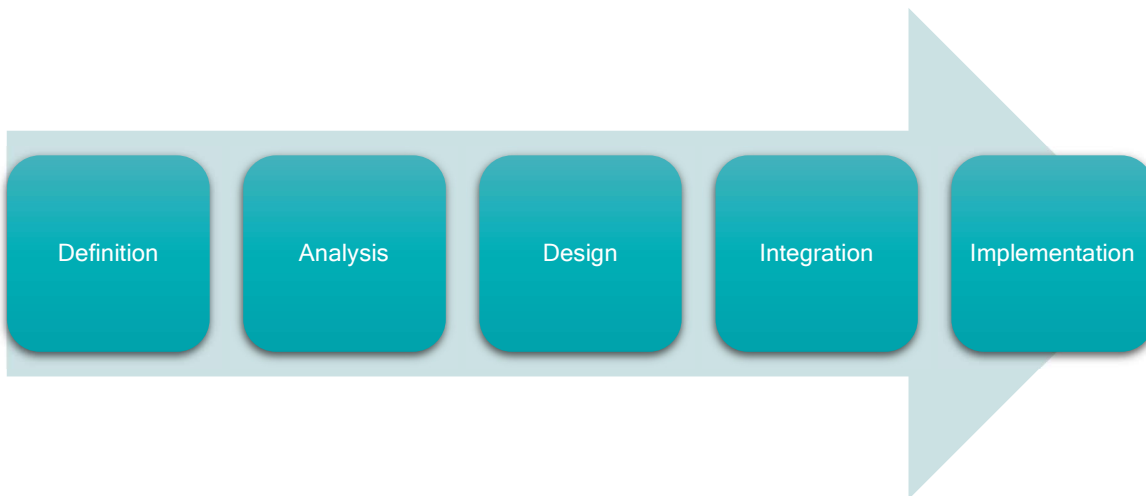
## PROJECT MANAGEMENT

Northern Digital's **project management philosophy** is centered around the development of a trusting and lasting relationship with our clients based on excellence and responsibility. This philosophy is founded on having a full understanding of our client's needs and managing our project resources to ensure that expectations are met or exceeded. Ultimately, NDI's success is predicated upon the strength of our client relationships. Our company stands by an ideal of "**relationships forged in commitment**," and we understand that we share a common interest in the overarching success of the project. NDI sits on the same side of the table as our clients. Because of these core values, NDI views our relationships as partnerships, and our objective is to provide on-time, on-budget delivery of a system that meets or exceeds your organization's expectations.

Northern Digital also takes a **full life-cycle approach**, considering all phases of the product development life cycle prior to beginning work. Throughout the Definition, Analysis, Design, Integration and Implementation phases of a project, each step is not independent of any other and decisions made regarding the design should consider and incorporate the requirements of the other phases.

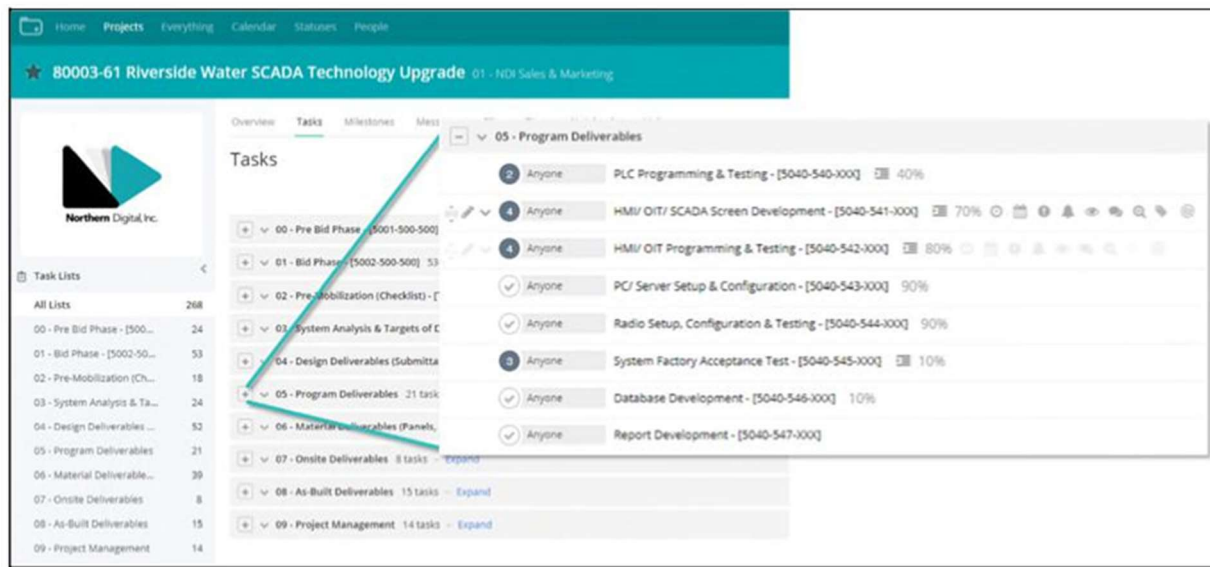
An important aspect of Northern Digital's **approach to Project Management** includes optimizing project efficiencies by *standardization* in applicable situations. NDI also implements a series of *processes* and *procedures* to ensure that the client's objectives as well as NDI's standards and best-practices are followed and executed to-plan. As a company, we have chosen to utilize **Teamwork**, a *cloud-based* software application, in order to serve as Northern Digital's **project management software tool**. This software also allows for the standardization of project templates, which aids in the development of Work Breakdown Structures, workflows, timekeeping systems, and Earned-Value Management tracking.

NDI's Project management philosophy utilizes the **System Development Life Cycle (SDLC)** methodology in order to segment the project into sequential phases. Proper project execution requires "**beginning**" with the "**end**" in-mind. The **5 stages** of NDI's SDLC include Definition, Analysis, Design, Integration, Implementation. Considering the requirements of each stage throughout the project is key to achieving success.



## PROJECT MANAGEMENT TRACKING

The **Teamwork software management tool** enables our project managers to receive real-time feedback on project performance, to track and reallocate resources, to provide a method of progress-tracking for clients to view, and to ultimately provides a centralized system for storing, viewing and acting on project management data. These capabilities equip our project managers with the ability to make more informed decisions regarding the project. It also centralizes tasks such as timekeeping, progress logging, status reporting, client communications, note-keeping, and document sharing. The Teamwork project data is accessible by the client. In addition, our clients also receive Teamwork Task Reports periodically (frequency depending on project requirements). Given these capabilities and insights, NDI Project Managers are well-equipped to serve as the interface between our Client and NDI's Project Team and to accomplish all the project objectives. The figures below and on the following page show screenshots of the Teamwork system with a sample project based on the project requirements. The figures show task lists based on a mock-WBS, as well as Teamwork's timekeeping capabilities.



Teamwork Screenshot of Sample Project Template with Tasks and % Complete

Time Logs

Filtered Totals: Logged: 32 hours (32.00) Billable: 32 hours (32.00) Estimated: 32 hours (32.00) [Log More Time](#)

Date	Who	Description	Type	Start	End	Billable	Time	Hours
08/06/2019	Jesse Gimboe	Assist Odei with SCADA topology information.	Current Task	11:55AM	1:55PM	✓	2 hrs	2.00
08/06/2019	Odei Adde-Yabo	Beginning analyzing the existing Scada topology as it pertains to Scada master plan development.	Current Task	4:04PM	10:04PM	✓	6 hrs	6.00
08/16/2019	Odei Adde-Yabo	1. Scada Topology Analysis and Write up development for Master Scada Plan.	Current Task	12:06PM	8:06PM	✓	8 hrs	8.00

Teamwork Sample Screenshot of Timekeeping and Logging Capability



## SCHEDULING, TASK MANAGEMENT, AND BILLING

**Northern Digital** has a highly-detailed and comprehensive Scheduling, Task Report Tracking, and Billing capability. The Teamwork software allows NDI Project Management to accurately track and report all progress throughout the life of the project. Real-time access to timekeeping records, budgets, schedules and other files enables NDI's project managers to be well-equipped to make informed and wiser decisions based on improved situational awareness. In addition to record data, Teamwork also allows for analysis to be conducted on this data in order to provide an **Earned Value Management** insight capability to track project metrics such as **Cost Performance Index (CPI)**, **Schedule Performance Index (SPI)**, **Estimate at Complete (EAC)**, variances in cost and schedule, and **To-Complete Performance Index (TCPI)** among other Earned Value metrics. Earned Value Management and real-time access to data provides NDI's project managers with the analytics necessary to have quick insights regarding the "health" of the project and the performance necessary to complete the project within the given budget and schedule constraints. Based on this information, NDI's project manager will be in continuous communication with the client's project lead in order to properly schedule project tasks, plan for the availability of resources, and discuss the project budget and schedule progress periodically throughout the project life cycle. This high-level of communication and coordination is key, and will be especially important during the cutover/ startup phase, as the system must remain operational.

## DOCUMENTATION DEVELOPMENT

During the initial **Analysis Phase** of the project, NDI's Project Manager will work with NDI's Operations, Engineering, and Administrative staff to develop a **Project Charter**, which provides details regarding the tasks, work products, budget, schedule, project methodologies, and understanding of the project as seen by all project stakeholders. The tasks associated with this process are clearly defined and broken down in Teamwork in the form of tasks and durations for these deliverables. The goal of this documentation is to define NDI's and the client's understanding of the scope of work, potential risks, identifying areas of improvement (especially with regards to Network Communications), and to track the project's progress. Documentation will be developed to define the Project Plan and major milestones that need to be completed for the Startup to go smoothly. For each item in the Analysis Phase a detailed findings report will be generated and communicated with the Client. This documentation will also include a detailed cutover plan that will be developed in conjunction with the client to maximize efficiency and keep the entire team unified in goals.

## ORGANIZED MEETINGS

As part of the responsibilities of **NDI's Project Manager**, meetings will be established on an as-needed basis, based on project requirements. Meetings can take place via teleconference, Zoom, and/or in-person. NDI uses Teamwork and Microsoft Outlook to coordinate and provide information regarding team meetings. Once the Project Plan and Project Timeline have been developed, the NDI Project Manager will work with the Client and the Operations Manager to establish dates for design review meetings, workshops, and deliverable deadlines. The goal is to coordinate all parties to minimize risks and delays and to bring the project to completion on time and within budget.



