

LAB DESIGN DEVELOPMENT

PIERCE HALL

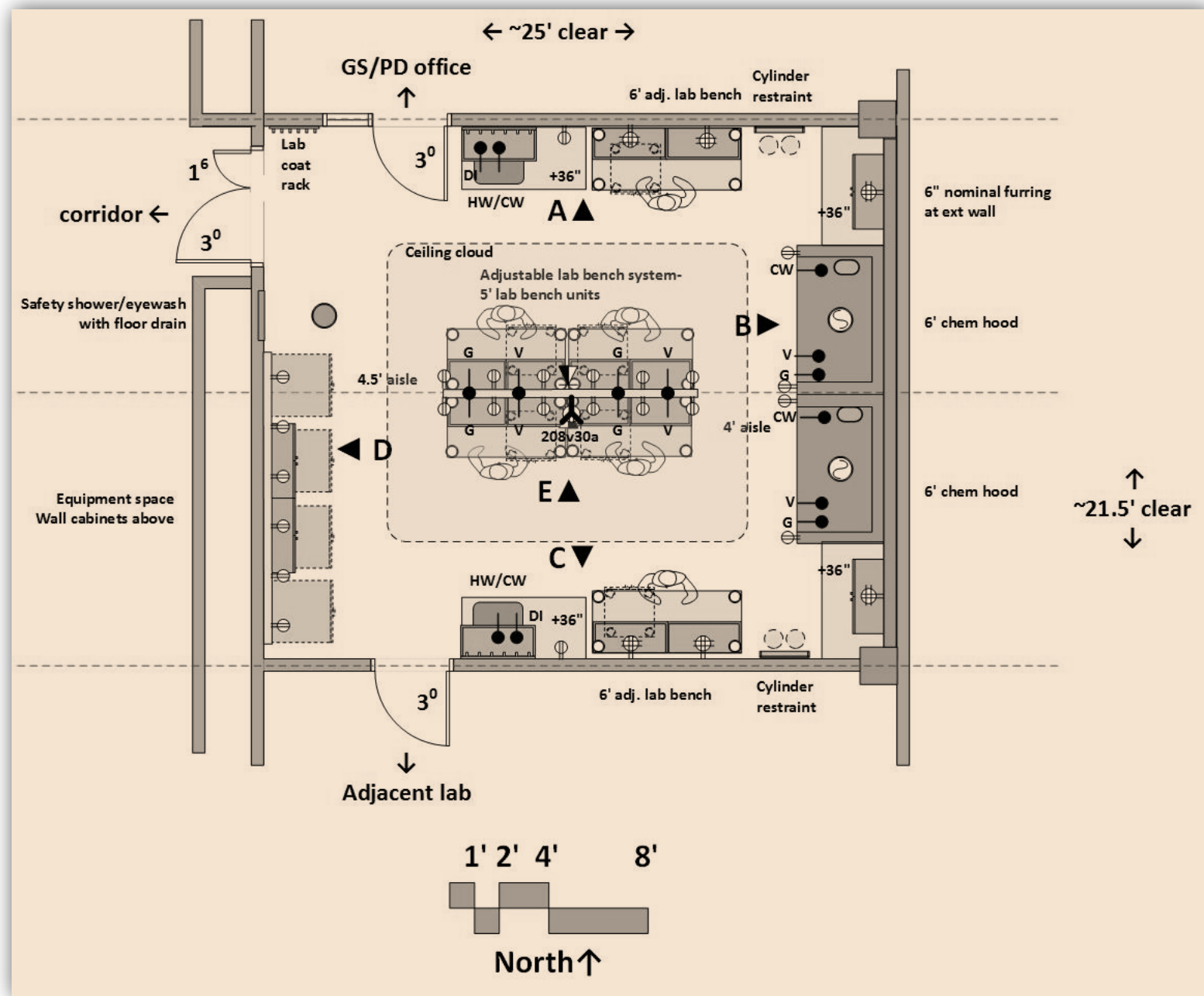
UC RIVERSIDE

2017 SEP 05

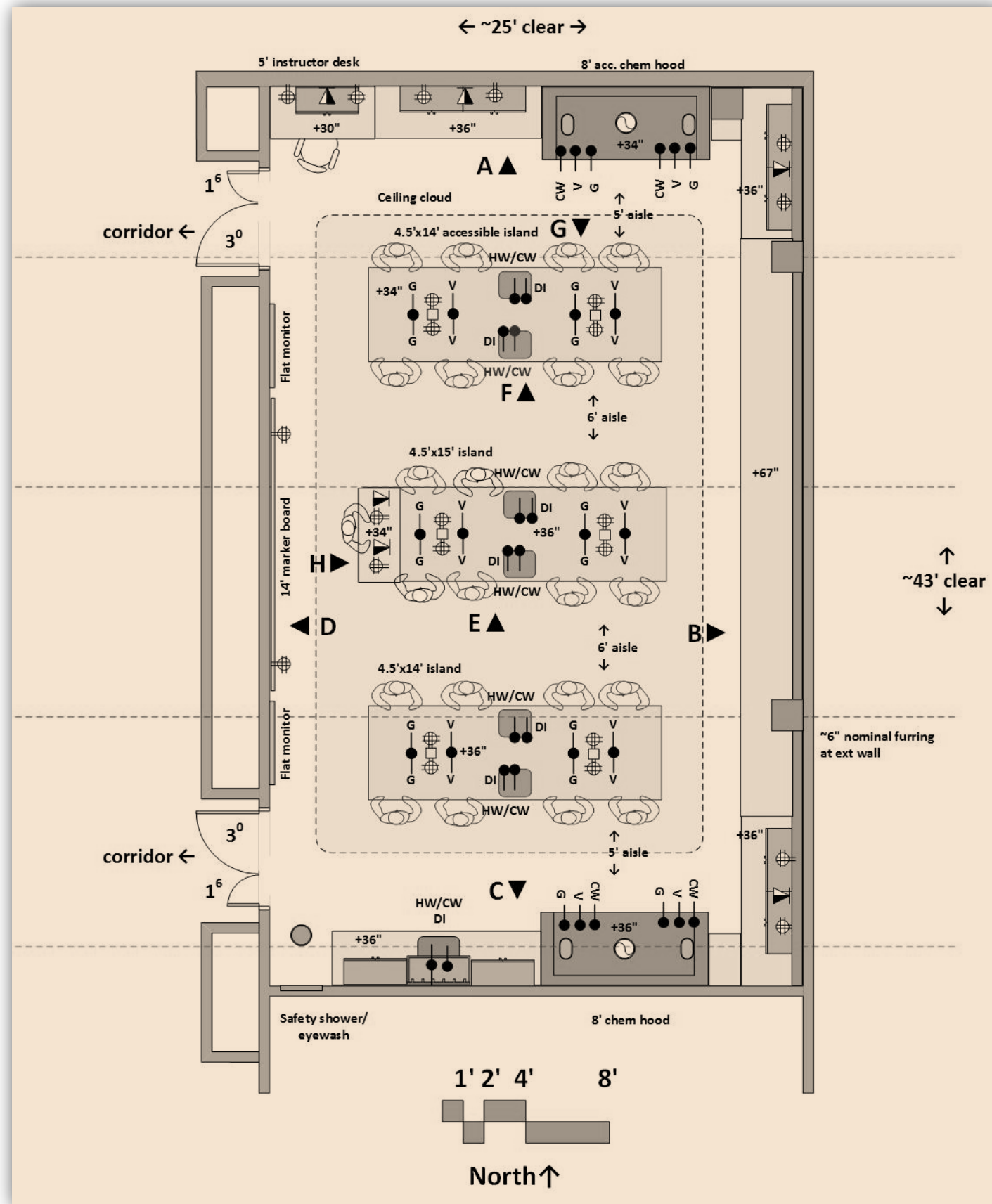
DRAFT #5



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SUMMARY

This document represents the fifth draft of the laboratory design development for the UCR Pierce Hall Renovation.

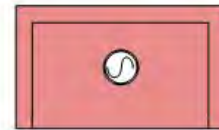
This draft contains revisions based upon information received from UCR to date.

Interior lab elevations are included for each different condition within the research and teaching labs.

