

# **COMMERCIAL VENTILATION, A/C & REFRIGERATION TECHNOLOGY**

September 30, 2010

## **I. PROGRAM REQUIREMENTS**

Refer to the project-specific Schedule of Spaces for student stations, square footage, and for any requirements that may differ from the prototype requirements listed below:

- 1 Laboratory
- 1 Material Storage Room
- 1 Tool Storage Room
- 1 Project Storage Room
- 1 Related Classroom
- 1 Teacher Planning Area
- 1 Outside Covered Project Area

## **II. PROGRAM FURNITURE AND EQUIPMENT**

Refer to the Furniture and Equipment List for Owner-provided furniture and equipment.

## **III. SPECIAL CONSIDERATIONS**

### **1. Heating/Ventilation/Air Conditioning**

Standard, in accordance with the General Design Requirements section.

### **2. Acoustical**

Standard, in accordance with the General Design Requirements section.

### **3. Floor**

Provide sealed concrete in the Laboratory and Storage Rooms. The Laboratory floor should be adequately sloped to the floor drains.

Provide sealed concrete in the Outside Covered Project Area, adequately sloped to drain. Provide painted non-skid zone boundary lines around all Owner-provided equipment.

### **4. Walls**

Provide wire mesh partitions (all metal construction) to fully enclose the Material Storage Room, Tool Storage Room, and Project Storage Room.

### **5. Ceiling**

Provide an 18' high ceiling in the Laboratory.

Provide 25' clear height in the Outside Covered Project Area. The roof/ceiling structure is to extend out past the concrete slab a minimum of 2' on all exposed sides.

### **6. Lighting**

Standard, in accordance with the General Design Requirements section.

**7. Windows**

Provide windows in the Laboratory, sill height to be minimum 5' above the floor.  
Provide a half-glass door from the Teacher Planning Area into the Laboratory.  
Provide an observation window, 3' wide x 4' high, from the Teacher Planning Area into the Related Classroom, sill height to be 36" above the floor.  
Provide an observation window, 12' wide x 4' high, from the Related Classroom into the Laboratory, sill height to be 36" above the floor.

**8. Doors**

In addition to a standard single door, provide an overhead roll-up door, 12' wide x 10' high (manually operated), between the Laboratory and the Outside Covered Project Area.  
Provide a wire dutch-type door from the Laboratory into the Tool Storage Room.  
Provide 4' wide wire mesh doors from the Laboratory into the Material Storage Room, and from the Laboratory into the Project Storage Room.  
Provide 4' wide wire mesh doors from the Material Storage Room into the Tool Storage Room, and from the Project Storage Room into the Tool Storage Room.

**9. Water**

Provide one (1) wall mounted sink with cold water in the Laboratory.  
Provide one (1) semi-circular wash station with three (3) faucets.  
Provide one (1) pull-cord emergency shower with eyewash, in accordance with SDHC standards.  
Provide an electric water cooler in the general vicinity of the Laboratory.  
Provide one (1) hose bibb and floor drains, number as required, in the Laboratory and in the Outside Covered Project Area.

**10. Communications**

Provide a clock, speaker and intercom handset in the Laboratory and Related Classroom.  
Provide a clock and speaker (no intercom handset) in the Teacher Planning Area.  
Provide a data outlet with adjacent power outlet in the Laboratory, Related Classroom, and Teacher Planning Area, in accordance with the General Design Requirements section and SDHC standards.  
Provide a TV bracket with DVD/VCR bracket, CCTV jack, and adjacent power outlet in the Laboratory and Related Classroom, in accordance with SDHC standards.

**11. Electrical**

Laboratory

Provide a duplex outlet at each Owner-provided student workbench and/or student workstation. Provide power poles if required, located as directed.  
Provide convenience outlets 10'-0" apart on three (3) walls.  
Provide pedestal-type floor outlets as required to serve freestanding power tools and equipment. Flush-type floor outlets are not to be provided at these locations.  
Provide two (2) master disconnect switches to shut down all receptacles, located so as to be easily accessible to the teacher. Provide a keyed reset mounted adjacent to each master disconnect switch.  
Provide two (2) 240v outlets for general use, located as directed.

Outside Covered Project Area

Provide 120v, 20amp weatherproof outlets, number as required, located around the walls and on the support columns.  
Provide two (2) 240v weatherproof outlets for general use, located as directed.

**12. Gas and Air**

Provide one (1) compressed air outlet on each wall of the Laboratory, 120 psi, 10cfm, with one pressure regulator and dryer for each outlet.

**13. Safety**

Standard, in accordance with the General Design Requirements section.

**14. Fencing**

Provide a 6' high chain link fence to enclose the Outside Covered Project Area, with a 12' wide rolling gate.

**15. Service Drives**

Provide a service drive from a main driveway or parking lot to the Outside Covered Project Area, for delivery of materials.

**16. Parking**

Not applicable

**17. Contractor-Provided Equipment and Casework**

Laboratory

Provide one (1) glasses/goggles sanitizing cabinet with 20 safety glasses and 10 goggles, in accordance with SDHC standards.

Tool Storage Room

Provide a pegboard, 20' long x 5' high, bottom to be mounted 36" above the floor. The pegboard is to be mounted so as to provide a minimum of 1/2" clearance between the back of the pegboard and the wall.

**18. Contractor-Provided Instructional Aids**

Laboratory

Provide a 12' wide x 4' high markerboard with a 4' wide x 4' high tackboard on one (1) side, bottom to be mounted 36" above the floor.

Provide a wall-mounted audio-visual projection screen, approximately 70" x 70", centered over the markerboard.

**19. Other Considerations**

In the Laboratory the Owner will provide student workbenches and may provide student workstations (ie computer). The quantity, type of workbenches and workstations and the configuration will vary depending on the program and the design of the space.

**19. Other Considerations (continued)**

In the Laboratory the work areas must be properly laid out to allow normal sequence of operations with a minimum of cross traffic. Provide adequate clearances between Owner-provided machines to avoid interference between operators and to allow free flow of traffic and materials.

The Outside Covered Project Area is to be a square area (approximately).

# SPACE RELATIONSHIPS