## CLARIFICATIONS & ASSUMPTIONS

NDI has the following clarifications regarding the scope of work described in this proposal:

1. This proposal is based on the assumption that the Crooke facility will require two PLC Control Panels (1 panel for the Booster Pumps/Reservoir and 1 panel for the two Wells).
2. This proposal is based on NDI collecting 45 PLC programs and will populate the programs into the existing Source Control Database. NDI assumes that the City is currently using a VisualSVN source control system.
3. This proposal assumes that the City's integrator will develop the test procedures for testing the PLCs, OITs, and SCADA application programs against the operational and functional requirements detailed in the Control Narrative documents.
4. This proposal pertains to the two facilities listed in the RFP: 1. Crooke and 2. Cambridge for the functional specifications development and SCADA programming specifications. The scope of work associated with the Source and Change control applies to the entire system, including 45 PLC programs.

# Section 3

## Relevant Experience

## Relevant Experience

### PROFESSIONAL SERVICES AGREEMENTS

**Northern Digital's** Culture and Business Model aims to provide our clients with the highest quality of product at the best value. We do this by **Partnering** with our clients through Professional Services Agreements (PSAs). NDI has numerous PSAs established with various clients for over 10, 15, and 20+ years, providing for their Control System & SCADA needs in a Design-Build approach. Currently, **80% of NDI's business** is through **PSAs** and the following is a list of some of NDI's Professional Service Agreement clients that have had similar needs to your project. Many of these PSAs were for Design-Build projects.

#### **Calleguas Municipal Water District**

2100 Olsen Road  
Thousand Oaks, CA 91360  
Tony Goff, GM  
(805) 579-7138  
Kristine McCaffery P.E., Mgr. of Eng.  
(805) 579-7173

#### **City of Simi Valley**

Department of Public Works  
2929 Tapo Canyon Road  
Simi Valley, CA 93036  
Dan Newton, Deputy  
Director/Waterworks  
(805) 583-6494  
PSA 17 years

#### **City of Thousand Oaks**

2100 Thousand Oaks Blvd.  
Thousand Oaks, CA 91362  
Mike Devlahovich, Supervisor  
(805) 376-5032  
PSA 8 years

#### **Santa Clarita Valley Water Agency**

26521 Summit Circle  
Santa Clarita, CA 91350  
Keith Abercrombie, VP of Operations  
(661) 259-2737  
PSA 25+ years

#### **Kern County Water Agency**

3200 Rio Mirada Drive  
Bakersfield, CA 93308  
Matt Garrison, SCADA Supervisor  
(661) 634-1477  
PSA 12 years

#### **Coachella Valley Water District**

51501 Tyler Street  
Coachella, CA 92236  
Luis Maciel, I.S. Director  
(760) 409-5285  
PSA 6 years

#### **South San Joaquin Irrigation District**

11011 East Highway 120  
Manteca, CA 95336  
Frank Avila, Operations Manager  
(209) 249-4663  
PSA 28 years

#### **Golden Oak Ranch**

19802 Placerita Canyon Rd.  
Newhall, CA 91321  
Diego Recinos, Facility Manager  
(661) 259-8717  
PSA 10 years

#### **City of Oxnard**

305 W. 3<sup>rd</sup> Street  
Oxnard, CA 93030  
Tim Beaman, P.E. City Engineer  
805-385-8141  
PSA 2 years

#### **Ventura River Water District**

1409 Old Baldwin Road  
Ojai, CA 93023  
Bert Rapp, General Manager  
(805) 646-3403  
PSA 3 years

## RELEVANT EXPERIENCE

### City of Oxnard - Oxnard, CA

NDI was awarded a Professional Services Contract in June 2021, through a selective RFP process for Professional Services. NDI was selected as the Design Engineering Firm to develop contract specifications and drawings for a bid solicitation to upgrade the City's Water Treatment SCADA System. The City provides safe, clean and reliable water for potable, fire protection and recycled uses. The Water System distributes treated water to a population of 208,000 people. The Oxnard Water System SCADA Upgrade consists of a new SCADA Application, Upgraded PLCs, Upgrade OITs and Instrumentation. The facilities consist of Blending Stations, Wells, Reservoirs Reverse Osmosis Treatment, Desalination, and Generator controls. NDI has completed the System Analysis and Design Phase of the New SCADA System and is currently in the process of reviewing the bid package with the City.

- PSA Contract Amount:	\$345,000.00	
- Contact Person:	Tim Beaman, P.E., City Engineer	
- Email Address:	timothy.beaman@oxnard.org	
- Phone Number:	(805) 385-8141	
- Inputs/Outputs: 1,800	Number of Screens: 500	Number of Tags: 2,000

### Calleguas Municipal Water District (CMWD) - Thousand Oaks, CA

CMWD is the water purveyor for Ventura County, servicing Simi Valley, Thousand Oaks, Moorpark, Camarillo, and Oxnard. Through NDI's PSAs with CMWD, NDI has provided consulting engineering and integration services for their SCADA System Projects using AVEVA Wonderware HMI/SCADA Software and Modicon PLCs. Over the past 21 years, NDI has consulted, designed, and implemented nearly all of CMWD's SCADA-related projects including PLC Program design documentation, PLC program application development, SCADA / HMI design and development, and PLC panel design and fabrication. Currently, NDI is in the process of upgrading the existing Modicon PLC to M580s & M340s and providing new Object-Oriented PLC Program applications for the various processes. CMWD's processes include Reservoirs, Pump Stations, Regulation Stations, Water Treatment Plants, 18 ASR Injections / Extractions Wells, and 95 Distribution Turnout Facilities with M340 PLCs. NDI's current Professional Services Contract includes on-call troubleshooting/maintenance services.

- PSA Contract (s) Amount:	\$5,000,000.00+ (Past 10 Years Projects)	
- Contact Person:	Tony Goff, General Manager	
- Email Address:	tgoft@callegaus.com	
- Phone Number:	(805) 579-7138	
- Inputs/Outputs: 4,850	Number of Screens: 580	Number of Tags: 12,000

### City of Thousand Oaks - Thousand Oaks, CA

NDI has developed new designs as well as provided integration services to the City of Thousand Oaks over the past 8 years. Recently NDI developed the specification and drawing bid package for the City's La Granada Pump Station upgrade project, involving new PLC panels, instrumentation and programming. The project is being recognized by the City with an Award for Excellence in March of 2023. NDI has been involved in the upgrade of Water Distribution facilities for the City. NDI has additionally configured and administered Wonderware InTouch 10.0 and Historian for the City's SCADA system. NDI has also configured, administered and updated Rockwell software SCADA / HMI platforms and Transaction-manager/Historian. NDI programmed and updated Modicon PLC's and RSLogix500 and ControlLogix PLC's, using both Ladder Logic and Function Blocks. Performed backups of the SCADA server environment, as well as configure and manage the SCADA Alarm Program. Designed and tested the SCADA Wonderware virtual machine environment. Designed/modified, tested and implemented HMI projects with FactoryTalk ME. Managed and configured Wonderware System Platform 3.0.

- PSA Contract (s) Amount:	\$200,000.00	
- Contact Person:	Mike Devlahovich, Operations Supervisor	
- Email Address:	MDevlahovich@toaks.org	
- Phone Number:	(805) 376-5032	
- Inputs/Outputs: 4,000	Number of Screens: 500	Number of Tags: 10,000



### Coachella Valley Water District (CVWD) - Coachella, CA

In September 2017, through an RFP process for Professional Services, NDI was selected as the Design-Build Consultant to Consult, Design and Implement a Master SCADA System Upgrade for Coachella Valley Water District (CVWD). CVWD provides domestic water, wastewater, recycled water, irrigation, storm water protection, and groundwater management services to a population of 265,000 encompassing an area of 1,000 square miles. The Master SCADA System Upgrade Project consists of a new AVEVA Wonderware System Platform SCADA / HMI Application, and new PLC Program Development for 100 miles of canal operations, including 33 Canal Sites. Water / Wastewater sites consist of 94 Wells, 61 Reservoirs, 158 Booster Pumps, 3 Wastewater Treatment Plants, and 30 Sewer Lift Stations. NDI has completed the System Analysis and Design Phase of the New SCADA System and is currently in the system integration and implementation phase of the project. The project includes upgrading the SCADA / HMI Software to an Object-Oriented Platform using Wonderware System Platform 2020 with OMI and upgrading the PLC Programs to an Object-Oriented Platform using GE Versa-Max PLCs.

- PSA Contract Amount:	\$6,103,000.00	
- Contact Person:	Luis Maciel, Information Systems Director	
- Email Address:	LMaciel@cvwd.org	
- Phone Number:	(760) 409-5285	
- Inputs/Outputs: 15,800	Number of Screens: 1,200	Number of Tags: 36,500

### Santa Clarita Valley Water Agency (SCVWA) - Santa Clarita, CA

For the past 25 years, NDI has maintained a long-standing Professional Services Contract (PSA) with Castaic Lake Water Agency, Valencia Water Co., Santa Clarita Water, and Newhall Water District. In 2017-18 the four entities merged into one, (SCVWA) with the number of remote sites for the new entity totaling 200 Plus. Prior to the formation of SCVWA, NDI, through a Design-Build approach, upgraded their SCADA Systems to AVEVA Wonderware System Platform and Allen Bradley ControlLogix's PLC's. NDI's services included HMI & PLC Object-Oriented program development, new PLC Control Panels, and Maintenance Services. SCVWA's System consists of Water Treatment Plants, Pump Stations, Wells, Reservoirs, Pressure Reducing Stations, and Turnouts. Additional services included designing and installing a new Ethernet Radio Network and installing Surveillance Cameras.

- PSA Contract (s) Amount:	\$4,200,000.00 Plus (Past 10 Years Projects)	
- Contact Person:	Keith Abercrombie, General Manager	
- Email Address:	kabercrombie@scwater.org	
- Phone Number:	(661) 259-2737	
- Inputs/Outputs: 4,500	Number of Screens: 750	Number of Tags: 20,000

### Kern County Water Agency (KCWA) - Bakersfield, CA

For the past 15 years, NDI has provided Consulting Engineering and PLC / HMI Integration Services for KCWA's Henry C. Garnett Water Purification Plant ID-5 and the Cross-Valley Canal. NDI designed and integrated a new SCADA System consisting of Wonderware Archestra Software and Modicon PLCs. The Agency is currently in the process of upgrading their legacy obsolete Modicon PLCs to the Modicon M340 and M580 PLC Platforms, and NDI is upgrading KCWA's PLC control panel hardware and PLC software applications. NDI currently has a Professional Services Contract with the Agency to provide SCADA Maintenance Services and maintain their Network connectivity, SCADA and PLC Networks, and provide on-call troubleshooting / maintenance services.