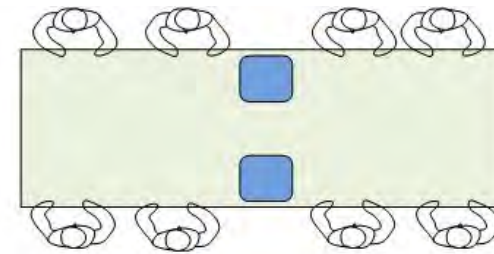
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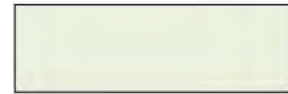
SYMBOL LEGEND



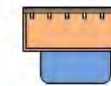
Chemical Fume Hood- VAV
 8' hoods in teaching labs
 6' hoods in research labs
 5', 4' hoods in lab support room
 Cold Water/Gas/Vac/Nit at research hoods
 Cold Water/Gas/Vac at teaching hoods
 Each fume hood adjustable height on 12 gauge tube steel welded frame
 Polypro hood in Acid Research Lab



Student island bench
 4.5' wide x 14' long x 36" high
 Section drawers below
 One Accessible height (34") island per lab
 Hot/Cold water at sinks
 Gas/Vac at student stations
 115 power at student stations



Fixed Lab Bench
 115 volt power
 Duplex at 2' on center or fourplex at 4' on center
 Data at each wall in lab
 Fixed base cabinets below
 Wall cabinets above



Lab Sink
 Drying rack and shelf above
 Hot/Cold water at each sink
 Pure water at each sink
 Accessible sink in each teaching lab



Adjustable Lab Bench
 30" W x 66" L x 84" H
 Non-proprietary design
 Unistrut frame
 2 rows adjustable shelves above
 Adjustable work surface
 Mobile base cabinet below
 115v power with cord
 Duplex outlets integral to unistrut frame



Student Island Lab Sink
 Hot/Cold water at each sink
 Accessible sink in each teaching lab



Equipment Space
 2 rows adjustable shelves above
 Unistrut frame
 115v standby power
 208v standby power



Safety Shower/Eyewash Unit
 Tepid water supply
 Floor drain below
 Hard connection drain at eyewash



Tall storage cabinet
 36" wide x 30" or 24" deep x 96" tall
 Adjustable shelves inside

