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PROPOSAL FOR:

**NORTH AMERICAN HOSPITAL
PHARMACY COMPLIANCE UPGRADE**

Proposal # CR.161201.101

12/29/2016

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1. Restriction on Disclosure Statement

Technical and cost data contained in this proposal shall not be used or disclosed, except for North American Hospital's evaluation purposes. If a contract is awarded to CEPro as a result of, or in connection with the submission of this proposal, North American Hospital shall have the right to use or disclose the data to the extent provided in the contract or consulting agreement. This restriction does not limit North American Hospital's right to use or disclose technical data obtained from another source.

All data contained in this proposal is subject to this restriction.

This proposal is valid for 90 days.

2. Introduction

Critical Environments Professionals, Inc. (CEPro) is pleased to submit this proposal for the renovation of the Pharmacy Drug Prep Area for North American Hospital's location to aid with compliance to USP <797/800> requirements. We are excited about the opportunity and are ready to start work immediately.

CEPro's staff has extensive expertise in the design, construction and service of highly critical facilities. We employ the latest and most effective techniques to maximize the benefits of the construction process employed by architects, contractors, engineers and all project team members.

Years of hands-on, pragmatic experience working in critical facilities has resulted in an intimate knowledge of the design, construction, certification, operation and maintenance of these types of facilities, which makes our offering unique in the industry. We have worked at all levels in the Bio-Research, Pharmaceutical Manufacturing and Research, and Medical industries. We have designed, built, commissioned, and even managed the maintenance programs for various types of critical Facilities throughout the United States, including development of Standard Operating Procedures (SOP's) for the operation, maintenance, and periodic certification of these facilities.

This proposal is designed to convey to you and your team our recognition of your project goals in addition to your expectations for the construction process. This proposal outlines the ways in which we will integrate our knowledge of the stringent requirements of critical facilities into the project to achieve your goals—seamlessly, on time and on budget.

We look forward to the opportunity to work with you on this exciting project. If you have any questions during your review of this proposal, please contact CEPro's President, Michael Kosinski at 847.344.4542.

3. Project Narrative

This turn-key proposal includes all modifications necessary to the existing drug preparation areas to meet all requirements of USP <797> and USP <800> as well as all other local and national codes, including NFPA, OSHA and ASHRAE.

USP <800> requires a Containment Segregated Compounding Area (C-SCA) for the preparation of Hazardous Drugs (HD's). This C-SCA must be negatively pressurized to the surrounding areas and must be sufficient in size to provide storage for all HD's, including refrigerated HD's. The existing C-SCA cannot be negatively pressurized as it does not have a door that will not hold the required minimum pressurization of -0.01" WC to adjacent spaces. The existing modular/casework wall is to be removed and a new modular cleanroom wall system will be installed. This wall will include doors that will allow for the required pressurization per USP <797/800>.

The floor will also be replaced with wide-sheet vinyl flooring as required per USP <797/800>.

The existing Biological Safety Cabinet (BSC) that is being used for the preparation of HD's does not meet the following USP <800> requirements:

- If a BSC is used as a Containment Primary Engineering Control (C-PEC), then it must be located in an ISO-7 Classified Cleanroom
- The C-PEC MUST be externally vented (exhausted to the outside)

The existing BSC will be replaced with a new BSC that meets USP <800> requirements and will be exhausted to the outside. A new exhaust fan will be installed on the 6th floor roof to serve this new BSC. This exhaust fan will meet NFPA 45 requirements that all exhaust ducts within the building operate under negative pressure.

USP <797> requires that the hand-wash sink be hands-free. The new sink and faucet will be hands-free as required.

USP <800> requires the negative pressure C-SCA be negative to adjacent areas by no less than 0.01" WC. Room pressure monitors/alarms will be installed to notify occupants immediately upon loss of room pressurization as required per USP <797/800>.

Following completion of construction, the space must be thoroughly cleaned and certified to meet USP <797/800>. The isolators must also be certified to manufacturers specifications. The Direct Compounding Areas (DCA's) must also be tested for bacterial and/or fungal growth.

