

This requirement is for A/E services for site-preparation work to modify Room E904, Building 126, into a clean room. This project is referred to as: 600-CSI-109 Clean Room Site Prep AE Design in the Long Beach, California, VA Health Care System (LBVAHCS).

**BACKGROUND**  
The 9th floor of Building 126 has an existing infusion area where various infusion treatments are provided for veterans. Currently, the chemicals and medications used for the infusion treatments are in building 164. The distance required to get the treatment medications mixed and used in the infusion clinic is unreasonably far and results in wasted medications due to the length of time it takes for the medications to reach the patients. A clean room located near the Infusion Clinic will mitigate these issues.

A clean room location has been identified as room E904 and is located adjacent to the infusion area. "CleanAir" has been contracted to provide and maintain a clean room in room E904. Prior to the construction of the clean room, site preparation work must be completed.

**ARCHITECTURAL** - Provide temporary flooring and prepare subfloors for drainage and slope required for "CleanAir" unit. Provide new ceiling to accommodate "CleanAir" unit. Provide new doors to accommodate the new CleanAir unit. **LIBRARY** - Provide new doors to accommodate the new CleanAir unit. **MECHANICAL** - Provide new ductwork, piping, all required smoke, sprinkler, and fire alarm audio and visual devices to maintain current VA and NFPA standards. **PLUMBING** - Demolish all drainage, and plumbing fixtures, as required to accommodate new "CleanAir" unit. Provide new plumbing fixtures as required. **ELECTRICAL** - Redesign existing exhaust vent to accommodate extra exhaust. Coordinate all requirements with CleanAir. In accordance to site visit and CleanAir requirements, provide modifications to existing HVAC to accommodate pressure balance. **ELECTRICAL** - Check existing electrical to match CleanAir requirements. Coordinate all requirements with CleanAir. In accordance to site visit and CleanAir requirements, provide modifications to existing electrical system to accommodate the new CleanAir unit.

Infection Control Risk Assessment shall be performed by the AE jointly with the VA Project Engineer and resulting Infection Control measures shall be incorporated into the working drawings.

1. Design solution is needed to enable the Medical Center to address requirements as directed in United States Pharmacopeia Chapter 800 (USP 800). These requirements focus on Compounding/Mixing of hazardous drugs (HDs), and they are enforced by accrediting bodies such as the Joint Commission.
2. USP Chapter 800, Section 5, Facilities and Engineering Controls

- 5.2 Antineoplastic HDs requiring manipulation other than counting or repackaging of final dosage forms must be stored in an externally ventilated, negative-pressure room with at least 12 ACPH.
- 5.3 Antineoplastic HDs requiring manipulation in a negative-pressure room with at least 12 ACPH:
- a. A secondary secondary engineering control (C-SEC) used for sterile and nonsterile compounding must (1) be externally ventilated through high-efficiency particulate air (HEPA) filtration; (2) have an appropriate air flow rate; (3) have a negative pressure of at least 0.02 inches of water column relative to the adjacent areas.
  - b. Water sources must be located at least 1 meter (39 inches) of distance from the secondary engineering control (C-PEC). Care must be taken to locate water sources and drains in areas where their presence will not interfere with required ISO classifications.
- 5.4 Antineoplastic HDs requiring manipulation in a C-SEC with 7 buffer room that has two walls, HEPA-filtered supply air, a negative pressure between 0.01 and 0.03 inches of water column relative to all adjacent areas and a minimum of 30 ACPH:
- a. HEPA-filtered supply air. Maintain a positive pressure of at least 0.02 inches of water column relative to all adjacent areas.
  - b. HEPA-filtered supply air. Maintain a positive pressure of at least 0.02 inches of water column relative to all adjacent areas.
  - c. A hand-washing sink must be placed in the ante-room—at least 1 meter from the entrance of the HD buffer room.