- PSA Contract (s) Amount:	\$1,500,000.00	
- Contact Person:	Matt Garrison, SCADA Supervisor	
- Email Address:	mgarrison@kcwa.com	
- Phone Number:	(661) 634-1477	
- Inputs/Outputs: 5,000	Number of Screens: 800	Number of Tags: 10,500

# Section 4

## References

**CITY OF SANTA ANA**  
RFP NO.: 23-026  
WATER RESOURCES FUNCTIONAL SPECIFICATIONS DEVELOPMENT AND SCADA  
PROGRAMMING SERVICES

**APPENDIX**

**ATTACHMENT 3: PROPOSER'S REFERENCES**

List and describe fully the contracts performed by your firm which demonstrate your ability to provide the supplies, equipment or services included in the scope of the proposal specifications. Attach additional pages if required. The City reserves the right to contact each of the references listed for additional information regarding your firm's qualifications.

**Reference**

Customer Name: \_\_\_\_\_ Contact Individual: \_\_\_\_\_  
Address: \_\_\_\_\_ Phone Number: \_\_\_\_\_  
\_\_\_\_\_ Email: \_\_\_\_\_  
Contract Amount: \_\_\_\_\_ Year: \_\_\_\_\_  
Description of supplies, equipment, or services provided:  
\_\_\_\_\_  
\_\_\_\_\_

**Reference**

Customer Name: \_\_\_\_\_ Contact Individual: \_\_\_\_\_  
Address: \_\_\_\_\_ Phone Number: \_\_\_\_\_  
\_\_\_\_\_ Email: \_\_\_\_\_  
Contract Amount: \_\_\_\_\_ Year: \_\_\_\_\_  
Description of supplies, equipment, or services provided:  
\_\_\_\_\_  
\_\_\_\_\_

**Reference**

Customer Name: \_\_\_\_\_ Contact Individual: \_\_\_\_\_  
Address: \_\_\_\_\_ Phone Number: \_\_\_\_\_  
\_\_\_\_\_ Email: \_\_\_\_\_  
Contract Amount: \_\_\_\_\_ Year: \_\_\_\_\_  
Description of supplies, equipment, or services provided:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CITY OF SANTA ANA**  
**RFP NO.: 23-026**  
**WATER RESOURCES FUNCTIONAL SPECIFICATIONS DEVELOPMENT AND SCADA**  
**PROGRAMMING SERVICES**

**Reference**

Customer Name: \_\_\_\_\_ Contact Individual: \_\_\_\_\_

Address: \_\_\_\_\_ Phone Number: \_\_\_\_\_

\_\_\_\_\_ Email: \_\_\_\_\_

Contract Amount: \_\_\_\_\_ Year: \_\_\_\_\_

Description of supplies, equipment, or services provided:

\_\_\_\_\_  
\_\_\_\_\_

**THIS FORM MUST BE COMPLETED AND INCLUDED WITH THE PROPOSAL.**  
**PROPOSALS THAT DO NOT CONTAIN THIS FORM WILL BE CONSIDERED NONRESPONSIVE.**



# Appendix A

## Attachment 5 Certifications Forms

**CITY OF SANTA ANA**  
RFP NO.: 23-026  
WATER RESOURCES FUNCTIONAL SPECIFICATIONS DEVELOPMENT AND SCADA  
PROGRAMMING SERVICES

**APPENDIX**  
**ATTACHMENT 5: CERTIFICATIONS**

**CITY OF SANTA ANA**  
RFP NO.: 23-026  
**WATER RESOURCES FUNCTIONAL SPECIFICATIONS DEVELOPMENT AND  
SCADA PROGRAMMING SERVICES**

**NON-COLLUSION AFFIDAVIT**

(Title 23 United States Code Section 112 and Public Contract Code Section 7106)

In conformance with Title 23 United States Code Section 112 and Public Contract Code 7106 the BIDDER declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the BIDDER has not directly or indirectly induced or solicited any other BIDDER to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any BIDDER or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the BIDDER has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the BIDDER or any other BIDDER, or to fix any overhead, profit, or cost element of the bid price, or of that of any other BIDDER, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the BIDDER has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Note: The above Non-collusion Affidavit is part of the Proposal. BIDDERS are cautioned that making a false certification may subject the certifier to criminal prosecution.

Signed \_\_\_\_\_

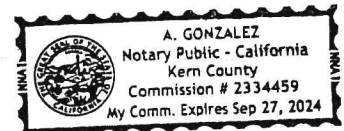
State of California  
County of Kern

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

Subscribed and sworn to (or affirmed) before me on this 9 day of March, 2023 by Joseph Marcus, proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me

Notary Public Signature

Notary Public Seal



**CITY OF SANTA ANA**  
RFP NO.: 23-026  
**WATER RESOURCES FUNCTIONAL SPECIFICATIONS DEVELOPMENT AND  
SCADA PROGRAMMING SERVICES**

**NON-LOBBYING CERTIFICATION**

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in conformance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

Signed: \_\_\_\_\_



Title: Business Development Manager

Firm: Northern Digital, Inc.

Date: 03/09/2023



**CITY OF SANTA ANA**  
RFP NO.: 23-026  
WATER RESOURCES FUNCTIONAL SPECIFICATIONS DEVELOPMENT AND  
SCADA PROGRAMMING SERVICES

**NON-DISCRIMINATION CERTIFICATION**

The undersigned consultant or corporate officer, during the performance of this contract, certifies as follows:

1. The Consultant shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Consultant shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Consultant agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.
2. The Consultant shall, in all solicitations or advertisements for employees placed by or on behalf of the Consultant, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
3. The Consultant shall send to each labor union or representative of workers with which he/she has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Consultant's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The Consultant shall comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
5. The Consultant shall furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his/her books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation, to ascertain compliance with such rules, regulations, and orders.
6. In the event of the Consultant's non-compliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, the contract may be canceled, terminated, or suspended in whole or in part and the Consultant may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulations, or order of the Secretary of Labor, or as otherwise provided by law.

**CITY OF SANTA ANA**  
RFP NO.: 23-026  
**WATER RESOURCES FUNCTIONAL SPECIFICATIONS DEVELOPMENT AND  
SCADA PROGRAMMING SERVICES**

7. The Consultant shall include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontract or purchase order as the administering agency may direct as means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in the event the Consultant becomes involved in, or is threatened with, litigation with a subconsultant or vendor as a result of such direction by the administering agency, the Consultant may request that the United States enter into such litigation to protect the interests of the United States.
8. Pursuant to California Labor Code Section 1735, as added by Chapter 643 Stats. 1939, and as amended, no discrimination shall be made in the employment of persons upon public works because of race, religious creed, color, national origin, ancestry, physical handicaps, mental condition, marital status, or sex of such persons, except as provided in Section 1420, and any consultant of public works violating this Section is subject to all the penalties imposed for a violation of the Chapter.

Signed: \_\_\_\_\_



Title: Business Development Manager

Firm: Northern Digital, Inc.

Date: 03/09/2023

# Appendix B

## Company Resumes

# Appendix C

## Company & Project Team Certifications



## CONTRACTOR'S LICENSE

STATE OF CALIFORNIA

**Contractors State License Board**

Pursuant to Chapter 9 of Division 3 of the Business and Professions Code  
and the Rules and Regulations of the Contractors State License Board,  
the Registrar of Contractors does hereby issue this license to:

**NORTHERN DIGITAL INC**

to engage in the business or act in the capacity of a contractor  
in the following classification(s):

**C-4 - BOILER, HOT WATER HEATING AND STEAM FITTING  
C10 - ELECTRICAL**

Witness my hand and seal this day,  
April 29, 2002

Issued April 26, 2002

\_\_\_\_\_  
SIGNATURE OF LICENSEE

\_\_\_\_\_  
SIGNATURE OF LICENSE QUALIFIER

This license is the property of the Registrar of Contractors,  
is not transferable, and shall be returned to the Registrar  
upon demand when suspended, revoked, or invalidated  
for any reason. It becomes void if not renewed.

\_\_\_\_\_  
Stephen P. Sands  
Registrar of Contractors

807306  
License Number

13L-254 (REV. 7-01)      DSP 01 5/0448      AUDIT NO. 214386

## COMPANY CERTIFICATION - CSIA CERTIFIED INTEGRATOR



## Northern Digital, Inc

has been audited and conforms to all requirements necessary to be a  
**CSIA Certified Member**

*The certification audit covers the following business and management categories:*

- General Management
- Human Resources Management
- Marketing, Business Development and Sales Management
- Financial Management
- Project Management
- System Development Lifecycle
- Supporting Activities
- Quality Management
- Service and Support
- Information Systems Management and Cyber Security

<b>Date of Certification:</b>	<b>October 7, 2020</b>
<b>Date of Expiration:</b>	<b>October 7, 2023</b>
<b>Certified Member Since:</b>	<b>October 7, 2020</b>
<b>CSIA Member Since:</b>	<b>May 9, 2017</b>

## COMPANY CERTIFICATION - ARCHESTRA CERTIFIED SYSTEM INTEGRATOR



## LINDA CEDERLOF - WONDERWARE CERTIFIED APPLICATION DEVELOPER - HISTORIAN 2020 R2



## LINDA CEDERLOF - WONDERWARE CERTIFIED APPLICATION DEVELOPER - INTOUCH 2020 R2



The AVEVA logo is displayed in white text on a dark purple background. The background features a subtle, abstract pattern of light purple and white lines.

## Application Developer Certificate

*This is to Certify that*

**Linda Cederlof**  
Northern Digital

*Is an Authorized*

**AVEVA Application Developer**

*for*

**CSI AVEVA Application Server 2020 R2 Exam**

Effective Date: 30 Dec 2022

Serial Number: 522045-21017-30122022



Northern Digital, Inc.

