



PRODUCTIONS CONTROL SYSTEM (PCS) UPGRADE PROJECT

Solicitation Number: CO-00189

Job No.: 16-6001

ADDENDUM 2

July 18, 2018

To Bidder of Record:

This addendum, applicable to work referenced above, is an amendment to the bid proposal, plans and specifications and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted copies of the bid proposal.

QUESTIONS

- Question:** In specification section 024100 Demolition, paragraph 3.03.A states that salvaged material which SAWS does not want becomes the property of the Contractor. Because the definition of "hazardous waste" has been expanded to include many items formerly not considered hazardous, this opens the Contractor to the possibility of having to dispose of hazardous waste. Almost all of the items to be demolished will have some value to a recycler. Would it be possible for SAWS to engage a recycling firm that would take all of the demolished material in exchange for the opportunity to sell the recyclable portion?

Response: Replace paragraph 3.03.A of section 024100 Demolition, with the following:

- Existing electrical equipment and apparatus in or on the structures shall remain the property of the Owner as Salvage. Contractor shall assist the Owner in relocating salvaged materials to a location agreeable to the Owner.
- Question:** In the specifications of this project, there isn't any reference to the modification of an existing Master/SCADA PLC or the inclusion of a new Master/SCADA PLC. Are the PlantPax AOIs already being utilized in an existing Master/SCADA PLC for all incoming RTU data or how will the incoming RTU data be associated with the correct PlantPax AOI Data Types? All incoming RTU data that is to be displayed utilizing PlantPax Graphical Objects will need to be associated with an AOI within the Master/SCADA PLC to obtain the full functionality of the PlantPax Graphical Objects. (For example – An incoming Tank Level transducer signal will need to be associated with a P_AIn (PlantPax Analog Input AOI) function block which has built in scaling and alarming capabilities.)

Response: The overall system design includes the requirement for the SCADA software to communicate directly with the existing RTUs and PLCs, which include Modicon, ControlMicrosystems, and Allen-Bradley PLCs without a master PLC. The intent of the project is to incorporate these existing PLCs and RTUs as "Legacy" devices, while configuring the PlantPax system to fully incorporate PlantPax AOI and Graphical Objects for future installations as well as for any Logix PLCs which are compliant.

The SAWS HMI Standards outline the modifications required to the PlantPax symbols to accommodate the legacy controllers. These slight modifications are intended to keep all legacy animations and functionality as similar to the PlantPax object library as possible as SAWS moves towards the full use of the AOIs.

- Question:** According to the RFCSP, questions are due July 12th. Is SAWS able to extend this deadline to July 13th?

Response: The deadline has been extended as per Addendum 1.

4. **Question:** The RFCSP mentions financial statements. Where should they go in our proposal?

Response: Financial statements are not required to be submitted for this solicitation and therefore do not need to be included in your proposal.

5. **Question:** The cost for a Maintenance Plan is to be included in our price. Which Bid Item does it go in?

Response: The Maintenance Plan shall be covered as a separate line item in the Price Proposal. See the attached revised Price Proposal.

6. **Question:** Can you please provide an explanation of the “Terminus Site” reference on the “Proposed PCS HMI System Architecture Diagram”? Is this a specific type of RTU with a specific communication protocol, or something else entirely? Additionally, there are references to “Terminus” also shown on the “Existing Desalination HMI System Architecture Diagram”. Please provide additional information regarding the nature of the term “Terminus” and its application or configuration.

Response: The Terminus site is a remote site associated with the SAWS Central Water Integration Program and is a future site, not part of the PCS Upgrade. The Terminus site is planned to be equipped with an independent workstation and Network interface to connect to the Production Control System. The workstation will be equipped with a historian data collector to send the historian data to the PCS Historian. The Terminus workstation will be developed independently from the PCS upgrade, by the design engineer for that project but will utilize the new PCS system and standards.

References to the Terminus site on the I-005 can be ignored.

7. **Question:** With respect to Drawing I-002, what do the boxes labeled “COMMS” refer to?

Response: The boxes labeled “COMMS” refer to the communication devices between remote sites and SAWS production control system network. Existing SAWS communication systems include broadband radio, narrowband ethernet radio, and serial radios as well as leased lines, and cellular systems.

8. **Question:** With respect to Drawings I-004, I-005, and I-006, what does the acronym “BGD” refer to?

Response: BGD stands for Brackish Groundwater Desalination

9. **Question:** Drawing I-002, A (Server Cluster, by SAWS at SAWS Headquarters)-One of the Software Applications listed is FACTORYTALK VIEW LICENSE SERVER (25 CONCURRENT). What is the part number for this software?

Response: Please see the following software part numbers for concurrent use license servers:

| System | Part Number | Description |
|--------|----------------------|---|
| PCS | 9701-VWSS000CW25LENE | ESD - View SE unlimited displays server, 25 R/W clients, 1 ViewPoint client |
| PCS | 9701-VWSS000LENE | ESD - FactoryTalk View SE Server Unlimited w/RSLinx Enterprise (ENGLISH) |
| ASR | 9701-VWSS000CW10LENE | ESD - View SE unlimited displays server, 10 R/W clients, 1 ViewPoint client |
| ASR | 9701-VWSS000LENE | ESD - FactoryTalk View SE Server Unlimited w/RSLinx Enterprise (ENGLISH) |

Contractor shall coordinate with Rockwell Automation and supplier for specific part numbers to satisfy the requirements of this contract.

10. **Question:** The tables at the end of Specification Section 406800 contain a list of software. Which of these are Owner-provided?

Response: Owner provided software is limited to operating system software and the Microsoft Office Professional software. The balance of the required software is to be provided by the contractor.

11. **Question:** If we are to furnish the VMWare, please provide the quantity and part numbers.

Response: VMWare platforms for the permanent servers will be provided by SAWS, as outlined in 406200 paragraph 2.03.D. Paragraph 2.03.E does require the Contractor to utilize their own VMWare based development servers for application development and testing, however this equipment and software is not required to be provided to the Owner.

12. **Question:** For the sites with PLCs other than Allen-Bradley PLCs, please provide a list of PLCs per site by manufacturer and model. If this is not feasible, please provide the manufacturer and model of each different type of PLC in the system that are not Allen-Bradley.

Response: See revised 406100 Appendix A, listing the PLC information for each site.

13. **Question:** How many FactoryTalk View SE Client licenses are required? These licenses are required for each workstation. We believe the quantity is 74. Please confirm.

Response: A total of 52 FactoryTalk View client licenses are required, broken down as follows:

- For the PCS portion of the system: Licenses are required for 25 concurrent remote clients and 11 thick clients.
- For the ASR portion of the system: Licenses are required for 10 concurrent remote clients and 6 thick clients.

14. **Question:** In Specification Section 406100, 2.02.A.2.c.3) Historical Display Response (page 406100-14), it says that the historical display response time must be less than 2 seconds. We are not certain that FactoryTalk will always meet this requirement. Please change this from a firm requirement to a target or goal.

Response: The specific subparagraph reference refers to the static portion of the historical displays, not the information drawn from the historian. Subparagraph c.4 outlines the response requirements of the call-up times for the historical data. Rockwell Automation has indicated that the software can meet this static display call-up requirement.

CHANGES TO THE SPECIFICATIONS

1. SUPPLEMENTARY INSTRUCTIONS TO RESPONDENTS: Section E.2 of the Supplementary Instructions to Respondents is modified to read as follows:

“2. The page limitation for Proposals shall be a maximum of **55** printed pages. The cover letter, table of contents, divider sheets, proposal checklist, Good Faith Effort Plan, Price Proposal, and any other required documents will not count towards the maximum of allowable printed pages.”

2. SUPPLEMENTARY INSTRUCTIONS TO RESPONDENTS: Section E.9 of the Supplementary Instructions to Respondents is modified to read as follows:

“9. Respondents shall include one (1) copy of the complete proposal on a CD or thumb drive in searchable portable document format (.pdf) in addition to the required number of hard copies. The CD or thumb drive shall contain the entire proposal package as submitted, excluding the Good Faith Effort Plan and Price Proposal, and should be encased in a paper envelope, clearly marked with the pertinent solicitation information.”


3. Modify Specification Section 406863, replacing paragraph 3.03 in its entirety with the attached. This modification provides details on HMI-level scripting present in the ASR Dynac system.
4. Replace drawing I-006 with revised drawing, attached. Modifications were made to the number of monitors on new workstations provided by SAWS.

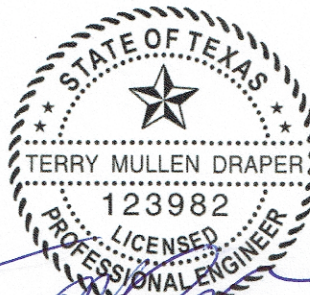
END OF ADDENDUM 2

This Addendum, including these four (4) pages, is seventeen (17) pages with attachments in its entirety.

