

RFI # 2

1. On drawing PP-101 fixture schedule, it calls out a Lavatory P-422 and a water closet P-115. There is no additional information or description for these two fixtures. Specification section 22 40 00 only provides descriptions for Lavatory P-421 and a sink P-519. Please provide descriptions and/or basis of design for P-422 and P-115.

SECTION 22 40 00 PLUMBING FIXTURES

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Plumbing fixtures, associated trim and fittings necessary to make a complete installation from wall or floor connections to rough piping, and certain accessories.

1.2 RELATED WORK

- A. Sealing between fixtures and other finish surfaces: Section 07 92 00, JOINT SEALANTS.
- B. Section 22 05 11, COMMON WORK RESULTS FOR PLUMBING.

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Submit plumbing fixture information in an assembled brochure, showing cuts and full detailed description of each fixture.

1.4 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American National Standard Institute (ANSI):
The American Society of Mechanical Engineers (ASME):
A112.6.1M-02(R2008)Floor Affixed Supports for Off-the-Floor Plumbing
Fixtures for Public Use
A112.19.1M-08Enameled Cast Iron Plumbing Fixtures
A112.19.2M-03Vitreous China Plumbing Fixtures
A112.19.3-2001(R2008)Stainless Steel Plumbing Fixtures (Designed for
Residential Use)

- C. American Society for Testing and Materials (ASTM):
 - A276-2010Stainless and Heat-Resisting Steel Bars and Shapes
 - WW-P-541-E/GENPlumbing Fixtures with Amendment 1
- D. National Association of Architectural Metal Manufacturers (NAAMM): NAAMM AMP 500-505
Metal Finishes Manual (1988)
- E. American Society of Sanitary Engineers (ASSE):
 - 1016-05Performance Requirements for Individual
Thermostatic, Pressure Balancing and Combination
Pressure Balancing and Thermostatic Control Valves
for Individual Fixture Fittings
- F. NSF International (NSF)
 - NSF/ANSI 14 (2013).....Plastics Piping System Components and Related
Materials
 - NSF/ANSI 61 (2012).....Drinking Water System Components – Health Effects
 - NSF/ANSI 372 (2011).....Drinking Water System Components – Lead Content
- G. American with Disabilities Act (A.D.A) Section 4-19.4 Exposed Pipes and Surfaces
- H. Environmental Protection Agency EPA PL 93-523 1974; A 1999) Safe Drinking
Water Act.
- I. International Building Code, ICC IPC 2012.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Material or equipment containing a weighted average of greater than 0.25 percent lead shall not be used in any potable water system intended for human consumption, and shall be certified in accordance with NSF/ANSI 61 or NSF 372. Endpoint devices used to dispense water for drinking must meet the requirements of NSF/ANSI 61, Section 9.

2.2 STAINLESS STEEL

- A. Corrosion-resistant Steel (CRS):
 - 1. Plate, Sheet and Strip: CRS flat products shall conform to chemical composition requirements of any 300-series steel specified in ASTM A276.
 - 2. Finish: Exposed surfaces shall have standard polish (ground and polished) equal to NAAMM finish Number 4.

- B. Die-cast zinc alloy products are prohibited.

2.3 STOPS

- A. Provide lock-shield loose key or screw driver pattern angle stops, straight stops or stops integral with faucet, with each compression type faucet whether specifically called for or not, including sinks in wood and metal casework, laboratory furniture and pharmacy furniture. Locate stops centrally above or below fixture in accessible location.
- B. Furnish keys for lock shield stops to COR.
- C. Supply from stops not integral with faucet shall be chrome plated copper flexible tubing or flexible stainless steel with inner core of non-toxic polymer.
- D. Supply pipe from wall to valve stop shall be rigid threaded IPS copper alloy pipe, i.e. red brass pipe nipple, chrome plated where exposed.

2.4 ESCUTCHEONS

Heavy type, chrome plated, with set screws. Provide for piping serving plumbing fixtures and at each wall, ceiling and floor penetrations in exposed finished locations and within cabinets and millwork.