## ODEI ADDO YOBO - ARCHESTRA CERTIFIED APPLICATION DEVELOPER - APP SERVER 2020R2



## ODEI ADDO YOBO - WONDERWARE CERTIFIED APPLICATION DEVELOPER - HISTORIAN 2020 R2





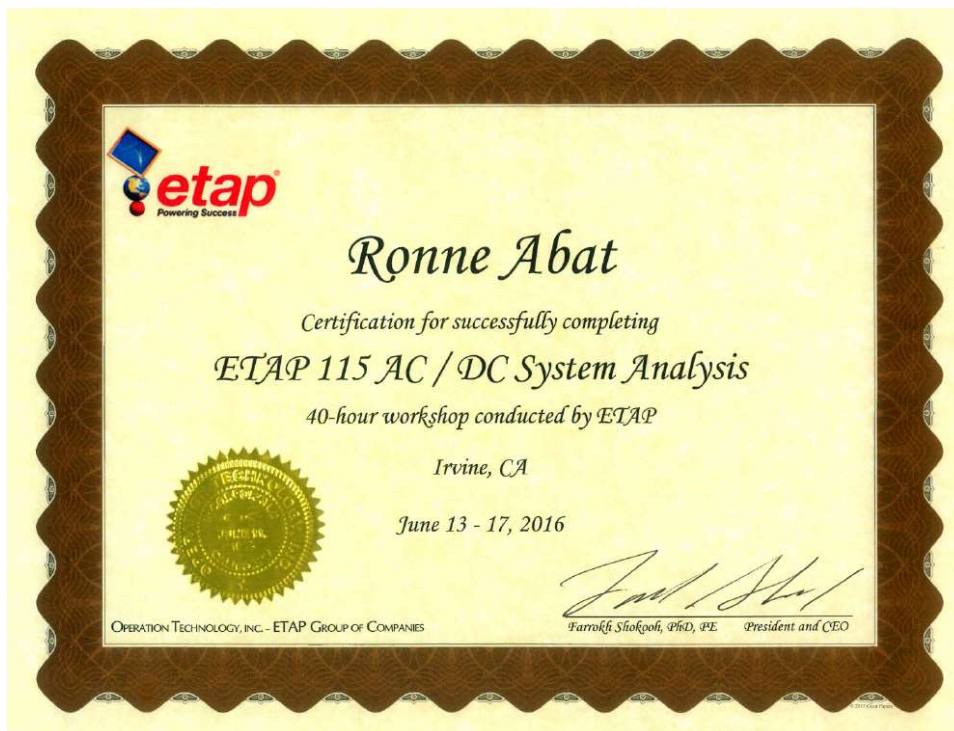
ODEI ADDO YOBO - WONDERWARE CERTIFIED APPLICATION DEVELOPER - INTOUCH  
11.1 2014 R2



## RONNE ABAT - WONDERWARE CERTIFIED APPLICATION DEVELOPER - APP SERVER 4.1 2014 R2



## RONNE ABAT - ETAP CERTIFIED 115 AC/DC SYSTEM ANALYSIS





## COMPANY CERTIFICATION - SCHNEIDER ELECTRIC ALLIANCE PARTNER

**From:** Jack Perkins <Jack.Perkins@se.com>  
**Date:** February 5, 2020 at 7:53:11 PM PST  
**To:** Martin Obermire <Martin.Obermire@ndi.us>  
**Subject:** Northern Digital - Schneider Registered Alliance Partner

Martin –

Thanks for providing Schneider Electric with the details of the projects that Northern Digital, Inc. has completed using Schneider Electric and Modicon Hardware, as well as Wonderware software in 2018 and 2019. A review of this information confirms that **Northern Digital has met the criteria to and is recognized as a Schneider Electric Registered Alliance Partner effective January 1, 2020.**

We welcome you into the program and look forward to working on automation integration projects moving forward.

Best Regards

Jack Perkins

**Jack Perkins**  
 Ecosystem Sales Executive – Industry Alliance  
 Industry Business:  
 Schneider Electric

+1 775 239 0502  
 jack.perkins@se.com



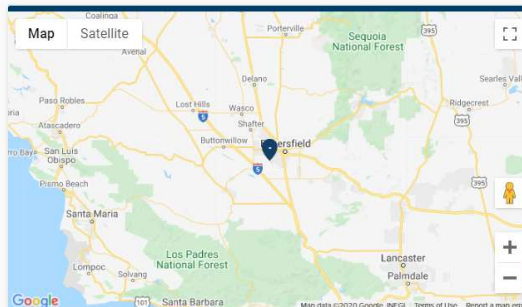
## COMPANY CERTIFICATION - INDUCTIVE AUTOMATION CERTIFIED INTEGRATOR

**inductive automation.** Product Pricing Resources Partners Support About Download Ignition

Search for location or integrator... **Search**

Home / Find an Integrator / Northern Digital Inc

**Northern Digital Inc**





**Northern Digital, Inc.**

**CERTIFIED**  
**Nathan Vasquez**  
 Lead System Engineer  
 4701 Corporate Ct.  
 Bakersfield, CA 93311-8705  
 United States  
 661-322-6044 ext. 252  
 ndi.us

**Location Certifications**

Ignition and other industry recognized certifications.

 **CERTIFIED**  
 Ignition 79 Certification

 **CREDENTIALED**  
 Ignition 79 Credentialed





Welcome,  
**Northern Digital Inc**

## Integrator Company Status



### Integrator

Inductive Automation Integrator

*Since 2015*

● Gold: 0 sites    ● Certified: 1 sites

● Credentialed: 0 sites

**BILL HUBERT - IGNITION 8****LINDA CEDERLOF - IGNITION 8**



JOSEPH MARCUS - CYBERSECURITY US DEPARTMENT OF HOMELAND SECURITY  
CERTIFICATION

# Certificate of Training

*Presented by the*

**National Cybersecurity & Communications Integration Center  
Industrial Control Systems  
U.S. Department of Homeland Security**

