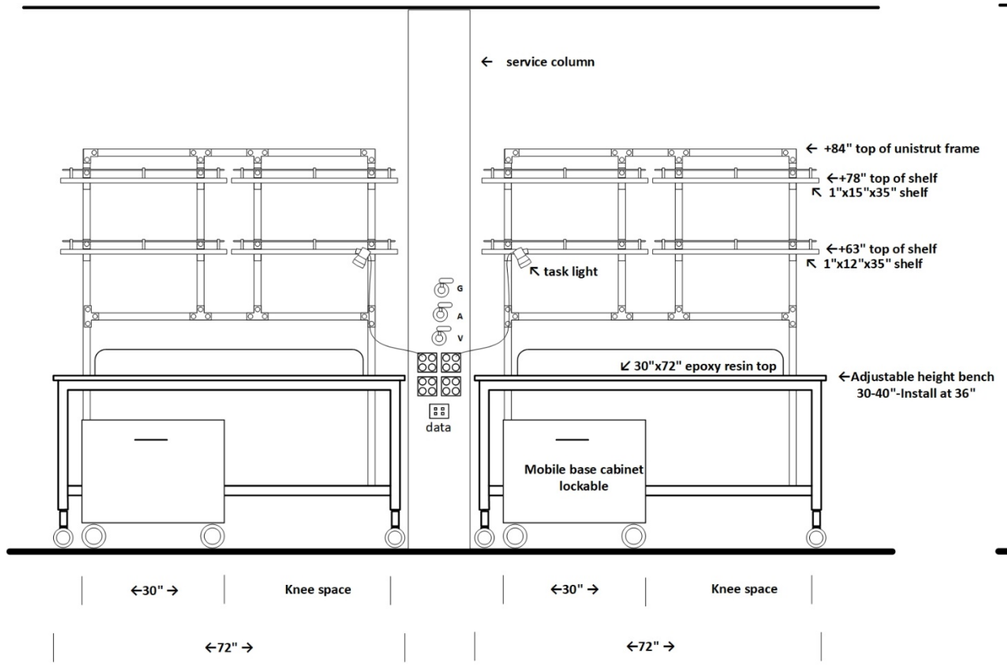
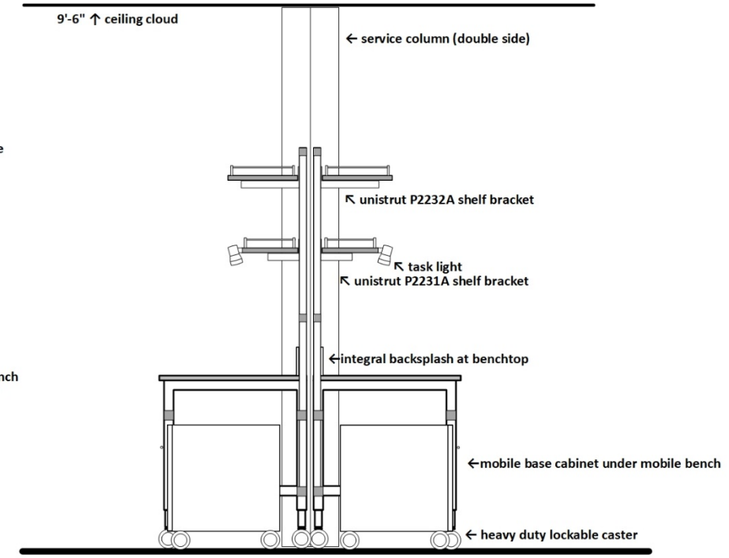


Elevation



Section

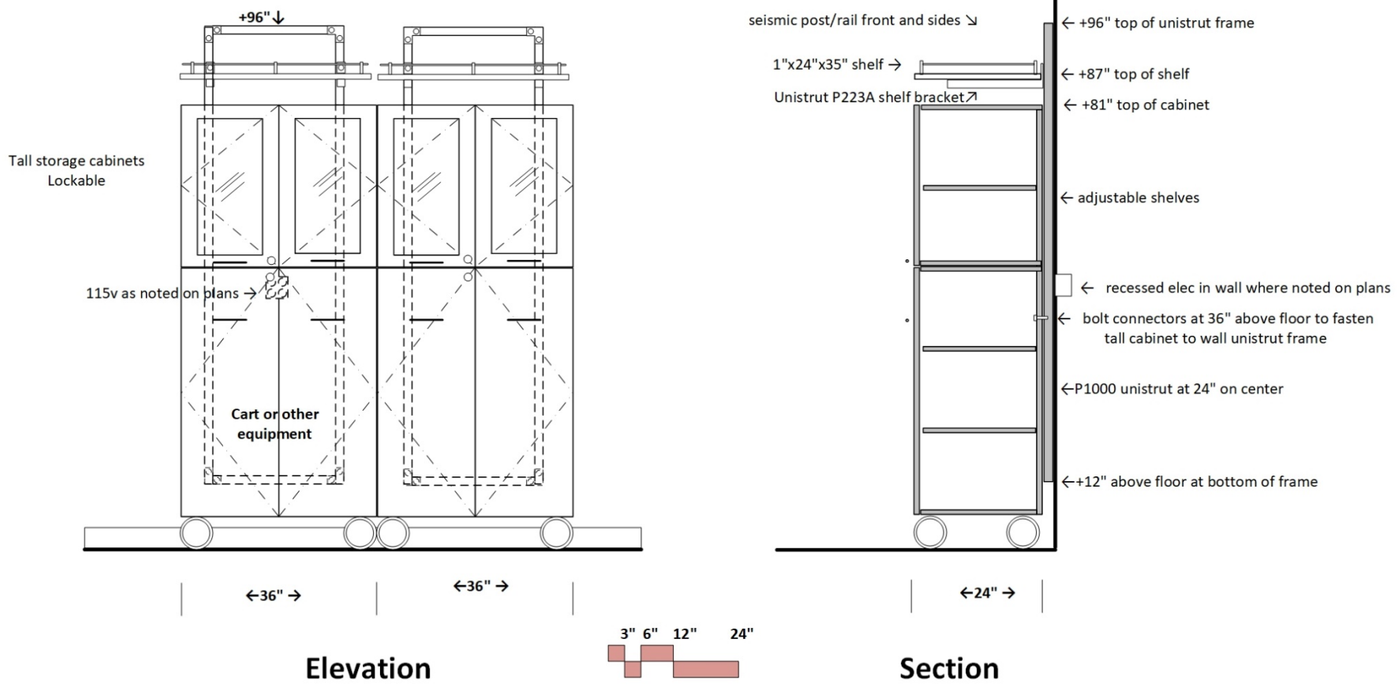
LABORATORY SKETCHBOOK

Doheny Eye Institute
Pasadena, California
Design Development
2019 October 01

HERA laboratory planners

Health, Education + Research Associates, Inc.

CONTENTS



EXECUTIVE SUMMARY

This is the third and final draft of the Design Development laboratory and vivarium design sketchbook for the Doheny Eye Institute, located in Pasadena, California.

This document serves as the Basis of Design for the laboratory and vivarium areas. The information contained herein provides the design team with the necessary information needed to prepare construction documents for the project. This document is part of the Design Development phase documentation.

This draft contains plan views of each different lab/vivarium space, and cut sheets of contractor and owner furnished lab equipment.
All electrical and plumbing fixtures are noted.

The design approach is based upon the goal the create Protean Lab Design features- Adaptable, Flexible, Versatile.
All elements except for sink stations and fume hoods are designed to be moved/adjusted/adapted by individual investigators after occupancy.

Glen Berry, AIA-NCARB
Laboratory Planning Consultant
glenb@herainc.com

HERA laboratory planners

SYMBOL LEGEND

Vivarium Equipment

Cage Rack washer
Cage Rack Washer
Electric steam generator
Floor sink
480v power with disconnect

Autoclave
Autoclave
26"x26"x49" chamber
Double door pass thru
Electric steam generator

Bottle Header Station
RO water feed

Bedding dispenser
Bedding dispenser

Bedding disposal
Bedding disposal
Manual removal of bedding waste to loading dock dumpster

Stainless steel sink station

Necropsy table

lockers

Metro shelf unit
30" wide x 48" long

Metro shelf unit
24" wide x 48" long

Bottle header station- wall mount

Rack flush station- wall mount

Mop rail-
Above each floor sink in procedure rooms

CO2 tanks with manifold/changeover

Janitor floor sink

Shower- flush with floor

Toilet

Wall sink in toilet room

Fold down bench

Fold down table

Canopy hood above autoclave & cage washer
Stainless steel

Pit drain

Floor sink

70
Single side cage rack
70 cages
Owner Furnished/Owner Installed

Spare cage rack in cage wash

acs
Animal changing station
Owner Furnished/Owner Installed

6
Rabbit cage rack
Owner Furnished/Owner Installed

Carcass freezer
Owner Furnished/Owner Installed

Equipment/cart space
Owner Furnished/Owner installed

Waste bin
Owner Furnished/Owner Installed

Mobile sink
Water/drain recessed in wall

Mobile bench

Metro cabinet

Downdraft hood

5' turn around required by ADA code

Lab Equipment

fh
5' chemical fume hood
Variable Air Volume (VAV)
800 c.f.m. exhaust
Gas and vacuum

bsc
biological safety cabinet
Class II Type C1
No external exhaust
Vacuum
Owner Furnished/Owner Installed

bsc
4' biological safety cabinet
Class II Type C1
external exhaust
Vacuum

6' sink station
Power and RO water feed for point-of-use water polisher
Accessible sink station locations to be determined

Sink work station in cold room
Stainless steel

Fixed wall bench with wall cabinets above
30" depth work surface
15" depth wall cabinets

6' mobile lab bench
Integral gas/vac at islands w/ disconnect

6' mobile lab bench- desk station
With integral shelves above
Mobile cabinet below

Equipment space
Shelf above
Equipment below (OFOI)

Tall cabinet
Mobile with shelf above

N2 tank storage
Unistrut at wall
24" deep shelf above

Safety shower/eyewash
Wall recessed eyewash unit
Floor drain

3 cylinder restraint at wall

2 cylinder restraint at wall

mb
Marker board- glass

Canopy hood
Canopy hood above autoclave
Stainless steel

20x20x38
Autoclave
20"x20"x38" chamber
480v power with disconnect

Autoclave transfer cart

Floor sink
Floor sink at autoclave, washer

Service column- double sided at island
Power as noted on plans
Data as noted on plans
Gas/Air/Vac as noted on plans
Not all locations have the same configuration of power/data/ plumbing

Service column- single sided at wall or window
Power as noted on plans
Data as noted on plans
Gas/Air/Vac as noted on plans
Not all locations have the same configuration of power/data/ plumbing

Microscope work station
Owner Furnished/Owner Installed

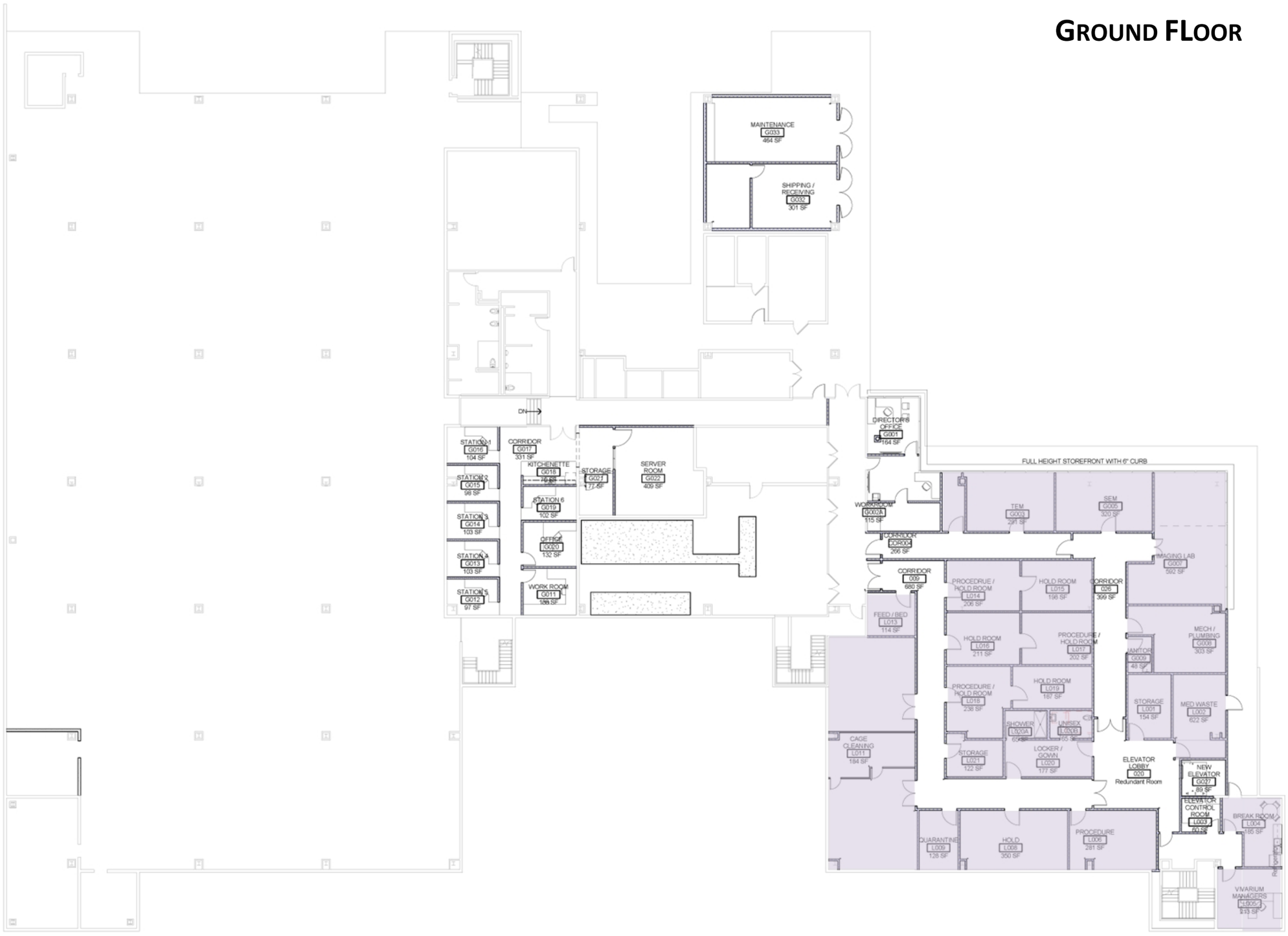
Chiller unit
Owner Furnished/Owner Installed

Laser table
Laser table
4'x9'
Owner Furnished/Owner Installed

Laser table
Laser table
4'x6'
Owner Furnshed/Owner Installed

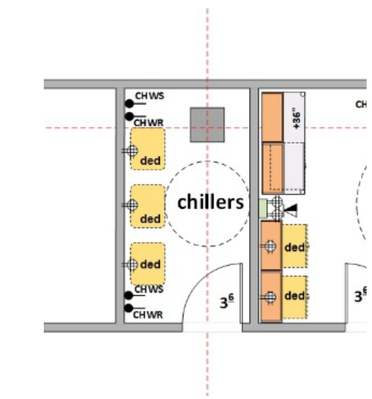
GROUND FLOOR VIVARIUM & LABS

GROUND FLOOR



CHILLER ROOM

Program Requirements



ARCHITECTURAL

Occupancy: B
Floor: sealed concrete
Walls: metal stud with gypsum board
Ceiling: open to structure
Doors: 3'-6"
Sound attenuation: NC 50 or less- sound attenuation at walls may be required to prevent noise from chillers transferring into vivarium
Security: digital access

STRUCTURAL

Existing concrete slab at floor

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 15/hour
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 75 btu/sf
Pressure: Negative

PLUMBING

Cold feed water supply to chillers
Loop process piping from chillers to TEM and SEM stations

ELECTRICAL

115v20a1ph outlets at walls
Standby power
Lighting: LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT

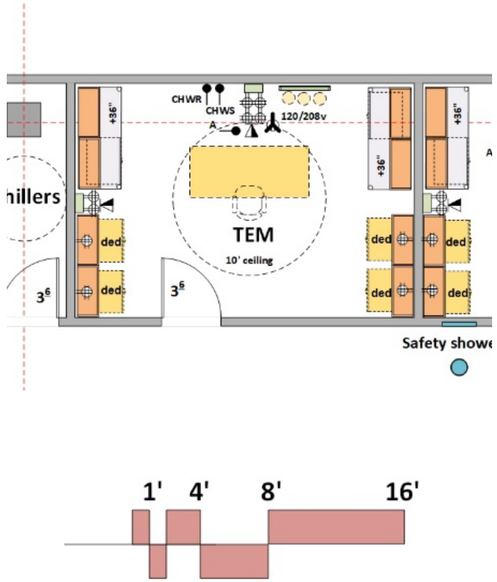
None

DEI FURNISHED EQUIPMENT

Air cooled Chillers

TEM LABORATORY

Program Requirements



ARCHITECTURAL

Occupancy: B
Floor: sealed concrete or vinyl tile
Walls: metal stud with gypsum board
Ceiling: acoustic tile cloud- 9'; 10' at circle area
Doors: 3'-6" with view window
Sound attenuation: NC 45 or less- sound attenuation at walls may be required to prevent noise transmission to vivarium
Security: digital access

STRUCTURAL

Existing concrete slab at floor

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 20/hour occupied; 6/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 75 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

Compressed Air (30 psi) at service column

ELECTRICAL

115v20a1ph outlets at walls
208v power at service colomn
Standby power
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT

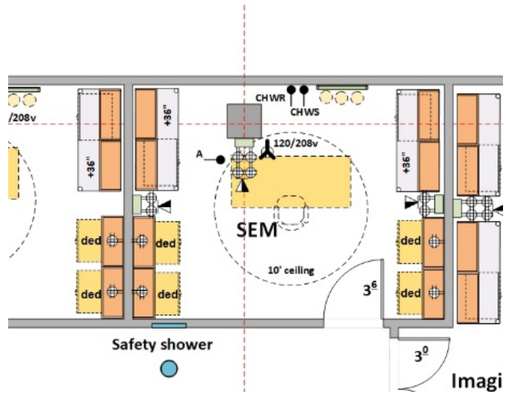
Mobile lab bench work station
Equipment space shelving
Cylinder restraint
Service columns

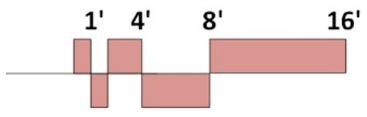
DEI FURNISHED EQUIPMENT

TEM instruments
TEM work station

SEM LABORATORY

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: sealed concrete or vinyl tile
Walls: metal stud with gypsum board
Ceiling: acoustic tile cloud- 9'; 10' height at circle area
Doors: 3'-6"0" with view window
Sound attenuation: NC 45 or less- sound attenuation at walls may be required to prevent noise transmission to vivarium
Security: digital access

STRUCTURAL

Existing concrete slab at floor

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 20/hour occupied; 6/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 75 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

Hot/Cold water at sink
Pure water at sinks via point-of-use water polishers
Specialty gases (SG1, SG2, SG3) at cylinder racks
Domestic tepid water at safety shower with floor drain

ELECTRICAL

115v20a1ph outlets at walls
208v power at service column
Standby power
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX.

CONTRACTOR FURNISHED EQUIPMENT

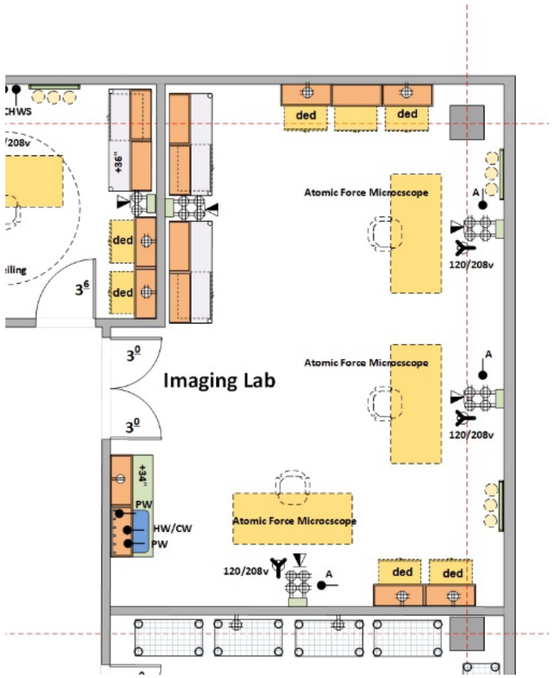
Mobile lab bench work station
Equipment space shelving
Cylinder restraint
Service column

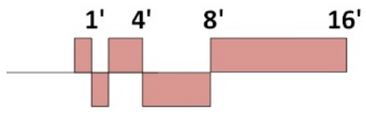
DEI FURNISHED EQUIPMENT

SEM instruments
SEM work station

IMAGING LABORATORY

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: sealed concrete or vinyl tile
Walls: metal stud with gypsum board
Ceiling: acoustic tile cloud- 9'
Doors: 3'-0" pair with view window entry from corridor
Sound attenuation: NC 45 or less- sound attenuation at walls may be required to prevent noise transmission to vivarium
Security: digital access

STRUCTURAL

Existing concrete slab at floor

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 20/hour occupied; 6/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 75 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

Hot/Cold water at sink
Pure water at sinks via point-of-use water polishers

ELECTRICAL

115v20a1ph outlets at walls
208v power at service columns
Standby power
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT

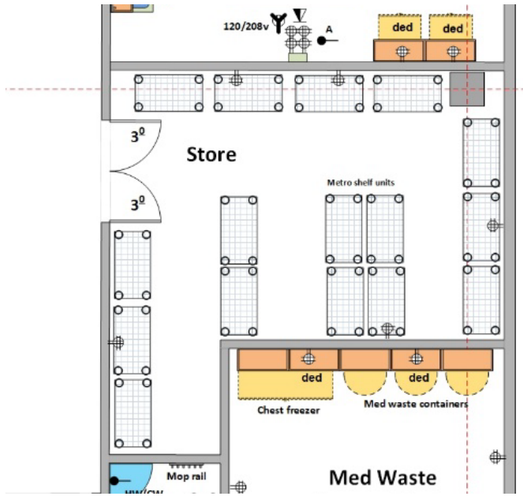
Sink work station
Mobile lab bench work station
Equipment space shelving
Cylinder restraints
Water polisher at sink

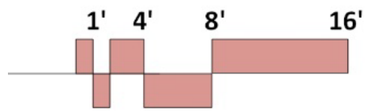
DEI FURNISHED EQUIPMENT

Atomic force microscopes
Imaging work station
Cylinder gases at cylinder restraint
Water polisher at sink

STORE

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: epoxy for store room within vivarium envelope;
Walls: metal stud with concrete backer board with fiberglass finish & epoxy paint
Aluminum wall guards at corridor
Aluminum wall guards at interior walls
Stainless steel corner guards at wall corners
Ceiling: same as wall construction
Doors: 3'-6"x8'-0" with view window;
3'-0" pair with view window
Sound attenuation: NC 50 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Pressure: Negative

PLUMBING

CO2 piping from manifold to 4 procedure rooms

ELECTRICAL

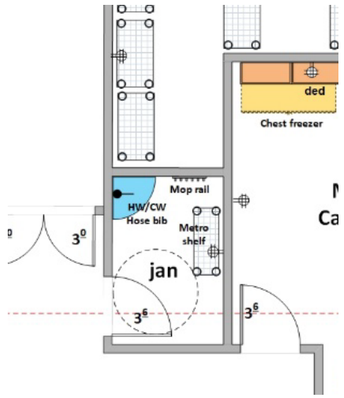
115v20a1ph outlets at walls
Wireless data (WAP)
Lighting: LED at 500 LUX

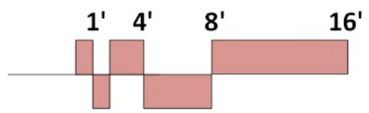
CONTRACTOR FURNISHED EQUIPMENT

Metro shelf units
CO2 manifold with manual changeover- Pipe CO2 to procedure rooms

DEI FURNISHED EQUIPMENT

None





JANITOR

Program Requirements

ARCHITECTURAL
Occupancy: B
Floor: sealed concrete
Walls: metal stud with concrete backer board with fiberglass finish & epoxy paint
Stainless steel corner guards at wall corners
Ceiling: same as wall construction
Doors: 3'-6"x8'-0" with view window
Sound attenuation: NC 50 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor

MECHANICAL
Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Pressure: Negative

PLUMBING
Hot/Cold domestic water at floor mop sink, with hose bib

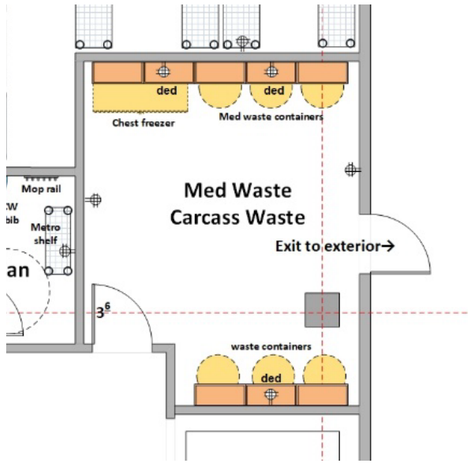
ELECTRICAL
115v20a1ph outlets at walls
Lighting: LED at 500 LUX

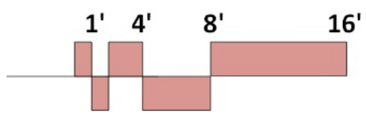
CONTRACTOR FURNISHED EQUIPMENT
Mop sink
Mop rail
Metro shelf unit

DEI FURNISHED EQUIPMENT
Cleaning equipment

MED WASTE/CARCASS WASTE

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: sealed concrete
Walls: metal stud with concrete backer board with fiberglass finish & epoxy paint
Stainless steel corner guards at wall corners
Ceiling: same as wall construction
Doors: 3'-6"x8'-0" with view window
Sound attenuation: NC 50 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Equipment heat gain: 50 btuh/sf
Pressure: Negative

PLUMBING

None

ELECTRICAL

115v20a1ph outlets at walls
Standby power
Wireless data (WAP)
Lighting: LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT

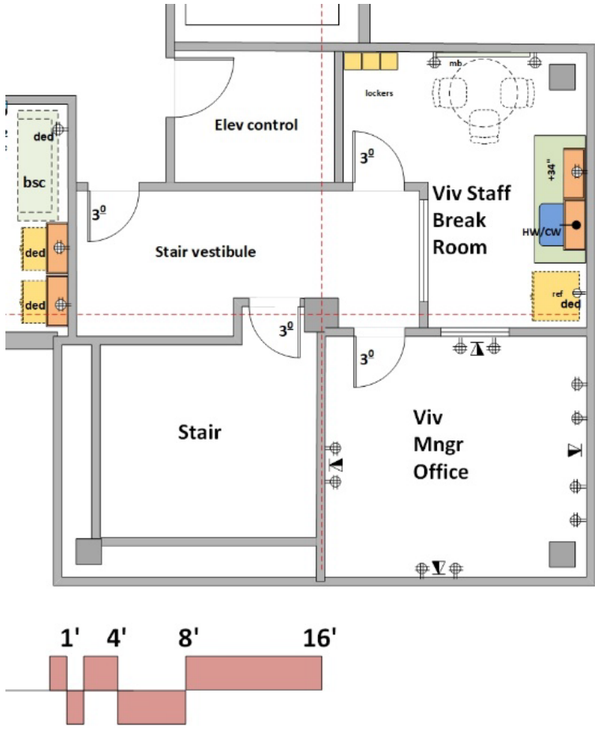
Shelf units at equipment space

DEI FURNISHED EQUIPMENT

Freezers
Refrigerators
Waste bins

VIVARIUM STAFF BREAK ROOM
VIVARIUM STAFF MANAGER OFFICE

Program Requirements



ARCHITECTURAL
Occupancy: B
Floor: vinyl tile or sheet vinyl
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile at 9'
Doors: 3'-0"x8'-0" with view window
Sound attenuation: NC 35 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor

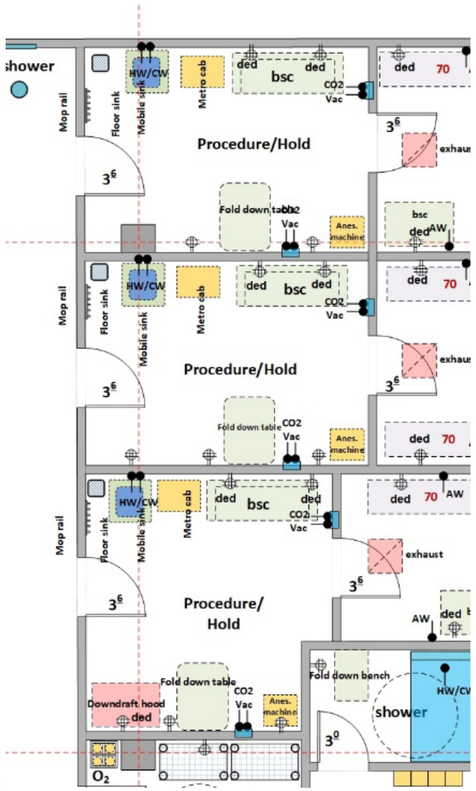
MECHANICAL
Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 4/hour occupied; 2/hour unoccupied
Pressure: Positive

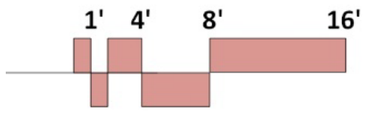
PLUMBING
Hot/Cold domestic water at break room sink

ELECTRICAL
115v20a1ph outlets at walls
Wireless data (WAP)
Lighting: LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT
Break room casework, sink, faucet
Lockers
Marker Board in Break Room

DEI FURNISHED EQUIPMENT
Refrigerator in Break Room
Table/Chairs in Break Room
Systems Furniture in Office
Waste bins





PROCEDURE

Program Requirements

ARCHITECTURAL

Occupancy: B
Floor: troweled on epoxy
Walls: metal stud with concrete backer board with fiberglass finish & epoxy paint
Stainless steel wall guards at corridor
Stainless steel corner guards at wall corners
Ceiling: waterproof gypsum board with fiberglass finish and epoxy paint
9' clear ceiling height- no access panels inside holding rooms and procedure rooms
Limit ceiling access panels to corridor
Doors: 3'-6"x 8'-0" with red glass view window
Vermin proof: all penetrations to rooms sealed
Sound attenuation: NC 40 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: controlled 30-70% relative
100% exhaust
Air changes: 15/hour
Pressure: Negative or positive depending upon use
Equipment heat gain: 25 btuh/sf
Controls: BMS environmental monitoring for temperature, humidity, pressure, and lighting; with digital display at each holding/procedure room

PLUMBING

Hot/Cold domestic water at mobile sink (recessed in wall)
CO2 and Vacuum at wall recessed boxes at 2 locations in each room.
CO2 to be piped from CO2 manifold in Store Room.

ELECTRICAL

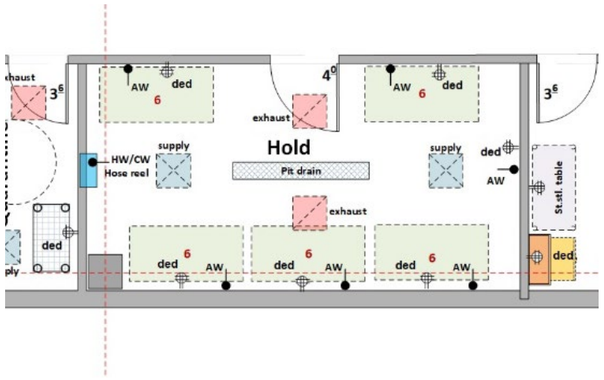
115v20a1ph outlets at walls
Standby power
Hardwire and wireless data (WAP)
Lighting: recessed, sealed LED at 500 LUX
Fire alarm: low volume chime

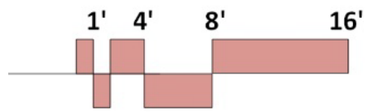
CONTRACTOR FURNISHED EQUIPMENT

Necropsy table in Rabbit Procedure Room
Mobile sink
Floor sink
Mop rack

DEI FURNISHED EQUIPMENT

Benchtop instruments
Refrigerators, freezers
Cage racks
Biological Safety Cabinet- Class II Type A, no external exhaust
Downdraft hood
Stainless Steel table
Metro cabinet





HOLD- RABBITS

Program Requirements

ARCHITECTURAL

Occupancy: B
Floor: troweled on epoxy
Walls: metal stud with concrete backer board with fiberglass finish & epoxy paint
Aluminum wall guards at corridor
Aluminum wall guards at interior walls
Stainless steel corner guards at wall corners
Ceiling: waterproof gypsum board with fiberglass finish and epoxy paint
9' clear ceiling height- no access panels inside holding rooms and procedure rooms
Limit ceiling access panels to corridor
Doors: 4'-0" with red glass view window
Vermin proof: all penetrations to rooms sealed Sound
attenuation: NC 40 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor

MECHANICAL

Temperature: 66 deg F +/- 2 deg F
Humidity: controlled 30-70% relative
100% exhaust
Air changes: 20/hour
Pressure: Negative or positive depending upon use
Controls: BMS environmental monitoring for temperature, humidity, pressure, and lighting; with digital display at each holding/procedure room

PLUMBING

Hot/cold domestic water on hose reel
Pit drain
Automatic animal watering system (RO)

ELECTRICAL

115v20a1ph outlets at walls and ceiling
Standby power
Hardwire and wireless data (WAP)
Lighting: recessed, sealed circadian LED at 600 LUX
Fire alarm: low volume chime

CONTRACTOR FURNISHED EQUIPMENT

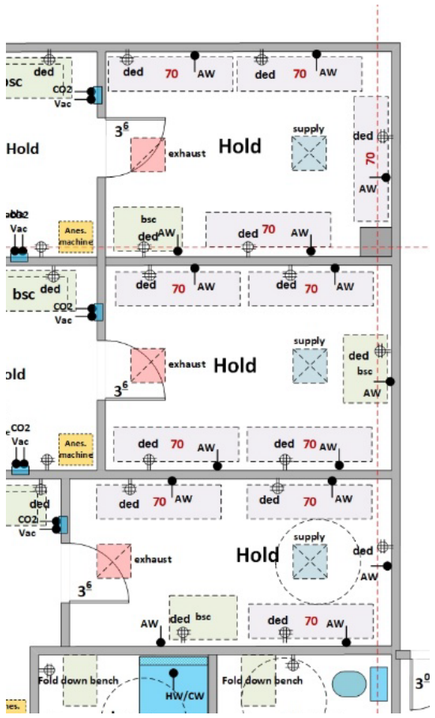
Animal watering system
Hose reel
Pit drain

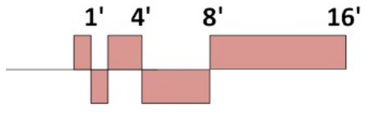
DEI FURNISHED EQUIPMENT

Rabbit cage racks

HOLD- MICE/RATS

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: troweled on epoxy
Walls: metal stud with concrete backer board with fiberglass finish & epoxy paint
Aluminum wall guards at corridor
Aluminum wall guards at interior walls
Stainless steel corner guards at wall corners
Ceiling: waterproof gypsum board with fiberglass finish and epoxy paint 9' clear ceiling height- no access panels inside holding rooms and procedure rooms;
Limit ceiling access panels to corridor
Doors: 3'-6"x8' with red glass view window, double swing
Vermin proof: all penetrations to rooms sealed Sound attenuation: NC 40 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor

MECHANICAL

Temperature: 68 deg F +/- 2 deg F
Humidity: controlled 30-70% relative
100% exhaust
Air changes: 15/hour
Pressure: Negative or positive depending upon use
Controls: BMS environmental monitoring for temperature, humidity, pressure, and lighting; with digital display at each holding/procedure room

PLUMBING

Hot/Cold water at sinks
Pure water at sinks via point-of-use water polishers
Specialty gases (SG1, SG2, SG3) at cylinder racks
Automatic animal watering system (RO)
Domestic tepid water at safety shower with floor drain

ELECTRICAL

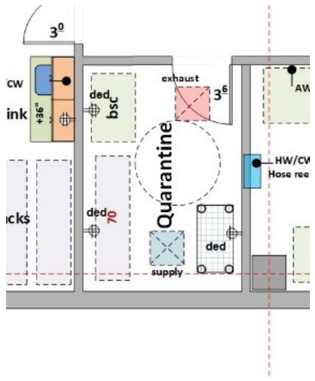
115v20a1ph outlets at walls and ceiling
Standby power
Hardwire and wireless data (WAP)
Lighting: recessed, sealed circadian LED at 600 LUX
Fire alarm: low volume chime

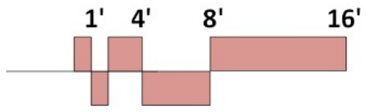
CONTRACTOR FURNISHED EQUIPMENT

Animal watering system

DEI FURNISHED EQUIPMENT

Cage racks
Biological Safety Cabinets- Class II Type C1- no external exhaust





QUARANTINE

Program Requirements

ARCHITECTURAL

Occupancy: B
Floor: troweled on epoxy
Walls: metal stud with concrete backer board with fiberglass finish & epoxy paint
Aluminum wall guards at corridor
Aluminum wall guards at room walls
Stainless steel corner guards at wall corners
Ceiling: waterproof gypsum board with fiberglass finish and epoxy paint
9' clear ceiling height- no access panels inside holding rooms and procedure rooms
Limit ceiling access panels to corridor
Doors: 3'-6" with red glass view window
Vermin proof: all penetrations to rooms sealed Sound
attenuation: NC 40 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: controlled 30-70% relative
100% exhaust
Air changes: 15/hour
Pressure: Negative or positive depending upon use
Controls: BMS environmental monitoring for temperature, humidity, pressure, and lighting; with digital display at each holding/procedure room

PLUMBING

Automatic animal watering system (RO)

ELECTRICAL

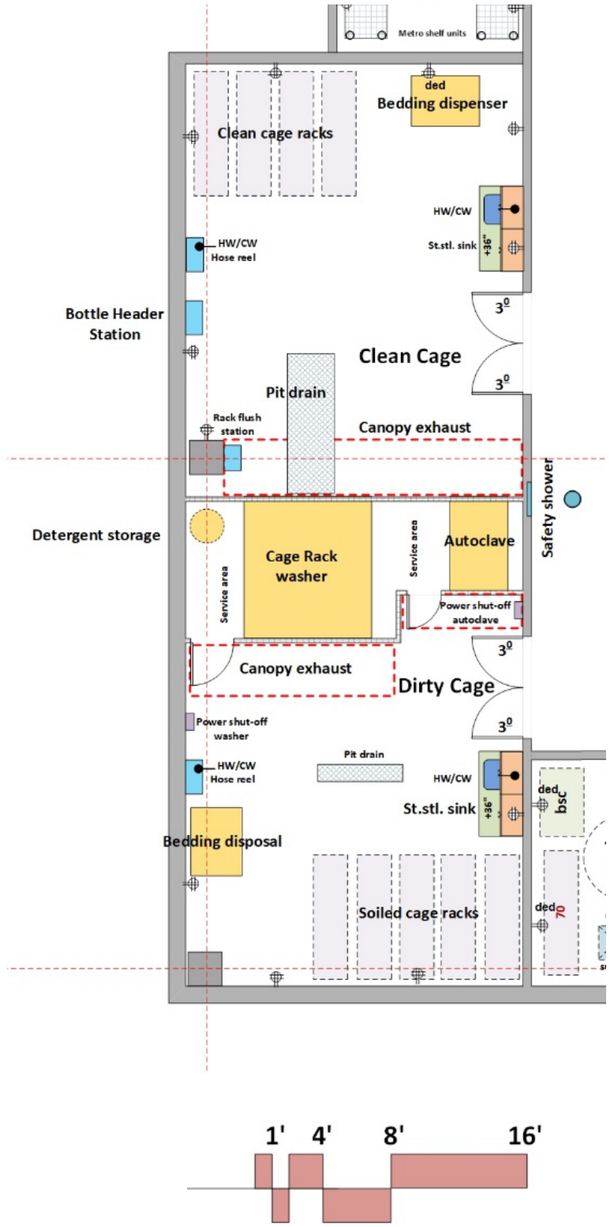
115v20a1ph outlets at walls and ceiling
Standby power
Hardwire and wireless data (WAP)
Lighting: recessed, sealed circadian LED at 500 LUX
Fire alarm: low volume chime