The existing HVAC system serving the Pharmacy Department is not sufficient to heat/cool the pharmacy as there is a window AC unit installed in the pharmacy window and a recirculating AC unit is installed in the cleanroom. This is not acceptable as all air entering the cleanroom must be HEPA filtered and the cooling coil collects condensate which can harbor microbial growth and is not allowed in a Pharmacy Cleanroom. The entire Pharmacy Department is to be separated from the existing building HVAC system, and a dedicated Air

Handling Unit is to be installed to provide the necessary heating, cooling and outside air to the Pharmacy Department. Since drugs are being stored in the pharmacy, it is crucial that the environment be controlled and that maximum temperatures do not exceed 77°F as required per USP <797>. Additionally, the new AHU will provide the necessary outside/make-up air to the Pharmacy Department to meet both the pressurization requirements as well as the new requirement that the air going into the cleanroom be 50% “fresh air”.

Constant Volume (CV) Boxes with reheat will be installed to serve the three new pharmacy cleanroom spaces and the existing pharmacy department. Office D458 is currently being fed off of the same AHU as the pharmacy and is downstream of the pharmacy department. This office will be re-fed from the new AHU serving the Pharmacy.

The existing heat exchanger does not have sufficient capacity to serve the new AHU and zone reheats, so this heat exchanger will be replaced with a new unit that will provide the added capacity of the new load +≈20%.

The new AHU and associated reheat zones will serve the Pharmacy Department as well as the new cleanroom space. This unit is sized appropriately to provide comfortable conditions to the pharmacy department and meet the required environmental conditions of the cleanroom space, which is:

- <77°F (required for drug storage)
- <60% Relative Humidity
- MIN 30 Air Changes/Hour (ACH)
- Hazardous Drug (HD) Preparation Room Pressure between -0.01 and -0.03” WC
- Ante-Room and non-HD Prep Room Pressure between +0.02 and +0.05” WC

All new mechanical systems will include new Direct Digital Controls and will be integrated into the existing Building Automation System, including the new room pressure alarms that will monitor the pressures of the rooms within the cleanroom suite.

The new HD Prep Room will be sufficient in size to compound and store all hazardous drugs, including refrigerated hazardous drugs. A small under-counter refrigerator will be installed in the HD Prep Room.

The new sink in the Ante-Room will be hands-free to meet the requirements of USP <797>, and will be provided with an electric hand-dryer to eliminate the need to use paper towels for hand-drying. An emergency eyewash will also be installed to meet the requirements of USP <800>.

Upon completion of this project, CEPro guarantees compliance to current USP <797> and USP <800> regulations. To ensure compliance, all certification testing, including equipment certification, HEPA filter challenge testing, particulate testing, and viable testing, is included in this project. If any of these tests do not pass, CEPro will perform and all steps necessary to correct the non-compliant issues at no cost to the owner.

4. Scope of Work

CEPro proposes to renovate the existing Pharmacy drug preparation areas to meet all requirements of USP <797/800>, to include the creation of the following functional spaces:

Room/Area	Class	Room Area
Pharmacy Drug Prep Areas		
Ante-Room	ISO-7	≈100 ft ²
HD Prep Area (C-SCA)	ISO-7	≈80 ft ²
IV Prep	ISO-7	≈114 ft ²

4.1. Division 1 - General Requirements

- CEPro will follow all pertinent hospital ICRA policies and procedures to ensure a proper containment area for all construction activities, including setting up an ante-room and proving negative pressure HEPA blowers
- CEPro will prepare the old basement records storage room as a temporary location for the pharmacy department for the duration of the project.
 - ♦ This temporary location will include a segregated area for the preparation of non-HD’s only and will be certified prior use as is required per USP <797>
 - ♦ This temporary drug preparation space will not be classified as a cleanroom, the existing Compounding Aseptic Isolator (CAI) will be relocated to this space and used as the Primary Engineering Control for the preparation of Non-HD’s
 - ♦ Power wiring is included in this proposal for all relocated pharmacy equipment
 - ♦ One VAV (cooling only) box will be provided to provide cooling/ventilation to this temporary space
- CEPro will relocate the existing pharmacy department, including furniture and equipment to the temporary location
- CEPro follows a “Clean-Build” protocol during all phases of work. This protocol ensures the cleanest possible environment during all phases of the construction project ensuring residual dirt/debris is not left within the facility, resulting in the cleanest possible facility upon completion of the work. Continuous cleaning is an integral part of the construction; from inside the duct to behind the walls, from above the ceiling to under the floor, ALL areas of the project are treated the same, not just the inside of the cleanroom upon completion.
- CEPro will provide sufficient onsite cleaning to prevent tracking of dirt/debris out of the construction area (footprints)
- CEPro will monitor particulate levels outside of the construction zone to ensure construction activities are not generating dirt/debris outside of the construction zone