*To*

**Joseph Marcus**

*For completion of the following online course:*

**210W-08 ICS Cybersecurity Consequences**

1/31/20

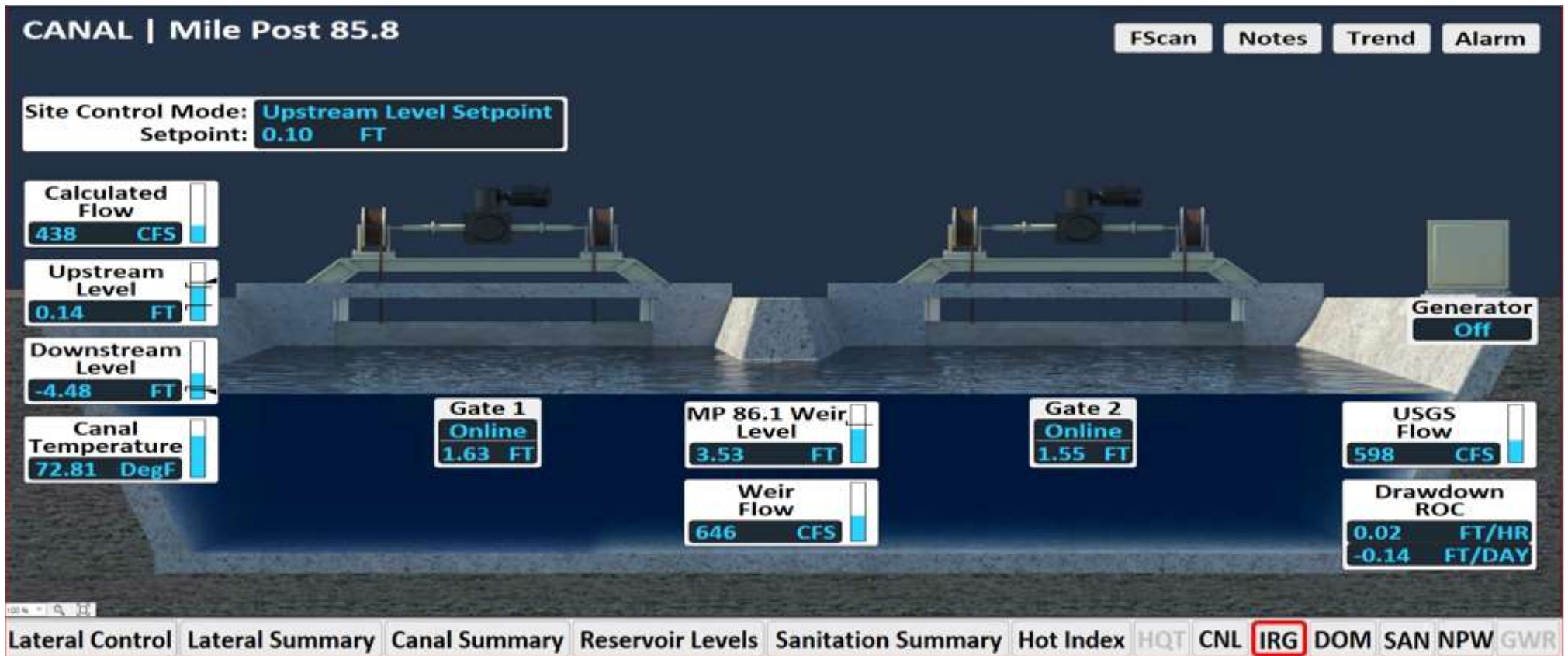
CEUs Awarded: 0.10



# Appendix D

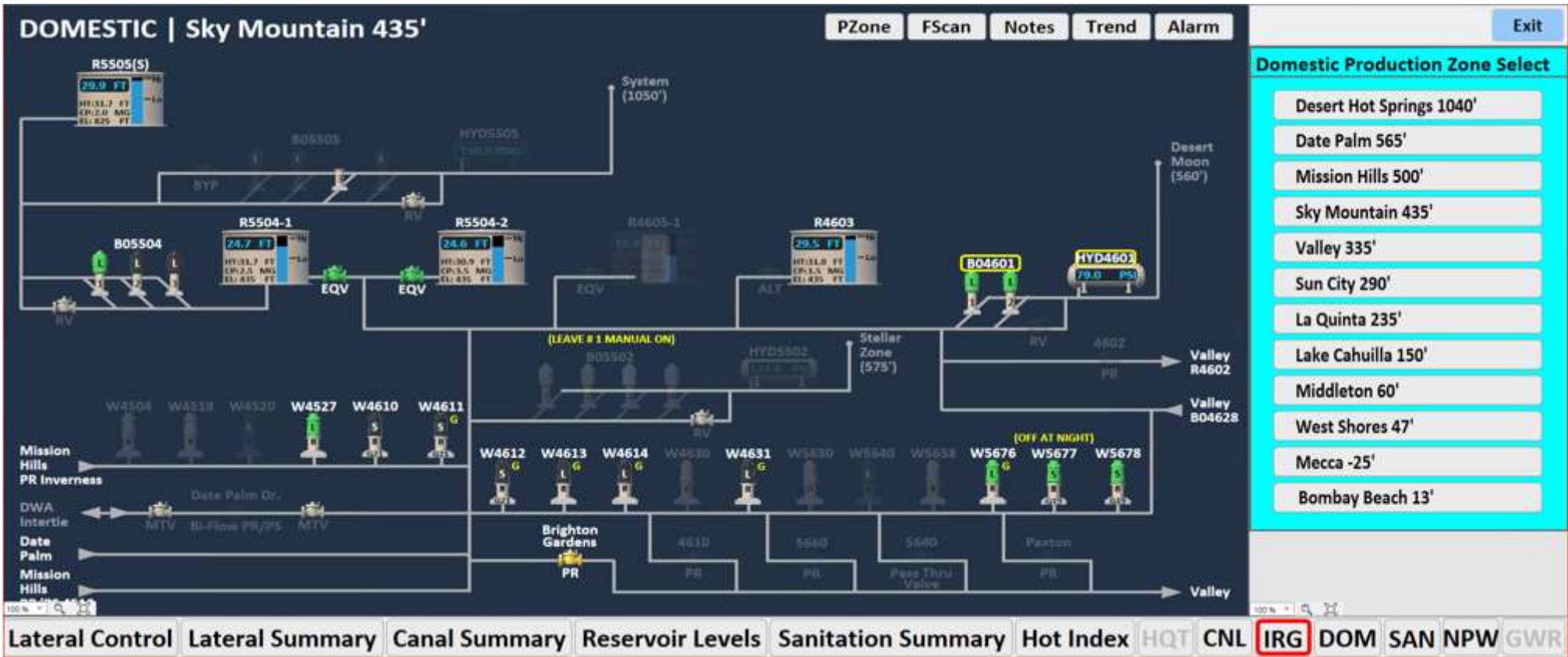
## Sample Screenshots

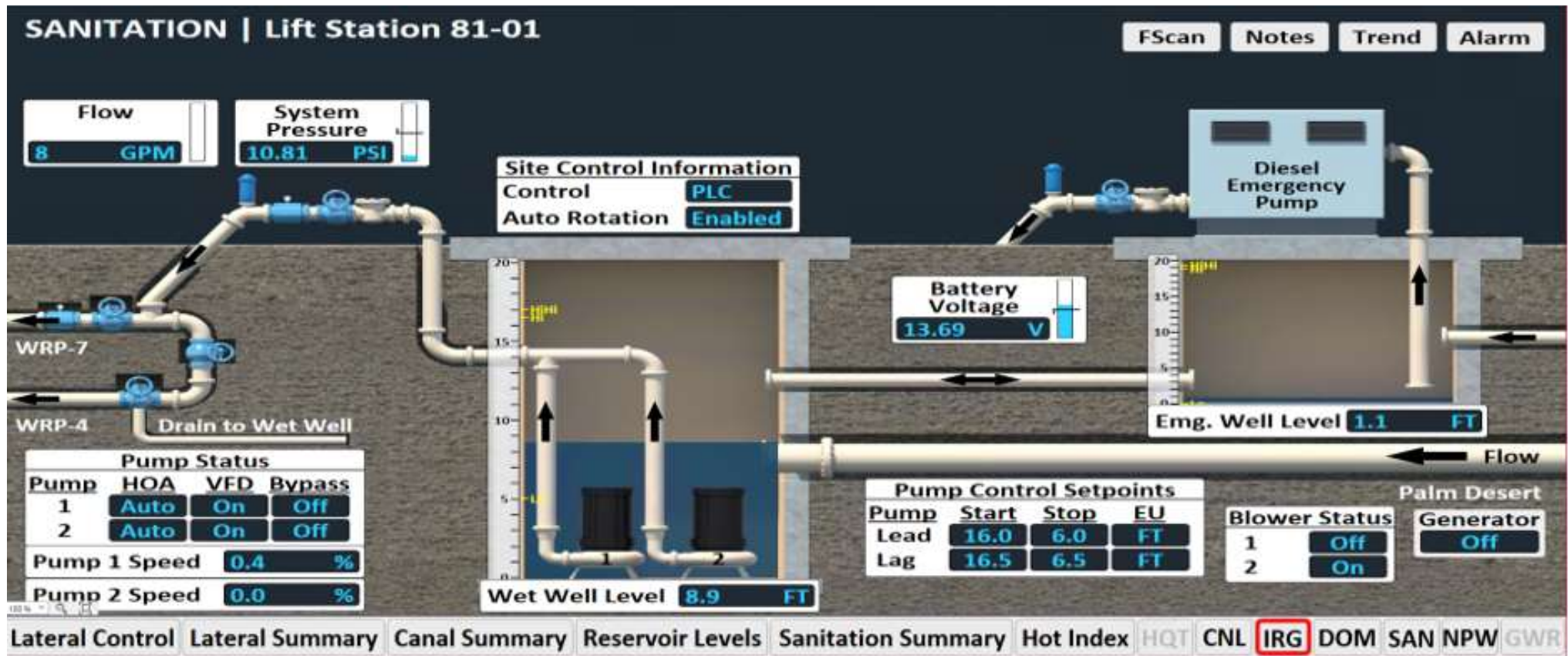


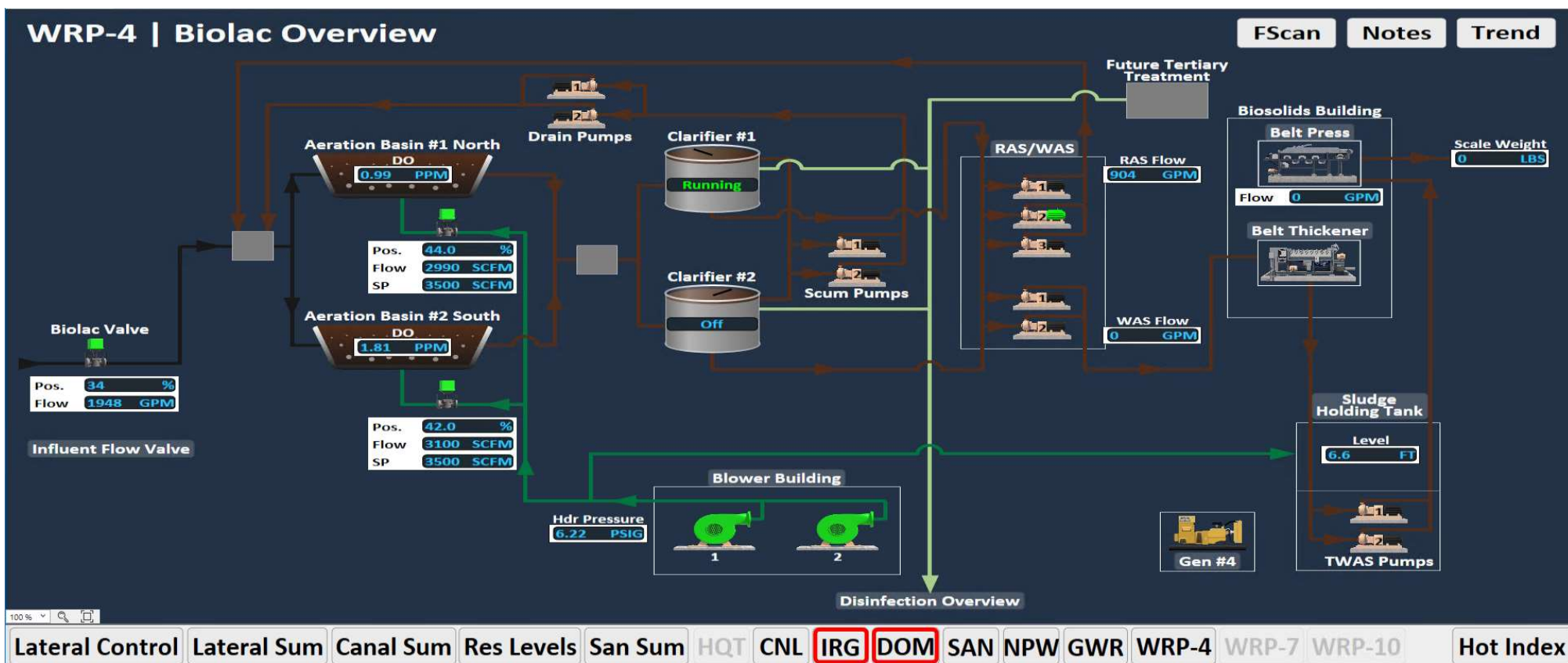




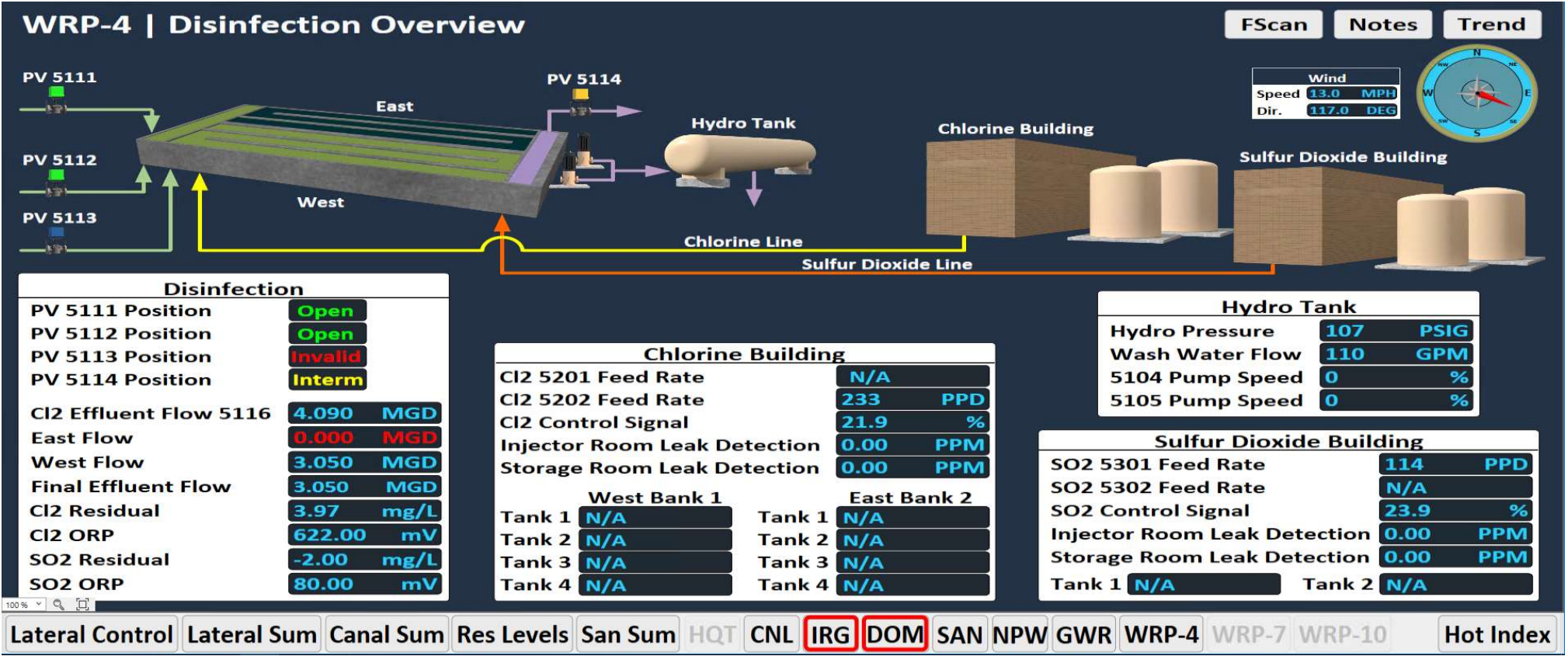


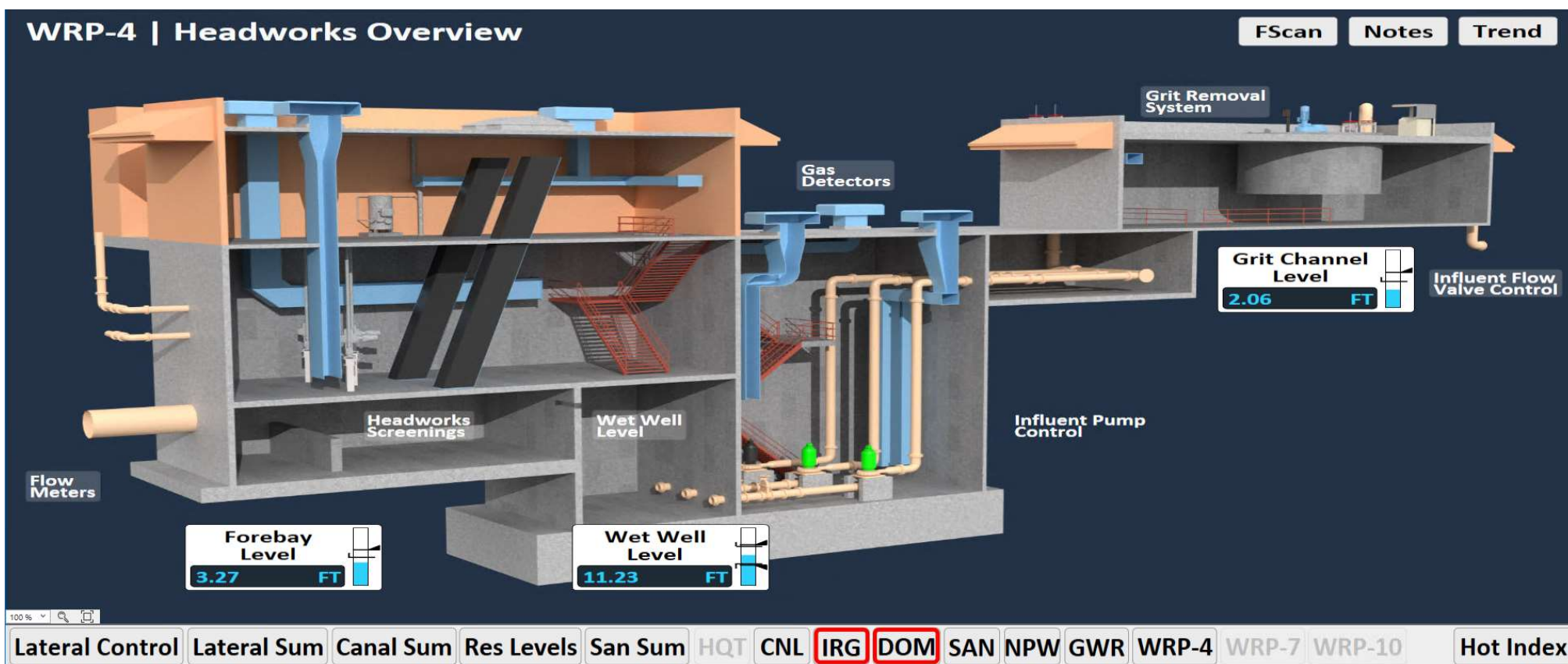


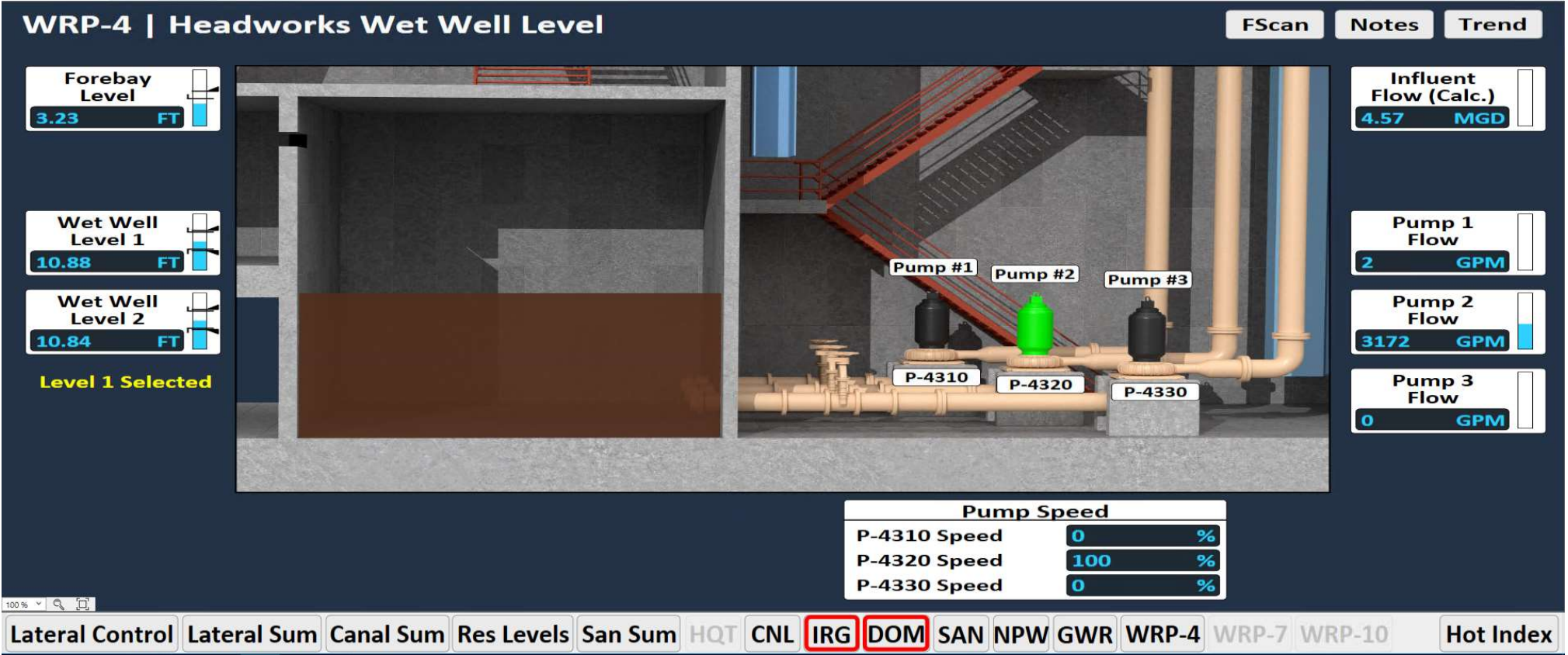






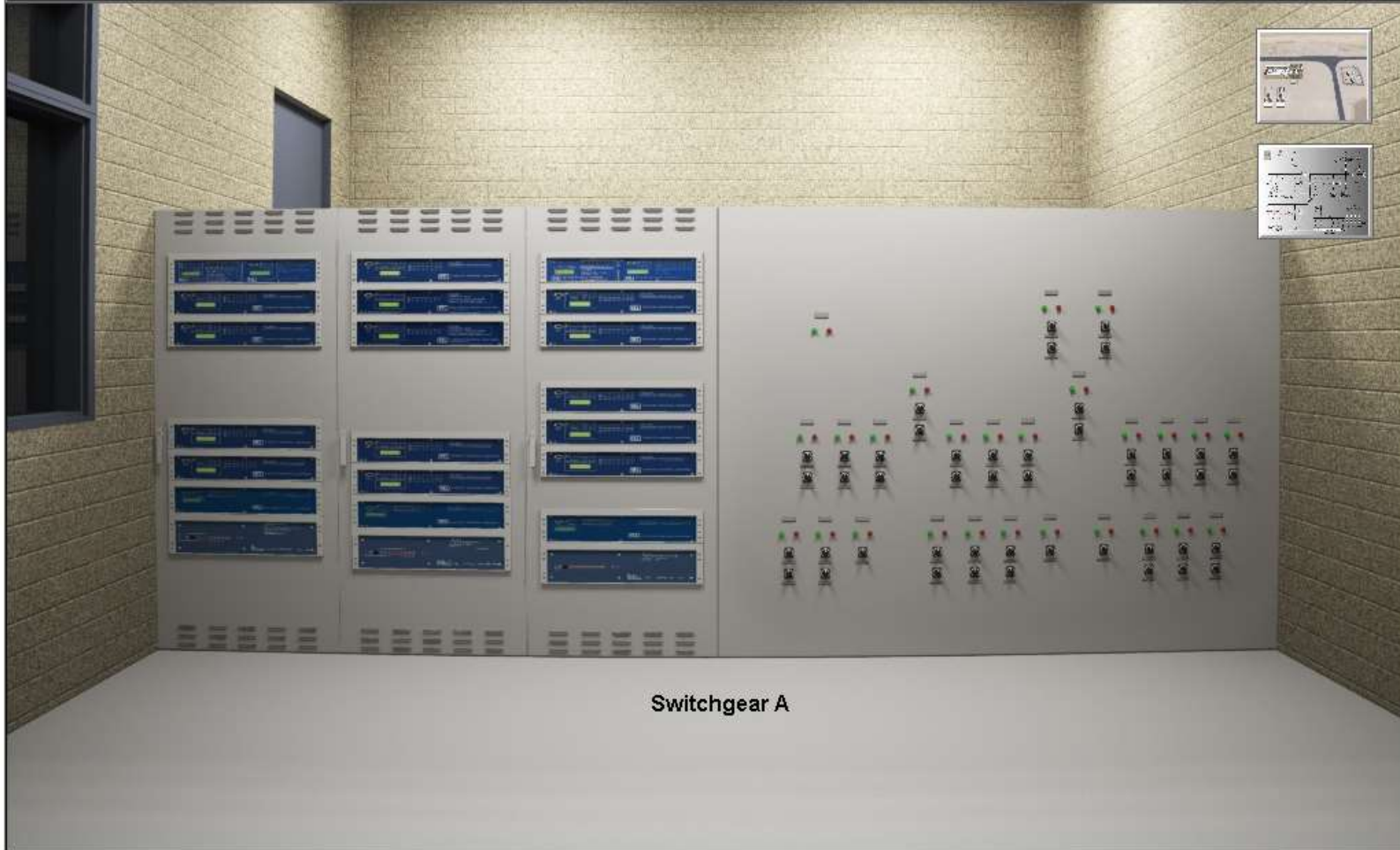






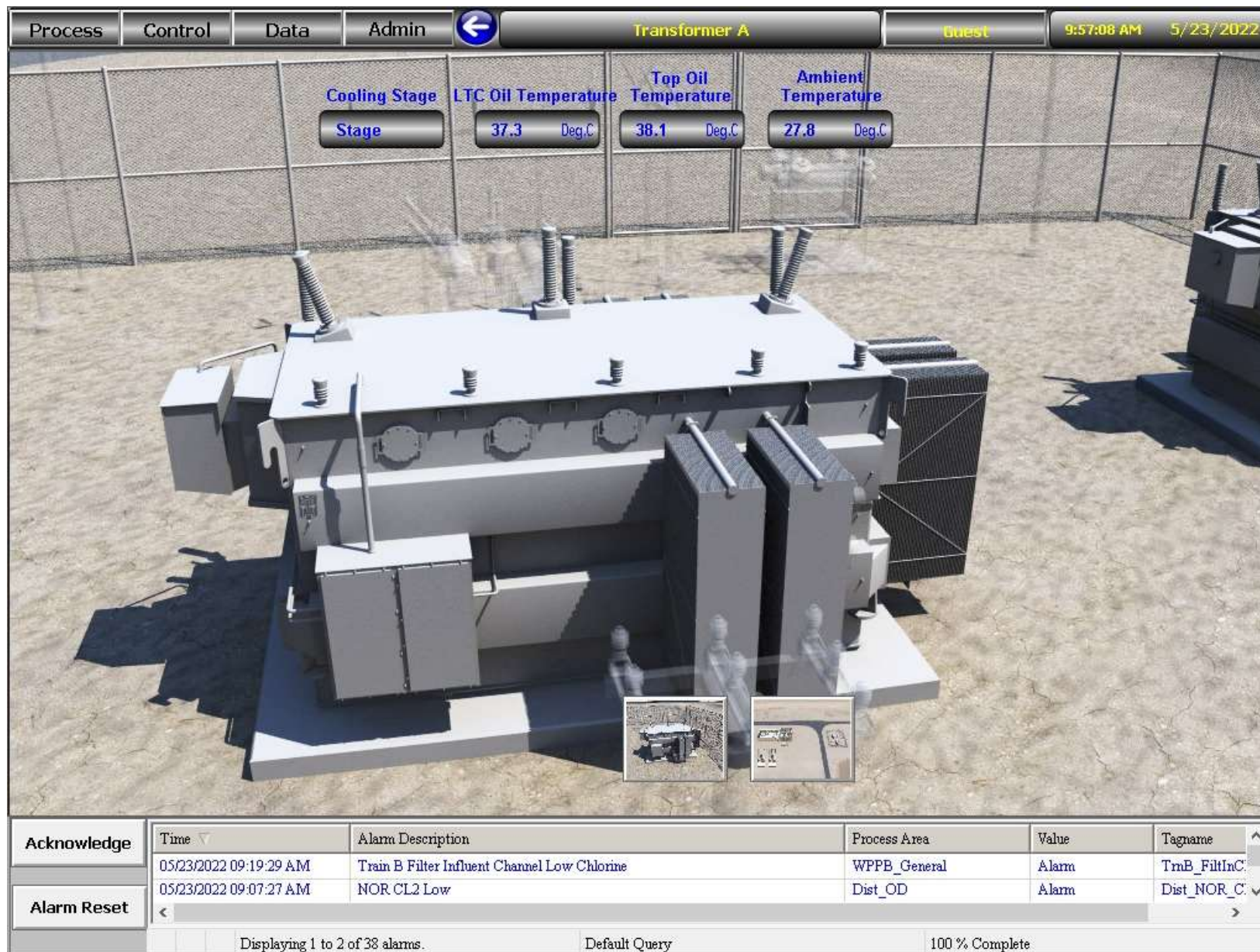


Process Control Data Admin Switchgear A Overview Guest 9:52:02 AM 5/23/2022

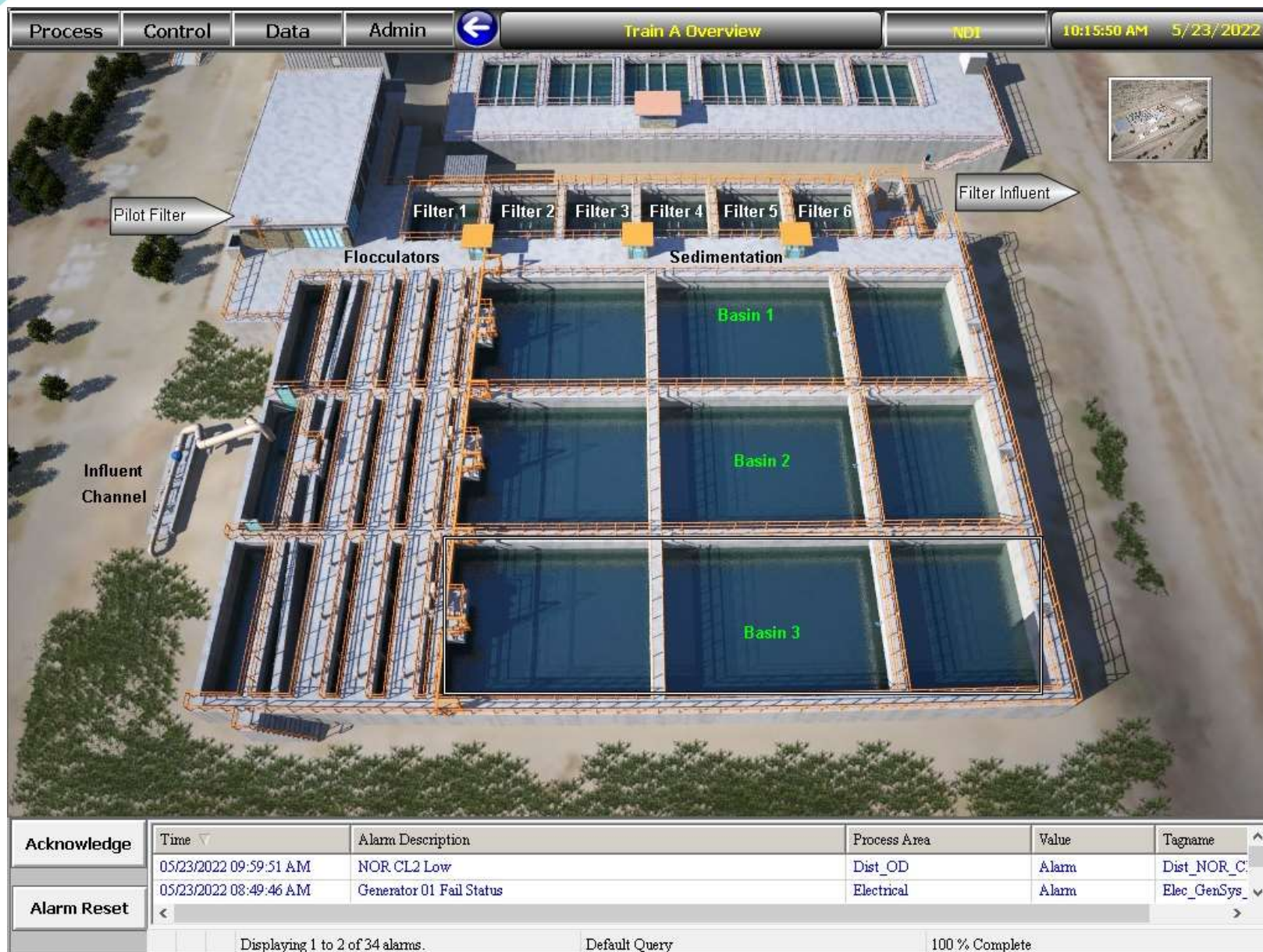


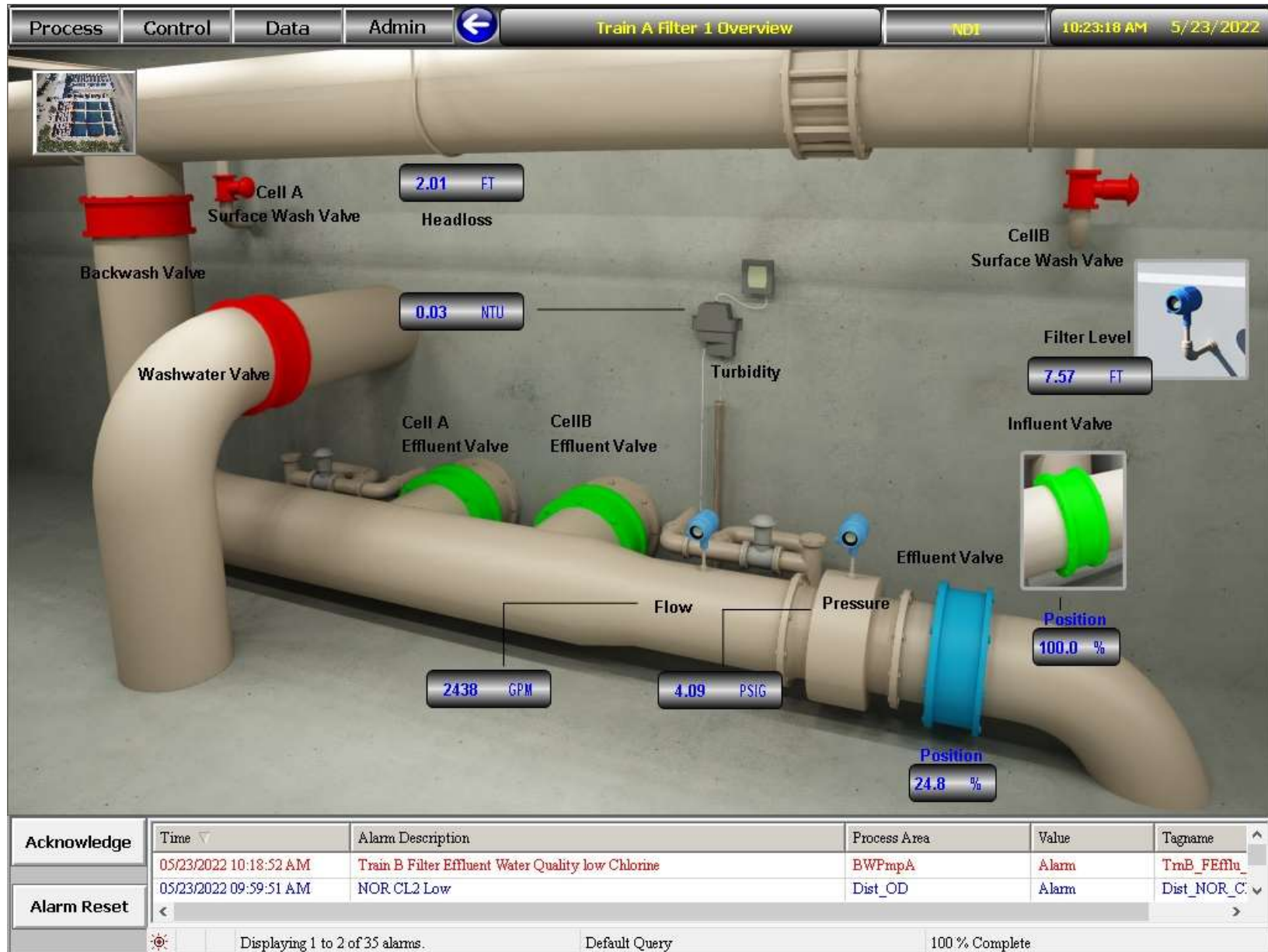
Switchgear A

Acknowledge	Time	Alarm Description	Process Area	Value	Tagname
	05/23/2022 09:19:29 AM	Train B Filter Influent Channel Low Chlorine	WPPB_General	Alarm	TrnB_FiltInC
Alarm Reset	05/23/2022 09:07:27 AM	NOR.CL2 Low	Dist_OD	Alarm	Dist_NOR_C












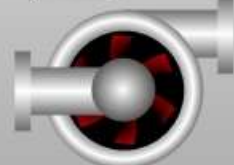
Process
Control
Data
Admin
Zinc Orthophosphate Feed Pump Control
NDI
10:27:11 AM 5/23/2022

Feeder	QMAX (GPH)	CONC (lb/Gal)	DOSE (mg/L)	MODE
1	22.1	11.1	1.4	Closed Loop ▾
2	22.1	11.1	1.4	Closed Loop ▾



**Pump Skid Control**



FE TWPS

Train A 18.22 MGD LEAD/STBY Train B 18.08 MGD



Standby


Remote
Stopped
0 rpm
98 mL/min

Control Command
Start 
Stop 

Lead



Remote
Running
1 rpm
98 mL/min

Control Command
Start 
Stop 

Acknowledge
Alarm Reset

Time ▾	Alarm Description	Process Area	Value	Tagname
05/23/2022 10:18:52 AM	Train B Filter Effluent Water Quality low Chlorine	BWPmpA	Alarm	TrnB_FEfflu_
05/23/2022 09:59:51 AM	NOR CL2 Low	Dist_OD	Alarm	Dist_NOR_C_ ▾

Displaying 1 to 2 of 35 alarms.
Default Query
100 % Complete


  
Northern Digital, Inc.





## **EXHIBIT C**

### **COMPENSATION**

Consultant's Fee Proposal including hourly rates, if applicable



# Fee Proposal

City of Santa Ana  
Public Works Agency

## Water Resources Functional Specifications Development and SCADA Programming Services

NDI Reference #80008-53