CONTRACTOR FURNISHED EQUIPMENT

Metro shelf unit
Automatic Watering System

DEI FURNISHED EQUIPMENT

Cage rack
Biological Safety Cabinet- Class II, Type A, no external exhaust



DIRTY/CLEAN CAGE WASH

Program Requirements

ARCHITECTURAL

Occupancy: B
Floor: troweled on epoxy
Walls: metal stud with concrete backer board with fiberglass finish & epoxy paint;
Aluminum wall guards at corridor
Aluminum wall guards at cage racks
Stainless steel corner guards at wall corners
Ceiling: waterproof gypsum board with fiberglass finish and epoxy paint
9' clear ceiling height
Doors: 3'-0"/3'-0" pair with view window
Vermin proof: all penetrations to rooms sealed Sound attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Controlled 30-70% relative
100% exhaust
Air changes: 20/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 75 btuh/sf
Pressure: Negative
"Ball-in-the-Wall" pressure indicator at Clean and Dirty Rooms
Equipment exhaust above Cage Rack Washer and Autoclave
Canopy exhaust above washer and autoclave

PLUMBING

Hot/Cold water at Cage Rack Washer and Autoclave
Hot/Cold water at hose reel
Hot/Cold water at bottle header station
Floor sinks at cage rack washer and autoclave
Pit drain at clean side of Cage Rack Washer
Pit drain in Dirty Cage Wash

ELECTRICAL

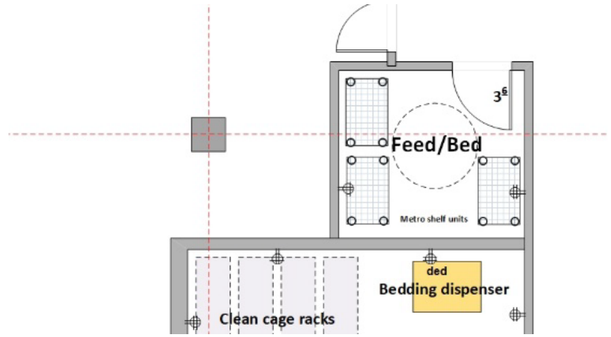
115v20a1ph outlets at walls
Standby power
Hardwire and wireless data (WAP)
280v and 480v as required for equipment
Lighting: recessed, sealed LED at 600 LUX
Fire alarm: low volume chime

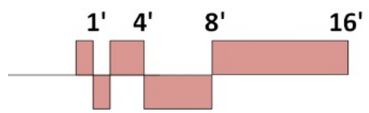
CONTRACTOR FURNISHED EQUIPMENT

Cage Rack Washer
Double door pass thru autoclave
Bottle Header Station
Stainless steel sinks
Canopy exhaust hoods

DEI FURNISHED EQUIPMENT

Cage racks
Bedding disposal- manual waste removal to dumpster at loading dock
Bedding dispenser





FEED/BED

Program Requirements

ARCHITECTURAL

Occupancy: B
Floor: troweled on epoxy
Walls: metal stud with concrete backer board with fiberglass finish & epoxy paint
Aluminum wall guards at corridor
Aluminum wall gaurds at 18” above floor inside room
Stainless steel corner guards at wall corners
Ceiling: waterproof gypsum board with fiberglass finish and epoxy paint
9' clear ceiling height- no access panels inside holding rooms and procedure rooms;
Limit ceiling access panels to corridor
Doors: 3'-6" with view window
Vermin proof: all penetrations to rooms sealed Sound
attenuation: NC 40 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor

MECHANICAL

Temperature: 68 deg F +/- 2 deg F
Humidity: controlled 30-70% relative
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Pressure: Negative

PLUMBING

None

ELECTRICAL

115v20a1ph outlets at walls
Standby power
Hardwire and wireless data (WAP)
Lighting: recessed, sealed LED at 500 LUX
Fire alarm: low volume chime

CONTRACTOR FURNISHED EQUIPMENT

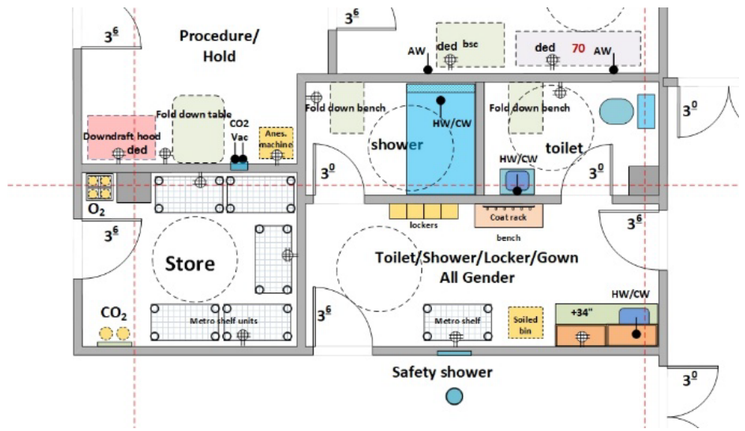
Metro shelf units

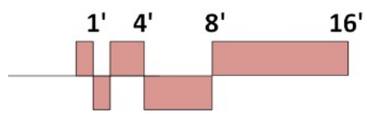
DEI FURNISHED EQUIPMENT

Feed/Bed supplies

TOILET/SHOWER/LOCKER/GOWN

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: troweled on epoxy
Walls: metal stud with concrete backer board with fiberglass finish & epoxy paint
Aluminum wall guards at corridor
Aluminum wall guards at store room interior
Stainless steel corner guards at wall corners
Ceiling: waterproof gypsum board with fiberglass finish and epoxy paint
9' clear ceiling height
Limit ceiling access panels to corridor
Doors: 3'-6"x8' with view window at corridor door
Vermin proof: all penetrations to rooms sealed Sound attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: controlled 30-=70% relative
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Pressure: Negative

PLUMBING

Hot/Cold domestic water at sinks
Hot/Cold domestic water at shower
Sink in toilet room and shower room
Domestic tepid water at safety showers with floor drains

ELECTRICAL

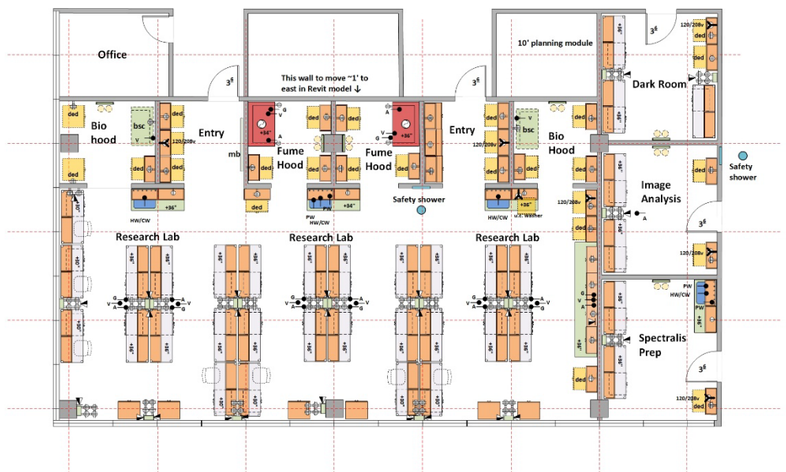
115v20a1ph outlets at walls
Standby power
Wireless data (WAP)
Lighting: recessed, sealed LED at 500 LUX
Fire alarm: low volume chime

CONTRACTOR FURNISHED EQUIPMENT

Stainless steel casework, sinks, top
Phenolic Resin lockers
Toilet, shower
Metro shelf units
Bench below coat rack
Coat rack

DEI FURNISHED EQUIPMENT

Vivarium gowning supplies



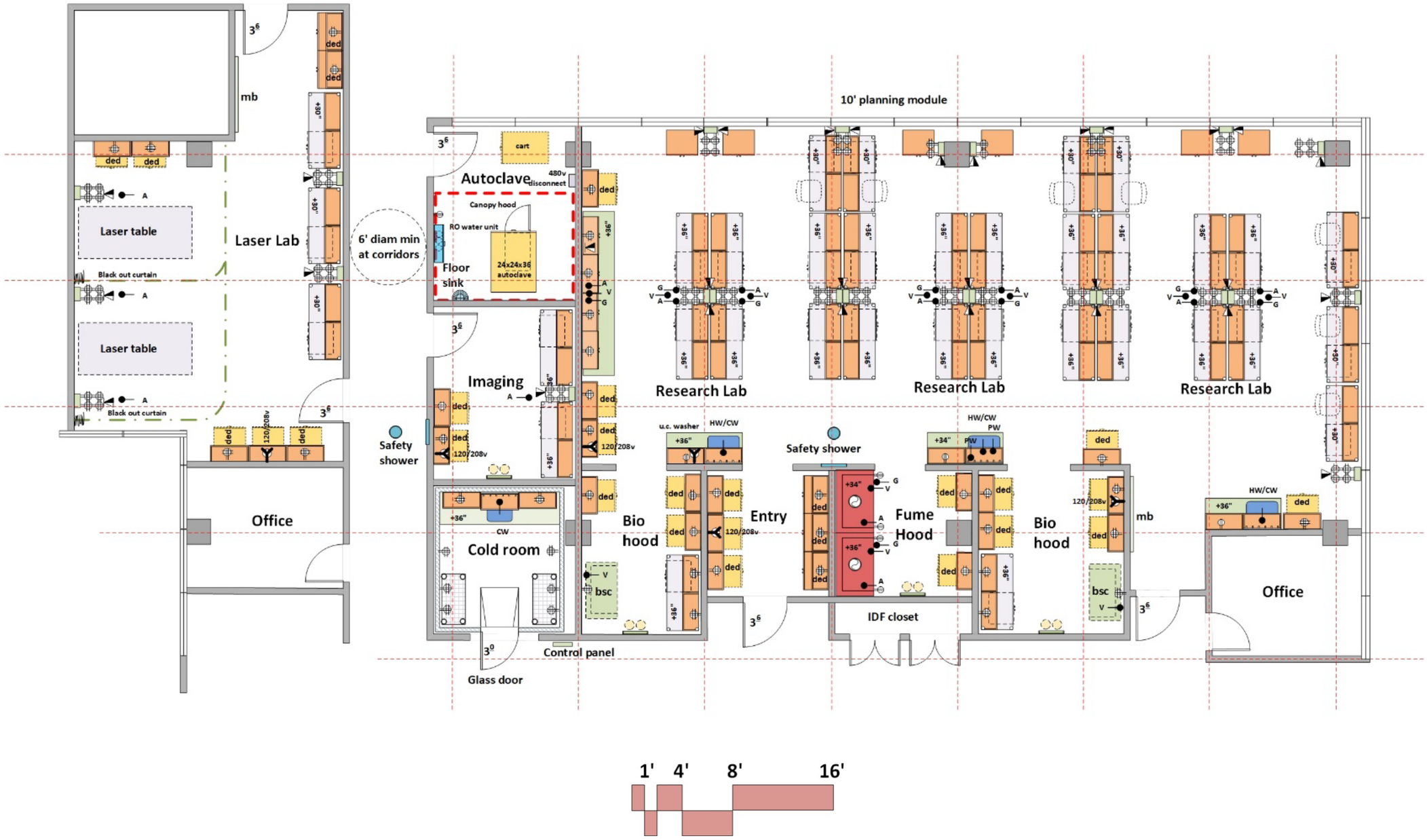
2ND FLOOR LABS

2ND FLOOR

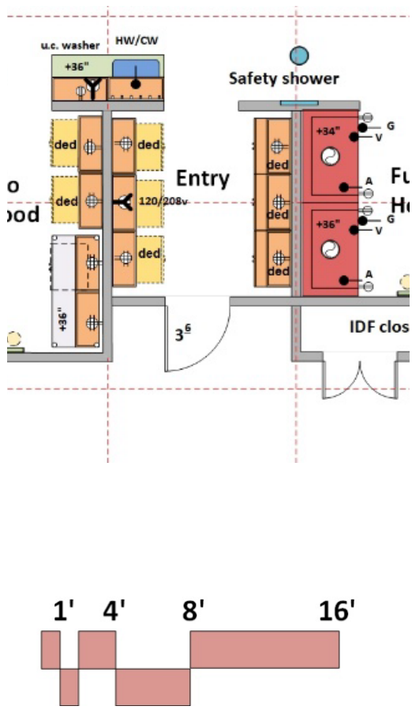

DIRECTOR'S OFFICE 219 457 SF
ASSISTANT 218 85 SF
OFFICE 3 217 130 SF
OFFICE 3 215 113 SF
OFFICE 4 216 114 SF
OFFICE 5 IS 220 116 SF
OFFICE 6 SC 221 113 SF
OFFICE 7 COMPLIANCE 222 141 SF
OFFICE 8 223 112 SF
OFFICE 9 IN SHARED 224 112 SF
SHARED OFFICE 10 ODE 225 135 SF
DIRC OPEN OFFICE 226 1388 SF
OFFICE 12 DEV 228 112 SF
MEETING 2 229 69 SF
MEETING 1 209 100 SF
OFFICE 2 210 156 SF
COFFEE 211 70 SF
DEV TEAM 230 296 SF
CONF 1 212 207 SF
AI OPEN 231 175 SF
AI OFFICE 232 136 SF
LASER LAB YUHUA ZHANG 233 561 SF
FREEZER STORE/AUTO CLAVE 234 164 SF
IMAGING 235 142 SF
YUHUA ZHANG LAB L201 523 SF
LAB L202 520 SF
ALFREDO SADUN LAB L203 671 SF
EAST
YZHANG OFFICE 245 112 SF
WALKI IN REFRIG 236 133 SF
BIO-HOOD / STORAGE L201B 126 SF
CHEM-HOOD L202A 81 SF
BIO-HOOD / STORAGE L202B 170 SF
OFFICE 237 111 SF
ASADUN OFFICE L238 113 SF
OFFICE 244 114 SF
JTAN OFFICE 243 115 SF
ARJANG OFFICE L239 102 SF
ERG DARK ROOM 242 181 SF
BIO-HOOD (BSL2) L206B 95 SF
CHEM-HOOD / STORAGE L206B 91 SF
BIO-HOOD (BSL2) L207B 91 SF
IMAGE ANALYSIS L205 199 SF
CORRIDOR COR203 317 SF
JAMES TAN LAB L209 509 SF
WEST
ALEX HUANG LAB L207 465 SF
PREP. SPECTRALS L206 199 SF
MECHANICAL SHAFT TO ROOF 240 104 SF
BREAK ROOM 477 SF
Room G035 1484 SF
SEATING TABLE / STORAGE 265 227 SF
LAYOUT COUNTER 247 135 SF
IDF G034 27 SF
CATERING 248 153 SF
LIBRARY / DISPLAYS 249 635 SF
MEETING L250 67 SF
PRESENTATION 264 2349 SF
FINAL DEV 255 97 SF
PRINT STORAGE 254 83 SF
DIAL OFFICE 251 165 SF
DIRRL OFFICE 253 158 SF
MEDIA CONTROL 261 209 SF
MISC STORAGE 262 97 SF
STOR 263 28 SF
CORRIDOR COR254 391 SF
DIRRL OPEN OFFICE 256 661 SF
CONF. ROOM #2 259 255 SF
CONF. ROOM #3 258 186 SF
CONF. ROOM #1 260 489 SF

2ND FLOOR LAB SUITE- EAST SIDE

Program Requirements



2ND FLOOR LAB SUITE- EAST SIDE
LAB ENTRY ALCOVE
Program Requirements



ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' height minimum
Doors: 3'-6" with view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative

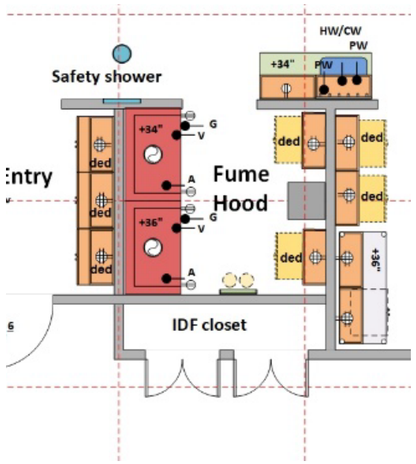
PLUMBING
None

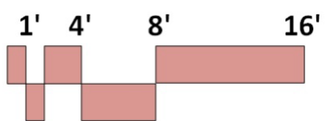
ELECTRICAL
115v20a1ph outlets at walls
Dedicated circuits at equipment spaces
208v at equipment spaces
Standby power at equipment spaces
wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT
Shelf units at equipment spaces
Tall cabinets- lockable

DEI FURNISHED EQUIPMENT
Refrigerators
Freezers

2ND FLOOR LAB SUITE- EAST SIDE
FUME HOOD ALCOVE
Program Requirements





ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile 9' height minimum
Doors: None; minimum 4' wide opening
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative

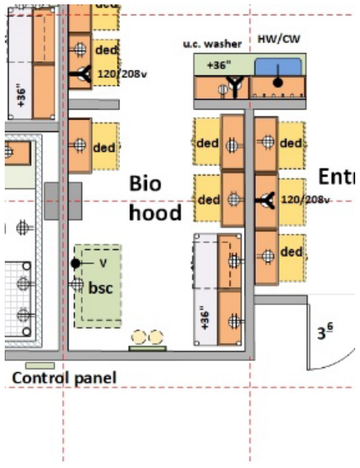
PLUMBING
Gas, Air, and vacuum at fume hoods

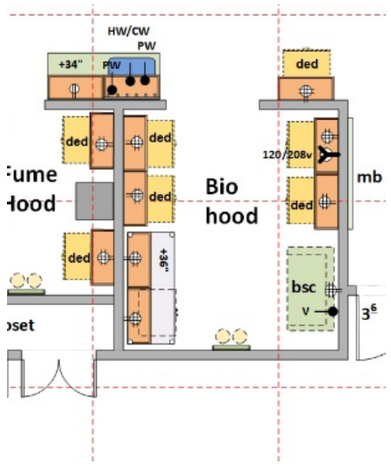
ELECTRICAL
115v20a1ph outlets at walls
Dedicated circuits at equipment spaces
Standby power at equipment spaces
wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

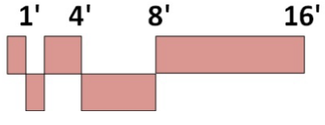
CONTRACTOR FURNISHED EQUIPMENT
Shelf units at equipment spaces
Chemical Fume Hoods- VAV; 600 cfm exhaust at each 5' hood
Cylinder restraint

DEI FURNISHED EQUIPMENT
Refrigerators
Freezers

2ND FLOOR LAB SUITE- EAST SIDE
BIO HOOD ALCOVE
Program Requirements







ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile 9' height minimum
Doors: 3'-6" with view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING
Vacuum valve with shut off at wall above BSC

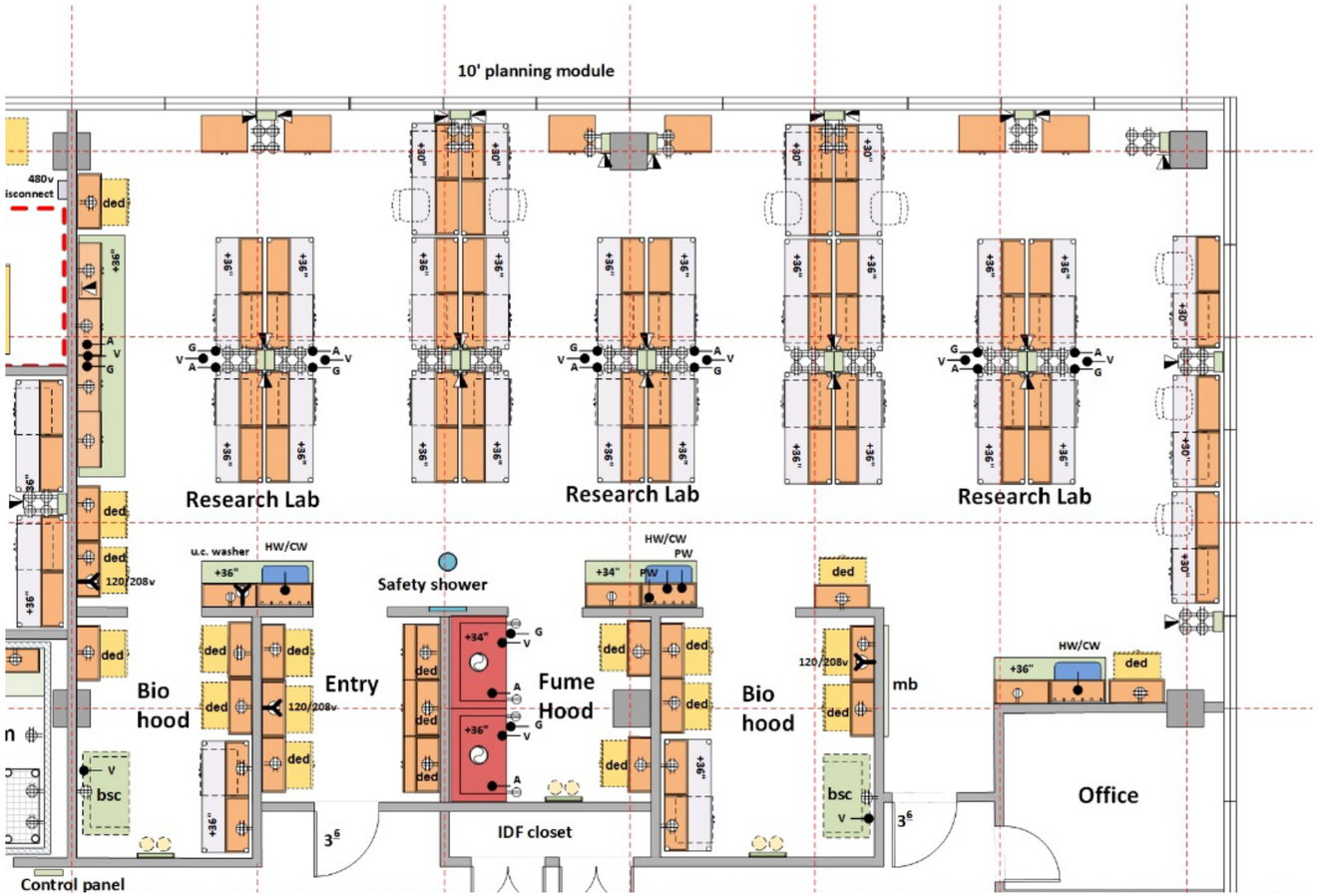
ELECTRICAL
115v20a1ph outlets at walls
208v at equipment spaces
Dedicated circuits at equipment spaces
Standby power at equipment spaces
wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

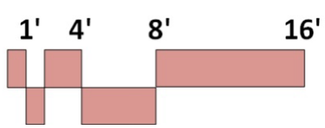
CONTRACTOR FURNISHED EQUIPMENT
Shelf units at equipment spaces
Mobile Protean Lab Benches
Cylinder restraints

DEI FURNISHED EQUIPMENT
Refrigerators
Incubators
Biological Safety Cabinets (4')- Class II Type C1- no external exhaust

2ND FLOOR LAB SUITE- EAST SIDE RESEARCH LAB

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile cloud- 9'-6" height minimum- 10' preferred
Doors: None; minimum 4' wide openings at alcoves
attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 25 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

Hot/Cold water at sinks
Pure water at sink via point-of-use water polisher
Gas, Air and vacuum at lab benches and service columns where noted
Domestic tepid water at safety shower with floor drain

ELECTRICAL

115v20a1ph outlets at walls
208v at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

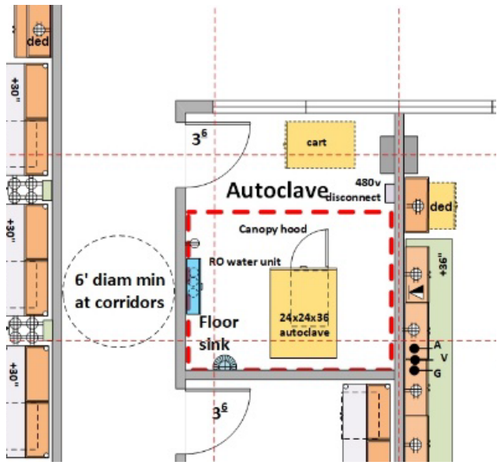
CONTRACTOR FURNISHED EQUIPMENT

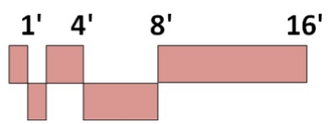
Casework, sinks, tops
Mobile Protean lab benches
Shelf units at equipment spaces
Service columns

DEI FURNISHED EQUIPMENT

Benchtop instruments
Refrigerators
Freezers
Water polisher at sink

2ND FLOOR LAB SUITE- EAST SIDE
AUTOCLAVE ROOM
Program Requirements





ARCHITECTURAL
Occupancy: B
Floor: epoxy
Walls: metal stud with water proof gypsum board, enamel paint
Ceiling: waterproof acoustic tile- 9' height minimum
Doors: 3'-6" solid with no window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 11,140 btuh at peak use (75 btuh/sf)
Pressure: Negative
Exhaust at steam canopy

PLUMBING
Hot/Cold water at autoclave
RO water at autoclave
Floor drain (4"diam) with large drain cover

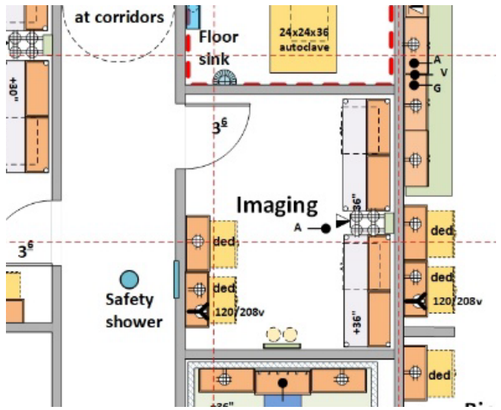
ELECTRICAL
115v20a1ph outlets at walls
480v with disconnect at autoclave
Lighting: direct/indirect LED at 500 LUX

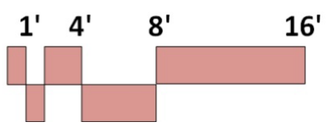
CONTRACTOR FURNISHED EQUIPMENT
Autoclave
RO Unit
Transfer cart

DEI FURNISHED EQUIPMENT
None

2ND FLOOR LAB SUITE- EAST SIDE IMAGING

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' height minimum
Doors: 3'-6" with view window
attenuation: NC 40 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

Compressed air at service column
Domestic tepid water at safety shower (in corridor) with floor drain and drain in wall for eyewash

ELECTRICAL

115v20a1ph outlets at walls
208v at equipment space
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX.

CONTRACTOR FURNISHED EQUIPMENT

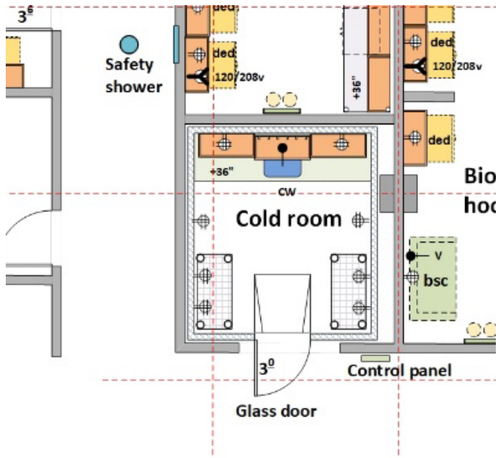
Mobile lab benches
Shelf units at equipment spaces
Cylinder Restraint
Service column

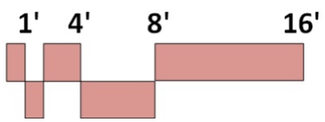
DEI FURNISHED EQUIPMENT

Benchtop instruments
Specialty gases at cylinder racks

2ND FLOOR LAB SUITE- EAST SIDE CONTROLLED ENV ROOM

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: 2" insulated panel with diamond grid aluminum
Walls: painted metal insulated panels
Ceiling: insulated panel with egg crate plenum
Doors: 3'-0" with full view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 4 deg C +/- 1 deg C
Humidity: Ambient
50 cfm exhaust
Pressure: positive

PLUMBING

Cold water at sink

ELECTRICAL

Single junction box point of connection at top of cold room box
115v20a1ph outlets at walls
Standby power at room
wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT

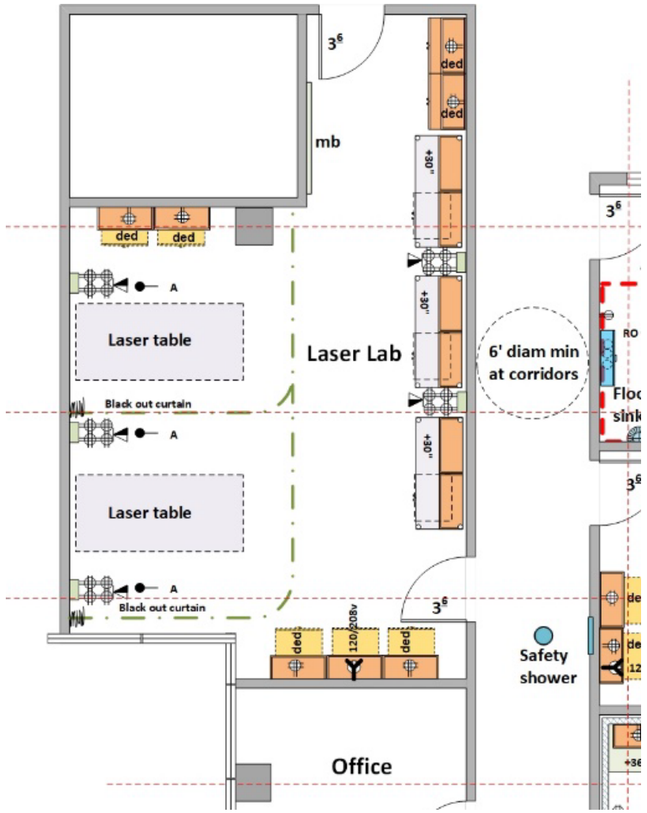
All stainless steel casework, sink, tops, shelving
Metro shelf units

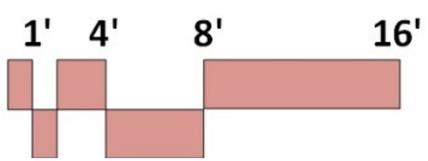
DEI FURNISHED EQUIPMENT

Benchtop instruments

2ND FLOOR LAB SUITE- EAST SIDE LASER LAB

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' minimum
Doors: 3'-6" with view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 25 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

Compressed air at service columns at lasers
Domestic tepid water at safety shower with floor drain

ELECTRICAL

115v20a1ph outlets at walls
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT

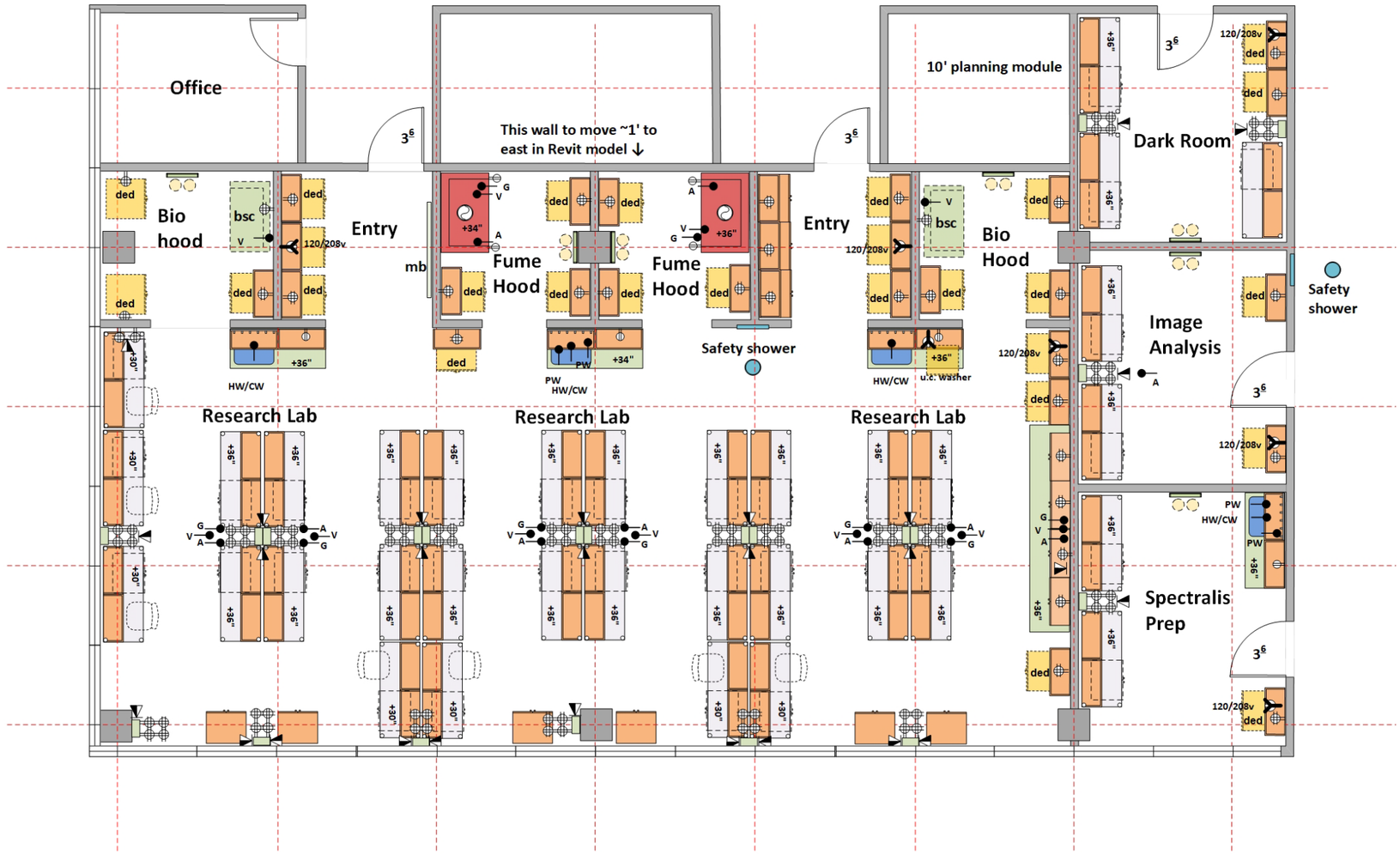
Casework, tops
Mobile lab benches
Shelf units at equipment spaces
Service columns
Black out curtains at lasers

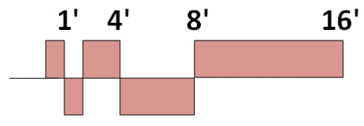
DEI FURNISHED EQUIPMENT

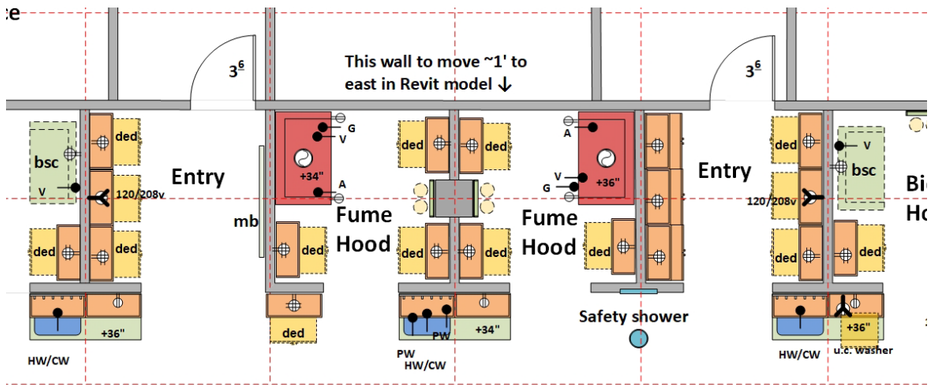
Benchtop instruments
Laser tables
Lasers and related instruments
Water polishers at sink

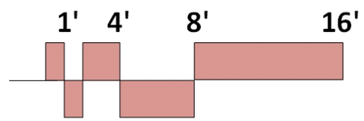
2ND FLOOR LAB SUITE- WEST SIDE

Program Requirements









2ND FLOOR LAB SUITE- WEST SIDE
LAB ENTRY ALCOVE
Program Requirements

ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' height minimum
Doors: 3'-6" with view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative

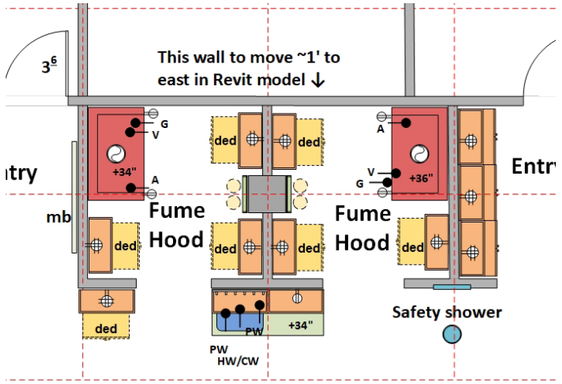
PLUMBING
None

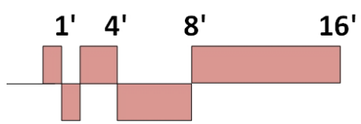
ELECTRICAL
115v20a1ph outlets at walls
Dedicated circuits at equipment spaces
208v at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT
Shelf units at equipment spaces
Tall cabinets- lockable
Marker board

DEI FURNISHED EQUIPMENT
Refrigerators
Freezers

2ND FLOOR LAB SUITE- WEST SIDE
FUME HOOD ALCOVE
Program Requirements





ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile 9' height minimum
Doors: None; minimum 4' wide opening
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative

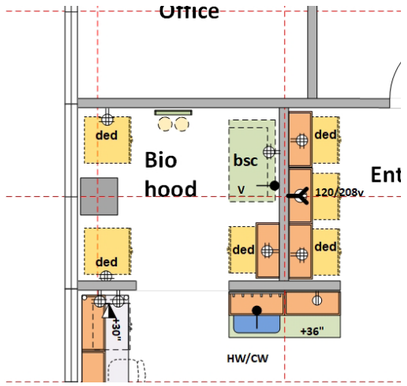
PLUMBING
Gas, Air, and vacuum at fume hoods

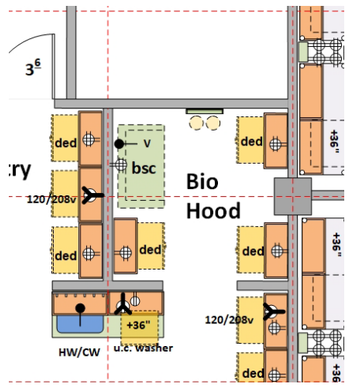
ELECTRICAL
115v20a1ph outlets at walls
Dedicated circuits at equipment spaces
208v at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

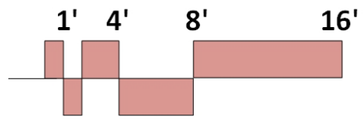
CONTRACTOR FURNISHED EQUIPMENT
Shelf units at equipment spaces
Chemical Fume Hoods- VAV; 600 cfm at each 5' hood
Cylinder restraints

DEI FURNISHED EQUIPMENT
Refrigerators
Freezers
Centrifuges

2ND FLOOR LAB SUITE- WEST SIDE
BIO HOOD ALCOVE
Program Requirements







ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile 9' height minimum
Doors: 3'-6" with view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING
Vacuum valve with shut off at wall above BSC