Attachments:

Price Proposal
406800A - Appendix A Site List
406863 – Excerpts (Paragraph 3.03)
Drawing I-006


Terry M. Draper
EMA, Inc



 7/18/18

| Line No. | Item No. | Item Description | Unit | Qty | Unite Price \$ | Total Price \$ |
|--------------------|----------|--|------|-----|----------------|----------------|
| 1 | PCS-01 | HMI Programming Upgrade- PCS | LS | 1 | | |
| 2 | PCS-02 | Conducting workshops and meetings- PCS | LS | 1 | | |
| 3 | PCS-03 | SCADA/HMI software- PCS | LS | 1 | | |
| 4 | PCS-04 | Training- PCS | LS | 1 | | |
| 5 | PCS-05 | System documentation- PCS | LS | 1 | | |
| 6 | PCS-06 | Factory Acceptance Tests- PCS | LS | 1 | | |
| 7 | PCS-07 | Site Acceptance Test- PCS | LS | 1 | | |
| 8 | PCS-08 | Tank Level Transmitter Recalibration- PCS | LS | 1 | | |
| 9 | ASR-01 | HMI Programming Upgrade- ASR | LS | 1 | | |
| 10 | ASR-02 | Conducting workshops and meetings- ASR | LS | 1 | | |
| 11 | ASR-03 | SCADA/HMI software- ASR | LS | 1 | | |
| 12 | ASR-04 | Training- ASR | LS | 1 | | |
| 13 | ASR-05 | System documentation- ASR | LS | 1 | | |
| 14 | ASR-06 | Factory Acceptance Tests- ASR | LS | 1 | | |
| 15 | ASR-07 | Site Acceptance Test- ASR | LS | 1 | | |
| 16 | Gen-01 | Video display wall | LS | 1 | | |
| 17 | Gen-02 | Bonds, Insurance, Permits, Mobilization and Demobilization | LS | 1 | | |
| Total Cost: | | | | | | |

Total Maintenance and Support Costs – These costs are for Year 1 upon installation through Year 5.

| Year | Cost |
|---|------|
| Year 1 | \$ |
| Year 2 | \$ |
| Year 3 | \$ |
| Year 4 | \$ |
| Year 5 | \$ |
| Total Maintenance and Support Costs: | \$ |

406100A APPENDIX A – PCS REMOTE SITE LIST

SAWS Production Control System Remote Site Listing
Water and Recycle Sites

| Current System | Site ID | Site Name | Address | HGL1 | HGL2 | HGL3 | PLC1 | PLC2 | PLC3 |
|----------------|---------|-------------------------|---|---------|---------|------|-----------------|-----------------|------|
| ClearSCADA | 21S | 21st Street PRM | 2518 SW 21st St, San Antonio, TX 78226 | PZ0828 | | | Modicon M340 | | |
| ClearSCADA | AMH | Amhurst TANK | 10911 Amhurst Dr, San Antonio, TX 78213 | PZ1010 | | | SCADAPack | | |
| ClearSCADA | ASP | Aspen WELL | 105 W Bitters Rd, San Antonio, TX 78216 | PZ1295 | | | Modicon M340 | | |
| ClearSCADA | BRC | Bear Creek SCND | 9731 Bear Creek Dr, San Antonio, TX 78245 | PZ0994 | | | Modicon M340 | | |
| ClearSCADA | BLK | Blackhawk SCND | 106 Blackhawk, Hill Country Village, TX 78232 | PZ1111 | | | Modicon M340 | | |
| ClearSCADA | BLR | Blanco Road BSTR | 1416 W Oak Estates Dr, San Antonio, TX 78260 | PZ1520 | | | SCADAPack | | |
| ClearSCADA | BOR | Borgfeld BSTR | 27102 Enchanted Eve, San Antonio, TX 78260 | PZ1520 | | | Modicon M340 | | |
| ClearSCADA | CAG | Cagnon PRM | 5940 Cagnon Rd, San Antonio, TX 78252 | PZ0950W | | | Modicon M340 | | |
| ClearSCADA | CRL | Carlisle SCND | 411 Carlisle Ave, San Antonio, TX 78225 | PZ0790 | | | SCADAPack | | |
| ClearSCADA | CRW | CRWA BSTR | 5207 TX-1604 Loop, Converse, TX 78109 | PZ0950E | | | SCADAPack | | |
| ClearSCADA | DNL | Donella PP | 367 Donella Dr, San Antonio, TX 78232 | PZ1111 | | | SCADAPack | | |
| ClearSCADA | ECH | Echo Mountain TANK | 25723 Echo Mountain, San Antonio, TX 78260 | PZ1520 | | | SCADAPack | | |
| ClearSCADA | FLT | Fleetwood TANK | 508 Ventura Dr, Hollywood Park, TX 78232 | PZ1111 | | | SCADAPack | | |
| ClearSCADA | GMM | General McMullen TANK | 1746 S General McMullen Dr, San Antonio, TX 78237 | PZ0828 | | | Modicon M340 | | |
| ClearSCADA | GIB | Gibbs Sprawl SCND | 6869 Gibbs Sprawl Rd, San Antonio, TX 78239 | PZ0950E | | | SCADAPack | | |
| ClearSCADA | GIL | Gillette TANK | 9311 Rhoda Ave, San Antonio, TX 78224 | PZ0790 | | | SCADAPack | | |
| ClearSCADA | GOL | Golden BSTR | 3408 Golden Quail, San Antonio, TX 78240 | PZ0790 | | | SCADAPack | | |
| ClearSCADA | HUT | Hutchins TANK | 1033 W Hutchins Pl, San Antonio, TX 78221 | PZ0790 | | | SCADAPack | | |
| ClearSCADA | KNG | King Street PRM | 140 King Ave, San Antonio, TX 78211 | PZ0790 | | | Modicon M340 | | |
| ClearSCADA | KNT | Knights Cross BSTR | 451 Knights Cross Dr, San Antonio, TX 78258 | PZ1295 | PZ1400E | | SCADAPack | | |
| ClearSCADA | LAR | La Rosa PRM | 3019 La Rosa St, San Antonio, TX 78211 | PZ0790 | | | SCADAPack | | |
| ClearSCADA | LMN | Lemonwood PRM | 202 Lemonwood Dr, Castle Hills, TX 78213 | PZ1010 | | | Modicon M340 | | |
| ClearSCADA | L16 | Loop1604 BSTR | 685 TX-1604 Loop, San Antonio, TX 78251 | PZ1295 | | | SCADAPack | | |
| ClearSCADA | MB2 | Marbach 2 PRM | 11801 Marbach Rd, San Antonio, TX 78245 | PZ0994 | | | SCADAPack | | |
| ClearSCADA | MDN | Medina BSTR | 6725 Moreno Street, San Antonio, TX 78252 | PZ0790 | | | CompactLogix | | |
| ClearSCADA | MID | Midcrown SCND | 5825 Midcrown Dr, San Antonio, TX 78218 | PZ0950E | | | Modicon M340 | | |
| ClearSCADA | MNT | Montgomery SCND | 6754 Montgomery Dr, San Antonio, TX 78239 | PZ0950E | | | SCADAPack | | |
| ClearSCADA | PIT | Pituluk WELL | 3040 Pitluk Ave, San Antonio, TX 78211 | PZ0790 | | | Modicon M340 | | |
| ClearSCADA | POT | Potranco TANK | 13074 FM1957, San Antonio, TX 78253 | PZ1080 | | | SCADAPack | | |
| ClearSCADA | SEA | SeaWorld TANK | 10349 Military Dr W San Antonio, TX 78251 | PZ0994 | | | SCADAPack | | |
| ClearSCADA | SOM | Somerset BSTR | 19260 Somerset Rd, Somerset, TX 78069 | PZ0830 | | | Modicon M340 | | |
| ClearSCADA | STV | Stevens Ranch PRM | 1150 Stevens Parkway, San Antonio, TX 78253 | PZ1170S | | | SCADAPack | | |
| ClearSCADA | TRP | Texas Research Park PRM | 15340 Lambda Dr, San Antonio, TX 78245 | PZ1170S | | | Modicon M340 | | |
| ClearSCADA | TIP | Tippecanoe SCND | 10371 Tippecanoe, San Antonio, TX 78245 | PZ0994 | PZ1111 | | Modicon M340 | | |
| ClearSCADA | TWR | Tower PRM | 302 Tower Dr, San Antonio, TX 78232 | PZ1111 | | | Modicon M340 | | |
| ClearSCADA | VST | Vestal TANK | 115 Vestal Pl, San Antonio, TX 78221 | PZ0790 | | | SCADAPack | | |
| ClearSCADA | WST | West Avenue SCND | 6912 West Ave, Castle Hills, TX 78213 | PZ1010 | | | Modicon M340 | | |
| ClearSCADA | WLD | Wild Turkey PRM | 25734 Wild Turkey Rd, San Antonio, TX 78260 | PZ1520 | | | Modicon M340 | | |
| ClearSCADA | WOT | Wotlin SCND | 104 Wotlin Rd, Castle Hills, TX 78213 | PZ1010 | | | Modicon M340 | | |
| ClearSCADA | ZAR | Zarzamora PRM | 6019 S Zarzamora St, San Antonio, TX 78207 | PZ0790 | | | Modicon M340 | | |
| PCS-Dynac | P18 | 181 South PP | 12058 US-181, San Antonio, TX 78223 | PZ0750 | | | Modicon Compact | | |
| PCS-Dynac | 21S | 34th Street PRM | 3939 Flagle St, San Antonio, TX 78237 | PZ0828 | PZ0930 | | Modicon Compact | Modicon Compact | |
| PCS-Dynac | 36S | 36th Street PRV | 607 North Frank Luke Drive, San Antonio, TX 78226 | PZ0930 | PZ846 | | CompactLogix | | |
| PCS-Dynac | ACM | Acme PP | 970 S Acme Road, San Antonio, TX 78237 | PZ0930 | | | Modicon M340 | | |
| PCS-Dynac | ARB | Adobe Ranch BSTR | 13955 Antonio Dr, Helotes, TX 78023 | PZ1400 | | | Modicon Compact | | |
| PCS-Dynac | ALO | American Lotus PRV | 11502 Wayward Daisy, San Antonio, TX 78245 | PZ0994 | | | CompactLogix | | |
| PCS-Dynac | AND | Anderson PRM | 5025 W Loop 1604 N, San Antonio, TX 78251 | PZ1111 | PZ1170W | | Modicon Compact | Modicon M340 | |
| PCS-Dynac | ANT | Antonio PP | 14871 Antonio Dr, Helotes, TX 78023 | PZ1400W | PZ1233 | | Modicon M340 | | |
| PCS-Dynac | ART | Artesia PRM | 703 AT&T Center Parkway, San Antonio, TX 78219 | PZ0828 | | | Modicon Compact | Modicon Compact | |
| PCS-Dynac | AUS | Austin TANK | 6227 Franklin St, San Antonio, TX 78209 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | BBC | Babcock TANK | 10202 Horn Blvd, San Antonio, TX 78240 | PZ1111 | | | Modicon Compact | | |
| PCS-Dynac | BB2 | Barbet 2 SCND | 526 Pilgrim Dr, San Antonio, TX 78213 | PZ0994 | | | Modicon Compact | | |
| PCS-Dynac | BSQ | Barclay Square PP | 1703 Timber Oak St, San Antonio, TX 78232 | PZ1111 | | | Modicon Compact | | |
| PCS-Dynac | BSN | Basin PRM | 7110 Basin Dr, San Antonio, TX 78216 | PZ0930 | | | Modicon Compact | Modicon Compact | |
| PCS-Dynac | BIT | Bitters BSTR | 13535 West Ave, San Antonio, TX 78216 | PZ1111 | | | Modicon Compact | | |
| PCS-Dynac | BIP | Bitters PP | 2590 MacArthur View, San Antonio, TX 78217 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | BTA | Bitters to Aspen PRV | 14015 San Pedro Ave, Hill Country Village, TX 78232 | PZ1111 | | | CompactLogix | | |
| PCS-Dynac | BK3 | Brackenridge 13 SCND | 2303 Avenue B., San Antonio, TX 78215 | PZ0930 | | | Modicon Compact | | |