**100% CONSTRUCTION DOCUMENTS SUBMISSION  
JUNE 28, 2018**



CLIENT:  
Department of Veterans Affairs  
Contract Specialist: xxx

**COR: John Paul Devera**  
**Long Beach VA Healthcare System**  
**5901 E 7th St., (Bldg. 126)**  
**Long Beach, CA 90822**  
**(562) 826-8000 ext. 5380: JohnPaul.Devera@va.gov**

DATE:	APPROVED: DIRECTOR
DATE:	APPROVED: ASSOCIATE DIRECTOR
DATE:	APPROVED: ASSISTANT DIRECTOR
DATE:	APPROVED: CHIEF OF STAFF
DATE:	APPROVED: CHIEF ENGINEER
DATE:	APPROVED: ASSOCIATE DIRECTOR, PATIENT CARE SERVICES
DATE:	APPROVED:
DATE:	APPROVED:

THERE IS NO LEAD OR ASBESTOS MATERIAL DESIGNED INTO THIS PROJECT.

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

**AUTHOR: MAT PERKINS, AIA, NCARB, PMP, LEED AP BD+C  
TRIPLE C - THE A&E GROUP**

THIRD-PARTY INSPECTIONS: COMPREHENSIVE THIRD-PARTY INSPECTIONS, TESTING AND WRITTEN REPORTS FOR ALL DIVISIONS (PAID BY THE GENERAL CONTRACTOR): CONTRACTOR SHALL EMPLOY THIRD PARTY INSPECTION CONSULTANTS TO PERFORM ALL INSPECTIONS REQUIRED BY THIS CONTRACT. THERE SHALL BE NO INSPECTION OF ANY TYPE, ANY REFUSED INSPECTIONS SHALL BE BY A THIRD-PARTY INSPECTOR OR AS REQUIRED BY THE WORK CREDENTIALS SHALL BE SUPPLIED TO THE VA/VE AS PERFORMED BY THIS CONTRACT. ALL INSPECTIONS, TESTING, CERTIFICATIONS, AND PERMITS ARE TO BE PAID FOR BY THE GENERAL CONTRACTOR. THE VA WILL NOT PAY FOR OR PERFORM ANY REQUIRED INSPECTIONS. VA INSPECTIONS ARE FOR VA USE ONLY. IF NOT PERFORMED, AND DOES NOT REDUCE THE INSPECTION BURDEN ON THE CONTRACTOR.

THIS PROJECT MUST BE "STAND ALONE". THAT IS, THE PROJECT CANNOT DEPEND ON ANOTHER PROJECT OR OTHER FUNDING SOURCE TO MAKE THE FINAL RESULT COMPLETE AND USABLE.

[illegible]

## PROJECT #: 600-18-200 Clean Room Site Prep project

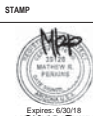
	<p><b>Inspection and Non-invasive activities, including, but not limited to:</b></p> <ul style="list-style-type: none"> <li>• Removal of ceiling tiles for visual inspections where no dust or asbestos is expected (Limited to 1 tile per 50 square feet)</li> <li>• Painting, but not sanding</li> <li>• Wall covering, electrical trim work, minor plumbing, and activities which do not generate dust or require cutting of walls or access to ceilings other than for visual inspection</li> </ul>
Type A	
	<p><b>Small scale, short duration activities which create minimal dust, including but not limited to:</b></p> <ul style="list-style-type: none"> <li>• Installation of electrical, plumbing, HVAC, telephone and computer cabling</li> <li>• Access to chase spaces where asbestos is not present</li> <li>• Cutting of walls or ceiling where dust migration can be controlled</li> </ul> <p><b>Work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies, including but not limited to:</b></p> <ul style="list-style-type: none"> <li>• Sanding of surfaces for painting or wall covering</li> <li>• Removal of floor coverings, ceiling tiles, and casework</li> <li>• New wall construction</li> <li>• Minor duct work or electrical work above ceilings</li> <li>• Major cabling activities</li> </ul> <p><i>Any type A, B, or C activity that cannot be completed within a single work shift</i></p> <p><b>Major demolition and construction projects, including but not limited to:</b></p> <ul style="list-style-type: none"> <li>• Activities requiring heavy demolition or removal of a complete utility or cabling system</li> <li>• New construction and renovation</li> <li>• Friable asbestos and mold abatement projects</li> <li>• Activities which require consecutive work shifts</li> </ul>
Type B	
Type C	
Type D	

Adapted from the American Society for Healthcare Engineering (ASHE) website 7/2014