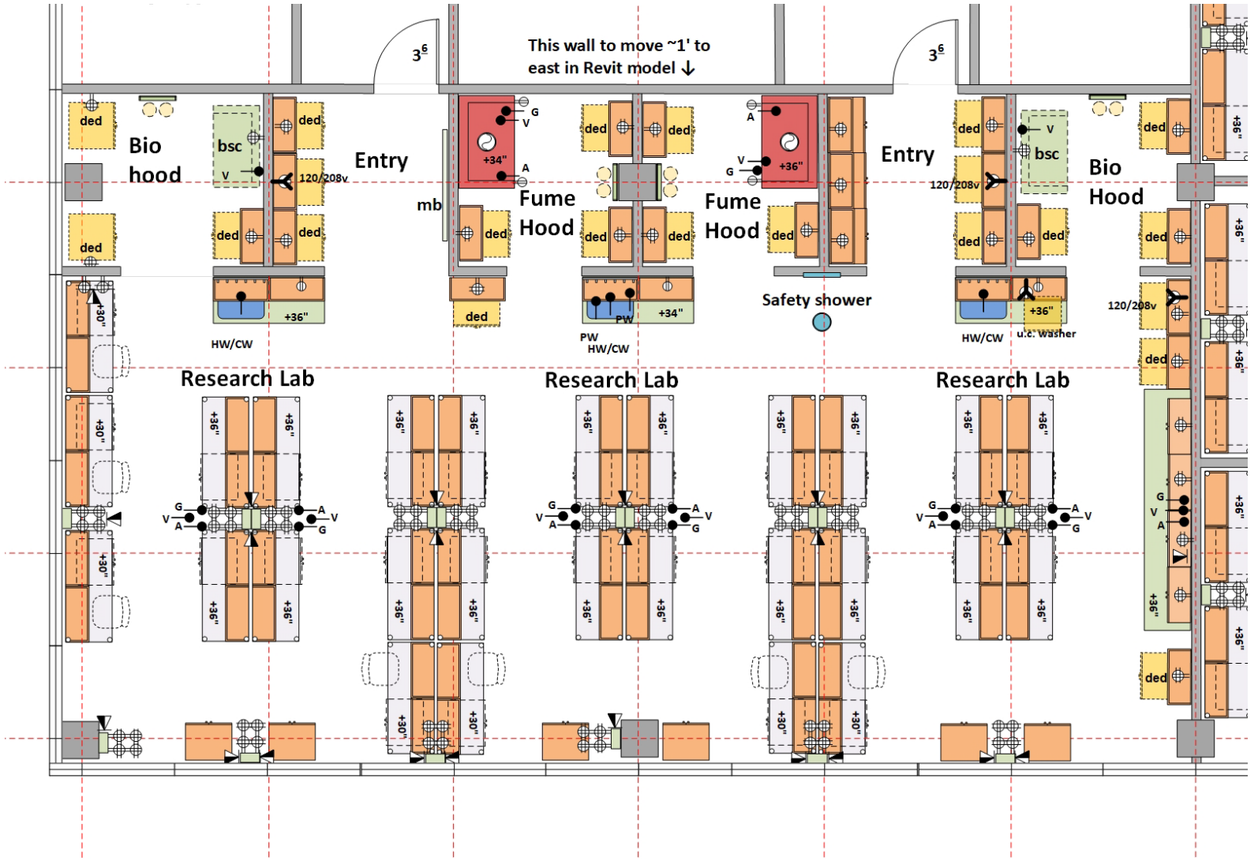
ELECTRICAL
115v20a1ph outlets at walls
208v at equipment spaces
Dedicated circuits at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

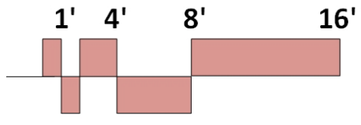
CONTRACTOR FURNISHED EQUIPMENT
Shelf units at equipment spaces
Cylinder restraints

DEI FURNISHED EQUIPMENT
Refrigerators
Incubators
Biological Safety Cabinets (4')- Class II Type C1- no external exhaust

2ND FLOOR LAB SUITE- WEST SIDE RESEARCH LAB

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile cloud- 9'-6" height minimum- 10' preferred
Doors: None; minimum 4' wide openings at alcoves
attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 25 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

Hot/Cold water at sinks
Pure water at sink via point-of-use water polisher
Gas, Air and vacuum at lab benches where noted
Domestic tepid water at safety shower with floor drain

ELECTRICAL

115v20a1ph outlets at walls
208v at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 50 LUX

CONTRACTOR FURNISHED EQUIPMENT

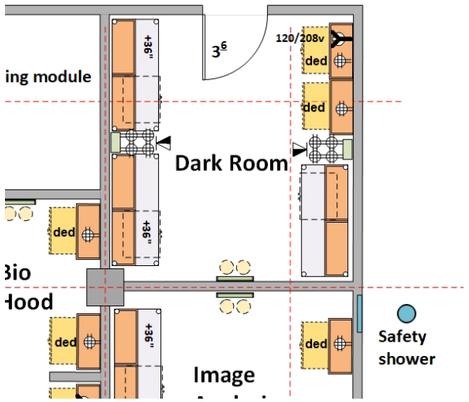
Casework, sinks, tops
Mobile lab benches
Shelf units at equipment spaces
Service columns

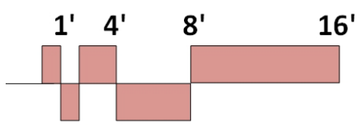
DEI FURNISHED EQUIPMENT

Benchtop instruments
Refrigerators
Freezers
Water polishers at sink
Specialty gases at cylinder restraints

2ND FLOOR LAB SUITE- WEST SIDE DARK ROOM

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' height minimum
Doors: 3'-6" solid with no window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

None

ELECTRICAL

115v20a1ph outlets at walls
208v at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

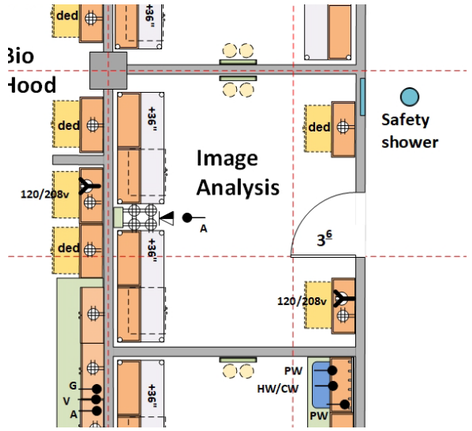
CONTRACTOR FURNISHED EQUIPMENT

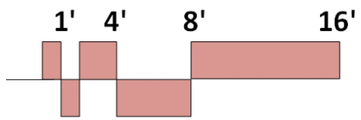
Casework, sinks, tops
Mobile Protean lab benches
Shelf units at equipment spaces
Service columns
Cylinder restraint

DEI FURNISHED EQUIPMENT

Benchtop instruments
Specialty gases at cylinder racks

2ND FLOOR LAB SUITE- WEST SIDE
IMAGE ANALYSIS
Program Requirements





ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' height minimum
Doors: 3'-6" with view window
attenuation: NC 40 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

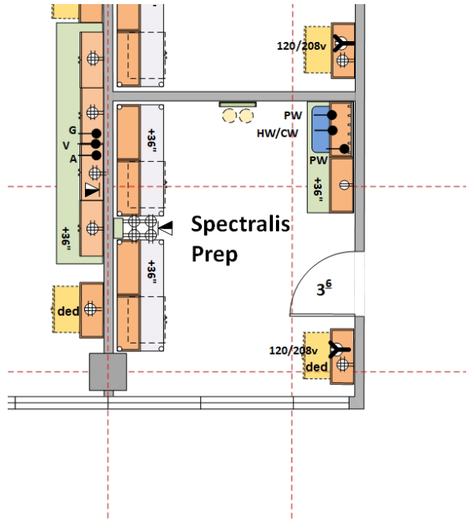
MECHANICAL
Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

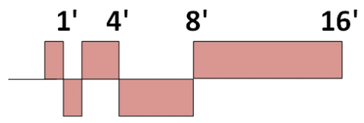
PLUMBING
Domestic tepid water at safety shower (in corridor) with floor drain and drain in wall for eyewash
Compressed air at service column

ELECTRICAL
115v20a1ph outlets at walls
208v at equipment space
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX.

CONTRACTOR FURNISHED EQUIPMENT
Casework, sinks, tops
Mobile Protean lab benches
Shelf units at equipment spaces
Service column
Cylinder Restraints

DEI FURNISHED EQUIPMENT
Benchtop instruments
Instrument carts at equipment spaces
Specialty gases at cylinder racks





2ND FLOOR LAB SUITE- WEST SIDE SPECTRALIS PREP

Program Requirements

ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' height minimum
Doors: 3'-6" with view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING
Hot/Cold water at sink
Pure water faucet at sink
Pure water valve above sink for point-of-use polisher
Ultrapure water at sink via point-of-use water polisher
Specialty gases (nitrogen, helium, argon) at cylinder rack

ELECTRICAL
115v20a1ph outlets at walls
208v at equipment space
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT
Casework, sinks, tops
Mobile lab benches
Shelf units at equipment spaces
Cylinder restraints
Service column

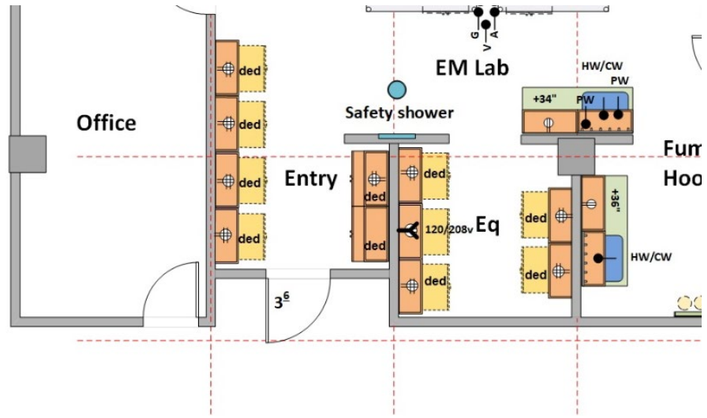
DEI FURNISHED EQUIPMENT
Benchtop instruments
Refrigerator/freezer
Water polisher at sink
Specialty gases at cylinder racks

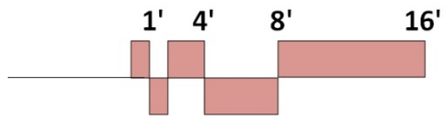
3RD FLOOR LABS

3RD FLOOR LABS

3RD FLOOR LAB SUITE- FAR EAST SIDE

Program Requirements





3RD FLOOR LAB SUITE- FAR EAST SIDE
LAB ENTRY ALCOVE
Program Requirements

ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile cloud- 9'-6" height
Doors: 3'-6" with view window
attenuation: NC 40 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING
None

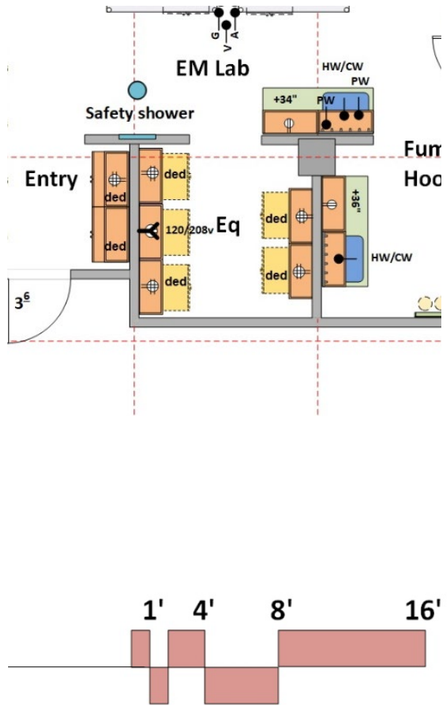
ELECTRICAL
115v20a1ph outlets at walls
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT
Casework
Shelf units at equipment spaces
Tall cabinets- lockable

DEI FURNISHED EQUIPMENT
Refrigerators
Freezers

3RD FLOOR LAB SUITE- FAR EAST SIDE EQUIPMENT ALCOVE

Program Requirements



ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile cloud- 9'-6" height
Doors: 3'-6" with view window
attenuation: NC 40 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

None

ELECTRICAL

115v20a1ph outlets at walls
208v at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

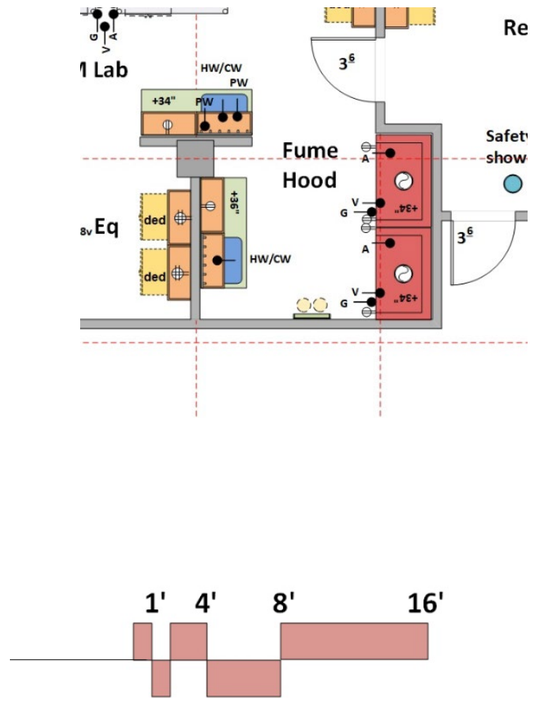
CONTRACTOR FURNISHED EQUIPMENT

Shelf units at equipment spaces
Tall cabinets- lockable

DEI FURNISHED EQUIPMENT

Refrigerators
Freezers

3RD FLOOR LAB SUITE- FAR EAST SIDE
FUME HOOD ALCOVE
Program Requirements



ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile cloud- 9'-6" height
Doors: 3'-6" with view window
attenuation: NC 40 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING
Hot/Cold water at sink
Gas/Air/Vac at fume hood

ELECTRICAL
115v20a1ph outlets at walls
208v at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

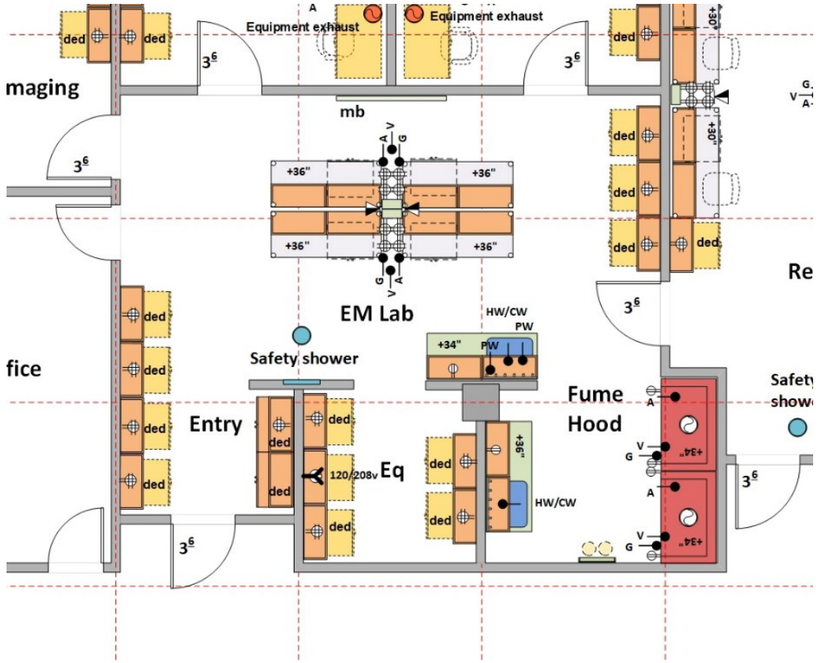
CONTRACTOR FURNISHED EQUIPMENT
Shelf units at equipment spaces
Chemical Fume Hoods

DEI FURNISHED EQUIPMENT
Refrigerators
Freezers

3RD FLOOR LAB SUITE- FAR EAST SIDE

EM LAB

Program Requirements



ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile cloud- 9'-6" height
Doors: 3'-6" with view window
attenuation: NC 40 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 25 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING
Hot/Cold water at sinks
Pure water at sink and point-of-use water polisher
Domestic tepid water at safety shower with floor drain
Gas/Air/Vac at service column

ELECTRICAL
115v20a1ph outlets at walls
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

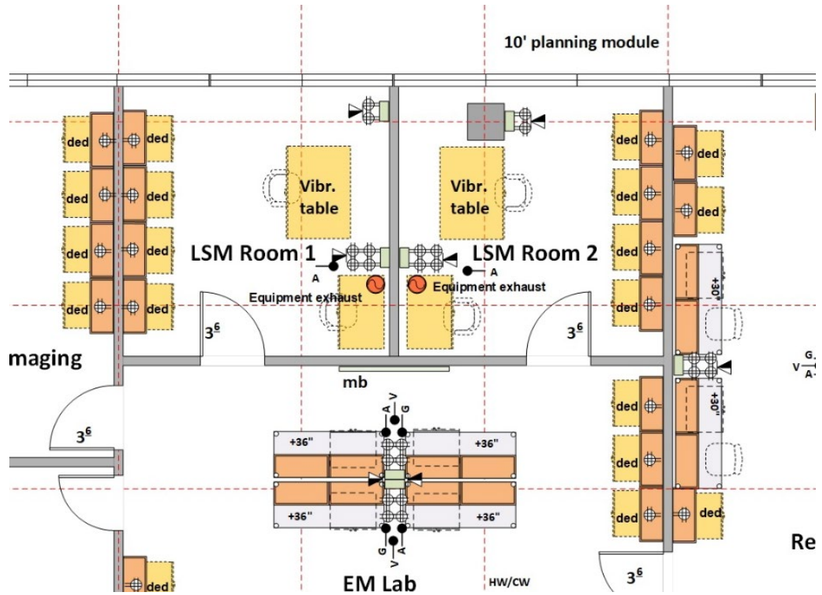
CONTRACTOR FURNISHED EQUIPMENT
Casework, sinks, tops
Mobile Protean lab benches
Shelf units at equipment spaces
Service columns

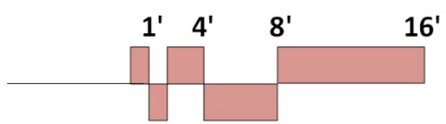
DEI FURNISHED EQUIPMENT
Benchtop instruments
Refrigerators
Freezers
Water polishers at sinks

3RD FLOOR LAB SUITE- FAR EAST SIDE

LSM ROOM 1, 2

Program Requirements





ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile cloud- 9'-6" height
Doors: 3'-6" with view window
attenuation: NC 40 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Equipment exhaust at ceiling in each room
Pressure: Negative or positive depending upon use

PLUMBING
Compressed air at service columns

ELECTRICAL
115v20a1ph outlets at walls
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

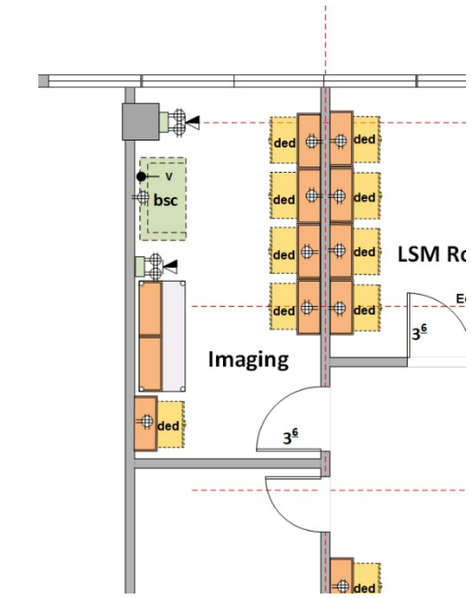
CONTRACTOR FURNISHED EQUIPMENT
Shelf units at equipment spaces
Service columns

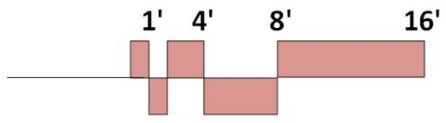
DEI FURNISHED EQUIPMENT
Benchtop instruments
Scientific equipment

3RD FLOOR LAB SUITE- FAR EAST SIDE

IMAGING

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile cloud- 9'-6" height
Doors: 3'-6" with view window
attenuation: NC 40 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Equipment exhaust at ceiling in each room
Pressure: Negative or positive depending upon use

PLUMBING

Vacuum at BSC

ELECTRICAL

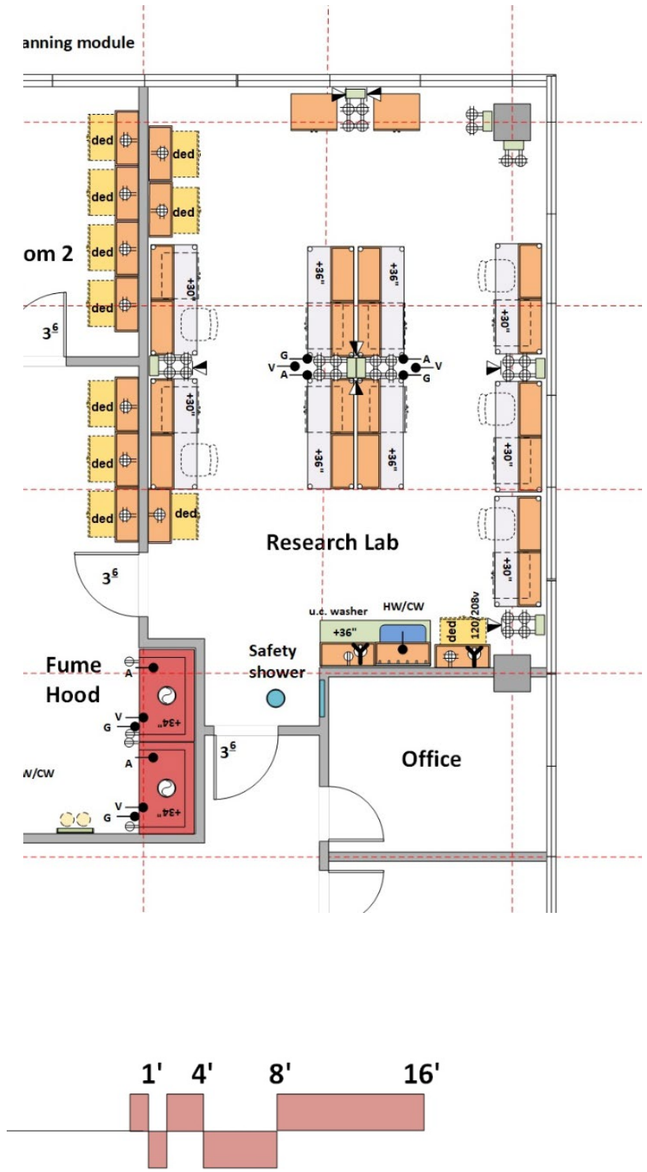
115v20a1ph outlets at walls
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT

Shelf units at equipment spaces
Service columns

DEI FURNISHED EQUIPMENT

Benchtop instruments
Scientific equipment
Biological Safety Cabinet (BSC) Class II, Type A, no external exhaust



3RD FLOOR LAB SUITE- FAR EAST SIDE

RESEARCH LAB

Program Requirements

ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile cloud- 9'-6" height
Doors: 3'-6" with view window
attenuation: NC 40 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 25 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

Hot/Cold water at sinks
Gas/Air/Vac at service column
Domestic tepid water at safety shower with floor drain

ELECTRICAL

115v20a1ph outlets at walls
208v at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT

Casework, sinks, tops
Mobile Protean lab benches
Shelf units at equipment spaces
Service columns

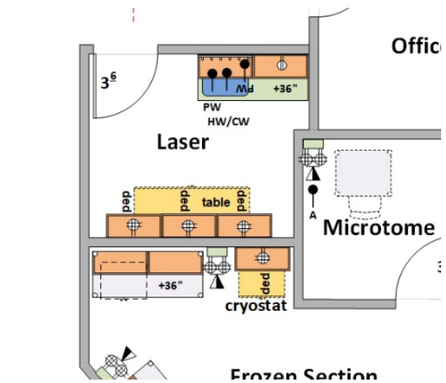
DEI FURNISHED EQUIPMENT

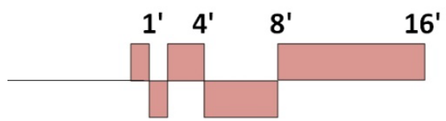
Benchtop instruments
Refrigerators
Freezers

3RD FLOOR LAB SUITE- FAR EAST SIDE

LASER LAB

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile cloud- 9'-6" height
Doors: 3'-6" with view window
attenuation: NC 40 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

Hot/Cold water at sink
Pure water at sink and polisher

ELECTRICAL

115v20a1ph outlets at walls
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

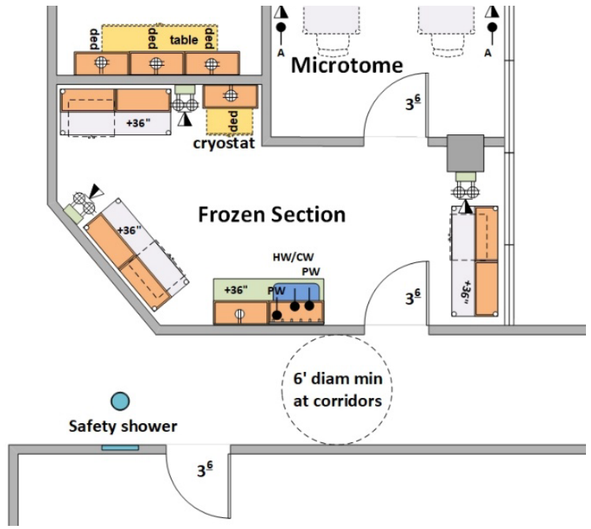
CONTRACTOR FURNISHED EQUIPMENT

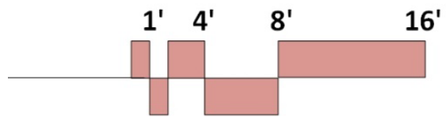
Mobile lab benches
Shelf units at equipment spaces
Service columns

DEI FURNISHED EQUIPMENT

Benchtop instruments
Scientific equipment
Lasers
Water polisher

3RD FLOOR LAB SUITE- FAR EAST SIDE
FROZEN SECTION
Program Requirements





ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile cloud- 9'-6" height
Doors: 3'-6" with view window
attenuation: NC 40 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING
Hot/Cold water at sinks
Pure water at sink and polisher

ELECTRICAL
115v20a1ph outlets at walls
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

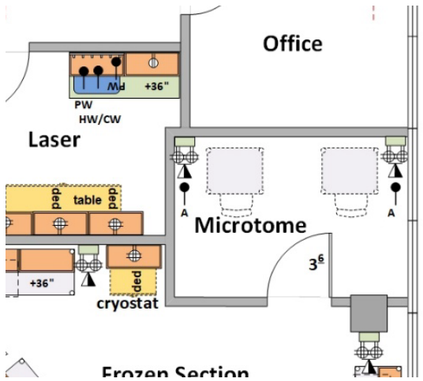
CONTRACTOR FURNISHED EQUIPMENT
Casework, sinks, tops
Mobile Protean lab benches
Shelf units at equipment spaces
Service columns

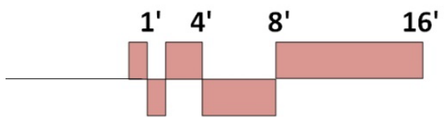
DEI FURNISHED EQUIPMENT
Benchtop instruments
Refrigerators
Freezers
Water polishers at sinks

3RD FLOOR LAB SUITE- FAR EAST SIDE

MICROTOME

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile cloud- 9'-6" height
Doors: 3'-6" with view window
attenuation: NC 40 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 25 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

Compressed air at service columns

ELECTRICAL

115v20a1ph outlets at walls
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT

Service columns

DEI FURNISHED EQUIPMENT

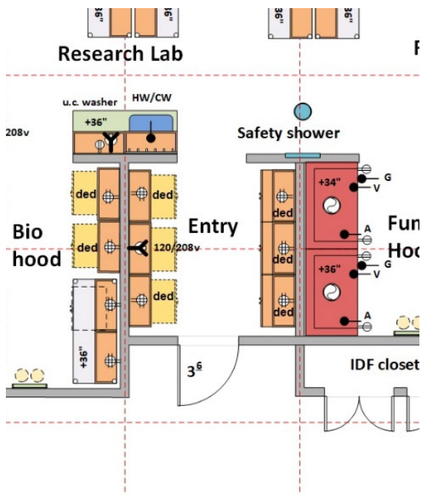
Microtome work stations

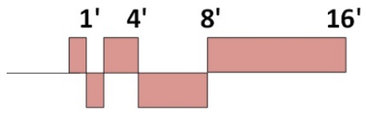
3RD FLOOR LAB SUITE- EAST SIDE

Program Requirements

3RD FLOOR LAB SUITE- EAST SIDE LAB ENTRY ALCOVE

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' height minimum
Doors: 3'-6" with view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative

PLUMBING

None

ELECTRICAL

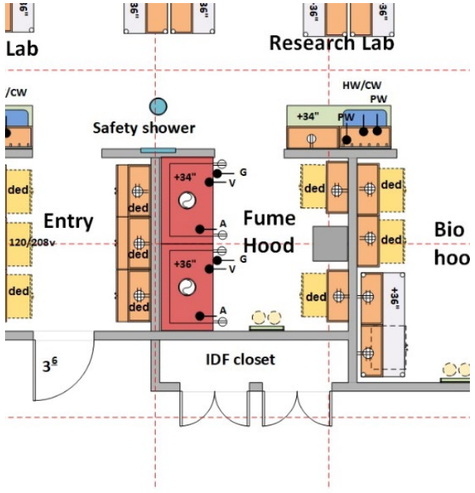
115v20a1ph outlets at walls
Dedicated circuits at equipment spaces
208v at equipment spaces
Standby power at equipment spaces
wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

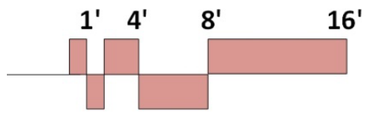
CONTRACTOR FURNISHED EQUIPMENT

Shelf units at equipment spaces
Tall cabinets- lockable

DEI FURNISHED EQUIPMENT

Refrigerators
Freezers





3RD FLOOR LAB SUITE- EAST SIDE FUME HOOD ALCOVE

Program Requirements

ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile 9' height minimum
Doors: None; minimum 4' wide opening
attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative

PLUMBING

Gas, Air, and vacuum at fume hoods

ELECTRICAL

115v20a1ph outlets at walls
Dedicated circuits at equipment spaces
Standby power at equipment spaces
wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

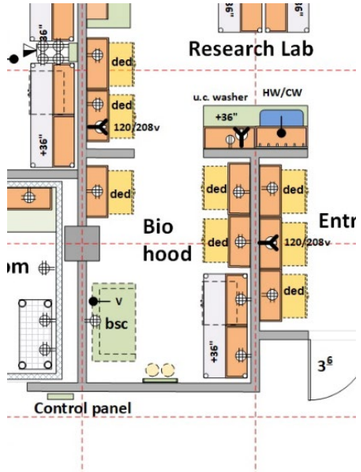
CONTRACTOR FURNISHED EQUIPMENT

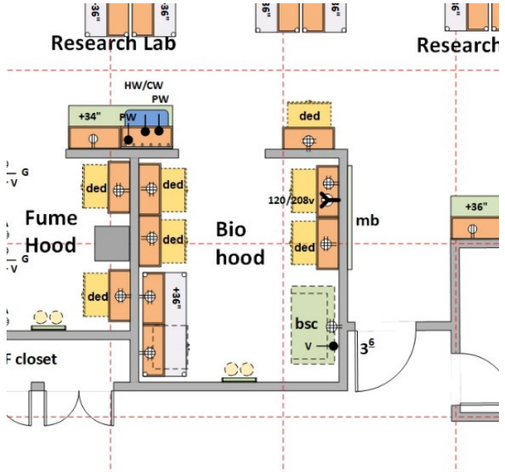
Shelf units at equipment spaces
Chemical Fume Hoods- VAV; 600 cfm at each 5' hood
Cylinder restraint

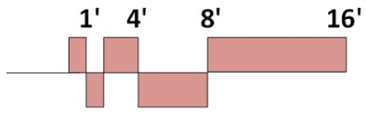
DEI FURNISHED EQUIPMENT

Refrigerators
Freezers
Specialty gases at cylinder restraints

3RD FLOOR LAB SUITE- EAST SIDE
BIO HOOD ALCOVE
Program Requirements







ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile 9’ height minimum
Doors: 3'-6" with view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING
Vacuum valve with shut off at wall above BSC

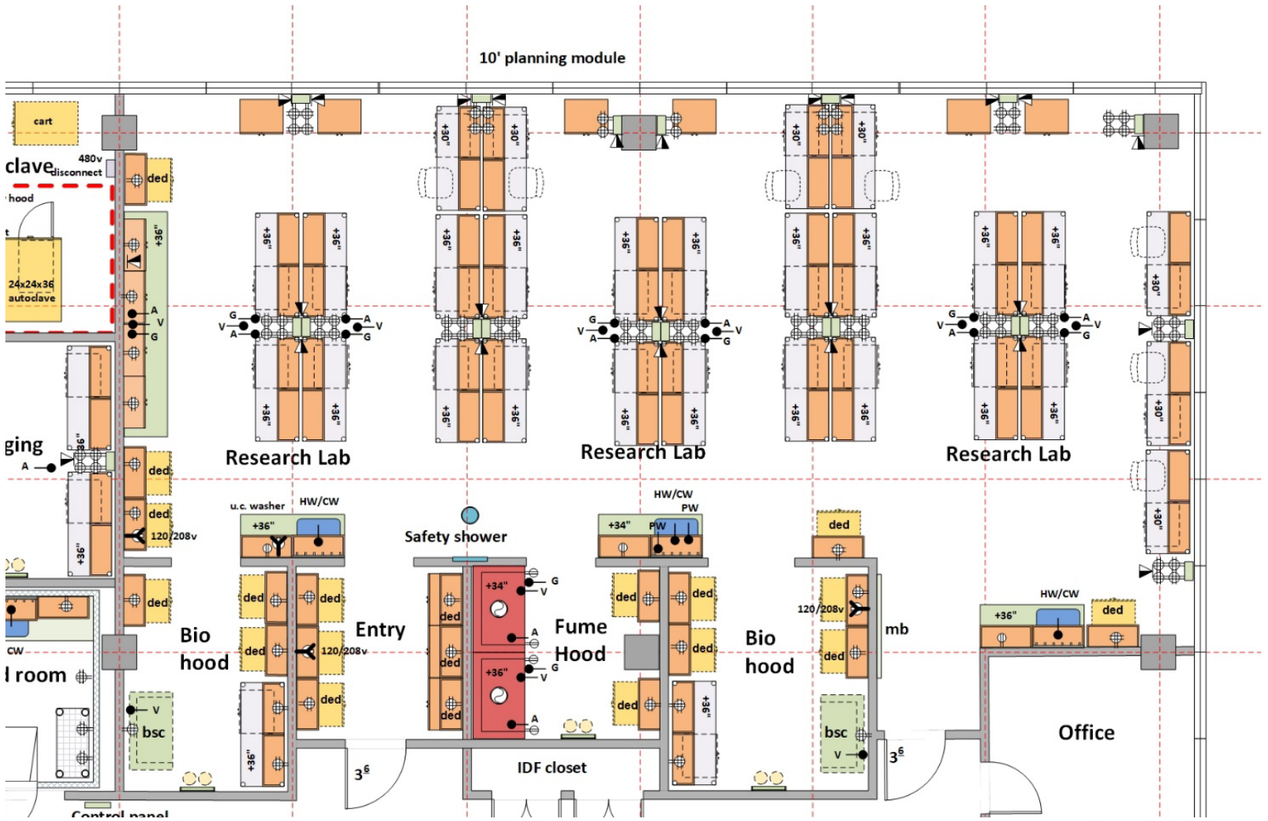
ELECTRICAL
115v20a1ph outlets at walls
208v at equipment spaces
Dedicated circuits at equipment spaces
Standby power at equipment spaces
wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT
Shelf units at equipment spaces
Mobile Protean lab benches
Cylinder restraints

DEI FURNISHED EQUIPMENT
Refrigerators
Incubators
Biological Safety Cabinets (4’)- Class II Type C1- no external exhaust
Specialty gases at cylinder restraints

3RD FLOOR LAB SUITE- EAST SIDE RESEARCH LAB

Program Requirements



ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile cloud- 9'-6" height minimum- 10' preferred
Doors: None; minimum 4' wide openings at alcoves
attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 25 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

Hot/Cold water at sinks
Pure water at sink and point-of-use water polisher
Gas, Air and vacuum at lab benches where noted
Domestic tepid water at safety shower with floor drain

ELECTRICAL

115v20a1ph outlets at walls
208v at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

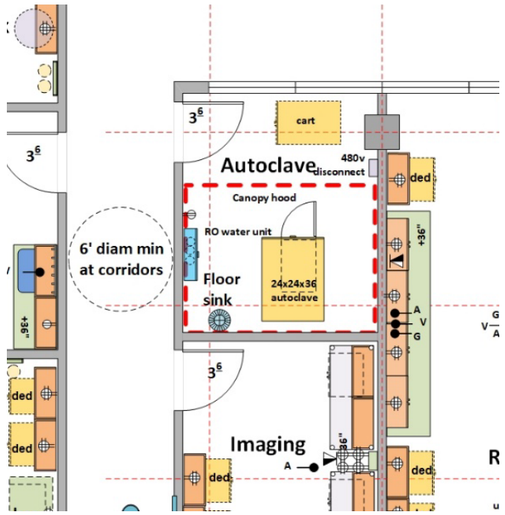
CONTRACTOR FURNISHED EQUIPMENT

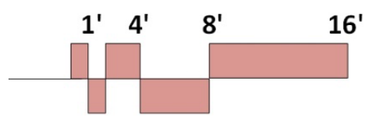
Casework, sinks, tops
Mobile lab benches
Shelf units at equipment spaces
Service columns

DEI FURNISHED EQUIPMENT

Benchtop instruments
Refrigerators
Freezers
Water polishers at sink

3RD FLOOR LAB SUITE- EAST SIDE
AUTOCLAVE ROOM
Program Requirements





ARCHITECTURAL
Occupancy: B
Floor: epoxy
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' height minimum
Doors: 3'-6" solid with no window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 11,140 btuh at peak use (75 btuh/sf)
Pressure: Negative
Exhaust at steam canopy

PLUMBING
Hot/Cold water at autoclave
RO water at autoclave
Floor drain (4"diam) with large drain cover

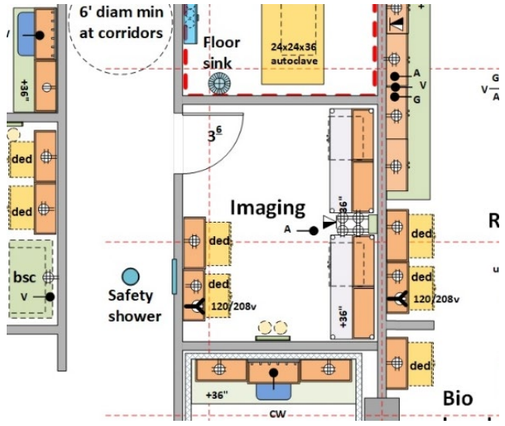
ELECTRICAL
115v20a1ph outlets at walls
480v with disconnect at autoclave
Lighting: direct/indirect LED at 500 LUX

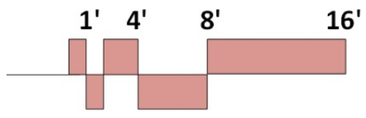
CONTRACTOR FURNISHED EQUIPMENT
Autoclave
RO Unit
Transfer cart

DEI FURNISHED EQUIPMENT
None

3RD FLOOR LAB SUITE- EAST SIDE IMAGING

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' height minimum
Doors: 3'-6" with view window
attenuation: NC 40 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

Compressed air at service column
Domestic tepid water at safety shower (in corridor) with floor drain and drain in wall for eyewash

ELECTRICAL

115v20a1ph outlets at walls
208v at equipment space
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX.

