

DATE: DECEMBER 4, 2013

FROM: PFB ARCHITECTS

SUBJECT: BIDDER QUESTION RESPONSES

PROJECT: **RELOCATE JOLIET CBOC PHASE II - BID PACKAGE C**

TO: **OWNER, CONTRACTORS**

1. Will we be able to use non-union labor without affecting the project schedule? **ANSWER:** The VA recognizes the Davis Bacon Act for prevailing wages and does not require union labor. It is the contractor's responsibility to meet the project schedule. Laborers walking off of a job due to non-union labor being utilized is not a valid claim for delay or a contract extension.
2. We need a complete specification for Item 208. Is there a spec? Is this a part of the Herman Miller product? **ANSWER:** Item 208 to be Herman Miller, Action Office, or equal, 6'-0" x 5'-0" with all accessories listed under Item 208 Description on Sheet A752
3. Will item 210 be supplied by the VA? **ANSWER:** Item #210, Janitor Cart, will be supplied by the VA.
4. What is the name of the phase 1 art supplier? We would like to match the type of paintings. **ANSWER:** Contractor to follow Artwork Specification provided on Sheet A752. Phase I artwork was provided by Arch Framing & Design, Inc.
5. Is there a name for the cherry veneer stain color used on the doors and trim? **ANSWER:** Phase I Plain Sliced Cherry Doors are finish # RA-15785 provided by Algoma Hardwoods, Inc...
6. Will the infection control walls need to be metal studs and drywall? **ANSWER:** Solid surface panels must be applied to gypsum board substrate over metal stud per manufacturer's installation standards. Refer to wall types on sheet A901.
7. Is the scissors lift to be included in our proposals? **ANSWER:** Refer to Addendum 1
8. Based on the comments in the demo drawings do you have any idea of how many items need to be thrown out and how many saved. **ANSWER:** Contractor to refer to items noted in demo drawings for bidding purposes. VA will have final say on all items.
9. For the items saved where will they be stored? **ANSWER:** Items will be stored on-site. Final location is to be coordinated with the VA after bid award.
10. Will new locks be needed on the existing Midmark base cabinets? **ANSWER:** Contractor to change out existing lock cylinder on cabinet doors below sinks for existing Midmark casework to remain. If no lock cylinder exists, Contractor to add cylinders to cabinet doors below sinks. All cylinders to be keyed alike to match Phase I.
11. At the rear of the building there will be a new generator pad installed. What is the location of the underground drain installed for the boiler building? I was shown going through the area that the new slab is. Is that the actual location of the drain? When we walked through we didn't see any new pavement or disturbance of the landscape. **ANSWER:** KJWW design drawings showed a sanitary line exiting to the west. We believe that this drain is connected to the CBOC sanitary system.

12. Can galvanized piping be used in lieu of copper as it was in the first phase? **ANSWER:** Galvanized piping is not approved for domestic water piping, steam or drainage piping. Only the piping in the specifications will be allowed.
13. Will demoed stock to be salvaged be stored in the basement? **ANSWER:** Items will be stored on-site. Final location is to be coordinated with the VA after bid award.
14. Note #6 on drawing A200 says to install metal closure panel. Is this supplied by the VA.? What is the spec? **ANSWER:** Metal closure panels to be provided and installed by the Audiometric Booth Manufacturer. Contractor to coordinate installation with Audiometric Booth Manufacturer. This also applies to Construction Keynote #10 Sheet A101B3. For additional information, contact Steve Mitchell with Noise Barriers, LLC, Phone: 847.843.0500 x17, email: smitchell@noisebarriers.com
15. Will Herman Miller be using the same documents? We would like to make sure the VA informs them to use the proper drawings. **ANSWER:** Herman Miller will be using the bid documents. Contractor to develop base bid based on drawings and specification provided.
16. Are the sound booths to be a part of the VA supplied and installed items or is this a part of the general contractor proposal? **ANSWER:** Sound Booths are provided by the VA and are to be installed by the sound booth manufacturer. Contractor to coordinate sound booth installation and provide all utility connections, and all finishes around, behind, over and up to the booth, including raised flooring. For additional information, contact Steve Mitchell with Noise Barriers, LLC, Phone: 847.843.0500 x17, email: smitchell@noisebarriers.com
17. Sheet A801 in plan lists sign IN.01.03. This sign type does not exist on the signage schedule. What is the sign? **ANSWER:** Sign Type IN.01.03 is the same as IN.01.3 in the signage schedule.
18. Is there any signage work in the Basement? **ANSWER:** Yes, per sheet A801 Signage Key Notes there is signage work in the basement, as well as the Phase I Area.
19. Clarification is needed - is the Contractor is responsible for the 1 year Warranty of Construction under the FAR and all extended warranties are the responsibility of the manufacturer? The key items we need to see addressed are those for 10+ years, but our preference would be to have the VA limit the exposure on all of the items > 1 year. I do believe that the intent of the VA is to have the manufacturers cover the extended warranties, but as the specs currently read, the extended warranties become the responsibility of the contractor.
- 04 20 00 – 1 Exterior masonry walls (Unit Masonry) – 5 years
  - 04 72 00 – 2 Exterior masonry walls (Cast Stone Masonry) – 2 years
  - 07 53 23 – 2 Roofing – 5 years
  - 07 84 00 – 1 Firestopping – 5 years
  - 07 92 00 – 3 Joint Sealants – 2 years
  - 08 71 00 – 2 Automatic Door Openers 2, 5 & 10 years
  - 08 80 00 – 5 Glazing 10 & 5 years
  - 09 65 16 – 4 Sheer Flooring 2 years
  - 09 68 00 – 2 Carpet – 2 years
  - 12 34 00 – 3 Manufactured Plastic Casework – 5 years
  - 13 49 00 - 2 Radiation Protection – 2 years
  - 27 11 00 – 30 Communications equipment - Contractor shall warranty all installed material and equipment free from defects and workmanship for a period of 20 years. Many of the other sections have a provision that states "The Contractor shall be authorized by the OEM to pass thru the OEM's warranty of the installed equipment to the VA" but this section does not have that
  - 28 05 00 – 54 120 VAC Surge Suppression – 10 years

**ANSWER:** the Contractor should provide the warranty for the installation of all items as indicated, and per FAR 52.246-21 the contractor should obtain all manufacturer warranties, in writing, that would be given in normal commercial practice. See comments in **RED** below

- 04 20 00 – 1 Exterior masonry walls (Unit Masonry) – 5 years **Contractor warranty against wall failure**
- 04 72 00 – 2 Exterior masonry walls (Cast Stone Masonry) – 2 years **Contractor warranty against wall failure, in our case the cast stone is a part of the exterior wall which is majority brick so the 5 year unit masonry warranty would be applicable to the wall enclosure.**
- 07 53 23 – 2 Roofing – 5 years **Contractor warranty against roof failure**
- 07 84 00 – 1 Firestopping – 5 years **Contractor warranty against Installation failure,**
- 07 92 00 – 3 Joint Sealants – 2 years **Contractor warranty against Installation failure,**
- 08 71 00 – 2 Automatic Door Openers 2, 5 & 10 years **manufacturer warranties**
- 08 80 00 – 5 Glazing 10 & 5 years **manufacturer warranties**
- 09 65 16 – 4 Sheer Flooring 2 years **Contractor warranty against Installation failure**
- 09 68 00 – 2 Carpet – 2 years **Contractor warranty against Installation failure**
- 12 34 00 – 3 Manufactured Plastic Casework – 5 years **This is a Warranty for the cabinet construction and components, and can be provided by either the manufacturer or the contractor – contractor is still responsible for the installation warranty period of 1 year per FAR 52.246-21**
- 13 49 00 - 2 Radiation Protection – 2 years **manufacturer warranties for Lead doors as indicated. Wall shielding will be the contractors responsibility and will be subject to testing by a radiation physicist.**
- 27 11 00 – 30 Communications equipment - Contractor shall warranty all installed material and equipment free from defects and workmanship for a period of 20 years. Many of the other sections have a provision that states “The Contractor shall be authorized by the OEM to pass thru the OEM’s warranty of the installed equipment to the VA” but this section does not have that **manufacturer warranty**
- 28 05 00 – 54 120 VAC Surge Suppression – 10 years **manufacturer warranty**