	During Construction Project	Upon Completion of Project
<b>Class I</b>	<ol style="list-style-type: none"> <li>1. Execute work by methods to minimize raising dust.</li> <li>2. Immediately replace ceiling tile if displaced.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean work area upon completion of task.</li> <li>2. Remove all visible debris and/or wet mop.</li> <li>3. Environmental Management Service to wipe work surfaces and floors with disinfectant.</li> </ol>
<b>Class II</b>	<ol style="list-style-type: none"> <li>1. Provide active means to prevent airborne dust from dispersing into atmosphere.</li> <li>2. Water mist surfaces to control dust while cutting.</li> <li>3. Seal unused doors with duct tape.</li> <li>4. Place sticky mat at entrance and end of work area</li> <li>5. Remove or isolate HVAC system in area where work is being performed.</li> <li>6. Cover construction waste before transport in covered containers.</li> </ol>	<ol style="list-style-type: none"> <li>1. Wipe work surfaces with cleaner/disinfectant.</li> <li>2. Contain construction waste before transport in tightly covered containers.</li> <li>3. Wet mop and/or vacuum work area with HEPA filtered vacuum work area.</li> <li>4. Upon completion, restore HVAC system where work was performed.</li> <li>5. Environmental Management Service to wipe work surfaces and floors with disinfectant.</li> </ol>
<b>Class III</b>	<ol style="list-style-type: none"> <li>1. Remove or isolate HVAC system in area where work is being done to prevent contamination of dust system.</li> <li>2. Complete all critical base work, including, plywood, plastic, to seal area from non-work area or implement control cube method (craft with plastic covering and sealed connection to work site with HEPA vacuum or vacuuming prior to work area entry).</li> <li>3. Maintain negative air pressure within site utilizing HEPA equipped air filtration units.</li> <li>4. Required pressure monitoring devices should be visible from outside the work area and readings should be documented at least daily.</li> <li>5. Contain construction waste before transport in tightly covered containers.</li> <li>6. Contain clean sticky mat at entrance and end of work area.</li> <li>7. Cover construction waste before transport in covered containers.</li> </ol>	<ol style="list-style-type: none"> <li>1. Do not remove barriers from work area until completed project is inspected by the Safety and Infection Prevention &amp; Control Department and thoroughly cleaned by the Environmental Management Service.</li> <li>2. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction.</li> <li>3. Vacuum work area with HEPA filtered vacuums.</li> <li>4. Wet mop area with cleaner/disinfectant.</li> <li>5. Upon completion, restore HVAC system where work was performed.</li> </ol>
<b>Class IV</b>	<ol style="list-style-type: none"> <li>1. Install and maintain construction critical barriers and ceiling protection.</li> <li>2. Isolate HVAC system within site and areas to prevent contamination of dust system.</li> <li>3. Seal doors opening to adjacent areas with duct tape.</li> <li>4. Seal holes, joints, conduits, and other openings.</li> <li>5. Block off and seal HVAC registers, grids and any openings in ductwork to remain.</li> <li>6. Maintain negative pressure within work site utilizing HEPA equipped air filtration units.</li> <li>7. Negative pressure monitoring devices should be visible from outside the work area and readings should be documented at least daily.</li> <li>8. Contain clean sticky mat at entrance and end of work area.</li> <li>9. Cover construction waste before transport in covered and sealed containers.</li> <li>10. Provide monitoring and clearance samples for mold/salmonella.</li> <li>11. Construct entrance and/or all personnel to pass through this room so they can be vacuumed using a HEPA vacuum cleaner before leaving work site or by wear shoe cover or paper coveralls that are removed each time they leave work site.</li> <li>12. All personnel entering work site are required to wear shoe covers. Shoe covers must be changed each time the worker exits the work area.</li> </ol>	<ol style="list-style-type: none"> <li>1. Do not remove barriers from work area until completed project is inspected by the Safety and Infection Prevention &amp; Control Department and thoroughly cleaned by the Environmental Management Service.</li> <li>2. Remove barrier material carefully to minimize spreading of dirt and debris associated with construction.</li> <li>3. Contain construction waste before transport in tightly covered containers.</li> <li>4. Vacuum work area with HEPA filtered vacuums.</li> <li>5. Vacuum work area with HEPA filtered vacuums.</li> <li>6. Wet mop area with cleaner/disinfectant.</li> <li>7. Upon completion, restore HVAC system where work was performed.</li> </ol>

[illegible]

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**VA** U.S. Department  
of Veterans Affairs

[Approved]