SAWS Production Control System Remote Site Listing
Water and Recycle Sites

| Current System | Site ID | Site Name | Address | HGL1 | HGL2 | HGL3 | PLC1 | PLC2 | PLC3 |
|----------------|---------|----------------------------|---|---------|--------|--------|-----------------|------|------|
| PCS-Dynac | BK4 | Brackenridge 14 SCND | 2304 Avenue B., San Antonio, TX 78215 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | BKR | Brackenridge REUSE | 2303 Avenue B., San Antonio, TX 78215 | PZ0890 | | | Modicon Compact | | |
| PCS-Dynac | BRP | Braun PP | 9662 Braun Rd, San Antonio, TX 78254 | PZ1111 | PZ1170 | | Modicon M340 | | |
| PCS-Dynac | BRD | Broadview TANK | 4151 Willowbrook Dr, San Antonio, TX 78228 | PZ0930 | | | Modicon M340 | | |
| PCS-Dynac | BKH | Brookhill PP | 5507 Clark Ave, San Antonio, TX 78223 | PZ0828 | | | Modicon Compact | | |
| PCS-Dynac | BAR | Brooks AFB REUSE | 8300 Challenger Dr, San Antonio, TX 78235 | PZ0890 | | | Modicon Compact | | |
| PCS-Dynac | BCP | Brooks City PP | 8030 Challenger Dr, San Antonio, TX 78235 | PZ0828 | | | Modicon Compact | | |
| PCS-Dynac | BUC | Buckeye PP | 4999 Buckeye Ave, San Antonio, TX 78213 | PZ0994 | | | Modicon Compact | | |
| PCS-Dynac | B10 | Buckhorn 10 WELL | 871 CR 123, #10, Nixon, TX 78140 | PZ1060 | | | Modicon M340 | | |
| PCS-Dynac | B14 | Buckhorn 14 WELL | 1303 CR 123, #14, Nixon, TX 78140 | PZ1060 | | | Modicon M340 | | |
| PCS-Dynac | B15 | Buckhorn 15 WELL | 979 CR 179, #15, Nixon, TX 78140 | PZ1060 | | | Modicon M340 | | |
| PCS-Dynac | B02 | Buckhorn 2 WELL | 3875 CR 132, #2, Nixon, TX 78140 | PZ1060 | | | Modicon M340 | | |
| PCS-Dynac | B05 | Buckhorn 5 WELL | 3874 CR 132, #5, Nixon, TX 78140 | PZ1060 | | | Modicon M340 | | |
| PCS-Dynac | B06 | Buckhorn 6 WELL | 234 CR 152, #6 Bebe, TX 78603 | PZ1060 | | | Modicon M340 | | |
| PCS-Dynac | B07 | Buckhorn 7 WELL | 979 CR 179, #7, Nixon, TX 78140 | PZ1060 | | | Modicon M340 | | |
| PCS-Dynac | B08 | Buckhorn 8 WELL | 979 CR 179, #8, Nixon, TX 78140 | PZ1060 | | | Modicon M340 | | |
| PCS-Dynac | B09 | Buckhorn 9 WELL | 979 CR 179, #9, Nixon, TX 78140 | PZ1060 | | | Modicon M340 | | |
| PCS-Dynac | BWM | Buckhorn Wells WELL | 979 CR 179, Nixon, TX 78140 | PZ1060 | | | Modicon M340 | | |
| PCS-Dynac | BUR | Burnett PP | 798 N Olive St, San Antonio, TX 78202 | PZ0930 | PZ0994 | | Modicon Compact | | |
| PCS-Dynac | CAL | Callaghan PP | 8990 Callaghan Rd, San Antonio, TX 78230 | PZ1111 | | | Modicon Compact | | |
| PCS-Dynac | CAT | Callaghan TANK | 7018 Callaghan Rd, San Antonio, TX 78229 | PZ1111 | | | Modicon Compact | | |
| PCS-Dynac | CAR | Carson Homes PP | 1420 Norfleet St, San Antonio, TX 78208 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | CBT | Cibolo TANK | 23003 Treemont Park, San Antonio, TX 78261 | PZ1258 | | | Modicon M340 | | |
| PCS-Dynac | CTR | Coliseum REUSE | 703 AT&T Center Parkway, San Antonio, TX 78219 | N/A | | | Modicon Compact | | |
| PCS-Dynac | CLN | Colonies North PP | 9900 Tioga Dr, San Antonio, TX 78230 | PZ1111 | | | Modicon Compact | | |
| PCS-Dynac | CCR | Convention Center REUSE | 1001 E. Market St, San Antonio, TX 78205 | PZ0890 | | | Modicon Compact | | |
| PCS-Dynac | CRP | Crescent Park BSTR | 180 Dominion Dr, San Antonio, TX 78257 | PZ1618 | | | Modicon M340 | | |
| PCS-Dynac | CRS | Cross Mountain TANK | 8719 San Fidel Way, San Antonio, TX 78255 | PZ1610 | | | Modicon M340 | | |
| PCS-Dynac | CRO | Crossroads PP | 207 Crossroads Blvd, Balcones Heights, TX 78201 | PZ0994 | | | Modicon Compact | | |
| PCS-Dynac | CUL | Culebra PRM | 15002 Geronimo Loop, San Antonio, TX 78254 | PZ1170W | | | Modicon M340 | | |
| PCS-Dynac | DAH | Dahlgreen PRV | 2786 Dahlgreen Ave, San Antonio, TX 78237 | PZ0930 | | | CompactLogix | | |
| PCS-Dynac | DEL | Dellcrest PP | 5058 Mary Diane Dr, San Antonio, TX 78220 | PZ0828 | | | Modicon Compact | | |
| PCS-Dynac | DTR | Devine REUSE | 643 E Hildebrand Ave San Antonio, TX 78212 | PZ0890 | | | Modicon Compact | | |
| PCS-Dynac | DOM | Dominion BSTR | 27 Devon Wood, San Antonio, TX 78256 | PZ1518 | | | Modicon Compact | | |
| PCS-Dynac | DRR | Dos Rios REUSE | 3495 Valley Rd, San Antonio, TX 78221 | PZ0660 | | | Modicon Compact | | |
| PCS-Dynac | DRH | Dreamhill PP | 4916 Betty Lou Dr, San Antonio, TX 78229 | PZ1111 | | | Modicon Compact | | |
| PCS-Dynac | DRM | Dreamhill SCND | 2030 Babcock Rd, San Antonio, TX 78229 | PZ1170 | | | Modicon Compact | | |
| PCS-Dynac | DWR | Dwyer TANK | 7033 Sun Valley Dr, San Antonio, TX 78227 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | EDN | Eden PP | 3521 Thousand Oaks, San Antonio, TX 78247 | PZ0994 | | | Modicon Compact | | |
| PCS-Dynac | ENS | Encino BSTR | 19754 US-281, San Antonio, TX 78258 | PZ1258 | | | Modicon Compact | | |
| PCS-Dynac | ENP | Encino PP | 19928 Park Ranch, San Antonio, TX 78259 | PZ1125 | | | Modicon Compact | | |
| PCS-Dynac | EVN | Evans BSTR | 22401 Bulverde Road, San Antonio, TX 78261 | PZ1125 | PZ1258 | PZ1400 | Modicon M340 | | |
| PCS-Dynac | FAR | Fair PP | 607 Fair Ave, I San Antonio, TX 78223 | PZ0828 | | | Modicon M340 | | |
| PCS-Dynac | FRV | Fischer PRV | 10999 Fischer Rd, Von Ormy, TX 78073 | PZ0930 | PZ0750 | | Modicon M340 | | |
| PCS-Dynac | FIV | Five Palms PP | 6341 Five Palms Dr, San Antonio, TX 78242 | PZ0930 | | | Modicon M340 | | |
| PCS-Dynac | FCB | Forest Crest BSTR | 20940 E Tejas Trail, San Antonio TX 78257 | PZ1494 | | | Modicon Compact | | |
| PCS-Dynac | FST | Foster PP | 3159 N Foster Rd, San Antonio, TX 78244 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | FOS | Foster TANK | 7420 I-10 Frontage Rd, San Antonio, TX 78219 | PZ0828 | | | Modicon M340 | | |
| PCS-Dynac | FRR | Fredricksburg REUSE | 4901 Gus Eckert Lane, San Antonio, TX 78240 | PZ1110 | | | Modicon Compact | | |
| PCS-Dynac | GAT | Gateway SCND | 6615 Rustleaf Dr, San Antonio, TX 78242 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | GEN | General McMullen Ruiz TANK | 3111 Ruiz St, San Antonio, TX | PZ0828 | | | Modicon M340 | | |
| PCS-Dynac | GRN | Greenbriar PP | 8001 Pinebrook Dr, San Antonio, TX 78230 | PZ1111 | | | Modicon Compact | | |
| PCS-Dynac | GRT | Grissom TANK | 7723 Grissom Rd, San Antonio, TX 78251 | PZ0994 | | | Modicon Compact | | |
| PCS-Dynac | GWN | Growdon NPBSTR | 3525 Growdon Rd, San Antonio, TX 78227 | N/A | | | Modicon Compact | | |
| PCS-Dynac | GUL | Guilbeau PP | 9088 Guilbeau Rd, San Antonio, TX 78250 | PZ1111 | | | Modicon M340 | | |
| PCS-Dynac | HAR | Harmony Hills PP | 503 Tammy Dr, San Antonio, TX 78216 | PZ1111 | | | Modicon Compact | | |
| PCS-Dynac | WC1 | Helotes Park 1 BSTR | 13955 Antonio Dr, Helotes, TX 78023 | PZ1201 | | | Modicon Compact | | |
| PCS-Dynac | WC2 | Helotes Park 2 TANK | 14007 Flying W Trail, Helotes, TX 78023 | PZ1201 | | | Modicon Compact | | |