- Included in this proposal are all tasks required to ensure the pharmacy is fully operational and ready for occupancy/use of the cleanroom space including the following:
 - ♦ All Certification Testing required for USP <797/800> including:
 - Cleanroom Particulate Sampling
 - HEPA Filter Challenge Testing
 - Laminar Flow Clean Bench Certifications
 - Biological Safety Cabinet Certification
 - Viable Air Samples (bacteria and fungi)
 - Surface (contact) Samples (bacteria and fungi)

4.2. **Division 2 – Selective Demolition / Disassembly**

Provide cartage and dumpster to remove all demolished items including the following:

- Demolish existing “cleanroom” space, including walls, floors, ceiling, fixtures, casework, sink, plumbing, shelving, lights, etc.
- Demolish existing ceiling-hung AC unit in the cleanroom
- Demolish existing sliding entry door to existing cleanroom
- Demolish wall between existing cleanroom and adjacent office
- Demolish entire ceiling in the pharmacy department
- Demolish all supply/return duct feeding the pharmacy department and cleanroom
- Demolish existing window AC unit(s) in the pharmacy

4.3. **Division 3 – Concrete**

- Provide all necessary coring as required for exhaust riser, electrical penetrations, etc., to provide a complete project installation

4.4. **Division 4 – Masonry**

- Patch brick following removal of existing duct penetrations

4.5. **Division 5 – Metals**

No structural steel required on this project

4.6. Division 6 – Woods & Plastics**4.6.1. Carpentry**

- Build fire-rated construction Ante-Room at main entrance to pharmacy off of the hallway
- Install new ceiling in entire Pharmacy following installation of new HVAC and electrical
- Open/close ceiling in D456B for HVAC work to be completed in that area
- Build new wall between office and new cleanroom Ante-Room with 3 ½” metal studs and one layer of drywall on office side
- Patch existing walls following demolition of ductwork and piping

4.7. Division 7 – Thermal and Moisture Protection

NIC

4.8. Division 8 – Doors, Frame and Hardware

– See Division 13 – Specialty Construction

4.9. Division 9 – Finishes**4.9.1. Acoustical Ceiling**

- Provide new ceiling in Pharmacy Department to match building standards for grid and tiles
- Rework existing ceiling tiles and grid at new partitions
- Rework existing ceiling tiles and grid at demolished partitions
- Rework existing ceiling tiles and grid at new MEP locations
- Provide new acoustical ceiling tiles in existing grid as required
- Replace damaged tiles as needed
- Provide insulation above tile
- Open/close on floor below for plumbing and electric as required

4.9.2. Flooring

- Patch office area following construction of new wall
- Patch existing VCT in main pharmacy area
- See Division 13 – Specialty Construction

4.9.3. Decorating

- Tape drywall
- Paint new wall in office area
- Touchup paint outside of pharmacy as required
- Touchup paint inside of main pharmacy area

4.10. Division 10 – Specialties

NIC

4.11. Division 12 - Furniture, Fixtures and Equipment

- (2) New NuAire NU-201-430 4' Laminar Flow Clean Bench for the preparation of non-hazardous drugs
- (1) New NuAire NU-430-400 4' Biological Safety Cabinet for the preparation of HD's
- (1) New Helmer iLR-105 Under Counter Refrigerator for the storage of HD's
- Wire shelving for cleanroom
- Cleanroom chairs
- Cleanroom stainless steel carts
- Cleanroom trash receptacles
- Cleanroom wall mounted shelving