20. Please clarify that all extended warranties mentioned in the various specification sections are manufacturer warranties that will be passed onto the VA and not contractor warranties. We are concerned that in general, surety companies do not like contractor warranties that go beyond 5 years. This can make it difficult for a small business to obtain a bond. **ANSWER:** Refer to Question/Answer 19 above.
21. Sheet A752 – Equipment Schedule #98 – noted as OFOI, confirm this is a freestanding unit and not wall attaching in anyway. Wall attached stations should be in CFCI, please confirm. **ANSWER:** Equipment Item #98 is an Owner furnished, Owner installed item per Equipment Schedule on Sheet A752.
22. Sheet A752 - Equipment Schedule #119 – noted as OFOI, confirm this is a freestanding unit and not wall attaching in anyway. Wall attached stations should be in CFCI, please confirm. **ANSWER:** Equipment Item #119 is an Owner furnished, Owner installed item per Equipment Schedule on Sheet A752.
23. Sheet A752 - Equipment Schedule #208 – not noted as OFOI or CFCI responsibility, please confirm. **ANSWER:** Equipment Item #208 is a Contractor furnished, Contractor Installed item. Refer to bidder question response #2 above for additional information.

24. Section 123400 p1. Under 1.1 C, casework is identified as "MVL". Please clarify where this is applicable in project. Identification cannot be found on plans or elevations provided. Please elaborate on what MLV stands for. **ANSWER:** Disregard the acronym "MVL" as it is not applicable to this project.
26. Please indicate where we can find the substitution form. **ANSWER:** Contractor to inquire with the Contracting Officer to see if there is a specific substitution form that will be required to be used for this project. Contractor to submit written substitution request to the VA Contracting Officer, Contracting Officers Representative and A/E. Substitution requests cannot be submitted during bidding.
27. The drawings reference duct cleaning, will all of the ductwork in this phase be getting cleaned or only a certain portion? **ANSWER:** Clean all the returns and the supply mains upstream of terminal devices or coils.
28. Will the AHU serving the necessary area be able to be shut down while the duct cleaning is performed? **ANSWER:** The AHU can be shut down during the off hours of the CBOC. The return ducts may be cleaned while the AHU is operating, but not the supplies.
29. There will be MEP work required in the several occupied areas (a few examples would be the lower level ceiling as well as corridor C1-5) will these areas be accessible during the normal day time hours if not please clarify what the accessible hours will be. **ANSWER:** Work in occupied areas will need to be coordinated with the staff using those areas. Contractor to assume normal hours.
30. Since we are making several tie ins to the existing stem and condensate piping I would like to know if these services can be shut down to the entire building or certain portions of the building at a time to maximize efficiency. **ANSWER:** During warm weather, steam shut downs can be made during occupied hours. Shut downs that do not affect occupied areas may occur at any time.
31. Can the steam system shut down / tie ins be done during normal working hours if not what is the ideal time for the occupant (2nd shift, weekends etc) and how long can the steam be off to any portion of the building. **ANSWER:** We have no objections to short steam shut downs during working hours; however, the shutdown should be coordinated with FMS staff and be short enough so that temperatures do not become objectionably cold.
32. Please supply the CX plan or their typical plan so all MEP bidders know what to expect **ANSWER:** The systems to be commissioned are discussed in the specifications. Refer to Question 53 response below.

33. Drawing A100A General Construction Notes #9 states that Heat Detectors shall be installed and tested weekly. How many will need to be installed in the entire area? **ANSWER:** Per the direction given by the VA/COR during the bidder walk through, the existing life safety system is to be left operational during demolition and construction, and is to be modified as needed to meet the bid documents and specifications. Heat detectors are not required. Contractor is responsible for providing all appropriate interim life safety measures during periods of work on the life safety system.
34. Drawings G1007 & G1008 list Add Alternates #1 & 2, on Drawings MH111B & MH500 it lists an add for the ERAD-1 system to be included in Add Alternate #1. Will a new Bid Schedule be provided to include the Add Alternate #1 and #2? **ANSWER:** Refer to Addendum 1
35. Section 010000 page9 H states we are to refer to a Phasing Narrative & Plan on Sheet G1006 which does not include this information and the referenced Section also states areas of Building will be occupied at various periods during construction and lists certain rooms. With the requirements listed throughout the specifications and drawings requiring dust proofing and potential ICRA controls what will be required in each of these occupied rooms areas as the work proceeds? **ANSWER:** Refer to Addendum 1. Phasing narrative has been removed. Coordinate access to occupied rooms with the VA manager on-site. Minor renovation work to be done in the occupied areas. Any work that will create excessive dust or construction debris is to be done in unoccupied construction zone and brought in for final installation. Contractor will be required to clean area after work is completed.
36. Section 010000page14 1.8 A & B require the contractor to establish and maintain a dust control program in accordance with guidelines provided by the VA ICRA group. What levels of ICRA control will be required by the VA and will they be the same for all the areas of work? **ANSWER:** Yes, class III for all work areas.
37. Section 010000page16 D 2(a) requires contractor to Maintain negative air at all times. Is this the requirement for all the work in the renovation area? **ANSWER:** Yes
38. Section 010000page 21 1.13 requires a registered land surveyor or registered civil engineer be contracted with to provide surveying and cannot be an employee of the Contractor. As there is a small amount of outside work involved in this project will consideration be given to allow the contractors to use their own in-house staff to perform these duties? **ANSWER:** No, Contractor to follow specifications.
39. Section 010000page 10 J requires a 7' chain link fence be installed around the construction area. What area is going to be considered the construction area? **ANSWER:** Contractor to provide for 350 linear feet of fence for work to take place on the West side of the building at the existing ambulance bay.
40. Drawing A801 signage keynotes 1 & 2 are both shown in the NIC (Not in Contract) please confirm they are to be installed in this area? Are there any additional signs required in the basement area besides the ones listed in Keynote 2? **ANSWER:** Per signage keynote 1, Contractor to install referenced signage in Phase I area. All signage requirements in Phase I area and the basement are referenced in Signage Key Notes 1 & 2.
41. There are four signs shown in the NIC hatch in Corridor C-1-6 & C-1-8, are these new signs? **ANSWER:** Yes, Contractor to install four (4) instances of IN.03.01 & IN.04.02 that are currently in the NIC hatch in Corridors C-1-6 & C-1-8.

42. Section 230593 3.10 It references Phasing Test & Balancing work, it implies that after each Phase Test & Balance will be performed and upon completion the project all areas shall have been tested and balanced. Will a final Test & Balance be required after final completion of the project? **ANSWER:** Since phase II of this project is to be completed as a single project, only one final test & balance effort will be required.
43. Section 230593 4.1 requires pre-balance of the systems serving the construction area prior to the start of any work. Will this require a complete re-balancing of the entire Joliet Phase I system as well? **ANSWER:** A complete re-balancing of AHU/exhaust systems that were affected or modified in phase II will be required. Phase I systems previously balanced and not modified in phase II will not require a re-balancing.
44. Drawing A752 Equipment Schedule lists items 91, 159, 160, & 171. We have not been able to find these items? **ANSWER:** There are zero (0) instances of equipment item #91, #159, #160, and #171 in this project.
45. Drawing A750A lists item #39 as a curtain track are there any rooms on this print that require a curtain track? **ANSWER:** Curtain track is to be provided around Mat Table and at each Treatment Bay in PM&R Room B042. Refer to 2/A100A for lengths.
46. Drawing CS101 keynote 7 calls out for Future type B Concrete Post Barricades..... Are they included for reference only? **ANSWER:** Yes these are future work for reference only.
47. Drawings A100B & A101B1 requires Auto Operator Push Plates in rooms B006, B008, 1007 & 1005 will these items be required to installed after hours? **ANSWER:** Auto Operators and push plates can be installed during normal hours. Contractor to coordinate with the VA manager.
48. Drawing AD100 General Demolition Note #28 requires having existing rigid wall protection removed. What is the square foot quantity that will need to be removed? **ANSWER:** Sheet AD100 indicates basement demolition only. Unless specifically noted, we are not removing rigid wall protection from the basement.
49. Drawing AD101 Are there additional lead lined walls in the Ortho rooms 2112 and 2110? **ANSWER:** Not to our knowledge.
50. Drawing A100A In the area where the new Door B042-2 is shown and a new sign installed do the existing signs need to be removed and the walls patched & painted? **ANSWER:** Per A902, door B042-2 is an existing door to remain. To our knowledge, there is no existing signage at Door B042-2.
51. Drawing A101B2 New walls are shown in Corridor C1-5 (near rooms 1066, 1067 & 1065). What types of walls are required? **ANSWER:** Refer to General Construction Note #1 on Sheet A101B2, "ALL NEW PARTITIIONS TO BE WALL TYPE 2 UNO. SEE WALL TYPES ON SHEET A901".
52. Drawing A201 Call out in the Reflected Ceiling Legend that dashed lines are curtains, are all dashed lines to be considered as curtains? **ANSWER:** Refer to Equipment Plans, sheets A750A through A751B4 for all instances of curtain track, equipment item #39. Contractor to provide curtain track in Rooms B042, 1107 & 1104 as well.
53. Section 019100 From previous experience on other VA projects we understand that the effort required of the Contractor to coordinate with the VA Commissioning Agent and the various