CONTRACTOR FURNISHED EQUIPMENT

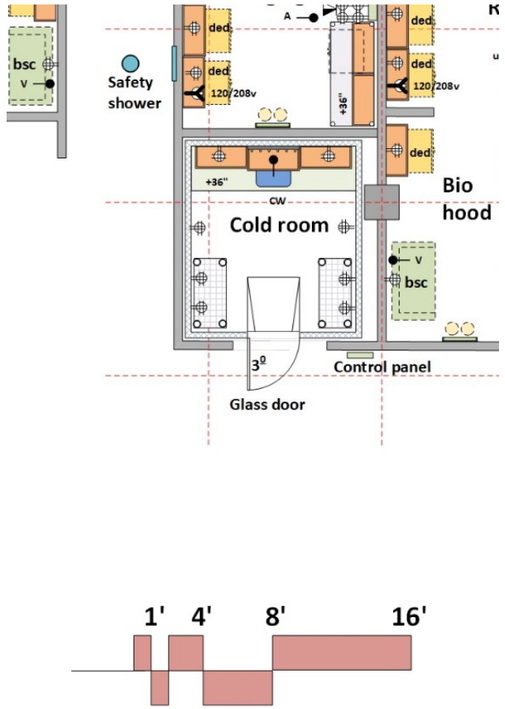
Mobile Protean lab benches
Shelf units at equipment spaces
Service column
Cylinder Restraint

DEI FURNISHED EQUIPMENT

Benchtop instruments
Specialty gases at cylinder racks

3RD FLOOR LAB SUITE- EAST SIDE CONTROLLED ENV ROOM

Program Requirements



ARCHITECTURAL

Occupancy: B
Floor: 2" insulated panel with diamond grid aluminum
Walls: painted metal insulated panels
Ceiling: insulated panel with egg crate plenum
Doors: 3'-0" with full view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 4 deg C +/- 1 deg C
Humidity: Ambient
50 cfm exhaust
Pressure: positive

PLUMBING

Cold water at sink

ELECTRICAL

Single junction box point of connection at top of cold room box
115v20a1ph outlets at walls
Standby power at room
wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

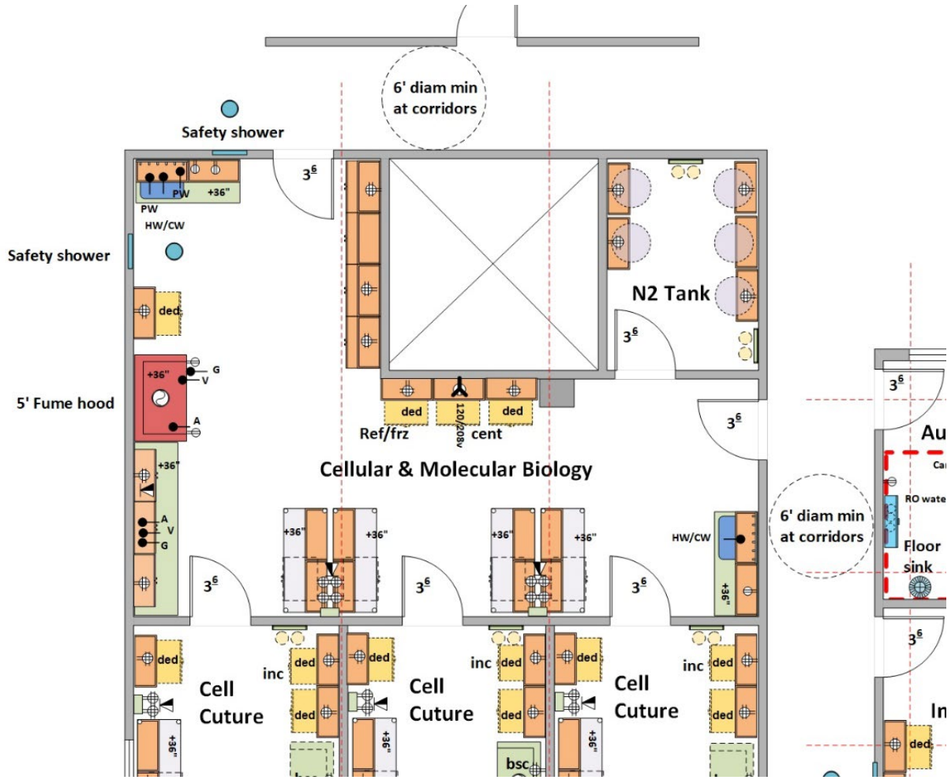
CONTRACTOR FURNISHED EQUIPMENT

All stainless steel casework, sink, tops, shelving
Metro shelf units

DEI FURNISHED EQUIPMENT

Benchtop instruments

3RD FLOOR LAB SUITE- EAST SIDE
CELLULAR & MOLECULAR BIOLOGY
Program Requirements



ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' minimum-
Doors: 3'-6" with view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 25 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING
Hot/Cold water at sinks
Pure water at sink via point-of-use water polisher
Gas, Air and vacuum at lab benches where noted
Domestic tepid water at safety shower with floor drain

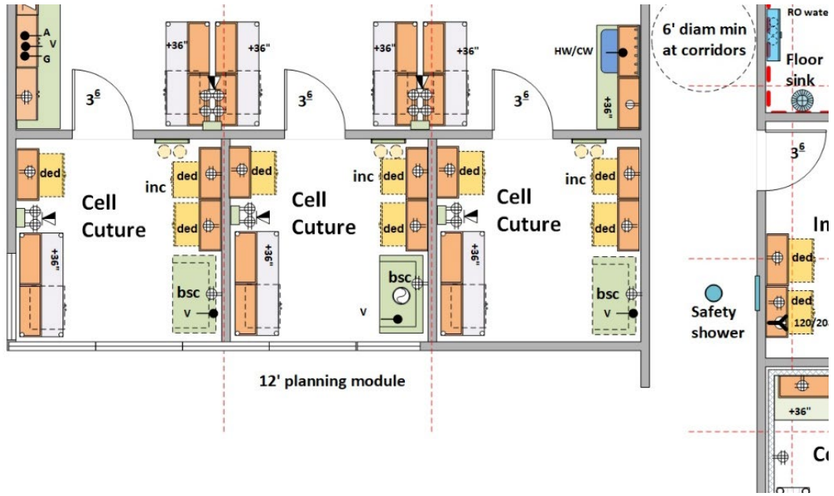
ELECTRICAL
115v20a1ph outlets at walls
208v at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

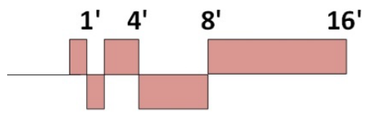
CONTRACTOR FURNISHED EQUIPMENT
Casework, sinks, tops
Mobile Protean lab benches
Shelf units at equipment spaces
Service columns

DEI FURNISHED EQUIPMENT
Benchtop instruments
Refrigerators
Freezers
Centrifuge
Water polishers at sink

3RD FLOOR LAB SUITE- EAST SIDE CELL CULTURE

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' minimum
Doors: 3'-6" with view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 25 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

Vacuum with shut off valve at wall above BSC

ELECTRICAL

115v20a1ph outlets at walls
Standby power at equipment spaces
wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

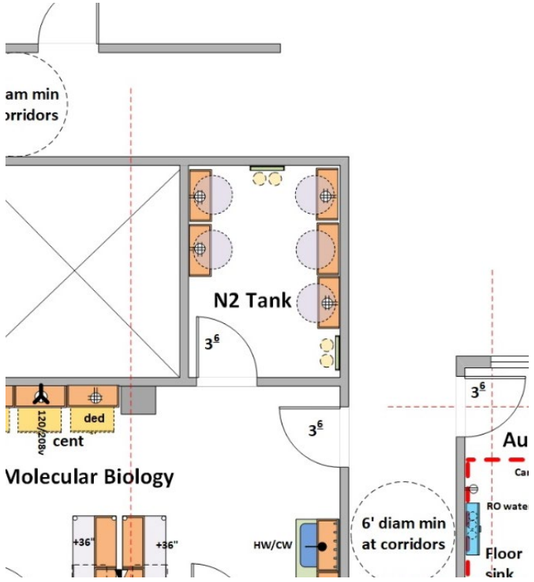
CONTRACTOR FURNISHED EQUIPMENT

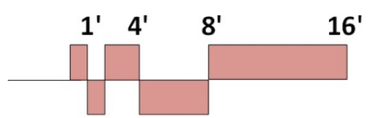
Mobile lab benches
Shelf units at equipment spaces
BSC- biological safety cabinet Class II Type C1 with exhaust in center room
Service columns

DEI FURNISHED EQUIPMENT

Benchtop instruments
Refrigerators
incubators
BSC- biological safety cabinets; Class II Type A (no exhaust) in 2 rooms

3RD FLOOR LAB SUITE- EAST SIDE
N2 TANK
Program Requirements





ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' minimum
Doors: 3'-6" with view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING
None

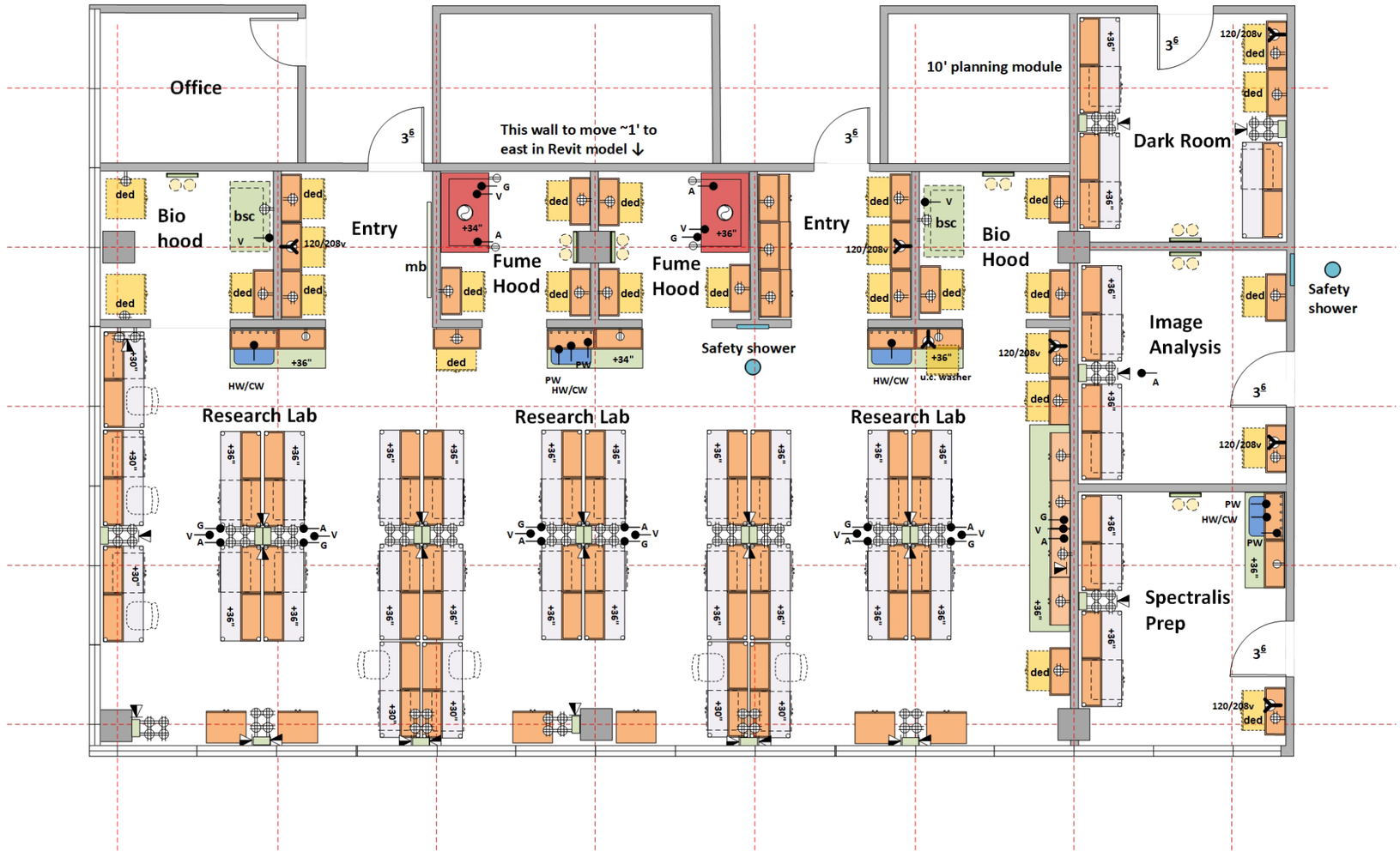
ELECTRICAL
115v20a1ph outlets at walls
Standby power at equipment spaces
wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

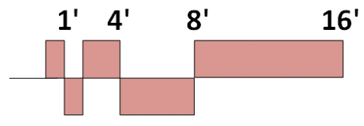
CONTRACTOR FURNISHED EQUIPMENT
Unistrut shelf units at walls
Chain restraints for N2 tanks/dewars

DEI FURNISHED EQUIPMENT
N2 tanks/dewars
Specialty gas cylinders

3RD FLOOR LAB SUITE- WEST SIDE

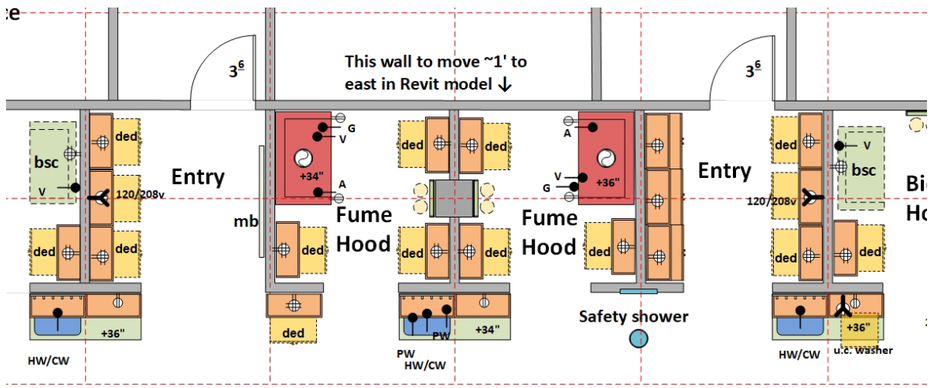
Program Requirements

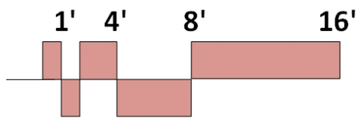




3RD FLOOR LAB SUITE- WEST SIDE LAB ENTRY ALCOVE

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' height minimum
Doors: 3'-6" with view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative

PLUMBING

None

ELECTRICAL

115v20a1ph outlets at walls
Dedicated circuits at equipment spaces
208v at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

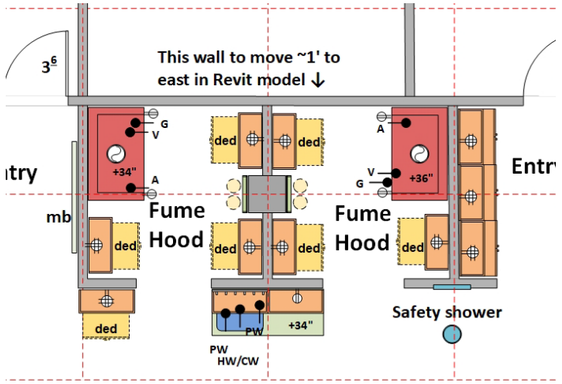
CONTRACTOR FURNISHED EQUIPMENT

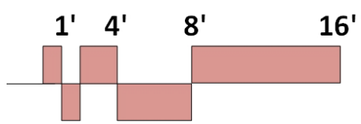
Shelf units at equipment spaces
Tall cabinets- lockable
Marker board

DEI FURNISHED EQUIPMENT

Refrigerators
Freezers

3RD FLOOR LAB SUITE- WEST SIDE
FUME HOOD ALCOVE
Program Requirements





ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile 9' height minimum
Doors: None; minimum 4' wide opening
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative

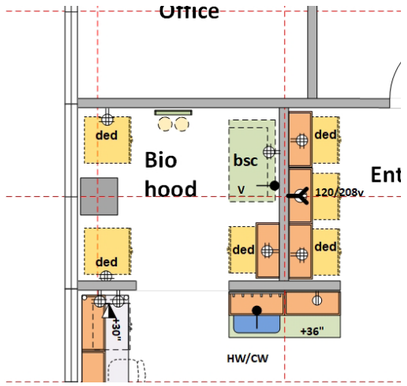
PLUMBING
Gas, Air, and vacuum at fume hoods

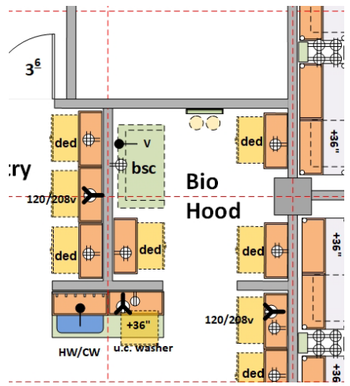
ELECTRICAL
115v20a1ph outlets at walls
Dedicated circuits at equipment spaces
208v at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

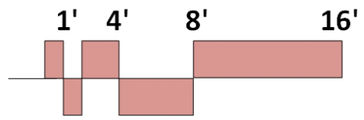
CONTRACTOR FURNISHED EQUIPMENT
Shelf units at equipment spaces
Chemical Fume Hoods- VAV; 600 cfm at each 5' hood
Cylinder restraints

DEI FURNISHED EQUIPMENT
Refrigerators
Freezers
Centrifuges

3RD FLOOR LAB SUITE- WEST SIDE
BIO HOOD ALCOVE
Program Requirements







ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile 9’ height minimum
Doors: 3'-6" with view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL
Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING
Vacuum valve with shut off at wall above BSC

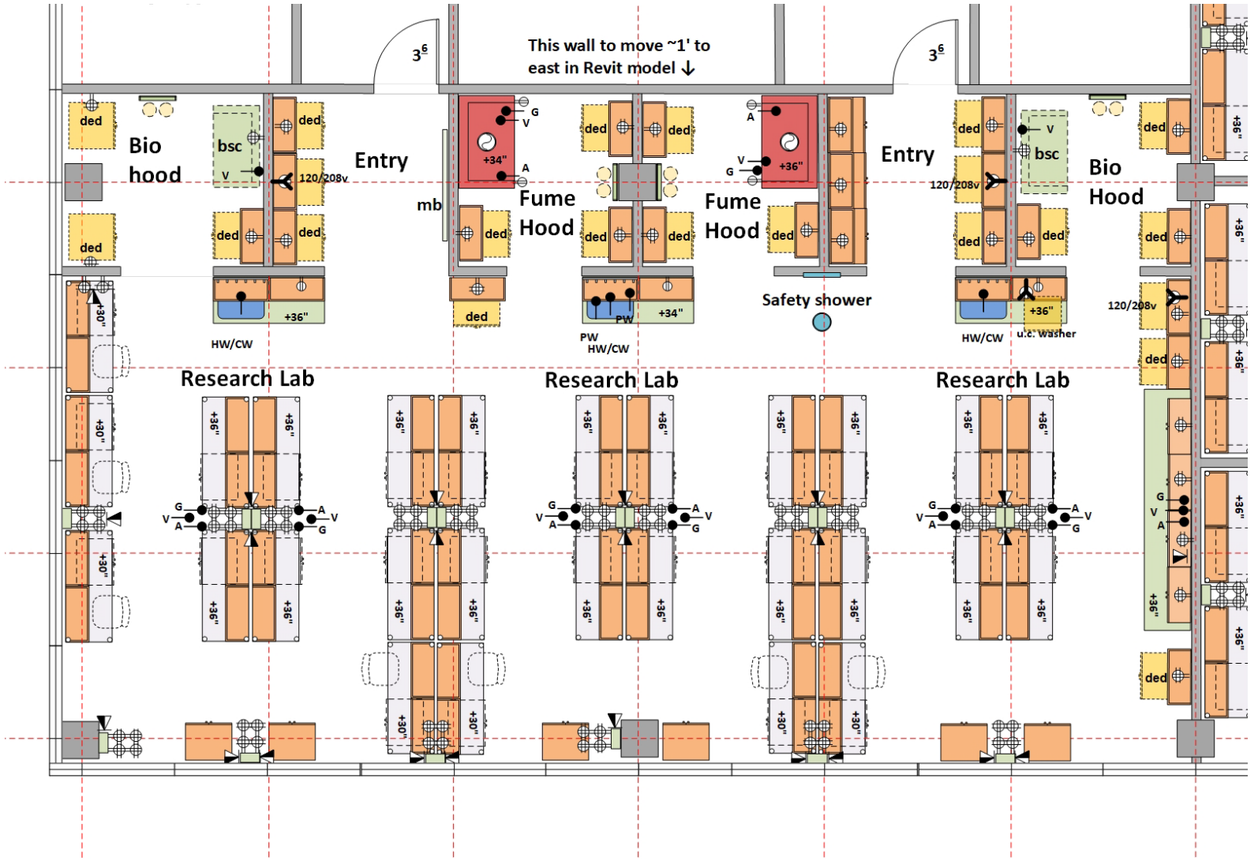
ELECTRICAL
115v20a1ph outlets at walls
208v at equipment spaces
Dedicated circuits at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

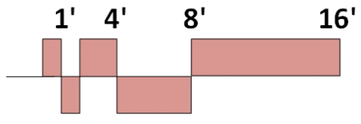
CONTRACTOR FURNISHED EQUIPMENT
Shelf units at equipment spaces
Cylinder restraints

DEI FURNISHED EQUIPMENT
Refrigerators
Incubators
Biological Safety Cabinets (4’)- Class II Type C1- no external exhaust

3RD FLOOR LAB SUITE- WEST SIDE RESEARCH LAB

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile cloud- 9'-6" height minimum- 10' preferred
Doors: None; minimum 4' wide openings at alcoves
attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 25 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

Hot/Cold water at sinks
Pure water at sink and point-of-use water polisher
Gas, Air and vacuum at lab benches where noted
Domestic tepid water at safety shower with floor drain

ELECTRICAL

115v20a1ph outlets at walls
208v at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 50 LUX

CONTRACTOR FURNISHED EQUIPMENT

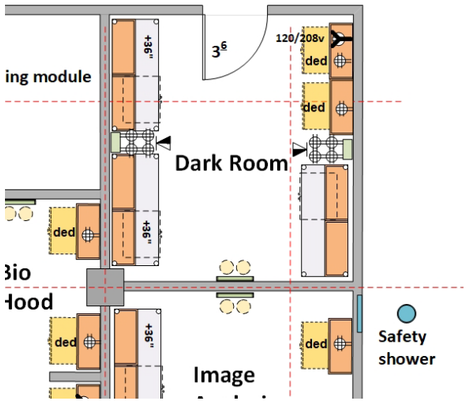
Casework, sinks, tops
Mobile lab benches
Shelf units at equipment spaces
Service columns

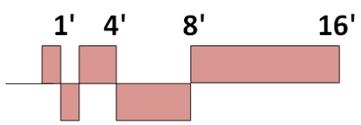
DEI FURNISHED EQUIPMENT

Benchtop instruments
Refrigerators
Freezers
Water polishers at sink
Specialty gases at cylinder restraints

3RD FLOOR LAB SUITE- WEST SIDE DARK ROOM

Program Requirements





ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' height minimum
Doors: 3'-6" solid with no window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL

Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING

None

ELECTRICAL

115v20a1ph outlets at walls
208v at equipment spaces
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

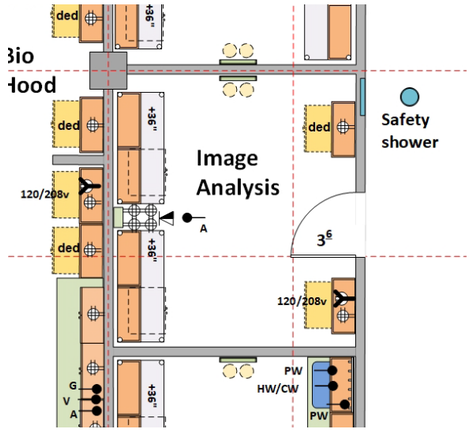
CONTRACTOR FURNISHED EQUIPMENT

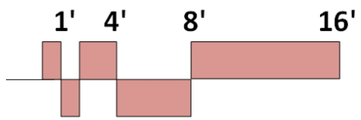
Casework, sinks, tops
Mobile Protean lab benches
Shelf units at equipment spaces
Service columns
Cylinder restraint

DEI FURNISHED EQUIPMENT

Benchtop instruments
Specialty gases at cylinder racks

3RD FLOOR LAB SUITE- WEST SIDE
IMAGE ANALYSIS
Program Requirements





ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' height minimum
Doors: 3'-6" with view window
attenuation: NC 40 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

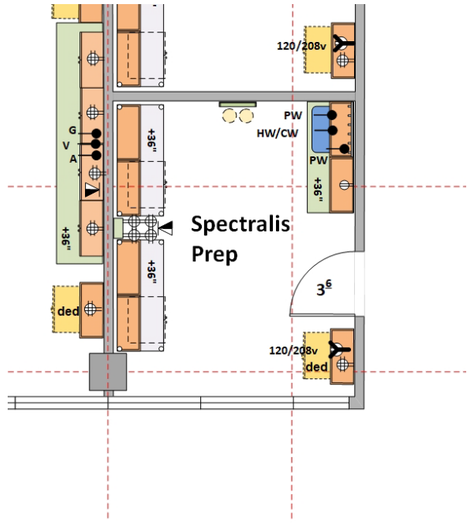
MECHANICAL
Temperature: 70 deg F +/- 2 deg F
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

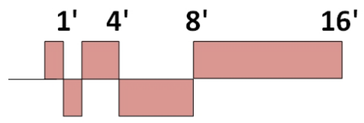
PLUMBING
Domestic tepid water at safety shower (in corridor) with floor drain and drain in wall for eyewash
Compressed air at service column

ELECTRICAL
115v20a1ph outlets at walls
208v at equipment space
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX.

CONTRACTOR FURNISHED EQUIPMENT
Casework, sinks, tops
Mobile Protean lab benches
Shelf units at equipment spaces
Service column
Cylinder Restraints

DEI FURNISHED EQUIPMENT
Benchtop instruments
Instrument carts at equipment spaces
Specialty gases at cylinder racks





3RD FLOOR LAB SUITE- WEST SIDE SPECTRALIS PREP

Program Requirements

ARCHITECTURAL
Occupancy: B
Floor: vinyl tile
Walls: metal stud with gypsum board, enamel paint
Ceiling: acoustic tile- 9' height minimum
Doors: 3'-6" with view window
attenuation: NC 45 or less
Security: digital access

STRUCTURAL
Existing concrete slab at floor
Upgrade vibration attenuation to 4,000 microinches per second or less

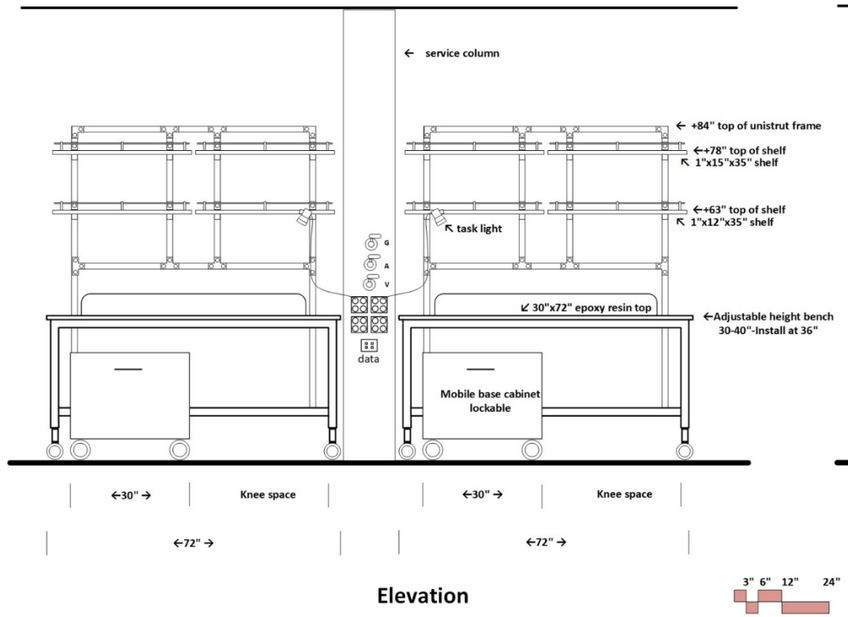
MECHANICAL
Temperature: 70 deg F +/- 2 deg F; 4 deg C for Cold Room
Humidity: Ambient
100% exhaust
Air changes: 8/hour occupied; 4/hour unoccupied
Air change rate may be higher due to equipment heat gain
Equipment heat gain: 50 btuh/sf
Pressure: Negative or positive depending upon use

PLUMBING
Hot/Cold water at sink
Pure water faucet at sink
Pure water valve above sink for point-of-use polisher
Ultrapure water at sink via point-of-use water polisher
Specialty gases (nitrogen, helium, argon) at cylinder rack

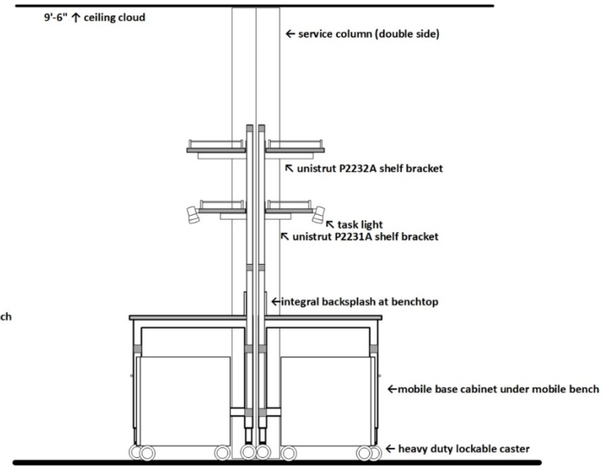
ELECTRICAL
115v20a1ph outlets at walls
208v at equipment space
Standby power at equipment spaces
Hardwire and wireless data (WAP)
Lighting: direct/indirect LED at 500 LUX

CONTRACTOR FURNISHED EQUIPMENT
Casework, sinks, tops
Mobile lab benches
Shelf units at equipment spaces
Cylinder restraints
Service column

DEI FURNISHED EQUIPMENT
Benchtop instruments
Refrigerator/freezer
Water polisher at sink
Specialty gases at cylinder racks



Elevation



Section

SECTION DETAILS

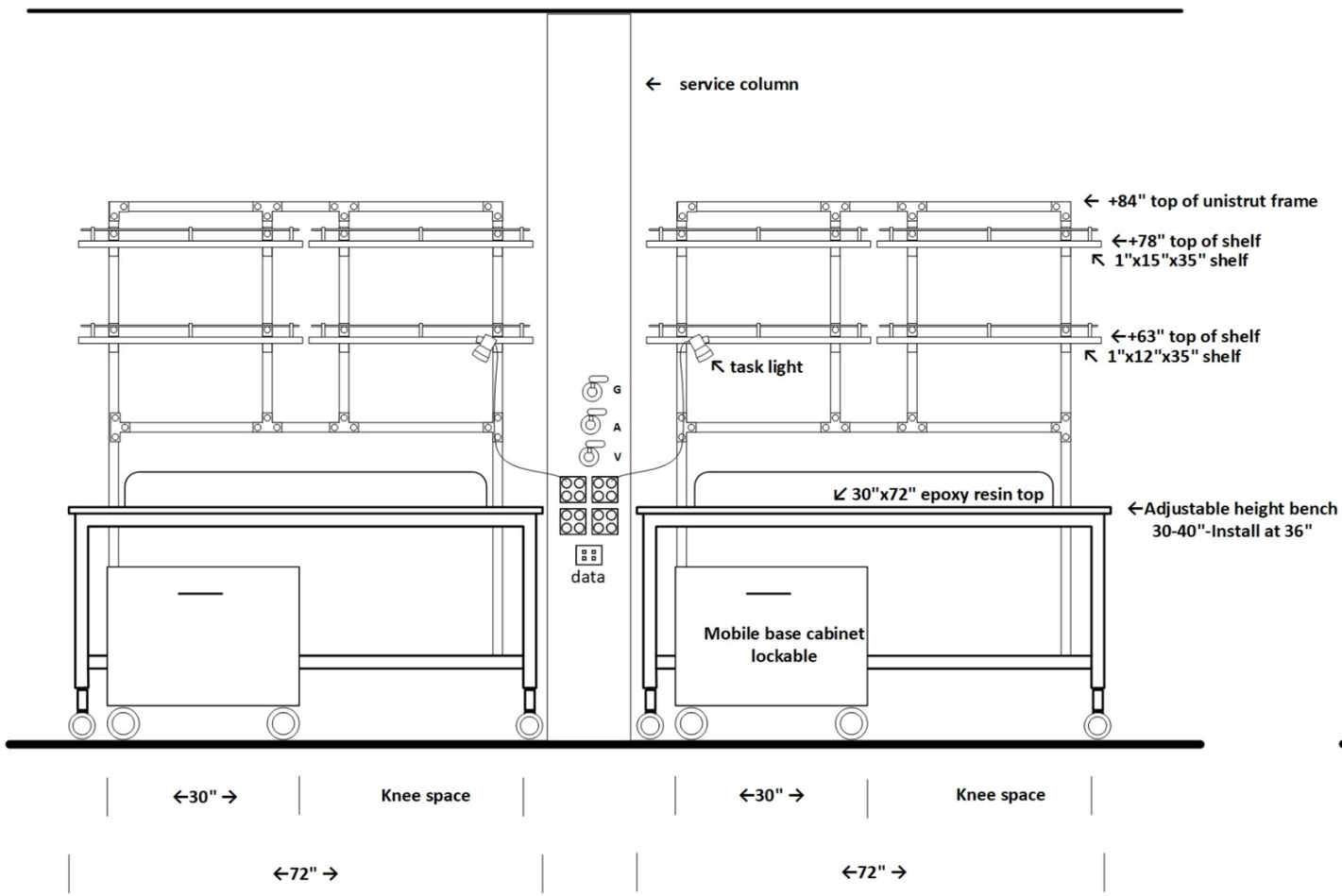
The following details illustrate basic configurations of lab casework conditions. They illustrate 4 of the 5 key elements of lab design:

1. **Bench/work surface.**
2. **Sink Station.**
3. **Storage.**
4. **Equipment Space.**

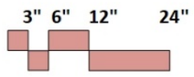
The 5th element of lab design, chemical fume hood, is shown in the cut sheets section.