SAWS Production Control System Remote Site Listing
Water and Recycle Sites

| Current System | Site ID | Site Name | Address | HGL1 | HGL2 | HGL3 | PLC1 | PLC2 | PLC3 |
|----------------|---------|-----------------------|--|---------|--------|--------|-----------------|-----------------|------|
| PCS-Dynac | HCK | Hickory Hollow TANK | 23110 Little Walnut Dr, San Antonio, TX 78264 | PZ0830 | | | Modicon M340 | | |
| PCS-Dynac | HIG | Highland TANK | 1323 Vanderbilt, San Antonio, TX 78210 | PZ0828 | | | Modicon Compact | | |
| PCS-Dynac | H90 | Highway 90 E. PP | 8689 IH-10 E, San Antonio, TX 78204 | PZ0828 | | | Modicon Compact | | |
| PCS-Dynac | HLD | Hildebrand TANK | 643 E. Hildebrand Ave, San Antonio, TX 78212 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | HIL | Hills BSTR | 15659 Babcock Rd, San Antonio, TX 78255 | PZ1400W | | | Modicon Compact | | |
| PCS-Dynac | HLT | Hills TANK | 16015 Oak Grove Dr, San Antonio, TX 78255 | PZ1170 | | | Modicon Compact | | |
| PCS-Dynac | HSR | Houston Street REUSE | 3930E Houston St, San Antonio, TX 78220 | PZ0890 | | | Modicon Compact | | |
| PCS-Dynac | HUN | Hunt PP | 2820 Hunt Ln, San Antonio, TX 78245 | PZ1111 | | | Modicon Compact | | |
| PCS-Dynac | ITB | IH10 BSTR | 17202 I-10, San Antonio, TX 78257 | PZ1400W | PZ1170 | | Modicon Compact | | |
| PCS-Dynac | ITW | IH10 West PRV | 17202 W IH 10, San Antonio, TX 78249 | PZ1610 | PZ1545 | | Modicon M340 | | |
| PCS-Dynac | IHB | Indian Hills BSTR | 8461 Indian Hills Ln, Boerne, TX 78006 | PZ1610 | | | Modicon M340 | | |
| PCS-Dynac | IST | Indian Springs TANK | 26120 Smithson Valley Rd, San Antonio, TX 78261 | PZ1400E | | | Modicon M340 | | |
| PCS-Dynac | ING | Ingram PP | 5312 Benrus Blvd, San Antonio, TX 78228 | PZ0994 | | | Modicon Compact | | |
| PCS-Dynac | IPR | Inspiration TANK | 4127 Willowbrook Dr San Antonio, TX 78228 | PZ0994 | | | Modicon Compact | | |
| PCS-Dynac | INW | Inwood BSTR | 2051 W. Bitters Rd, San Antonio, TX 78248 | PZ1170 | | | Modicon Compact | | |
| PCS-Dynac | JPR | James Park REUSE | 3940 Rittiman Rd, San Antonio, TX 78218 | PZ0890 | | | Modicon Compact | | |
| PCS-Dynac | JSR | Josephine REUSE | 101 E Josephine St San Antonio, TX 78215 | PZ0890 | | | Modicon Compact | | |
| PCS-Dynac | JSR | Judson PP | 13945 Judson Rd, San Antonio, TX 78233 | PZ1125 | | | Modicon Compact | | |
| PCS-Dynac | JDB | Judson TANK | 5330 Stahl Rd, San Antonio, TX 78247 | PZ1125 | | | Modicon Compact | | |
| PCS-Dynac | JUN | Jung PP | 4283 Jung Rd, San Antonio, TX 78247 | PZ1060 | | | Modicon Compact | | |
| PCS-Dynac | KLS | Klaus SCND | 2660 Eisenhauer Rd, San Antonio, TX 78209 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | LLV | Lackland AFB PRV | Kelly USA Bldg 314, San Antonio, TX 78236 | PZ0930 | PZ0846 | | Modicon M340 | | |
| PCS-Dynac | LC3 | Lackland City 3 SCND | 531 Ravenswood Dr, San Antonio, TX 78227 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | LLR | Lackland City REUSE | Lackland Air Force Base (Bong & Truemper), San Antonio, TX 78236 | PZ0820 | | | Modicon Compact | | |
| PCS-Dynac | LCR | Leon Creek REUSE | 1105 Mauermann Rd, San Antonio, TX 78224 | PZ0680 | | | Modicon Compact | | |
| PCS-Dynac | LNS | Lions TANK | 527 Kashmuir Pl, San Antonio, TX 78223 | PZ0828 | | | Modicon Compact | | |
| PCS-Dynac | LKH | Lockhill TANK | 11211 Brazil, San Antonio, TX 78213 | PZ1111 | | | Modicon Compact | | |
| PCS-Dynac | LOC | Locust PP | 198 E Locust St, San Antonio, TX 78212 | PZ0828 | | | Modicon Compact | | |
| PCS-Dynac | LLS | Loma Linda SCND | 5218 Loma Linda Dr, San Antonio, TX 78201 | PZ0994 | | | Modicon Compact | | |
| PCS-Dynac | LRC | Los Reyes Canyon BSTR | 16168 Revello Drive, Helotes, TX 78023 | PZ1450 | | | Modicon Compact | | |
| PCS-Dynac | MAL | Maltsberger PRM | 8910 Jones Maltberger Rd, San Antonio, TX 78216 | PZ0994 | | | Modicon M340 | CompactLogix | |
| PCS-Dynac | MB1 | Marbach 1 PRM | 7614 Marbach Rd, San Antonio, TX 78227 | PZ0930 | | | Modicon M340 | CompactLogix | |
| PCS-Dynac | MKT | Market PRM | 106 W. Market St, San Antonio, TX 78205 | PZ0828 | | | Modicon Compact | | |
| PCS-Dynac | MDB | Medical BSTR | 8311 Fredricksberg Rd, San Antonio, TX 78229 | PZ1170 | | | Modicon Compact | | |
| PCS-Dynac | MDP | Medical Center PP | 7710 Ewing Halsell Dr, San Antonio, TX 78229 | PZ1170 | | | Modicon Compact | | |
| PCS-Dynac | MCW | Medio Creek REUSE | 2231 Hunt Lane, San Antonio, TX 78227 | PZ1050 | PZ0820 | | Modicon M340 | | |
| PCS-Dynac | MGR | Menger TANK | 4842 Vance Jackson Rd, San Antonio, TX 78230 | PZ0994 | | | Modicon Compact | | |
| PCS-Dynac | MER | Mertz PP | 8501 Mertz Dr, San Antonio, TX 78216 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | MIC | Micron PRM | 7203 Micron Dr, San Antonio, TX 78251 | PZ0994 | PZ1111 | | Modicon Quantum | | |
| PCS-Dynac | MHW | Military PRV | 10900 Military Dr, San Antonio, TX 78251 | PZ1111 | PZ1044 | | Modicon M340 | | |
| PCS-Dynac | MSN | Mission PRM | 615 E. Theo Pkwy, San Antonio, TX 78210 | PZ0828 | | | Modicon Quantum | | |
| PCS-Dynac | MON | Montgomery PRV | 6510 Calle Briseno (Montgomery Rd), San Antonio, TX 78252 | PZ0950W | PZ0855 | | CompactLogix | | |
| PCS-Dynac | NAB | NACO-AB PRM | 13655 O'Connor Rd, San Antonio, TX 78233 | PZ0994 | PZ1060 | PZ1125 | Modicon M340 | | |
| PCS-Dynac | NWW | New World TANK | 9623 New World Dr, San Antonio, TX 78239 | PZ0950E | PZ1060 | | SCADAPack | Modicon M340 | |
| PCS-Dynac | NRT | Northridge TANK | 2705 Albin Dr, San Antonio, TX 78209 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | NRS | Northwood SCND | 2319 Kenilworth Blvd, San Antonio, TX 78209 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | MIL | NW Military PP | 4091 NW Military Hwy (HEB back driveway), San Antonio, TX 78231 | PZ1170 | | | Modicon M340 | | |
| PCS-Dynac | OCK | Oak Creek PP | 2520 W FM 1604, Mertens, TX 76666 | PZ1111 | | | Modicon Compact | | |
| PCS-Dynac | OKW | Oakway PP | 4827 Oakway Dr, San Antonio, TX 78228 | PZ1111 | | | Modicon Compact | | |
| PCS-Dynac | OPP | Old Pearsall BSTR | 6841 Old Pearsall Rd, San Antonio, TX 78252 | PZ0930 | | | Modicon M340 | | |
| PCS-Dynac | ORR | Oliver Ranch BSTR | 26293 US-281 NE, San Antonio, TX 78260 | PZ1400E | | | Modicon Compact | Modicon Compact | |
| PCS-Dynac | PAT | Palo Alto TANK | 473 Palo Alto Dr, Von Ormy, TX 78073 | PZ0830 | | | Modicon M340 | | |
| PCS-Dynac | PKN | Park North PP | 4530 Schertz Rd, San Antonio, TX 78233 | PZ1060 | | | Modicon Compact | | |
| PCS-Dynac | PRR | Pearsall Road REUSE | 4820 Pearsall Rd, San Antonio, TX 78242 | PZ0680 | | | Modicon Compact | | |
| PCS-Dynac | PHS | Phylis PP | 321 Phyllis St, San Antonio, TX 78225 | PZ0828 | | | Modicon Compact | | |
| PCS-Dynac | PIR | Pinn REUSE | 8290 Military Dr W, San Antonio, TX 78251 | PZ0820 | PZ1050 | PZ1110 | Modicon Compact | | |
| PCS-Dynac | PMS | Pipers Meadow PRM | 7721 Joe Newton St, San Antonio, TX 78251 | PZ0994 | | | Modicon Compact | | |
| PCS-Dynac | PST | Pipestone TANK | 2310 Pipestone Dr, San Antonio, TX 78232 | PZ0994 | | | Modicon Compact | | |