subcontractors is very time consuming and costly. Generally the subcontractors exclude any commissioning work in their bids which then requires the Contractor to review their select divisions of work to ascertain the level of coordination required and agree to reimburse the subcontractors for their respective work. Because of the significant costs involved we would like the Specification Sections listed to be clear as to what Divisions require Commissioning. Paragraph 1.1.B. states in part: Requirements for startup, testing, and adjusting services specified in Division 7, Division 21, Division 22, Division 23, Division 26, Division 27, Division 28, and Division 31 are listed as requiring Commissioning coordination. We can find nothing in Division 7 related to commissioning or any Division 31 at all.

Paragraph 1.6B states in part: The following systems will be commissioned.... And lists Division 21, Division 22, Division 23 and Division 26 only please clarify which sections will require Contractor and Subcontractor commissioning coordination with the VA Commissioning agent.

**ANSWER:**

## Division 7 THERMAL AND MOISTURE PROTECTION

- Commissioning inspections for quality control. No prefunctional or functional tests list will be required.

## Division 21 FIRE SUPPRESSION

- Prefunctional checklists for work completed (see section SECTION 019100 1.6)
- Functional checklists with sampling inspections

## Division 22 PLUMBING

- Prefunctional checklists for work completed (see section SECTION 019100 1.6)
- Functional checklists with sampling inspections (see section SECTION 019100 1.6)

## Division 23 HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)

- Prefunctional checklists for work completed (see section SECTION 019100 1.6)
- Functional checklists with sampling inspections (see section SECTION 019100 1.6)

## Division 26 ELECTRICAL\*

- Prefunctional checklists for work completed (see section SECTION 019100 1.6)
- Functional checklists with sampling inspections (see section SECTION 019100 1.6)

## Division 27 COMMUNICATIONS

- Removed from commissioning

## Division 28 ELECTRONIC SAFETY AND SECURITY

- Removed from commissioning

## Division 31

- Removed from specification

54. Please refer to Drawing GI006, Deductive Alternate #1. The Architectural description begins "Demo all space with the exception of the Ambulance Bay per the contract documents." Please define the area known as the "Ambulance Bay". Demo drawings do not label any existing areas. Please verify that the Ambulance Bay is the Therapy Gym area? **ANSWER:** Refer to sheet AD101, Ambulance Bay is between Column Lines B' through C" and .1 through .5.
55. Specification Sections 09 65 19, 23 82 00, 25 10 10, 26 28 16, and 26 29 23 are noted in the Table of Contents but are not contained in the Specification Book. Please provide these missing Sections. **ANSWER:** Refer to Addendum 1. Sections 096519 & 251010 have been removed from the Table of Contents. Sections 238200, 262816 & 262923 have been provided as part of Addendum 1.
56. Please refer to Note # 6C on Drawing AD101. We are required to remove and salvage the pneumatic tube system **in its entirety**. Please provide a dimensional and detailed drawing showing the extent of this system so we have an understanding of the scope of this work. **ANSWER:** Remove and salvage the tube stations and remove associated tube runs to Mechanical Room B018. No existing drawings are available. The majority of phase II is scheduled for demolition, assume all pneumatic tube runs will be exposed as a part of that demo work.
57. Please refer to Item # 14 on Drawing AD101 under General Demolition Notes. The verbiage states "are indicated below, but not limited to:". Please clarify what additional items could or will be included? **ANSWER:** Some additional items to be included are tagged in demolition plans. Refer to General Demolition Note #6 – the VA has the final decision on all items.
58. Please refer to Item # 5 on Drawing AD101 under General Demolition Notes. What level of detail will be acceptable to comply with the word "cataloged". **ANSWER:** All items are to be tagged with a unique ID. Provide an electronic document to include each item identified by ID Tag with a description including information readily available, such as, make, model, size, and quantity.
59. Please refer to Item # 24 on Drawing AD101 under General Demolition Notes. Are the heat detectors to be tied into an existing system or are they a stand-alone system alarming within the work areas only? **ANSWER:** Per the direction given by the VA/COR during the bidder walk through, the existing life safety system is to be left operational during demolition and construction, and is to be modified as needed to meet the bid documents and specifications. Heat detectors are not required. Contractor is responsible for providing all appropriate interim life safety measures during periods of work on the life safety system.
60. Do any of the existing MEP systems scheduled to be demolished service areas that are not being renovated, thus requiring re-routing? **ANSWER:** Yes, these re-routed systems are shown on the new work drawings.

This information is critical since it affects cost. These conditions cannot be accurately verified by the Contractor given the time and multiple jobsite visits needed to perform a complete survey.

**ANSWER:** During the construction/demolition process, the contractor shall contact the engineer if any discrepancies arise prior to completing work.



61. Please refer to Note # 6K on Drawing AD101. The ventilation demo for Area B of the basement is also shown on this Drawing. Note 6K says to refer to MEP/T/FP Drawings. Our set of Drawings does not contain a Drawing Sheet for the Ventilation demolition in Area B. **ANSWER:** This note will apply to the basement level for ventilation demolition.
62. What exterior building openings will we be allowed to control ingress and egress? **ANSWER:** The ambulance bay on the Western side of the building.
63. Drawing F-111B, Fire Protection Symbols List indicates several areas requiring "Ordinary Group 1" FP but it is unclear what areas require "Light Hazard" FP as the "New Work" line symbol encompasses the entire area. **ANSWER:** Any area within the new work border that is not ordinary group 1 (no hatch) is considered light hazard

General Note # 3 on Drawing F-111B states to provide an allowance for work. This same verbiage appears on various other Drawings. Please provide information that will allow for these allowances' to be priced. **ANSWER:** The notes should be revised to remove the allowance. Notes 1 on ED-110 and 2 on ED-111B should be revised to read as follows:

CONTRACTOR SHALL INSPECT THE INTERSTITIAL SPACE BETWEEN THE CBOC AND THE SILVER CROSS PROPERTY TO ENSURE THAT ALL CIRCUITS AND CONDUITS CROSSING FROM THE CBOC SHALL BE REMOVED WITH WALLS CUT AND PATCHED SO THAT THERE ARE NO CONDUITS IN THE INTERSTITIAL SPACE BETWEEN THE CBOC AND THE SILVER CROSS PROPERTY. ASSUME THAT TEN (10) ¾" CONDUITS MUST BE REMOVED AND TWO (2) 1" CONDUITS.

General note 3 on F-111B shall read:

CONTRACTOR SHALL INSPECT THE INTERSTITIAL SPACES BETWEEN THE CBOC AND THE SILVER CROSS PROPERTY TO ENSURE THAT NO FIRE PROTECTION PIPING REMAINS BETWEEN THE BUILDINGS. ANY PIPING THAT IS NOT ACCOUNTED FOR ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE A/E.