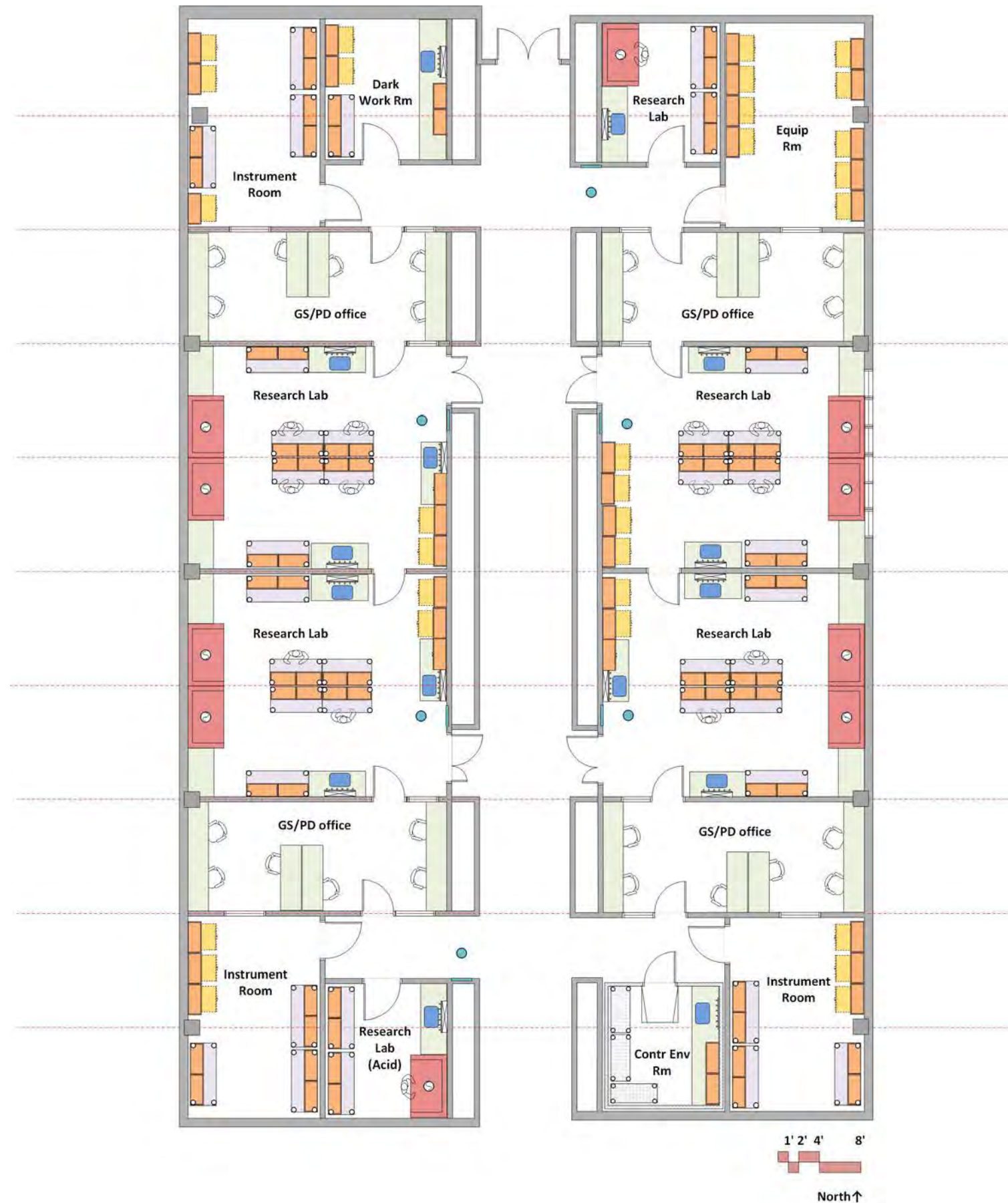


Adjustable wall shelf
 35" wide x 15" deep



Fixed Wall Cabinet
 36" wide x 15" deep x 36" high
 Task light below

LAB DESIGN Level 3- North Wing



- **Four Research Labs**
Two 6' fume hoods per lab
One lab per PI
- **Two Single Module Research Labs**
One 5' fume hood per lab
One used for high acid use
- **Lab Support Rooms**
3 Instrument Rooms
Equipment Room
Dark Work Room
Controlled Env. Room
- **Four GS/PD Offices**
Shared office for grad students
and post docs

LAB DESIGN
Level 2- North Wing



- **Four Teaching Labs**
 - Two 8' fume hoods per lab
 - 24 students per lab
 - 2 General Chemistry
 - 1 Biochemistry (up to 28 students)
 - 1 Earth Science (up to 28 students)

- **Two Prep/Stage Rooms**
 - One 5' fume hood per room

LAB DESIGN
Level 1- North Wing



- **Four Teaching Labs**
 - Two 8' fume hoods per lab**
 - 24 students per lab**
 - Two General Chemistry**
 - One Biochemistry**
 - One Earth Science**

- **Two Prep/Stage Rooms**
 - One 5' fume hood per room**

LAB DESIGN

Level 1- Center Wing

- Four New Teaching Labs- Gen Chem
 - Two 8' fume hoods per lab
 - 24 students per lab
- Three Existing Teaching Labs- removate only for ADA requirements
- One Procedure Room
- One Central Chem Stock Room
- One Chem Waste Room
- Two Prep/Stage Rooms



RESEARCH LAB

North Wing- 3rd Floor

Similar for 4 labs

ARCHITECTURAL

Occupancy: B
 Floor: vinyl tile; Base: Vinyl
 Walls: gypsum board and enamel paint
 Ceiling: 9' cloud/open to structure
 Doors: 3°/1⁶x7° framed glass at entry; 3°x7° at office and adjacent lab
 Windows: existing to remain, if any
 Daylight attenuation: at exterior windows, if any
 Acoustic Attenuation: NC 40 or less
 Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 24/7/365
 Temperature: 66-74 deg. F, +/- 2 deg. F
 100% exhaust- no recirculation of air
 Fume hood exhaust on emergency power supply
 (8) air changes per hour minimum occupied (air change rate may be higher due to equipment heat gain)
 (4) air changes per hour unoccupied
 Pressure: negative
 Humidity: Ambient
 Equipment Heat Gain: 25 btuh/sf
 800 c.f.m. exhaust at each fume hood (VAV)