2.5 LAMINAR FLOW CONTROL DEVICE

- A. Smooth, bright stainless steel or satin finish, chrome plated metal laminar flow device shall provide non-aeration, clear, coherent laminar flow that will not splash in basin. Device shall also have a flow control restrictor and have vandal resistant housing.
- B. Flow Control Restrictor:
 - 1. Capable of restricting flow from 95 ml/s to 110 ml/s (1.5 gpm to 1.7 gpm) for lavatories; 125 ml/s to 140 ml/s (2.0 gpm to 2.2 gpm) for sinks P-505 through P-520, P-524 and P-528; and 170 ml/s to 190 ml/s (2.75 gpm to 3.0 gpm) for dietary food preparation and rinse sinks or as specified.
 - 2. Compensates for pressure fluctuation maintaining flow rate specified above within 10 percent between 170 kPa and 550 kPa (25 psi and 80 psi).
 - 3. Operates by expansion and contraction, eliminates mineral/sediment build-up with self-cleaning action, and is capable of easy manual cleaning.

2.6 CARRIERS

- A. ASME/ANSI A112.6.1M, with adjustable gasket faceplate chair carriers for wall hung closets with auxiliary anchor foot assembly, hanger rod support feet, and rear anchor tie down.
- B. ASME/ANSI A112.6.1M, lavatory, chair carrier for thin wall construction. All lavatory chair carriers shall be capable of supporting the lavatory with a 250-pound vertical load applied at the front of the fixture.
- C. Where water closets, lavatories or sinks are installed back-to-back and carriers are specified, provide one carrier to serve both fixtures in lieu of individual carriers. The drainage fitting of the back to back carrier shall be so constructed that it prevents the discharge from one fixture from flowing into the opposite fixture.

2.7 WATER CLOSETS

- A. (P-115) Water Closet (Floor Mounted, rear discharge, ASME/ANSI A112.19.2M, Figure 6) siphon jet. Top of bowl shall be 254 mm (10 inches) above finish floor.
 - 1. Seat: Commercial weight, chemical resistant, solid plastic open front less cover for infant bowls, integrally molded bumpers, concealed check hinge with stainless steel post. Color shall be white.
 - 2. Fitting and Accessories: Gaskets-neoprene, bolts with chromium plated cap nuts and washers.
 - 3. Flush valve: Large chloramines resistant diaphragm, semi-red brass body, 120 volt powered active infra-red sensor for automatic operation with courtesy flush button for manual operation exposed chrome plated, water saver design, 25 mm (1 inch) screwdriver angle check stop, adjustable tailpiece, high pressure vacuum breaker, cast set screw wall flanges and spud flanges, sweat solder adapter with cover tube, spud coupling for 38 mm (1-1/2 inch) top spud, wall and spud flanges. Set centerline inlet 292 mm (11 1/2 inches) above rim. Valve body, cover, tailpiece, and control stop shall be in conformance with ASTM alloy classification for semi-red brass.

2.8 LAVATORIES

- A. Dimensions for lavatories are specified, Length by width (distance from wall) and depth.

- B. Brass components in contact with water shall contain no more than 3 percent lead content by dry weight.
- C. (P-421) Lavatory (ASME/ANSI A112.19.2M, Figure 16) raised back, approximately 521 mm by 464 mm (15 inches by 10 inches "D" shaped bowl) and a 102 mm (4 inches) maximum apron, first quality vitreous china. Punching for faucet on 102 mm (4 inches) centers. (Basis of design: American Standard "Lucern". Support lavatory to wall with steel wall plate. Set with rim 864 mm (34 inches) above finished floor:
1. Faucet: Solid cast brass construction with washerless ceramic disc mixing cartridge type and centrally exposed rigid gooseneck spout with outlet 127-152 mm (5-6 inches) above rim. Provide laminar flow control device. Electronic sensor operated, wiring box, 120/24-volt solenoid, remote mounted transformer, back check valves, solid brass hot-cold water mixer adjusted from top deck with barrier free design and inline filter. Provide laminar flow control device. Breaking the light beam shall activate the water flow. Faucet, wall and floor escutcheons shall be either copper alloy or CRS. Exposed metal parts, including exposed part under valve handle when in open position, shall be chrome plated with a smooth bright finish.
 2. Drain: Cast or wrought brass with flat grid strainer and offset tailpiece, chrome plated finish.
 3. Stops: Angle type. See paragraph 2.2. Stops
 4. Trap: Cast copper alloy, 38 mm by 32 mm (1 1/2 inches by 1 1/4 inches) P-trap. Adjustable with connected elbow and 1.4 mm thick (17 gauge) tubing extension to wall. Exposed metal trap surface, and connection hardware shall be chrome plated with a smooth bright finish. Set trap parallel to wall.
- D. (P-422) Lavatory (Sensor Control, Gooseneck Spout, ASME/ANSI A112.19.2M, Figure 16) straight back, approximately 27 inches by 20 inches and a 4 inches minimum apron, first quality vitreous china with punching for gooseneck spout. Set rim 34 inches above finished floor.
1. Faucet: Solid cast brass construction, chrome plated, gooseneck spout with outlet 4 inches to 5 inches above rim. Electronic sensor operated, 4 inches center set mounting, battery operated electronic module, back check