Key note 6 on MD-111B shall read:

CONTRACTOR SHALL INSPECT THE INTERSTITIAL SPACES BETWEEN THE CBOC AND THE SILVER CROSS PROPERTY ON THE FIRST FLOOR AND BASEMENT TO ENSURE THAT NO DUCTWORK REMAINS BETWEEN THE BUILDINGS. ANY DUCTWORK THAT IS NOT ACCOUNTED FOR ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE A/E.

Key note 1 on MD-120B and MD-121B shall read:

CONTRACTOR SHALL INSPECT THE INTERSTITIAL SPACES BETWEEN THE CBOC AND THE SILVER CROSS PROPERTY TO ENSURE THAT NO STEAM PIPING REMAINS BETWEEN THE BUILDINGS. ANY PIPING THAT IS NOT ACCOUNTED FOR ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE A/E.

64. Are there any noise limitations in the work space? We did not find any specific limits in the bidding documents. **ANSWER:** Refer to Addendum 1. modification to specification 010000 section 1.6.F
65. Refer to drawing G1008. Please provide Specifications for the dock bumpers and scissor lift.  
**ANSWER:** Refer to Addendum 1 – Sheet G1008 deleted from bid documents
66. Refer to drawing G1007. Please provide a Specification for the fabric enclosed walkway system  
**ANSWER:** Refer to Addendum 1 – Sheet G1007 deleted from bid documents
67. Refer to Drawings AD101 and A101B2. The Drawings do not seem to accurately depict all the demo and new work required at the existing Ambulance area/new Therapy Gym.
- The floor in the Ambulance room is pitched toward drains and will require more than simply a skim coat to accept the new flooring. Is the intent for this area to have a level floor or be pitched? **ANSWER:** Floor is to be pitched. Maximum floor slope to be 1/8" in 12".
  - There is a triple basin and a few floor drains in this room. What is the intent for these?  
**ANSWER:** Provide new floor drain at all locations in Therapy Gym 1074. Coordinate with new flooring installation
  - There is currently a raised concrete curb/slab in the NE corner of this room that is not shown. Please clarify the intent and provide details for pricing this work. **ANSWER:** Existing curb to remain as-is. Modify location of training Toilet 1074D & Storage 1074E East stud wall to sit on top of Western edge of curb. Construct ramp as indicated in Construction Documents.
  - There is a concrete ramp and handrail that exists in the short hallway between the Ambulance room and Corridor # 2099 not shown on the Drawings. Please clarify the intent and provide details for pricing this work. **ANSWER:** Ramp and handrails are existing to remain. Install new flooring per bid documents
  - No wall demolition or structural work is shown for the new concrete ramp leading into the Therapy Gym (which is the existing Ambulance area). Please clarify the intent.  
**ANSWER:** Refer to Demolition Keynote 1B & 3A on Sheet AD101 for required demolition and support of new opening in existing brick & block wall. Refer to Construction Keynote 17, Sheet A101B2 for additional information on ramp construction.
68. Is the existing roof currently under warranty? If so, please provide the name of the installer and/or manufacturer. **ANSWER:** Not to our knowledge.
69. Please provide a soils report for all exterior excavation work so that we understand the conditions.  
**ANSWER:** A soils report is not available. Contractor is responsible for obtaining a soils report prior to commencing work.
70. Please confirm that 36" below grade is acceptable to prevent possible frost issues for the generator and mobile PET/CT scanner pads. Typically walls are 42" below grade. **ANSWER:** Build the pads per the details shown on CS101.
71. Please provide a Drawing depicting the number and length of joists that require reinforcement as

noted on Drawing CS501. **ANSWER:** For joist reinforcement, there are eight joists at 36 feet long and two joists at 24 feet long. Reinforce all joists.

72. Please confirm Note # 7 on Drawing CS101 does not apply to this Project since the description begins with the word "FUTURE" **ANSWER:** The items indicated in Keynote 7 are shown for information only and will be installed as part of a future phase.

73. Where does the work shown on Detail 1/CS501 occur? **ANSWER:** The pedestrian ramp is called out with Keynote 4 on CS101 on the sidewalk approaching the Mobile PET/CT Scanner Pad.

74. Drawing A201 tells us to re-install ceiling tile in "good" condition that was salvaged and protected during demolition. Please define what constitutes "good" tile and what happens if there is an insufficient quantity of tile left from the demolition to satisfy this requirement? **ANSWER:** 90% of the existing tile observed that is currently on site is in good condition and quantity is sufficient. Tiles that are discolored, or have water stains, major cracks or chips or damaged edges are not considered to be in "good" condition.

75. We noticed some existing unistrut above the ceilings in the existing Radiation rooms at the pre-bid. The Drawings do not indicate this to exist. Are these to be removed? What about other unknown items that exist above the ceilings that are not shown on the documents? **ANSWER:** Above ceiling support is to be removed in its entirety, refer to Keynote 11, Sheet AD201. Any unknown conditions found during construction will be addressed at that time.

76. Specification Section 22 13 00 allows the use of cast iron, copper tube or PVC for the sanitary waste, drain, and vent piping. Does City of Joliet take precedence as to what material can be used or are they exempt because this is a Federal project? **ANSWER:** The VA follows the Illinois Plumbing Code. The City of Joliet does not take precedence.

77. Please confirm the existing sloped floor in the short hallway between the existing Ambulance area and Corridor # 2099 is to remain sloped "as is". **ANSWER:** Confirmed, to remain as-is. Contractor is responsible for all flooring transitions between areas and dissimilar materials.

78. Please provide an Earthwork or Excavation Specification for all exterior work. **ANSWER:** Refer to Addendum 1 for specification section 312000.

79. Please advise if spoil (soil) haul-off is required to be deposited in a Schedule "D" landfill. **ANSWER:** Dispose of excess excavated material per spec 312000, Section 3.5, issued as part of Addendum 1.

80. Refer to Drawing Detail 2/A700B. The detail calls for new carpet and sheet vinyl flooring. No corresponding areas are indicated on the Demolition plans. Other areas similar to this condition exist in the Basement (i.e. Drawing Detail 1/A700A). Please clarify. **ANSWER:** Refer to General Demolition Note 16 on Sheet AD100, "REMOVE EXISTING FINISHES AS NECESSARY IN ALL AREAS TO RECEIVE NEW FINISHES. ALL EXISTING SURFACES ARE TO BE PATCHED AND PREPARED TO RECEIVE NEW SCHEDULED FINISH. REFER TO ROOM FINISH SCHEDULE IN SHEET A702."

81. Drawing AD201 shows a couple of major ceiling areas to remain. When you overlay the HVAC demo and new work, and Electrical demo and new lighting layout it would be less expensive to the Government if we completely removed all the grid and tile and provided new. The new lighting layout requires the grid and tile to be completely reworked anyway. Please consider. **ANSWER:** Contractor to bid the documents as shown.
82. Drawings PD-110B and PL-110B show plumbing demolition and new work. Please provide a reflected ceiling Drawing for Basement, Area "B" so that we know what type(s) of ceilings require removal and replacement. **ANSWER:** No drawing will be provided. Contractor to assume suspended ACT ceiling system throughout.
83. There are some floors in the Basement of Area "A" that contain wide gaps where separate concrete pours occurred when the building was built. Simple floor prep will not "bridge" these gaps in order for the new sheet vinyl to be installed. Please provide a solution for these types of existing conditions. **ANSWER:** Contractor to address this condition per the flooring manufacturers installation procedures and recommendations.
84. Drawing A752 identifies several Owner furnished/Contractor installed items. Please forward product data for the items that have no manufacturers specified so that we can properly price their installation. **ANSWER:** The equipment will be provided by the Owner. No cut sheets are available at this time.
85. Drawing A752 contains an artwork specification for the frames, however the description of the artwork we are to provide is very unclear. The description simply says "ALL ARTWORK SHOULD BE NEW, FAMILY-FRIENDLY AND HEALTHCARE APPROPRIATE". We suggest either an allowance be established for the artwork or furnished and installed by the Owner since this is completely subject to personal interpretation and taste. **ANSWER:** Refer to response to question 4 above.
86. Please provide a manufacturer for Item # 204 (Acrylic Poster) on Drawing A752. **ANSWER:** Refer to signage specification 10 14 00 and VA Interior Signage Design Guide referenced on Sheet A801, Signage General Note 1.
87. Reflected Ceiling Note # 3 on Drawing A201 says to refer to Equipment Matrix Sheet A752. No information exists for this item on Sheet A752. Please clarify. **ANSWER:** Disregard reference to Sheet A752.
88. Refer to Reflected Ceiling Note # 8 on Drawing A201. Please provide details of the equipment being supported by our Unistrut including load information and dimensioned configuration of the equipment so that we can properly price this work. **ANSWER:** Basis of design is Siemens YSIO System.
89. Please advise if any existing areas contain lead or lead-lined materials so that we can properly price their removal and disposal. **ANSWER:** Contractor to assume lead enclosure on all sides of existing Rooms 2131, 2132 & 2135.
90. Does the Owner intend on salvaging the existing aluminum door systems? **ANSWER:** Yes, they will be salvaged.