4.12. Division 13 – Specialty Construction (Cleanroom Space ONLY)

Furnish and install a Cleanroom Suite, complete with duct chases and glazing, to include the following to meet the requirements of USP <797/800>

4.12.1. Ceiling

- Furnish and install Cleanroom Ceiling, complete w/ blank ceiling tiles, gasket, 2" main tees, 2" cross tees, and 3/8 " dia. rods w/ turnbuckles

4.12.2. Walls

- For interior walls, furnish 2" aluminum honeycomb modular wall system with powder coated finish, including all framing, edging and supports
- Perimeter walls laminated with ¼" cleanroom aluminum honeycomb modular wall system furring panels with powder coated finish
- Furnish and install (3) doors w/ half lites, standard hardware, door seals, and sweeps

4.12.3. Flooring

- Furnish and install Medintech vinyl flooring with welded seams and 4" flash cove
- Includes prep of existing floor to level prior to installation of new flooring

4.13. Division 21 – Fire Suppression

- Add sprinkler as required for necessary coverage in new cleanroom space
- Add fire alarm annunciator/strobes as required in new cleanroom space

4.14. Division 22 - Plumbing

- Provide new sink in new Ante-Room
- Provide eyewash
- Provide mixing valves as required
- Provide hands-free faucet with integral hand-dryer for new sink
- Relocate hot/cold and drain piping to new sink as required
- Building plumbing shut-downs NOT include / Hot & Cold water piping to be frozen if necessary to install isolation valves

4.15. Division 23 – Mechanical**4.15.1. Basic Mechanical**

- Provide new Air Handling Unit to serve the entire pharmacy department
- Provide new condensing unit for new AHU
- Provide new exhaust fan to serve the new HD Prep space and equipment (BSC)
- Provide new return fan with variable frequency drive (VFD)
- Provide (6) new VAV boxes
- Provide (2) Fire Dampers
- Provide (4) control dampers
- Provide (6) HEPA Fan Filter Units (FFU's)
- Provide new steam humidifier
- Provide all necessary equipment rails and curbs
- Provide all rigging and hoisting

4.15.2. Steam and Hydronic

- Provide new shell & tube heat exchanger
- Install low pressure seam piping as required for steam humidifier and heat exchanger
- Install condensate piping
- Provide (2) new hot water pumps
- Hot water piping to AHU and VAV box reheat coils
- Provide (1) VAV box (cooling only) for temporary pharmacy space

4.15.3. Insulation

- Insulate all supply duct
- Repair/replace insulation on steam piping as necessary for HX replacement
- Insulate new hot water piping to new reheats and AHU heating coil
- Provide heat-trace for freeze protection of outside hot water piping

4.15.4. Test & Balance

- Preliminary Test & Balance of existing conditions
- Rebalance of existing AHU following disconnection of pharmacy system
- Test & Balance of new pharmacy and cleanroom
- Test & Balance of new HX and hot water system

4.16. Division 25 – Automation / Temperature Controls

- Integrate all new controls to existing BAS
- Control of new AHU/Return Fan, including:
 - Discharge Temperature
 - Start/stop
 - Status
 - Smoke detector interlock wiring
 - Low-temp detection/interlocks
 - Static pressure control
 - Filter status indicators
 - HI/LO static cutout sensors
- Airflow Measuring Stations (AFMS) for flow tracking for cleanroom pressurization
- Exhaust Fan control, including:
 - Start/stop
 - Status
 - Static Pressure Control
- VAV box control, including:
 - Airflow control
 - Space temperature (reheat) control
- Room Pressure Monitor/Alarms for (3) cleanroom spaces
- Monitor (6) cleanroom HEPA FFU's
- Space humidity control
- Heat exchanger control including:
 - Hot water temperature wells/sensors
 - Start/stop and status of (2) hot water pumps
 - Pump VFD control and monitoring

- Hot water pressure control
 - Monitor fill pump status
 - Pump HI pressure switch
 - BTU Meter for hot water
 - Monitor condensate pump level alarm
- Monitor and alarm heat trace status