SAWS Production Control System Remote Site Listing
Water and Recycle Sites

| Current System | Site ID | Site Name | Address | HGL1 | HGL2 | HGL3 | PLC1 | PLC2 | PLC3 |
|----------------|---------|----------------------|---|---------|---------|--------|-----------------|-----------------|--------------|
| PCS-Dynac | PRU | Prue PP | 5334 Prue Rd, San Antonio, TX 78240 | PZ1170 | PZ1111 | | Modicon M340 | | |
| PCS-Dynac | PYR | Pyron PP | 360 E Pyron Rd, San Antonio, TX 78214 | PZ0828 | | | Modicon Compact | | |
| PCS-Dynac | QIC | Qunitana PRV | 10901 Fischer Rd, Von Ormy, TX 78073 | PZ0930 | PZ710 | | Modicon M340 | | |
| PCS-Dynac | RT2 | Ranch Town 2 BSTR | 11598 Lago Vista, Helotes, TX 78023 | PZ1610W | | | Modicon Compact | | |
| PCS-Dynac | RAN | Randolph PRM | 212 S Weidner Rd, San Antonio, TX 78233 | PZ0930 | PZ1060 | OC0010 | Modicon Compact | Modicon Compact | |
| PCS-Dynac | RED | Redland BSTR | 19702 US HWY 281, San Antonio, TX 78258 | PZ1125 | PZ1060 | | Modicon Compact | | |
| PCS-Dynac | RIV | Rivas PP | 1160 Rivas St, San Antonio, TX 78207 | PZ0828 | | | Modicon Compact | | |
| PCS-Dynac | RSR | Riverside REUSE | 203 McDonald, San Antonio, TX 78210 | PZ0890 | | | Modicon Compact | | |
| PCS-Dynac | RFT | Roft Road BSTR | 12560 Rockwall Mill, San Antonio, TX 78253 | PZ1258W | PZ1170W | | Modicon Compact | | |
| PCS-Dynac | RVA | Roosevelt PRV | 299 Lorita Dr, San Antonio, TX 78214 | PZ0828 | PZ0750 | | Modicon M340 | | |
| PCS-Dynac | SAL | Salado BSTR | 18450 Rogers Bend, San Antonio, TX 78258 | PZ1111 | PZ1400W | PZ1295 | Modicon Compact | | |
| PCS-Dynac | SSE | Sasse BSTR | 6515 West Queens Crown, San Antonio, TX 78233 | PZ1125 | PZ1060 | | Modicon Compact | | |
| PCS-Dynac | SPP | Schertz BSTR | 1744 Schertz Parkway, Schertz, TX, 78154 | PZ1060 | | | Modicon M340 | | |
| PCS-Dynac | SEL | Seale PRM | 254 Seale Rd, San Antonio, TX 78219 | PZ0930 | | | Modicon Compact | Modicon Compact | |
| PCS-Dynac | SEW | Sewer Plant PP | 1600 Rilling Rd, San Antonio, TX 78214 | PZ0750 | | | Modicon Compact | | |
| PCS-Dynac | SHR | Shearer Hills PP | 318 Oblate Dr, San Antonio, TX 78216 | PZ0994 | | | Modicon M340 | | |
| PCS-Dynac | SHB | Shields BSTR | 7645 Heuermann Road, San Antonio, TX 78256 | PZ1610 | | | Modicon Quantum | | |
| PCS-Dynac | SIG | Sigma Drive PP | 18598 Sigma Rd, San Antonio, TX 78258 | PZ1258 | PZ1111 | | Modicon M340 | | |
| PCS-Dynac | SMT | Silver Mountain BSTR | 2111 Silver Mountain Dr, San Antonio, TX 78264 | PZ0830 | PZ0900 | | Modicon Compact | | |
| PCS-Dynac | FRT | South Foster TANK | 2727 S Foster Rd, San Antonio, TX 78220 | PZ0828 | | | Modicon Compact | | |
| PCS-Dynac | SLP | South Loop 1604 PP | S Loop 1604 & IH37 S, San Antonio, TX 78264 | PZ0750 | | | Modicon M340 | | |
| PCS-Dynac | SET | Southeast BSTR | 1144 S Loop 1604 W, San Antonio, TX 78264 | PZ0830 | PZ0750 | | Modicon Compact | | |
| PCS-Dynac | SRW | Stein Ranch WELL | 18999 Huebner Rd, San Antonio, TX 78258 | PZ1111 | | | Modicon M340 | | |
| PCS-Dynac | L1R | Stotzer REUSE | 5025 TX 1604 Loop, San Antonio, TX 78253 | PZ1050 | | | Modicon Compact | | |
| PCS-Dynac | SUG | Summerglen PP | 1550 Palmer View, San Antonio, TX 78260 | PZ1400E | | | Modicon Compact | | |
| PCS-Dynac | SSB | Sunset BSTR | 11045 TX-1604 Loop, San Antonio, TX 78254 | PZ1111 | PZ1170 | | Modicon Compact | | |
| PCS-Dynac | SUN | Sunshine SCND | 1929 St Cloud, San Antonio, TX 78228 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | SUT | Sutton SCND | 938 Sutton Dr, San Antonio, TX 78228 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | LAF | SW Military PRV | 4936 Southwest Military Drive, San Antonio, TX 78242 | PZ0930 | PZ846 | | CompactLogix | | |
| PCS-Dynac | TRH | Terrell PP | 407 Terrell Rd., Terrell Hills, TX 78209 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | OAK | Thousand Oaks PP | 16616 San Pedro Ave, San Antonio, TX 78232 | PZ1111 | | | Modicon Compact | | |
| PCS-Dynac | TRV | Towerview BSTR | 10102 Rafter S Trail, Helotes, TX 78023 | PZ1530 | | | Modicon Compact | | |
| PCS-Dynac | TRV | Toyota North Gate PP | 15203 Applewhite Rd, San Antonio, TX 78264 | PZ0750 | | | Modicon Compact | | |
| PCS-Dynac | TSR | Tuleta REUSE | 102 Tuleta Dr, San Antonio, TX 78209 | PZ0890 | | | Modicon Compact | | |
| PCS-Dynac | TC2 | Turtle Creek 2 PRM | 8523 Datapoint Dr, San Antonio, TX 78229 | PZ1170 | | | Modicon Compact | | |
| PCS-Dynac | TC3 | Turtle Creek 3 SCND | 6 Bluffdale Dr, San Antonio, TX 78229 | PZ1170 | | | Modicon Compact | | |
| PCS-Dynac | UNI | University BSTR | 7050 W. Hausman Rd, San Antonio, TX 78249 | PZ1170 | | | Modicon M340 | | |
| PCS-Dynac | VAL | Valley Road PP | 2683 Valley Rd, San Antonio, TX 78221 | PZ0750 | | | Modicon Compact | | |
| PCS-Dynac | WVV | W.W. White PRV | 7200 S WW White Rd, San Antonio, TX 78222 | PZ0828 | PZ0750 | | Modicon Compact | | |
| PCS-Dynac | WLB | Walden BSTR | 6601 Legend Ln, San Antonio, TX 78256 | PZ1536 | | | Modicon Compact | | |
| PCS-Dynac | WLZ | Walzem SCND | 127 Newport Dr, San Antonio, TX 78218 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | B72 | Waterwood TANK | 22614 Shady Forest Dr, Elmendorf, TX 78112 | PZ0730 | | | SCADAPack | | |
| PCS-Dynac | WET | Watson TANK | 10202 Horn Blvd, San Antonio, TX 78240 | PZ0750 | | | Modicon M340 | | |
| PCS-Dynac | WLT | Wayland TANK | 5994 Randolph Blvd, San Antonio, TX 78233 | PZ0930 | | | Modicon Quantum | | |
| PCS-Dynac | WLP | West Loop 1604 PRV | 1841 W Loop 1604, San Antonio, TX 78251 | PZ1111 | PZ1044 | | Modicon M340 | | |
| PCS-Dynac | WLA | Wildlake PP | Wildlake Blvd & Lago Vista, Helotes, TX 78023 | PZ1400W | | | Modicon M340 | | |
| PCS-Dynac | WSR | Willow Springs REUSE | 703 AT&T Center Parkway, San Antonio, TX 78219 | PZ0890 | | | Modicon Compact | | |
| PCS-Dynac | WIL | Wiltshire Estates PP | 4336 Renault Dr, San Antonio, TX 78218 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | WIN | Winchester BSTR | 2560 Marshall Rd, San Antonio, TX 78259 | PZ1400 | | | Modicon Compact | | |
| PCS-Dynac | WWD | Winwood BSTR | 28555 Frontage Rd, Boerne, TX 78006 | PZ1610 | | | Modicon Quantum | | |
| PCS-Dynac | WLK | Woodlake SCND | 6663 FM78, San Antonio, TX 78244 | PZ0930 | | | Modicon Compact | | |
| PCS-Dynac | WLG | Woodland Green PRV | 275055 Woodland Green Boerne & Bowmans Ln, Boerne, TX 78015 | PZ1610 | PZ1545 | | Modicon M340 | | |
| PCS-Dynac | WUR | Wurzbach PRM | 6111 Wurzbach Rd, San Antonio, TX 78238 | PZ0994 | PZ1111 | | CompactLogix | Modicon M340 | Modicon M340 |

