



Medical Air Solutions, Inc.

Marietta, GA 30068, 800-645-1059, Fax 770-977-9964

Technology & Service

MAS Project: P-10-30-12

Revision 11

OLOL Project: 13-016

for

Our Lady of the Lake Regional Medical Center
Medical Oncology LLC Building

Client: 8119 Picardy Avenue

Baton Rouge, LA 70809

Pharmacy Compounding Area Upgrade

Project Document Date: April 16, 2013

Project Participants

Bradley-Blewster & Associates	General Contractor (GC)
Mr. Carroll Blewster	Arkel Constructors
Baton Rouge, LA	Sub-contractors TBD by GC
(225) 769-7042	
Medical Air Solutions, Inc.	Dammon Engineering
Design/Supplier	Mr. Chuck Dammon
Mr. Bob Wiltbank, V. P.	Slidell, LA
(770) 377-3884 Cell	(985) 649-5832
(770) 977-1407 (Corporate)	
(800) 645-1059 (Toll Free)	

This document is intended to list the demolition and construction/renovation of the Medical Oncology building to convert the second floor into a compounding of sterile preparations (CSP) area with the first floor renovated for infusion. This list of project items is not “carved in stone” as to the order in which they are performed.

Bob Wiltbank

Medical Air Solutions, Inc.

(770) 377-3884 Engineering (Cellular - Primary)

(800) 645-1059 Toll Free Corporate Office

(770) 977-9964 Business Office Facsimile

(770) 977-1407 Corporate – Local Atlanta

1.0 Project Participants

- 1.1 **Chuck Dammon** – Mr. Chuck Dammon will perform A&E design services for the 2nd floor with **MAS’** specification of selected equipment needed for this project. They will generate construction drawings and also update the hospital’s “As-Built” CAD drawing(s) to reflect the changes to the physical plant.

He or the Project Coordinator will coordinate with the Hospital to schedule, if required, any safety orientation meetings such as Interim Life Safety Measures (ILSM) and/or Infection Control Risk Assessments (ICRA) to ensure safe working conditions and to ensure the work area is isolated from the client’s working area in the building.

- 1.2 **General Contractor (GC) Arkel Constructors** – The hospital’s contractor will act as General Contractor.

1.2.1 **Note that work being performed by the other trades and services companies (Electrical, Mechanical, Plumbing, flooring, painting, Sprinkler System, Roofing, et al), will be considered to be under the GC and their tasks will be listed under the GC label in this document.**

1.2.2 The **A&E’s** will be responsible for all permits or inspections.

- 1.3 **American Medical Systems, LLC (AMS)** – Mr. Mike Flood will supervise the installation of all **MAS** supplied equipment, instruments and materials coordinating with **GC** and other sub-contractors on those items where specific trades must perform work.

- 1.4 **Medical Air Solutions, Inc. (MAS)** – Mr. Bob Wiltbank will provide technical assistance to all participants before and during the renovation/construction phase. He will also perform commissioning and in-service upon completion of the project. For any question about delivery of **MAS** supplied items, please call Mr. Lee Hadin at (770) 977-1407 or (800) 645-1059.

- 1.5 **Bradley-Blewster & Associates (BB&A)** – Mr. Carroll Blewster, AIA, will be the project coordinator for A&E and construction and renovation for the first floor and for other areas of the building including the first floor and any outside work needed. He will coordinate with the contractor(s) required for that work.

- 1.6 **Unknown** – Other contractors, including **Bernhard Mechanical**, will be on site to perform demolition, construction and renovation of the first floor of the building. Some interaction between the construction groups may be required to accomplish to entire project.