FULLY SPRINKLERED

Issue Date	Checked	Drawn
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G-001





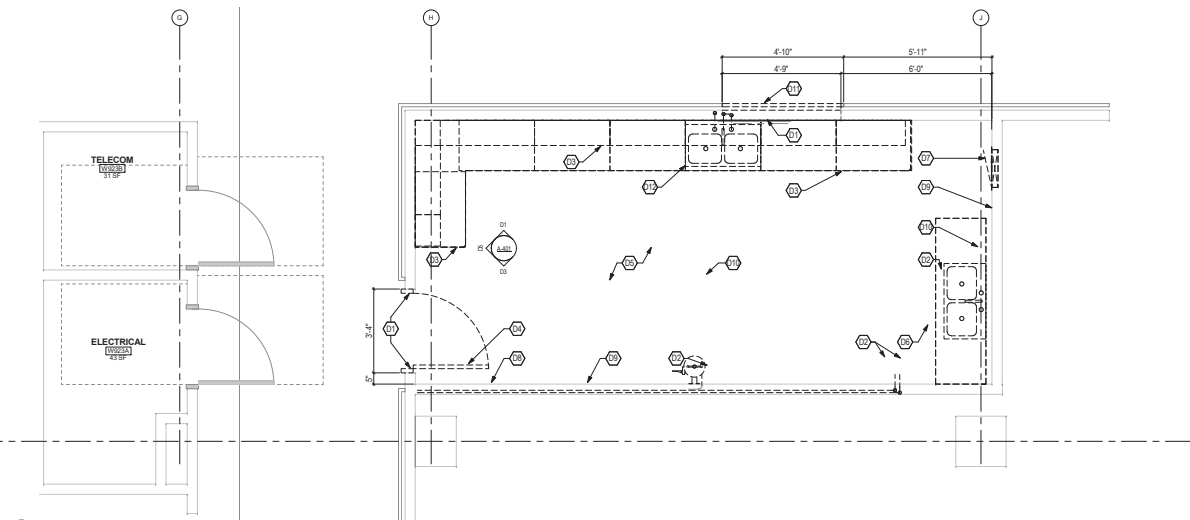


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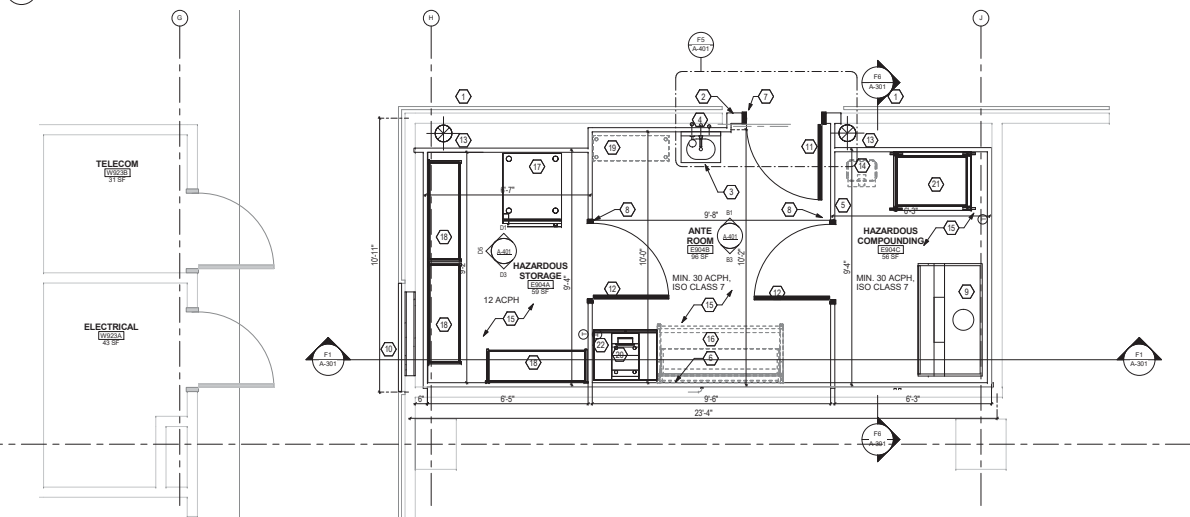
CONSULTANT	ARCHITECT/ENGINEER OF RECORD A/E: Triple C - The AE Group 4011 Atlantic Drive, Suite 200 Long Beach, CA 90807 (562) 452-7175 Mat Perkins	STAMP 	Office of Construction and Facilities Management 	Drawing Title ARCHITECTURAL ABBREVIATIONS, SYMBOLS, & GENERAL NOTES Approved:	Phase 100% CONSTRUCTION DOCUMENTS FULLY SPRINKLERED	Project Title Clean Room Site Prep AE Design Location 5901 E 7TH ST, LONG BEACH, CA 90822 Issue Date 06/28/2018 Checked M. PERKINS Drawn K. LUKE	Project Number 600-18-200 Building Number B126 Drawing Number A-001
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EXISTING EXHAUST HOOD TO BE REWORKED