- valves, solid brass hot-cold water mixer adjusted from top deck with barrier free design control handle. Provide laminar flow control device. Breaking the light beam shall activate the water flow. Flow shall stop when user moves away from light beam.
2. Drain: Cast or wrought brass with flat grid strainer with offset tailpiece, brass, chrome plated.
 3. Stops: Angle type. See paragraph 2.2. Stops
 4. Trap: Cast copper alloy, 1 1/2 inches by 1 1/4 inches P-trap. Adjustable with connected elbow and 17 gage tubing extension to wall. Exposed metal trap surface and connection hardware shall be chrome plated with a smooth bright finish. Set trap parallel to wall.
 5. Provide cover for drain, stops and trap per A.D.A 4-19.4.

2.9 SINKS AND LAUNDRY TUBS

- A. Dimensions for sinks and laundry tubs are specified, length by width (distance from wall) and depth.
- B. (P-519) Sink (Surgeons Scrub-up, Sensor Control) double units approximately 1600 mm by 559 mm (63 inches by 22 inches) and 305 mm (12 inches) deep.
 1. Construction: Provide a minimum of 16 gage, Type 302/304 stainless steel, with exposed welds grounded and polished to blend with adjacent surfaces. Sound deadened front and back, front access panel, splash-retarding angle design. Exterior surfaces shall have a uniformed NAAMM Number 4 finish. Mount sink with wall hanger and stainless steel support brackets and ASME/ANSI A112.6.IM, Type III, heavy duty chair carriers and secure fixture with minimum 3/8-inch bracket studs and nuts. Cove corners with 6 mm (1/4 inch) radius. Set sink rim 914 mm (36 inches) above finished floor as shown.
 2. Equip each scrub bay with an infrared photocell sensor with wiring box, 120/24 volt solenoid and remote mounted transformer to control water flow automatically and a thermostatic valve. Breaking the light beam shall activate the water flow. Flow shall stop when the user moves away from light beam. Sensor may be wall mounted, deck mounted or integral with faucet.
 3. Valve: Type T/P combination thermostatic and pressure balancing with chrome plated metal lever type operating handle and chrome plated metal

- or CRS face plate. Valve body shall be any suitable copper alloy. Internal parts shall be copper, nickel alloy, CRS or thermoplastic material. Valve inlet and outlet shall be IPS. Provide external screwdriver check stops, and temperature limit stops. Set stops for a maximum temperature of 43 degrees C (110 degrees F). All exposed fasteners shall be vandal resistant. Valve shall provide a minimum of 380 ml/s at 310 kPa (6 gpm at 45 psi) pressure drop.
4. Gooseneck Spout: For each scrub bay, provide gooseneck spout with laminar flow device. Spout and trim shall be cast or wrought copper alloy and be chrome plated with smooth bright finish.
 5. Grid Drain: Stainless steel stamped drain fitting, 114 mm (4 1/2 inches) top with 76 mm (3 inches) grid and 38 mm (1 1/2 inches) tailpiece.
 6. Trap: Cast copper alloy, 38 mm (1 1/2 inches) P-trap, adjustable with connected elbow and nipple to the wall. Exposed metal trap surfaces and connection hardware shall be chrome plated with smooth bright finish.
 7. Shelf: Surface mounted of Type 304 stainless steel with exposed surface in satin finish and stainless-steel support brackets. Shelf shall be 203 mm (8 inches) wide and length as shown on the drawings.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Fixture Setting: Opening between fixture and floor and wall finish shall be sealed as specified under Section 07 92 00, JOINT SEALANTS.
- B. Supports and Fastening: Secure all fixtures, equipment and trimmings to partitions, walls and related finish surfaces. Exposed heads of bolts and nuts in finished rooms shall be hexagonal, polished chrome plated brass with rounded tops.
- C. Toggle Bolts: For hollow masonry units, finished or unfinished.
- D. Expansion Bolts: For brick or concrete or other solid masonry. Shall be 6 mm (1/4 inch) diameter bolts, and to extend at least 76 mm (3 inches) into masonry and be fitted with loose tubing or sleeves extending into masonry. Wood plugs, fiber plugs, lead or other soft metal shields are prohibited.
- E. Power Set Fasteners: May be used for concrete walls, shall be 6 mm (1/4 inch) threaded studs, and shall extend at least 32 mm (1 1/4 inches) into wall.

- F. Tightly cover and protect fixtures and equipment against dirt, water and chemical or mechanical injury.
- G. Where water closet waste pipe has to be offset due to beam interference, provide correct and additional piping necessary to eliminate relocation of water closet.
- H. Do not use aerators on lavatories and sinks.

3.2 CLEANING

At completion of all work, fixtures, exposed materials and equipment shall be thoroughly cleaned.

3.3 WATERLESS URINAL

Manufacturer shall provide an operating manual and onsite training for the proper care and maintenance of the urinals.

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- 2. Please clarify/confirm if the glass for the side lights in doors 1F122B & 1F124B is to be lead lined glass with protection equivalent to lead lined thickness of the door. The door 1F122B & 1F124B is lead lined door and frame. The glass for the side lights in doors 1F122B & 1F124B is to be lead lined glass.
- 3. On drawing MP-102 Note 7 it identifies for us to install a new Reverse Osmosis water treatment system. There is nothing on the mechanical schedule designating any information for this equipment nor any detailed drawings. Please provide information on this equipment.

SECTION 22 67 19.16 REVERSE-OSMOSIS WATER EQUIPMENT

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Provide complete industrial-type packaged reverse osmosis (RO) water treatment system producing high purity water by removal of dissolved minerals, bacteria, particles and organic impurities. Designed for continuous automatic

operation. The system shall include pre-filter and all devices necessary for fully operational system.

- B. A complete listing of all acronyms and abbreviations are included in Section 22 05 11, COMMON WORK RESULTS FOR PLUMBING.

1.2 RELATED WORK

- A. Section 01 00 00, GENERAL REQUIREMENTS.
- B. Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- C. Section 01 91 00, GENERAL COMMISSIONING REQUIREMENTS.
- E. Section 22 05 11, COMMON WORK RESULTS FOR PLUMBING: Systems for service other than boiler plant make-up water.
- F. Section 22 07 11, PLUMBING INSULATION.
- G. SECTION 22 08 00, COMMISSIONING OF PLUMBING SYSTEMS. Requirements for commissioning, systems readiness checklist, and training.

1.3 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by their basic designation only.
- B. American Society of Mechanical Engineers (ASME):
B40.100-2013Pressure Gauges and Gauge Attachments
- C. ASTM International (ASTM):
A269/A269M-2014e1Standard Specification for Seamless and Welded
Austenitic Stainless Steel Tubing for General Service
D1785-2012Standard Specification for Poly (Vinyl Chloride) (PVC)
Plastic Pipe, Schedules 40, 80, and 120
- D. American Water Works Association (AWWA):
B300-2010Hypochlorites
B301-2010Liquid Chlorine
C651-2014Disinfecting Water Mains
- E. National Electrical Manufacturers Association (NEMA):
ICS 6-1993 (R2001, R2006) ...Industrial Control and Systems Enclosures
- F. National Fire Protection Association (NFPA):
70-2014National Electrical Code

- G. Department of Health and Human Services, Food and Drug Administration (FDA):
CFR 21, Chapter 1, Part 175.300, Resinous and Polymeric Coatings

1.4 SUBMITTALS

- A. Submittals, including number of required copies, shall be submitted in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Information and material submitted under this section shall be marked "SUBMITTED UNDER SECTION 22 67 19.16, REVERSE-OSMOSIS WATER EQUIPMENT", with applicable paragraph identification.
- C. Manufacturer's Literature and Data including: Full item description and optional features and accessories. Include dimensions, weights, materials, applications, standard compliance, model numbers, size, and capacity.
1. Catalog cuts, complete description and specifications of all equipment and accessories.
 2. Accessories including filters.
 3. Performance data including normal and maximum flow and pressure drop. Certification that required performance shall be achieved.
 4. Piping.
- D. Complete detailed layout, setting, arrangement, and installation drawings including. Drawings shall also show all parts of the apparatus including relative positions, dimensions, and sizes and general arrangement of connecting piping.

1.5 QUALITY ASSURANCE

- A. Manufacturer shall have been engaged in the manufacture of RO systems as a primary product for at least ten years. The ten year requirement supersedes any conflicting requirement in other parts of the project specification.
- B. Bio-Based Materials: For products designated by the USDA's Bio-Preferred Program, provide products that meet or exceed USDA recommendations for bio-based content, so long as products meet all performance requirements in this specifications section. For more information regarding the product categories covered by the Bio-Preferred Program, visit <http://www.biopreferred.gov>.

PART 2 - PRODUCTS

2.1 RO SYSTEM

A. Performance Requirements:

1. Membrane reject ratio: 98 percent minimum. TDS of product is 2 percent maximum of input TDS.
2. Capture rate: 75 percent minimum. Maximum amount of water to drain 25 percent of input.

B. RO Membrane Elements: Thin-film composite with fiberglass reinforced polyester (FRP) over-wrap, anti-telescoping device, u-cup brine seal. The design salt rejection shall be 98 percent based on 2000 ppm water at 1550 kPa (225 psig) at 25 degrees C (77 degrees F).

C. RO Element Housings: Type 304 stainless steel with PVC end caps held in place with stainless steel bands. Each housing assembly complete with one set of O-rings and O-ring lubricant. (Bio-based materials shall be utilized when possible.) Housings for systems over 34,070 L per day (9,000 gallons per day) shall be constructed of FRP. Provide cleaning connections.

D. Manual Valves:

1. Concentrate Throttle Valve, Recycle Throttle Valve: In-line needle style, stainless steel, rated for 2070 kPa (300 psig) minimum.
2. Inlet Isolation Valve, Product and Concentrate Check Valves: PVC with EPDM seats and seals.
3. Feedwater Sample Valve, Product Water Sample Valve: PVC plug valve with EPDM seats and seals.
4. High Pressure Sample Valve: Type 316 stainless steel plug valve.

E. Automatic Valves:

1. Automatic Inlet Shut Off Valve: Solenoid type, diaphragm actuated, normally closed, constructed of glass-filled Noryl thermoplastic.
2. Automatic Membrane Flush Valve: Provide for purging the membranes with fresh water upon machine shut down.

F. Piping:

1. Low Pressure Feed, Reject and Recycle Piping 520 kPa (75 psig and under): ASTM D1785, Schedule 80 PVC, socket welded and flanged.

2. RO Product Tubing From Each Membrane Housing: ASTM D1785, Schedule 80 PVC, socket welded and flanged.
3. Low Pressure Control and Pressure Gage Tubing: Polyethylene.
4. High Pressure Reject and Recycle Piping 520 kPa (above 75 psig): ASTM A269/A269M, Type 304 Schedule 10 stainless steel with butt welded joints.
5. High Pressure Control and Pressure Gage Tubing: 6895 kPa (1000 psig) burst nylon.

2.2 PRE-FILTER

- A. Single multi-media filter sized for the RO machine inlet flow rate. Filter designed for suspended solids removal down to 10 microns and automatic backwash cycle.
- B. Media Tank: FRP designed for 1035 kPa (150 psig). Pre-piped internal backwash distributor and filtered water collector.
- C. Filter Media: Top layer of anthracite, middle layer of silica sand, bottom layer of multi-grade garnet. Install filter media at job site.
- D. Backwash Cycle: Top-mounted, piston-operated control valve with pre-sized drain line flow control orifice. The cycle shall be initiated by and adjustable seven day electronic time clock. Include RO lockout switch.
- E. Replacement Filter Media: Provide elements for one complete replacement.

2.3 ACTIVATED CARBON FILTER

- A. Single filter sized for the RO machine inlet flow rate. Designed to remove chlorine and prevent RO membrane damage.
- B. Media Tank: FRP designed for 1035 kPa (150 psig). Pre-piped internal backwash distributor and filtered water collector.
- C. Filter Media: 12 x 40 mesh bituminous coal-based activated carbon. Install media at job site.
- D. Backwash Cycle: Top-mounted, piston-operated control valve with pre-sized drain line flow control orifice. The cycle shall be initiated by and adjustable seven-day electronic time clock. Include RO lockout switch.

PART 3 – EXECUTION

3.1 REQUIRED TECHNICAL SERVICES

- A. Provide services of a qualified manufacturer's representative to check complete installation for conformance to manufacturer's recommendations, put system into service, make all adjustments required for full conformance to design and specified requirements, and perform all demonstrations and tests.

3.2 FLUSHING AND DISINFECTING

- A. Flush and disinfect new water lines and RO system and tank interiors in accordance with AWWA C651.
- B. Material:
 - 1. Liquid chlorine: AWWA B301.
 - 2. Hypochlorite: AWWA B300.

3.3 STARTUP AND TESTING

- A. Operating: Tests shall be run in presence of COR.
- B. Procedure:
 - 1. Operate RO system at constant maximum required capacity for one hour after demineralized RO product water is produced. When necessary, waste product water to sewer to maintain above flow rate. Product water production shall begin when a sample shows that demineralization complies with requirements.
 - 2. Demonstrate all features of the control system including diagnostics and flow and cycle indications.
- C. The CxA will observe startup and contractor testing of selected equipment. Coordinate the startup and contractor testing schedules with the COR and CxA. Contractor shall provide a minimum of 10 working days prior to startup and testing.

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4. On page 6 of the solicitation scope of work Demolition Note #5 states that mechanical contractor is to demo all the way down to 1F122A. Also on page 6, note 7 states that no demo will happen in rooms 1F123D, 1F124, 1F124A, 1F125 & 1F126.

1. Page 7 of the scope of work note #3 states that mechanical contractor is to install ductwork & piping to 1F122 as shown on MH101.

1. Are we to leave future connections for the eventual buildout of Cardiac Cath Lab #1?

Yes, the contractor is to leave future connections for the eventual buildout of Cardiac Cath Lab # 1. The existing (D)VAV-2 and (D)VAV-5 shown on drawing MD101 is to be remain and has to be connected to new supply air duct.

2. Will the entire area be under containment from column line 1 through 5 & most of A through C for demo & installation?

The entire area be under containment from column line 1 through 5 & A down to corridor. Only the area from column 1 through 3 to be renovated. There is no renovation in the areas from column 3 through 5. The work above ceiling in the areas from column 3 through 5 such as ductwork, conduits, and piping the ceiling shall be reinstalled back as original. The area shall install negative pressure machine and monitoring to maintain negative pressure during the ceiling open.

5. DDC Control System:

- After the redesign of the project, has there been an adjustment in the VAV (Terminal Unit) count?

For the renovation Cath Lab # 2 there are 5 VAV.

- During the previous bid period on this project (March 2018) The mechanical equipment included the following:

- o 1 AHU

- o 11 VAV Terminal Units

The project includes 1 AHU and 5 VAV Terminal units.

6. Due to the tight schedule, can the VA issue a written scope of work detailing as well as a floor plan showing what work is under this contract?

The SOW states the renovation work in the areas from column 1 through 3. There is no renovation in the areas from column 3 through 5. The work above ceiling in the areas from column 3 through 5 such as ductwork, conduits, and piping, the ceiling shall be reinstalled back as original. The areas shall install negative pressure machine and monitoring to maintain negative pressure during the ceiling open.

7. Due to the tight schedule will the VA confirm the submittal lead time the VA A&E will have to turn around submittals?

It was suggested during the walk through that all submittals be turned in at time of NTP especially long lead items.

8. Does the contractor have to use the same fire alarm subcontractor? If so who?

VA fire alarm system is Gamewell System. ADVO is general contractor on Fire Alarm Project. Advance Cable is subcontractor for ADVO. Advance Cable install fire alarm system and Advance Cable is certified by Gamewell. The contractor does not have to use the same fire alarm subcontractor. Whoever the contractor uses for fire alarm subcontractor, the fire alarm subcontractor has to be certified by Gamewell.

9. Can the VA state the schedule time officially so that there is no mistaking as to how much time will be given? As Stated in item 11 of the solicitation SF 1442 120 Calendar Days after receiving the notice to proceed.

10. What coordination will be required between us and Philips?

All coordination with Philips is shown on the Philips plan.

11. Can the VA detail the amount of ductwork to be removed seeing as how the second Cath lab will be cancelled?

The existing main supply and return air ductwork to be removed from AHU to renovation areas in Cath Lab 2.

12. It seems as though the ductwork, piping, and electrical home runs, are all coming from the direction of the second Cath lab (which we believe to be canceled?) can the VA detail what work is to be done in the second Cath lab?

There is no renovation work in Cath Lab 1 the areas from column 3 through 5. The ceiling in Cath Lab 1 can be opened for work above the ceiling to install ductwork, piping, and conduits run to Cath Lab 2. The ceiling has to be restored back as original after finished in stall ductwork, piping, and conduits. During the ceiling open in Cath Lab 1 the areas have to maintain negative pressure by installing negative pressure machine and the areas negative pressure shall be monitor during work above the ceiling.