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 208v power at equipment spaces
 Stand-by power for equipment
 Data & Wireless data
 Lighting: indirect LED @ 600 LUX
 Task lights below wall cabinets
 Provide light switches at door

PLUMBING

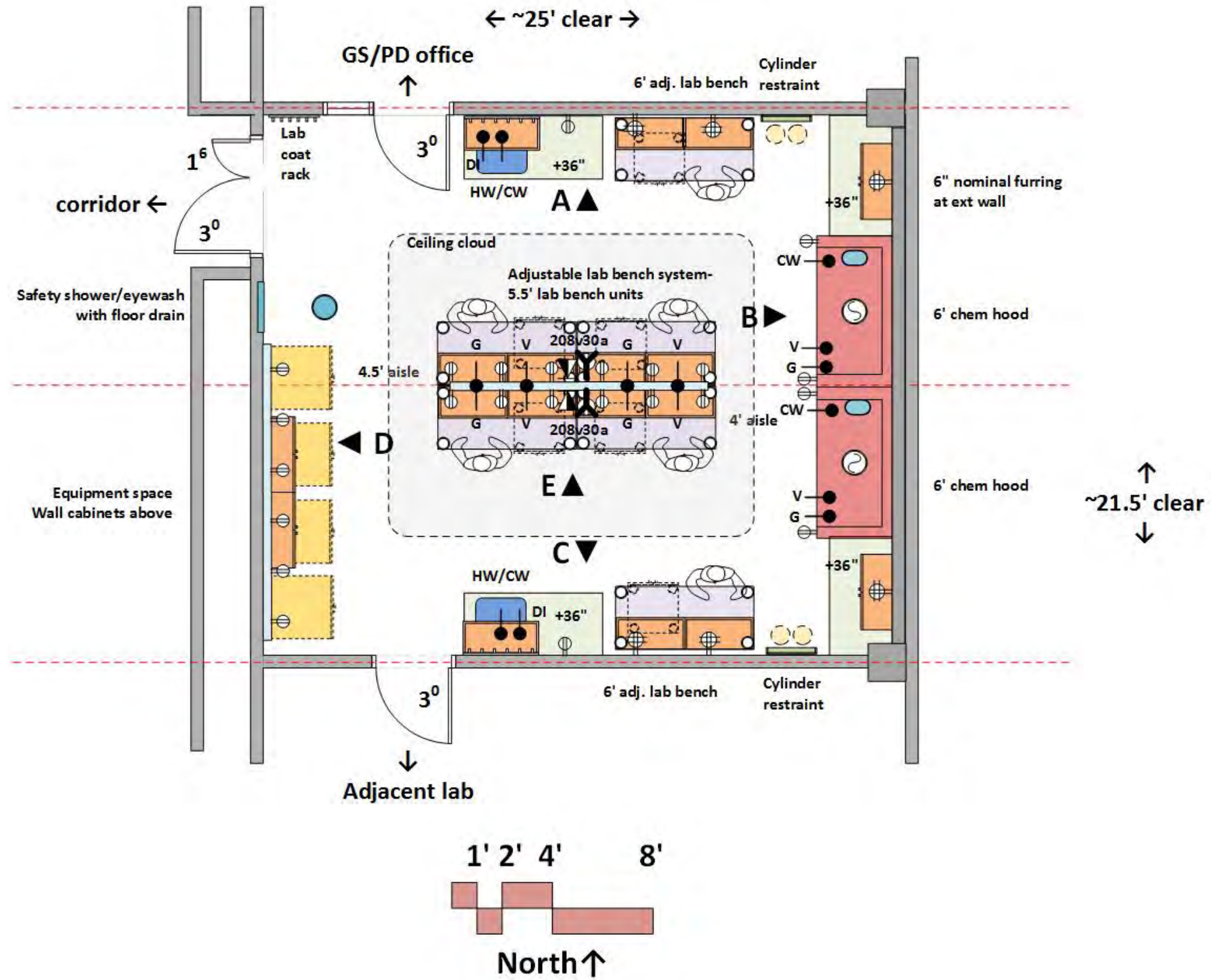
Hot/Cold water (HW/CW) at sinks with vacuum breakers
 DI water at sinks
 Natural gas and vacuum at islands and fume hoods
 Local cylinder gases
 Domestic water and drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