4.17. Division 26 – Electrical

- New LED cleanroom light fixtures for cleanroom
- Room Data Outlets
- Provide electrical circuits per the following table

Description	Source	Qty	Type
Room Outlets and Equipment	Critical	10	20A/1P/120V
Room Outlets and Equipment	Normal	1	20A/1P/120V
Future Room Circuits	Normal	1	20A/1P/120V
Roof Mounted Air Handling Unit	Critical	1	30A/3P/208V
Roof Mounted Condensing Unit	Critical`	1	100A/3P/208V
Roof Mounted Exhaust Fan	Critical	1	20A/3P/208V
BAS Panels	Critical	1	20A/1P/120V
Heat Trace	Critical	1	20A/1P/120V

4.18. Division 28 – Electronic Safety & Security

NIC

5. Project Approach

5.1. Schedule

CEPro will coordinate all trades/activities to complete all aspects of this project. All considerations for equipment lead time, laboratory occupant activity, holidays, and safety will be implemented into this project schedule.

CEPro anticipates a construction schedule of approximately 10 weeks after delivery of materials. Final completion will be defined as successful certification by an NSF accredited certification contractor.

5.2. Safety

All CEPro employees and subcontractors will follow in strict accordance with the OSHA Construction Contractor Safety Regulations.

CEPro will abide by any and all hospital-specific safety measures and will participate in safety training as required for contractors.

5.3. Training

CEPro provides training and ongoing support to all Pharmacy and Maintenance staff for the operation and maintenance of the newly install equipment. This training includes, but is not limited to equipment operation, ingress, gowning, egress, alarms, temperature control, and cleaning.

6. Cost Estimate

CEPro, Inc. proposes to include all of the necessary labor and materials to provide North American Hospital with a project as specified in the above Scope of Work.

Item#	Description	Total Cost
1	General	\$ -
2	General Conditions	\$ 27,832
3	Demolition	\$ 13,986
4	Carpentry / ICRA	\$ 49,852
5	Existing Flooring Patching & Repair	\$ 5,767
6	Drywall / Patching / Painting	\$ 8,372
7	Roof Work for HVAC	\$ 33,994
8	Temp Lighting in Cleanroom	\$ 759
10	Cleanroom Wide-Sheet Vinyl Flooring	\$ 6,660
12	Cleanroom Wall System	\$ 40,327
13	Cleanroom Ceiling System	\$ 10,614
14	Set FFU's	\$ 527
15	Misc Materials	\$ 240
16	Cleanroom Site Mgt	\$ 229
17	Cartage	\$ 457
18	Cleanroom General Conditions	\$ 399
19	Freight	\$ 2,485
38	Pharmacy Relocation Costs	\$ 24,750
40	Mechanical	\$ -
41	Mechanical Installation - Includes the following	\$ -
42	Split AHU	\$ 171,704
43	Return Fan w/ VFD	\$ 24,244
44	Exhaust Fan	\$ 12,314
45	Six (6) VAV Boxes	\$ 73,216
46	Fire Dampers	\$ 1,105
47	Control Dampers	\$ 3,035
48	Airflow Measuring Stations	\$ 559
49	Steam Humidifier	\$ 72,540
50	Heat Exchanger	\$ 118,456
51	Two (2) Pumps	\$ 26,624
52	Roof Rails and Curbs	\$ 6,656
53	Insulation	\$ 67,891
54	Rigging	\$ 100,889
55	Coring	\$ 6,789
56	Coordinated Drawings	\$ 6,656
57	Test & Balance (Preliminary)	\$ 2,263
58	Test & Balance (Rebalance Existing)	\$ 5,699
59	Test & Balance (New)	\$ 3,444
60	Test & Balance (Hot Water)	\$ 2,313
62	MAC-10 LEDC 2x4 RSR (Compatible with VAV Controls)	\$ 12,077
67	FFU Remote Speed Adjustment	\$ 591