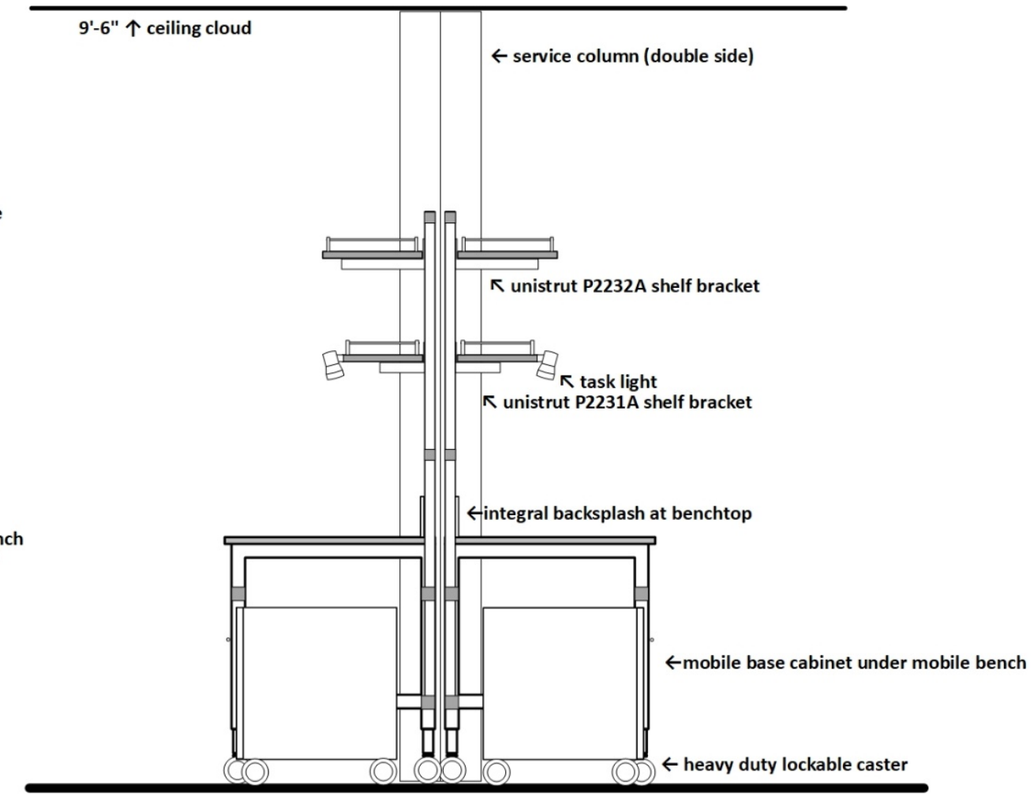
5. **Fume Hood.**

SECTION DETAIL 01
Protean Lab Bench Island



Elevation

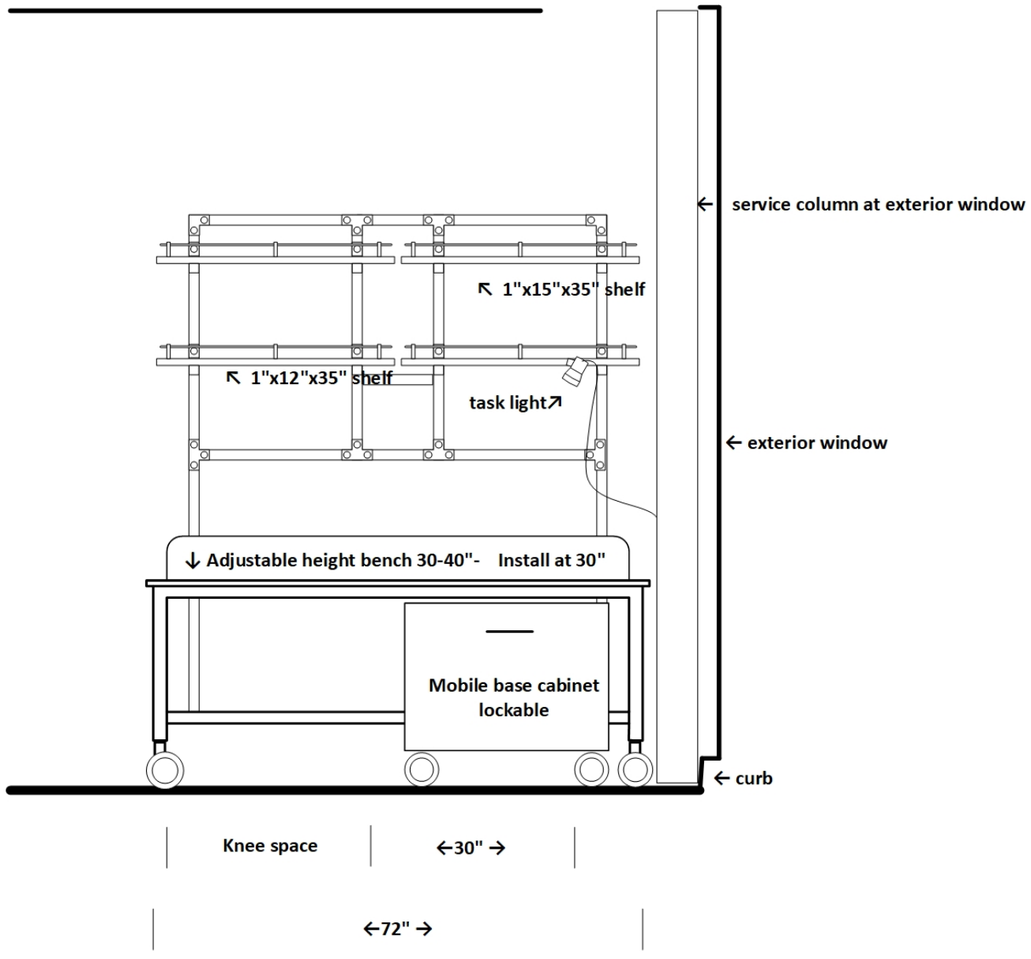




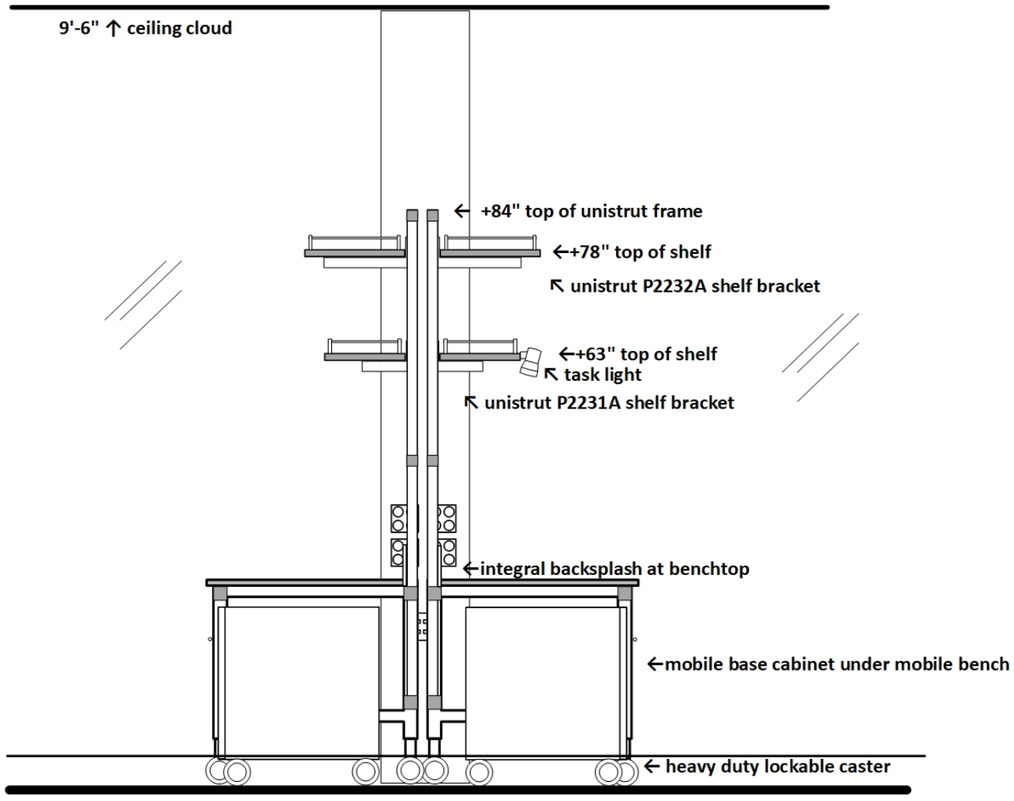
Section

SECTION DETAIL 02

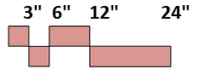
Protean Lab Bench at Ext. Window



Elevation



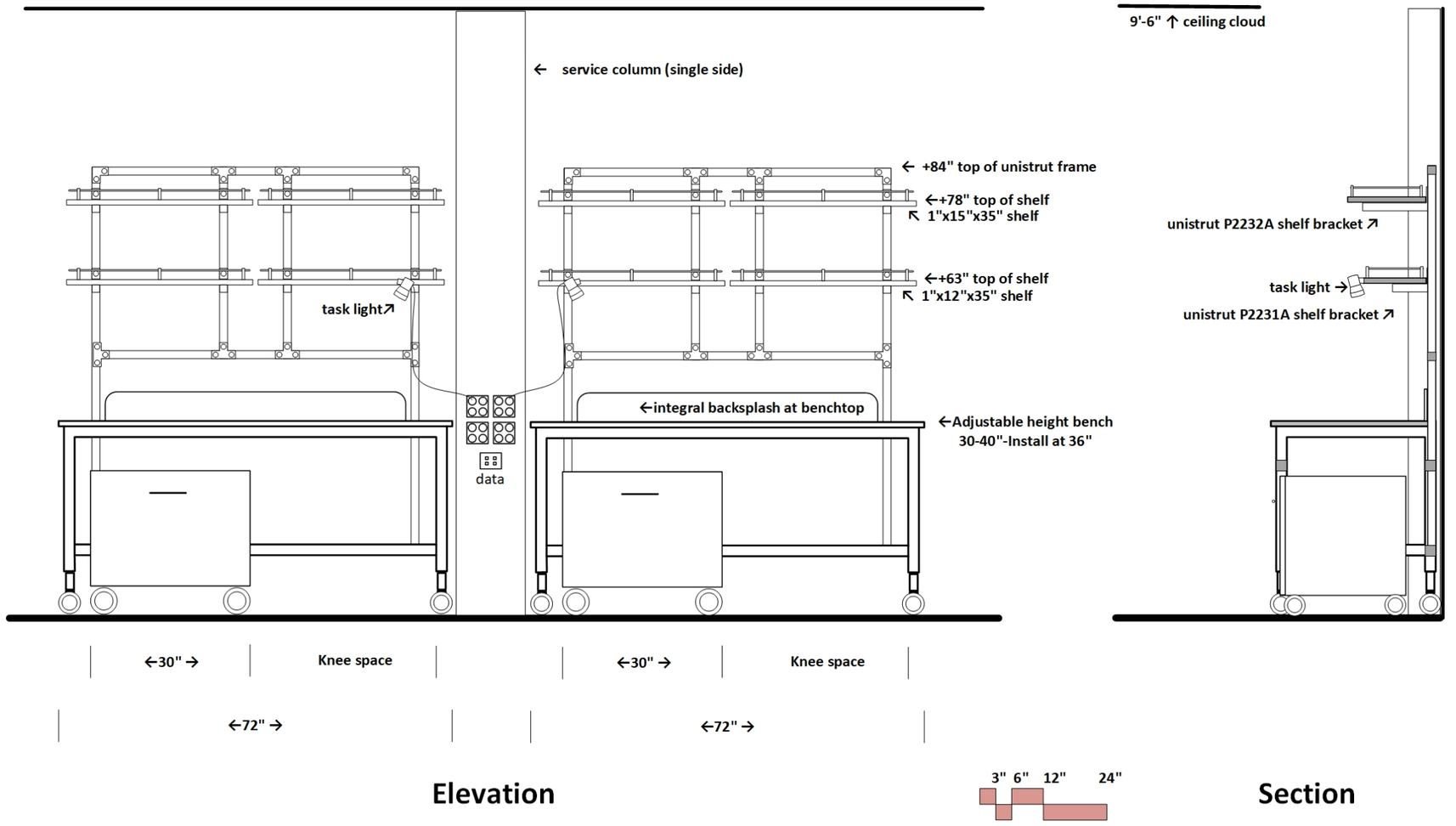
Section



SECTION DETAIL 03

Protean Lab Bench at Wall- Double

2 adjacent lab benches shown
Similar for single lab bench

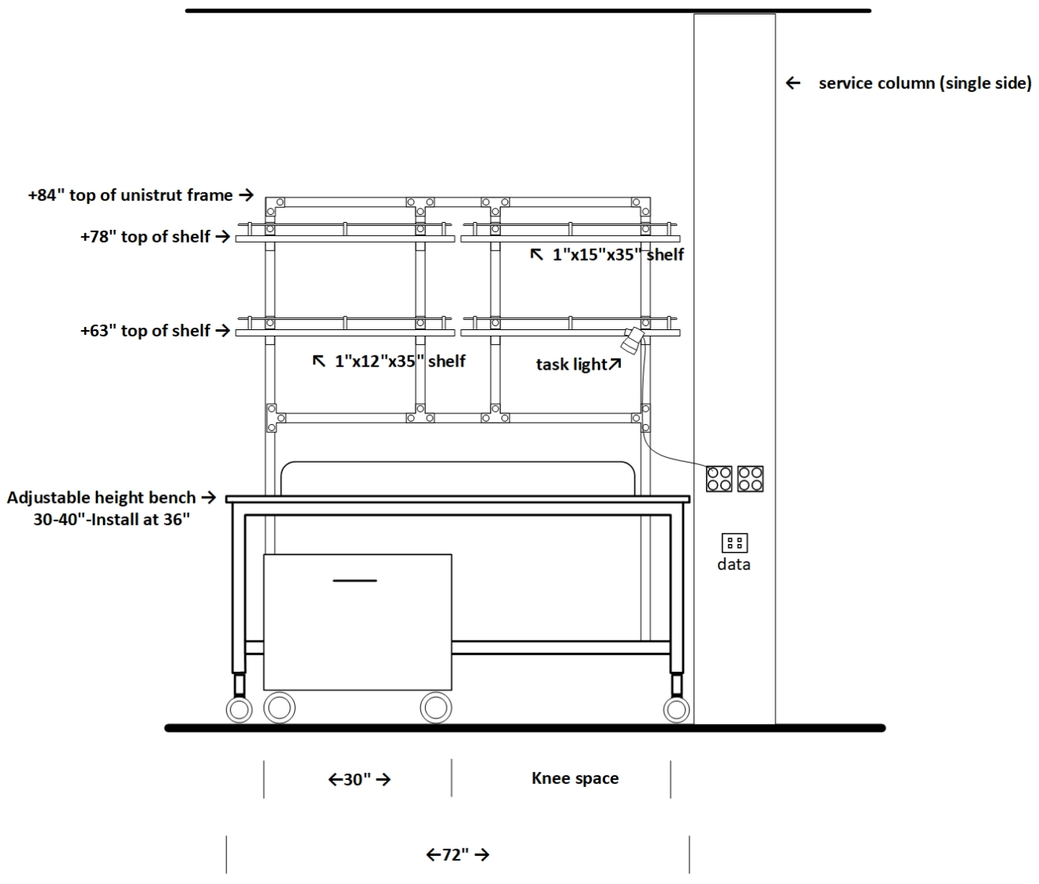


Elevation

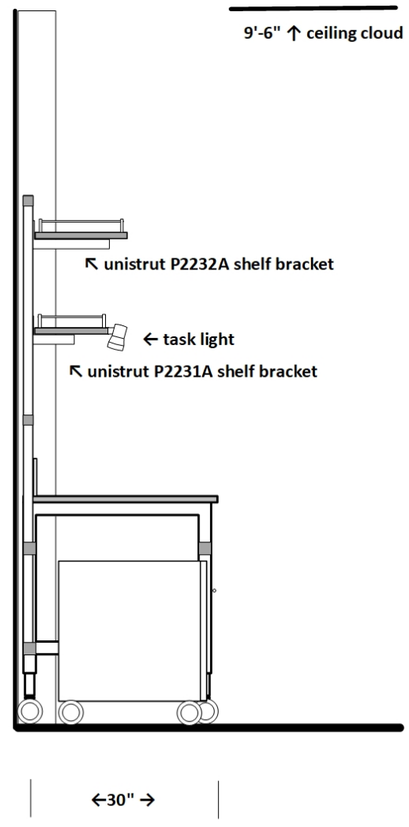
Section

SECTION DETAIL 04

Protean Lab Bench at Wall- Single



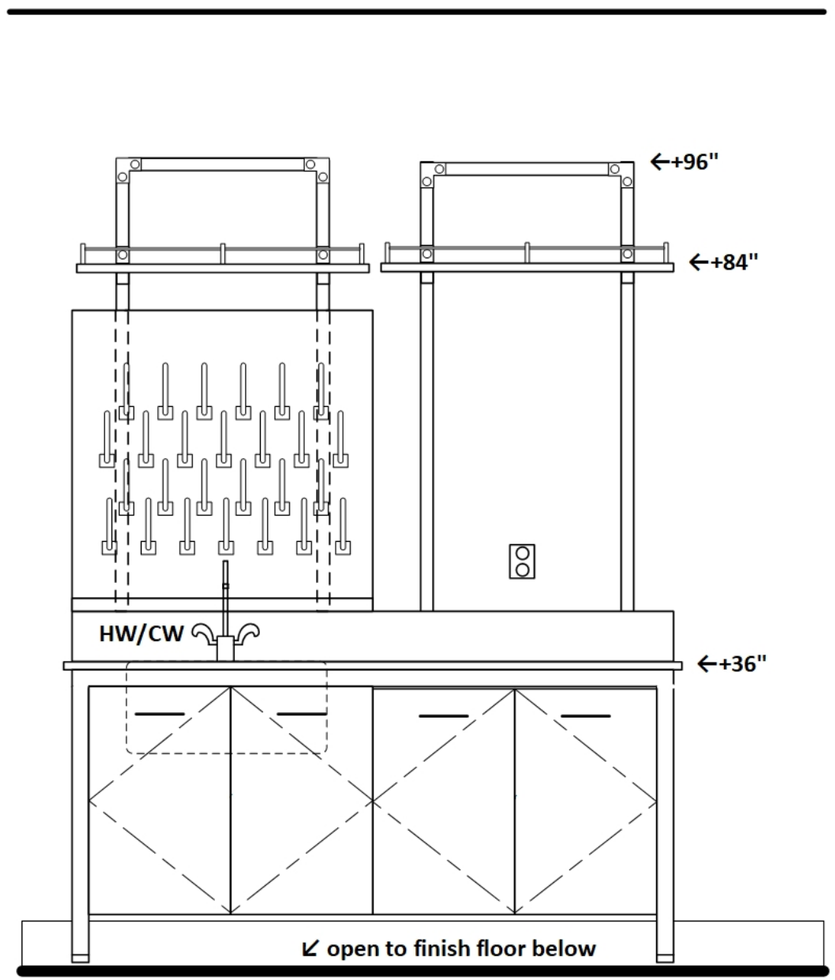
Elevation



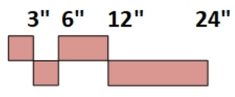
Section

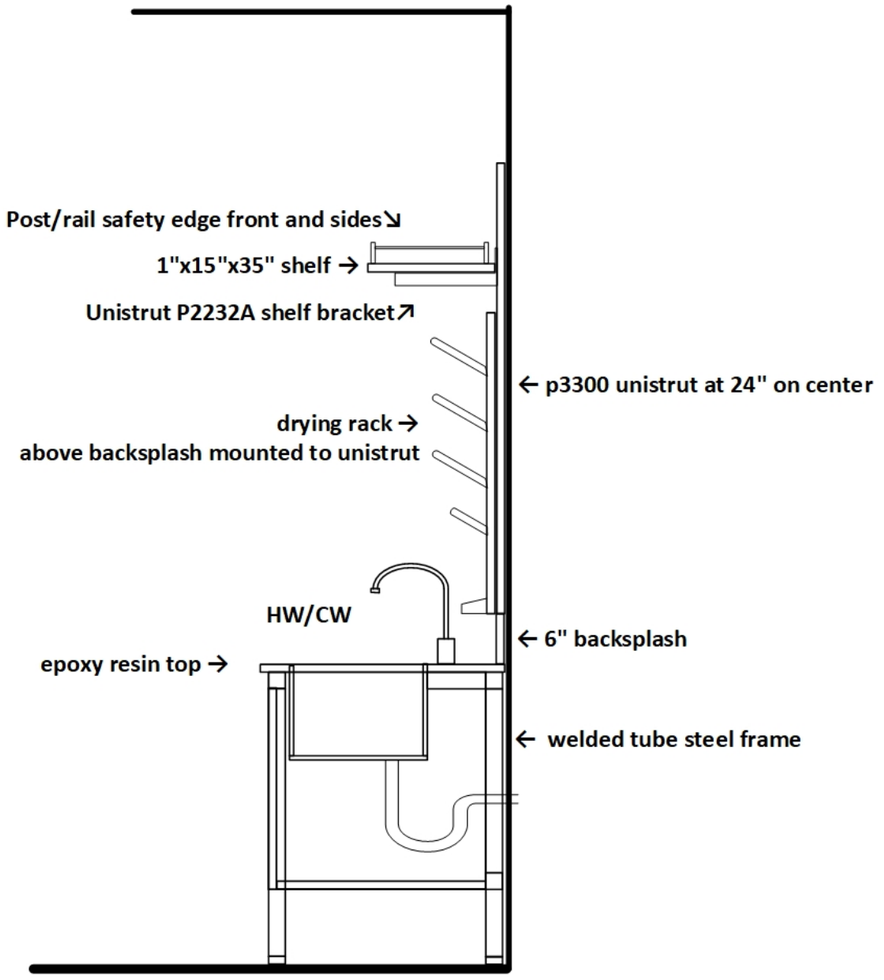
3" 6" 12" 24"

SECTION DETAIL 05
Sink Station



Elevation

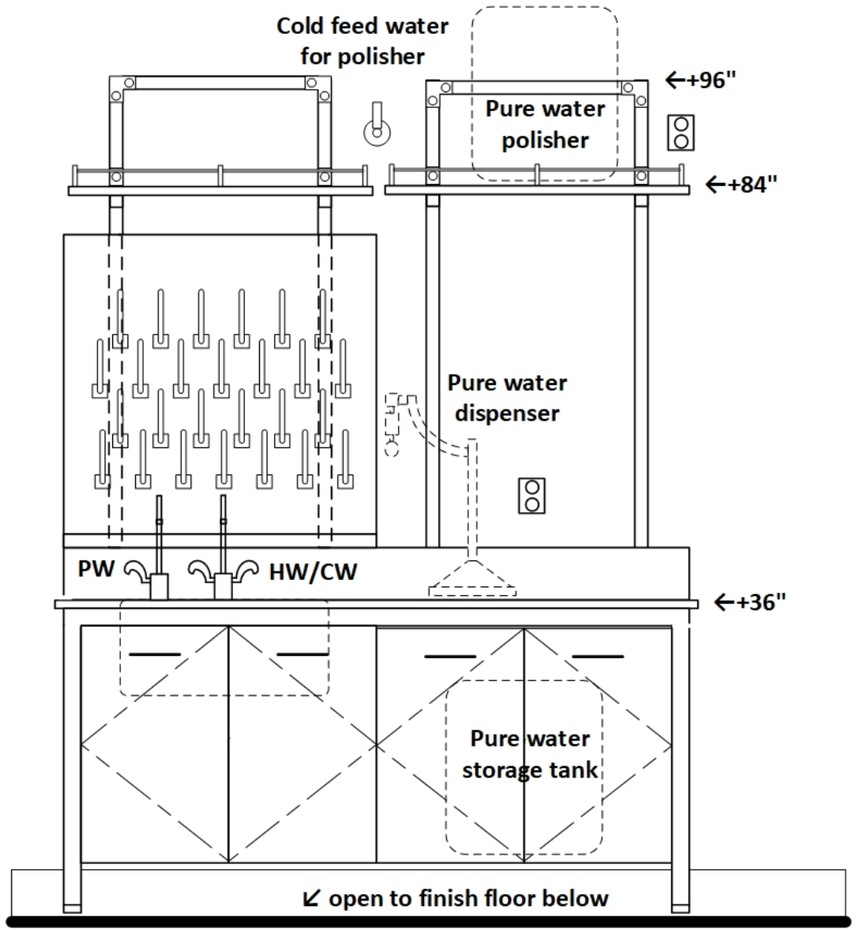




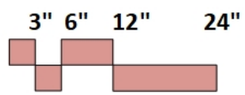
Section

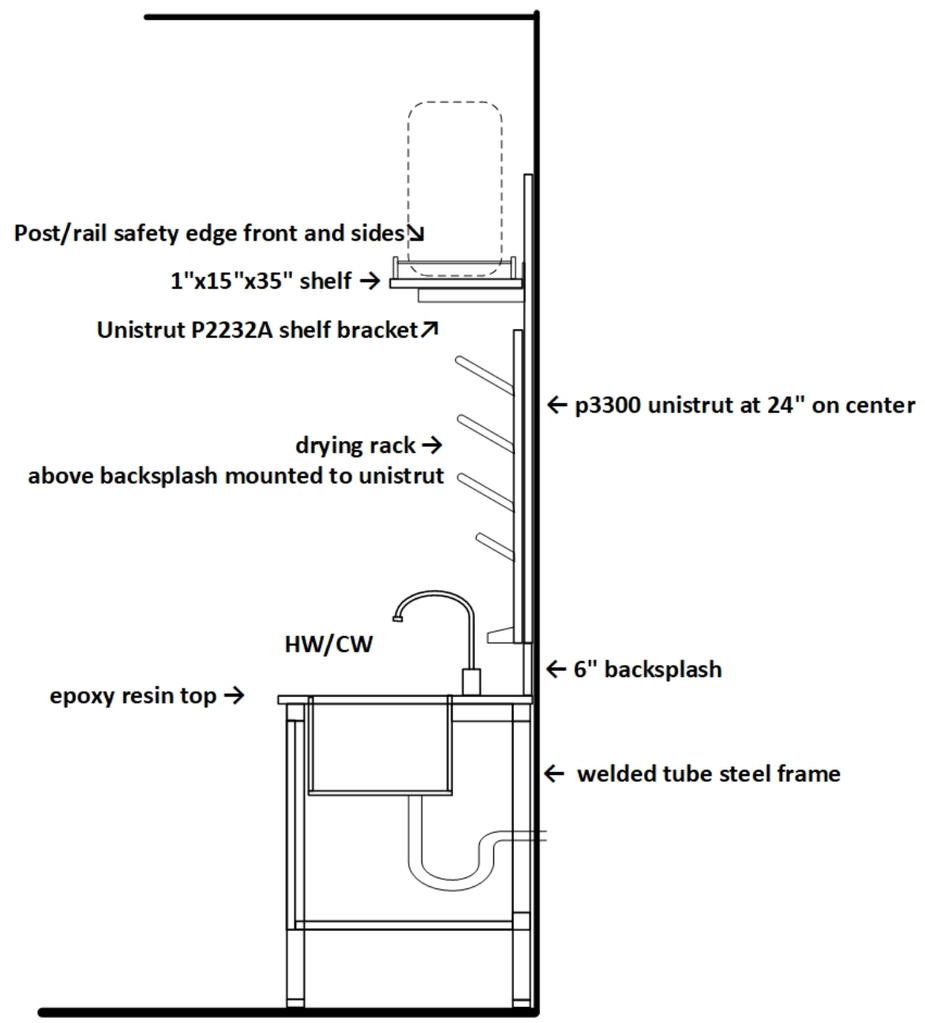
SECTION DETAIL 06

Sink Station with Water Polisher



Elevation

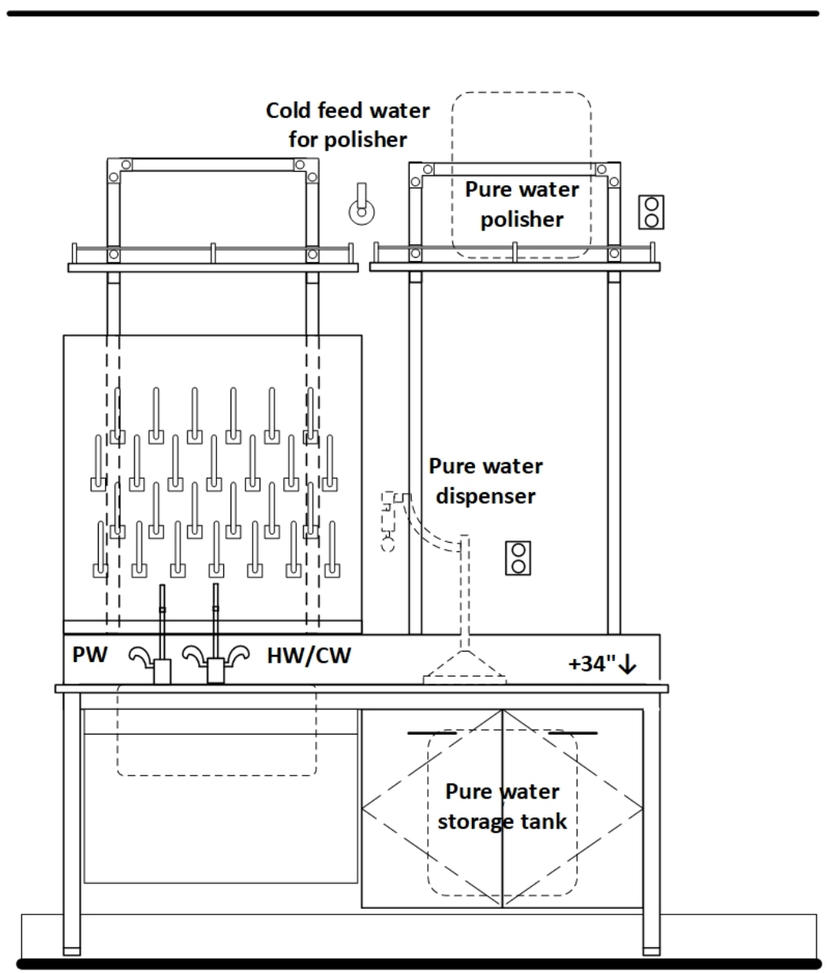




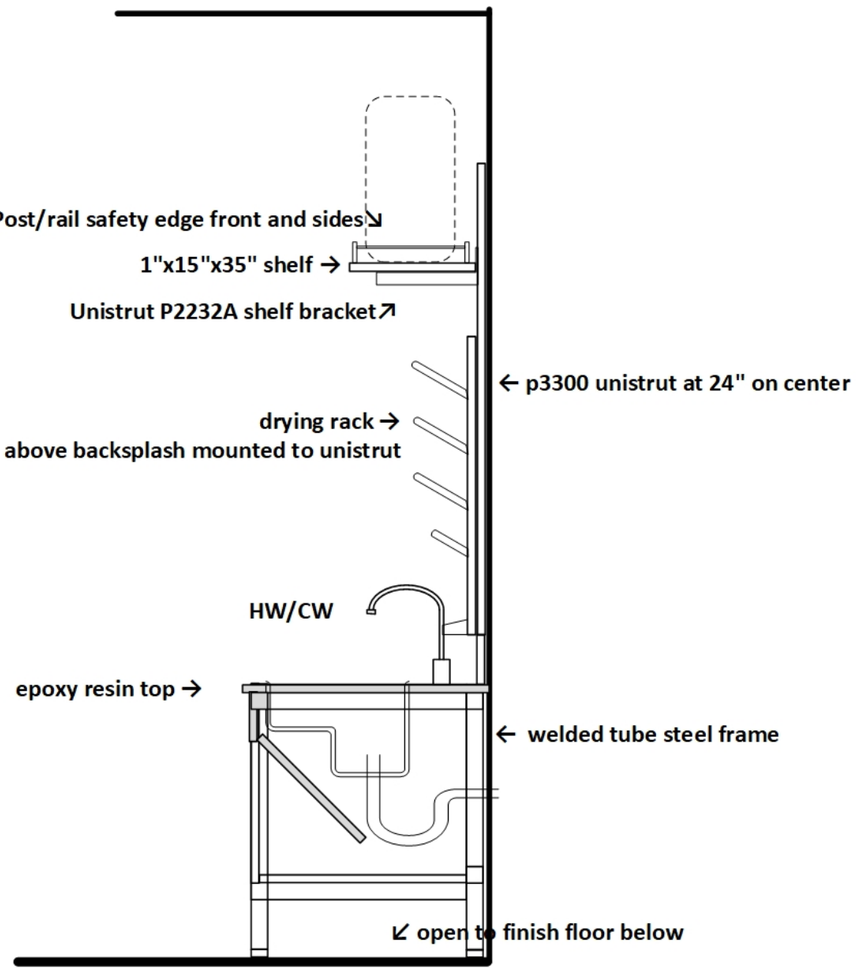
Section

SECTION DETAIL 07

Sink Station- Accessible
With water polisher



Elevation



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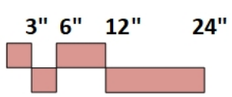
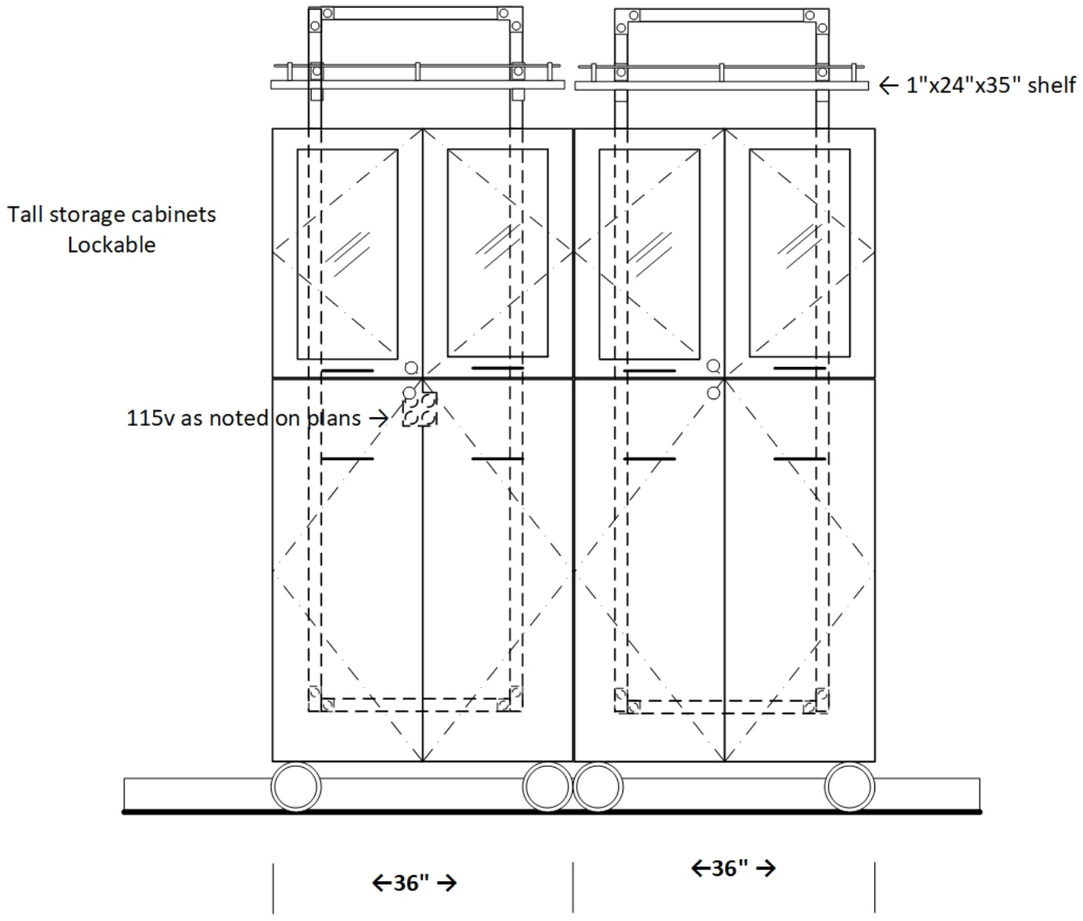


SECTION DETAIL 08
Tall Storage Cabinet



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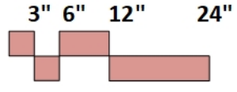
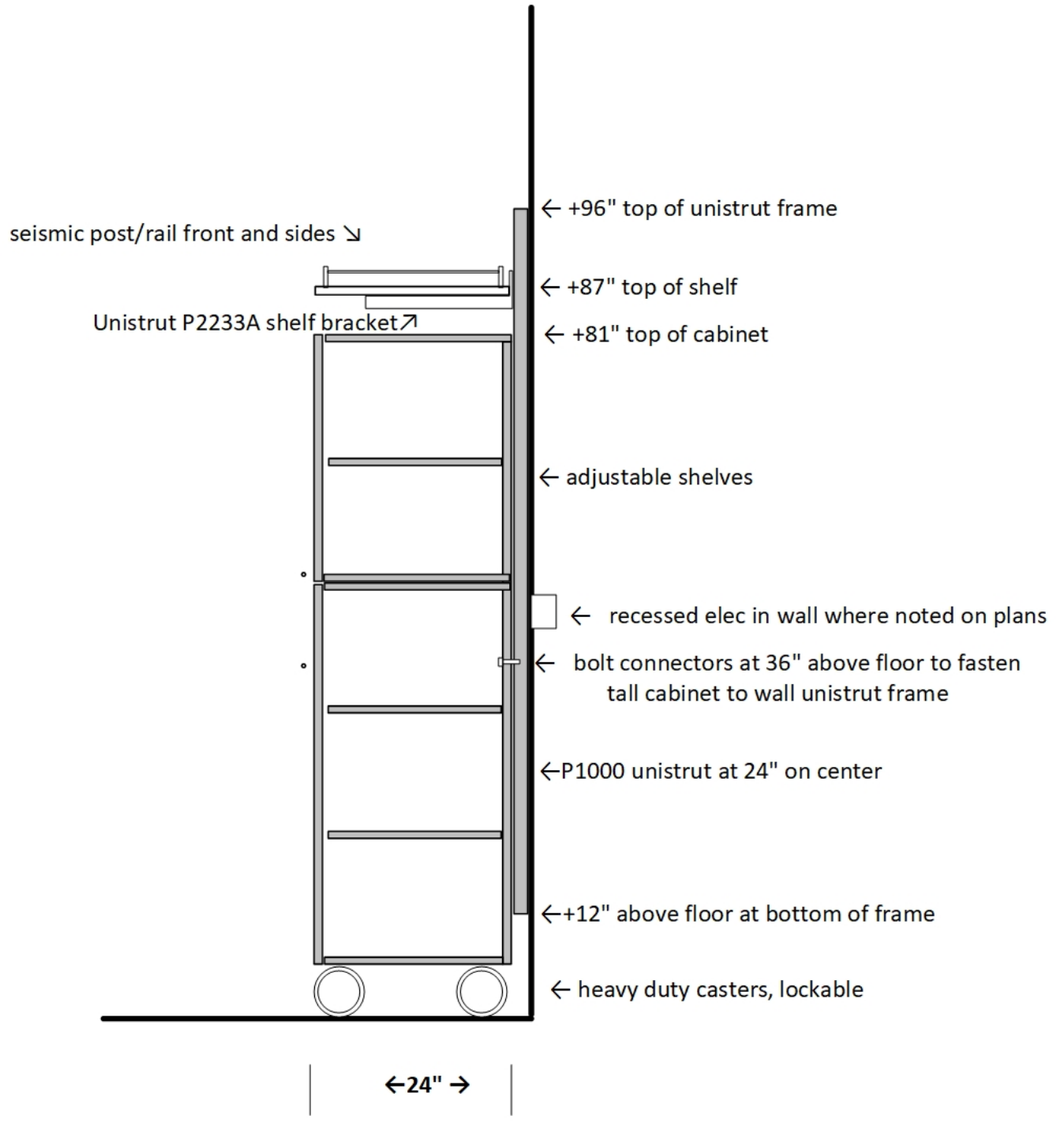
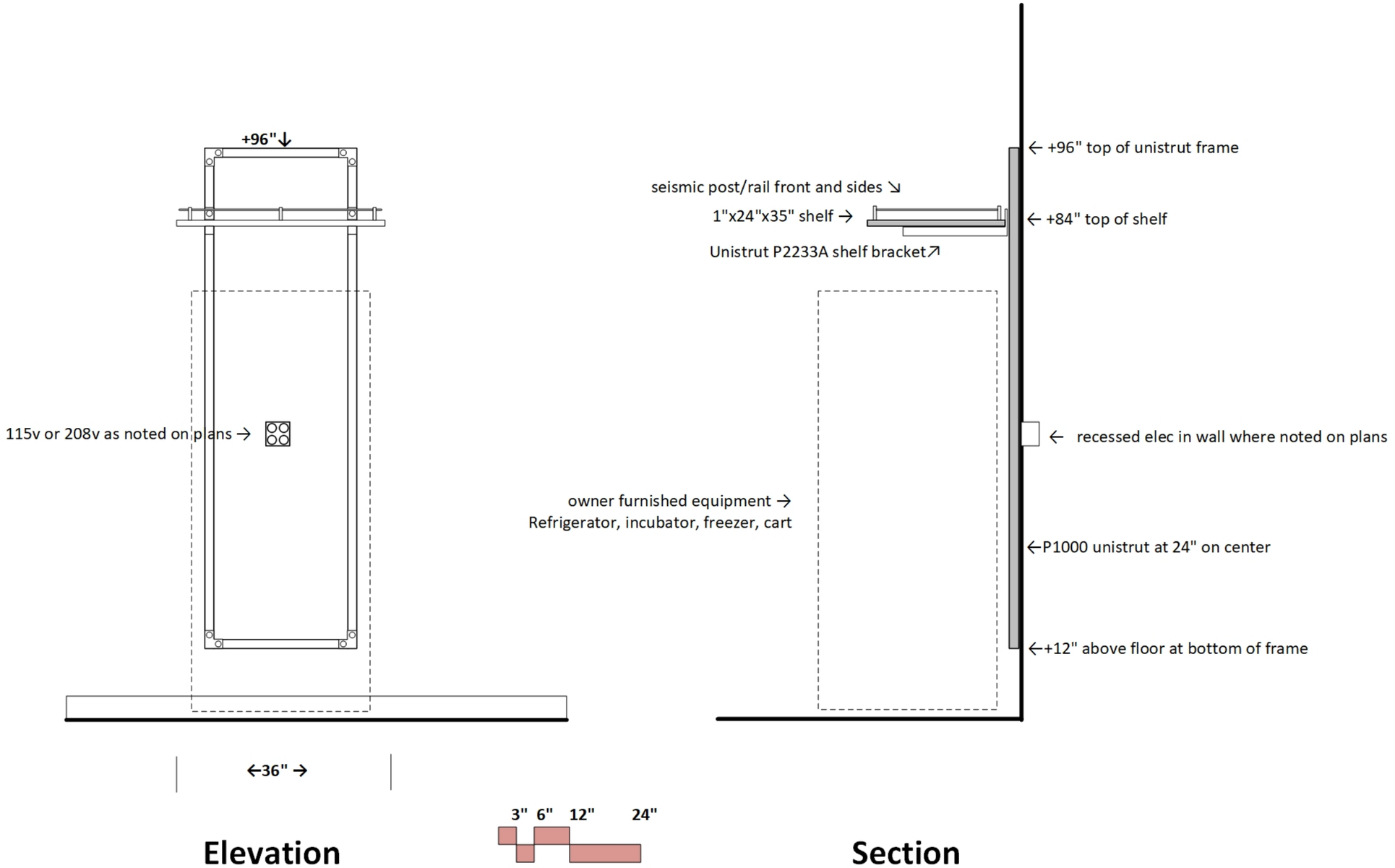




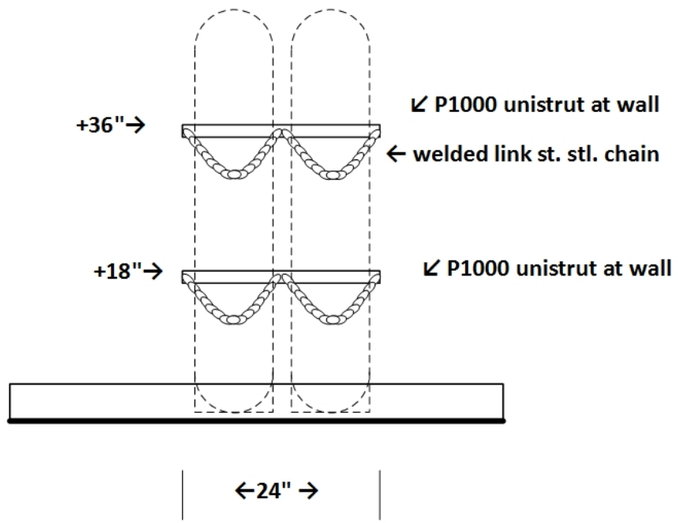
Section

SECTION DETAIL 09
Equipment Space at Wall



SECTION DETAIL 10

Cylinder Restraint



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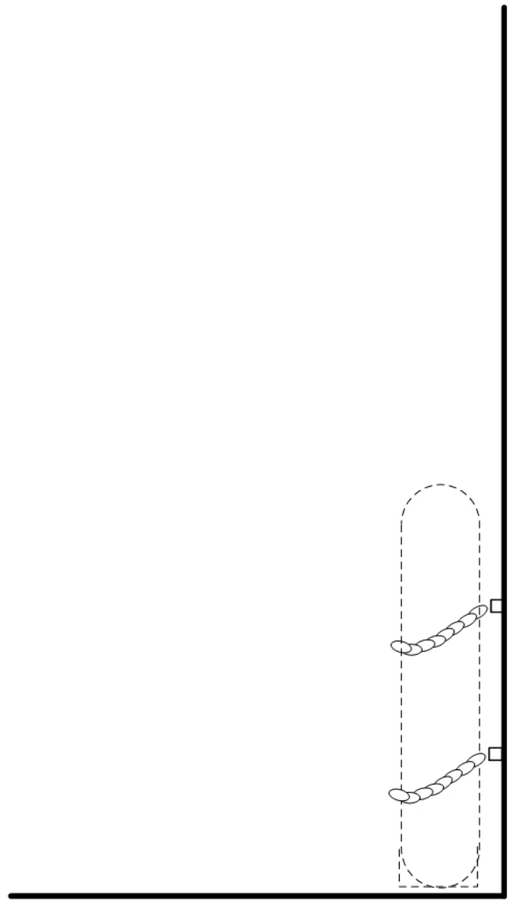

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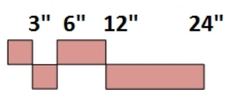
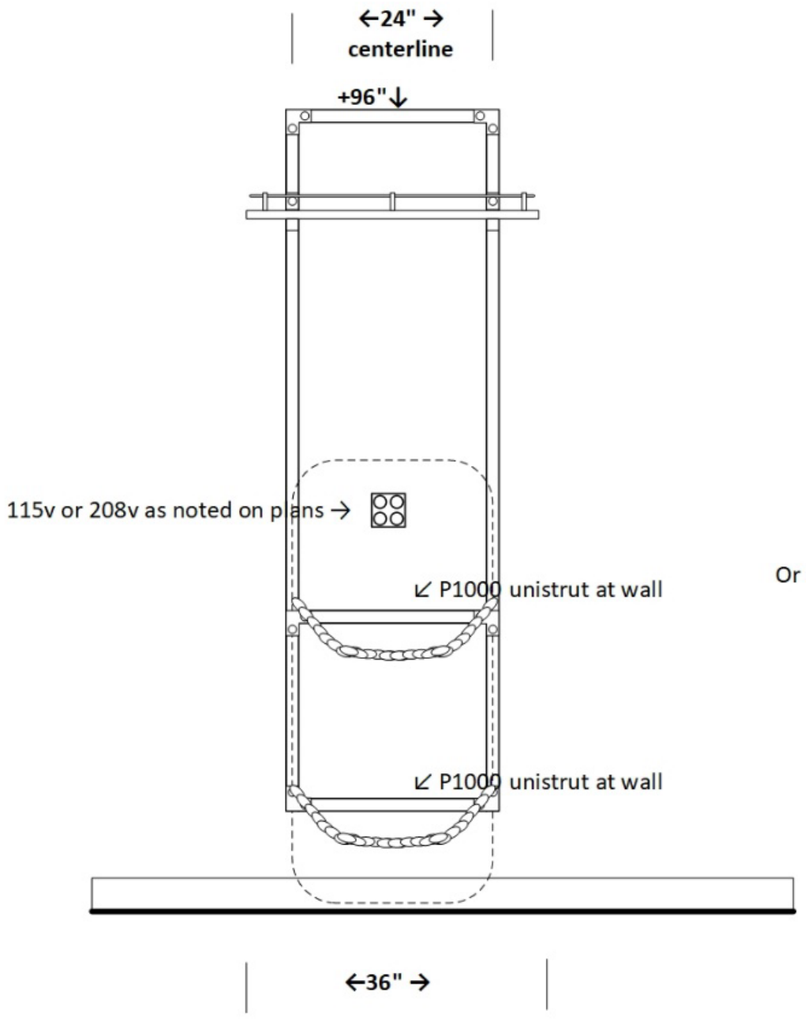
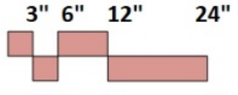


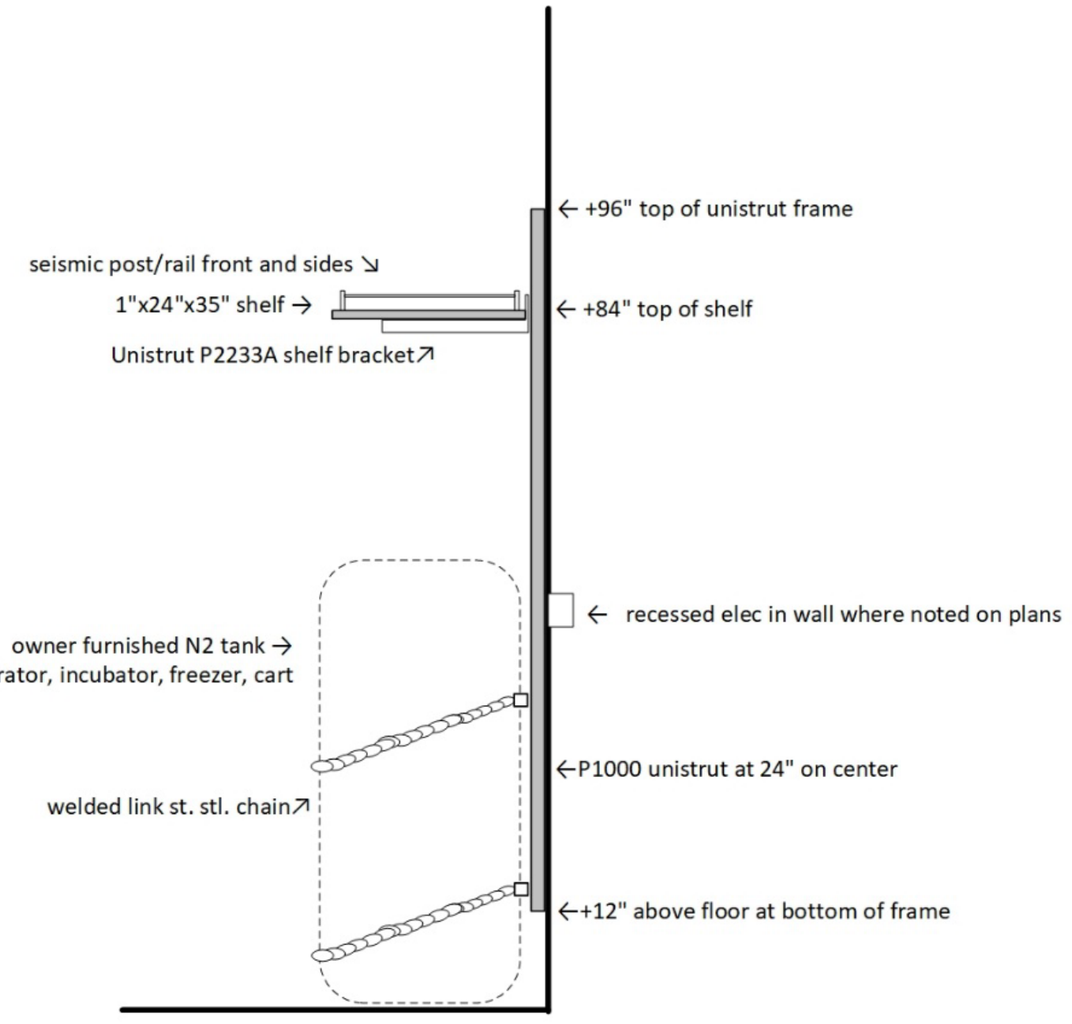
SECTION DETAIL 11

N2 tank restraint



Elevation





Section

PHOTOS

The following photos illustrate examples of Protean Lab Design-

- **adaptable**
- **flexible**
- **versatile**

Features include adjustable height work surfaces, mobile lab benches, mobile base cabinets, adjustable shelves above work surface.