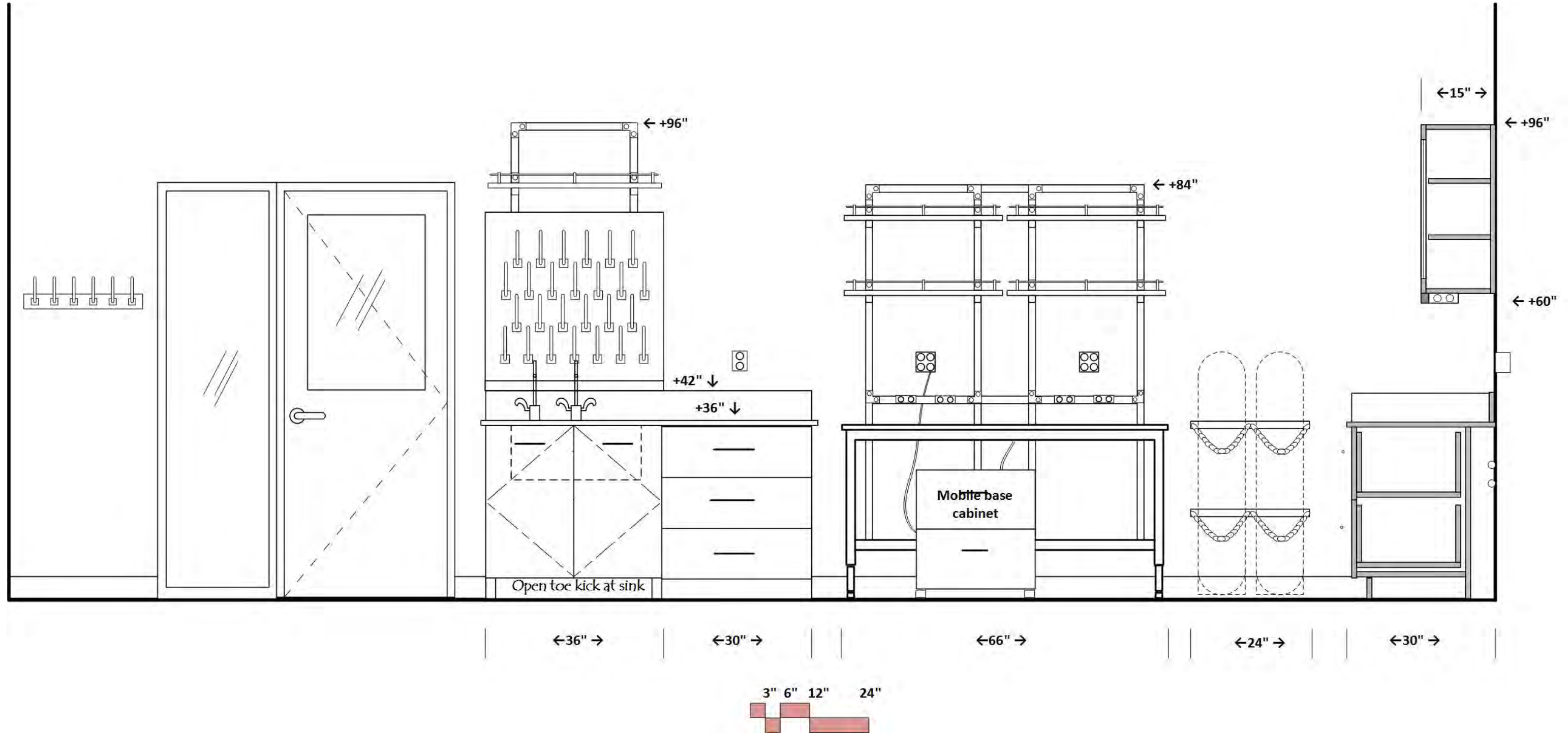
Wood (bamboo) casework - base cabinets, wall cabinets, tall cabinets
 Epoxy resin tops and sinks; Faucets & fittings
 Chemical fume hoods
 Safety shower/eyewash; Fire Extinguisher
 Cylinder restraint