91. Rooms # 2092 and 2094 contain some rather large ceiling hung X-Ray machines or similar equipment. Are these to be salvaged and turned over to the Owner and are we to dispose of this equipment? Also, are we to remove all above ceiling supports for this equipment which is most likely Unistrut? Please advise. **ANSWER:** These are surgical lights to be salvaged and returned to the Owner. Above Ceiling Support is to be removed and disposed of.
92. Rooms # 2092 and 2094 contain some existing cabinets not shown on the demolition plans for removal. Are these to be removed off-site or salvaged? **ANSWER:** These cabinets are to be removed. Contractor to verify with the Owner at time of demolition if they are to be salvaged.
93. Refer to Drawings CS101 and ES-100. Keynote # 2 on Drawing CS101 states to install the existing light pole in the same location. Drawing ES-100 states to remove and **relocate** this pole. Please clarify. **ANSWER:** Drawing CS101 shows new location of light pole and drawing ES-100 shows existing location. Contractor is responsible for providing new work to relocate and extend circuiting to new location. Keynote 2 on CS101 states, "DEMOLISH EXISTING LIGHT POLE BASE, INSTALL NEW BASE AND REINSTALL ORIGINAL LIGHT POLE." The original light pole should be salvaged for installation at the new location.
94. Refer to Drawings CS101 and ES-100. It appears as though the 18" wide south channel designed for the generator feeds on Drawing CS101 don't align with the location of the stainless steel enclosure for the generator feeds shown on Drawing ES-100. Please confirm the south channel is required. **ANSWER:** The channels are required. There is no correlation between the 18" channels and the stainless steel pull box. Measurements will all need to be re-verified by the contractor with the existing generator to be relocated prior to construction. The dimensions are approximations provided by engineer field work.
95. Refer to Drawing A752. Item # 208 is missing responsibility information, mfg., and model. Item # 210 only lists a Model number. Item # 118 does not list a manufacturer or model number. Item # 157 does not list a manufacturer or model number. Please provide all missing information. **ANSWER:** For equipment item #208, refer to Question 2 response above. Item #118 basis of design to be Benthin / Faber spring operated, free hanging roller shade w/ Phifer SheerWeave Style 2000 shade fabric. Item #157 to be same as Item #162.
96. Refer to Drawing A752. Item # 47 offers several types of "Fast Track" shelves. Please clarify a specific Model and type. Item # 40 specifies Model # CS3 for the wall brackets which hold one chair. Model CS6 holds two chairs. Please confirm CS3 is the required bracket. According to the manufacturer of Item # 156, the shelf is not available. Please clarify. **ANSWER:** Item #47 to have "tight mesh" white epoxy coated ventilated wire shelving, mounting rails, shelving standards and cantilever brackets. Item #40 Model CS3 is correct and will hold two (2) specified clip chairs. For Item #156, Contractor to provide equal product.
97. Refer to Drawing Details 4/A601 and 2/A910 Please provide a manufacturer or specification for the speed medicine shelves. Please also define what H.D.P.B. stands for. **ANSWER:** Speed medicine shelves are to be millwork. H.D.P.B. stands for High Density Particle Board. All sides of speed medicine shelves are to be finished with PL-1.
98. Refer to Drawing Detail 10/A602 Please provide a specification for Privacy Film WF-1. **ANSWER:** Refer to Finish Legend on Sheet A752.

99. Please refer to Note # 2A on Drawing AD101. Many of the wood doors observed during the pre-bid walk thru that are tagged # 2A on the Drawings had veneer missing (chipped) as well as a substantial amount of deep scratches in the veneer. The procedure to "refinish existing door to like new condition" per Note # 2A in most cases is almost impossible based on their current condition. What constitutes a door that will be "like new condition"? **ANSWER:** "Like new" doors are to have the appearance of newly purchased doors. Contractor to substitute doors to remain with other removed doors in better condition if "Like new" appearance is not achievable.
100. Is this project tax exempt? **ANSWER:** Yes
101. Will this project be broken down into phases? **ANSWER:** No
102. Who is providing the MRI mobile port? **ANSWER:** Contractor is providing power & data connectivity and weatherproof wall mounted enclosure.
103. Per drawing A100A construction key notes #4 owner purchase audiometric sound booth. Will the installation be a part of the contractors bid? **ANSWER:** Refer to question 16 response above.
104. Drawings A752 Equipment schedule item #31 is a large framed art and item #45 is small framed art. The elevation drawing only indicates framed art and doesn't mention whether it is small or large. What is the quantity of the small art and the quantity of the large art? **ANSWER:** Refer to equipment drawings A750 through A751B4 for artwork locations.
105. Drawing A752 items numbers 43, 44, 145, 185, 206 is owner furnished and contractor installed. Please provide the product data / cut sheets / installation instructions to help determine the installation costs. **ANSWER:** The equipment will be provided by the Owner. No cut sheets are available at this time.
106. Drawing A752 item #48 is missing the manufacturer and model. Please provide manufacturer and model for accurate pricing. **ANSWER:** Provide new 24v wired doorbell and selectable chime with minimum 5 year manufacturer's warranty. Provide all required electrical materials required for installation.
107. Drawing A752 item #90 contractor F/I lockers. The lockers are not clearly identified on the drawing and there isn't a specification. Identify where the lockers are located and the quantity. **ANSWER:** Equipment Item #90 is located in Sub-Wait 1074A South Wall. Refer to A751B2.

END OF BIDDER QUESTION RESPONSES



## Steam and Condensate Piping Pre-Functional Checklist

Equipment ID	
Building	
Location	

### Statement of Readiness

The above equipment and/or systems integral to them are complete and ready for functional testing, except as noted. None of the outstanding items preclude safe and reliable functional tests being performed. This checklist does not take the place of the manufacturer's recommended checkout and startup procedures or report.

### Responsible Contractor Sign Here

CONTRACTOR	PRINTED NAME	SIGNATURE	DATE
General Contractor (GC)			
Mechanical Contractor (MC)			
Electrical Contractor (EC)			
TAB Contractor (TAB)			
Controls Contractor (CC)			

This statement of readiness has been received by the Commissioning Agent on \_\_\_\_\_ and will be incorporated as part of the final commissioning report.