PHOTO 1
PROTEAN LAB BENCH

Life Science Research Lab
Nevada Cancer Institute
Las Vegas, Nevada
New Construction

Relevant features:

1. **Non-proprietary.**
2. **Adjustable height work surface at mobile lab benches.**
3. **Shelves integral with bench.**
4. **Suspended base cabinets integral with bench frame.**
5. **Gas and vacuum hard piped from ceiling above through service column.**
6. **Fixed perimeter bench and desk stations at perimeter.**

PHOTO 2
PURE WATER STATION

Life Science Research Lab
Nevada Cancer Institute
Las Vegas, Nevada
New Construction

Relevant features:

1. **Fixed sink work station.**
2. **Point-of-use water polisher at sink station.**
3. **Fume hood in alcove.**

PHOTO 3
SERVICE COLUMN

Chapman University
School of Pharmacy
Irvine, California
Renovation

Relevant features:

1. **Service column provides flexible chase for power, data, and plumbing.**
2. **Outlets/fixtures can be added/subtracted without affecting lab bench or walls.**

PHOTO 4
AUTOCLAVE

Autoclave
School of Pharmacy
Chapman University
Renovation

Relevant features:

1. **Epoxy flooring.**
2. **Floor sink (not visible).**
3. **Power disconnect switch (no visible).**
4. **Canopy hood above.**

PHOTO 5
CONTROLLED ENV. ROOM

Environmental Room (Cold Room)
School of Pharmacy
Chapman University
Renovation

Relevant features:

1. **Glass door (triple pane).**
2. **4 deg C. temp control.**
3. **All stainless furnishings inside room.**
4. **Ramp inside door for insulated floor panel.**
5. **Control module at wall.**
6. **Room condensate connects to sink drain.**

EQUIPMENT CUT SHEETS

CONTRACTOR FURNISHED

MODEL 495LXe

CAGE AND RACK WASHER

LYNX PRODUCT GROUP

Size:
Compartment:
46" wide x 85" high x 92" long
Overall Unit:
84" wide x 100" high x 100" long
Sump Height:
6" high

Note: Washer can be designed to any size to meet new or existingapplications. (Overall size may vary depending on chosen options)

400 SERIES

MODEL 495LXe

The LYNX Model 495LXe Cage and Rack Washer is an electrically heated, heavy duty, large capacity, hydro-spray washer designed for thorough, efficient cleaning of cages, racks, debris pans, and miscellaneous items used in the care of laboratory animals. Shallow sump design.

STANDARD FEATURES:
- Modular Construction
- Knock-down Shipment
- Oscillating Spray Jet System
- Personnel Safety Features
- Micro-computer Control System with Modem Package
- Automatic Ten-phase Treatment Cycle
- Automatic Self-cleaning Screen
- Temperature Guarantee
- Insulated Construction
- Incoming Utility Gauges
- Interior Illumination
- S/S Recirculation Piping and Components

CONSTRUCTION:
- All Stainless Steel Construction
- Automatic Water Level Control
- 10 HP Treatment Pump
- Electric Heating Elements
- Touch Screen Operator Interface
- Programmable Cycles
- Direct Read Pump Pressure Gauge
- Double-pane Glass Window

ACCESSORIES:
- Floor Ramps
- Modular Walls
- Barrier Wall Flange(s)
- Bottle Wash Cart
- Universal Cage Wash Cart

400 SERIES CAGE AND RACK WASHERS

CONSOLIDATED STERILIZER SYSTEMS

Consolidated Sterilizers

Designed to Transform Your Laboratory

Models	
SSR-2A (76" x 76" x 76")	
SSR-3A (120" x 76" x 76")	
SR-24A (124" x 76" x 96")	
SR-24B (124" x 76" x 48")	
SR-26A (126" x 76" x 96")	

Small Lab Series Steam Sterilizers General Specifications

General Specification
Steam Sterilizer, Radial-Arm Door(s), Hinged, Single Chamber, Double Wall

Consolidated Small Lab Series Sterilizers are designed to sterilize at temperatures between 212° F and 275° F (100° C and 135° C) through the use of steam. Choose from a variety of sizes and programmable control options for pre-vacuum or gravity operation. Consolidated sterilizers offer a range of performance options to meet the most demanding applications in clinical, animal and life science, biotechnology, pharmaceutical, and commercial/industrial applications.

Table of Contents

Features and Benefits

Simplified Maintenance, Low Cost of Ownership.
All Consolidated sterilizers are manufactured in the USA and built from commonly available parts to allow quick and cost effective field-level service and maintenance.

Serviceability.
Easy access to replaceable components, local component availability and common electrical and plumbing parts permit qualified facility or area service companies to maintain the sterilizer.

Control Flexibility.
A choice of programmable controllers allows a broad range of performance functions, complete with alarm, monitoring and communications required for internal or third-party compliance.

Performance Cycles—Basic to Advanced.
The fully-jacketed sterilizer design permits vacuum and pressure control when configured for pre-vacuum, post-vacuum, and more sophisticated functions such as air-over-pressure. Consolidated sterilizers are ideal for sterilizing wrapped and unwrapped goods, liquids, waste, and other applications.

Green and Environmentally Friendly.
Unique, new technologies reduce water and energy consumption without compromising performance.

Cloud-Enabled.
Consolidated sterilizers can be connected to the internet and can be pre-configured for cloud-based monitoring, alerting and data collection.

Consolidated Small Lab Series Sterilizers are available in single door, pass thru and dual (bowie) models. A versatile control system offers a range of performance options to meet the most demanding applications in life science, biotechnology, pharmaceutical, and commercial/industrial applications. Model PT SR 24A X1 shown with X1™ control system.

5' Protector ClassMate Laboratory Hood

LABCONCO

View online: https://www.labconco.com/product/5-protector-classmate-laboratory-hood-10/6768

Overview

The patented Protector ClassMate Laboratory Hood is designed to meet the needs of instructional laboratories. Clear back and sides and taller front viewing window provide enhanced visibility for conducting chemistry demonstrations or observing students using the hood. The clear back also does not obstruct visibility when hoods are placed back-to-back in an island configuration.

Fully-featured with baffle and air foil, this high-performance by-pass hood maintains safe airflow while conserving energy. The Protector ClassMate Hood is benchtop design and offered in 4', 5', and 6' widths. Models with combination style sashes are also available.

Catalog Number: 160505102

Specifications

- **Weight:** 530.0 lbs
- **Weight metric:** 240.4 kg
- **Dimensions:** 60.0" w x 32.7" d x 59.0" h
- **Dimensions metric:** 152.4 x 81.9 x 149.9 cm
- **Electrical:** 100-115V, 50/60 Hz, 10A
- **Product Subcategory:** Educational
- **Nominal Width:** 5'
- **Sash Movement Direction:** Combination (Vertical & Horizontal)
- **Region:** International, U.S. and Canada
- **Blower Requirements:** Remote blower required
- **Conformance:** ANSI Z9.5, ASHRAE 110, ASTM E84, CAN/CSA C22.2, CFR 29, NFPA 45, SEFA 1, SEFA 8 (Cabinet Surface Finish), UL 1805, UL 61010
- **Electrical Duplexes:** 1
- **Lighting:** LED
- **Service Fixtures:** 2
- **Style:** Benchtop

CAGE RACK WASHER CUT SHEET

Location: Vivarium, Ground Floor

MODEL 495LXe

CAGE AND RACK WASHER

LYNX PRODUCT GROUP

Size:

Compartment:
46″ wide x 85″ high x 92″ long

Overall Unit:
84″ wide x 100″ high x 100″ long

Sump Height:
6″ high

Note: Washer can be designed to any size to meet new or existingapplications. (Overall size may vary depending on chosen options)

MODEL 495LXe

The LYNX Model 495LXe Cage and Rack Washer is an electrically heated, heavy duty, large capacity, hydro-spray washer designed for thorough, efficient cleaning of cages, racks, debris pans, and miscellaneous items used in the care of laboratory animals. Shallow sump design.

STANDARD FEATURES:

- Modular Construction
- Knock-down Shipment
- Oscillating Spray Jet System
- Personnel Safety Features
- Micro-computer Control System with Modem Package
- Automatic Ten-phase Treatment Cycle
- Automatic Self-cleaning Screen
- Temperature Guarantee
- Insulated Construction
- Incoming Utility Gauges
- Interior Illumination
- S/S Recirculation Piping and Components

CONSTRUCTION:

- All Stainless Steel Construction
- Automatic Water Level Control
- 10 HP Treatment Pump
- Electric Heating Elements
- Touch Screen Operator Interface
- Programmable Cycles
- Direct Read Pump Pressure Gauge
- Double-pane Glass Window

ACCESSORIES:

- Floor Ramps
- Modular Walls
- Barrier Wall Flange(s)
- Bottle Wash Cart
- Universal Cage Wash Cart

400 SERIES CAGE AND RACK WASHERS

400 SERIES

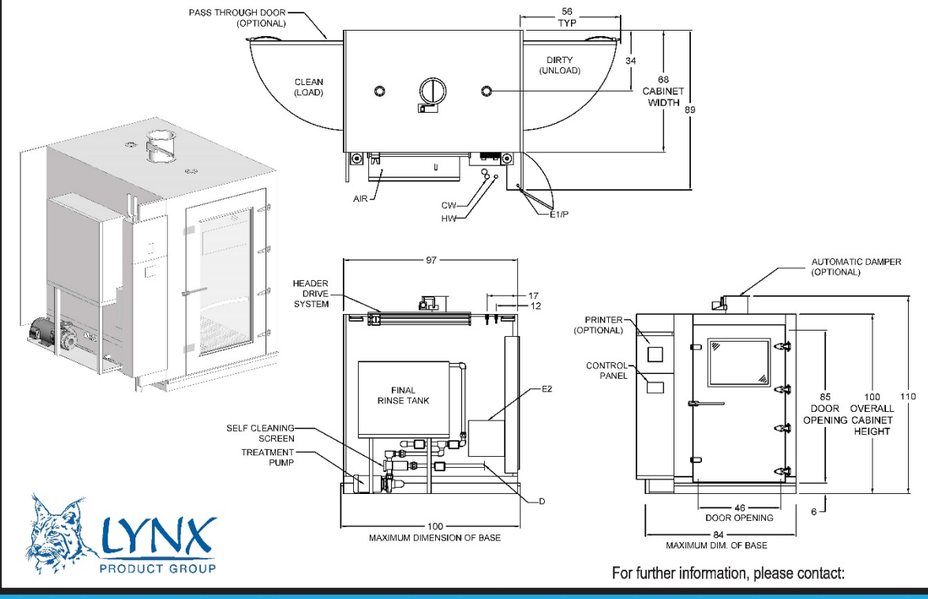
UTILITIES: 495LXe

E1	Electrical	3-60-208/230/480 V	12 HP	
E2	Electrical	3-60-208/230/480 V	70 kW	
HW	Hot Water	1½″ NPT	35 PSI	50 GPM @ 140 °F ± 5 °F
C	Condensate	1″ NPT		
D	Drain	12″x12″ Floor Sink with 4″ Floor Drain (Min.)	120 GPM	Flow Rate @ 200 °F
V	Vent	12″ ID Duct	450 CFM	Saturated Vapor @ 190 °F
A	Air	½″ NPT	100 PSI	6 CFM Flow Rate
CW*	Cold Water	1½″ NPT	35 PSI	60 GPM @ 50 °F ± 5 °F

*CW – Required if drain discharge cool-down package is ordered

OPTIONAL FEATURES:

- LYNX OPTI-Wash™ System
- Pit or Floor Mounted
- Right or Left Hand Services
- Re-usable Throwaway Alkaline and/or Acid Tanks
- Integral Data Collection System
- LYNX Smart-Cool™ System
- Split Base for Special Entry
- Automatic Damper
- Pass-thru Unit
- Drain Discharge Cool Down/Tank
- Feeder Bottle Washing System
- Pan Washing
- Automatic Watering Rack Flush System
- Pass-thru Door Interlock System
- Air Compressor
- Exhaust Fan
- Strip Chart Printer
- Utility Enclosure Panels
- Detergent Dispensing Systems
- pH Neutralization System
- Seismic Tie Down



LYNX PRODUCT GROUP

For further information, please contact:

LYNX Product Group • 650 Lake Street • Wilson, NY, 14172
716.751.3100 (Fax) 716.751.3101 LYNXPG.COM
service@lynxpg.com info@lynxpg.com
parts@ lynxpg.com

AUTOCLAVE CUT SHEET

Double Door Pass Thru

Location: Vivarium, Ground Floor

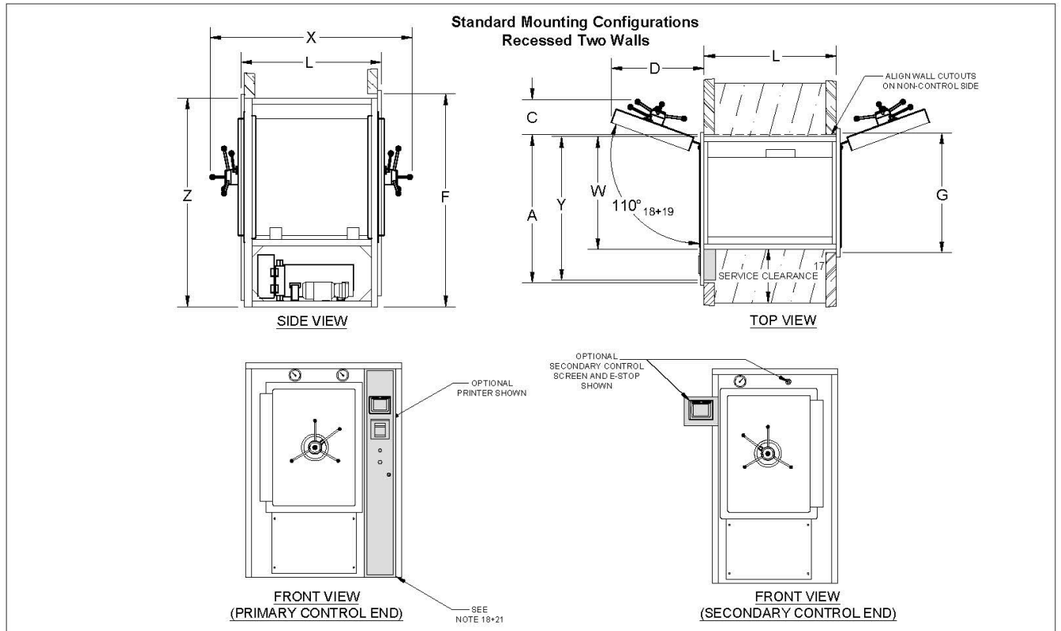


Table 3: Sterilizer Dimensions[20]

Model	PT-SR-24C	PT-SR-24D	PT-SR-24E[18]	PT-SR-24F[18]	PT-SR-26B	PT-SR-28B
Chamber Dimensions (w x h x f-b)	24" x 36" x 36" 61 x 91.4 x 91.4 cm	24" x 36" x 48" 61 x 91.4 x 122 cm	24" x 36" x 60" 61 x 91.4 x 152.4 cm	24" x 36" x 72" 61 x 91.4 x 183 cm	26" x 26" x 49" 66 x 66 x 124.5 cm	28" x 28" x 48" 71 x 71 x 122 cm
Volume	18 cu. ft (510L)	24 cu. ft (680L)	30 cu. ft (850L)	36 cu. ft (1019L)	19.2 cu. ft (544L)	21.8 cu. ft (617L)
Overall Length (X)	66.5" 168.9 cm	78.5" 199.4 cm	90.5" 229.9 cm	102.5" 260.4 cm	75" 190.5 cm	78.5" 199.4 cm
Primary Control End Overall Width (Y)	48.375" 122.9 cm	48.375" 122.9 cm	48.375" 122.9 cm	48.375" 122.9 cm	48.375" 122.9 cm	51.375" 130.5 cm
Overall Height (Z)[23]	71" 180.3 cm	70.25" 178.4 cm	70.25" 178.4 cm	70.25" 178.4 cm	71" 180.3 cm	71" 180.3 cm
Frame Length (L)	42.5" 107.9 cm	54.5" 138.4 cm	66.5" 168.9 cm	78.5" 199.4 cm	49" 124.5 cm	54.5" 138.4 cm
Frame Width (W)[24]	38" 96.5 cm	38" 96.5 cm	38" 96.5 cm	38" 96.5 cm	38" 96.5 cm	41" 104.1 cm
Primary Control End Wall Opening Width (A)	50.375" 128 cm	50.375" 128 cm	50.375" 128 cm	50.375" 128 cm	50.375" 128 cm	53.375" 135.6 cm
Primary Control End Wall Opening Height (B)	72" 182.9 cm	71.25" 181 cm	71.25" 181 cm	71.25" 181 cm	72" 182.9 cm	72" 182.9 cm
Secondary Control End Wall Opening Width (G)	40" 101.6 cm	40" 101.6 cm	40" 101.6 cm	40" 101.6 cm	40" 101.6 cm	43" 109.2 cm
Secondary Control End Wall Opening Height (B)	72" 182.9 cm	71.25" 181 cm	71.25" 181 cm	71.25" 181 cm	72" 182.9 cm	72" 182.9 cm
Minimum Door Swing Clearance Hinge Side (C)	20" 50.8 cm	20" 50.8 cm	20" 50.8 cm	20" 50.8 cm	12.75" 32.4 cm	20.5" 52.1 cm
Door Swing (D)	31.5" 80 cm	31.5" 80 cm	31.5" 80 cm	31.5" 80 cm	35.5" 90.2 cm	37.5" 95.3 cm

17. Recommended service clearance is 18-24" both sides. If necessary, service clearance can be decreased or adjusted to one side to accommodate facility specific space constraints.
18. Operating end right side control housing, left side door hinge shown. Non-operating end shown with right side door hinge. Standard control location is opposite hinge. Opposite mounting is available upon request.
19. An electric generator supplied with a unit of this size is not integral to sterilizer and requires a separate footprint.
20. Additional options may require a larger footprint.
21. The control housing is shipped detached from the sterilizer to allow passage through doorways, reducing pre-installation Overall Width (Y) by 10.375". When the sterilizer is installed, the control housing and electrical connections are easily attached.
22. All views contain configuration specific components. These are for illustrative purposes only, actual configuration may vary.
23. After adjustment, leveling feet may add up to 1 inch to the Overall Height (Z).
24. PT-SR-24C, D, E, and F with service limited to the non-hinge side increases Frame Width (W) by 3".

CONFIGURATION

	L	TOP	R
HINGE	X		X
CONTROLLER		X	X
SERVICE	X	X	X

CONSOLIDATED STERILIZER SYSTEMS
76 ASHFORD ST, BOSTON MA 02134
TITLE: MEDIUM STERILIZER PASS-THRU CUT SHEET X1 CONTROLS
SIZE A | DWG. NO. 91124 | REV 4
SCALE: N/A | WEIGHT: --- | SHEET 3 OF 5

Model: PT-SR-26B
Chamber: 26”x26”x49”

Integral Electric Steam generator- requires separate footprint area outside of autoclave footprint

Enclosed in stainless steel wall panel system

Exhaust

Floor sink

Requires RO water feed

CONSOLIDATED STERILIZER SYSTEMS

Consolidated Sterilizers

Designed to Transform Your Laboratory

Models	
SSR-2A (16" x 16" x 26")	
SSR-3A (20" x 20" x 38")	
SR-24A (24" x 24" x 36")	
SR-24B (24" x 24" x 48")	
SR-26A (26" x 26" x 39")	

Small Lab Series Steam Sterilizers General Specifications

General Specification

Steam Sterilizer, Radial-Arm Door(s), Hinged, Single Chamber, Double Wall

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A choice of programmable controllers allows a broad range of performance functions, complete with alarm, monitoring and communications required for internal or third-party compliance.

Performance Cycles—Basic to Advanced.
The fully-jacketed sterilizer design permits vacuum and pressure control when configured for pre-vacuum, post-vacuum, and more sophisticated functions such as air-over-pressure. Consolidated sterilizers are ideal for sterilizing wrapped and unwrapped goods, liquids, waste, and other applications.

Green and Environmentally Friendly.
Unique, new technologies reduce water and energy consumption without compromising performance.

Cloud-Enabled.
Consolidated sterilizers can be connected to the internet and can be pre-configured for cloud-based monitoring, alerting and data collection.

Consolidated Small Lab Series Sterilizers are available in single door, pass-thru and dual (tower) models. A versatile control system offers a range of performance options to meet the most demanding applications in life science, biotechnology, pharmaceutical, and commercial/industrial applications. Model PT-SR-24A-X1 shown with X1™ control system.

Table 3. Power and Steam Usage

Model	Chamber Dimensions (w x h x f-b)	Air Removal Method	Electrically Heated					Steam Heated		
			Generator Size (kW)[2]	Generator Current (amps)[3]				Steam Consumption		
				208V	240V	380V	480V	Peak (lb/hr)	Per Cycle[1] (lb/cycle)	Idle (lb/hr)
SSR-2A	16" x 16" x 26" 40.6 x 40.6 x 66 cm	Gravity	25	69	60	37	30	180	17	5
		Vacuum	25	69	60	37	30	180	25	5
SSR-3A	20" x 20" x 38" 50.8 x 50.8 x 96.5 cm	Gravity	25	69	60	37	30	180	20	7
		Vacuum	25	69	60	37	30	180	35	7
SR-24A	24" x 24" x 36" 61 x 61 x 91.4 cm	Gravity	25	69	60	37	30	180	30	7
		Vacuum	30	83	72	46	36	180	50	7
SR-24B	24" x 24" x 48" 61 x 61 x 122 cm	Gravity	25	69	60	37	30	180	35	9
		Vacuum	30	83	72	46	36	180	55	9
SR-26A	26" x 26" x 39" 66 x 66 x 99 cm	Gravity	25	69	60	37	30	180	35	9
		Vacuum	30	83	72	46	36	180	55	9

[1] Assuming 30 minute sterilizing time at 250° F (121° C) and 20 minute drying time.
[2] If current draw for 25kW is too high contact Consolidated for 20kW generator.
[3] Current drawn by generator. Local codes and regulations may affect breaker size.
Note: For dual (tower) models contact Consolidated for additional information.

Table 4. Water Feed Requirements, Carbon-Steel Steam Generators[4]

Characteristic	Recommended Condition	Maximum Condition
Temperature	As Supplied	140° F (60° C)
Total Hardness	0–17 mg/L	85 mg/L
Alkalinity	50–180 mg/L	350 mg/L
Total Dissolved Solids	0–150 mg/L	250 mg/L
pH	7.5–8.5	7.5–9.0
Total Silica	0.1–1.0 mg/L	2.5 mg/L
Resistivity	2,000–6,000 ohms/cm	26,000 ohms/cm[5]

[4] Stainless-steel generators require deionized water >1 MΩ/cm.
[5] If water supplied is greater than 26,000 Ω/cm contact Consolidated for recommendation.

Typical Utility Requirements

General.
- Steam (S): ¾" NPT, 50-80 psi dynamic.
- Electrical (E1, E3): 110V, AC or 220V, AC, 1-phase, 15 amps—dedicated and isolated.
- Water (W2): ½" NPT, 45 psi dynamic minimum.
- Drain (D): open drain to funnel connection in floor, diameter 3" minimum.
- Backflow preventer not provided.

Optional Vacuum Systems (maximum one per unit).
- Economy, Post-Vac (W3): ½" NPT, 45 psi minimum.
- Hi-Vacuum with Water Ejector (W3): 1¼" NPT, 45 psi minimum.
- Hi-Vacuum with Vacuum Pump (W3): ½" NPT, 45 psi minimum.

Electric Steam Generator Utilities:
- Power Supply (E2): available in 208/240/380/480V, single or three phase.
- Generator Feedwater (W1): hot/treated water, ½" NPT, 60 psi dynamic minimum.

AUTOCLAVE CUT SHEET

Single Door

Location: Autoclave Rooms, 2nd and 3rd Floors

Model: SSR-24A
Pre Vacuum
Chamber dimensions: 24” W x24” H x 36”D
Exterior dimensions: 43” W x 73” H x 58”D

480v power with disconnect

Integral electric steam generator

Steam canopy above

Floor sink

Requires RO water feed

AUTOCLAVE RO UNIT CUT SHEET

Location: Autoclave Rooms, 2nd and 3rd Floors

CONSOLIDATED STERILIZER SYSTEMS

WPS-1200

Water Purification Systems

WPS-1200 Water Purification Systems

Consolidated offers two water systems as part of the WPS-1200 line. The WPS-1200-RO reverse osmosis water purification system produces Type III laboratory-grade water ideal for steam sterilizers and glassware washers. This robust system includes an RO module and a reservoir tank. Each module consists of two pre-treatment filters and a reverse osmosis filter. The pre-treatment filters remove particles larger than 5 microns, free chlorine, chloramines, and other undesirable traits. The reverse osmosis membrane filter removes greater than 90% of inorganic ions, hardness, and dissolved solids, as well as other particles and microorganisms.

If deionized water is required, the WPS-1200-DI system incorporates extra filtration to produce Type II deionized water (>1 megohm•cm resistivity) for clean steam or other high purity applications.

WPS-1200 Benefits

- Improves equipment life and performance by removing at least 90% of all dissolved solids that cause scale build-up.
- Designed specifically for autoclaves and glassware washers.
- Reduction of scale build up translates to increased uptime as well as reduced maintenance and energy costs.
- Designed to be very low maintenance and easy to use with a low cost of ownership.
- System includes a pressurized storage tank.
- Tank is floor standing and can be mounted remotely.
- 100% seamless composite construction with durable, high density polyethylene inner liner.

WPS-1200 Features

- Filters have a special 1/4 turn quick change design that allows simple, quick and clean filter replacement. Filters can be easily changed in minutes without the use of tools or the need for a service call.
- Flexible design allows system to be installed integral to the sterilizer[1] or on a nearby wall.
- Pressurized storage allows purified water to be used for general lab use.
- Environmentally safe; 100% lead-free.
- Color indicator on DI filter signals when to change the filter.

[1] Increases the footprint of the sterilizer.

Quick, Clean, Hassle-Free Filter Replacement. NO Service Calls, NO Tools!

Why Purify Your Water?

Many steam sterilizers use an electric steam generator to create the required steam. When the steam is created, salts and minerals from the feed water are left behind. If hard tap water is used to generate the steam, over time these mineral deposits will accumulate and coat the generator heating elements, continually decreasing the functionality of the generator until it stops working. Consolidated's Water Purification Systems will remove these contaminants and help ensure maximum uptime.

Product Summary

Specificaitons	Model WPS-1200-RO	Model WPS-1200-DI
Production Water Quality	Type III	Type II (DI >1 megohm•cm)
Application	For steam sterilizers with carbon steel steam generators	For steam sterilizers with stainless steel steam generators (i.e. clean steam)
Sterilizer Size (volumetric)	up to 42.4 cu.ft. 1200 liters	up to 42.4 cu.ft. 1200 liters

Model WPS-1200-RO System with RO module and 11 gallon tank shown.

Specificaitons	Model WPS-1200-RO	Model WPS-1200-DI
Dimensions	38" H x 20.5" W x 8" D 96.5 x 52.1 x 20.3 cm	38" H x 30.5" W x 8" D 96.5 x 77.5 x 20.3 cm
Required Clearance	Add 6" (15.25 cm) on all sides for cover removal and service access.	
Operating Weight (not including storage tank)	40 lbs 18 kg	65 lbs 30 kg
Daily Production Rate*	350 gpd / 14.5 gph nominal 1,325 lpd / 55.2 lph	350 gpd / 14.5 gph nominal 1,325 lpd / 55.2 lph
Sterilizer Size (volumetric)	up to 42.4 cu.ft. 1200 liters	up to 42.4 cu.ft. 1200 liters
Tank		
Tank Dimensions	37 – 57" H x 16" D 94 –144.8 cm x 40.6 cm	
Tank Weight (fully loaded)	110 – 210 lbs 50 – 95 kg	
Tank Volume	11 – 22 gallons 42 – 83 liters	
Water		
Facility Supplied Connection	1/2" NPT Ball Valve; 25 – 80 PSIG Dynamic; 1 GPM; 40-100°F (4.4-37.8°C)	
Drain Connection	1/4" (.64 cm) OD tube connection; Floor drain or Floor Sink, Gravity Flow	
Electrical		
	115VAC/60Hz; NEMA 5-15P Plug Branch Circuit Protection 15 or 20 Amp Ground Fault	

**Feed water temperature, feed water quality and age of filters affects production rate. Incoming water must meet water quality requirements,*

Water Feed Requirements, Carbon-Steel Steam Generators

The table below shows the recommended feed water requirements for a standard steel boiler. If water quality fails to meet maximum condition requirements listed below, then your water will require purification by the WPS-1200-RO. If you are unsure of your facility's water quality, please contact Consolidated to arrange for an initial assessment.

Characteristic	Recommended Condition	Maximum Condition
Temperature	As Supplied	140° F (60° C)
Total Hardness	0–17 mg/L	85 mg/L
Alkalinity	50–180 mg/L	350 mg/L
Total Dissolved Solids	0–150 mg/L	250 mg/L
pH	7.5–8.5	7.5–9.0
Total Silica	0.1–1.0 mg/L	2.5 mg/L
Resistivity	2,000–6,000 megohm•cm	26,000 megohm•cm*

** If water supplied is greater than 26,000 megohm•cm contact Consolidated for recommendation.*

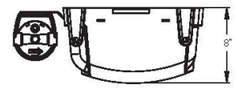
Water Feed Requirements, Stainless Steel Generators

Stainless-steel generators require deionized water >1 megohm•cm.

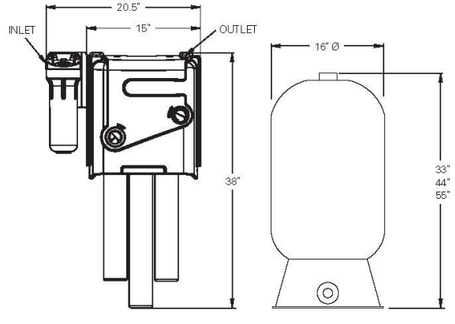
WPS-1200 Maintenance

- Proper pre-treatment is required to control scale formation and/or fouling (recommended preventive maintenance involves pre-treatment filter cartridge changes every 6 months[2]).
- Change RO cartridges regularly (recommended 2-3 year preventive maintenance program[2]).

[2] Feed water quality and usage affects filter life and replacement frequency.



NOTE:
Typical dimensions for the WPS-1200-RO.
Extra filter for the WPS-1200-DI Not shown.



/consteril | /consteril | /consolidatedSS | /company/consolidated-sterilizer-systems

AllerGard™ ES NU-607 Class I Animal Bedding Disposal Station

The AllerGard™ ES (Energy Saver) NU-607 Class I Animal Waste Station minimizes the risk of exposure to allergens and animal infections for the technician handling low to moderate risk materials through HEPA filtration and an air barrier.

Part #: NU-607

MODEL 710LX

BEDDING DISPENSER

LYNX PRODUCT GROUP

Size:
Tunnel Opening:
14″ high x 27″ wide

Overall Unit:
93″ high x 43″ wide x 30″ long

MODEL 710LX

The LYNX Model 710LX Bedding Dispenser is a semiautomatic unit designed to dispense bedding materials* into two (2) animal cages (max. 13″ x 13″) simultaneously when they are placed into position within the filling area. The dispenser is capable of handling most, free flowing solid bedding as commonly used in the animal care industry. The dispensed bedding volume is adjustable to accommodate various depths and sizes of cages.

STANDARD FEATURES:

- 15 Cubic Foot Bedding Hopper
- Automatic Bedding Transfer
- Operator Control Panel
- Dust Filtration

CONSTRUCTION:

- All 304 Stainless Steel Construction
- Work Station Area

OPTIONAL FEATURES:

- Dust Collection System
- Air Compressor
- Seismic Tie-down

* Equipment designed for free-flowing and non-bridging bedding. Please consult the factory for all other bedding.

700 SERIES BEDDING DISPENSERS

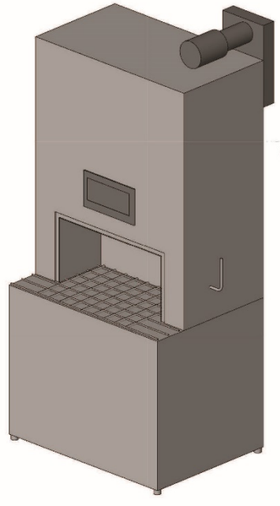
BEDDING DISPENSER UNIT CUT SHEET

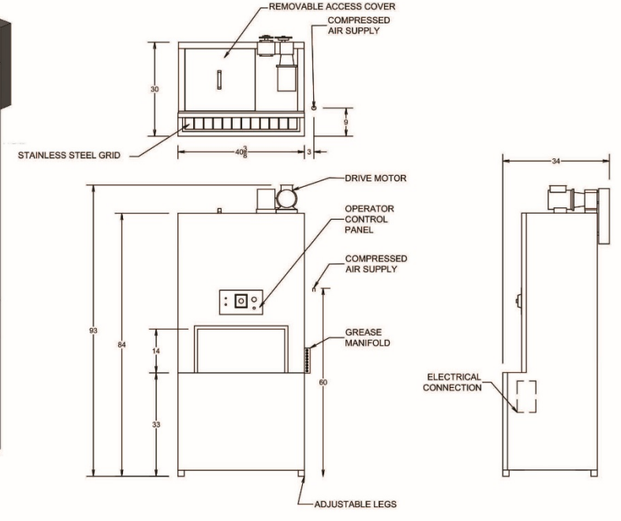
Location: Vivarium, Ground Floor

700 SERIES

UTILITIES: 710LX

E	Electrical	40A – 120V	60 Hz	
V	Vent	4″ ID Duct	3/4″ SP	650 CFM
A	Air	1/2″ NPT	80-100 PSI	2 CFM





700 SERIES BEDDING DISPENSERS

LYNX PRODUCT GROUP

For further information, please contact:

LYNX Product Group • 650 Lake Street • Wilson, NY, 14172
716.751.3100 (Fax) 716.751.3101 LYNXPG.COM
service@lynxpg.com info@lynxpg.com
parts@ lynxpg.com

MODEL 100LX

FEEDER BOTTLE FILLER

Size:
24″ wide x 41″ long x 48″ high*

*53 ½″ High with Automatic Operations Control Panel

Note: Filler can be designed to any basket size or configuration to meet new or existing applications.

LYNX PRODUCT GROUP

MODEL 100LX

The LYNX Model 100LX Feeder Bottle Filler is a manifold type filler designed for filling basket loads of feeder bottles used in the care of laboratory animals.