OWNER FURNISHED EQUIPMENT

Chairs
 Benchtop analytical instruments



RESEARCH LAB Elevation A

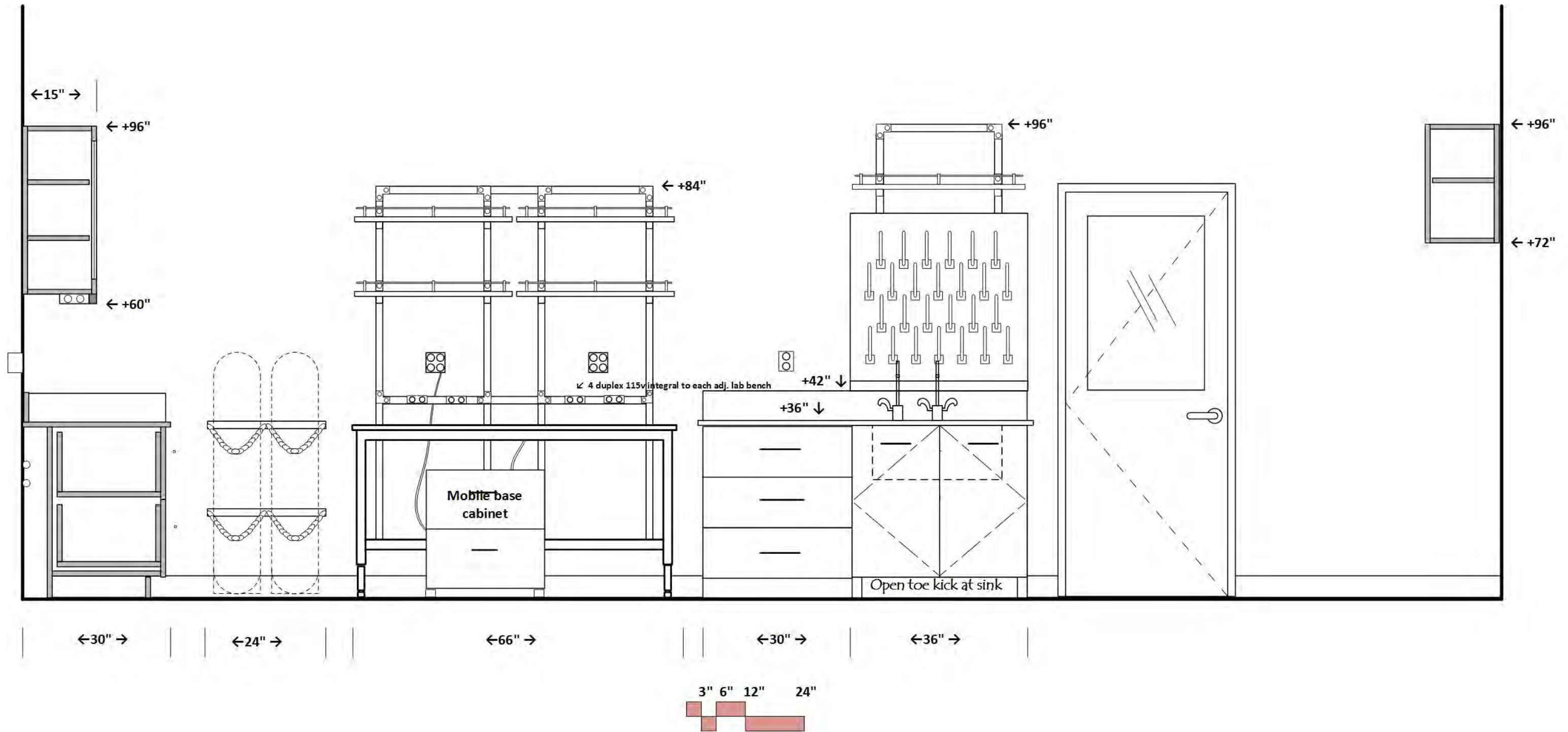