2.0 Present Area Description

2.1 Refer to **Dammon Engineering's** MEP drawings for construction.

3.0 Project Tasks in Order of Execution – Prior to Start Date

- 3.1 The execution of the demolition/renovation/construction may have some items being performed simultaneously. This list, and the order of execution, is not “carved in stone” especially in the construction phase of the project. The expeditious completion of the project may dictate field changes in the order of tasks. Refer to the updated **Dammon Engineering Drawings** and the **MAS** written proposal and this project work document.
- 3.2 The start date of the project will be dependent upon the delivery of the critical equipment and instruments. As of this revision, most **MAS** supplied items have been delivered.
- 3.3 Note that there may be other demolition and renovation on the 1st floor of this building while the **CSP Area** is being performed.
- 3.4 The following abbreviations will be used:
- 3.4.1 **DE** – Dammon Engineering
 - 3.4.2 **GC** – Hospital Contractor
 - 3.4.3 **MAS** – Medical Air Solutions, Inc. and American Medical Systems, Inc.
 - 3.4.4 **BB&A** – Bradley-Blewster & Associates
 - 3.4.5 **Client** – Our Lady of the Lake Regional Medical Center for Medical Oncology
- 3.5 The project elements:
- 3.5.1 **DE, MAS, GC, BB&A** – Confirm with **Client** the area designated to be the **CSP Area** (with initial “walk-through”) and identify contractors & sub-contractors and suppliers of equipment, instruments and materials of construction. This was initially to be located on the first floor of the building but is now to be located on the second floor of the building.
 - 3.5.2 **BB&A** – Will perform first floor engineering drawings and will be the project coordinator for that part of the overall project. Some electrical and structural work will be performed for the second floor part of the project.
 - 3.5.3 **DE** – Will perform second floor engineering drawings and will be the project coordinator for that part of the overall project. Some electrical, plumbing and structural work will be performed for the second floor part of the project by the **GC**.
 - 3.5.4 **MAS** – Written proposal with line drawings being supplied to **Client** and **DE** by **MAS**. A quote from **MAS** for equipment/instruments and services (including all sub-contractors and **DE's** MEP construction and as-built drawings and any other associated services. This renovation is to ensure the finished **CSP Area** will meet **USP General Chapter <797>**. **MAS** line drawings will be updated after the walk-through is completed.
 - 3.5.5 **MAS, GC, DE, BB&A** – Confer to define what architectural and engineering tasks are to be required, which are:
 - 3.5.5.1 Specify dedicated HVAC recirculating system and other associated equipment and ducting for the **CSP Area** from a procured air handling unit (AHU) to the fan powered ceiling **APS** in each room.

- 3.5.5.2 Trane Baton Rouge will be the vendor for the AHU, chiller unit and other associated equipment. The location of the AHU will be in a mechanical room in the attic area. An additional chiller coil and heater will be required.
 - 3.5.5.3 Specify the location of the roof penetration required for attic ventilation plus the ceiling penetration for chemo **Hood units #1** and **#2** exhaust.
 - 3.5.5.4 Confer with **Client** to ascertain whether the client requires cleanroom lighting units and, if so, specify and designate ceiling grid locations. Lighting to be procured by the electrical sub-contractor.
 - 3.5.5.5 Specify 304 SS return grilles for AHU return to be procured by **Bernhard**.
- 3.5.6 **GC** – Identify and procure the services of the sub-contractors which **GC** will or may need include but is not limited to:
- 3.5.6.3 Mechanical contractor
 - 3.5.6.4 Electrical contractor
 - 3.5.6.5 Video and smoke/fire alarm contractor
 - 3.5.6.6 Plumbing contractor
 - 3.5.6.7 Flooring and Painting contractors
 - 3.5.6.8 Roof Contractor (Usually the one holding the warranty)
 - 3.5.6.9 Identify T&B to perform final balancing of the HVAC system

4.0 Project Tasks in Order of Execution – Demolition/Site Prep

- 4.1 The execution of the demolition may have some items being performed simultaneously. This list, and the order of execution, is not “carved in stone” especially in the operating phase of the project. The expeditious completion of the project may dictate field changes in the order of tasks.
- 4.2 **GC – Ceiling and Above Ceiling Area** – The following relate to the demo of the entire or parts of the horizontal ceiling area. The slanted drywall ceiling is to be left in place.
 - 4.2.1 Existing lighting in all rooms should be wire hung from the roof beams to provide lighting for construction/renovation.
 - 4.2.2 Demo all wallboard in the horizontal section of the ceiling.
 - 4.2.3 Remove any unused ducting, piping and conduit.
- 4.3 **GC – Flooring** – The following relates to the entire floor of the **CSP Area**.
 - 4.3.1 Remove any floor obstructions and fill in any low areas in preparation for a heat welded vinyl covering. The knee wall on the west end of the area must remain.
- 4.4 **GC – Wall Removal** – Demo the indicated walls on **DE’s** and **BB&A’s** drawings.
- 4.5 **GC – AHU Relocation** – Relocate any existing Air Handler(s) to prepare for installation of the new mechanical room for the **AHU** and the general renovation as per **BB&A’s** drawings.
- 4.6 **GC – Plumbing** – Identify water piping runs for the two (2) hand wash/eyewash stations on the second floor and the one (1) hand wash/eyewash station in the **Med Room** on the first floor.
- 4.7 **GC** – Construct stairs for emergency exit from the second floor.