Pressure Reducing Valve Information											
PRV	Specified				Submitted				Installed		
Manufacturer											
Model											
Stage	1		2		1		2		1		2
Size											
Capacity, lbs/hr											
Entering/Leaving Steam Pressure, psig											
Safety Relief Valve Pressure Setting, psig											
Safety Relief Valve Capacity, lbs/hr											
Sound level, dBA at 3 feet AFF and 3 feet in any direction											



Associated Checklists					
Boiler	<input type="checkbox"/>	Heat Exchanger	<input type="checkbox"/>	BAS	<input type="checkbox"/>
Steam Condensate Pump(s)	<input type="checkbox"/>	Other	<input type="checkbox"/>	Other	<input type="checkbox"/>
Comments:					

Requested documentation submitted	Rec'd	Comments
Manufacturer's cut sheets	<input type="checkbox"/>	
Performance data (pump curves, coil data, etc.)	<input type="checkbox"/>	
Installation and startup manual and plan	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
Sequences and control strategies	<input type="checkbox"/>	
Flushing and cleaning plan	<input type="checkbox"/>	
Leak test reports	<input type="checkbox"/>	
Welder Certification	<input type="checkbox"/>	
Comments:		

Installation Checks			
Check if Acceptable; Provide comment if unacceptable	NA		Comment
Piping			
Piping installed per the drawings and details	<input type="checkbox"/>	<input type="checkbox"/>	
Piping, fittings, valves, traps and equipment properly supported and seismically anchored per the details	<input type="checkbox"/>	<input type="checkbox"/>	
Piping, fittings, traps and valves insulated per specification	<input type="checkbox"/>	<input type="checkbox"/>	
In-line equipment insulated per specification	<input type="checkbox"/>	<input type="checkbox"/>	
Piping labeled per specification with flows indicated in the correct direction	<input type="checkbox"/>	<input type="checkbox"/>	
Strainers and low-point drains opened and verified to be clean	<input type="checkbox"/>	<input type="checkbox"/>	
Construction strainers removed	<input type="checkbox"/>	<input type="checkbox"/>	
Test plugs (P/T) installed near all control sensors and as per spec	<input type="checkbox"/>	<input type="checkbox"/>	
Flushing and cleaning plan submitted and approved	<input type="checkbox"/>	<input type="checkbox"/>	
Piping system properly flushed and cleaned and temporary piping removed	<input type="checkbox"/>	<input type="checkbox"/>	
Piping pressure tested according to contract documents	<input type="checkbox"/>	<input type="checkbox"/>	
No leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>	



Installation Checks			
Check if Acceptable; Provide comment if unacceptable		NA	Comment
Provisions in place for expansion compensation	<input type="checkbox"/>	<input type="checkbox"/>	
Record drawings updated to reflect the actual installation	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Valves</b>			
Isolation valves provided at all branches and main takeoffs to facilitate isolation (as required by contract)	<input type="checkbox"/>	<input type="checkbox"/>	
Valve installation per manufacturer's instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Valve manufacturer labels permanently affixed	<input type="checkbox"/>	<input type="checkbox"/>	
Manual isolation valves checked for proper seal and found to travel freely	<input type="checkbox"/>	<input type="checkbox"/>	
Valves installed in proper direction	<input type="checkbox"/>	<input type="checkbox"/>	
Valves stroke fully and easily and spanning is calibrated (see calibration section below)	<input type="checkbox"/>	<input type="checkbox"/>	
Valves that require a positive shut-off are verified to not be leaking when closed at normal operating pressure	<input type="checkbox"/>	<input type="checkbox"/>	
No leaking apparent	<input type="checkbox"/>	<input type="checkbox"/>	
Valves tagged and valve schedule submitted and displayed as required	<input type="checkbox"/>	<input type="checkbox"/>	
Adequate maintenance clearance in provided and valve is accessible	<input type="checkbox"/>	<input type="checkbox"/>	
Unions installed to allow for easy removal of control valves	<input type="checkbox"/>	<input type="checkbox"/>	
<b>PRV Station</b>			
Manufacturer's installation and pre-start-up checklists complete and attached	<input type="checkbox"/>	<input type="checkbox"/>	
PRV installation matches contract documents and manufacturer's recommendations	<input type="checkbox"/>	<input type="checkbox"/>	
Tags affixed with proper information	<input type="checkbox"/>	<input type="checkbox"/>	
Manufacturer's straight run pipe diameters verified and correct	<input type="checkbox"/>	<input type="checkbox"/>	
Sensing line installation correct distance from PRV, pitch of line, pressure gauge, single or common for PRVs	<input type="checkbox"/>	<input type="checkbox"/>	
Safety relief valve installation complete	<input type="checkbox"/>	<input type="checkbox"/>	
Drip pan elbow installed	<input type="checkbox"/>	<input type="checkbox"/>	
Valve body and drip pan drains piped to floor drain	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Sensors and Gages</b>			
Temperature, pressure and flow gages and sensors installed	<input type="checkbox"/>	<input type="checkbox"/>	
Piping gages, BAS and associated panel temperature and pressure readouts match.	<input type="checkbox"/>	<input type="checkbox"/>	
<b>TAB</b>			
Installation of system and balancing devices allowed balancing to be completed following specified NEBB or AABC procedures and contract documents	<input type="checkbox"/>	<input type="checkbox"/>	



Operational Checks			
Check if Acceptable; Provide comment if unacceptable	NA		Comments
PRV Station			
Safeties installed and safe operating ranges for this equipment provided	<input type="checkbox"/>	<input type="checkbox"/>	
Bypass valves verified closed	<input type="checkbox"/>	<input type="checkbox"/>	
Manual and automatic steam and condensate valves positioned for start-up	<input type="checkbox"/>	<input type="checkbox"/>	
Steam introduced to system slowly, gradually to warm up system	<input type="checkbox"/>	<input type="checkbox"/>	
Steam pressure carefully raised just until safety relief valve lifted through use of bypass line; lift pressure recorded to confirm relief valve setting	<input type="checkbox"/>	<input type="checkbox"/>	
Final PRV pressure setting set for full steam mode or partial steam mode (indicate which one)	<input type="checkbox"/>	<input type="checkbox"/>	
PRV pressures set (one at a time) for 1/3 and 2/3 valves with other valve isolated and proper load based on set mode (full or partial)	<input type="checkbox"/>	<input type="checkbox"/>	
Permanent mark made on pressure adjustment spring to indicate where set; locking ring installed	<input type="checkbox"/>	<input type="checkbox"/>	
All trap assemblies verified for proper operation	<input type="checkbox"/>	<input type="checkbox"/>	
Safeties installed and safe operating ranges for this equipment provided	<input type="checkbox"/>	<input type="checkbox"/>	

### Sensor and Actuator Calibration

All field-installed sensors and gages, and all actuators (dampers and valves) on this piece of equipment shall be calibrated in accordance with Specification Section 01810. All test instruments shall have had a certified calibration within the last 12 months: **Y/N** \_\_\_\_\_. Sensors installed *in* the unit at the factory with calibration certification provided need not be field calibrated.

Sensor or Actuator Tag & Location	Location OK	1 <sup>st</sup> Gage or BAS Value	Instrument Measured Value	Final Gage or BAS Value	Pass Y / N

Comments:



**Department of  
Veterans Affairs**

**PFB ARCHITECTS / KJWW  
CONSULTANTS / GUIDON  
DESIGN  
RELOCATE JOLIET CBOC  
EDWARD HINES JR., V.A.  
HOSPITAL, HINES, ILLINOIS**

--



## Ductwork Construction Pre-Functional Checklist

Equipment ID	
Building	
Location	

### Statement of Readiness

The above equipment and/or systems integral to them are complete and ready for functional testing, except as noted. None of the outstanding items preclude safe and reliable functional tests being performed. This checklist does not take the place of the manufacturer's recommended checkout and startup procedures or report.

### Responsible Contractor Sign Here

CONTRACTOR	PRINTED NAME	SIGNATURE	DATE
General Contractor (GC)			
Mechanical Contractor (MC)			
Sheet Metal Contractor (SMC)			
TAB Contractor (TAB)			

This statement of readiness has been received by the Commissioning Agent on \_\_\_\_\_ and will be incorporated as part of the final commissioning report.

Requested documentation submitted	Rec'd	Comments
Ductwork Construction Details	<input type="checkbox"/>	
Submittal/Shop Drawing Information	<input type="checkbox"/>	
O&M manuals	<input type="checkbox"/>	
<b>Comments:</b>		

**Note: This form should be completed weekly, throughout the installation of ductwork.**





**DUCT LEAKAGE TESTING REQUIREMENTS MUST BE COORDINATED WITH CONTRACT DOCUMENTS AND EDITED TO MATCH.**

**Support:** Ductwork is supported properly.

**Seal:** All ductwork openings are sealed with plastic or a metal cap to keep out dust, dirt, and debris.  
All ductwork connections are fastened and sealed with high quality duct sealer.

**Clean:** All ductwork is free of dust, dirt, and debris.

**Conflicts:** Were any conflicts or potential conflicts with the work of other trades discovered?  
If so, describe in section 3.