Item#	Description	Total Cost
68	FFU Collars (specify size)	\$ 470
70	Electrical	\$ -
71	Electrical Installation Including the Following	\$ -
72	Roof AHU / EF / Condensing Unit	\$ 75,349
73	BAS Power	\$ 7,642
74	Heat Trace	\$ 12,262
75	EM Power to Cleanroom Equipment	\$ 63,601
77	Data	\$ 12,556
79	Variable Frequency Drive (including startup)	\$ 4,925
83	Cleanroom LED Light Fixtures (2x4)	\$ 1,318
90	Plumbing	\$ -
91	Plumbing Installation Including	\$ 14,497
92	Drain Piping	\$ -
93	Hot/Cold Water Piping	\$ -
94	Vent Piping	\$ -
97	Wall Mounted Sink	\$ 599
98	Hands-free Faucet with Integral Hand Dryer	\$ 2,130
110	Fire Protection	\$ -
111	Sprinkler	\$ 3,842
112	Add Annunciator Strobes	\$ 4,659
130	Controls	\$ -
131	Controls Installation Including	\$ -
132	Pharmacy AHU Control	\$ 50,466
133	VAV Box Control	\$ 8,852
134	CV Box Control	\$ 17,878
135	Return Air Valve Control	\$ 13,964
136	CRC Pressure Monitoring	\$ 18,530
137	Fan Filter Unit Control	\$ 30,245
138	Humidifier Control	\$ 8,267
139	Heat Exchanger Control	\$ 30,105
140	Exhaust Fan Control	\$ 9,744
150	Miscellaneous	\$ -
170	Furniture, Fixtures and Equipment	\$ -
173	NU-201-430 (4' LFCB)	\$ 16,259
175	NU-430-400 (4' BSC)	\$ 16,134
176	In-Lab Delivery	\$ 3,994
177	Wire Shelving	\$ 799
178	Desk/Work Surface	\$ 2,796
179	Support Brackets	\$ 240
180	Helmer iLR-105 Under Counter Refrigerator	\$ 4,114
181	Cleanroom Chairs w/ Casters	\$ 1,607
183	Stainless Carts	\$ 1,331
185	Trash Recepticals (2)	\$ 599
186	Wall Mounted Shelving	\$ 343
190	Cleaning, Testing & Certifications	\$ -
191	Deep Clean	\$ 612

Item#	Description	Total Cost
192	Cleanroom Supplies (Kit)	\$ 333
193	Test & Balance (see Mechanical)	\$ -
194	Cleanroom Particulate Sampling	\$ 546
195	Viable Air Samples (Bacteria)	\$ 455
196	Surface Samples (Bacteria)	\$ 455
197	Viable Air Samples (Fungi)	\$ 455
198	Surface Samples (Fungi)	\$ 455
199	BSC Certification	\$ 146
200	LFCB Certifications	\$ 173
201	HEPA Filter Challenging (Terminal)	\$ 439
210	Design / PM / Supervision	\$ -
211	Design / Project Planning	\$ -
212	Project Management / Supervision	\$ 81,358
213	Parking	\$ -
214	Submittal Review / Commissioning	\$ -
216	MEP Cx / As-Builts	\$ 9,984
219	Architect	\$ 28,621
228	Travel & Lodging (estimated)	\$ -
	Subtotal	\$ 1,510,464
	Total Materials	\$ 708,276
	Total Subcontracts / Labor	\$ 802,188
	Freight	\$ 10,624
	Total Direct Cost	\$ 1,521,088
	Sales Tax @ 9.25%	\$ -
	Insurance @ 1%	\$ 15,211
	OH Adjustment	
	Total Contract Price	\$ 1,536,299
	Contingency (3%)	\$ 45,633
	Bond	
	ROI	
	Total Fund Request	\$ 1,581,931

7. Why CEPro?

CEPro provides professional solutions for all Critical Environment needs. From construction of a new facility, to maintenance of an existing one, CEPro understands the unique requirements of your Critical Environment, and has the expertise to help you meet those needs.

With decades of Critical Environment experience (since the early 1980's) CEPro brings innovative consulting, design/build, certification/commissioning solutions for Hospital Critical Function Spaces, Cleanrooms and Biological Safety Level 3/4 labs. CEPro is the recognized leader in providing these services to the educational, healthcare, pharmaceutical and biotechnology industries. CEPro's experience, technical expertise, and familiarity with government regulations and industry standards enables us to deliver high-quality, cost-effective solutions that meet all of your service needs and compliance requirements.