March 09, 2023



**Northern** Digital, Inc.

4701 Corporate Ct.  
Bakersfield, CA 93311

**Joseph Marcus**  
661.322.6044 (259)  
joseph.marcus@ndi.us



March 9, 2023

City of Santa Ana  
Public Works Agency  
ATTN: James Burk, P.E., Project Manager

**RE: FEE PROPOSAL TO PERFORM CONSULTING ENGINEERING SERVICES, CONTROL SYSTEM DESIGN SERVICES, FUNCTIONAL SPECIFICATION DEVELOPMENT, AND SCADA SYSTEM SOURCE & CHANGE CONTROL SERVICES FOR THE CITY OF SANTA.**

Please find NDI's fee proposal attached in response to the City's RFP 23-026 Water Resources Functional Specifications Development and SCADA Programming Services. Enclosed is Attachment 2 as well as NDI's rate sheet for services performed for this project.

NDI has over **34+ years of industry experience** and has an extensive background in providing control system engineering services for numerous Water/Wastewater industry applications. **Northern Digital is an industry leader in providing technical solutions and integration services** to a wide variety of agencies including municipalities, districts, and independent water companies. Our core value of **relationships forged in commitment** aims to develop lasting partnerships with our clients. NDI strives to ensure that we meet or exceed all your project expectations. We are grateful for this opportunity to submit a Qualification Package to the City of Santa Ana and are excited at the prospect of working with you.

Sincerely,



**Joseph Marcus**  
Northern Digital, Inc.  
Manager, Business Development  
W: 661.322.6044  
M: 661.319.4015  
E: joseph.marcus@ndi.us

# Section 1

## Attachment 2: Fee Proposal

CITY OF SANTA ANA  
RFP NO.: 23-026  
WATER RESOURCES FUNCTIONAL SPECIFICATIONS DEVELOPMENT AND SCADA  
PROGRAMMING SERVICES

**APPENDIX  
ATTACHMENT 2: FEE PROPOSAL**