CONSTRUCTION:

- All Stainless Steel Construction
- Individual S/S Spray Jets
- Adjustable Leveling Feet
- Stainless Steel Splash Hood
- Quick-disconnect Filler Manifold
- Stainless Steel Piping and Components

ACCESSORIES:

- Additional Filler Head (Manifold)
- Bottle Basket Transfer Cart
- Bottle Baskets

OPTIONAL FEATURES:

- Automatic Operations
- Roller Table Loading
- Acid Proportioner
- pH Monitoring System
- pH Strip Chart Recorder
- Seismic Tie Downs

100 SERIES FEEDER BOTTLE FILLER

BOTTLE FILLER UNIT CUT SHEET

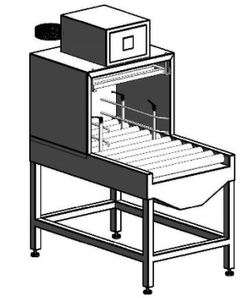
Location: Vivarium, Ground Floor

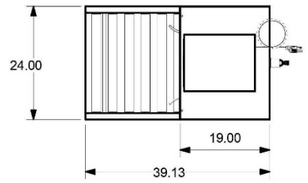
100 SERIES

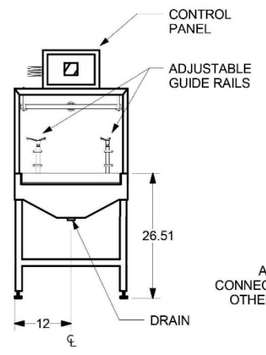
UTILITIES: 100LX

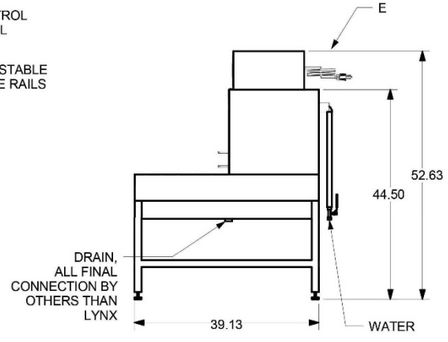
W	Water	1″ NPT, 35 PSI ±5 PSI
D	Drain	1½″ Connection
E*	Electrical	120 VAC

*E – Required if Auto Fill package is ordered









100 SERIES FEEDER BOTTLE FILLER

LYNX PRODUCT GROUP

For further information, please contact:

LYNX Product Group • 650 Lake Street • Wilson, NY, 14172
716.751.3100 (Fax) 716.751.3101 LYNXPG.COM
service@lynxpg.com info@lynxpg.com
parts@ lynxpg.com

(307) 322-4040

Mobile Sinks

THE BH MOBILE SINK ELIMINATES A STANDARD FIXED SINK FROM EVERY ROOM OF A FACILITY WHICH SAVES FLOOR SPACE AND REDUCES FACILITY COSTS. SAVINGS IN INFRASTRUCTURE CAN BE APPLIED TO DIRECT RESEARCH NEEDS.

DESCRIPTION:
Open Model and Cabinet Model Mobile Sinks.

TYPICAL USE:
Provides simple, cost effective, and floor space efficient solution for sink access in multiple laboratories.

DIMENSIONS:
24"w x 24"d x 39"h from the floor to the top of the sink - 49 3/8" from the floor to the top of the gooseneck faucet.

OPTIONS:

CONTACT

Utility Boxes

DESCRIPTION:
The Britz & Co. Utility Box works hand in hand with the Mobile Sink for an effective, cost saving cleaning system. The prefabricated BH Utility Box is recessed into the wall and interstitial wall space, it is designed to supply hot and cold water. The Mobile Sink has built-in quick-disconnect fittings for easy connection to the Utility Box water supply. When installed, the plumbing utilities are recessed, making the wall surface smooth to enhance sanitization procedures and space utilization.

TYPICAL USE:
If you are in the planning stages for a new building or remodeling project, the mobile sink utility box is an integral design element for saving money and floor space. The utility box can supply hot and cold water supplies, as well as de-ionized water.

DIMENSIONS:
4"d x 14"h x 14"w

HOT/COLD WATER VALVE CUT SHEET

Location: Vivarium Procedure Rooms
Ground Floor

DESCRIPTION

The Strahman M-200TS is a Thermostatically Controlled Bronze Mixing Unit that allows you to blend hot and cold water to an exact output water temperature. The M200TS is accurate and solid. Its liquid-filled thermostat allows you to set your desired output water temperature – anywhere from 80°F to 160°F. This unit includes several important features like single lever On/Off operation, an adjustable temperature limit stop, and a thermostat that senses and compensates for temperature or pressure fluctuations, all for maximum safety and efficiency.

With its durable bronze body construction, this unit is reliable and long-lasting. The valve features replaceable components that resist corrosion, and both the piston and liner are made of stainless steel material for long-lasting durability.

Please see the attached spec sheet for additional product specifications.

MOP RAIL CUT SHEET

Location: Vivarium Procedure Rooms; Vivarium Janitor Room

LSP Interior Finishes

Technical Specification

800-638-9874
www.lspinc.com

DIVISION _____

Specification Section # _____

Broomstow

Wall mounted broom and mop hanger designed to allow cleaning equipment to be stored off the floor and away from the wall.

Single piece frame of clear anodized extruded 6061-T6 aluminum alloy, Federal Specification QQA 200/8.

Frame dimensions are ¼" thick x 4" wide w/ 1/8" radius top and bottom edges and ¾" radius bends at each end to position outside face of frame 1¾" from wall surface.

Configuration is such so as to eliminate hollows and to minimize lateral flat surfaces which may collect dirt, dust, debris, etc.

Main frame for a single position cleat is 14" long, increasing by 5" for each additional cleat.

Specify size as follows:
BS-1: 1 cleat @ 14"
BS-2: 2 cleats @ 19"
BS-3: 3 cleats @ 24"
BS-4: 4 cleats @ 29"
BS-5: 5 cleats @ 34"
BS-6: 6 cleats @ 39"
BS-7: 7 cleats @ 44"
BS-8: 8 cleats @ 49"

Frame will have (4) 5/16" mounting holes, (2) at each end of frame. Stainless steel mounting hardware to be specified by manufacturer depending on wall type.

Cleat is black, high-impact plastic with dense foam covered, gravity/pinch type cleat mounted to frame with stainless steel hardware.

PRESSURE INDICATOR CUT SHEET

"Ball-in-the-wall"

Location: Vivarium Clean & Dirty Wash, Ground Floor

AIRFLOW DIRECTION INCORPORATED

Toll Free: 888-334-4545. (This site is not an eCommerce and is for information only)

MANUFACTURER OF THE ORIGINAL

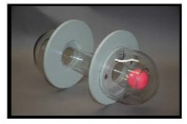
BALL-IN-TUBE BALL-IN-THE-WALL®

ROOM PRESSURE MONITOR

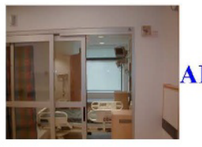
...incorporating ADI'S BALL-IN-TUBE BAULIN-TUBE® Technology

- **HOSPITALS:** Isolation Rooms, Construction/Renovation Barriers, Operating Rooms & Pharmacy
- **LABS:** Vivariums, Animal Resource Facilities, BSL2, BSL3
- **MANUFACTURING:** Cleanrooms, Pharmaceuticals, Food Processing, and more...

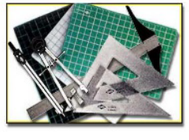
BUILT-IN FAILSAFE OPERATION! ... simply open the room door to see if indicator and room are operating properly. LIFETIME WARRANTY!



PRODUCTS



APPLICATIONS



TECHNICAL RESOURCES

Airflow Direction Incorporated
2 Livingston Lane, Newbury, MA 01951

Tel: Toll-Free: 888-334-4545 (local 978-462-9995) | Fax: Toll-Free: 888-257-3555 (local 978-462-9996)

CHEMICAL FUME HOOD CUT SHEET

Location: Research Labs, 2nd and 3rd Floors

5' Protector ClassMate Laboratory Hood

View online: https://www.labconco.com/product/5-protector-classmate-laboratory-hood-10/6768

Overview

The patented Protector ClassMate Laboratory Hood is designed to meet the needs of instructional laboratories. Clear back and sides and taller front viewing window provide enhanced visibility for conducting chemistry demonstrations or observing students using the hood. The clear back also does not obstruct visibility when hoods are placed back-to-back in an island configuration.

Fully-featured with baffle and air foil, this high-performance by-pass hood maintains safe airflow while conserving energy. The Protector ClassMate Hood is benchtop design and offered in 4', 5', and 6' widths. Models with combination style sashes are also available.

Teaching fume hood has glass sides and back. Works well for research labs and provides greater visual monitoring and can be located against exterior window wall.

Catalog Number: 160505102

Specifications

- **Weight:** 530.0 lbs
- **Weight metric:** 240.4 kg
- **Dimensions:** 60.0" w x 32.7" d x 59.0" h
- **Dimensions metric:** 152.4 x 81.9 x 149.9 cm
- **Electrical:** 100-115V, 50/60 Hz, 10A
- **Product Subcategory:** Educational
- **Nominal Width:** 5'
- **Sash Movement Direction:** Combination (Vertical & Horizontal)
- **Region:** International, U.S. and Canada
- **Blower Requirements:** Remote blower required
- **Conformance:** ANSI Z9.5, ASHRAE 110, ASTM E84, CAN/CSA C22.2, CFR 29, NFPA 45, SEFA 1, SEFA 8 (Cabinet Surface Finish), UL 1805, UL 61010
- **Electrical Duplexes:** 1
- **Lighting:** LED
- **Service Fixtures:** 2
- **Style:** Benchtop

SAFETY SHOWER CUT SHEET

Location: Ground, 2nd and 3rd Floors

Model 2150 to be specified.
Requires tempered water per Div. 22.
Provide 8” diam floor drain below per Div. 22.

Recessed Laboratory Units

Application: ColorTech recessed laboratory units are recess mounted into a finished wall. They conserve valuable floor space, while eliminating the clutter and obstruction created by conventional eye wash and shower equipment. Units can be installed in either a corridor or a lab room, close to where accidents might occur. In an emergency, units are easily located and activated.

ADA Compliance: When installed at recommended mounting heights, units comply with ADA requirements for accessibility by handicapped persons (maximum height and reach, minimum knee clearance and distance from obstructions).

Certification: All ColorTech safety equipment is third-party certified to meet the requirements of ANSI Z358.1 - 1998 ("Emergency Eye Wash and Shower Equipment").

Finish: Units are supplied with a powder coated finish on all exposed brass components. Specify finish when ordering: white, gray, tan, polished chrome with clear epoxy or satin chrome with clear epoxy.

Shower Head: 8" diameter cast brass. Furnished with vertical supply pipe and ceiling escutcheon for mounting shower head at desired height below finished ceiling.

Shower Valve: 1" IPS brass stay-open ball valve with stainless steel "panic bar". Pulling bar down activates shower; shower remains in operation until bar is returned to original closed position. Furnished with stainless steel access panel and 1" IPS unions for valve.

Cover/Drain Pan: Eye/face wash section of unit has stainless steel cover. Opening cover pulls outlet head assembly down from vertical to horizontal position and activates water flow. Horizontal grab bar is easily grasped and pulled in an emergency. While unit is in operation, waste water is collected by drain pan and returned into unit for drainage. Unit remains in operation until cover is returned to closed position.

Outlet Head Assembly: Two FS-Plus spray heads mounted on supply arms. Each spray head has internal flow control and filter to remove impurities from water.

Eye/Face Wash Valve: 1/2" IPS brass stay-open ball valve.

Mounting: Entire unit is contained in an 18 gauge stainless steel cabinet with flanged rim for recessed mounting in wall. Combination cover and drain pan is 18 gauge stainless steel. Unit fits in standard 3-1/2" deep wall.

Pipe and Fittings: All pipe and fittings are brass.

Supply: 1" IPS female inlet.

Waste: 1-1/2" OD chrome plated brass tube.

Sign: Furnished with ANSI-compliant identification sign.

Quality Assurance: Unit is completely assembled and water tested prior to shipment

U.S. Patent: 5,768,721

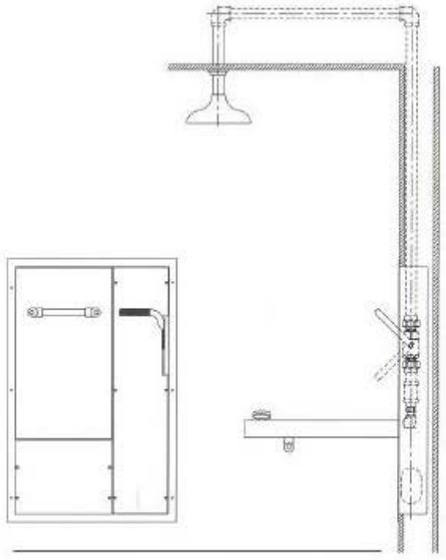
Available Options:

AP280-220 Electric Light and Alarm Horn. Flashing light is mounted on wall above unit. Alarm horn is recess mounted in wall next to light. Light is illuminated and horn sounds when either eye/face wash or shower is activated. See page 87 for complete information.

AP3800 Thermostatic Mixing Valve. Mixing valve precisely blends hot and cold water to deliver warm (tepid) water to eye/face wash and shower station as required by ANSI Z358.1 - 1998. Warm water prevents possibility of thermal shock. See page 86 for complete information.

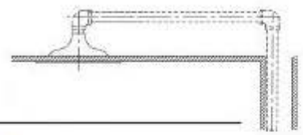
CTSSBF2150

Recessed Safety Station with Drain Pan



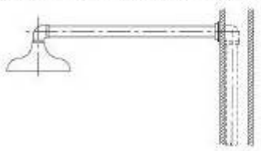
CTSSBF2160

Same as above except with recess mounted shower head.

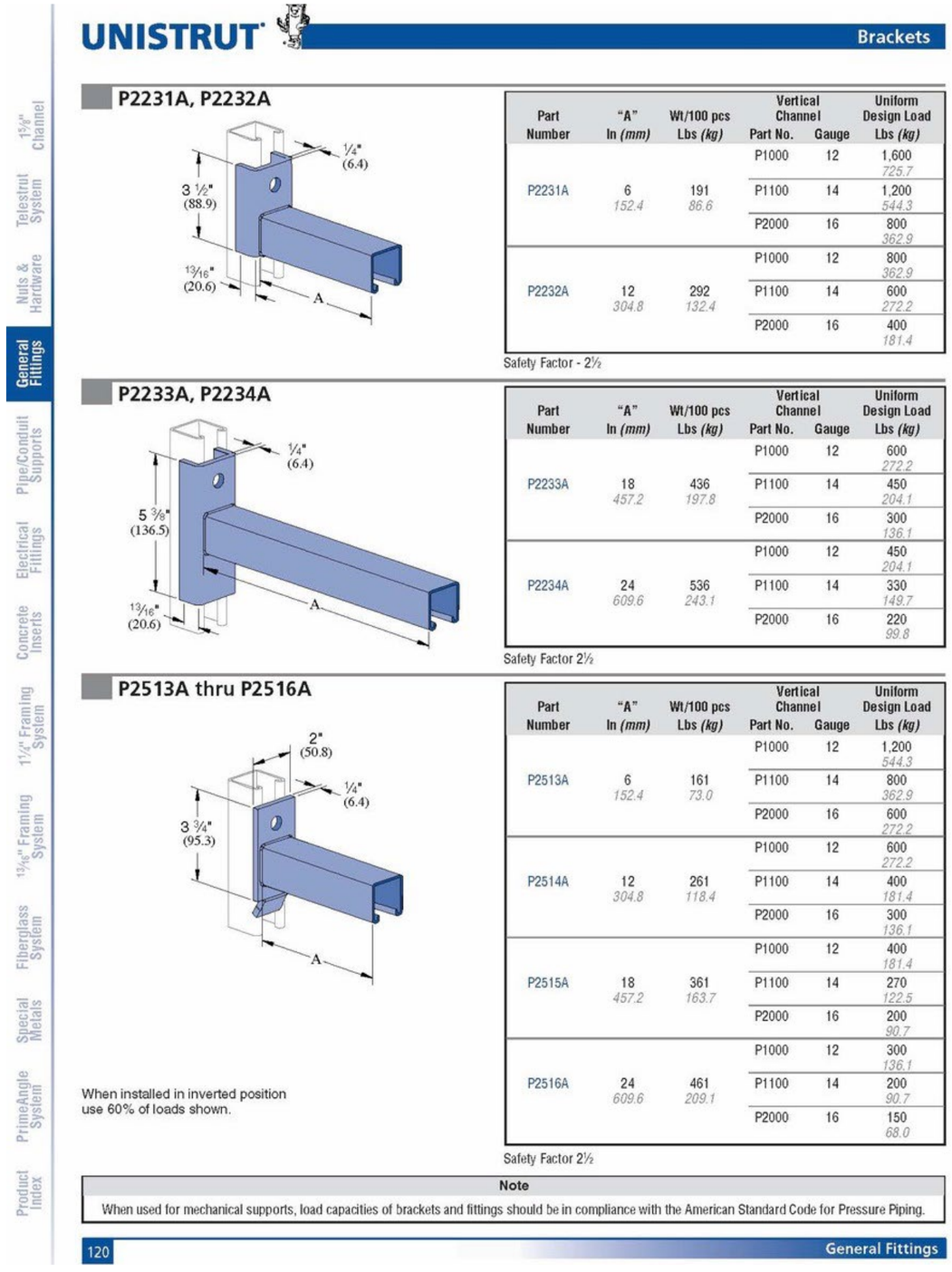


CTSSBF2170

Same as above except with wall mounted shower head.



WaterSaver Faucet Co. 312.666.5500 Voice 312.666.8597 Fax wsflab.com



UNISTRUT

Brackets

Telestrut System | Nuts & Hardware | General Fittings | Pipe/Conduit Supports | Electrical Fittings | Concrete Inserts | 1¼" Framing System | 13/16" Framing System | Fiberglass System | Special Metals | PrimeAngle System | Product Index

P2231A, P2232A

Part Number	"A" In (mm)	Wt/100 pcs Lbs (kg)	Vertical Channel Part No.	Vertical Channel Gauge	Uniform Design Load Lbs (kg)
P2231A	6 (152.4)	191 (86.6)	P1000	12	1,600 (725.7)
			P1100	14	1,200 (544.3)
			P2000	16	800 (362.9)
P2232A	12 (304.8)	292 (132.4)	P1000	12	800 (362.9)
			P1100	14	600 (272.2)
			P2000	16	400 (181.4)

Safety Factor - 2½

P2233A, P2234A

Part Number	"A" In (mm)	Wt/100 pcs Lbs (kg)	Vertical Channel Part No.	Vertical Channel Gauge	Uniform Design Load Lbs (kg)
P2233A	18 (457.2)	436 (197.8)	P1000	12	600 (272.2)
			P1100	14	450 (204.1)
			P2000	16	300 (136.1)
P2234A	24 (609.6)	536 (243.1)	P1000	12	450 (204.1)
			P1100	14	330 (149.7)
			P2000	16	220 (99.8)

Safety Factor 2½

P2513A thru P2516A

When installed in inverted position use 60% of loads shown.

Part Number	"A" In (mm)	Wt/100 pcs Lbs (kg)	Vertical Channel Part No.	Vertical Channel Gauge	Uniform Design Load Lbs (kg)
P2513A	6 (152.4)	161 (73.0)	P1000	12	1,200 (544.3)
			P1100	14	800 (362.9)
			P2000	16	600 (272.2)
P2514A	12 (304.8)	261 (118.4)	P1000	12	600 (272.2)
			P1100	14	400 (181.4)
			P2000	16	300 (136.1)
P2515A	18 (457.2)	361 (163.7)	P1000	12	400 (181.4)
			P1100	14	270 (122.5)
			P2000	16	200 (90.7)
P2516A	24 (609.6)	461 (209.1)	P1000	12	300 (136.1)
			P1100	14	200 (90.7)
			P2000	16	150 (68.0)

Safety Factor 2½

Note

When used for mechanical supports, load capacities of brackets and fittings should be in compliance with the American Standard Code for Pressure Piping.

120 General Fittings

SHELF BRACKET

Location: All equipment spaces with shelf above, all lab benches with shelves.

P2231A for 12” deep shelves.
Modified to 4.5” height to allow shelf placement without covering bolt connector.

P2232A for 15” deep shelves.
Modified to 4.5” height to allow shelf placement without covering bolt connector.

P2233A for 24” deep shelves.
Modified to 6.5” height to allow shelf placement without covering bolt connector.

HOT/COLD WATER FAUCET CUT SHEET

Location: Ground, 2nd and 3rd Floors

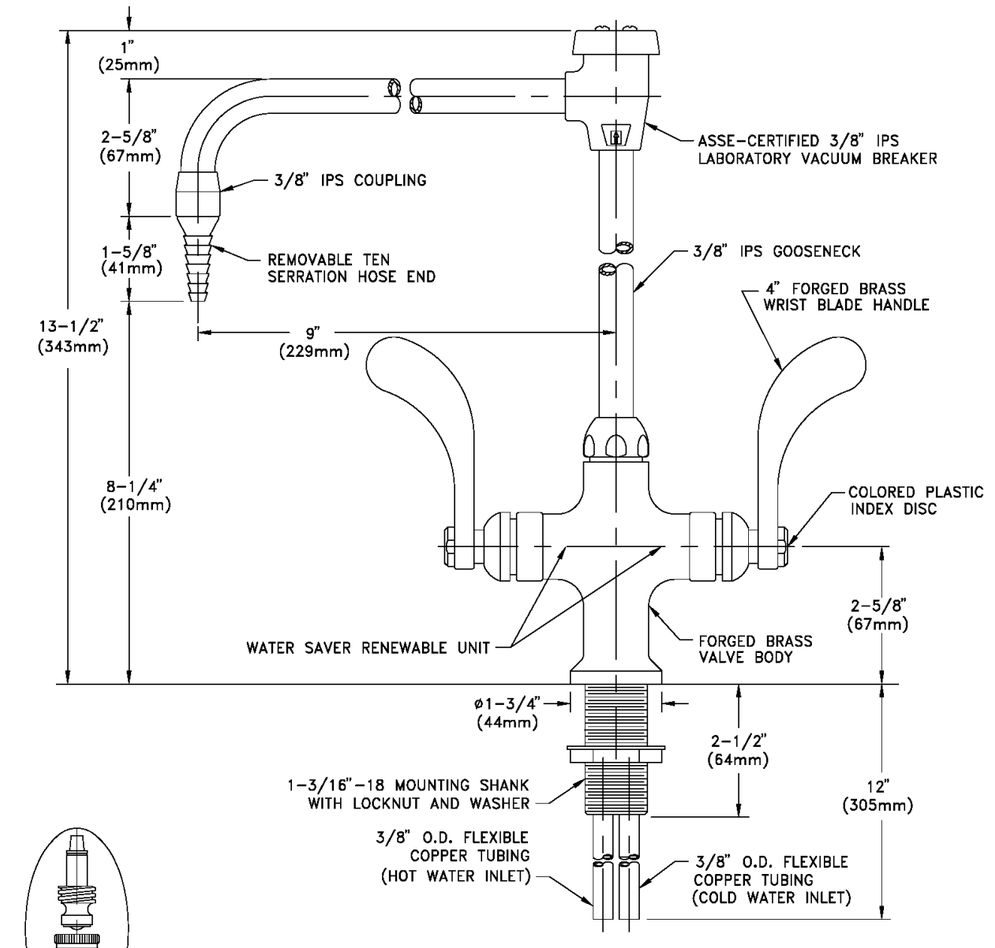
COLORTECH

Laboratory Service Fixtures by
WaterSaver Faucet Co.

701 West Erie Street Phone 312 666 5500
Chicago, Illinois 60610 Fax 312 666 8597

CT414-9VB-BH

LABORATORY MIXING FAUCET, DECK MOUNTED, 9" RIGID/SWING VACUUM BREAKER GOOSENECK, WRIST BLADE HANDLES



WATER SAVER RENEWABLE UNIT WITH REPLACEABLE STAINLESS STEEL SEAT

MEASUREMENTS MAY VARY ±1/4".

NOTES:
1. CSA CERTIFIED UNDER CAN/CSA B125.M89. COMPLIES WITH ANSI/ASME A112.18.1M.
2. FIXTURE IS FURNISHED WITH COLORTECH POWDER-COATED FINISH.

Drawing Number: _____

Revision Number: 031803-KJS

All faucets and fittings to be satin chrome finish with clear epoxy coat.

SINK CUT SHEET

Location: Research Labs
2nd and 3rd Floors

Typical lab sink:
Epoxy resin drop in mount
D59- 28” long x 15” wide x 11.8” deep

Epoxy resin drop in mount
Typical accessible lab sink:
A26- 18” long x 15” wide x 5/11” deep

Similar for Vivarium, except all stainless steel

DURCON INCORPORATED

PRODUCT DIMENSIONS

DOMESTIC SIZES

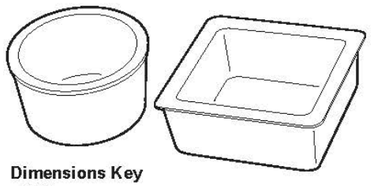
Standard DropIn® Sinks

Sink No.	Outlet	Wgt (lb)	Dimensions (in)				
			Inside Bowl			Outlet Location	
			Length	Width	Depth	X	Y
D01C	Center	9	9.0	6.0	5.8	4.5	3.0
D03C	Center	16	12.0	8.0	5.8	6.0	4.0
♿ A05	Corner	18	14.0	10.0	5.0	3.5	3.5
D05	Corner	22	14.0	10.0	6.2	3.5	3.5
D05C	Center	24	14.0	10.0	6.2	7.0	5.0
D10	End	20	16.0	8.0	6.8	4.5	4.0
D10C	Center	22	16.0	8.0	6.8	8.0	4.0
D15	Corner	30	16.0	12.0	8.0	3.5	3.5
D15C	Center	31	16.0	12.0	8.0	8.0	6.0
D19	Corner	42	16.0	16.0	9.6	3.5	3.5
D20	Corner	32	16.0	16.0	7.5	3.5	3.5
D22C	Center	30	18.0	6.5	6.8	9.0	3.3
D24C	Center	30	18.0	14.0	10.5	9.0	6.8
♿ A25	Corner	35	18.0	15.0	5.0	3.5	3.5
D25	Corner	39	18.0	15.0	7.9	3.5	3.5
D30	Corner	53	18.0	15.0	11.0	3.5	3.5
D30C	Center	50	18.0	15.0	10.8	9.0	7.5
D33E	End	59	21.0	17.0	9.8	4.5	8.5
D45	Corner	64	21.5	15.5	11.0	3.5	3.5
D50C	Center	48	24.0	16.0	8.0	12.0	8.0
D52	Corner	77	24.0	18.0	11.0	3.5	3.5
♿ A55	Corner	47	25.0	15.0	4.8	3.5	3.5
D55	Corner	61	25.0	15.0	10.0	3.5	3.5
D59	Corner	61	28.0	15.0	11.8	3.5	3.5
DRS12	Center	18	12.0	Round	7.8	Center	

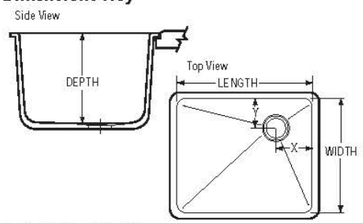
♿ *ADA compliant sinks are designated by this symbol.*

All Dimensions are nominal and may vary by manufacturing location. Cutsheets available upon request.

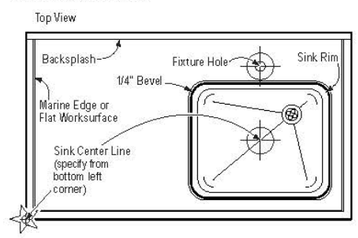
DropIn® Sink Styles



Dimensions Key



Installation Detail

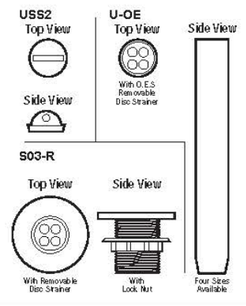


Sink Outlets & Accessories

Part No.	Description	Color Availability								Dimensions (in)		
		Black Onyx	Gray	Graphite	Forest Green	Steel Blue	Tan	Alpine White	Palo Duro	Table Rock	Inside Pipe/Outlet Diameter	Outside Rim Diameter	Length
Polypropylene													
SO3-R	Sink Outlet*	✓	✓	—	—	—	—	✓	—	—	1.4	3.3	3.0
USS2	Sink Stopper	✓	—	—	—	—	—	—	—	—	—	1.4	—
U-OE	Open End Overflow	✓	—	—	—	—	—	—	—	—	—	1.4	4, 6, 8,10
O.E.S.	U-OE Strainer Cap	✓	—	—	—	—	—	—	—	—	—	1.4	—
Epoxy Resin													
SO3	Sink Outlet*	—	—	✓	✓	✓	✓	—	—	—	1.4	3.3	3.0

**A plastic disc strainer is included with each sink outlet.*

Outlets & Accessories



Special Order DropIn Sinks

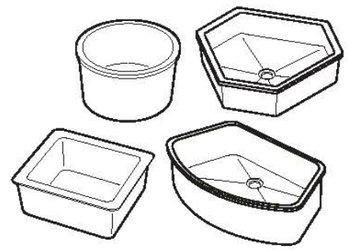
Sink No.	Outlet	Wgt (lb)	Dimensions (in)				
			Inside Bowl			Outlet Location	
			Length	Width	Depth	X	Y
♿ D06*	Center	34	12.0	12.0	12.0	6.0	6.0
A07*	Corner	24	14.0	14.0	5.0	3.5	3.5
D08*	Corner	25	15.0	8.0	6.0	3.5	3.5
D09*	Corner	25	15.0	8.0	10.8	3.5	3.5
D21*	Corner	58	16.0	16.0	15.0	3.5	3.5
♿ A26*	Corner	39	18.0	15.0	5/11	4.5	5.5
D32	Corner	49	18.0	15.0	15.8	3.5	3.5
D51*	Corner	60	24.0	16.0	9.6	3.5	3.5
D54*	Corner	45	25.0	15.0	8.0	3.5	3.5
D57*	Corner	71	25.0	15.0	13.6	3.5	3.5
D58*	Corner	79	25.0	15.0	17.8	3.5	3.5
D61	End	94	30.0	16.0	17.8	4.5	7.5
D65C*	Center	98	35.5	19.5	9.8	17.8	9.8
D68**	End	70	30.0	16.0	10.0	8.0	4.75
D70C*	Center	95	24.0	16.0	15.5	8.0	12.0
D100**	Center	29	22.5	Hexagon	5.0	Center	
D200**	End	64	30.9	Hexagon	7.0	15.5	8.0
DRS10*	Center	14	10.0	Round	7.8	Center	
DHC20*	Center	82	30.0	Hexagon	7.0	Center	
D99*	End	56	32.0	Semi-Circle	10.0	11.5	4.5

All sinks are available at both plants unless otherwise noted:
** Available only from Taylor, TX. plant (colors: Black Onyx, Gray, Graphite, Tan, Forest Green and Steel Blue).*
*** Available only from Canton, MI, plant (colors: Black Onyx, Gray and Alpine White)*

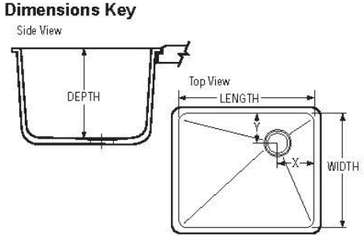
♿ *ADA compliant sinks are designated by this symbol.*

All Dimensions are nominal. Exterior dimensions vary by manufacturing location. Cutsheets available upon request.

DropIn® Sink Styles



Dimensions Key



VISTA SERVICE COLUMN CUT SHEET

Double side, square corners, at research islands.
Single side, square corners, at wall locations.
Single side, rounded corners at exterior windows.

WIREMOLD®
Wire & Cable Management Systems

Vista™ Series

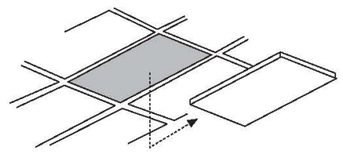
INSTALLATION INSTRUCTIONS

Installation Instruction No.: 42140R1 – Updated February 2003

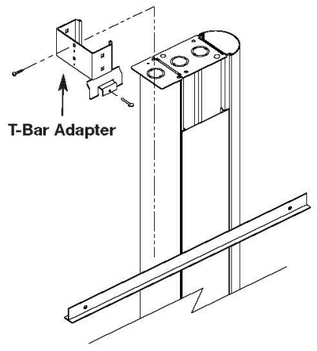
Wiremold Electrical Systems conform to and should be installed and properly grounded in compliance with requirements of the current National Electrical Code, Canadian Electrical Code or codes administered by local authorities.

All electrical products may represent possible shock or fire hazard if improperly installed or used. Wiremold electrical products are cUL Listed, made for interior use only, and should be installed in conformance with current local and/or the National Electrical Code.

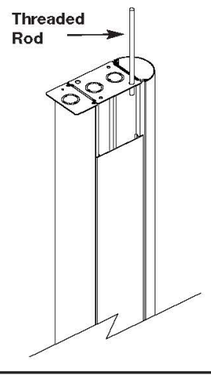
1 Remove Ceiling tile from the grid if present.



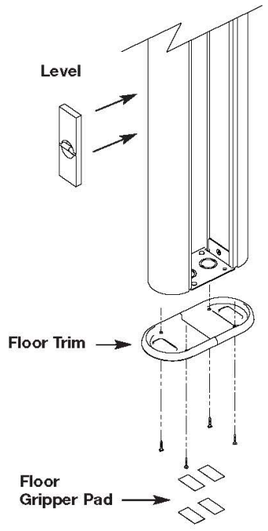
2a **For installation with a suspended ceiling**. Use the included T-bar adapter. Slide fitting over outside channel and tighten as shown. Position T-bar clamp over grid tee and tighten with thumbscrew.



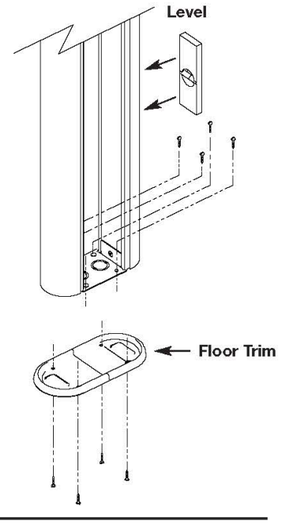
2b **For tying into ceilings without suspended grids**. Use 3/8" [9.5mm] threaded rod (not included). Secure to top plate using provided knockouts and appropriate nuts. Attach to ceiling structure.



3a Locate and attach floor trim piece to main support with the four pan head screws provided. Use provided floor gripper pads to secure to floor. Use both pieces for hard flooring. For use with carpet use only the coarse portion of the pad. Make certain Vista Unit is correctly oriented and plumb before securing to floor.



3b **For more permanent mounting**. Remove provided knockouts from steel base support. Locate and attach floor trim piece to main support with the four pan head screws provided. Drive four screws (not provided) through trim piece and into flooring. Minimum recommended screws size #8 x 1" [7.9mm head size x 25mm]. Use proper hardware for specific flooring materials. Make certain the Vista Unit is correctly oriented and plumb before securing to floor.



METRO SHELF UNIT CUT SHEET

Location: Ground, 2nd and 3rd Floors

Typical metro shelf unit to be 5 tier, 24” wide x 48” long x 72” nominal height with heavy duty lockable casters.

METRO

Item # _____

Job _____

SUPER ADJUSTABLE 2" SUPER ERECTA SHELF®

WIRE SHELVING

Super Adjustable 2™ Super Erecta Wire Shelving is the most advanced and innovative wire storage system available. The unique Corner Release System, which allows shelves to be adjusted quickly and easily without tools, has been re-engineered to provide increased rigidity. And Super Adjustable 2™ Shelving works in conjunction with the entire Super Erecta System of shelves and accessories.

- Maximum Space Utilization: The Corner Release System encourages repositioning of shelves during initial assembly to reclaim wasted vertical space. In some cases, reclaimed vertical space will allow an extra shelving tier to be added to the storage unit resulting in a 25% increase in storage capacity!
- Easily Assembled: The unique Corner Release System enables quick and easy repositioning of shelves during the initial set up to accommodate different package or container sizes. `Total Assembly` is complete only after the shelves are properly spaced to maximize storage. SiteSelect™ Posts, with the double-groove visual guide feature, have circular grooves at 1` (25mm) increments and are numbered at 2` (51mm) intervals to easily identify proper shelf locations.
- Easily Adjustable: The unique shelf design and SiteSelect™ Posts enable `tool-free`, quick adjustment at 1` (25mm) increments along the entire height of the post.
- Improved Rigidity: An enhanced Corner Release System has made Super Adjustable 2™ the most rigid, easily adjustable shelving system ever.
- Strong: Super Adjustable 2™ shelves hold as much weight as traditional Super Erecta wire shelving. Stationary units hold a maximum of 2,000 lb. (910 kg). Maximum weight capacity per shelf (48` [1219mm] or shorter = 800 lb. [364kg]; longer than 48` [1219mm] = 600 lb. [273kg].)
- Choice of Finishes: Super Adjustable 2™ Super Erecta shelving is available in a variety of finishes: Super Erecta Brite and chrome-plated for dry storage; Metroseal 3™ with antimicrobial product protection and stainless steel for corrosive environments; and attractive black epoxy for merchandising applications.

Dry Storage — Chrome or Super Erecta Brite™

All Environments — Metroseal 3™ with ^Microban® Antimicrobial Product Protection

Mobile Stem Caster Cart

Mobile Dolly Truck

Super Adjustable 2™ Advantage . . .

Easily reposition Super Adjustable 2™ shelves during initial assembly to increase storage capacity by as much as 25%.

Corner Release System

^MICROBAN® and the MICROBAN® symbol are registered trademarks of the Microban Products Company, Huntersville, NC.

METRO

InterMetro Industries Corporation
North Washington Street
Wilkes-Barre, PA 18705
www.metro.com

EMERSON Storage Solutions

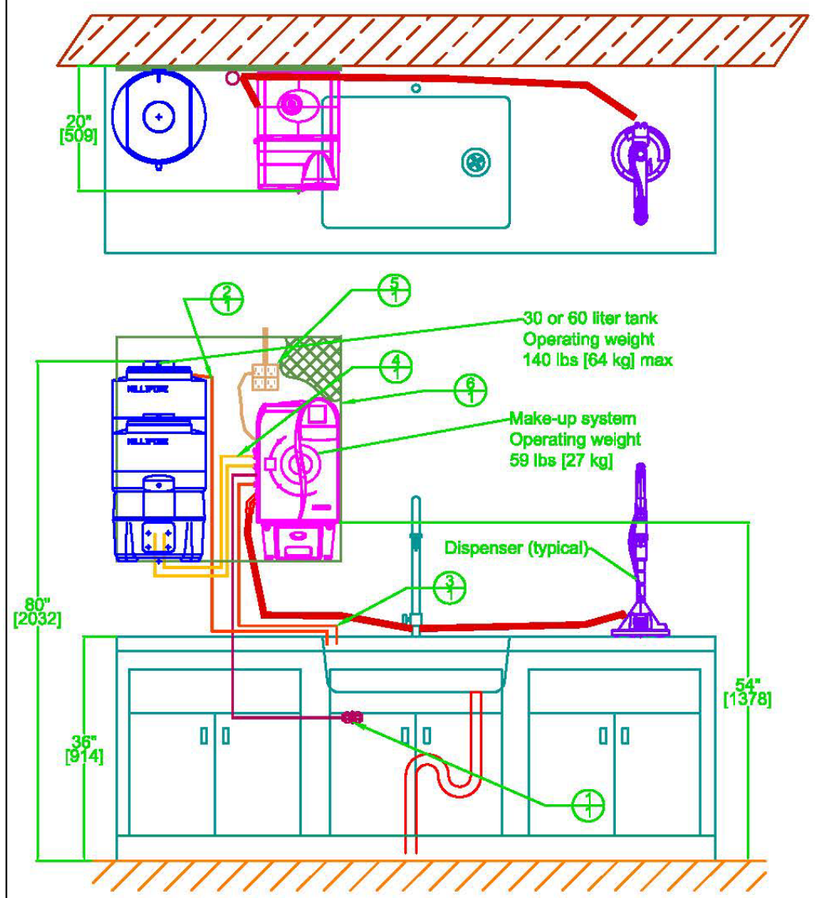
METRO Adjustable Wire Shelving SUPER ADJUSTABLE 2" SUPER ERECTA SHELF®

10.01A

WATER POLISHER CUT SHEET

Location: At select lab sinks, To Be Determined

REVISIONS				
REV	BY	DESCRIPTION	DATE	APPD
-	-	INITIAL RELEASE	xx/xx/xx	



System and 30 or 60 liter tank wall mounted

For both Milli-Q Integral and Elix Advantage Systems

INTERFACE CALL-OUT TABLE

TAG	DESCRIPTION	LOCATION
1-1	Feed water source - provide 1/2" npt connection for Millipore interface. Pressure 30-80 psi, Temp 41-95°F	Either under the sink or on wall, within 5 feet of system. If under sink, provide 2" Ø hole in counter or casework for tubing for connection to system by Millipore
2-1	Overflow from storage tank	Gravity drain connection is on back of tank, Millipore will run 3/4" hose from tank to sink or standpipe provided by customer
3-1	Reject from make-up system	Millipore will run tubing from system to sink or standpipe provided by customer
4-1	Supply and return from storage tank	Millipore will run tubing from system to the storage tank
5-1	120VAC for water system, provide 5-15R receptacle. System power 160VA, fused internally at 2.5 A	Locate within 48" of the Millipore system
6-1	Provide mounting panel to cover wall behind and provide mounting for Millipore equipment	Locate as needed, dimensions as needed, material typically 3/4" plywood or similar, to support tank and make-up system
7-1	Supply and return to/from the dipsenser(s)	Millipore will run tubing from system to the dispenser(s)

INSTALLATION NOTES

(1) TANK LOCATION: Typical shown. Tank must be located within 6 ft (2 m) above or below, and within 9 ft (3m) left or right of the system.
(2) DISPENSER: Typical shown. Provided with communications/tubing assembly that allows location up to 9 ft (3 m) away from system (see "Pod combinations" drawing.
(3) CASEWORK : Owner to provide Holes in counters and casework as needed to provide path for all tubing and cables.