5.0 Project Tasks in Estimated Order of Execution – Renovation/Construction

- 5.1 The installation of the **MAS** supplied equipment, instruments and building materials is performed by **MAS's** contractor but will need electrical, mechanical, plumbing and other support. As stated earlier, some of these tasks can be performed simultaneously.
- 5.1.1 **GC – AHU and Chiller Installation** – Install **Chiller** on a pad at the outside Northeast corner of the building and install the **AHU** in the **Mechanical Room**.
- 5.1.1.1 Provide electrical service to both units.
 - 5.1.1.2 Run piping from the **Chiller** to the **AHU**.
 - 5.1.1.3
- 5.1.2 **GC – Emergency Door** – Build out new door for emergency exit per **DE** construction drawings and the walkway to the outside wall per **BB&A** drawings.
- 5.1.2.1 An air handler must be moved to make a platform to the door that will be on the outside wall.
- 5.1.3 **GC – CSP Area Supply Ducting** – Install main supply hard ducting in the upper attic area. Refer to **DE** Drawing **C-M-1** and field fit ducting.
- 5.1.3.1 Main supply ducting from the **AHU** to the **CSP Area's APS** units can be carbon steel.
 - 5.1.3.2 Install heater unit (electric) in the main supply duct at the location indicated on **DE** drawing.
 - 5.1.3.3 Fabricate transitions for **APS** to connect with insulated flex ducting to the main supply duct.
 - 5.1.3.4 All supply ducting must inspected for debris and cleaned before being put in service.
 - 5.1.3.5 All main supply ducting joints must be sealed and the ducting insulated after **APS** are connected and duct inspection is performed.
- 5.1.4 **GC – CSP Area Return Ducting** – Install main hard return ducting in the attic side areas. Refer to **DE** Drawing **C-M-1** and field fit ducting.
- 5.1.4.1 Main return ducting from the **APS** to the **CSP Area's AHU** units can be carbon steel.
 - 5.1.4.2 Install and fabricate transitions for **return grilles** to connect with flex ducting to the main return duct.
 - 5.1.4.3 All return ducting must inspected for debris and cleaned before being put in service.
 - 5.1.4.4 All main return ducting joints must be sealed and the ducting insulated after **return grilles** are connected and duct inspection is performed.
- 5.1.5 **GC – Hard Wall Erection** – Build out new perimeter walls with wood studs as per **DE** construction and **BB&A** drawings. The partial sheetrock walls extending to the middle of the room (where the ceiling is not slanted) will have a vertical flat end to mate with the cleanroom wall system.
- 5.1.5.1 Notch out walls for receptacles, instruments and light switches. Some locations to be field determined.
 - 5.1.5.2 Tape, fill and spackle wallboard.
 - 5.1.5.3 Paint walls with a single coat of primer.
 - 5.1.5.4 Paint with epoxy paint.
 - 5.1.5.5 Seal Three (3) service doors to existing AHU's for first floor.
- 5.1.6 **MAS – Cleanroom Walls** – Install all cleanroom wall panels as per **DE** drawings.