**Drawings Updated:** The installed system is shown on the as-built drawings.

**1. Primary (Main) Ductwork Installation**

Date	Description of Work Performed/ Drawing Reference	Items (see descriptions above)				Drawings Updated?	Percent Complete	Initial
		Support	Seal	Clean	Conflicts			
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		



2. Secondary (Branch) Ductwork Installation

Date	Description of Work Performed/ Drawing Reference	Items (see descriptions above)				Drawings Updated?	Percent Complete	Initial
		Support	Seal	Clean	Conflicts			
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		
		Yes / No	Yes / No	Yes / No	Yes / No	Yes / No		

3. Conflicts (attach sheets as necessary)

Date	Description of Conflict	Suggested Resolution	Resolved
			Yes / No
			Yes / No
			Yes / No
			Yes / No
			Yes / No
			Yes / No
			Yes / No
			Yes / No
			Yes / No



4. **Pressure Testing** (required to document the conditions of the test)

Primary	Secondary
The operating pressure of this system is _____ inches	The operating pressure of this system is _____ inches
<p>The <u>test pressure</u> of this system is the <u>maximum</u> of:</p> <p>High/Med Pressure Ductwork: 2" + operating pressure = 2" + _____ = _____ inches</p> <p><b>AND</b></p> <p>Low Pressure Ductwork: 1" + operating pressure = 1" + _____ = _____ inches</p> <p>Where high/med pressure is 2" and higher operating pressure and low pressure is under 2."</p>	<p>The <u>test pressure</u> of this system is the <u>maximum</u> of:</p> <p>High/Med Pressure Ductwork: 2" + operating pressure = 2" + _____ = _____ inches</p> <p><b>AND</b></p> <p>Low Pressure Ductwork: 1" + operating pressure = 1" + _____ = _____ inches</p> <p>Where high/med pressure is 2" and higher operating pressure and low pressure is under 2."</p>
<p>The <u>maximum leakage rate</u> is:</p> <p>0.01 x _____ cfm (section air flow rate) = _____ cfm</p>	<p>The <u>maximum leakage rate</u> is:</p> <p>0.01 x _____ cfm (section air flow rate) = _____ cfm</p>



Complete Table 1 during the actual pressure testing.  
Test 2 is only to be completed if the first test detects excessive leakage.

**Table 1: Leakage and Pressure Readings**

Time (min)	Primary				Secondary			
	Test 1		Test 2		Test 1		Test 2	
	Pressure inches	Leakage cfm	Pressure inches	Leakage cfm	Pressure inches	Leakage cfm	Pressure inches	Leakage cfm
Begin								
1								
2								
3								
5								
7								
10								
End								

Required Test Pressure (from previous page):

Primary: \_\_\_\_\_ inches

Secondary: \_\_\_\_\_ inches

Maximum allowable leakage rate (from previous page):

Primary: \_\_\_\_\_ cfm

Secondary: \_\_\_\_\_ cfm

**Primary**

Test 1:

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Date: \_\_\_\_\_

Initials: \_\_\_\_\_

Test 2:

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Date: \_\_\_\_\_

Initials: \_\_\_\_\_

**Secondary**

Test 1:

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Date: \_\_\_\_\_

Initials: \_\_\_\_\_

Test 2:

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Date: \_\_\_\_\_

Initials: \_\_\_\_\_



## 5. Calibration Information

Data on the unit used to measure the leakage of air needs to be recorded to document its calibration and accuracy information if questions arise after the testing. The accuracy of the unit should be **[+/- 7.5%]** of expected leakage rate (for example if the leakage rate is not to exceed 200 cfm, then the unit must have an accuracy of 15 cfm).

Manufacturer: \_\_\_\_\_

Model: \_\_\_\_\_

Range: \_\_\_\_\_

Accuracy: \_\_\_\_\_

Last calibration date: \_\_\_\_\_ (include copy of calibration report)



## Terminal Units (Multiple) Pre-Functional Checklist

Equipment ID	
Building	
Location	

### Statement of Readiness

The above equipment and/or systems integral to them are complete and ready for functional testing, except as noted. None of the outstanding items preclude safe and reliable functional tests being performed. This checklist does not take the place of the manufacturer's recommended checkout and startup procedures or report.

### Responsible Contractor Sign Here

CONTRACTOR	PRINTED NAME	SIGNATURE	DATE
General Contractor (GC)			
Mechanical Contractor (MC)			
Electrical Contractor (EC)			
TAB Contractor (TAB)			
Controls Contractor (CC)			

This statement of readiness has been received by the Commissioning Agent on \_\_\_\_\_ and will be incorporated as part of the final commissioning report.

## NEW TERMINAL UNIT INSTALLATIONS

### Equipment Information ..... TU-120

Make		Model Number			
Serial Number		Capacity		CFM	





Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-121**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-122**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-123**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-250**



Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-251**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-252**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-253**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	



Notes:

**Equipment Information ..... TU-254**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-255**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					



Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-120	TU-121	TU-122	TU-123	TU-250	TU-251	TU-252	TU-253	TU-254	TU-255						
<b>Equipment Information</b>																		
MC	Make																	
MC	Model																	
MC	Serial Number																	
MC	Capacity																	
MC	CFM																	
MC	Volts/Phase																	
MC	Function																	
MC	Service Area																	
TAB	Min CFM Setting																	
TAB	Max CFM Setting																	
<b>General Installation</b>																		
MC	Permanent labels affixed to equipment, switches, controls and safety devices.																	
MC	Each equipment model number complies with approved submittal.																	
MC	Connection to ductwork is tight and in good condition.																	
MC	Fan and motor properly installed and operational.																	
MC	Correct VAV box location is shown on as-built drawings.																	



Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-120	TU-121	TU-122	TU-123	TU-250	TU-251	TU-252	TU-253	TU-254	TU-255						
MC	Air terminal units are installed level and plumb.																	
MC	Equipment installation meets serviceability requirements.																	
MC	Ductwork pressure test has been completed and approved.																	
MC	Cabinet panels permanently affixed.																	
MC	Thermal insulation has been installed according to specification.																	
<b>Coils, Piping and Valves</b>																		
MC	Dampers are installed and operating properly.																	
MC	Damper operator linkages are tight.																	
MC	Required length of straight duct provided upstream of air supply terminals.																	
MC	Manual balancing dampers permanently marked at final setting.																	
MC	Valve actuators have been fully stroked.																	



Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-120	TU-121	TU-122	TU-123	TU-250	TU-251	TU-252	TU-253	TU-254	TU-255						
MC	Automatic damper operates full stroke without binding.																	
MC	Hot water is properly piped to the coil.																	
MC	Piping is supported by hangers independent of the coil.																	
MC	Hydrostatic test for re-heat piping complete and report submitted.																	
MC	Strainers removed and cleaned after system flushing.																	
MC	Piping insulation complete and undamaged.																	
MC	Isolation valves are installed, open and accurately located on as-built drawings.																	
MC	Piping is labeled correctly and flow direction is indicated clearly.																	
MC	P&T ports have been installed on the inlet and outlet piping of the coil or as indicated in the construction documents.																	





Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-120	TU-121	TU-122	TU-123	TU-250	TU-251	TU-252	TU-253	TU-254	TU-255						
MC	Coils are clean and fins are in good condition.																	
MC	Control valves installed as indicated on the document details.																	
MC	Air vents installed at high points in piping.																	
MC	Drain valves installed at low points and have hose connections.																	
MC	All piping and accessories installed per contract document details.																	

Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-120	TU-121	TU-122	TU-123	TU-250	TU-251	TU-252	TU-253	TU-254	TU-255						
<b>Testing and Balance</b>																		
TAB	Water balancing is complete.																	
TAB	Air balancing is complete.																	
TAB	Balancing valves are marked at final setting.																	
TAB	Dampers are marked at final setting.																	



Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-120	TU-121	TU-122	TU-123	TU-250	TU-251	TU-252	TU-253	TU-254	TU-255						
TAB	Test and balancing (T&B) report submitted.																	
TAB	All system pressure and airflow set points have been documented during the test and balance procedure and will be included in the final TAB report.																	
<b>Electrical and Controls</b>																		
EC	Proper power voltage is supplied.																	
EC	Normal power supply energized and identified.																	
EC	Control circuit energized and properly identified.																	
EC	All control panels are in place.																	
TCC	Control devices have been calibrated and programmed.																	
TCC	Control loops have been tuned in field.																	
TCC	Control damper(s) operator has been fully stroked.																	
TCC	Coil control valve installed and terminated.																	



Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-120	TU-121	TU-122	TU-123	TU-250	TU-251	TU-252	TU-253	TU-254	TU-255						
TCC	Coil control valve powered and calibrated.																	
TCC	Coil control valve is programmed and reads correctly at front end computer.																	
TCC	Operator Workstation - points programmed and generated in graphics.																	
TCC	Discharge temperature sensor installed and accurately located on as-built drawings.																	
<b>Controls (Sensors I/O)</b>																		
TCC	<b>Analog Inputs</b>																	
TCC	Zone Temperature																	
TCC	Zone Setpoint																	
TCC	Supply #1 CFM																	
TCC	Supply #2 CFM																	
TCC	Supply #3 CFM																	
TCC	Exhaust #1 CFM / snorkel																	
TCC	Exhaust #2 CFM																	
TCC	Exhaust #3 CFM																	
TCC	Exhaust #4 CFM																	
TCC	Exhaust #1 Pressure / snorkel																	
TCC	Exhaust #1 Discharge Air Temp																	



Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-120	TU-121	TU-122	TU-123	TU-250	TU-251	TU-252	TU-253	TU-254	TU-255						
TCC	Exhaust #2 Discharge Air Temp																	
TCC	Exhaust #3 Discharge Air Temp																	
TCC	<b>Analog Outputs</b>																	
TCC	Supply #1 Air Damper Position																	
TCC	Supply #2 Air Damper Position																	
TCC	Supply #3 Air Damper Position																	
TCC	Exhaust #1 Air Damper Position/Snorkel																	
TCC	Exhaust #2 Air Damper Position																	
TCC	Exhaust #3 Air Damper Position																	
TCC	Exhaust #4 Air Damper Position																	
TCC	Supply #1 Reheat Valve Position																	
TCC	Supply #2 Reheat Valve Position																	
TCC	Supply #3 Reheat Valve Position																	
TCC	<b>Binary Outputs</b>																	
TCC	Supply #1 Radiant Panel Valve																	





## EXISTING TERMINAL UNIT REVISIONS

### Equipment Information ..... TU-B01

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

### Equipment Information ..... TU-B02

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

### Equipment Information ..... TU-B03

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

### Equipment Information ..... TU-203

Make		Model Number			
Serial Number		Capacity		CFM	



Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-205**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-206**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-209**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					



**Equipment Information ..... TU-210**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-211**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-212**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-213**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	





Notes:	
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**Equipment Information ..... TU-214**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-217**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					

**Equipment Information ..... TU-218**

Make		Model Number			
Serial Number		Capacity		CFM	
Volts/Phase		Function		Service Area	
Notes:					



**Equipment Information .....TU-219**

<b>Make</b>		<b>Model Number</b>			
<b>Serial Number</b>		<b>Capacity</b>		<b>CFM</b>	
<b>Volts/Phase</b>		<b>Function</b>		<b>Service Area</b>	
<b>Notes:</b>					

Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-B01	TU-B02	TU-B03	TU-203	TU-205	TU-206	TU-209	TU-210	TU-211	TU-212	TU-213	TU-214	TU-217	TU-218	TU-219
			<b>Equipment Information</b>														
MC	Make																
MC	Model																
MC	Serial Number																
MC	Capacity																
MC	CFM																
MC	Volts/Phase																
MC	Function																
MC	Service Area																
TAB	Min CFM Setting																
TAB	Max CFM Setting																
<b>General Installation</b>																	
MC	Permanent labels affixed to equipment, switches, controls and safety devices.																
MC	Each equipment model number complies with approved submittal.																
MC	Connection to ductwork is tight and in good condition.																
MC	Fan and motor properly installed and operational.																
MC	Correct VAV box location is shown on as-built drawings.																



Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-B01	TU-B02	TU-B03	TU-203	TU-205	TU-206	TU-209	TU-210	TU-211	TU-212	TU-213	TU-214	TU-217	TU-218	TU-219
MC	Air terminal units are installed level and plumb.																
MC	Equipment installation meets serviceability requirements.																
MC	Ductwork pressure test has been completed and approved.																
MC	Cabinet panels permanently affixed.																
MC	Thermal insulation has been installed according to specification.																
<b>Coils, Piping and Valves</b>																	
MC	Dampers are installed and operating properly.																
MC	Damper operator linkages are tight.																
MC	Required length of straight duct provided upstream of air supply terminals.																
MC	Manual balancing dampers permanently marked at final setting.																
MC	Valve actuators have been fully stroked.																
MC	Automatic damper operates full stroke without binding.																



Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-B01	TU-B02	TU-B03	TU-203	TU-205	TU-206	TU-209	TU-210	TU-211	TU-212	TU-213	TU-214	TU-217	TU-218	TU-219
MC	Hot water is properly piped to the coil.																
MC	Piping is supported by hangers independent of the coil.																
MC	Hydrostatic test for re-heat piping complete and report submitted.																
MC	Strainers removed and cleaned after system flushing.																
MC	Piping insulation complete and undamaged.																
MC	Isolation valves are installed, open and accurately located on as-built drawings.																
MC	Piping is labeled correctly and flow direction is indicated clearly.																
MC	P&T ports have been installed on the inlet and outlet piping of the coil or as indicated in the construction documents.																
MC	Coils are clean and fins are in good condition.																



Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-B01	TU-B02	TU-B03	TU-203	TU-205	TU-206	TU-209	TU-210	TU-211	TU-212	TU-213	TU-214	TU-217	TU-218	TU-219
MC	Control valves installed as indicated on the document details.																
MC	Air vents installed at high points in piping.																
MC	Drain valves installed at low points and have hose connections.																
MC	All piping and accessories installed per contract document details.																

Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-B01	TU-B02	TU-B03	TU-203	TU-205	TU-206	TU-209	TU-210	TU-211	TU-212	TU-213	TU-214	TU-217	TU-218	TU-219
<b>Testing and Balance</b>																	
TAB	Water balancing is complete.																
TAB	Air balancing is complete.																
TAB	Balancing valves are marked at final setting.																
TAB	Dampers are marked at final setting.																
TAB	Test and balancing (T&B) report submitted.																



Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-B01	TU-B02	TU-B03	TU-203	TU-205	TU-206	TU-209	TU-210	TU-211	TU-212	TU-213	TU-214	TU-217	TU-218	TU-219	
TAB	All system pressure and airflow set points have been documented during the test and balance procedure and will be included in the final TAB report.																	
<b>Electrical and Controls</b>																		
EC	Proper power voltage is supplied.																	
EC	Normal power supply energized and identified.																	
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TCC	Control damper(s) operator has been fully stroked.																	
TCC	Coil control valve installed and terminated.																	



Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-B01	TU-B02	TU-B03	TU-203	TU-205	TU-206	TU-209	TU-210	TU-211	TU-212	TU-213	TU-214	TU-217	TU-218	TU-219	
TCC	Coil control valve powered and calibrated.																	
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TCC	<b>Analog Inputs</b>																	
TCC	Zone Temperature																	
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TCC	Exhaust #3 CFM																	
TCC	Exhaust #4 CFM																	
TCC	Exhaust #1 Pressure / snorkel																	
TCC	Exhaust #1 Discharge Air Temp																	





Responsible Contractor	Requirement (Tag numbers based on Mechanical Drawings)	Sign Off	TU-B01	TU-B02	TU-B03	TU-203	TU-205	TU-206	TU-209	TU-210	TU-211	TU-212	TU-213	TU-214	TU-217	TU-218	TU-219	
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TCC	Exhaust #4 Air Damper Position																	
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TCC	<b>Binary Outputs</b>																	
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PFB ARCHITECTS / KJWW  
CONSULTANTS / GUIDON  
DESIGN  
**RELOCATE JOLIET CBOC  
EDWARD HINES JR., V.A.  
HOSPITAL, HINES, ILLINOIS**

[illegible]

**Yes = Checked and Completed, N/A = Not Applicable**

## Additional Comments: