








ARCHITECTURE, ENGINEERING & CONSTRUCTION

# PROGRAM DESIGN GUIDELINES

SEMINARIES & INSTITUTES

FEBRUARY 2024

THE CHURCH OF
JESUS CHRIST
OF LATTER-DAY SAINTS

THE FOLLOWING CONTRIBUTED TO THE PROGRAM DESIGN GUIDELINES:

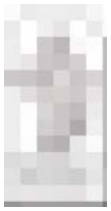
## THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

**Rick Piacente**, Area Architect
**Michael Jenson**, Interior Designer
**Michael Frank Wyatt**, Mechanical Engineer
**Mike Molyneux**, P.E., Structural Engineer
**Shawn Shield**, Senior Drafter
**Steve Poulsen**, Technology & AV (Data)
**Kurtis D. Dallinga**, Technology & AV (Acoustics)
**Guillermo Oviedo Vella**, Ph.D., P.E., Electrical Engineer, Lighting, Access Control, Fire Alarm
**David Wright**, Landscape Architect
**Mark Shaffer**, Area Architect
**Joseph Walton**, Architectural and Engineering Manager
**Les Goforth**, Area Architect
**Tyler S. Anderson**, S&I Property and Planning Manager
**Trevar Daw**, S&I Property and Planning Manager

PROGRAMMING TEAM:

## PLANNING CONSULTANTS

**Tony K. Pantone**, AIA, LEED AP, Studio 333 Architects
**Ashley Badali**, NCIDQ, SCCID, IIDA, Studio 333 Architects



# 1.0

**EXECUTIVE SUMMARY**

PROJECT VISION, GOALS, & NEEDS

SPACE NEEDS SUMMARY

BUILDING CODE SUMMARY

THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

## PROJECT VISIONS, GOALS, & NEEDS

During programming discussions and goal development, The Church of Jesus Christ of Latter-Day Saints and the Programming Team discussed the following points.

### ORGANIZATIONAL GOALS:

Our purpose is to help youth and young adults deepen their conversion to Jesus Christ and His restored gospel, qualify for the blessings of the temple, and prepare themselves, their families, and others for eternal life with their Father in Heaven.

To achieve our purpose:

- **LIVE**
  We live the gospel of Jesus Christ and strive for the companionship of the Holy Ghost. Our conduct and relationships are exemplary in the home, in the classroom, and in the community. We continually seek to improve our performance, knowledge, attitude, and character. We listen carefully to God's living prophets and follow their inspired teachings and direction.

- **TEACH**
  We center each learning experience on Jesus Christ and His example, attributes, and redeeming power. We help students learn the restored gospel of Jesus Christ as found in the scriptures and words of the prophets. We help students fulfill their role in learning for themselves. We strive to invite the Holy Ghost to fulfill His role in each learning experience.

- **LEAD**
  We pattern our leadership after the example of Jesus Christ. We invite and encourage all youth and young adults to participate in seminary and institute. We seek to strengthen those we lead, effectively administer the work, and build unity with others. Our efforts assist and support individuals, families, and priesthood leaders.

### FACILITY GOALS:

- Implement biophilic design. Incorporate views to exterior or optional murals of surrounding landscapes when requested, natural textures, and sustainable materials to promote a connection with nature and reduce stress levels among students.

- Create a sense of place. Design spaces that reflect the identity of the school, church, and city; fostering a sense of belonging and community within the building.

- Adopt the Third Place Theory. Develop areas within the building that serve as social hubs beyond home and classroom/work, encouraging social interaction and collaboration for both students and faculty.

- Flexible furniture and seating. Provide adaptable furniture to facilitate diverse learning activities, allowing students to choose comfortable spaces for what they prefer or how the instructor chooses to set up the classroom.

- Student-centered and active learning spaces. Design classrooms and common areas that promote student engagement, interaction and hands-on learning experiences.

- Enhance student retention through design. Craft an environment conducive to learning and well-being, positively impacting student retention rates.

- Integrate technology seamlessly. Consider advanced technology to support modern teaching and look for ways to encourage innovation.

- Maximize natural daylight. Optimize the building's layout and windows to harness natural light, creating an inviting and energizing atmosphere.

- Maintain a clean, contemporary environment. Emphasize simplicity and cleanliness in design aesthetics to foster a modern and uncluttered learning environment.

## SPACE NEEDS SUMMARY

Small Seminary Building
Stand-alone 1 to 4 classroom building for secondary school grades 9, 9 through 12, or 10 through 12.

Large Seminary Building
Stand-alone 6 to 8 classroom building for secondary school grades 9 through 12 or 10 through 12.

## SPACE NEEDS SUMMARY TABLE

| SPACE NEEDS | |
|---|---|
| 1 Classroom Gross Square Feet (GSF) | 3,120 sf |
| 2 Classroom Gross Square Feet (GSF) | 4,290 sf |
| 3 Classroom Gross Square Feet (GSF) | 6,175 sf |
| 4 Classroom Gross Square Feet (GSF) | 7,920 sf |
| 5 Classroom Gross Square Feet (GSF) | 9,940 sf |
| 6 Classroom Gross Square Feet (GSF) | 11,500 sf |
| 7 Classroom Gross Square Feet (GSF) | 12,950 sf |
| 8 Classroom Gross Square Feet (GSF) | 14,300 sf |

## BUILDING CODE SUMMARY

A building code analysis was performed to assist in developing a building design that conforms to the locally adopted Building Code. This search process for relevant building code selections is important to later phases of the design process. The building code analysis can be found in section 4.1.

# 2.0

**SITE CONSIDERATIONS**

CIVIL ANALYSIS

LANDSCAPING ANALYSIS

EXTERIOR LIGHTING

THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

## CIVIL ANALYSIS

### SITE PLAN:

#### Development & Design Considerations

The site plan should identify required engineered fill depths and locations. Site development design should take advantage of existing topography to minimize cut and fill requirements and to provide minimum and maximum grading slopes required by these guidelines. Site development constitutes a significant portion of total project cost and a well-prepared proper site design will greatly minimize future maintenance of site and site elements.

It is acceptable to place catch basins in landscaped areas, in order that proper, and recommended, slopes be provided across the entire site.

Following are items of particular importance to the owner that may be unique to local practices and that are to be verified by the architect with the local authority having jurisdiction:

- Any requirement for detectable warning panels in exterior handicapped ramps.
- Any required development of any off-site adjoining streets, water lines, sewer lines, sidewalks, etc.
- The location of the electrical transformer is to be coordinated with the utility company so it is as close to the service entrance gear and is as hidden as possible.
- Any setbacks at front, rear, and sides and/or any greenbelt (open space) requirements.

See Site Plan Drawings Section of the Meeting-house Design Guidelines for owner require-ments.

### PARKING LOTS:

*Determine if the local authority having jurisdiction has a stormwater utility credit, if so, identify utility credit procedures and application. Coordinate with project architect and project manager to identify and carry forward through design "Best Management Practices" (BMPs) to obtain utility credits.*

#### Design Considerations

The project manager should evaluate whether asphalt or concrete paving should be used based upon site conditions and a life cycle cost analysis. Paving is to be designed for the following loads unless otherwise determined through the site adapt process:

- Parking areas, drive lanes, driveways and paved areas:
  - Design for a "Light" Traffic Classifica-tion, Class I (equivalent single axle load, ESAL, of less than $10^4$ year) AND
  - Lighting for parking lots should be kept to the perimeter of the building and staff parking. Poles should be spaced a minimum of 80' apart. 18' poles should be used.
  - Design paving to support six (6) equiv-alent single axle loads of 18 kips/sq ft (214 MPa) per week.
  - Design drive lanes and driveway paving system to support five (5) to fif-teen (15) equivalent single axle loads of 18 kips per week from buses and garbage trucks.
  - Trash enclosure approach slab: One (1) 40,000-pound axle load per week.
- Design life of concrete and asphalt paving system is to be forty (40) years (minimum).

Where water tables are high, provide subsurface drainage systems (i.e. French drains) to remove and prevent buildup of water in the aggregate base and in the upper layer of the subgrade.

## LANDSCAPE ANALYSIS

### LANDSCAPE GUIDING PRINCIPLES:

#### Specific Seminary and Institute Landscape Considerations

- Install sidewalks in areas where students will most likely walk or gather.
- Use lawn in areas that may have moderate foot traffic or congregating students.

When designing a seminary building next to a high school with a large lawn area, it may be desirable to provide a gradual transition from lawn to planter area rather than creating an abrupt planter edge at the property line.

The safety and security of students and faculty is a major concern. Carefully evaluate utility service area placement as well as the landscape planting design. Include these considerations:

- Keep sites well lit— trees and shrubs should not block lights.
- Use shrub species that will not exceed 3 feet in height.
- Use low spreading shrubs or groundcovers where local ordinances require large amounts of shrub beds.

Avoid creating extensive hardscape areas that may be an invitation for skateboarding. Provide skateboard deterrent design where reasonable, effective, and without excessive associated costs.

#### Conservation of Water and Natural Resources

A carefully designed landscape can contribute to the conservation of water and natural resources. To that end, a narrow sampling of a wide array of design ideas are listed below:

- Install vegetative material in soils that will allow plants to flourish.
- Use hardy, native and proven plant material for the region.
- Apply mulch around plant materials to reduce water loss.

Apply irrigation water based on plant needs and eliminate over-watering, over-spray, and other water wasting practices.

#### Natural Enhancement of Architectural and Building Features

Enhancement can be accomplished by the following:

- Frame views of the building with appropriate trees and shrubs.
- Diversify color and texture to accentuate these areas.
- Not overplanting and obscuring architectural features or signs.

#### Reduced Maintenance

Reduce maintenance and care of the landscape by:

- Using plants that require little or no maintenance.
- Reducing the number of plants and turf that demand water, pest control, and frequent fertilization.

- Reducing the number of plants near the building foundation.
- Using appropriate mulch types and depths around plants.

Reducing the need for shrub and tree hedging and pruning. This is accomplished by:

- Locating plants at sufficient distances from walks, parking areas, buildings and mow strips to allow for natural growth.
- Specifying plants that typically do not require excessive pruning.
- Eliminating lawn in small spaces, with acute angles, and on steep hillsides.

### Long Term Cost Savings

This can be accomplished by:

- Providing planting design appropriate for climate and soil conditions.
- Installing efficient irrigation systems that are designed to maximize distribution uniformity (DU), utilize smart irrigation controller technology and provide for longevity and ease of maintenance.

### Neighborhood Beautification

The landscape should be a complimentary asset to the neighborhood and not a detriment. For older established neighborhoods, it is particularly important to visually tie into existing landscape conditions and mature plant material. It is also important to communicate the design intent to local members and especially the stake leadership.

## EXTERIOR LIGHTING

### PARKING AREA LIGHTING

Pole mounted single head cut-off fixtures are recommended for parking area lighting because of their efficiency in providing lighting coverage and control. Generally, the parking area closest to the building should receive the main lighting emphasis because it is the area that is used the most. Locating fixtures close to the building utilizes the spill light from the fixtures to provide walkway and building security lighting. Power company rental lights are generally not economical except in areas of high vandalism.

In laying out parking area lighting, consider impacts such as glare and light trespass on adjacent neighbors. Coordinate locations of fixtures with landscaping elements to avoid conflicts.

Fixtures should not be located on the perimeter of the lot unless required by the local jurisdiction. Illuminance levels at the site perimeter should not exceed 0.2 fc.

Control lighting with the building's lighting control system. Coordinate the lighting operation schedule with the governing energy code and the facility's director.

### OTHER EXTERIOR LIGHTING

Exterior building lighting is included at building entries and controlled with the building lighting control system separate from the parking area lighting control. Minimal Building Accent lighting may be included.

## EXTERIOR EMERGENCY EGRESS LIGHTING

Include as required by code. System should generally consist of small, directional exterior lamp heads at the exits with the associated battery units located inside the building in mechanical equipment or other accessible utility spaces.

## SEMINARIES & INSTITUTES ACCESS CONTROL

Locking hardware and keying schemes should only be selected as specified in the master specifications for the following reasons:

- Controlled Availability of Keys: Specified key systems are patented with key blanks available only from a designated controlled supplier. To eliminate unauthorized key duplication, keys should only be requested through the facilities manager.

- Reduced Cost of Re-keying: Interior keying system should be different from the exterior keying system to eliminate necessity of re-keying both systems in the event of lost or stolen keys.

### Securing Devices

Locks and locksets for doors are provided through national contracts with preferred suppliers established by the owner. Typically, the interior door keying system of a Seminary or Institute will be independent from other Seminaries and Institutes. For most Seminaries and Institutes, re-keying of interior door locks is rarely, if ever, necessary and should not be required. If re-keying interior door locks becomes necessary, however, costs can be minimized if the hardware and keying system used conforms to Church standards.
Building Code Requirements: In fire sprinkled Seminaries and Institutes located in areas under the International Building Code jurisdiction, the following hardware changes can be made for new buildings:

Master Key Access for Facilities Managers: One exterior door in all Seminaries and Institutes under the responsibility of a facilities manager should be keyed alike in order to provide needed access for the facilities manager. The keying scheme for these locks should be independent from the local keying scheme for each building.

Normally open exterior doors shall be controlled by a Church approved electronic access control system. All other exterior doors shall be provided with a means to remain locked. Provide electric strikes and card readers for all electrically controlled exterior doors. All electrically controlled exterior doors shall lock upon activation of a panic button at the receptionist desk or other location indicated by the facility's director. Coordinate with the host school for "Lock-down" procedures and is necessary provide the means to initiate lock-down upon activation at the home school.

# 3.0

**BUILDING ORGANIZATION**

SPACE REQUIREMENTS

SPACE DATA SHEETS

THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

## SPACE REQUIREMENTS

*ALL SF ARE ESTIMATES AND CAN BE ADJUSTED BASED ON DESIGN AND PROGRAM NEEDS.

**1 CLASSROOM SEMINARY BUILDING**

| PROGRAM OF APPROXIMATE SPACE NEEDS | | | | | | |
|---|---|---|---|---|---|---|
| ID | SPACE | S.F. | QTY. | TOTAL | | |
| **STUDENT** | | | | | | |
| 001 | CLASSROOM | 900 | 1 | 900 | | |
| | STUDENT SPACES SUBTOTAL | | 1 | 900 | | |
| **FACULTY** | | | | | | |
| 003 | QUIET STUDY/ SMALL OFFICE | 70 | 1 | 70 | | |
| 004 | WORKROOM/ KITCHENETTE/ COLLABORATION | 300 | 1 | 300 | | |
| | FACULTY SPACES SUBTOTAL | | 1 | 370 | | |
| **OPERATIONS** | | | | | | |
| 005 | STORAGE (INTERIOR ACCESS) | 40 | 1 | 40 | | |
| 006 | STORAGE (EXTERIOR ACCESS) | 40 | 1 | 40 | | |
| 007 | CUSTODIAL | 85 | 1 | 85 | | |
| | OPERATIONS SPACES SUBTOTAL | | 3 | 165 | | |
| **SUPPORT** | | | | | | |
| 009 | FOYER/ ADMINISTRATIVE ASSISTANT | 480 | 1 | 480 | | |
| 010 | RESTROOM (ACCESSIBLE) | 70 | 2 | 140 | | |
| 013 | VESTIBULE | 115 | 3 | 345 | | |
| | SUPPORT SPACES SUBTOTAL | | 6 | 965 | | |

| | | QTY. | S.F. | MULT. | B.G.S.F. |
|---|---|---|---|---|---|
| **SPACE NEEDS SUMMARY** | | | | | |
| | TOTAL | 11 | 2,400 | 0.3 | 3,120 |

**2 CLASSROOM SEMINARY BUILDING**

| PROGRAM OF APPROXIMATE SPACE NEEDS | | | | | | |
|---|---|---|---|---|---|---|
| ID | SPACE | S.F. | QTY. | TOTAL | | |
| **STUDENT** | | | | | | |
| 001 | CLASSROOM | 900 | 2 | 1,800 | | |
| | STUDENT SPACES SUBTOTAL | | 2 | 1,800 | | |
| **FACULTY** | | | | | | |
| 003 | QUIET STUDY/ SMALL OFFICE | 70 | 1 | 70 | | |
| 005 | WORKROOM/ KITCHENETTE/ COLLABORATION | 300 | 1 | 300 | | |
| | FACULTY SPACES SUBTOTAL | | 1 | 370 | | |
| **OPERATIONS** | | | | | | |
| 006 | STORAGE (INTERIOR ACCESS) | 40 | 1 | 40 | | |
| 006 | STORAGE (EXTERIOR ACCESS) | 40 | 1 | 40 | | |
| 007 | CUSTODIAL | 85 | 1 | 85 | | |
| | OPERATIONS SPACES SUBTOTAL | | 3 | 165 | | |
| **SUPPORT** | | | | | | |
| 009 | FOYER/ ADMINISTRATIVE ASSISTANT | 480 | 1 | 480 | | |
| 010 | RESTROOM (ACCESSIBLE) | 70 | 2 | 140 | | |
| 013 | VESTIBULE | 115 | 3 | 345 | | |
| | SUPPORT SPACES SUBTOTAL | | 6 | 965 | | |

| | | QTY. | S.F. | MULT. | B.G.S.F. |
|---|---|---|---|---|---|
| **SPACE NEEDS SUMMARY** | | | | | |
| | TOTAL | 12 | 3,300 | 0.3 | 4,290 |

**3 CLASSROOM SEMINARY BUILDING**

| PROGRAM OF APPROXIMATE SPACE NEEDS | | | | | | |
|---|---|---|---|---|---|---|
| ID | SPACE | S.F. | QTY. | TOTAL | | |
| **STUDENT** | | | | | | |
| 001 | CLASSROOM | 900 | 3 | 2,700 | | |
| | STUDENT SPACES SUBTOTAL | | 3 | 2,700 | | |
| **FACULTY** | | | | | | |
| 002 | PRINCIPAL'S OFFICE | 120 | 1 | 120 | | |
| 003 | QUIET STUDY/ SMALL OFFICE | 70 | 2 | 140 | | |
| 004 | WORKROOM/ KITCHENETTE/ COLLABORATION | 300 | 1 | 300 | | |
| | FACULTY SPACES SUBTOTAL | | 3 | 560 | | |
| **OPERATIONS** | | | | | | |
| 006 | STORAGE (INTERIOR ACCESS) | 40 | 2 | 80 | | |
| 006 | STORAGE (EXTERIOR ACCESS) | 40 | 1 | 40 | | |
| 007 | CUSTODIAL | 85 | 1 | 85 | | |
| | OPERATIONS SPACES SUBTOTAL | | 4 | 205 | | |
| **SUPPORT** | | | | | | |
| 009 | FOYER/ ADMINISTRATIVE ASSISTANT | 800 | 1 | 800 | | |
| 010 | RESTROOM (ACCESSIBLE) | 70 | 2 | 140 | | |
| 013 | VESTIBULE | 115 | 3 | 345 | | |
| | SUPPORT SPACES SUBTOTAL | | 6 | 1,285 | | |

| | | | QTY. | S.F. | MULT. | B.G.S.F. |
|---|---|---|---|---|---|---|
| **SPACE NEEDS SUMMARY** | | | | | | |
| | TOTAL | | 16 | 4,750 | 0.3 | 6,175 |

**4 CLASSROOM SEMINARY BUILDING**

| PROGRAM OF APPROXIMATE SPACE NEEDS | | | | | | |
|---|---|---|---|---|---|---|
| ID | SPACE | S.F. | QTY. | TOTAL | | |
| **STUDENT** | | | | | | |
| 001 | CLASSROOM | 900 | 4 | 3,600 | | |
| | STUDENT SPACES SUBTOTAL | | 4 | 3,600 | | |
| **FACULTY** | | | | | | |
| 002 | PRINCIPAL'S OFFICE | 120 | 1 | 120 | | |
| 003 | QUIET STUDY/ SMALL OFFICE | 70 | 3 | 210 | | |
| 004 | WORKROOM/ KITCHENETTE/ COLLABORATION | 600 | 1 | 600 | | |
| | FACULTY SPACES SUBTOTAL | | 4 | 930 | | |
| **OPERATIONS** | | | | | | |
| 006 | STORAGE (INTERIOR ACCESS) | 40 | 2 | 80 | | |
| 006 | STORAGE (EXTERIOR ACCESS) | 40 | 1 | 40 | | |
| 007 | CUSTODIAL | 85 | 1 | 85 | | |
| | OPERATIONS SPACES SUBTOTAL | | 4 | 205 | | |
| **SUPPORT** | | | | | | |
| 009 | FOYER/ ADMINISTRATIVE ASSISTANT | 800 | 1 | 800 | | |
| 010 | RESTROOM (ACCESSIBLE) | 70 | 3 | 210 | | |
| 013 | VESTIBULE | 115 | 3 | 345 | | |
| | SUPPORT SPACES SUBTOTAL | | 7 | 1,355 | | |

| | | | QTY. | S.F. | MULT. | B.G.S.F. |
|---|---|---|---|---|---|---|
| **SPACE NEEDS SUMMARY** | | | | | | |
| | TOTAL | | 19 | 6,090 | 0.3 | 7,917 |

## SPACE REQUIREMENTS

*ALL SF ARE ESTIMATES AND CAN BE ADJUSTED BASED ON DESIGN AND PROGRAM NEEDS.

**5 CLASSROOM SEMINARY BUILDING**

| PROGRAM OF APPROXIMATE SPACE NEEDS | | | | | | |
|---|---|---|---|---|---|---|
| ID | SPACE | S.F. | QTY. | TOTAL | | |
| **STUDENT** | | | | | | |
| 001 | CLASSROOM | 900 | 5 | 4,500 | | |
| | STUDENT SPACES SUBTOTAL | | 5 | 4,500 | | |
| **FACULTY** | | | | | | |
| 002 | PRINCIPAL'S OFFICE | 120 | 1 | 120 | | |
| 003 | QUIET STUDY/ SMALL OFFICE | 70 | 3 | 210 | | |
| 004 | WORKROOM/ KITCHENETTE/ COLLABORATION | 725 | 1 | 725 | | |
| | FACULTY SPACES SUBTOTAL | | 4 | 1,055 | | |
| **OPERATIONS** | | | | | | |
| 006 | STORAGE (INTERIOR ACCESS) | 80 | 2 | 160 | | |
| 006 | STORAGE (EXTERIOR ACCESS) | 40 | 1 | 40 | | |
| 007 | CUSTODIAL | 85 | 1 | 85 | | |
| | OPERATIONS SPACES SUBTOTAL | | 4 | 285 | | |
| **SUPPORT** | | | | | | |
| 009 | FOYER/ ADMINISTRATIVE ASSISTANT | 1,250 | 1 | 1,250 | | |
| 010 | RESTROOM (ACCESSIBLE) | 70 | 3 | 210 | | |
| 013 | VESTIBULE | 115 | 3 | 345 | | |
| | SUPPORT SPACES SUBTOTAL | | 7 | 1,805 | | |

| | | QTY. | S.F. | MULT. | B.G.S.F. |
|---|---|---|---|---|---|
| **SPACE NEEDS SUMMARY** | | | | | |
| | TOTAL | 20 | 7,645 | 0.3 | 9,938.5 |

**6 CLASSROOM SEMINARY BUILDING**

| PROGRAM OF APPROXIMATE SPACE NEEDS | | | | | | |
|---|---|---|---|---|---|---|
| ID | SPACE | S.F. | QTY. | TOTAL | | |
| **STUDENT** | | | | | | |
| 001 | CLASSROOM | 900 | 6 | 5,400 | | |
| | STUDENT SPACES SUBTOTAL | | 6 | 5,400 | | |
| **FACULTY** | | | | | | |
| 002 | PRINCIPAL'S OFFICE | 120 | 1 | 120 | | |
| 003 | QUIET STUDY/ SMALL OFFICE | 70 | 4 | 280 | | |
| 004 | WORKROOM/ KITCHENETTE/ COLLABORATION | 850 | 1 | 850 | | |
| | FACULTY SPACES SUBTOTAL | | 5 | 1,250 | | |
| **OPERATIONS** | | | | | | |
| 006 | STORAGE (INTERIOR ACCESS) | 80 | 2 | 160 | | |
| 006 | STORAGE (EXTERIOR ACCESS) | 40 | 1 | 40 | | |
| 007 | CUSTODIAL | 85 | 1 | 85 | | |
| 008 | FIRE RISER | 40 | 1 | 40 | | |
| | OPERATIONS SPACES SUBTOTAL | | 4 | 325 | | |
| **SUPPORT** | | | | | | |
| 009 | FOYER/ ADMINISTRATIVE ASSISTANT | 1,250 | 1 | 1,250 | | |
| 010 | RESTROOM (ACCESSIBLE) | 70 | 4 | 280 | | |
| 013 | VESTIBULE | 115 | 3 | 345 | | |
| | SUPPORT SPACES SUBTOTAL | | 8 | 1,875 | | |

| | | QTY. | S.F. | MULT. | B.G.S.F. |
|---|---|---|---|---|---|
| **SPACE NEEDS SUMMARY** | | | | | |
| | TOTAL | 23 | 8,850 | 0.3 | 11,505 |

**7 CLASSROOM SEMINARY BUILDING**

| PROGRAM OF APPROXIMATE SPACE NEEDS | | | | | | |
|---|---|---|---|---|---|---|
| ID | SPACE | S.F. | QTY. | TOTAL | | |
| **STUDENT** | | | | | | |
| 001 | CLASSROOM | 900 | 7 | 6,300 | | |
| | STUDENT SPACES SUBTOTAL | | 7 | 6,300 | | |
| **FACULTY** | | | | | | |
| 002 | PRINCIPAL'S OFFICE | 120 | 1 | 120 | | |
| 003 | QUIET STUDY/ SMALL OFFICE | 70 | 4 | 280 | | |
| 004 | WORKROOM/ KITCHENETTE/ COLLABORATION | 1,000 | 1 | 1,000 | | |
| | FACULTY SPACES SUBTOTAL | | 5 | 1,400 | | |
| **OPERATIONS** | | | | | | |
| 006 | STORAGE (INTERIOR ACCESS) | 80 | 2 | 160 | | |
| 006 | STORAGE (EXTERIOR ACCESS) | 40 | 1 | 40 | | |
| 007 | CUSTODIAL | 85 | 1 | 85 | | |
| 008 | FIRE RISER | 40 | 1 | 40 | | |
| | OPERATIONS SPACES SUBTOTAL | | 4 | 325 | | |
| **SUPPORT** | | | | | | |
| 009 | FOYER/ ADMINISTRATIVE ASSISTANT | 1,250 | 1 | 1,250 | | |
| 010 | RESTROOM (ACCESSIBLE) | 70 | 5 | 350 | | |
| 013 | VESTIBULE | 115 | 3 | 345 | | |
| | SUPPORT SPACES SUBTOTAL | | 9 | 1,945 | | |

| | | | QTY. | S.F. | MULT. | B.G.S.F. |
|---|---|---|---|---|---|---|
| **SPACE NEEDS SUMMARY** | | | | | | |
| | TOTAL | | 25 | 9,970 | 0.3 | 12,961 |

**8 CLASSROOM SEMINARY BUILDING**

| PROGRAM OF APPROXIMATE SPACE NEEDS | | | | | | |
|---|---|---|---|---|---|---|
| ID | SPACE | S.F. | QTY. | TOTAL | | |
| **STUDENT** | | | | | | |
| 001 | CLASSROOM | 900 | 8 | 7,200 | | |
| | STUDENT SPACES SUBTOTAL | | 8 | 7,200 | | |
| **FACULTY** | | | | | | |
| 002 | PRINCIPAL'S OFFICE | 120 | 1 | 120 | | |
| 003 | QUIET STUDY/ SMALL OFFICE | 70 | 5 | 350 | | |
| 004 | WORKROOM/ KITCHENETTE/ COLLABORATION | 1,000 | 1 | 1,000 | | |
| | FACULTY SPACES SUBTOTAL | | 6 | 1,470 | | |
| **OPERATIONS** | | | | | | |
| 006 | STORAGE (INTERIOR ACCESS) | 80 | 2 | 160 | | |
| 006 | STORAGE (EXTERIOR ACCESS) | 40 | 1 | 40 | | |
| 007 | CUSTODIAL | 85 | 1 | 85 | | |
| 008 | FIRE RISER | 40 | 1 | 40 | | |
| | OPERATIONS SPACES SUBTOTAL | | 4 | 325 | | |
| **SUPPORT** | | | | | | |
| 009 | FOYER/ ADMINISTRATIVE ASSISTANT | 1,250 | 1 | 1,250 | | |
| 010 | RESTROOM (ACCESSIBLE) | 70 | 6 | 420 | | |
| 012 | VESTIBULE | 115 | 3 | 345 | | |
| | SUPPORT SPACES SUBTOTAL | | 10 | 2,015 | | |

| | | | QTY. | S.F. | MULT. | B.G.S.F. |
|---|---|---|---|---|---|---|
| **SPACE NEEDS SUMMARY** | | | | | | |
| | TOTAL | | 28 | 11,010 | 0.3 | 14,313 |

## SPACE DATA SHEETS

### STUDENT SPACE

# 001 CLASSROOMS
**900 NSF**

### 1. PROGRAM

Space Description: Open room for engaging, active learning to take place.

Occupants: 32-36

Quantity: 1-8

### 2. ADJACENCY AND ACCESS REQUIREMENTS

Adjacency: Locate near central circulation core

### 3. ARCHITECTURAL CHARACTERISTICS

Windows: Storefront (Maximize natural light)

Doors: Interior Glazing Partition Systems and/or painted hollow metal storefront frames

Floors: Carpet

Walls: Painted gypsum board; vinyl wall protection (rub rails). Accent wall color behind whiteboards. Select accent wall color based on overall theming and available rub rail colors (may consider school colors).

Ceiling: Acoustical Ceiling Tiles/ Gypsum Board Ceiling System

Ceiling Height: 10’ minimum

### 4. ENGINEERING SYSTEMS

HVAC: 2 Stage System.

Plumbing: N/A

Electrical: Provide minimum of 3 duplex outlets per wall

Lighting: Provide indirect volumetric, LED lighting. Lighting controls shall have occupancy sensors and daylight sensors.

Phone/Data: Wireless access point

Security: Classroom function lock, Clutch Hardware

Special Requirements: Provide carbon monoxide detection as required by local codes.

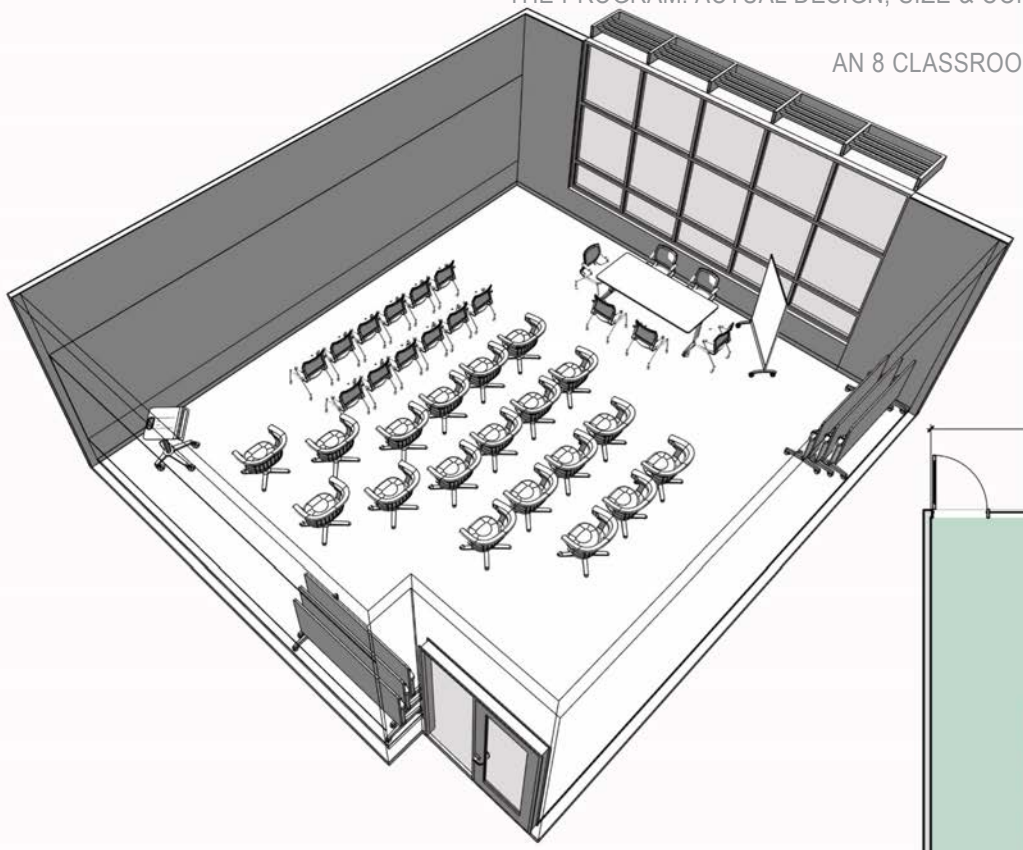
### 5. FURNITURE, FIXTURES & EQUIPMENT

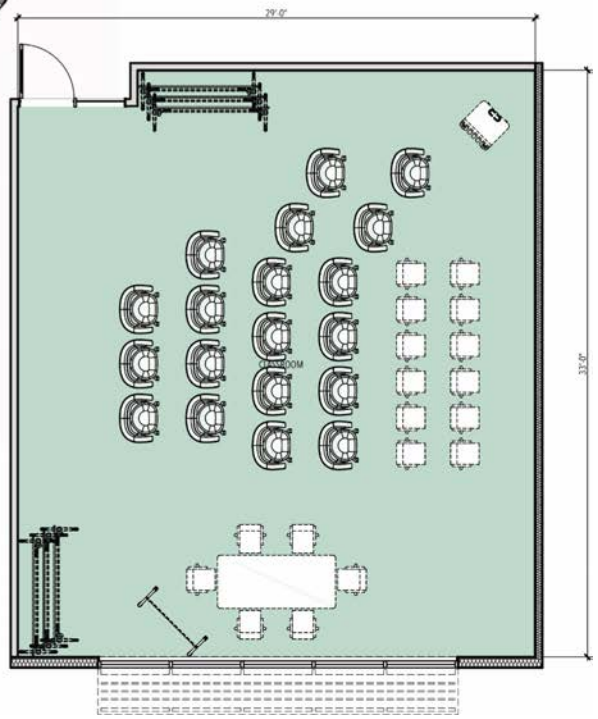
General: Seating on casters, Flip top tables on casters, Mobile teacher lectern/podium, Large monitor on cart, Portable whiteboard

### 6. SPECIAL REQUIREMENTS & NOTES

Notes: Whiteboards from 24” AFF to 96” AFF on two walls (adjacent walls preferable)
Vinyl wall protection (12” rub rails) from 24” AFF to 36” AFF

*THE PROVIDED FLOOR PLAN & AXONOMETRIC VIEWS BELOW ARE ONE INTERPRETATION OF THE PROGRAM. ACTUAL DESIGN, SIZE & CONTENT SHOULD BE MODIFIED TO MEET SPECIFIC PROGRAM.
AN 8 CLASSROOM SCENARIO HAS BEEN USED IN THIS EXAMPLE.





## SPACE DATA SHEETS

### FACULTY SPACE

# 002 PRINCIPAL'S OFFICE

**120 NSF**

### 1. PROGRAM

Space Description: Welcoming office for students to have access to the principal

Occupants: 1

Quantity: 1 (Unless Junior High Level <3 Classroom and some High School <3 Classroom)

### 2. ADJACENCY AND ACCESS REQUIREMENTS

Adjacency: Locate near support specialist and quiet study/offices. Direct adjacency to workroom/ break room/ collaboration. Accessed from main corridor.

### 3. ARCHITECTURAL CHARACTERISTICS

Windows: N/A

Doors: Interior Glazing Partition Systems

Floors: Carpet

Walls: Painted gypsum board

Ceiling: Acoustical Ceiling Tiles/ Gypsum Board Ceiling System

Ceiling Height: 9' minimum

### 4. ENGINEERING SYSTEMS

Plumbing: N/A

Electrical: Provide one duplex outlet under the desk and one in the room for general cleaning.

Lighting: Provide LED panels, 0-10 V dimmers and occupancy sensors.

Phone/Data: 1 Data for Phone

Security: Locking Door

Special Requirements:

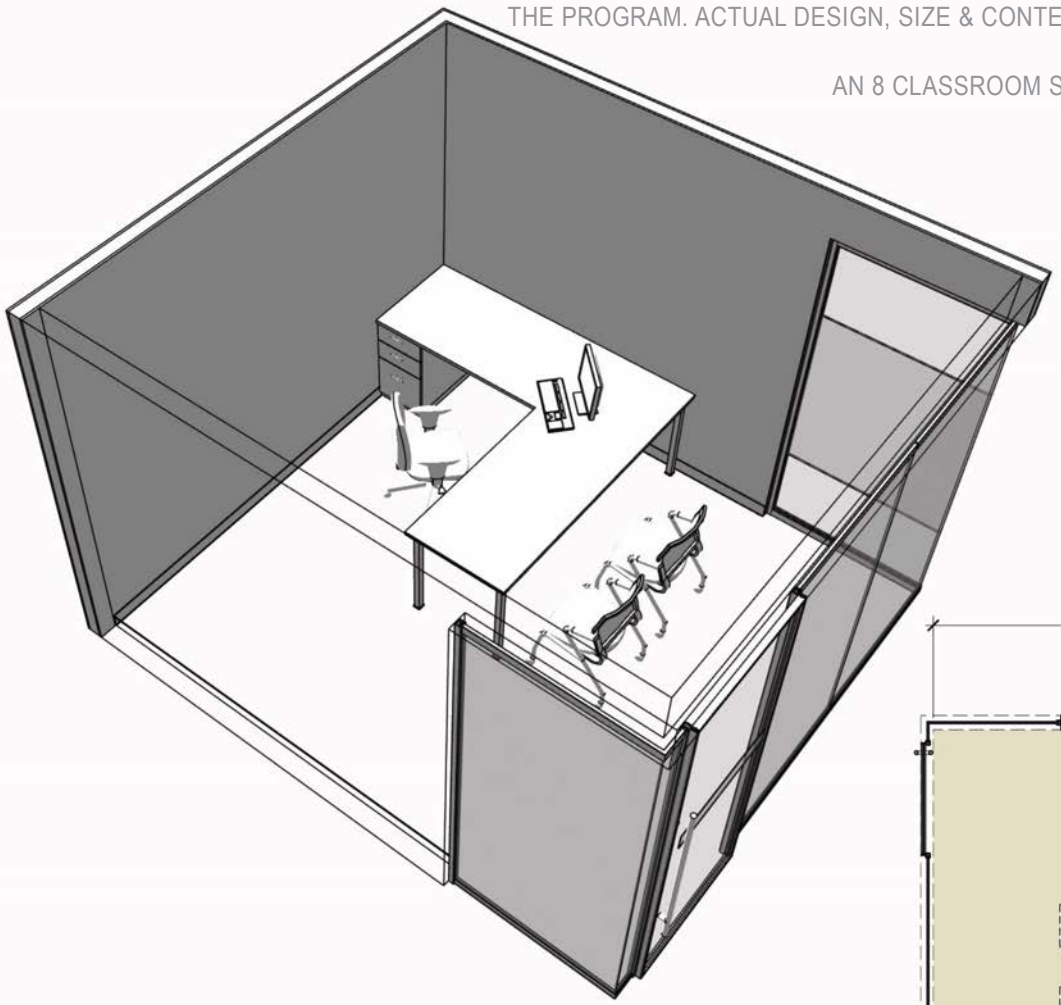
### 5. FURNITURE, FIXTURES & EQUIPMENT

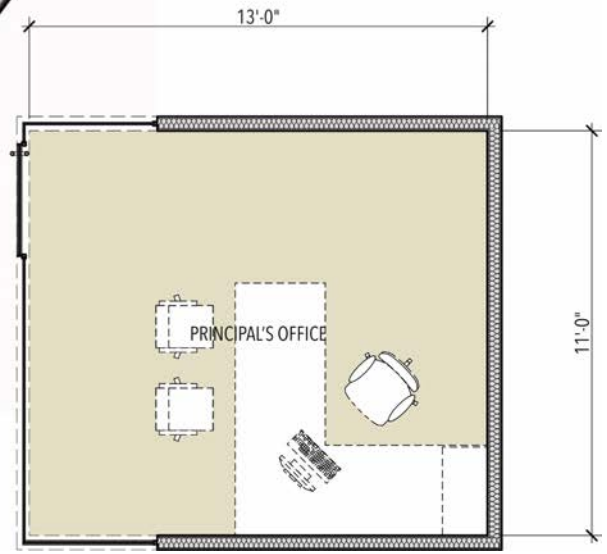
General: Desk, Minimal storage, Coat hook w/ hanger, 1 adjustable task chair, 2 guest chairs

### 6. SPECIAL REQUIREMENTS & NOTES

Notes: Acoustical Considerations

*THE PROVIDED FLOOR PLAN & AXONOMETRIC VIEWS BELOW ARE ONE INTERPRETATION OF THE PROGRAM. ACTUAL DESIGN, SIZE & CONTENT SHOULD BE MODIFIED TO MEET SPECIFIC PROGRAM.
AN 8 CLASSROOM SCENARIO HAS BEEN USED IN THIS EXAMPLE.





## SPACE DATA SHEETS

### FACULTY SPACE

# 003 QUIET STUDY/ SMALL OFFICE

**70 NSF**

### 1. PROGRAM

Space Description: Enclosed office space, not dedicated to a specific individual.

Occupants: 1

Quantity: ~1 per classroom

### 2. ADJACENCY AND ACCESS REQUIREMENTS

Adjacency: Locate near support specialist and classrooms

### 3. ARCHITECTURAL CHARACTERISTICS

Windows: N/A

Doors: Interior Glazing Partition Systems

Floors: Carpet

Walls: Painted gypsum board

Ceiling: Acoustical Ceiling Tiles/ Gypsum Board Ceiling System

Ceiling Height: 9’ minimum

### 4. ENGINEERING SYSTEMS

Plumbing: N/A

Electrical: Provide one duplex outlet under the desk and one in the room for general cleaning.

Lighting: Provide LED panels, 0-10 V dimmers and occupancy sensors.

Phone/Data: 1 Data for Phone

Security:

Special Requirements:

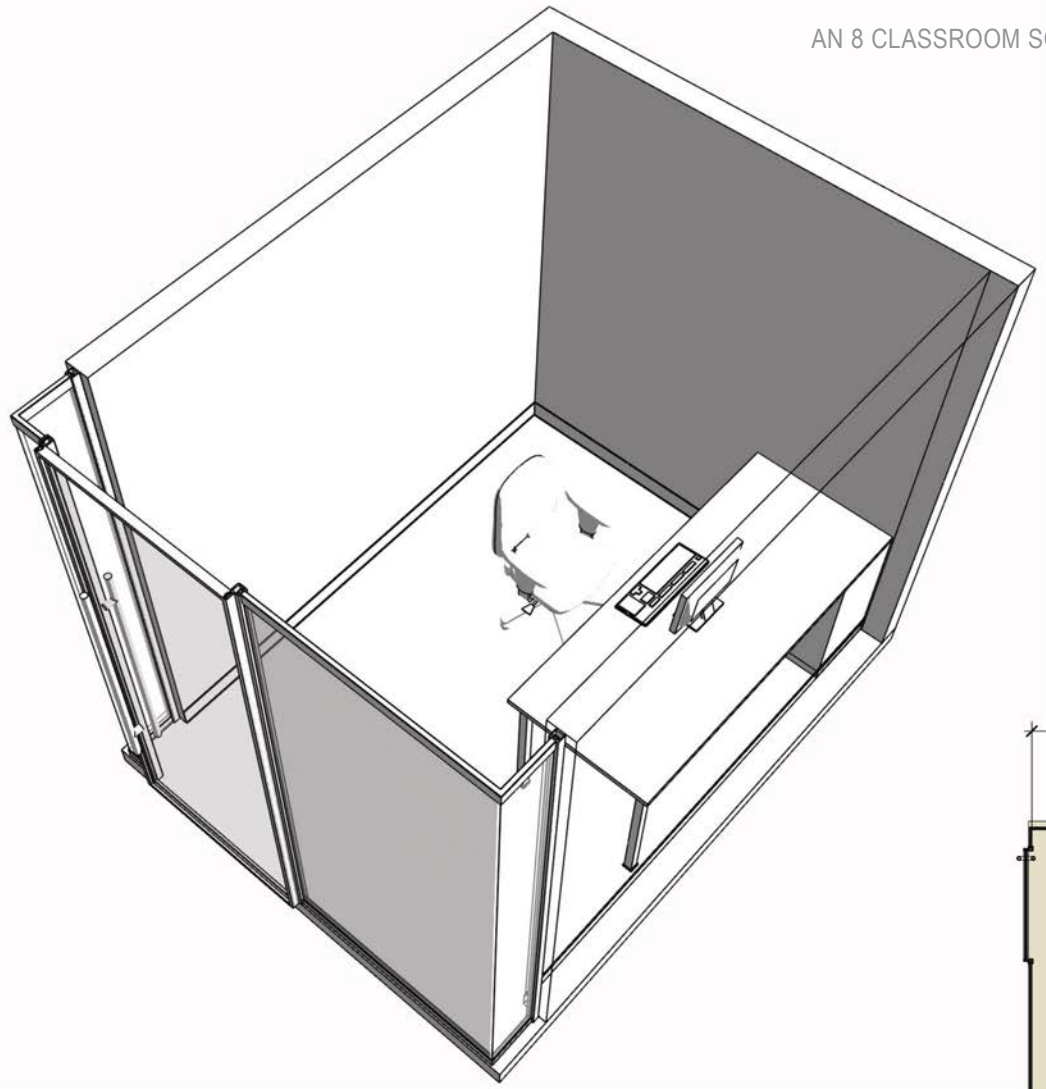
### 5. FURNITURE, FIXTURES & EQUIPMENT

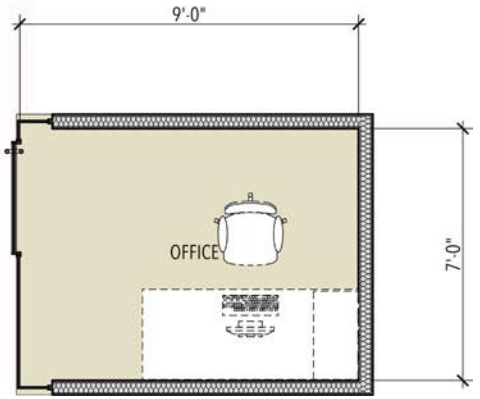
General: Desk & Task chair

### 6. SPECIAL REQUIREMENTS & NOTES

Notes:

*THE PROVIDED FLOOR PLAN & AXONOMETRIC VIEWS BELOW ARE ONE INTERPRETATION OF THE PROGRAM. ACTUAL DESIGN, SIZE & CONTENT SHOULD BE MODIFIED TO MEET SPECIFIC PROGRAM.
AN 8 CLASSROOM SCENARIO HAS BEEN USED IN THIS EXAMPLE.





## SPACE DATA SHEETS

### FACULTY SPACE

# 004 WORKROOM/ KITCHENETTE/ COLLABORATION

#### 1. PROGRAM

Space Description: Open space for faculty to prepare for class, collaborate with one another, take breaks between classes, eat, make phone calls,  and store personal items.

Occupants: Varies

Quantity: > 2 Classroom = 1

#### 2. ADJACENCY AND ACCESS REQUIREMENTS

Adjacency: Locate near central circulation core, support specialist

#### 3. ARCHITECTURAL CHARACTERISTICS

Windows: Storefront

Doors: Interior Glazing Partition Systems

Floors: Carpet

Walls: Painted gypsum board

Ceiling: Acoustical Ceiling Tiles/ Gypsum Board Ceiling System

Ceiling Height: 9’ minimum

#### 4. ENGINEERING SYSTEMS

Plumbing: Sink with Disposal

Electrical: Provide one duplex outlet at every wall. Floor recessed power outlets for bench desks where applicable. Provide power for appliances. Provide at least two GFCI outlets at the prep counter.

Lighting: Provide LED panels. Fixtures to be 0-10V dimmable. Lighting controls shall have occupancy sensors and daylight sensors.

Phone/Data: 2 Data for Phones

Security: Locking Doors

Special Requirements: Speaker & Volume Controls

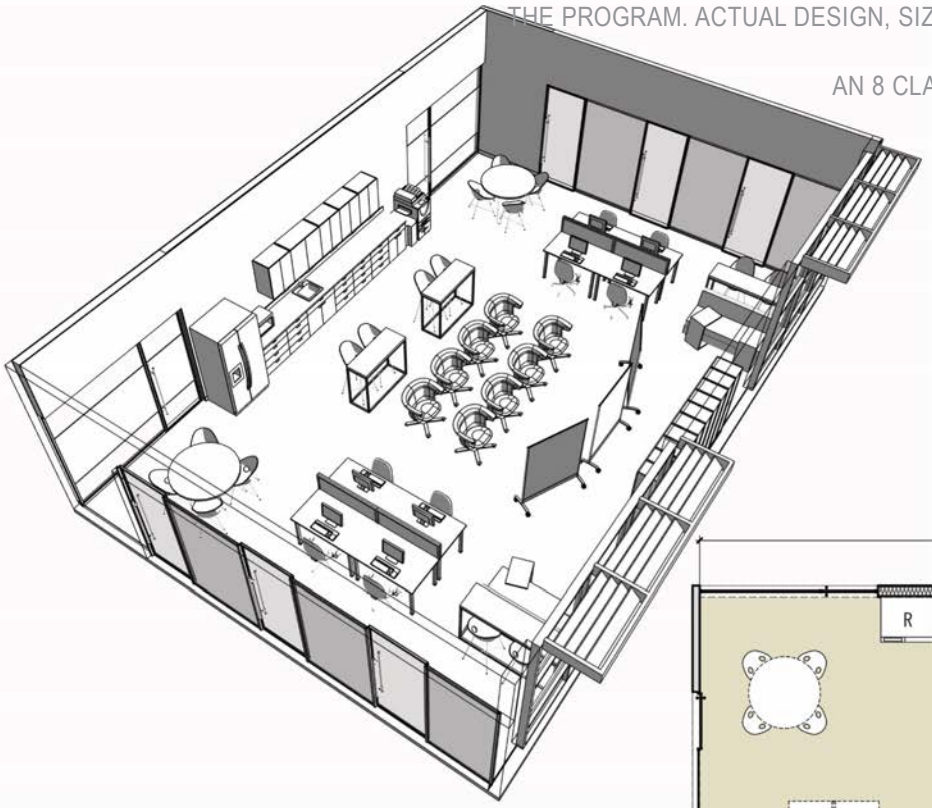
#### 5. FURNITURE, FIXTURES & EQUIPMENT

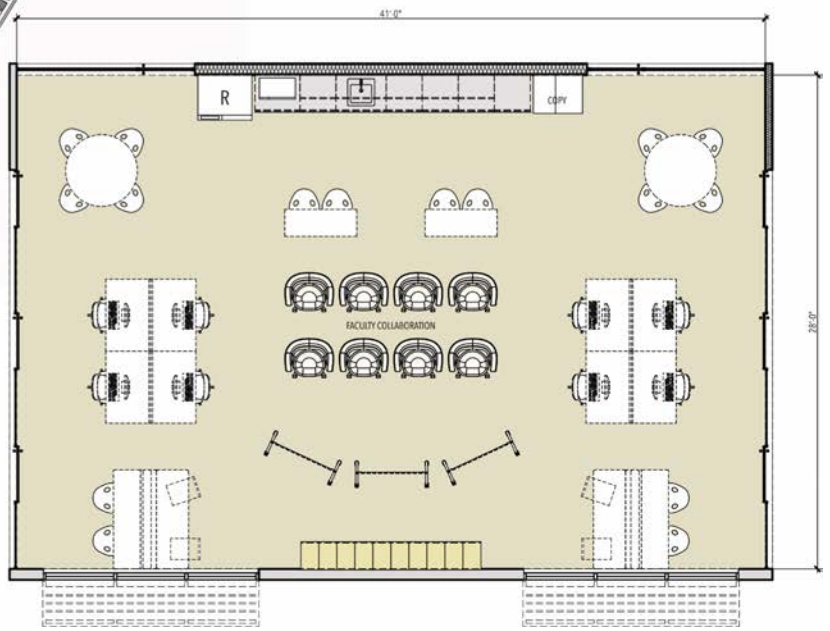
General: Bench desking w/surface mtd power units, Task seating w/arms, Lounge seating (conversation area), Lockers, Copy machine/printer, Microwave, Refrigerator

#### 6. SPECIAL REQUIREMENTS & NOTES

Notes:

*THE PROVIDED FLOOR PLAN & AXONOMETRIC VIEWS BELOW ARE ONE INTERPRETATION OF THE PROGRAM. ACTUAL DESIGN, SIZE & CONTENT SHOULD BE MODIFIED TO MEET SPECIFIC PROGRAM.
AN 8 CLASSROOM SCENARIO HAS BEEN USED IN THIS EXAMPLE.





## SPACE DATA SHEETS

### OPERATIONS SPACE

# 005 STORAGE (INTERIOR ACCESS)

**40-80 NSF**

### 1. PROGRAM

Space Description: Storage space for supplies.

Occupants:

Quantity: Varies by size of building

### 2. ADJACENCY AND ACCESS REQUIREMENTS

Adjacency: Locate throughout building

### 3. ARCHITECTURAL CHARACTERISTICS

Windows: N/A

Doors: Locking solid core wood door

Floors: Carpet

Walls: Painted gypsum board and Wall Tile

Ceiling: Typically (but not limited to) Gypsum Board Ceiling System

Ceiling Height: 8’ minimum

### 4. ENGINEERING SYSTEMS

HVAC: N/A

Plumbing: N/A

Electrical: Provide a single duplex outlet for general cleaning. Outlets to support other equipment are to be provided as necessary.

Lighting: Provide surface mounted LED strip light. Provide light switches as required by code.

Phone/Data: N/A

Security: N/A

Special Requirements:

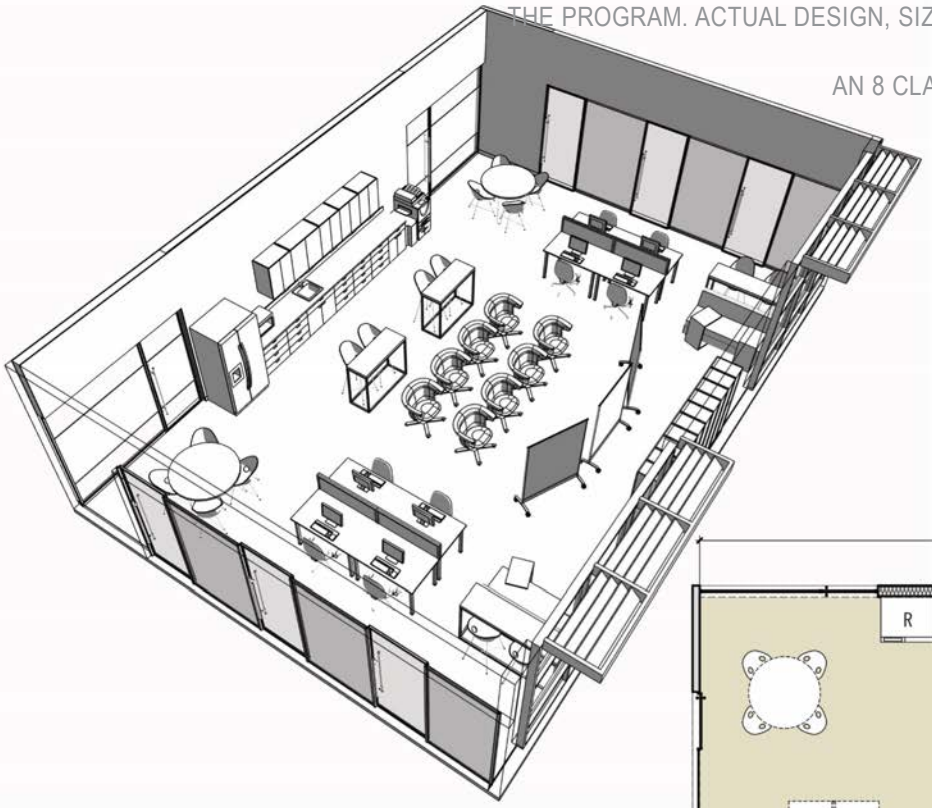
### 5. FURNITURE, FIXTURES & EQUIPMENT

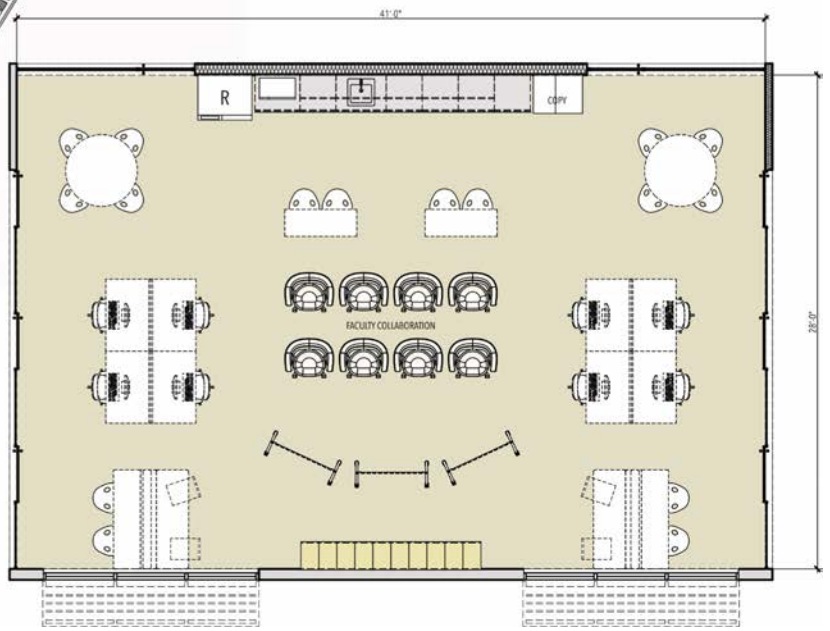
General: Open shelving, Storage cabinets

### 6. SPECIAL REQUIREMENTS & NOTES

Notes:

*THE PROVIDED FLOOR PLAN & AXONOMETRIC VIEWS BELOW ARE ONE INTERPRETATION OF THE PROGRAM. ACTUAL DESIGN, SIZE & CONTENT SHOULD BE MODIFIED TO MEET SPECIFIC PROGRAM.
AN 8 CLASSROOM SCENARIO HAS BEEN USED IN THIS EXAMPLE.





## SPACE DATA SHEETS

### OPERATIONS SPACE

# 006 STORAGE (EXTERIOR ACCESS)

**40 NSF**

### 1. PROGRAM

Space Description: Storage space for supplies.

Occupants:

Quantity: Varies by size of building

### 2. ADJACENCY AND ACCESS REQUIREMENTS

Adjacency: Locate throughout building

### 3. ARCHITECTURAL CHARACTERISTICS

Windows: N/A

Doors: Painted Metal Door

Floors: Sealed Concrete

Walls: As required by local jurisdiction

Ceiling: As required by local jurisdiction

Ceiling Height: 8’ minimum

### 4. ENGINEERING SYSTEMS

HVAC: N/A

Plumbing: N/A

Electrical: Provide a single duplex outlet for general cleaning. Outlets to support other equipment are to be provided as necessary.

Lighting: Provide surface mounted LED strip light. Provide light switches as required by code.

Phone/Data: N/A

Security: N/A

Special Requirements:

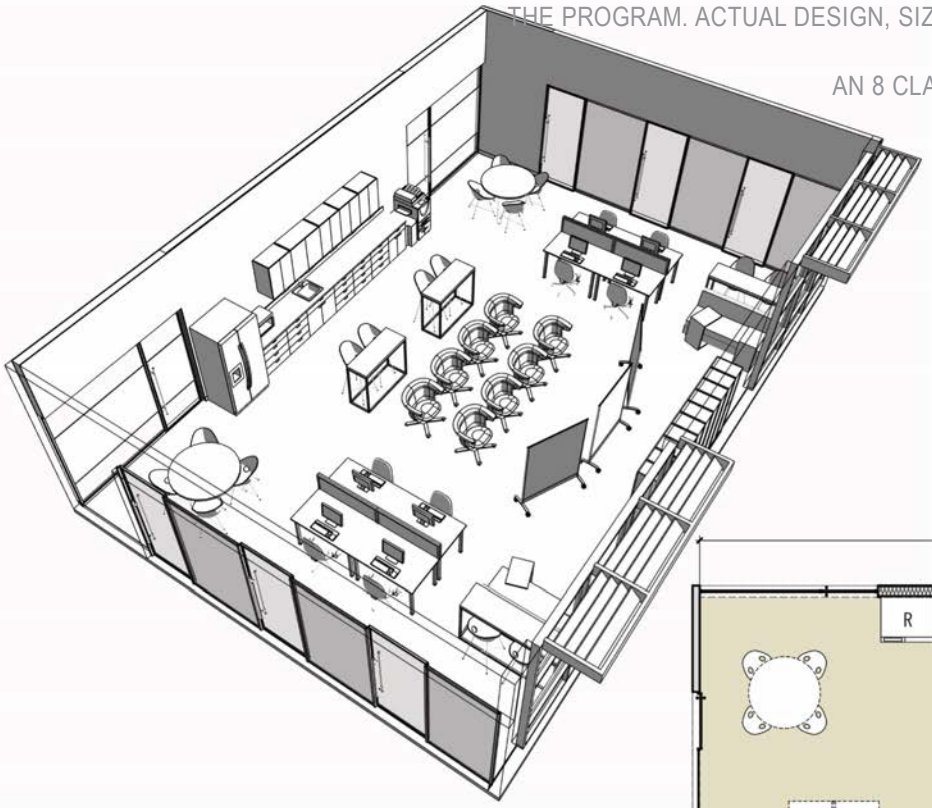
### 5. FURNITURE, FIXTURES & EQUIPMENT

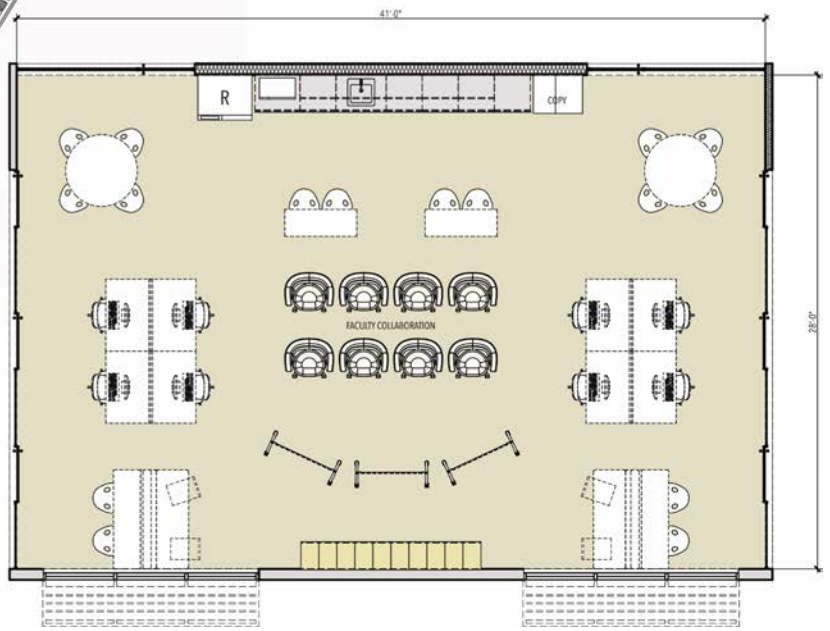
General: Open shelving, Storage cabinets

### 6. SPECIAL REQUIREMENTS & NOTES

Notes:

*THE PROVIDED FLOOR PLAN & AXONOMETRIC VIEWS BELOW ARE ONE INTERPRETATION OF THE PROGRAM. ACTUAL DESIGN, SIZE & CONTENT SHOULD BE MODIFIED TO MEET SPECIFIC PROGRAM.
AN 8 CLASSROOM SCENARIO HAS BEEN USED IN THIS EXAMPLE.





## SPACE DATA SHEETS

### OPERATIONS SPACE

# 007 CUSTODIAL

**40 NSF**

### 1. PROGRAM

Space Description: Room with custodial/janitorial provisions including floor sink.

Occupants:

Quantity: 1

### 2. ADJACENCY AND ACCESS REQUIREMENTS

Adjacency: Locate near central circulation core

### 3. ARCHITECTURAL CHARACTERISTICS

Windows: N/A

Doors: Locking solid core wood door

Floors: Porcelain Tile

Walls: Painted gypsum board and Wall Tile

Ceiling: Gypsum Board Ceiling System

Ceiling Height: 8’ minimum

### 4. ENGINEERING SYSTEMS

HVAC: Exhaust fans, if chemicals are to be stored here.

Plumbing: Mop Sink, Floor Drain

Electrical: Provide a single duplex outlet for general cleaning. Outlets to support other equipment are to be provided as necessary. Main electrical panels.

Lighting: Provide surface mounted LED strip light. Provide a occupancy sensor.

Phone/Data: N/A

Security: N/A

Special Requirements:

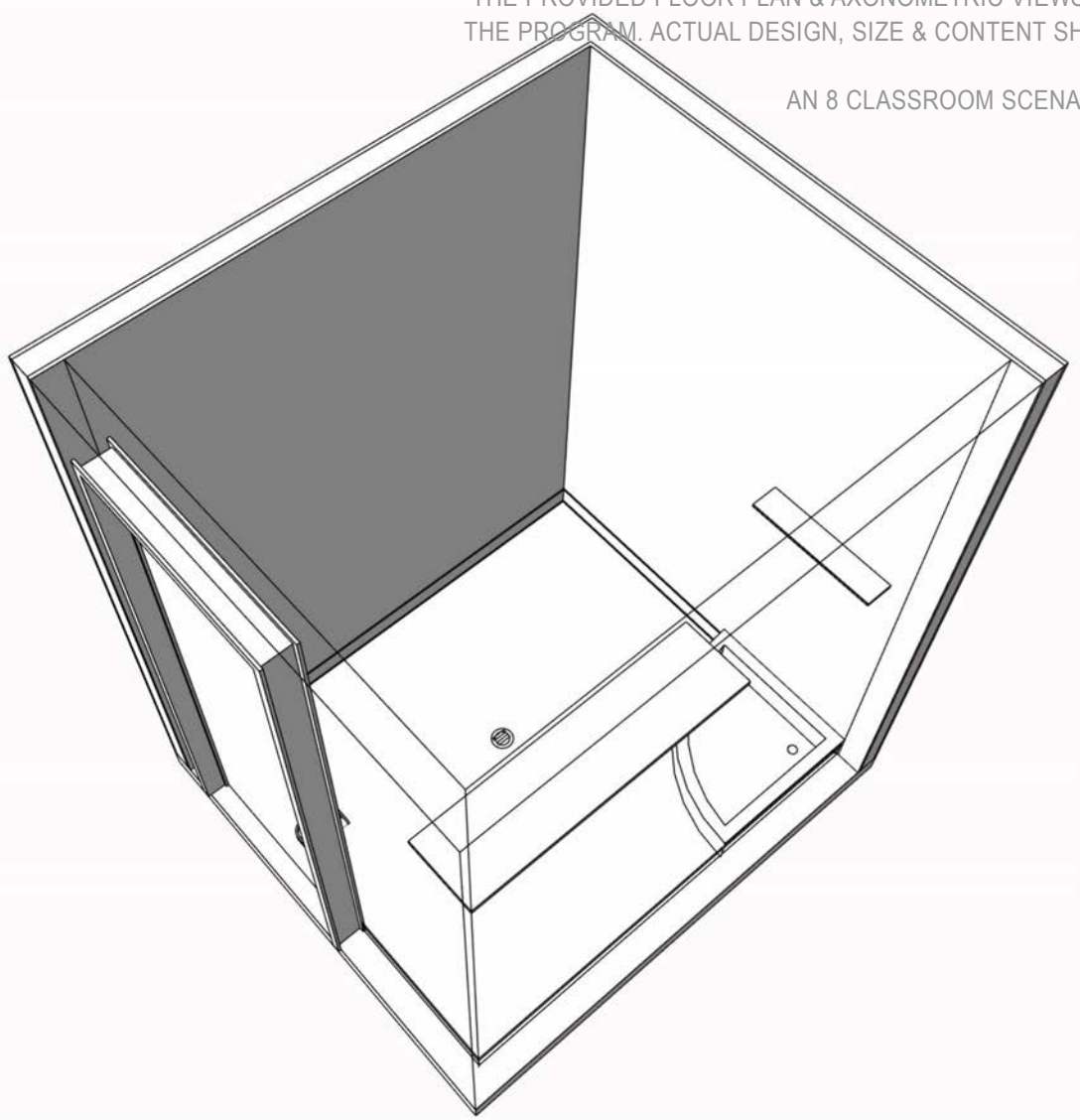
### 5. FURNITURE, FIXTURES & EQUIPMENT

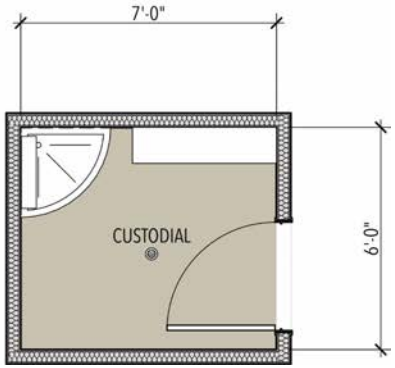
General: Shelving

### 6. SPECIAL REQUIREMENTS & NOTES

Notes:

*THE PROVIDED FLOOR PLAN & AXONOMETRIC VIEWS BELOW ARE ONE INTERPRETATION OF THE PROGRAM. ACTUAL DESIGN, SIZE & CONTENT SHOULD BE MODIFIED TO MEET SPECIFIC PROGRAM.
AN 8 CLASSROOM SCENARIO HAS BEEN USED IN THIS EXAMPLE.





## SPACE DATA SHEETS

### OPERATIONS SPACE

# 008 ELECTRICAL

**40 NSF**

### 1. PROGRAM

Space Description: Room with dedicated electrical equipment.

Occupants:

Quantity: 1

### 2. ADJACENCY AND ACCESS REQUIREMENTS

Adjacency: Locate near central circulation core

### 3. ARCHITECTURAL CHARACTERISTICS

Windows: N/A

Doors: Locking solid core wood door

Floors: Sealed Concrete

Walls: Painted gypsum board

Ceiling: Gypsum Board Ceiling System

Ceiling Height: 8’ minimum

### 4. ENGINEERING SYSTEMS

HVAC: N/A

Plumbing: N/A

Electrical: Provide a single duplex outlet for general cleaning. Outlets to support other equipment are to be provided as necessary. Main electrical panels.

Lighting: Provide surface mounted LED strip light. Provide light switches as required by code.

Phone/Data: N/A

Security: Locked & accessible only to qualified personnel.

Special Requirements: No water above or below, typ.

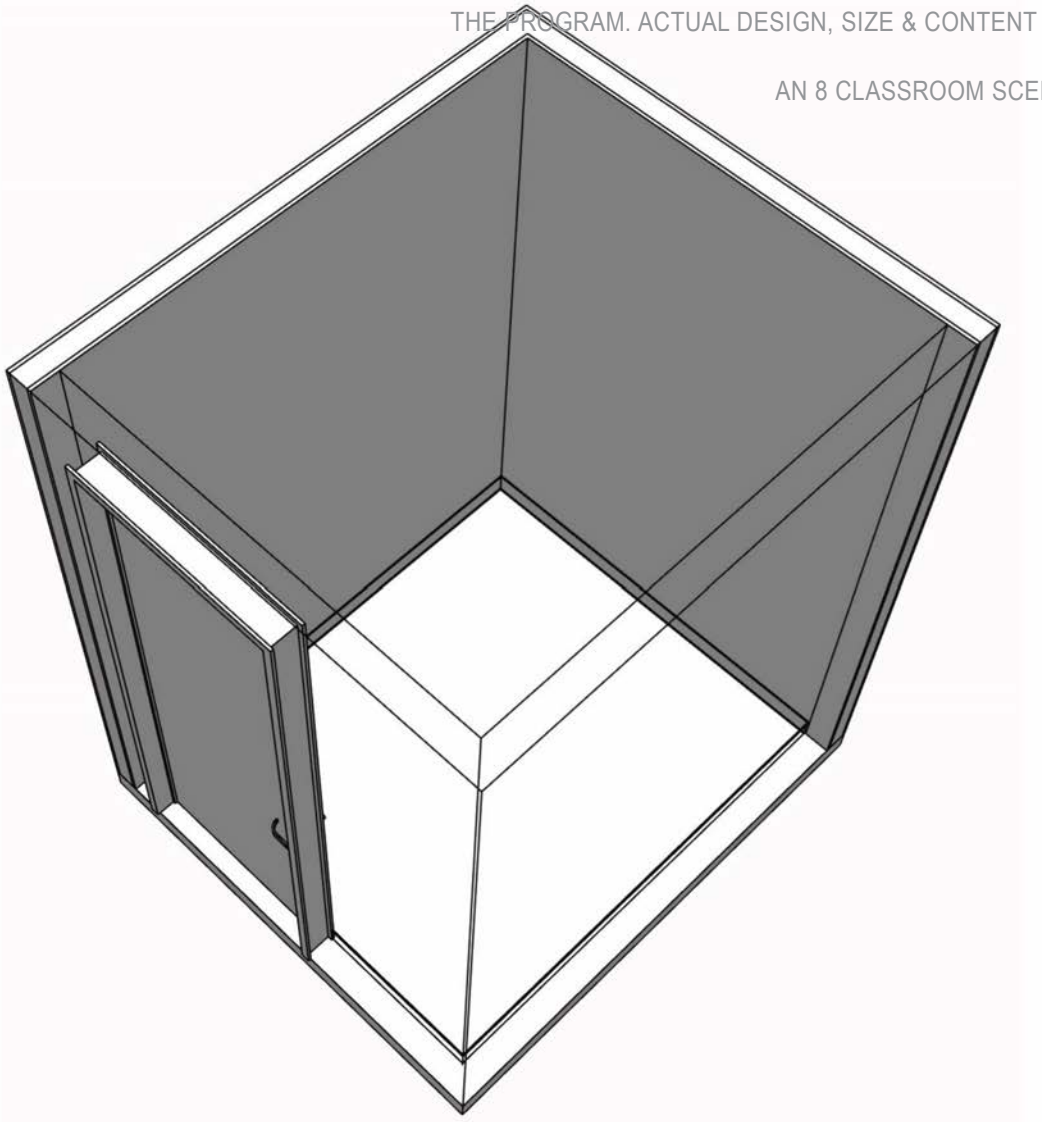
### 5. FURNITURE, FIXTURES & EQUIPMENT

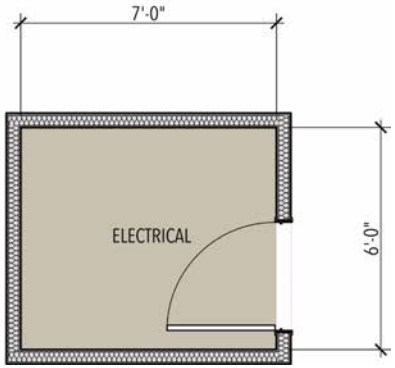
General: AV and Data Racks

### 6. SPECIAL REQUIREMENTS & NOTES

Notes:

*THE PROVIDED FLOOR PLAN & AXONOMETRIC VIEWS BELOW ARE ONE INTERPRETATION OF THE PROGRAM. ACTUAL DESIGN, SIZE & CONTENT SHOULD BE MODIFIED TO MEET SPECIFIC PROGRAM.
AN 8 CLASSROOM SCENARIO HAS BEEN USED IN THIS EXAMPLE.





## SPACE DATA SHEETS

### OPERATIONS SPACE

# 009 FIRE RISER ROOM

**40 NSF**

### 1. PROGRAM

Space Description: Room dedicated for fire protection equipment where the fire sprinkler system begins.

Occupants:

Quantity: 1

### 2. ADJACENCY AND ACCESS REQUIREMENTS

Adjacency: Locate at exterior wall

### 3. ARCHITECTURAL CHARACTERISTICS

Windows: N/A

Doors: Locking solid core wood door

Floors: Seaed Concrete

Walls: Painted gypsum board

Ceiling: Gypsum Board Ceiling System

Ceiling Height: 8’ minimum

### 4. ENGINEERING SYSTEMS

HVAC: Electric wall heater.

Plumbing: Floor Drain

Electrical: Provide a single GFCI duplex outlet for general cleaning. Outlets to support other equipment are to be provided as necessary.

Lighting:  Provide surface mounted LED strip light. Otherwise, provide a occupancy sensor.

Phone/Data: N/A

Security: N/A

Special Requirements:

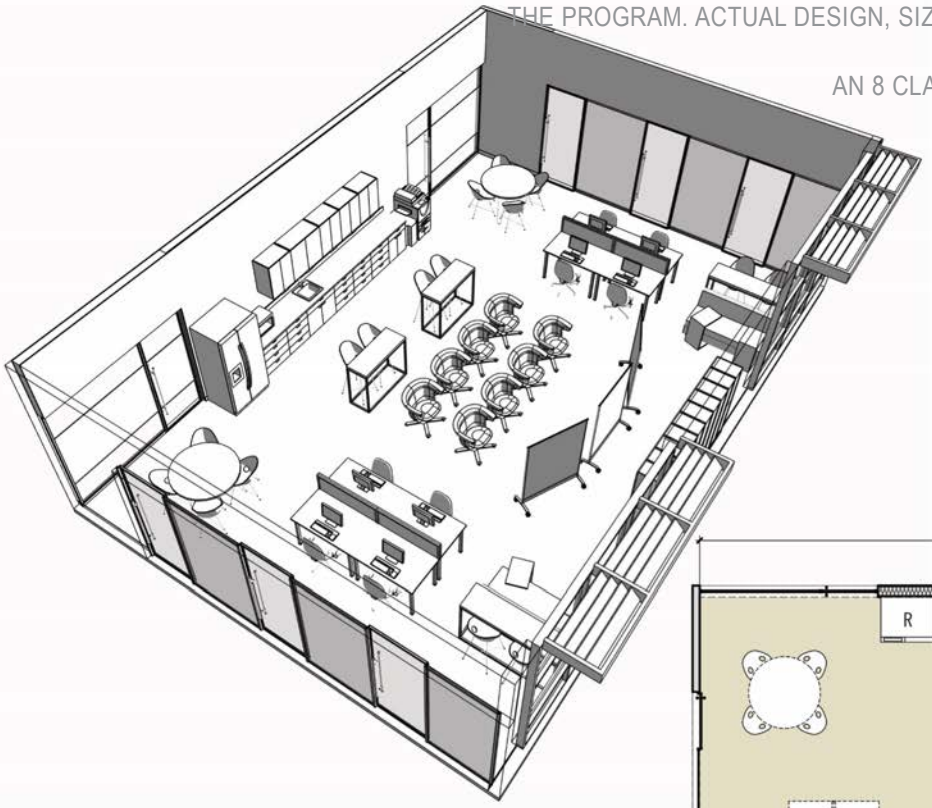
### 5. FURNITURE, FIXTURES & EQUIPMENT

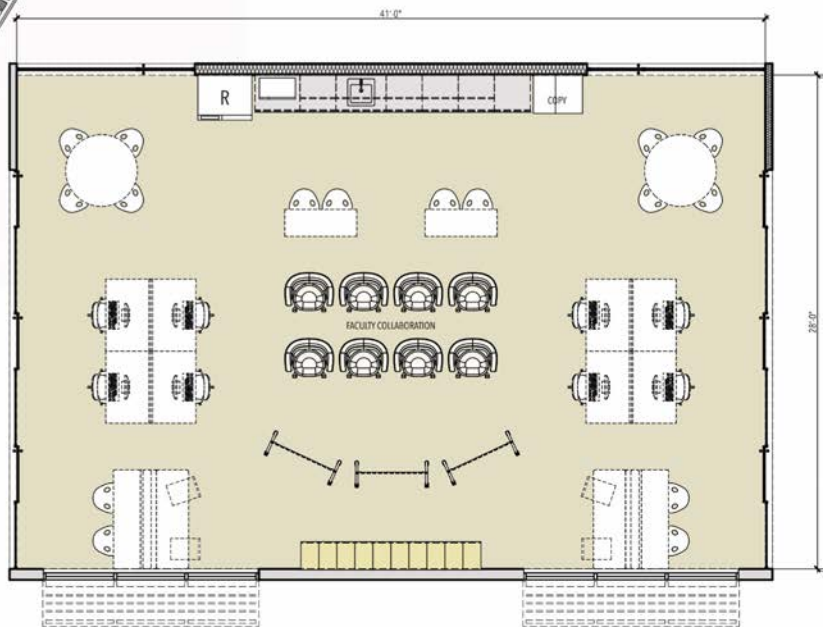
General:

### 6. SPECIAL REQUIREMENTS & NOTES

Notes:

*THE PROVIDED FLOOR PLAN & AXONOMETRIC VIEWS BELOW ARE ONE INTERPRETATION OF THE PROGRAM. ACTUAL DESIGN, SIZE & CONTENT SHOULD BE MODIFIED TO MEET SPECIFIC PROGRAM.
AN 8 CLASSROOM SCENARIO HAS BEEN USED IN THIS EXAMPLE.





## SPACE DATA SHEETS

### SUPPORT SPACE

# 010 RESTROOM (ACCESSIBLE)

**70 NSF**

### 1. PROGRAM

Space Description: Room with toilet, urinal and lavatory

Occupants:

Quantity: As required by code

### 2. ADJACENCY AND ACCESS REQUIREMENTS

Adjacency: Locate near central circulation core

### 3. ARCHITECTURAL CHARACTERISTICS

Windows: N/A

Doors: Locking solid core wood door. Occupancy locks.

Floors: Porcelain Tile

Walls: Painted gypsum board and Ceramic tile

Ceiling: Gypsum Board Ceiling System

Ceiling Height: 8’ minimum

### 4. ENGINEERING SYSTEMS

HVAC: Exhaust Fan

Plumbing: Floor mounted flush tank toilet. Elastomeric trap seal in floor drain. Wall mounted urinal. Wall mounted sink and faucet, provide insulation at all exposed piping below lavatories.

Electrical: N/A

Lighting: Provide LED panels and occupancy sensors.

Phone/Data: N/A

Security: N/A

Special Requirements:

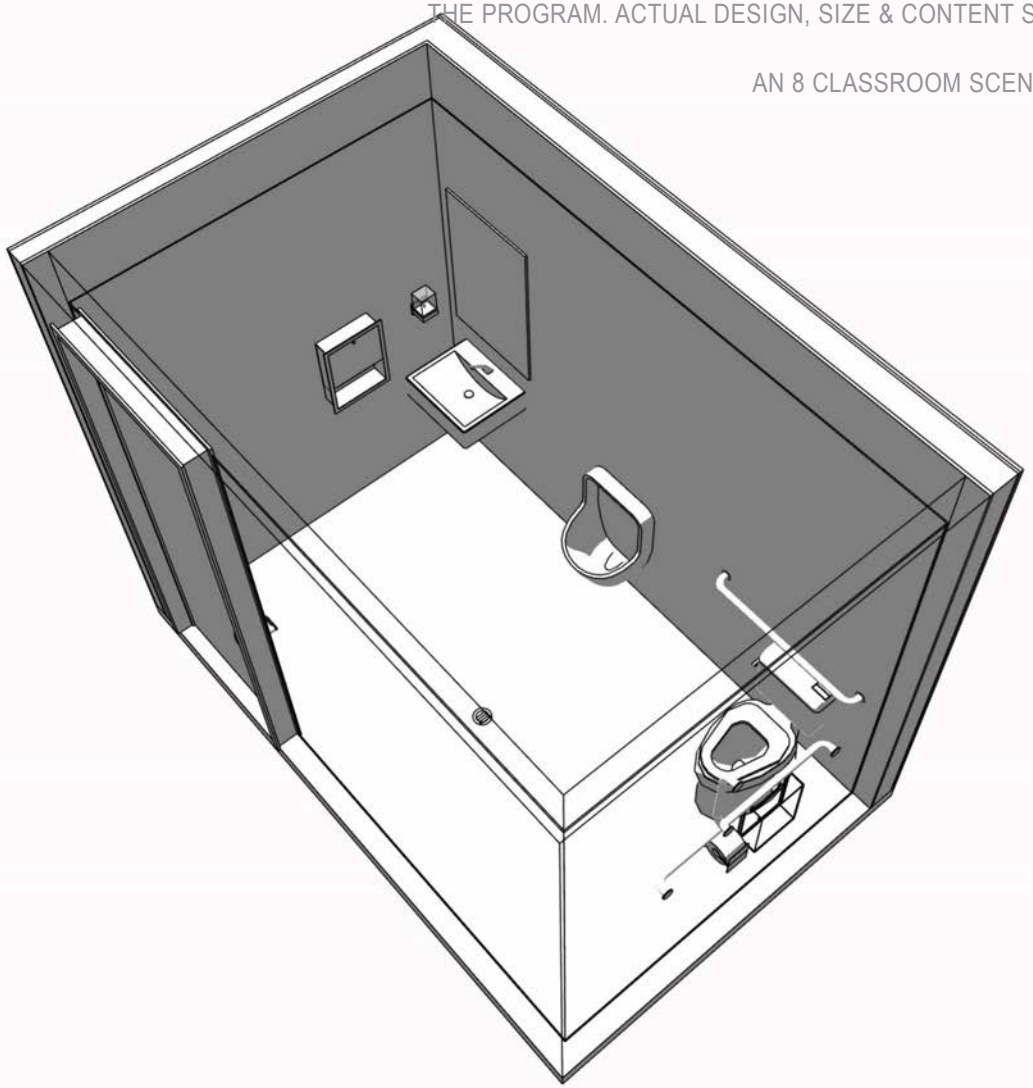
### 5. FURNITURE, FIXTURES & EQUIPMENT

General:

### 6. SPECIAL REQUIREMENTS & NOTES

Notes: Multi-roll tissue dispenser, Grab bars, Surface mtd. feminine napkin disposal, Channel frame mirror, Soap dispenser, Bag hook, Towel dispenser

*THE PROVIDED FLOOR PLAN & AXONOMETRIC VIEWS BELOW ARE ONE INTERPRETATION OF THE PROGRAM. ACTUAL DESIGN, SIZE & CONTENT SHOULD BE MODIFIED TO MEET SPECIFIC PROGRAM.
AN 8 CLASSROOM SCENARIO HAS BEEN USED IN THIS EXAMPLE.



SUPPORT SPACE

# 011 FOYER/ ADMINISTRATIVE ASSISTANT

**480-1250 NSF**

## 1. PROGRAM

Space Description: Main entrance for students & faculty. Design intent is to provide placemaking through inspiring and uplifting surroundings. Size in smaller classroom buildings may not allow for furniture.
Assist and direct students from a seated desk secure computer and filing capabilities. Must have visibility of all corridors and entry points.

Occupants:

Quantity: 1

## 2. ADJACENCY AND ACCESS REQUIREMENTS

Adjacency: Locate near central circulation core, vestibule, classrooms

## 3. ARCHITECTURAL CHARACTERISTICS

Windows: Storefront

Doors: Storefront

Floors: Carpet/ Walk-off Carpet Tile

Walls: Painted gypsum board

Ceiling: Acoustical Ceiling Tiles

Ceiling Height: 10' minimum

## 4. ENGINEERING SYSTEMS

Plumbing: N/A

Electrical: Provide a duplex outlet at each work station location, outlets for office equipment such as copiers and printers and a single duplex outlet on each wall for general cleaning.

Lighting: Provide indirect volumetric, LED lighting. Lighting controls shall have occupancy sensors.

In administrative area provide LED panels. Fixtures to be 0-10V dimmable. Lighting controls shall have occupancy sensors, daylight sensors and be tied to the building management control system. Lighting levels should be 400-500 lux.

Phone/Data: 1 Data per Support Specialist, Paging/Intercom Volume Control

Security: Address Concerns of Cold Air from Vestibule
Special Requirements: Dry leg for fire sprinkler. ADA door actuator.
Address Concerns of Cold Air from Vestibule.

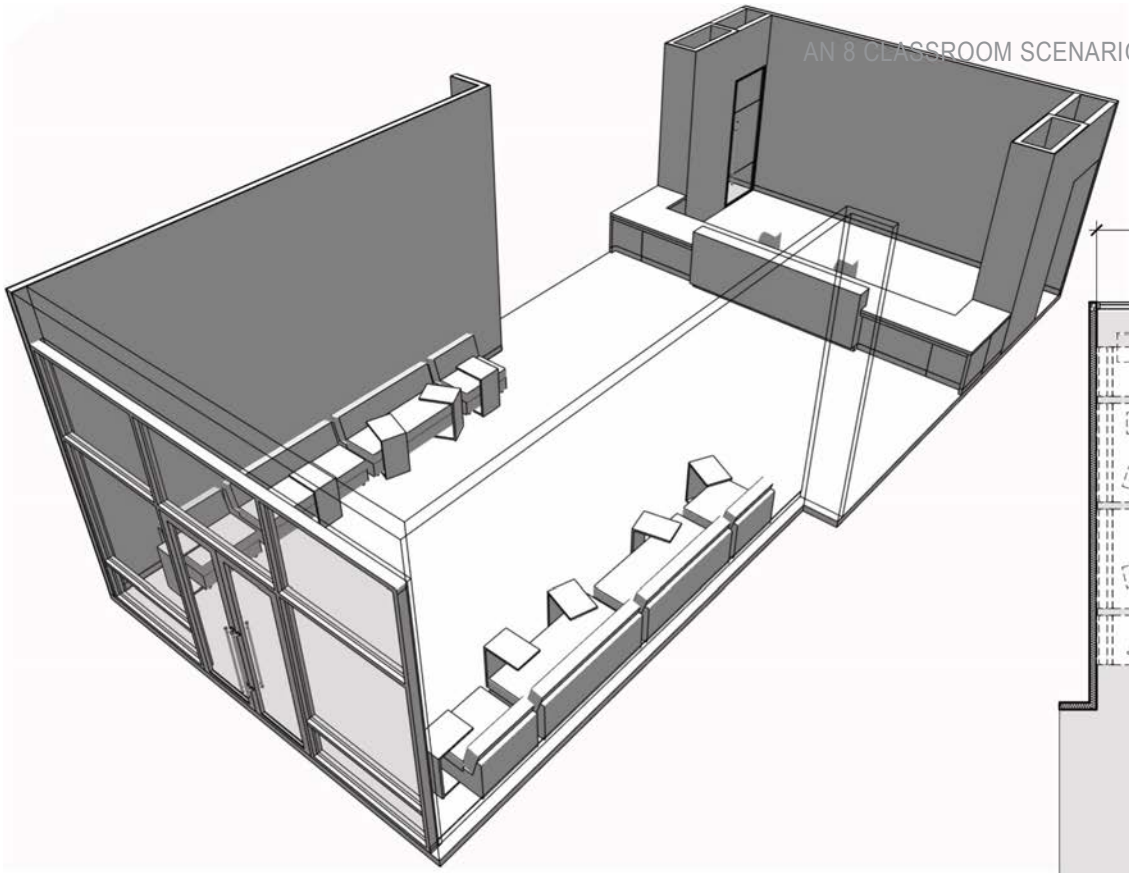
## 5. FURNITURE, FIXTURES & EQUIPMENT

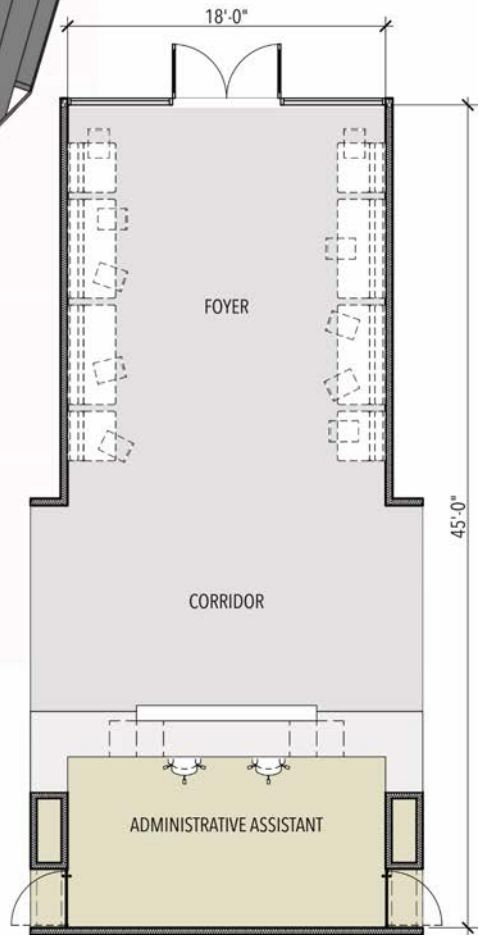
General: Lounge seating, Occasional tables (optional)
Desk, Computer, Desktop printer, Minimal file storage, Adjustable task chair w/arms

## 6. SPECIAL REQUIREMENTS & NOTES

Notes: Artwork

*THE PROVIDED FLOOR PLAN & AXONOMETRIC VIEWS BELOW ARE ONE INTERPRETATION OF THE PROGRAM. ACTUAL DESIGN, SIZE & CONTENT SHOULD BE MODIFIED TO MEET SPECIFIC PROGRAM.
AN 8 CLASSROOM SCENARIO HAS BEEN USED IN THIS EXAMPLE.





## SPACE DATA SHEETS

### SUPPORT SPACE

# 012 VESTIBULES

**70 NSF**

### 1. PROGRAM

Space Description: Small area just inside the entrance of the building that serves as the transition between the public way and helps with temperature control.

Occupants:

Quantity: 2-3

### 2. ADJACENCY AND ACCESS REQUIREMENTS

Adjacency: Locate near central circulation core

### 3. ARCHITECTURAL CHARACTERISTICS

Windows: Storefront

Doors: Storefront

Floors: Walk-Off Carpet

Walls: Painted gypsum board

Ceiling: As desired to match design aesthetics

Ceiling Height: 9’ minimum

### 4. ENGINEERING SYSTEMS

HVAC: N/A

Plumbing: N/A

Electrical: N/A

Lighting: Provide LED panels and ceiling mounted occupancy sensors.

Phone/Data: N/A

Security: Card reader tied to panic button.

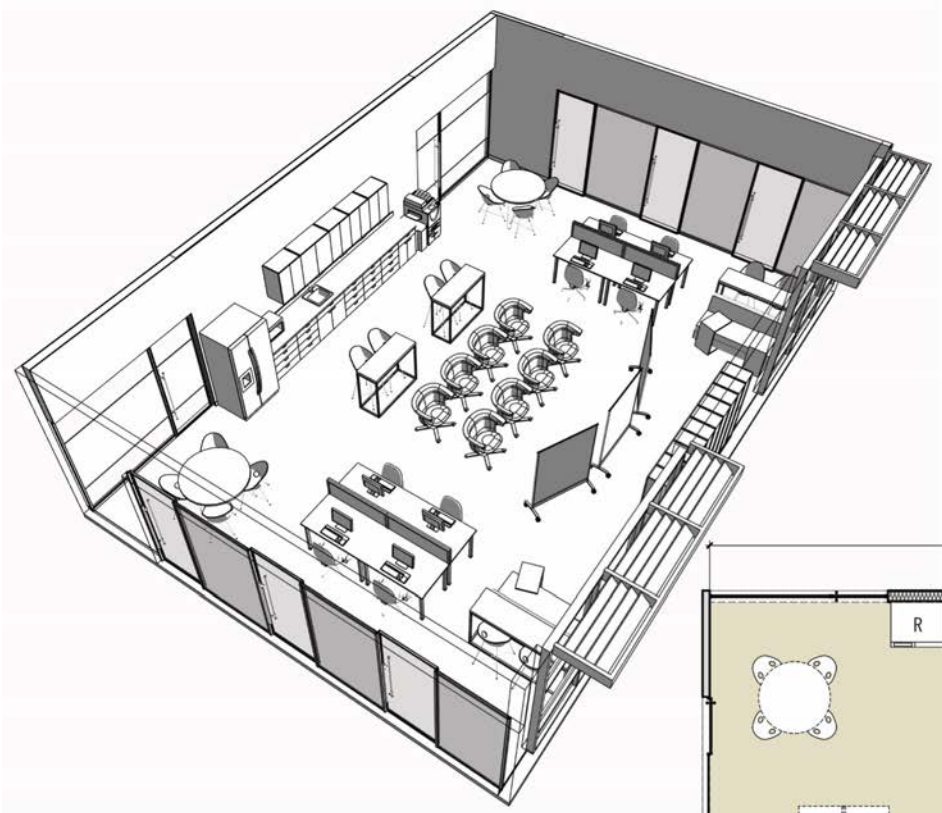
Special Requirements: Dry leg for fire sprinkler. ADA Door Actuator. Fire Alarm Actuator.

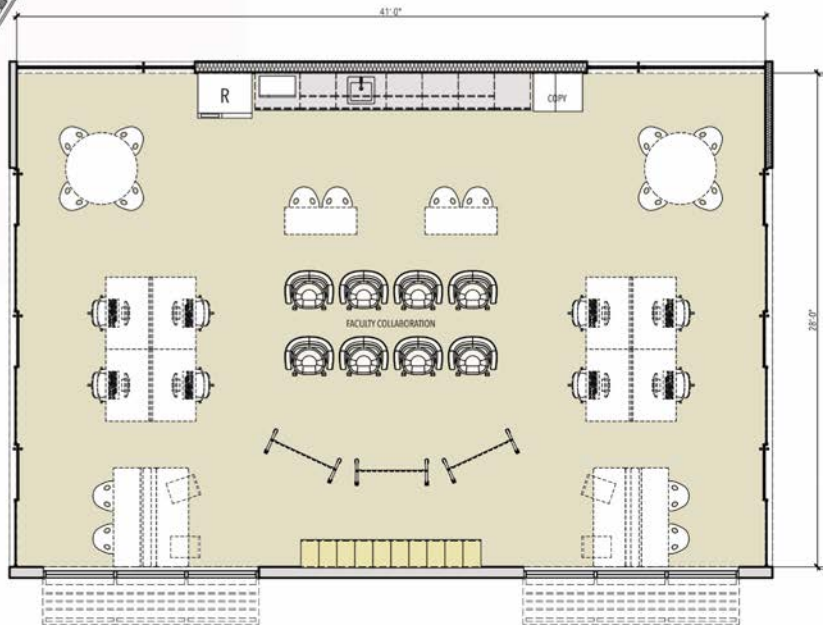
### 5. FURNITURE, FIXTURES & EQUIPMENT

General: N/A

### 6. SPECIAL REQUIREMENTS & NOTES

Notes:




41'-0"
R
COPY
FACULTY COLLABORATION
28'-0"

## SPACE DATA SHEETS

### SUPPORT SPACE

# 013 CIRCULATION

**(VARIES) NSF**

### 1. PROGRAM

Space Description: Space used for pedestrian travel such as passage ways, corridors, stair-ways, atriums, exit paths, etc.

Occupants:

Quantity: N/A

### 2. ADJACENCY AND ACCESS REQUIRE-MENTS

Adjacency: Varies

### 3. ARCHITECTURAL CHARACTERISTICS

Windows: N/A

Doors: N/A

Floors: Carpet. (Porcelain Tile at EWC.)

Walls: Painted gypsum board. (Ceramic Tile at EWC.)

Ceiling: As desired to match design aesthetics

Ceiling Height: 9’ minimum

### 4. ENGINEERING SYSTEMS

HVAC:

Plumbing: Bottle filler EWC.

Electrical: Provide general cleaning outlets 40 feet apart with a minimum of one outlet.

Lighting: Provide LED panels and ceiling mounted occupancy sensors.

Phone/Data: 1-2 Data ports Depending on Layout for wireless access points.

Security:

Special Requirements:

### 5. FURNITURE, FIXTURES & EQUIPMENT

General:

### 6. SPECIAL REQUIREMENTS & NOTES

Notes: Artwork. Custom Signage.

## SPACE DATA SHEETS

### OPERATIONS SPACE

# 014 MECHANICAL SPACE
**(VARIES) NSF**

### 1. PROGRAM

Space Description: Space where most or all mechanical equipment is located.

Occupants:

Quantity: 1

### 2. ADJACENCY AND ACCESS REQUIREMENTS

Adjacency: Varies

### 3. ARCHITECTURAL CHARACTERISTICS

Windows: N/A

Doors: Varies

Floors: Sealed concrete

Walls: Paint

Ceiling: Exposed structure - painted

Ceiling Height: 8’ minimum

### 4. ENGINEERING SYSTEMS

HVAC:

Plumbing:

Electrical: Provide outlets for mechanical equipment and one outlet for general purpose at an accessible wall.

Lighting: Provide surface mounted LED strip light. Provide light switches as required by code.

Phone/Data:

Security:

Special Requirements: Install carbon monoxide detectors as required by code..

### 5. FURNITURE, FIXTURES & EQUIPMENT

General:

### 6. SPECIAL REQUIREMENTS & NOTES

Notes:

# 4.0

**BUILDING ANALYSIS**

BUILDING CODE ANALYSIS

FIRE DETECTION & ALARM

INTERIORS

STRUCTURAL

HVAC

PLUMBING

FIRE PROTECTION

ELECTRICAL

LIGHTING DESIGN TABLES

SOUND & DATA

## BUILDING CODE ANALYSIS

This analysis uses the codes in place in Utah at time of print. Please adapt for project location and time.

**APPLICABLE CODES:**
- 2021 International Building Code (IBC)
- 2021 International Mechanical Code (IMC)
- 2021 International Plumbing Code (IPC)
- 2021 International Fire Code (IFC)
- 2021 International Fuel Gas Code (IFGC)
- 2021 International Energy Conservation Code (IECC)
- 2020 National Electrical Code (NEC)

**CIVIL RIGHTS:**
- 2017 ADA Standards/ICC A117.1-2017

**USE AND OCCUPANCY CLASSIFICATION - (CHAPTER 3):**
Occupancy Classification (302)
- Group E (Education)

Other Occupancies
- B (Business)

Occupancy Separations (508.4)
- Group E to Group B: Non-separated uses - No separation required if the most restrictive use requirements are met (508.3.3)

**GENERAL BUILDING HEIGHTS AND AREAS FOR 'E' OCCUPANCY - (CHAPTER 5)**
- Allowable height (504.3) = 40 feet (Non-Sprinkled); 60 feet (Sprinkled)
- Allowable number of stories above grade plane (504.4) = 1 (Non-Sprinkled); 2 (Sprinkled)

**TYPE OF CONSTRUCTION - (CHAPTER 6):**
- Type VB

**FIRE RESISTIVE REQUIREMENTS (HOURS) - TYPE VB - (601)**
- Primary Structural Frame: 0 hour rating
- Bearing Walls
  Exterior: 0 hour rating
  Interior: 0 hour rating
- Nonbearing Walls and Partitions
  Exterior: 0 hour rating
  Interior: 0 hour rating
- Floor Construction: 0 hour rating
- Roof Construction: 0 hour rating

**FIRE DOOR ASSEMBLIES - (SECTION 716.5):**
- 1-hour Partition Fire Rating: 3/4-hour fire assembly rating
- 1/2-hour Partition Fire Rating: 1/3-hour fire assembly rating

**FIRE AND SMOKE PROTECTION FEATURES - (SEC. 713.4):**
- Shaft Enclosures: Shaft enclosures shall have a fire-resistive rating of not less than 1 hour when connecting less than 4 stories.

**AUTOMATIC SPRINKLER SYSTEMS - (CHAPTER 9):**
Automatic Sprinkler System Required if fire area greater than 12,000 s.f. (Must meet NFPA 13)

**MEANS OF EGRESS:**
Exit Access Travel Distance: (Table 1017.2)
- E (Educational) : 250 l.f. (Sprinkled)
- E (Educational) : 200 l.f. (Non-Sprinkled)

Maximum Common Path of Egress Travel Distance (Table 1006.3.1)
- E (Educational) : 75 l.f. (Sprinkled)
- E (Educational) : 75 l.f. (Non-Sprinkled)

**BUILDING AREA (506.2.1):**

- Allowable Area per story (Single-Occupancy Buildings)

  Aa+[At+(NS x If)] x Sa

**OCCUPANT LOAD (1004):**

Occupant Load Factor (Business) : 150 gross
Occupant Load Factor (Classrooms) : 20 net
Occupant Load Factor (Storage) : 300 gross

**INTERNATIONAL ENERGY CONSERVATION CODE REQUIREMENTS:**

Climate Zone (C301): Climate Zone 5B
Thermal Envelope Insulation Min. Requirements (Table C402.1.3):

- Roofs: Insulation Entirely Above Roof Deck: R-30ci
- Walls: Wood Framed, Above Grade: R-13+R3.8ci
- Slab-On-Grade Floors - Unheated Slabs: R-10 for 24" Below

**PLUMBING FIXTURES REQUIRED – IBC CHAPTER 29:**

Minimum Number of Required Plumbing Fixtures for 'E' Occupancies

- Water Closets:

  Male: 1 per 50
  Female: 1 per 50

- Lavatories:

  Male: 1 per 50
  Female: 1 per 50

- Drinking Fountains:

  1 per 100 (1 standard and 1 accessible)

- Service Sink:

  1 required

## FIRE DETECTION & ALARM

For new Seminaries and Institutes construction, a monitored fire alarm and detection system is required. Owner will arrange for monitoring services. If a building does not have a fire sprinkling system, a fire detection and alarm system should be included as necessary to meet local regulations. Typical/ generic fire alarm and detection system documents must be adapted to meet the local regulations for each project. The fire alarm system should be interfaced, if possible, with the host school system for a coordinated response of events. The fire alarm system shall have a voice evacuation system capable of recording and reproducing pre-programmed emergency messages. Pre-record distinct emergency messages for the following scenarios:

1. Fire alarm
2. Active shooter lock-down
3. Carbon monoxide alarm

The messages shall be in accordance to the facilities response plan.

## INTERIORS

### GENERAL CONCEPTS

#### Design

The seminary and institute facilities should meet, but not exceed, the design level and construction quality of educational facilities constructed within the same vicinity.

#### Color Board Requirements

Refer to Agreement Between Owner and Architect.

### VERTICAL SURFACES

#### Painted Drywall

Use painted drywall for interior walls. Light texture or smooth walls with roller stipple texture is acceptable. Walls to receive vinyl wall covering (murals) should have a smooth texture. Ceilings to have light knockdown texture. Walls to receive writeable wall markerboard system to be painted an accent color as determined in consultation with Owner.

#### Ceramic Wall Tile

Include ceramic tile on restroom walls, and walls around drinking fountains.

### FLOOR COVERINGS

#### Carpet

Select only from approved colors and patterns provided by Tarkett Commercial and Mohawk Industries

#### Luxury Vinyl Planks

Approved suppliers are Tarkett Commercial and Mohawk Industries

#### Ceramic Floor Tile

Use only tile sizes as described in contract documents for restrooms, serving areas, custodial room, and under drinking fountains. Install tile on a setting bed in a recessed slab wherever floor drains and sloped floors are necessary, otherwise use epoxy thin set system. Tile patterns in the floors are not authorized unless otherwise directed by project manager.

#### Rubber Base

Select color to blend with the color of flooring material.

#### Carpet Tile

Carpet walk-off tile may be used in vestibules and extended into foyers as needed to minimize tracking soil into building. Carpet tile should generally not be used elsewhere in the building except as directed by project manager.

#### Artwork

Church-approved artwork for existing facilities is obtained through the facilities manager, and for new facilities through the project manager. Artwork enhances the interiors of seminaries and institutes by helping to create a spirit of place where students can acquire a sense of belonging, receive mutual support, and feel connected to Jesus Christ and others as they learn their identity and purpose as children of God.

Artwork purchases for existing facilities are funded from the O&M budget and are ordered by the facilities manager. Artwork for new facilities is funded from the construction budget and ordered by the project manager.

### Room Dividers

Use owner-specified  sky-fold doors to divide large rooms.  Cladding surface in markerboard may be considered when writeable wall surfaces are required.

### Interior Signage

If braille signs are not required by local authority having jurisdiction, delete the requirements for braille signs from the specification section.

### Visual Display Boards

Markerboard system comes in 6'H x 4'W increments and should cover a majority of two walls in each classroom, Bottom of markerboards should be hung 2' above the finished floor, extending to 8' above the finished floor. Approved supplier is Platinum Visual Systems.

### Contracted Furnished Products

Project architects and facilities managers should use the owner-specified roller shade products for seminary and institute facilities.  Product should minimize glare and solar heat gain while maintaining views to outside. The openness factor should not be less than 4%.

## STRUCTURAL

### GENERAL DESIGN CONSIDERATIONS:

### Codes and References

The building code and all referenced standards adopted by the jurisdiction should be used in the design of the structure.

### Importance Factors

For projects (with or without considering potential future phases) having a potential occupant load of over 250 people, design the project with the importance factor required for an IBC Risk Category III, or local code equivalent. For projects with a potential occupant load of less than 250 people, design the project with the wind speed and importance factor required for an IBC Risk Category II for wind and snow loads but use the importance factor required for an IBC Risk Category III for seismic loads ($I_e$ = 1.25).

### Geotechnical

Follow and incorporate recommendations found in the site specific Geotechnical Report.

## HVAC

### GENERAL

#### Design Standards

HVAC systems used are either residential furnaces and condensing units with energy recovery ventilators, or packaged rooftop units with economizers if there is a flat roof. If rooftop units are used, code-required outside air may be brought in without the use of ERVs as long as amounts do not exceed the capacity of the RTU.
Use two stage systems in the large classrooms.

#### Codes and Standards

Plans must comply with the latest versions of the International Mechanical, Plumbing, Fuel Gas, and Energy Conservation Codes, including supplements as required

Use ASHRAE standards dated no later than the most current International Code.

Industry standards may be followed in lieu of code when approved by local authority having jurisdiction provided standard plan requirements are satisfied.

## PLUMBING

### GENERAL

#### Design Standards

Provide flow sensing in the hot water recirculation loop, interlocked with the recirculation pump.

Use floor mounted tank-type water closets.

Provide elastomeric trap seals in floor drains.

#### Codes and Standards

Plans must comply with the latest versions of the International Plumbing, Fuel Gas, Energy Conservation Codes, and (in Utah) the Utah State Boiler Code. Request and confirm acceptance from local authority having jurisdiction.

Plans should follow industry standards such as ASPE (American Society of Plumbing Engineers).

Use ASPE standards dated no later than the most current International Code.

Industry standards may be followed in lieu of code when approved by local authority having jurisdiction provided standard plan requirements are satisfied.

## FIRE PROTECTION

### FIRE SPRINKLER AND EXTINGUISHING SYSTEMS

#### Design

ANSI/NFPA 13, 24, 101 and 1142 govern the design.

#### Fire Protection System

Owner requires a fire alarm system be installed in all buildings and the local authority having jurisdiction should be consulted to determine scope of work.

Automatic Sprinkler System Required if fire area greater than 12,000 s.f. (Must meet NFPA 13)

For projects with fire sprinkler installations, always retain a fire protection consultant with main responsibilities to:

- Confirm with local jurisdiction if a back flow preventer is required.
- Verify that piping is installed and sloped according to contract documents.

- Ensure that sprinkler heads are installed according to manufacturer's installation instructions.
- Verify that all pressure tests have been completed according to contract documents.
- Verify that fire protection system is fully operational prior to Substantial Completion.

A wet-pipe sprinkler system is to be installed in areas of the building where there is no chance of freezing temperatures.

An antifreeze system is to be installed in areas of the building where freezing temperatures may occur, typically outside of the building insulation envelope. Provide allowance for the thermal expansion of the antifreeze.

The antifreeze solution must be premixed to provide protection against freezing due to temperatures at least 10 degrees Fahrenheit below winter design.

Verify the thermal envelope will keep the wet-pipe system from freezing. Provide accessible sample points at the high points of the antifreeze system. An accessible sample point does not require a ladder or crawling under or through trusses or other construction. In rural and suburban areas, when an adequate and reliable water supply system for firefighting does not exist, follow NFPA 1142.

### Fire Detection and Alarm

For new building construction, a monitored fire alarm and detection system is required for buildings that have a fire sprinkling system. Owner will arrange for monitoring services. If a building does not have a fire sprinkling system, a fire detection and alarm system should be included as necessary to meet local regulations.

The fire alarm in Seminaries and Institutes shall be outfitted with a panic button which shall lock all doors and initiate a call to the authorities through GSOC. Coordinate with the host school emergency response team and security so that emergency response signals reach the facility. If necessary, tie the fire alarm system in the building to the fire alarm system in the host school for automatic activation.

## ELECTRICAL

### ELECTRICAL SERVICE AND RATES

Utilize the most economical electrical service option available at the project location. Clearly identify the respective responsibilities of the power company and the contractor in the contract documents.

Locate pad-mounted transformer a minimum of 40 feet from building entrances. Minimize secondary feeder lengths and associated costs; however, also consider visual impact of transformer location. Size the main electrical service in accordance with applicable codes. Generally, demand-limiting/control equipment cannot be economically justified due to low hours of use and the amount of equipment available for diversified operation. For non-phased buildings, there is no need to provide electrical service capacity for possible future additions.

On projects with smaller sites, transformers may be located closer but care should still be taken to minimize visual impact. Separate lighting and convenience outlets into separate panelboards. Mechanical and operational loads must also be separated into their own panelboards.

### CABLES, CONDUCTORS, RACEWAY & CONDUIT

Install interior line voltage conductors in conduit where required by code. Interior low voltage cables (70 volts or less) of telephone, sound, data, fire alarm, and temperature control systems need not be run in conduit unless required by code. Exposed conduit or cables are permitted only in mechanical rooms and other utility spaces. Direct burial cable is not permitted.

### HEATING CABLES

Rain Gutter and Roof Heating Cables
Installation of rain gutter and associated roof cable should usually be considered only on the north side of facilities in cold climates

### INTERIOR LIGHTING

#### Lighting Design

In the interest of maintenance, the number of different lamp sizes and types should be minimized. Light emitting diodes (LEDs) should be the primary light sources. Proprietary LED optical systems are not ideal due to the transient nature of the technology.

When a governing energy code requires changes to the lighting design or control schemes, make adjustments that minimize impact on cost and complexity. Consult with owner for preferred method of complying with code. Assist the architect in obtaining any available rebates for lamps, ballasts, occupancy sensors, or other lighting equipment. Include modern light fixtures and designs.

### OCCUPANCY SENSORS

Tamper-resistant passive infrared sensor switches with manual “on” and automatic “off” capability control lights in classrooms, offices, material center, serving area and large storage rooms. Lighting in small storage and mechanical should be by occupancy sensors. Occupancy sensors control restroom lights and associated exhaust fans. Occupancy sensors in other locations may be added if required by governing energy regulations.

## LIGHTING CONTROL PANELS

The lighting in the common areas, the parking lot and the exterior of the building should be controlled by an automatic lighting control panel. The lighting control panel shall be capable of dimming the lights down with daylight conditions. It should also include an astronomical time clock and control all lighting circuits based on a schedule.

## EXIT SIGNS

Exit signs are included to indicate lanes of egress from assembly areas and to identify exits as required by governing codes. The Fixture Schedules on the standard plans contain specific catalog numbers for exit signs. Also refer to Lighting Design Table.

## EMERGENCY LIGHTING

Emergency lighting is included in classrooms, corridors, restrooms, and other areas as required by governing codes. Battery packs concealed in the regular fixtures or additional low-profile lighting fixtures with integral batteries are preferred. Central battery units may be used where economical.

## LIGHTING DESIGN TABLES

TABLE 4.1

| AREA | fc [a] | LIGHTING FIXTURE TYPE [b] |
|---|---|---|
| Restroom | 20-30 | LED edge lit panels, surface mounted and wall mounted above mirror; include low wattage night light in restrooms without windows |
| Mechanical room, storage | 10-20 | LED strip lights; A-19 LED in small, low-use rooms |
| Exterior at entries | - | LED controlled by photocell/time switch, surface mounted, recessed or wall fixtures. 3000 or 4000 K max. As recommended by consultant |
| Parking area | - | LED cut-off fixture, 4000 lumens, on 18' hinged-base aluminum pole. 4000 K max. |
| Exit signs | - | LED type with integral battery for new construction. In existing applications replace self-luminous (tritium) type as they expire with new LED signs |
| Exit signs (low level if required) | - | Phosphorescent if permitted. |
| Emergency lighting (interior) | - | Battery packs integral to fixtures. |
| Emergency egress lighting (exterior) | - | Battery packs integral to fixtures. |
| Classrooms | 70-80 | LED fixtures |
| Office/secretary/workroom | 70-80 | LED edge lit panels, recessed or surface mounted |
| Hallway/Corridor | 5-10 | LED edge lit panels, recessed or surface mounted |
| Foyer | 30-40 | Decorative LED or recessed |

### NOTES FOR TABLE 4.1:

a. fc (foot-candle) as used in the Table is the calculated average maintained level.
b. Refer to owner's fixture schedule for specific fixture manufacturers and catalog numbers that identify desired quality, cost, and efficiency criteria. While architect and consultant have the option to approve "equals" (before bid), other manufacturers and styles must meet this same criteria. Consult with the owner concerning questions. In all cases when preparing lighting schedules, list two or more fixture manufacturers for each fixture type to ensure competitive bidding.
c. Refer to Exterior Lighting section.
d. To meet code requirements

## SOUND & DATA

### NETWORK CONNECTIVITY SYSTEMS

Wired network access consists of network cables running from the firewall to wall jacks. Wired connections should be used primarily where computers are permanently located and where multimedia content will be uploaded or viewed.

Run separate, uninterrupted cables (Home Run) from each outlet location to a patch panel located in close proximity to the firewall location. Cables should be run in conduit in inaccessible areas to allow for future technology requirements. They may be run in same conduit as telephone cables. (Telephone cables are the same as data cables so are installed accordingly.) Furnishing and installing of system components is by owner. Coordinate with Internet service provider and meet their requirements for service. Clearly identify responsibilities of internet provider and contractor in contract documents. Do not run cables exposed in finished areas. These runs would generally include technology equipment area, offices, classrooms, and utility equipment control locations (as required).

Cabling for network connectivity is required in all Seminary and Institute classrooms at the A/V cabinet location. Network connectivity is also required in all offices (2 locations in the Principals Office and 1 in other offices), collaboration room, workrooms (at printer/copier location), and in Support Specialist (Secretary) office.

### ACOUSTICAL TREATMENT

#### Architectural Acoustics

The acoustics should help achieve high intelligibility for amplified speech, good music and singing quality, and a reverent atmosphere throughout the building.

Instructor, Principal, Director Offices, and Classrooms
Office walls are to be constructed with sound blanket insulation between studs to an approximate STC rating of 38. Acoustic tile and glue-down carpet are required to reduce noise and increase privacy. Door sweeps and thresholds are not required. Seminary and institute classroom solid walls are to be constructed to provide an approximate STC rating of 55. Where operable folding panel partitions are provided, an STC rating of 50 with a Noise Isolation Class (NIC) measurement of 33 minimum in the field is required.

#### Mechanical Noise Control

Review the mechanical system drawings to ensure the design is consistent with good noise control practices as stated below. Check to confirm that there will not be interference with speech intelligibility.

- Design for Noise Criterion (NC) rating of 30 to 35 in classrooms.
- Ensure that the full length of supply and return rectangular air ducts are lined with acoustical duct liner.
- Ensure that un-housed spring and neoprene vibration isolators and flexible connections to gas, electrical and plumbing connections are installed on all major mechanical equipment whether mounted on the floor or hung from ceiling structure.
- Ensure that air diffusers with NC rating of 25 or less at design air velocities are used.
- Do not use air transfer grilles in doors to offices, restrooms, or mechanical rooms.
- Manual balance dampers are to be used in the branch duct near the main trunk duct, not as diffusers.
- Similar design and noise criteria apply to both supply and return air systems.
- Ducts between adjacent rooms should have at least two lined elbows to reduce crosstalk.