EXISTING CABINETS TO BE REMOVED



C4 09 NINTH FLOOR - DEMOLITION PLAN



F4 09 NINTH FLOOR - NEW PLAN

## CLEANAIR COORDINATION NOTES:

- [illegible]


Revisions:
Date:

CONSULTANT	

**ARCHITECT/ENGINEER OF RECORD**

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Office of  
Construction  
and Facilities  
Management

**VA** | U.S. Department  
of Veterans Affairs

Drawing Title  
ARCHITECTURAL PLANS - NINTH  
FLOOR (ROOM E904)

Approved:

Phase	100% CONSTRUCTION DOCUMENTS
	FULLY SPRINKLERED

Project Title	Clean Room Site Prep AE Design		Project Number	600-18-200
			Bidding Number	B126
Location	5901 E 7TH ST, LONG BEACH, CA 90822		Drawing Number	
Issue Date	06/28/2018	Checked M. PERKINS	Drawn K. LUKE	A-101

## GENERAL NOTES

- [illegible]

 DEMOLITION KEYNOTES

- |     |   |
|-----|---|
| D1  | PORTION OF EXISTING WALL TO BE REMOVED  |
| D2  | EXISTING PLUMBING FIXTURE TO BE REMOVED. PIPING TO BE CAPPED OUTSIDE OF PREFABRICATED GLEANER ROOM                              |
| D3  | EXISTING COUNTER TOP AND CABINETS TO BE REMOVED   |
| D4  | EXISTING DOOR TO BE REMOVED   |
| D5  | EXISTING FLOOR TILES TO BE REMOVED. PROVIDE TEMPORARY FLOORING WHILE SUBPOOR IS INSTALLED TO ACCORDANCE TO GLEANER REQUIREMENTS |
| D6  | EXISTING EXHAUST TO BE REMOVED ABOVE  |
| D7  | EXISTING ELECTRICAL PANELS TO BE RETAINED AND RELOCATED   |
| D8  | EXISTING ACCESS PANELS TO BE RETAINED AND RELOCATED   |
| D9  | EXISTING WALLS TO BE REWORKED TO ACHIEVE REQUIRED RATING  |
| D10 | EXISTING DRAIN LINE TO BE CAPPED BELOW FLOOR LEVEL  |
| D11 | PORTION OF EXISTING WALL/GUARD TO BE REMOVED. REPLACE WALL GUARD TO COORDINATE WITH NEW DOOR LOCATION                           |
| D12 | EXISTING PLUMBING FIXTURE TO BE REMOVED. SINK AND DRAIN PIPING TO BE RECONFIGURED TO MEET NEW EQUIPMENT REQUIREMENTS            |

## KEYNOTES

- |     |   |
|-----|---|
| 1   | NEW TYPARTY LISTS AND EXHIBIT GLASS LISTS MOUNTED ABOVE CEILING                             |
| 2   | NEW SECURITY ALARMS (BELL) ON MAGNETIC LOCK TOOK COORDINATING WITH AUTOMATIC DOOR           |
| 3   | NEW SECURITY ALARMS (BELL) ON MAGNETIC LOCK TOOK COORDINATING WITH AUTOMATIC DOOR           |
| 4   | NEW FLOOR FINISHES (STAIN) WITH NEW SPOT ON CORNERS, EGGE, MIDDLE, WIDE, 1/4" x 1/4" x 1/4" |
| 5   | NEW FLOORING (CARPET, ACCESS PANEL, AND HOOKS) BY QUINCY                                    |
| 6   | NEW AIR QUALITY (BELL) BY QUINCY  |
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