- 5.1.7 **MAS – APS Installation** – Install 2' x 2' and 2' x 4' **APS** in the ceiling. Exact positioning to be field determined
- 5.1.8 **MAS – Ceiling Grid** – Install ceiling grid for sealed ceiling system.
- 5.1.9 **GC – Floor Covering** – Install flooring in all rooms in the **CSP Area** with heat welded vinyl with coving on the hard walls.
- 5.1.10 **GC – Emergency Exit** – Erect stairs and platform for the emergency exit to the parking lot.
- 5.1.10.1.1 The stairs and platform should be of sufficient construction to support any equipment delivered through that door.
- 5.1.11 **GC – Electrical, Light Switches** – Light switches for all rooms will be installed at convenient locations with fire retardant gaskets behind the wall plates.
- 5.1.12 **GC – Electrical, Outlets** – Duplex outlets will be required for the new equipment requiring electrical service in the **Anteroom, Workroom, Buffer Zone 1** and **Buffer Zone 2**. The **Client** will advise **DE** and **GC** as to how many additional outlets are required in all rooms.
- 5.1.12.1.1 The outlets must have fire retardant gaskets behind the wall plates.
- 5.1.13 **MAS – FRP installation** – Install FRP (Fiberglass Reinforced PVC) wall covering on hard walls in all rooms.
- 5.1.14 **GC – Hands Free Sink and Eyewash** – Install hands free sink/eyewash units (2 on the second floor, 1 on the first floor) and connect water service to same.
- 5.1.15 **GC – Roof Penetrations** – Perform roof penetrations for the Chemo hood exhaust as per the **DE** drawing.
- 5.1.16 **GC – Chemo Hoods Exhaust Blower** – Mount exhaust blower at the designated location on the roof. Ensure compliance with OSHA 1910's twenty-five (25) foot rule for any discharged air that could be inimical to life and health.
- 5.1.16.1 There will be a supplied 15' extension to be mounted on top of the torpedo type blower.
- 5.1.16.2 Rather than guy wires, we recommend offset splines on the 15' extension.
- 5.1.17 **GC – Roof Penetrations** – Perform roof penetrations for the Chemo hood exhaust as per the **DE** drawing.
- 5.1.18 **AMS – Workstation Placement** – Move the new CSP workstations (**LAFW unit #1** in **Buffer Zone 1**, **Hood unit #1** and **Hood unit #2** in **Buffer Zone 2**) to **Buffer Zone 1** and **Buffer Zone 2** respectively.
- 5.1.19 **GC – Hood unit #1 and #2 Exhaust Ducting** – Connect each Chemo workstation exhaust port to the dedicated outside roof exhaust blower via ducts for each hood in **Buffer Zone** to the main duct to the exhaust blower.
- 5.1.20 **MAS – Room Pressure Monitor Boxes** – Install one box each in **Buffer Zone 1, Buffer Zone 2, Anteroom** and the **Workroom** for the flush wall mounted **TRRM** room pressure monitors and affix transformer NEMA 4 box on the wall above the ceiling.
- 5.1.21 **MAS, GC – Room Pressure Monitors, Electrical** – Run 110/60/1 VAC power to the transformer in each NEMA 4 electrical box above each monitor in

Buffer Zone 1, Buffer Zone 2, Anteroom and the **Workroom** and run four (4) 18 ga. plenum rated wires from the wall box to the electrical box above.

5.1.22 **MAS – APS Control Panel Boxes** – Install flush wall mounted control panel boxes next to the room pressure monitor in all rooms in the **CSP Area**.

5.1.23 **MAS, GC – APS Control Panels Wiring, Electrical** – Run 18 ga. seven (7) plenum rated wires from the “J” box for each **APS** to its Control Panel box in all **CSP Area** rooms.

5.1.24 **MAS – Wires to APS Control Panel Boxes** – Terminate wires from all **APS** units to their respective control module.

5.1.25 **MAS – Room Pressure Monitor Sensors** – Install pressure, temperature and relative humidity sensors in the ceiling of **Buffer Zone 1, Buffer Zone 2, Anteroom** and **Workroom** then run pitot tubes to same including the reference pressure point in the stairway.

5.1.26 **MAS, Client** – Place desks as directed and affix wall shelving as directed by the Director of Pharmacy or his designate.

6.0 Project Tasks in Order of Execution – Commissioning

6.1 **MAS, GC** – After installation is complete **MAS** and **AMS** will commission all elements in the **CSP Area**. **MAS** will perform an initial balancing to ensure air changes and room pressures meet the **USP <797>** standard. Balancing by a LA licensed balancing company may be required (**DE** or **GC**)

6.2 **GC** – Arrange for any inspections required.

6.3 **MAS** - Perform in-service for the pharmacy staff, facilities personnel and other personnel the **Client** feels need this information.

Please call me if you have additions or corrections. The one (1) and one (1) MAS line drawing is on the following pages.

Bob Wiltbank
Vice President Engineering/Manufacturing
Medical Air Solutions, Inc.
3080 Brookview Drive
Marietta, GA 30068
USA
(800) 645-1059 Toll Free
(770) 977-9964 Business Office Facsimile
(770) 977-1407 Corporate - Atlanta
(877) 840-2013 Engineering & Technology Office (Toll Free including FAX)
(770) 377-3884 Engineering (Cellular)
WWW: <http://www.medicalairsolutions.com>
E-mails: Corporate@medicalairsolutions.com
or AvatarGA1@aol.com