DO NOT SCALE PRINT

MILLIPORE

NA CUSTOM WATER SYSTEMS - BIOSCIENCE DIVISION
BILLERICA, MASSACHUSETTS 01821

CLIENT: Millipore Installation Details

TITLE: Typical Milli-Q/ Elix Advantge installation dimensions

DRAWN BY: TJC 11-8-08
CHK'D BY: XXX xx/xx/xx
ENGR: xx/xx/xx
APPD: xx/xx/xx

SIZE: A
DWG NO: Siwus-CS- 111009E
REV: -
SCALE: none
DRAWING CP
SHEET: 1 OF 1

Locate at each lab sink where required.
Requires RO water supply and duplex power outlet.

Includes 30 litre storage tank, wall mounted on shelf.

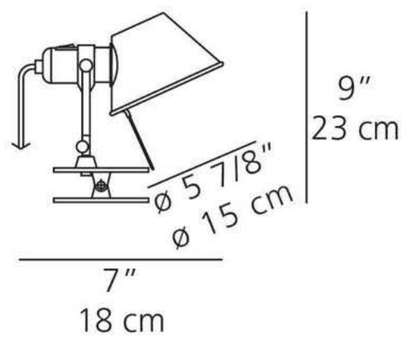
Can be Owner Furnished/Owner installed, or Contractor Furnished/Contractor Installed.

TASK LIGHT CUT SHEET

At lab benches, 2nd and 3rd Floors

LED Task light attaches to shelf edge and is easily moved/removed. Task light plugs into raceway at mobile lab bench.

Tolomeo clip spot



EQUIPMENT CUT SHEETS
OWNER FURNISHED

BIOLOGICAL SAFETY CABINET CUT SHEET

Location: Vivarium Procedure Rooms;
Ground Floor
Research Procedure Rooms
2nd and 3rd Floors

4' Purifier Logic+ Class II A2 Biological Safety Cabinet with 10" sash opening Catalog #302310001

- **Product Subcategory:** Class II, Type A2 Biological Safety Cabinets
- **Nominal Width:** 4'
- **Protection Type:** Product and Personnel
- **Nominal Sash Opening:** 10" (25 cm)
- **Region:** U.S. and Canada
- **Base Stand:** Required (not included)
- **Conformance:** ADA, CAN/CSA C22.2, ETL, NSF 49, UL
- **Exhaust : No external exhaust**
- **Lighting:** LED
- **Power Cord & Plug:** North America, 115V, 15A
- **Estimated Shipping Weight:** 510.0 lbs
- **Estimated Shipping Weight metric:** 231.3 kg
- **Dimensions:** 55" w x 31.2" d x 61.7" h
- **Dimensions metric:** 140 x 79.2 x 156.7 cm
- **Electrical:** 115V, 60 Hz, 12A

ANIMAL TRANSFER STATION CUT SHEET

4’ model

Location: Vivarium Holding Rooms

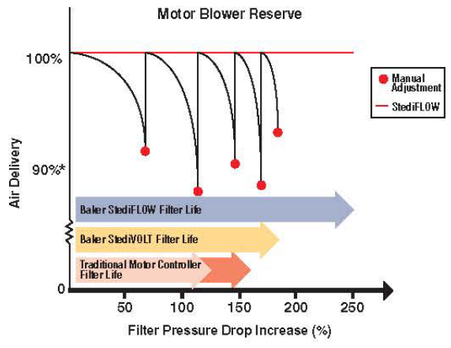
Ground Floor

This is Owner Furnished/Owner Installed item.
Actual unit brand, size, and type may vary.
Shown for reference only.

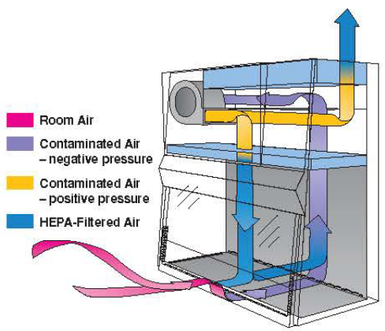
Industry-Leading Technologies Provide Superior Protection and Maximum Efficiency

Maximum protection and energy efficiency is achieved through seven technologies working in concert: our exclusive motor controller, momentum air curtain, high velocity return air slots, aerodynamically designed airfoil, optimized downflow and exhaust filter and unique air bypass armrest.

- Baker’s StediFLOW™ VFD (variable frequency drive) motor controller uses less energy, reduces heat output and operates more quietly. Constant air volume reduces risk of performance degradation, which can compromise personnel and product protection.



- The e3 biological safety cabinet incorporates Baker’s exclusive UniPressure Preflow Plenum high-performance airflow system that saves energy and extends filter life by loading filters evenly.
- Baker’s optimum blower/motor design ensures performance and extends filter life an additional 30% over our previous cabinets—the longest life in the industry—with a range of over 10 years.
- A unique momentum air curtain offers an added measure of containment and protection by creating a strong air barrier, or momentum air curtain, at the front of the cabinet, increasing protective capabilities for both animals and personnel.



- Containment and cleanliness are achieved with precise control of airflow volumes and velocities. A unique feature in the Baker cabinet design, the high-velocity return air slots have been proven to maximize the cabinet’s protective capabilities.
- Unique all-metal, double-wall design of the SterilGARD® e3 cabinet creates base, side and back wall plenums that capture and contain contaminated air under negative pressure.
- The cabinet features a unique airflow design that delivers unidirectional downflow air over the work area for maximum containment and protection.

SterilGARD® e3 Animal Transfer Station with Adjustable Mobile Lift

Class II, Type A2

The SterilGARD® e3 Animal Transfer Station offers an adaptive ergonomic design combined with proven containment technology to improve worker comfort, increase productivity and reduce fatigue. Providing protection for personnel, animals and the environment, the SterilGARD e3 Animal Transfer Station provides maximum safety and project flexibility in the animal research laboratory.

Features

- HEPA supply and exhaust filters protect animals, users and the environment.
- 10° slanted viewscreen permits enhanced product viewing.
- Adaptive ergonomic design combined with continuously adjustable mobile lift for work surface heights of 22" to 40½" provides maximum operator comfort, increased productivity and reduced fatigue.
- Electric/hydraulic lift system allows for increased mobility by lowering height and center of gravity; maintains position when power is removed.
- Portable unit on casters with lift and pullbars; fits through standard doorway in lowest position for increased mobility.
- 12" viewscreen sash opening.
- Pre-filters to capture hair, dander and bedding to preserve the main HEPA filter.
- Available in 4', 5' or 6' models.

CAGE RACK CUT SHEET

Location: Holding Rooms, Mice/Rats Ground Floor

This is Owner Furnished/Owner Installed item.
Actual unit brand, size, and type may vary.
Shown for reference only.

DEMOUNTABLE SHELF STYLE RACK

Completely demountable with shelves, easily removable without tools.

Solid sheet shelves have side- and back-lips for added security of cage position.

Normally used as single-sided racks only.

Available in two different sizes.

Cage body	Nr of cages per shelf	Dimensions L x W x H (mm/in)	Nr of shelves	Cat. No.
1144B	7	1210 x 390* x 1843 47.64 x 15.35* x 72.56	6	2UN1D600
1145T	6			
1264C 1284L 2150E	5			
1290D 1291H	6	1773 x 572 x 1868 69.80 x 22.50 x 73.54	5	2UN2D600
1500U 1354G	4			

* overall width including wheels = 480 mm / 18.90 in

WELDED SHELF STYLE RACK

Fully welded for maximum strength and rigidity.

Simple design for easier cleaning and significant comparative low cost.

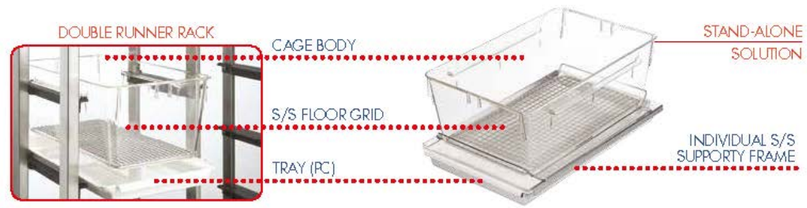
Only one size available.

Cage body	Nr of cages per shelf	Dimensions L x W x H (mm/in)	Nr of shelves	Cat. No.
1144B	7	1307 x 547 x 1712 51.46 x 21.54 x 67.40	5 (6*)	2UN5B106
1145T	6			
1264C 1284L	5			
1290D	4			

* the roof can be used as extra shelf

Cage body	Rack configuration				Rack model		Dimensions without bumpers L x W x H (mm/in)
	Nr of cages	Design	Rows	Columns	Without bumpers	with bumpers	
1144B	64	Single-sided	8	8	2B64B1000	2B64B1000BW	1494 x 480 x 1874 / 58.82 x 18.90 x 73.78
1145T	42	Single-sided	7	6	2T42B1000	2T42B1000BW	1128 x 500 x 1648 / 44.41 x 19.68 x 64.88
	48	Single-sided	8	6	2T48B1000	2T48B1000BW	1128 x 500 x 1861 / 44.41 x 19.68 x 73.27
	64	Single-sided	8	8	2T64B1000	2T64B1000BW	1494 x 500 x 1861 / 58.82 x 19.68 x 73.27
	128	Double-sided	8	8	2T128B1000	2T128B1000BW	1494 x 865 x 1861 / 58.82 x 34.06 x 73.27
1264C 1284L	30	Single-sided	6	5	2CL30B1000	2CL30B1000BW	1240 x 480 x 1871 / 48.82 x 18.90 x 73.66
	36	Single-sided	6	6	2CL36B1000	2CL36B1000BW	1492 x 480 x 1871 / 58.35 x 18.90 x 73.66
	48	Single-sided	8	6	2CL48B1000	2CL48B1000BW	1492 x 480 x 1996 / 58.35 x 18.90 x 78.58
	60	Double-sided	6	5	2CL60B1000	2CL60B1000BW	1240 x 880 x 1871 / 48.82 x 34.65 x 73.66
	70	Double-sided	7	5	2CL70B1000	2CL70B1000BW	1240 x 880 x 1871 / 48.82 x 34.65 x 73.66
1290D	24	Single-sided	6	4	2D24B1000	2D24B1000BW	1214 x 515 x 1877 / 47.80 x 20.28 x 73.90
1290D 1291H	20	Single-sided	5	4	2H20B1000 **	2H20B1000BW **	1214 x 515 x 1655 / 47.80 x 20.28 x 65.16
	20	Single-sided	5	4	2H20B1000H *	2H20B1000HBW *	1214 x 515 x 1877 / 47.80 x 20.28 x 73.90
	24	Single-sided	6	4	2H24B1000 **	2H24B1000BW **	1214 x 515 x 1947 / 47.80 x 20.28 x 76.65
	30	Single-sided	6	5	2H30B1000	2H30B1000BW	1510 x 480 x 1947 / 59.45 x 18.90 x 76.65
2150E	25	Single-sided	5	5	2E25B1000	2E25B1000BW	1300 x 535 x 1874 / 51.18 x 21.06 x 73.78
	30	Single-sided	6	5	2E30B1000	2E30B1000BW	1300 x 535 x 1874 / 51.18 x 21.06 x 73.78
2154F	20	Single-sided	5	4	2F20B1000	2F20B1000BW	1178 x 580 x 1877 / 46.38 x 22.83 x 73.90
	25	Single-sided	5	5	2F25B1000	2F25B1000BW	1465 x 580 x 1877 / 57.68 x 22.83 x 73.90
1500U	15	Single-sided	5	3	2U15B1000	2U15B1000BW	1239 x 600 x 1791 / 48.78 x 23.62 x 70.51
	20	Single-sided	5	4	2U20B1000	2U20B1000BW	1642 x 600 x 1791 / 64.65 x 23.62 x 70.51
1354G	18	Single-sided	6	3	2G18B1000 *	-	1239 x 690 x 1877 / 48.78 x 27.17 x 73.90
	20	Single-sided	5	4	2G20B1000	2G20B1000BW	1642 x 690 x 1760 / 64.65 x 27.17 x 69.29
	20	Single-sided	5	4	2G20B1000H *	2G20B1000HBW *	1642 x 690 x 1877 / 64.65 x 27.17 x 73.90
	24	Single-sided	6	4	2G24B1000 *	2G24B1000BW *	1642 x 690 x 1877 / 64.65 x 27.17 x 73.90
2000P	15	Single-sided	5	3	2P15B1000	2P15B1000BW	1396 x 725 x 1877 / 54.92 x 28.54 x 73.90
	18		6	3	2P18B1000LW **	2P18B1000LWBW **	1396 x 725 x 1980 / 54.92 x 28.54 x 77.95

* can be used with raised lid
** close distance between cages when filter tops are used
* to be used with bottle type F
** cannot be used with filter tops

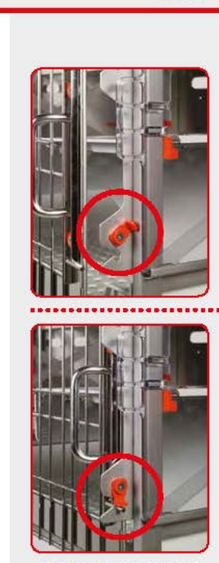


Cage body	Rack configuration			Rack model with double runners		Dimensions without bumpers L x W x H (mm/in)	PC body with cut-away base	S/S mesh floor grid 7x7/11x11 mm	Tray (PC)	Individual S/S support frame
	Nr of cages	Design	Rows/ columns	Without bumpers	with bumpers					
1264C/1284L	30	single-sided	6/5	2CL30B2000	2CL30B2000BW	1238 x 480 x 1871 / 48.76 x 18.90 x 73.66	-051	-524 / -	-382	-905
1290D	24	single-sided	6/4	2D24B2000	2D24B2000BW	1214 x 515 x 1877 / 47.80 x 20.28 x 73.90	-051	-524 / -525	-382	-905
1291H	20	single-sided	5/4	2H20B2000	2H20B2000BW	1214 x 515 x 1877 / 47.80 x 20.28 x 73.90	-051	-524 / -525	-382 *	-905 *
1354G	20	single-sided	5/4	2G20B2000	2G20B2000BW	1642 x 690 x 1877 / 64.65 x 27.17 x 73.90	-051	-524 / -525	-382	-905

* 1291H to be ordered as 1290D - 382 / -905

CAGE RACK CUT SHEET- RABBITS

Location: Rabbit Holding Room
Ground Floor



PUSH-AND-CLOSE GATE
WITH SAFETY LOCK SYSTEM

TRANSPARENT SIDE PANELS - INTERLINKED RACKS

FAST-DRY ROOF DESIGN

CAGE

	X	R	P
Floor area (cm² / ft²)	4264 / 4.59	4670 / 5.03	5456 / 5.87
Overall dimensions W x D x H (mm /in)	713 x 716 x 115 28.06 x 28.19 x 4.53	743 x 716 x 114 29.27 x 28.19 x 4.49	870 x 740 x 131 34.25 x 29.13 x 5.16
Internal height (mm / in)	476 / 18.74	471 / 18.55	604 / 23.76
Plastic type	Noryl - 2-year warranty		
Cage body	Autoclavable, high stackability		
Waste tray	Autoclavable, high stackability, simmetric (no back, no front)		Autoclavable, high stackability
Feeder capacity	2.2 l / 74.39 oz (US) / 77.43 oz (UK)		
Bottle capacity *	750 ml / 25.36 oz (US) / 26.40 oz (UK)		

* can accomodate multiple water bottles

RACK

Cage type	Rack configuration	Overall rack dimensions L x W x H (mm/in)
X	3 cages (1W x 3H)	784 (817*) x 820 (869**) x 1830 30.87 (32.17*) x 32.28 (34.20**) x 72.05
R	3 cages (1W x 3H)	810 (843*) x 820 (870**) x 1830 31.89 (33.19*) x 32.28 (34.26**) x 72.05
P	2 cages (1W x 2H)	937 (970*) x 845 (896**) x 1718 36.89 (38.19*) x 33.27 (35.25**) x 67.64

* with interlinking device
** with feeder and water bottle

Note: 3 levels "P" type racks are available upon request

OPTIONS
- Auto watering system
- S/S feeder with anti-dust cover
- S/S hay feeder
- Enlongated waste tray for "X" type cage

ACCESSORIES
- Noryl nesting box
- Additional water bottle

This is Owner Furnished/Owner Installed item.
Actual unit brand, size, and type may vary.
Shown for reference only.

METRO CABINET CUT SHEET

Location: Vivarium Procedure Rooms
Ground Floor

METRO

HOW TO BUY PRODUCTS REP LOCATOR SUPPORT LITERATURE CATALOG BLOG ABOUT US

Home / Cabinets

PRODUCTS

CABINETS

- Enclosed Storage
- Heated Cabinets
- Holding Cabinets
- Medication Cabinets
- Pharmacy Fixtures & Shelving

Cabinets

cabinets

ENCLOSED STORAGE

HEATED CABINETS

HOLDING CABINETS

MEDICATION CABINETS

PHARMACY FIXTURES...

SEM CUT SHEET

Location: SEM Lab, Ground Floor

JSM – 6390LV/LGS

Scanning Electron Microscope

Installation Facilities Requirements

JEOL USA Inc.
11 Dearborn Road
Peabody, MA 01960
Phone (978) 535-5900
Fax (978) 536-2205
www.jeol.com

Dimensions and Weights

	Width	Depth	Height	Weight
Column Console	750 [29.5]	1000 [39.4]	1445 [56.9]	320 [704]
Operation Desk	1,143 [45]	889 [35]	737 [29]	72.7 [160]
Vibration Isolation Block	270 [10.6]	200 [8]	200 [8]	22 [48.4]
Rotary Pump (2)	460 [18]	175 [7]	255 [10]	50 [110]

Dimension: mm [inch] Weight: Kg [lbs]

Laboratory Requirements

A. Liquid Nitrogen (Optional) (Customer Supplied)	Required if the optional EDS system or LNB/LNT accessory units are purchased. Review the specific technical manuals for the exact amounts required by the vendors.

Water Requirements

A. Pressure	1.4 kg/cm^2 to 2.1 kg/cm^2 [20 to 30 PSI]
B. Flow Rate	2 liter/min [1 gal/min]
C. Temperature	70 to 75 degrees F
D. Faucet	10mm OD compression or quick release
E. Drain	Larger than 25 mm I.D. or 10mm OD compression or quick release

Note: It is recommended that the optional water recirculator be purchased in areas where the water temperature is not stable or the water is corrosive. If you have purchased the optional water recirculator, please make sure you have specified a water-cooled or air-cooled condenser.

The water-cooled unit requires water for cooling, either from a closed loop chilled water source or from an open loop source (tap water) and a drain.

The air-cooled unit requires uses air between 55 ° F and 85 ° F, creates a heat load for HVAC in the room it is installed, and generates significant noise.

The customer is responsible for the facility water and power connection for the optional water chiller. The JEOL engineer will inspect, fill and make the instrument side water connection.

Room Environment

A. Minimum Room Dimensions	3,531mm x 2,794mm [139" x 110"]
B. Doorway Dimensions	850mm (W) x 2000mm (H) 34" (W) x 79" (H)
C. Room Temperature	20 ± 5 degrees C 70 ± 10 degrees F
D. Humidity	less than 60%
E. Environmental Criteria	JEOL will provide survey to determine room conditions.
F. Light Shield	Not necessary

TEM CUT SHEET

Location: TEM Lab, Ground Floor

Heat Load Specifications

	To Water	To Air
Basic Instrument	12,300 BTU/Hr	5,200 BTU/Hr
Film Desiccator	NA	2,500 BTU/Hr
R175 Chiller (air-cooled)	NA	15,000 BTU/Hr Max
R175 Chiller (water-cooled)	14,000 BTU/Hr Max	1,000 BTU/Hr
GJ-700-72-125 UPS (option)	NA	4,098 BTU/Hr Max

Dimensions and Weights

	Width	Depth	Height	Weight
Basic TEM	2,250 [88.6]	1,740 [68.5]	2,540 [100]	1,300 [2,860]
Power Console	570 [22.5]	800 [31.5]	1750 [69]	350 [770]
High Tension Tank	720 [28.3	660 [28.3]	1,200 [47.2]	170 [374]
Pump Box	200 [7.8]	260 [10.2]	424 [16.7]	33 [72.6]
Air Compressor (option)	420 [17]	420 [17]	800 [32]	45 [99]
Film Desiccator (option)	610 [24]	457 [18]	711 [28]	110 [242]
R175 Chiller	686 [27]	660 [26]	889 [35]	193 [425]

Dimension: mm [inch] Weight: Kg [lbs]

Laboratory Requirements

A. SF6

A 115 lb tank of FS6 and a regulator will be provided with the instrument. This should be adequate for the installation. Additional SF6 may be needed for future service.

B. Liquid Nitrogen

(Optional)
(Customer Supplied)

Required for anti-contamination device and if the optional EDS systems are purchased.

Room Environment

A. Minimum Room Dimensions
2800mm x 3000mm x 2,950mm(H)
[110" x 118" x 116"]

B. Minimum Doorway Dimensions
800mm (W) x 1900mm (H)
31.5" (W) x 75" (H)

C. Ceiling Height
116"*
*See Room Layout, Page 8, for required area.

C. Room Temperature
20 ± 5 degrees C
70 ± 10 degrees F
Stability: < 1 degree C/Hour

D. Humidity
less than 60%

E. Environmental Criteria
JEOL will provide survey to determine room conditions.

G. Light Shield
Not necessary

Water Requirements

There are two options for the water chiller ordered with the instrument. The unit is either a R175 **water-cooled** or a R175 **air-cooled**.

Water-Cooled Compressor: The cooling water for the compressor can be either a leg of a building closed cooling loop, or supplied by from a faucet and thrown away. In either case there is a need for a pressure *differential* of 25 PSI. Please use the chiller guide to determine water temperature and flow requirements.

Air-Cooled Compressor: Room temperature needs to be between 55 ° F and 85 ° F. There also needs to be a 2-foot clearance in front and back of the chiller to allow for adequate air flow. Please use the chiller guide to determine air heat load requirements.

Notes:
1) The customer is responsible for installation of the water chiller.
2) The chiller should be placed outside the instrument room and connected to the provided water manifold (figure 1).There is one supply line and one return line between the chiller and the provided manifold. JEOL recommends the supply line be insulated.

R-Series
Custom Chillers

HASKRIS

Achievement in Design

www.haskris.com

R-Series
Custom Chillers

HASKRIS

Technical Data

MODEL		COOLING CAPACITY*	REFRIGERATION CIRCUIT		FLUID CIRCUIT				DIMENSIONAL DATA AND WEIGHT***		AVAILABLE POWER OPTIONS****		
		BTU/hr (kW)	Compressor HP	Refrigerant	Fluid Flow Rate** GPM (LPM)	Pump HP	Connection Size Inches (NPT)	Reservoir Volume Gallons (Liters)	W x D x H Inches (cm)	Dry Unit Weight lbs (kg)	Voltage	Phase	Frequency
R033	Air Cooled	2,730 (0.80)	1/3	R134A	1 (3.8)	1/3	1/2	5 (19)	18 x 27 x 29 (46 x 69 x 74)	250 (114)	115V	1Ø	60Hz
	Water Cooled	4,090 (1.20)	1/3	R134A	1 (3.8)	1/3	1/2	5 (19)	18 x 27 x 29 (46 x 69 x 74)	250 (114)	115V	1Ø	60Hz
R050	Air Cooled	4,775 (1.40)	1/2	R134A	1 (3.8)	1/3	1/2	5 (19)	18 x 27 x 29 (46 x 69 x 74)	250 (114)	115V or 208/230V	1Ø	60Hz
	Water Cooled	5,970 (1.75)	1/2	R134A	1 (3.8)	1/3	1/2	5 (19)	18 x 27 x 29 (46 x 69 x 74)	250 (114)	115V or 208/230V	1Ø	60Hz
R075	Air Cooled	7,500 (2.20)	3/4	R134A	1.7 (6.4)	1/3	1/2	5 (19)	21 x 29 x 32 (54 x 74 x 82)	350 (159)	208/230V	1Ø	60Hz
	Water Cooled	10,230 (3.00)	3/4	R134A	1.7 (6.4)	1/3	1/2	5 (19)	21 x 29 x 32 (54 x 74 x 82)	350 (159)	208/230V	1Ø	60Hz
R100	Air Cooled	10,740 (3.14)	1	R134A	1.7 (6.4)	1/3	1/2	5 (19)	21 x 29 x 32 (54 x 74 x 82)	350 (159)	208/230V	1Ø	60Hz
	Water Cooled	13,125 (3.84)	1	R134A	1.7 (6.4)	1/3	1/2	5 (19)	21 x 29 x 32 (54 x 74 x 82)	350 (159)	208/230V	1Ø	60Hz
R175	Air Cooled	17,076 (5.00)	1.75	R407C	3.7 (14)	1/3	1/2	9 (34)	27 x 26 x 35 (69 x 66 x 89)	425 (193)	208/230V	1Ø	60Hz
	Water Cooled	20,491 (6.00)	1.75	R407C	3.7 (14)	1/3	1/2	9 (34)	27 x 26 x 35 (69 x 66 x 89)	425 (193)	208/230V	1Ø	60Hz
R250	Air Cooled	25,575 (7.5)	2.5	R407C	3.7 (14)	1/3	1/2	14 (53)	35 x 31 x 48 (89 x 79 x 122)	750 (341)	208/230V	1Ø	60Hz
	Water Cooled	28,985 (8.5)	2.5	R407C	3.7 (14)	1/3	1/2	14 (53)	27 x 26 x 43 (69 x 66 x 110)	525 (239)	208/230V	1Ø	60Hz
R300	Air Cooled	34,100 (10.0)	3	R407C	8.0 (30)	3/4	1/2	14 (53)	35 x 31 x 48 (89 x 79 x 122)	750 (341)	208/230V	3Ø	60Hz
	Water Cooled	37,510 (11.0)	3	R407C	8.0 (30)	3/4	1/2	14 (53)	30 x 26 x 43 (77 x 66 x 110)	600 (273)	208/230V	3Ø	60Hz
R400	Air Cooled	42,625 (12.5)	4	R407C	8.0 (30)	3/4	1/2	30 (114)	47 x 36 x 56 (120 x 92 x 143)	900 (409)	208/230V	3Ø	60Hz
	Water Cooled	46,025 (13.5)	4	R407C	8.0 (30)	3/4	1/2	30 (114)	30 x 36 x 48 (77 x 92 x 122)	600 (273)	208/230V	3Ø	60Hz
R550	Air Cooled	61,375 (18.0)	5.5	R407C	9.0 (34)	1	3/4	30 (114)	47 x 36 x 56 (120 x 92 x 143)	900 (409)	208/230V	3Ø	60Hz
	Water Cooled	66,500 (19.5)	5.5	R407C	9.0 (34)	1	3/4	30 (114)	30 x 36 x 48 (77 x 92 x 122)	650 (295)	208/230V	3Ø	60Hz
R750	Air Cooled	78,425 (23.0)	7.5	R407C	12.5 (47)	1.5	3/4	30 (114)	47 x 36 x 66 (120 x 92 x 168)	1000 (454)	208/230V or 460V	3Ø	60Hz
	Water Cooled	85,250 (25.0)	7.5	R407C	12.5 (47)	1.5	3/4	30 (114)	30 x 36 x 56 (77 x 92 x 143)	775 (352)	208/230V or 460V	3Ø	60Hz
R1000	Air Cooled	102,300 (30.0)	10	R407C	18.0 (68)	2	1	30 (114)	47 x 36 x 66 (120 x 92 x 168)	1200 (545)	208/230V or 460V	3Ø	60Hz
	Water Cooled	112,530 (33.0)	10	R407C	18.0 (68)	2	1	30 (114)	30 x 36 x 56 (77 x 92 x 143)	900 (409)	208/230V or 460V	3Ø	60Hz

* Cooling capacities rated at sea level using water as the recirculating fluid at 65°F process setpoint with nominal operating voltage.
Air-cooled units rated at 80°F ambient air temperature. Other fluids, process temperatures, ambient temperatures, altitude, or operating voltages will affect capacity.
Specifications subject to change. Standard air-cooled operating ambient temperature range is 55°F to 90°F for R033-R175 and 40°F to 100°F for R250-R1000.
See Option (J) and Option (J) for ambient temperatures outside these standard ranges.
** Many pumping alternatives available.
*** R-Series units require 3ft of clearance in front and 6 inches of clearance in the rear for optimal performance.
**** Alternate power options available upon request including 50Hz designs and universal 50/60Hz designs. Please contact Haskris.

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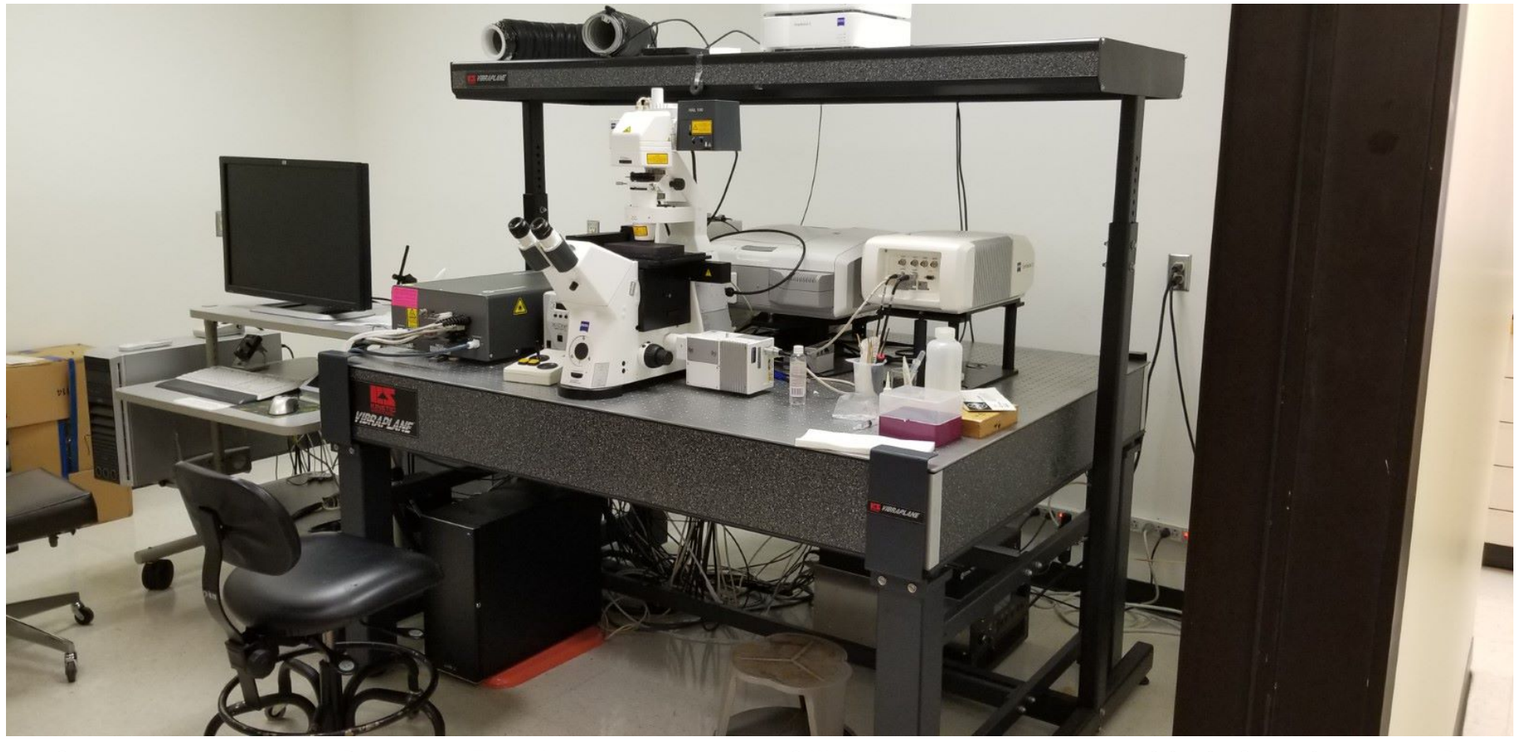
R83017

2.5 Environmental Requirements

1. Operation, specified performance	T = 22 °C ± 3 °C without interruption (24 h a day independently whether system is operated or switched-off)
2. Operation, reduced performance	T = 15 °C to 35 °C, any conditions different from item 1. and 5.
3. Storage, less than 16 h	T = -20 °C to 55 °C
4. Storage, less than 6 h	T = -20 °C to 55 °C
5. Temperature gradient	± 0.5 °C/h
6. Warm up time	1 h, for high-precision and/or long-term measure-ments ≥ 3 h
7. Relative humidity	< 65 % at 30 °C
8. Operation altitude	max. 2000 m
9. Loss of heat	4 kW

LSM CUT SHEET

Location: LSM Room, 3rd floor
Far East Side



VWR® –86 °C Ultra-Low Temperature Freezers with Natural Refrigerants

- **Capacity** 400 box (2") Capacity
- **Electrical** 115 V, 60 Hz
- **Volume** 19.4 cu.ft. (Interior)
- **Exterior Dimensions** 32.3W×38.4D×78"H
- **Interior Dimensions** 23.1W×28.3D×51.2"H
- **Plug Type** NEMA 5-20
- **Amps/ Breaker** 13/20
- **Weight** 687 lbs.
- **VWR Cat #** 76307-948

Forma™ Series II 3110 Water-Jacketed CO2 Incubators

- **Capacity (English)** 6.5 cu. ft.
- **Certifications/Compliance** UL, cUL, CE
- **CO2 Concentration Range** 0 to 20%
- **CO2 Sensor Technology** TC sensor
- **Data Outputs** Optional 4-20mA
- **Description** Single 184L incubator
- **Capacity (Metric)** 184 L
- **Chamber Material** Polished Stainless Steel
- **Dimensions (D x W x H) Interior** 20 x 21.3 x 26.8 in. (50.8 x 54.1 x 68.1 cm)
- **Temperature Range (Metric)** Ambient +5° to 50°C
- **Relative Humidity** >90% at 37°C
- **Electrical Requirements** 115 V, 50/60 Hz
- **Oxygen Control** Not Included
- **Weight (English)** 365 lb.

Kenmore 60412 18 cu ft Top-Freezer Refrigerator - 30" width – White

- **Depth w/out Handle** 29.88 (In.)
- **Standard or Counter Depth** Standard Depth
- **Depth** w/ Handle 32.63 (in.)
- **Height to Top of Case** 65.38 (in.)
- **Height to Top of Hinge** 66.13 (in.)
- **Width w/Door Open 90 Degrees** 32.75 (In.)
- **Depth w/ Door Open 90 Degrees** 58.25
- **Width w/ Door Closed** 29.88 (In.)
- **Width** 29 to 29 7/8 inches
- **Panel Dimensions** 30x66x32
- **Dimensions Details** Fits standard 30" W x 66" H Opening
- **Depth without Door** 26.63 (in.)
- **Features Automatic** Defrost
- **Voltage** 115 (V)
- **Freezer Capacity 3.98** (Cu Ft)
- **Overall Capacity 18.08** (Cu Ft)
- **Refrigerator Capacity** 14.1
- **Weight** 195 (lbs.)
- **Shipping:** 205 (lbs.)

CENTRIFUGE- FLOOR 208V

Location: Research Labs, Procedure Rooms

Sorvall™ WX+ Ultracentrifuge Series 75000090

- **Max. Speed** 90,000rpm
- **Max. RCF** 692,149 x g (T-890 rotor)
- **Refrigerated** Yes
- **Ambient Temperature Operating Range** +10° to +30°C
- **Amperage** 16/20A
- **Control Speed Accuracy** ±2rpm
- **Heat Output** 1kW or below
- **Height (English) Exterior** 34.6 in.
- **Height (Metric) Exterior** 88cm
- **Length (English) Exterior** 27.2 in.
- **Length (Metric) Exterior** 69cm
- **Noise Level** 51dBA (running at set speed, under in-house test condition) measured 1m in front of instrument
- **Refrigerator System Type** Thermo-module cooling system (CFC/HCFC/HFC-free)Solid-state thermoelectric refrigeration (CFC-free)
- **Width (English) Exterior** 31.1 in.
- **Width (Metric) Exterior** 79cm
- **Description** Sorvall WX 90+ Ultracentrifuge
- **Certifications/Compliance** CE and cCSAus
- **Capacity** 6 x 250mL
- **Phase** Single
- **Accel/Decel Profiles** 10/11 (10 and coasting)
- **Electrical Requirements** 208 to 240V 50/60Hz
- **Dimensions (HWD)** 34.6 x 31.1 x 27.2 in. (88 x 79 x 69cm)
- **Type** Floor Model Centrifuge
- **Net Weight** 859.8 lb. (390kg)
- **Program Storage** 1000 programs with step-runs
- **Standards** CE and cCSAus
- **Temperature Range** 0° to +40°C

Sorvall™ MTX 150 Micro-Ultracentrifuge 46960

- **Max. Speed** 150,000rpm
- **Max. RCF** 1,048,680 x g
- **Refrigerated** Yes
- **Ambient Temperature Operating Range** 5° to 35°C (41° to 95°F)
- **Amperage** 12A
- **Control Speed Accuracy** ±50rpm
- **Heat Output** 0.7kW
- **Height (English) Exterior** 16.1 in.
- **Height (Metric) Exterior** 40.8cm
- **Noise Level** <45dBA
- **Refrigerator System Type** Solid-state thermoelectric cooling
- **Width (English) Exterior** 23.2 in.
- **Width (Metric) Exterior** 59cm
- **Depth (Metric) Exterior** 58.2cm
- **Description** Sorvall MTX 150 Micro-Ultracentrifuge
- **Certifications/Compliance** IEC61010-2-020, EN61326-1 2006, GMP/GLP Data Compliance and Management: Offers traceability and quality control for biopharmaceutical processing needs. cCSAus, CE
- **Capacity** 6 x 30mL (180mL) (with S50A rotor) or 4 x 7mL (28mL) (with S50-ST rotor)
- **Phase** single
- **Accel/Decel Profiles** 9/9, brake off 9/9, brake off
- **Electrical Requirements** 115V 50/60Hz
- **Dimensions (HWD)** 16.1 x 23.2 x 22.9 in. (40.8 x 59 x 58.2cm)
- **Type** Benchtop Centrifuge
- **Net Weight** 213 lb. (97kg)
- **Program Storage** 20, each with up to 9 steps
- **Standards** cCSAus, CE, IEC61010-2-020, EN61326-1 2006
- **Temperature Range** 0° to 40°C