CEPro understands the requirements of your operations and can translate that into the design and function of your facility. We take into account structural and practical use limitations as well as personnel factors to provide an integrated solution to meet your operational needs.

By choosing CEPro, you eliminate the frustration of coordinating multiple vendors and integrating their schedules, work, and personalities to service your facility. Since CEPro can test, repair, certify and maintain your Critical Environment, you can combine your service needs and work with only ONE provider.

The CEPro advantages include:

- One provider for all your service needs
- Unparalleled expertise in the field
- Required documentation on site for verification purposes
- Systemic collaborative response to your requirements (synergism)
- Fast, courteous, professional and quality service
- Minimal disruption to your operations

8. Previous Experience

Loretto Hospital, Pharmacy Renovation (USP<797/800> Compliant), Chicago

Budget: \$444,000

Project team: Critical Environments Professionals, Inc., Arlington Heights, IL (design/build contractor)

Description: Existing Pharmacy located on the first floor of the main hospital with basement storage connected by stairs. Relocated staff and Pharmacy operations to sixth floor with interim IV Prep area. Entire space was renovated including Pharmacy work area, basement storeroom and cleanrooms to meet USP <797> and USP <800> compliance



Northwestern Memorial Hospital, cGMP Cell Therapy Processing Facility, Chicago

Budget: \$6.9 million.



Project team: Anderson Mikos Ltd., Oakbrook Terrace, IL. (architect); Henneman Engineering Inc., Chicago (engineer); Bulley & Andrews LLC, Chicago (design/build contractor); Critical Environments Professionals, Inc., Arlington Heights, IL (Cleanroom Consultant/Commissioning Authority)

Description: Facility on the seventh floor of the Olson Pavilion at the hospital recently won second place in the ASHRAE 2010 Technology Awards competition (institutional buildings category). The compact lab is used for collecting, processing and manufacturing human cells, tissues, and cellular and tissue-based projects. ASHRAE recognized the facility's achievements in the area of occupant comfort, indoor air quality and energy conservation, based on the design as well as a year of verifiable operating data.

Mercy Medical Center, Pharmacy Cleanroom (USP<797> Compliant), Chicago
Budget: \$275,000

Project team: Fox Valley Engineering, Fox River Grove, IL (engineer); Critical Environments Professionals, Inc. (design/build contractor)

Description: Cleanroom located in the lower level of the 15 story main hospital building, was designed and built by CEPro, Inc. A location for temporary relocation of the cleanroom was not available, so a 31-day construction window was available for the completion of the work.

Final USP <797> certification of the cleanroom and equipment was completed on New Year's Eve, just 30 days after the construction began.

**DuPage Medical Group, Pharmacy Cleanroom (USP<797> Compliant), Lisle, IL**
Budget: \$2.2 million

Project team: Eckenhauf Saunders Architects, IL (architect); Affiliated Engineers, Chicago, IL (engineer); Loepardo Construction, Hoffman Estates, IL (general contractor); Critical Environments Professionals, Inc., Arlington Heights, IL (Cleanroom Consultant / Commissioning Authority)

Description: Cleanroom built as a joint-venture between Rush University Medical Center and DuPage Medical Group, this USP <797> compliant pharmacy cleanroom is used for preparation of both IV drug preparation and chemotherapy drug preparation for outpatient treatment.

Other Cleanroom Projects

- Rush University Medical Center
- Rush Oak Park Hospital
- Advocate Lutheran General Hospital
- Advocate Sherman Hospital
- Advocate Christ Hospital
- Advocate Illinois Masonic Hospital
- Methodist Hospitals (Indiana)
- Presence Resurrection Hospital
- Presence Health - Skokie Oncology Clinic
- Northwestern Medicine
- Mt. Sinai Hospital
- University of Illinois, Chicago
- DuPage Medical Group
- Riverside Medical Center
- Home Infusion Solutions
- Methode – AMD Facility, Monterrey Mexico
- Knowles
- Daviess Community Hospital (Indiana)
- Centegra Hospitals
- Alexian Brothers
- St. Alexia Medical Center

9. General Notes

9.1. Terms

CEPro shall bill monthly based on construction progress. Monthly payment terms shall be Net 30 Days. There shall be a 1.5% monthly finance charge for all invoices over 60 days.