**Certification** - I certify that I have read, understand and agree to the terms and conditions of this Request for Proposal. I have examined the **ATTACHMENT 1: SCOPE OF WORK**. I am familiar with all the existing conditions and limitation that may impact work requests. I understand and agree that I am responsible for reporting any errors, omissions or discrepancies to the City for clarification prior to the submission of my proposal.

**Proposer shall submit hourly rates schedule, which shall include but not limited to, direct and indirect costs for labor, for staff per job classification, material, equipment rates, overhead, incidental supplies, travel, mileage, and fuel. Any special materials will be purchased by the contractor only after discussed and authorized by the City projects manager or designee in writing.**

**Prior to commencement of services, Contractor shall provide separate quotes, upon request by the City, which shall be approved by the City's Public Works Water Resources Division.**

**FEE SCHEDULE**

The undersigned declares that he/she has carefully examined the request for proposal, that he/she has examined the Proposed Scope of Services, and hereby proposes to furnish all material and do all the work required to complete the said work in accordance with said Proposed Scope of Services, for the unit price(s) set forth in the following schedule:

Note: This contract is subject to prevailing wages.

TO: CITY COUNCIL OF THE CITY OF SANTA ANA

FROM: Northern Digital, Inc.

<u>Item #</u>	<u>Bid Item</u>	<u>Unit</u>	<u>Quantity</u>	<u>Amount</u>
<b>Crooke Station and Cambridge Station (Please refer to Appendix A and Appendix B)</b>				
<b>Crooke Station (Located at 730 E Memory Ln, Santa Ana CA 92706) – Appendix A</b>				
1.	Control Panel Drawings	EA	1	\$ <u>47,228</u>
2.	Functional Specification	EA	1	\$ <u>44,868</u>
3.	Programming and Testing Specifications	EA	1	\$ <u>44,388</u>
4.	Source Control	EA	1	\$ <u>15,198</u>
5.	Change Control	EA	1	\$ <u>15,198</u>

CITY OF SANTA ANA  
RFP NO.: 23-026  
WATER RESOURCES FUNCTIONAL SPECIFICATIONS DEVELOPMENT AND SCADA  
PROGRAMMING SERVICES

Cambridge Station (Located at 2736 N Cambridge St, Santa Ana CA 92701) – Appendix B				