SAWS Production Control System Remote Site Listing
Lift Station Sites

| Current System | Site ID | Site Name | Address | Sewershed | PLC1 | PLC2 | PLC3 |
|----------------|---------|------------------------------|--|-----------------------|-----------------|------|------|
| PCS-Dynac | 38S | 38th Street LS 248 | 1033 SW 38th St, San Antonio, TX 78237 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | ACE | Acequia Park LS 172 | 8600 Mission Parkway, San Antonio, TX 78214 | Dos Rios | Modicon M340 | | |
| PCS-Dynac | AOL | Afton Oaks LS 121 | 620 E Afton Oaks Blvd, San Antonio, TX 78232 | Salado Creek | CompactLogix | | |
| PCS-Dynac | ALM | Alamo Dome LS 190 | 127 Gonzales St, San Antonio, TX 78206 | Dos Rios | CompactLogix | | |
| PCS-Dynac | ALB | Alamo Ranch B LS 281 | 13006 Salt Fork, San Antonio, TX 78253 | Medio Creek | CompactLogix | | |
| PCS-Dynac | ARC | Alamo Ranch C LS 291 | 11506 Segovia Way, San Antonio, TX 78253 | Medio Creek | Modicon M340 | | |
| PCS-Dynac | ALR | Alamo Ranch LS 258 | 11860 Thoroughbred Tr, San Antonio, TX 78253 | Medio Creek | CompactLogix | | |
| PCS-Dynac | BDL | Bandera LS 287 | 15795 Far Reaches Lane, Helotes, TX 78023 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | BSL | Bascum LS 052 | 610 Barberrry St, San Antonio, TX 78221 | Dos Rios | CompactLogix | | |
| PCS-Dynac | BBL | Bitter Blue LS 273 | 28194 Bulverde Rd, San Antonio, TX 78260 | Dos Rios-East | Modicon M340 | | |
| PCS-Dynac | BLC | Bluffs of Lost Creek LS 266 | 7514 Camino Manor, Boerne TX 78015 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | BOE | Boerne Stage LS 275 | 29473 Interstate 10 West Frontage Rd, Boerne TX 78006 | Leon Creek | CompactLogix | | |
| PCS-Dynac | BKR | Braun LS 144 | 9120 Braun Rd, San Antonio, TX 78254 | Leon Creek | CompactLogix | | |
| PCS-Dynac | BRI | Brighton Oaks LS 208 | 2544 Brighton Oaks, San Antonio, TX 78231 | Dos Rios | Modicon M340 | | |
| PCS-Dynac | CWL | Carowinds LS 205 | 9803 Carowinds, San Antonio, TX 78251 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | CHL | Champions LS 150 | 1701 Cactus Bluff, San Antonio, TX 78258 | Salado Creek | CompactLogix | | |
| PCS-Dynac | CHR | Champions Ridge LS 270 | 127 Champions Bend, San Antonio, TX 78258 | Dos Rios-Central | Modicon M340 | | |
| PCS-Dynac | CVX | Chavaneaux LS 057 | 9702 Ruidosa St, San Antonio, TX 78214 | Dos Rios | Modicon M340 | | |
| PCS-Dynac | CBA | Cibolo A LS 288 | 7620 Elegante Way, San Antonio, TX 78266 | Dos Rios-East | CompactLogix | | |
| PCS-Dynac | CBB | Cibolo B LS 289 | 7228 Loop 1604 E Access Rd, San Antonio, TX 78247 | Dos Rios-East | CompactLogix | | |
| PCS-Dynac | CMC | Commercial Chavaneaux LS 074 | 713 W Chavaneaux Rd, San Antonio, TX 78221 | Dos Rios | Modicon M340 | | |
| PCS-Dynac | COR | Corner Stone LS 162 | 5308 Dietrich Rd, San Antonio, TX 78219 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | COS | Costco LS 231 | 1321 N Loop 1604 E, San Antonio, TX 78247 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | CBL | Cresta Bella LS 271 | 20029 Interstate 10 Frontage Rd, San Antonio, TX 78257 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | ERL | Elkhorn Ridge LS 284 | 29621 Elkhorn Ridge, Boerne TX, 78015 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | EPL | Encino Park LS 165 | 3098 Caliza Dr, San Antonio, TX78259 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | EDL | Espada LS 256 | 9590 Espada Rd, San Antonio, TX 78214 | Dos Rios-Central | CompactLogix | | |
| PCS-Dynac | FAL | Falcon Center LS 169 | 23490 Frontage Road, San Antonio, TX 78257 | Leon Creek | CompactLogix | | |
| PCS-Dynac | FLL | Falcon Landing LS 282 | 15323 Saber Point, San Antonio, TX 78253 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | FCL | Feathercrest LS 011 | 3847 Thousand Oaks, San Antonio, TX 78217 | Salado Creek | Modicon Compact | | |
| PCS-Dynac | FEL | Fiesta LS 126 | 96 Trailcrest St., San Antonio, TX 78232 | Salado Creek | CompactLogix | | |
| PCS-Dynac | FRL | Fossil Ridge LS 235 | 4515 E Evans Road, San Antonio, TX 78259 | Salado Creek | CompactLogix | | |
| PCS-Dynac | FML | Foster Meadows LS 156 | 3540 Eagle Creek, San Antonio, TX 78222 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | FOX | Fox Grove LS 236 | 21355 Branding Bay, San Antonio, TX 78259 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | FDM | Freedom Elementary LS 238 | 3845 S Loop 1604 E, San Antonio, TX 78264 | Dos Rios-South | Modicon M340 | | |
| PCS-Dynac | GCL | Gold Canyon LS 215 | 3000 Gold Canyon Rd, San Antonio, TX 78259 | Salado Creek | CompactLogix | | |
| PCS-Dynac | GAL | Golden Alumium LS 178 | 14500 Streich Rd, Elmendorf, TX 78112 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | GFL | Goldfield LS 023 | 4801 Goldfield, San Antonio, TX 78218 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | HMS | Harris Middle School LS 245 | 300 Cass Ave, San Antonio, TX 78204 | Dos Rios-Central | Modicon M340 | | |
| PCS-Dynac | HRL | Hausman LS 268 | 8111 W Hausman Rd, San Antonio, TX 78249 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | HCL | Heathers Cove LS 244 | 6243 Heathers Cove, San Antonio, TX 78227 | Medio Creek | CompactLogix | | |
| PCS-Dynac | HSO | Heights Of Stone Oak LS 252 | 25119 Estancia Cir, San Antonio, TX 78260 | Dos Rios-East | Modicon M340 | | |
| PCS-Dynac | HER | Heritage Elementary LS 221 | 3223 S Loop 1604 E, San Antonio, TX 78221 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | HHL | Hidden Heights LS 202 | 15802 Lofty Heights, Hill Country Village, TX 78232 | Salado Creek | CompactLogix | | |
| PCS-Dynac | HSL | Hills of Shaenfield LS 242 | 11103 Dublin Cir, San Antonio, TX 78254 | Leon Creek | CompactLogix | | |
| PCS-Dynac | HYH | Hollyhock LS 218 | 8886 Abe Lincoln, San Antonio, TX 78240 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | HB1 | Horseshoe Bend LS 210 | 5700 S Horseshoe Bend, San Antonio, TX 78228 | Dos Rios / Leon Creek | Modicon M340 | | |
| PCS-Dynac | IND | Indian Hills LS 148 | 91 Arrowhead Path, San Antonio, TX 78223 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | ISL | Indian Springs LS 263 | 25622 Rabbitbrush, San Antonio, TX 78261 | Dos Rios-East | Modicon M340 | | |
| PCS-Dynac | IRN | Iron Horse LS 233 | 10505 Parrigin Rd, Helotes TX 78023 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | LSI | La Sierra LS 206 | 19846 Fiesta Grande, San Antonio, TX 78256 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | LVL | Lago Vista LS 213 | 16737 Lago Vista, Helotes TX 78023 | Leon Creek | CompactLogix | | |