9.2. Additional Scope

CEPro shall not perform services in excess of the amount listed above without the prior written consent of North American Hospital.

9.3. Assumptions

All work to be performed during regular business hours unless otherwise specified.

Any unforeseen delays out of CEPro's control will be addressed with North American Hospital management for resolution.

9.4. Not Included in this Proposal

- Furniture or casework not specifically listed
- Over Time or Premium Time unless otherwise noted
- Bonds and/or Permitting

9.5. Notes

Insurance carried by CEPro, Inc. can be provided under separate cover at your request. Any requests for coverage modifications or additional limits are subject to availability at additional cost to North American Hospital, and not included in this quotation.

9.6. General

- Our proposal is based on a mutually agreed-to contract by both parties
- All work to be performed in a workmanlike manner
- Square footages and other measurements as listed above are used for our bid purposes only and should not be confused with or used to analyze rentable square foot (RSF) costs or other lease related terms
- No tenant signage is included
- Existing base building mechanical services will remain (electric panels, HVAC mains, plumbing/sprinkler mains)
- Schedule dates are contingent upon manufacturer lead times and delays, labor strikes, etc.
- Moving of any existing furniture, files, etc. either stored or in use in the area of work is not included
- No Life Safety work included
- Unless specifically noted, no x-rays, scanning or other testing of floors is included
- Cannot guarantee color match of any existing finishes to new finishes (flooring, ceiling tile, etc.) due to age, wear, and/or die lot changes
- No correction of pre-existing building code violations is included
- Project start without permit is at the risk of building's owner or management. Our starting any work prior to permit is only in order to meet lease dates, therefore we can't be liable for any subsequent City fees or fines.
- We specifically exclude any liquidated damages
- We specifically exclude permits or permit expediting fees
- We specifically exclude payment and performance bonds
- We specifically exclude builders risk insurance
- We specifically exclude any provisions for LEED programs, qualifying materials or back up data for LEED
- We specifically exclude any utility usage charges
- We specifically exclude any costs or allowances to accelerate, expedite or quick ship any materials to maintain or accelerate the schedule
- We have included an allowance for minor floor prep
- We have not included any removal, scarifying or shot blasting of existing mastic, existing floor finish residue adhesives and underlayment's
- We specifically exclude relocation of any above ceiling obstructions in relation to new light lay-out
- We specifically exclude re-routing or raising of the sprinkler system main piping or branch piping

- We specifically exclude any plumbing riser or HVAC chilled water riser cut-ins or shutdowns. We assume futures existing at these locations
- We assume this project to be tax exempt

10. Glossary

Acronym	Definition
ACH	Air Changes per Hour
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
BSC	Biological Safety Cabinet
CACI	Compounding Aseptic Containment Isolator
CAI	Compounding Aseptic Isolator
C-SCA	Containment Segregated Compounding Area
CFM	Cubic Feet per Minute (air flow)
FFU	Fan Filter Unit
FPM	Feet Per Minute (air velocity)
GFI	Ground Fault Interrupt (outlet type)
HD	Hazardous Drug
HEPA	High-Efficiency Particulate Absorption (filter)
HVAC	Heating, Ventilation, and Air Conditioning
ICHP	Illinois Council of Health-System Pharmacists
ICRA	Infectious Control Risk Assessment
IDPH	Illinois Department of Public Health
ISO	International Standardization Organization
LED	Light Emitting Diode (light fixtures)
LEED	Leadership in Energy and Environmental Design
LFCB	Laminar Flow Clean Bench
NFS	National Sanitation Foundation Organization Responsible for Accrediting Cleanroom and Equipment Certifiers
SOP	Standard Operating Procedure
USP	United States Pharmacopeia

11. Acceptance

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

North American Hospital

CEPro, Inc.

By: _____

By: _____

Title: _____

Title: _____

Signature: _____

Signature: _____