6.	Control Panel Drawings	EA	1	\$29,228
7.	Functional Specification	EA	1	\$47,748
8.	Programming and Testing Specifications	EA	1	\$39,708
9.	Source Control	EA	1	\$15,198
10.	Change Control	EA	1	\$15,198

Total            \$313,960

**Contractor shall submit rate schedule, additional labor, material and rental equipment rates along with fee schedule.** Contractor's labor and equipment rate sheet shall list rates for all labor designations, equipment and materials.

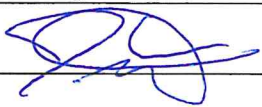
**BIDDER INFORMATION:**

Legal Company Name: Northern Digital, Inc.

Complete address: 4701 Corporate Court, Bakersfield, CA 93311

Phone Number: 661-322-6044

Email Address: joseph.marcus@ndi.us

Authorized Signature: 

Name: Joseph Marcus

Title: Manager, Business Development

# Section 2

## Labor Classification Rate Sheet

## NDI Fee Schedule

### CLASSIFICATION RATE SCHEDULE

**Northern Digital** has a staff of qualified engineers and multidisciplinary employees capable of meeting the requirements of your project. NDI's staff includes Engineering, Project Management, Finance, CAD Specialists, and Procurement, all capable of meeting the scheduling, testing, inspections, oversight of installation, and training requirements of this project. NDI's Professional Services Classifications and associated rates can be found below

Professional Services Classification	NDI Hourly Rate
Consultant / Principal	\$195
Systems Engineer	\$180
Project Manager	\$180
Field Technical Support Engineer	\$170
Clerical	\$70
Vehicle Transportation	\$0.75 per mile

### PLEASE NOTE THE FOLLOWING BILLING POLICIES:

\*Rate may vary due to changes in the IRS determined Standard Mileage Reimbursement Rate

\*Travel & Expenses Costs will follow GSA Guidelines

Billing will be per the Professional Services Agreement between the City of Santa Ana and NDI.

Work will be billed progressively on a T&M basis.

Note: A yearly 4% Cost of Living increase will apply after each year, effective after contract year 1 (based on date of contract execution).