SAWS Production Control System Remote Site Listing
Lift Station Sites

| Current System | Site ID | Site Name | Address | Sewershed | PLC1 | PLC2 | PLC3 |
|----------------|---------|--------------------------------|--|-------------------------|-----------------|------|------|
| PCS-Dynac | LCL | Laurel Canyon LS 243 | 10220 Braun Rd, Helotes TX 78254 | Leon Creek | CompactLogix | | |
| PCS-Dynac | LHL | Legend Hills LS 147 | 7021 Washita Way, San Antonio, TX 78256 | Leon Creek | CompactLogix | | |
| PCS-Dynac | LPL | Legend Point LS 171 | 19103 Chuska Way, San Antonio, TX 78256 | Leon Creek | CompactLogix | | |
| PCS-Dynac | LIN | Lincoln Heights Park LS 164 | 41 Paddington Way, San Antonio, TX 78209 | Dos Rios | Modicon M340 | | |
| PCS-Dynac | LML | Lomas Verdes LS 255 | 9839 Via Ventana, San Antonio, TX (ZIP Code Unknown) | Dos Rios-East | CompactLogix | | |
| PCS-Dynac | LUB | Lubbock LS 004 | 237 E Lubbock, San Antonio, TX 78204 | Dos Rios | Modicon M340 | | |
| PCS-Dynac | MAH | Marshall Road LS 226 | 23710 US-281, San Antonio, TX 78264 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | MDN | Medio Creek LS xxx | 2230 Hunt Ln, San Antonio, TX 78227 | Medio Creek | Modicon M340 | | |
| PCS-Dynac | MSD | Mission Del Lago LS 192 | 10762 Pleasanton Rd, San Antonio, TX 78221 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | MFN | Mission Foundation LS 203 | 8706 Misson Rd, San Antonio, TX 78214 | Dos Rios | Modicon M340 | | |
| PCS-Dynac | MRL | Mission Reach LS 269 | 510 E Glenn Ave, San Antonio, TX 78204 | Dos Rios | CompactLogix | | |
| PCS-Dynac | MT1 | Mission Trail 1 LS 222 | 2321 E Chavaneaux, San Antonio, TX 78214 | Dos Rios | Modicon M340 | | |
| PCS-Dynac | MT2 | Mission Trail 2 LS 223 | 2759 Camino Coahuilteca, San Antonio, TX 78214 | Dos Rios | Modicon M340 | | |
| PCS-Dynac | MVL | Monte Viejo LS 241 | 8203 Monte Seco, San Antonio, TX 78223 | Dos Rios-East | CompactLogix | | |
| PCS-Dynac | MNL | Mountain Climb LS 247 | 11410 Mountain Climb, Helotes TX 78023 | Leon Creek | CompactLogix | | |
| PCS-Dynac | MCL | Mudd Creek LS 191 | 1701 Cactus Bluff, San Antonio, TX 78258 | Salado Creek | CompactLogix | | |
| PCS-Dynac | NIC | Nickel and Dime LS 230 | 13307 Babcock Rd, San Antonio, TX 78249 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | OTV | Octavia LS 234 | 4526 Sierra St, San Antonio, TX 78214 | Dos Rios | Modicon M340 | | |
| PCS-Dynac | PLS | Palo Alto LS 253 | 3706 Twining Dr, San Antonio, TX 78211 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | PEA | Pleasanton Farm LS 279 | 316 Pleasanton Cir, San Antonio, TX 78221 | Dos Rios-Central | CompactLogix | | |
| PCS-Dynac | PAL | Police Academy LS 170 | 10500 Pleasanton Rd, San Antonio, TX 78221 | Dos Rios | Modicon M340 | | |
| PCS-Dynac | PTL | Potranco LS 163 | 9765 Potranco Rd, San Antonio, TX 78251 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | PWL | Prestwick LS 016 | 5106 Ferrington Dr, Santy Antonio, TX 78223 | Dos Rios | Modicon M340 | | |
| PCS-Dynac | QRL | Quintana LS 262 | 815 Quintana Rd., San Antonio, TX 78211 | Dos Rios-Central | CompactLogix | | |
| PCS-Dynac | RIH | Ranch at Iron Horse LS 257 | 10950 Iron Spring, Helotes, TX 78023 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | RAV | Ravinia LS 240 | 19422 US HWY 281, San Antonio, TX 78258 | Dos Rios-East | Modicon M340 | | |
| PCS-Dynac | REL | Rittiman East LS 061 | 5201 Business Park, San Antonio, TX 78218 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | RSL | Riverstone LS 285 | 5508 Calaveras Way, San Antonio, TX 78253 | Medio Creek | Modicon M340 | | |
| PCS-Dynac | SRL | San Antonio Ranch LS 246 | 16597 Bandera Rd, Helotes, TX 78023 | Leon Creek | Modicon Compact | | |
| PCS-Dynac | SYL | Sanctuary LS 274 | 17888 Snowmass Mount, Helotes, TX 78023 | Leon Creek | CompactLogix | | |
| PCS-Dynac | SNL | Sewanee LS 020 | 1043 Sewanee St, San Antonio, TX 78210 | Dos Rios | Modicon Compact | | |
| PCS-Dynac | SHN | Shaenfield LS 237 | 9011 Shaenwest, San Antonio, TX 78254 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | SDL | Solana Ridge LS 251 | 7622 Covel Rd., San Antonio, TX 78252 | Medio Creek | CompactLogix | | |
| PCS-Dynac | SPR | South Presa LS 220 | 8534 S Presa St, San Antonio, TX 78223 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | SOH | Southside High School LS 239 | 1612 Martinez Losoya, San Antonio, TX 78221 | Dos Rios-South | Modicon M340 | | |
| PCS-Dynac | STR | Southton Road LS 180 | 13817 Southton Rd, San Antonio, TX 78223 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | SWH | Southwest High School LS 228 | 11914 Dragon Lane, San Antonio, TX 78252 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | SWM | Southwest Middle School LS 176 | 9620 SW Loop 410, San Antonio, TX 78242 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | SOL | Stone Oak LS 134 | 1026 Silver Knoll, San Antonio, TX 78258 | Salado Creek | CompactLogix | | |
| PCS-Dynac | SIH | Streich LS 179 | 14500 Southton Rd, Elmendorf, TX 78112 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | SSL | Sulfur Springs LS 261 | 6138 Pyrite Loop, San Antonio, TX 78222 | Dos Rios-East | CompactLogix | | |
| PCS-Dynac | TRE | Threadneedle LS 189 | 9603 Ray Ellison Rd, San Antonio, TX 78227 | Medio Creek | Modicon M340 | | |
| PCS-Dynac | TNL | Toyota North LS 250 | 15203 Applewhite Rd, San Antonio, TX 78264 | Leon Creek | CompactLogix | | |
| PCS-Dynac | TIL | Triana LS 276 | 10532 Cima Vista, Helotes, TX 78023 | Leon Creek | CompactLogix | | |
| PCS-Dynac | UOL | University Oaks LS 132 | 4738 Shavano Oak, San Antonio, TX 78249 | Dos Rios / Salado Creek | CompactLogix | | |
| PCS-Dynac | VAV | Valle Vista LS 035 | 4011 Valley Vista, San Antonio, TX 78242 | Dos Rios | Modicon M340 | | |
| PCS-Dynac | VYH | Valley Hi LS 188 | 874 New Valley Hi Dr, San Antonio, TX 78227 | Medio Creek | Modicon M340 | | |
| PCS-Dynac | VIL | Villa Espranza LS 211 | 2204 Calle Estrella, San Antonio, TX 78226 | Dos Rios | Modicon M340 | | |
| PCS-Dynac | VGB | Village of Bulverde LS 265 | 24514 Invitation Oak, San Antonio, TX 78261 | Dos Rios-East | Modicon M340 | | |
| PCS-Dynac | VIN | Vineyard LS 209 | 2303 N Loop 1604 W, San Antonio, TX 78258 | Salado Creek | Modicon M340 | | |
| PCS-Dynac | WGL | Walgreens LS 259 | 10003 W Loop 1604 N, San Antonio, TX 78254 | Leon Creek | CompactLogix | | |
| PCS-Dynac | WEW | Westwind West LS 280 | Saffron Rose, San Antonio, TX 78253 | Leon Creek | Modicon M340 | | |

SAWS Production Control System Remote Site Listing
Lift Station Sites

| Current System | Site ID | Site Name | Address | Sewershed | PLC1 | PLC2 | PLC3 |
|----------------|---------|------------------------------|--|---------------|-----------------|------|------|
| PCS-Dynac | WES | Westwinds LS 264 | 12402 Alstroemeria, San Antonio, TX 78253 | Leon Creek | CompactLogix | | |
| PCS-Dynac | WOD | Wood Glen LS 207 | 2401 Village Parkway, San Antonio, TX 78251 | Leon Creek | Modicon M340 | | |
| PCS-Dynac | WKL | Wooded Knoll LS 151 | 20303 Hardy Oak Blvd, San Antonio, TX 78258 | Salado Creek | CompactLogix | | |
| PCS-Dynac | ESL | Woods of Shavano East LS 102 | 14322 Indian Woods, San Antonio, TX 78249 | Dos Rios | Modicon Compact | | |
| PCS-Dynac | WSL | Woods of Shavano West LS 100 | 14626 Hidden Glen Woods, San Antonio, TX 78249 | Dos Rios | CompactLogix | | |
| PCS-Dynac | WOL | Wortham Oaks LS 260 | 5405 E Evans Rd, San Antonio, TX 78261 | Dos Rios-East | CompactLogix | | |

SAWS Production Control System Remote Site Listing
Odor Control Sites

| Current System | Site ID | Site Name | Address | PLC1 | PLC2 | PLC3 |
|----------------|---------|-----------------------------|---|--------------|-----------------|------|
| PCS-Dynac | 34O | 34th Street OC | 3700 Flagle St, San Antonio, TX 78237 | Modicon M340 | | |
| PCS-Dynac | CBO | Culberson OC | 490 Culberson Ave, San Antonio, TX 78225 | Modicon M340 | | |
| PCS-Dynac | ESO | East Side Service Center OC | 3930 E Houston St, San Antonio, TX 78220 | Modicon M340 | | |
| PCS-Dynac | HAO | Hart OC | 539 E Hart Ave San Antonio, TX 78214 | Modicon M340 | | |
| PCS-Dynac | HPO | Henderson Pass OC | 17691 Henderson Pass, San Antonio, TX 78232 | CompactLogix | | |
| PCS-Dynac | HTO | Hutchins OC | 1919 W Hutchins Pl, San Antonio, TX 78224 | Modicon M340 | | |
| PCS-Dynac | MTO | Mission Trails OC | 1515 Mission Rd, San Antonio, TX 78210 | Modicon M340 | | |
| PCS-Dynac | SCW | Salado OC | 13498 Blue Wing Rd, San Antonio, TX 78223 | Modicon M340 | Modicon Quantum | |

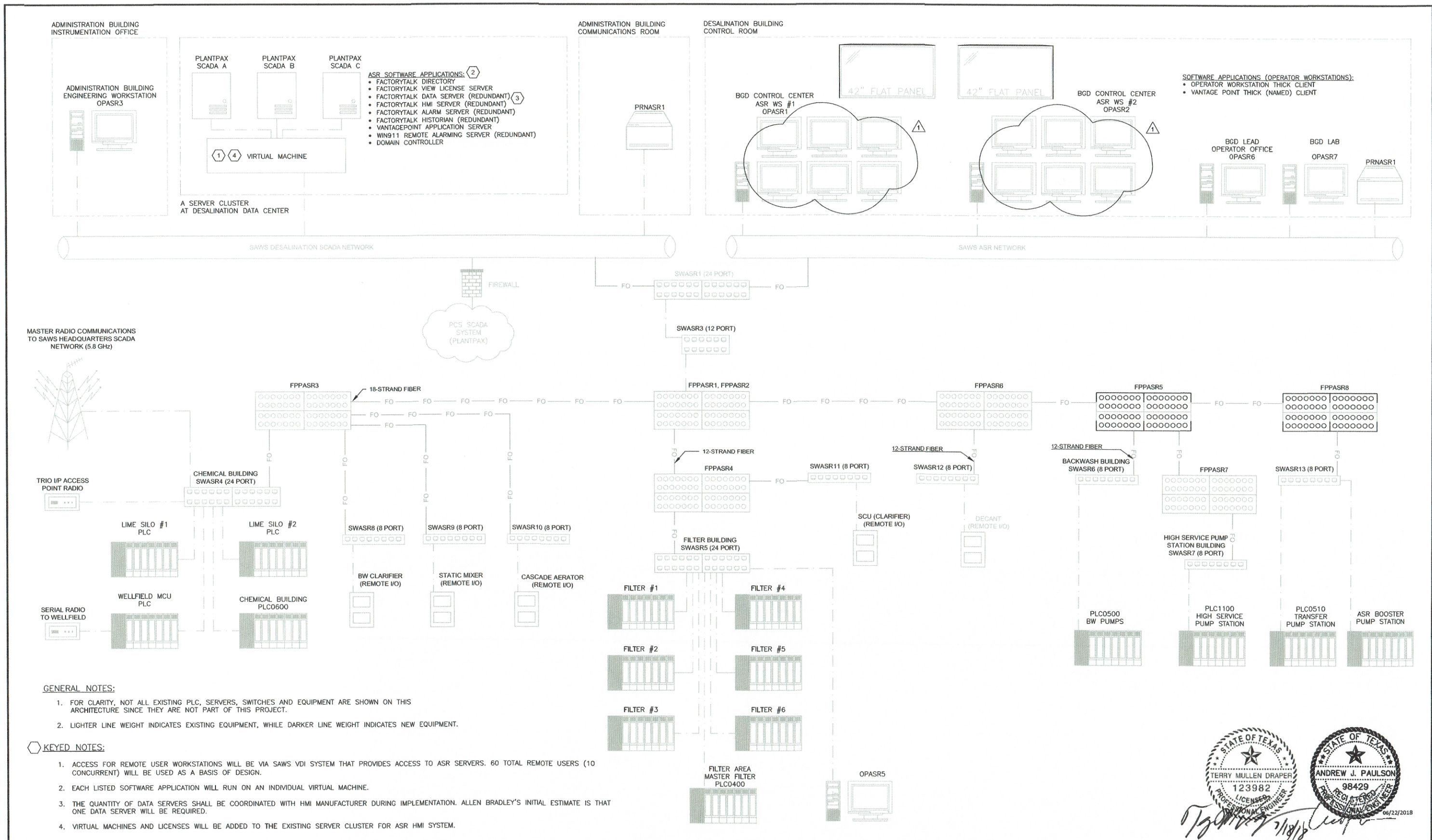
3.03 SCADA SCRIPTING DEVELOPMENT

- A. The existing PCS-DYNAC and PCS-ASR systems use scripting to accomplish mathematical calculations and limited peer to peer communications via the HMI.
- B. The development of the PlantPax system shall accomplish the functionality of the scripting by the most efficient means within the PlantPax software platform.
- C. The table below provides a summary of the types of scripts and quantities for the PCS-Dynac system.

| Type | Quantity of Script Type | Example HMI Sript Function | Example Formula |
|-------------------|-------------------------|--|---|
| HGL from Pressure | 197 | CALCULATES HGL FROM KNOWN PRESSURE HGL = Pressure (psig) x 2.31 + elevation 1 psi = 2.31 ftH2O | ARBPHGL = (ARBPI140 * 2.31) + 1130 |
| Tank/Resv HGL | 88 | CALCULATES TANK/RESV HGL HGL = Tank Height + Ground Elevation | WWIDTHGL = WWDLI120 + 1400 |
| MDG Conversion | 79 | GPM TO MGD CONVERSION MGD = (GPM x 1440 minutes per day)/1000000 | WURFI305 = (WURFI205 * 1440) / 1000000 |
| Totalizer | 76 | TOTALIZE FLOWS FOR STATISTICAL RECORDS | SL7WELL = WURWELL7 + AN1WELL |
| Sum Run | 35 | TOTAL FLOW FOR RUNNING PUMPS TOTAL = PUMPS RUNNING STATUS x FLOW RATE | SELWMFL = (SELMN102 * SELFI102) + (SELMN103 * SELFI103) + (SELMN104 * SELFI104) |
| Peer to Peer | 32 | SENDS A MEASURED LEVEL FROM ONE SITE AS SETPOINT TO ANOTHER SITE | LCRSET5→PRRSET5 |
| Heartbeat | 6 | HEARTBEAT (DO) | SUTHB001 |
| GPM Conversion | 3 | MGD TO GPM CONVERSION GPM = (MGD / 1440) x 1000000 | TC2GPM102 = (TC2FI102 / 1440) * 1000000 |
| Total: | 516 | | |

- D. The table below provides a summary of the types of scripts and quantities for the PCS-ASR system.

| Type | Quantity of Script Type | Example HMI Script Function | Example Formula |
|--------------------|-------------------------|--|---|
| Totalizer | 253 | Lime Metering Accumulate Runtime (MTD) | LMP1_MTD = LMP1_MTD + (HS0614 * .25), IF ((\$DAY = 1) AND (\$HOUR = 0) AND (\$MINUTE < 15)) THEN (LMP1_MTD = 0) |
| MGD Conversion | 63 | GPM TO MGD CONVERSION MGD = ((GPM x 1440 minutes per day)/1000000) | FIT1040_B2F1 = (FIT1040_B2F * 1440) / 1000000 |
| System Information | 34 | PLC STATUS | IF (FILTER1 = ONLINE) THEN (STAT_PLC0410 = ACTIVE) ELSE (STAT_PLC0410 = UNAVAIL) |
| Flow Calculation | 30 | SUMS WELL PRODUCTION FLOW, RECHARGE FLOW, AND BACKFLOW | WELL1_FLOW = FIT1010_BF + FIT1010_B2F + FIT1010_B1F |
| Set Point | 19 | SETS BACKWASH LOW FLOW SETPOINT EQUAL TO AN INDIVIDUAL FILTER'S LOW FLOW SETPOINT IF THAT FILTER'S "BW STEP" IS GREATER THAN OR EQUAL TO 1 | IF (FLT1_BW_STEP ≥ 1) THEN (F0476_SP = FLT1_BW_LRF_SP) ELSE (IF (FLT2_BW_STEP ≥ 1) ... THEN (F0476_SP = FLT6_BW_LRF_SP)))))))) |
| CL2 Reading | 11 | CL2 USED IN LAST HOUR | W0641_CL2_USED = W0641 — OLD_WEIGHT , OLD_WEIGHT = W0641 |
| Average | 9 | AVERAGES CURRENT TURBIDITY OF IN SERVICE FILTERS | FILTER_TURB = (A0410 + A0420 + A0430 + A0440 + A0450 + A0460) / (FLT1_SERV + FLT2_SERV + FLT3_SERV + FLT4_SERV + FLT5_SERV + FLT6_SERV) |
| Peer to Peer | 5 | RETRANSMITS ANALOG VALUE FROM BWP TO HSP | L1151→L1151C |
| Failure Alarm | 1 | BW Sequence Failure Alarm Relay | IF ((FLT1_BW_FAIL = ALARM) OR (FLT2_BW_FAIL = ALARM) ... OR (FLT2_BW_FAIL = ALARM)) THEN (BW_FAILURE = TRIP) ELSE (BW_FAILURE = NORMAL) |
| Total: | 425 | | |



- ASR SOFTWARE APPLICATIONS:**
- FACTORYTALK DIRECTORY
 - FACTORYTALK VIEW LICENSE SERVER
 - FACTORYTALK DATA SERVER (REDUNDANT)
 - FACTORYTALK HMI SERVER (REDUNDANT)
 - FACTORYTALK ALARM SERVER (REDUNDANT)
 - FACTORYTALK HISTORIAN (REDUNDANT)
 - VANTAGEPOINT APPLICATION SERVER
 - WIN911 REMOTE ALARMING SERVER (REDUNDANT)
 - DOMAIN CONTROLLER

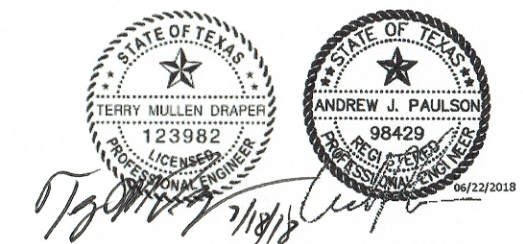
- SOFTWARE APPLICATIONS (OPERATOR WORKSTATIONS):**
- OPERATOR WORKSTATION THICK CLIENT
 - VANTAGE POINT THICK (NAMED) CLIENT

GENERAL NOTES:

1. FOR CLARITY, NOT ALL EXISTING PLC, SERVERS, SWITCHES AND EQUIPMENT ARE SHOWN ON THIS ARCHITECTURE SINCE THEY ARE NOT PART OF THIS PROJECT.
2. LIGHTER LINE WEIGHT INDICATES EXISTING EQUIPMENT, WHILE DARKER LINE WEIGHT INDICATES NEW EQUIPMENT.

KEYED NOTES:

1. ACCESS FOR REMOTE USER WORKSTATIONS WILL BE VIA SAWS VDI SYSTEM THAT PROVIDES ACCESS TO ASR SERVERS. 60 TOTAL REMOTE USERS (10 CONCURRENT) WILL BE USED AS A BASIS OF DESIGN.
2. EACH LISTED SOFTWARE APPLICATION WILL RUN ON AN INDIVIDUAL VIRTUAL MACHINE.
3. THE QUANTITY OF DATA SERVERS SHALL BE COORDINATED WITH HMI MANUFACTURER DURING IMPLEMENTATION. ALLEN BRADLEY'S INITIAL ESTIMATE IS THAT ONE DATA SERVER WILL BE REQUIRED.
4. VIRTUAL MACHINES AND LICENSES WILL BE ADDED TO THE EXISTING SERVER CLUSTER FOR ASR HMI SYSTEM.



| REVISIONS | | | | | | |
|-----------|------------------------|-----|-------|-------|-------|-------|
| No. | Description | AFE | Drawn | Date | Chk'd | Date |
| 1 | REVISED PER ADDENDUM 2 | | SS | 07/18 | AP | 07/18 |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| | | | | | |
|----------------------|----|-------|-------|--------------------|-----------------|
| Drawn by: | MT | Date: | 06/22 | Scale: | NONE |
| Checked by: | AP | Date: | 06/22 | Location: | SAN ANTONIO, TX |
| Project Engineer: | SS | Date: | 06/22 | SAWS CONTRACT NO.: | PS-00028-01 |
| Design Coordinator: | TD | Date: | 06/22 | Project Number: | 17017 |
| Engineering Manager: | HH | Date: | 06/22 | Sheet Name: | I-006 |



PRODUCTION CONTROL SYSTEM UPGRADE

PROPOSED ASR HMI SYSTEM ARCHITECTURE

Drawing File Name: I-006 PROPOSED SYSTEM ARCHITECTURE ASR.dwg Set Rev: 100P