RESEARCH LAB
Elevation B



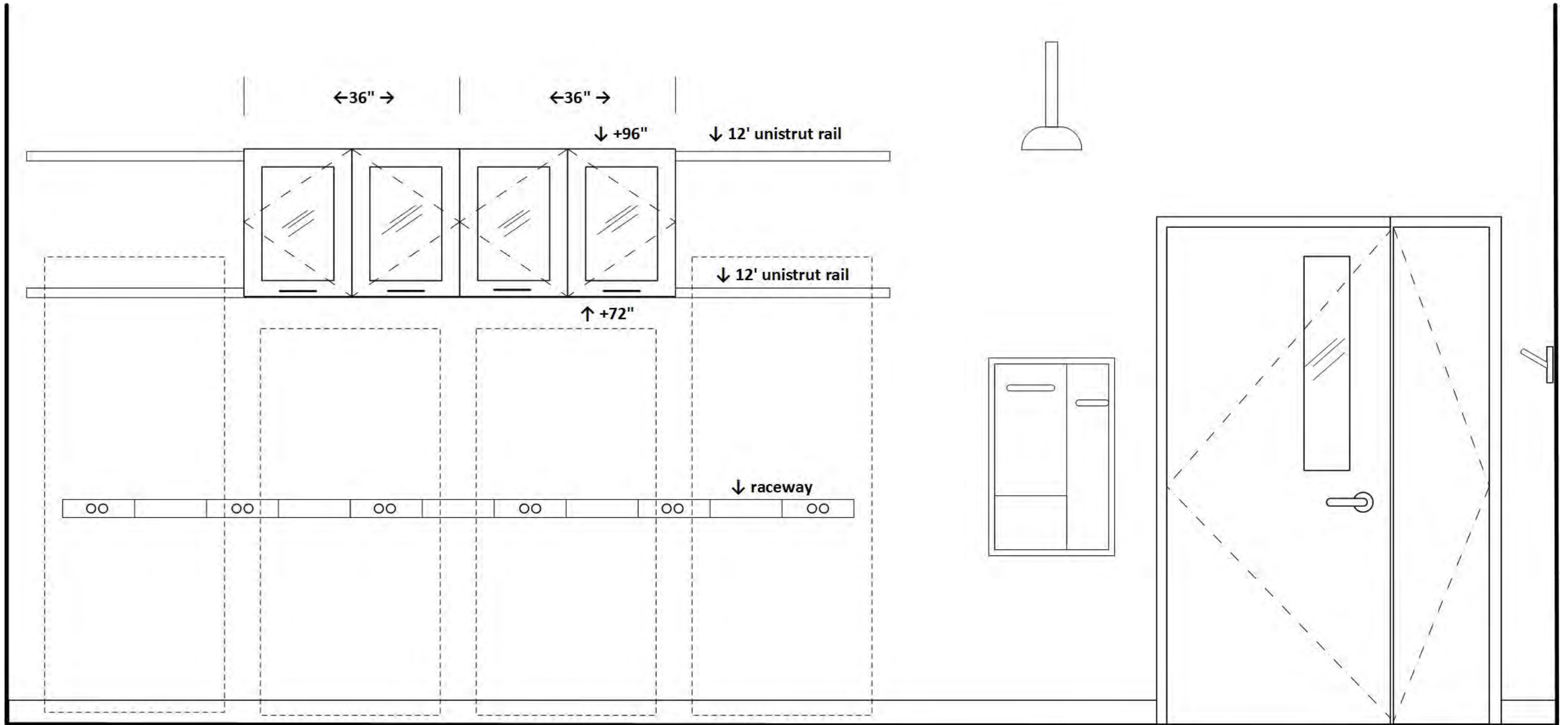
RESEARCH LAB

Elevation C



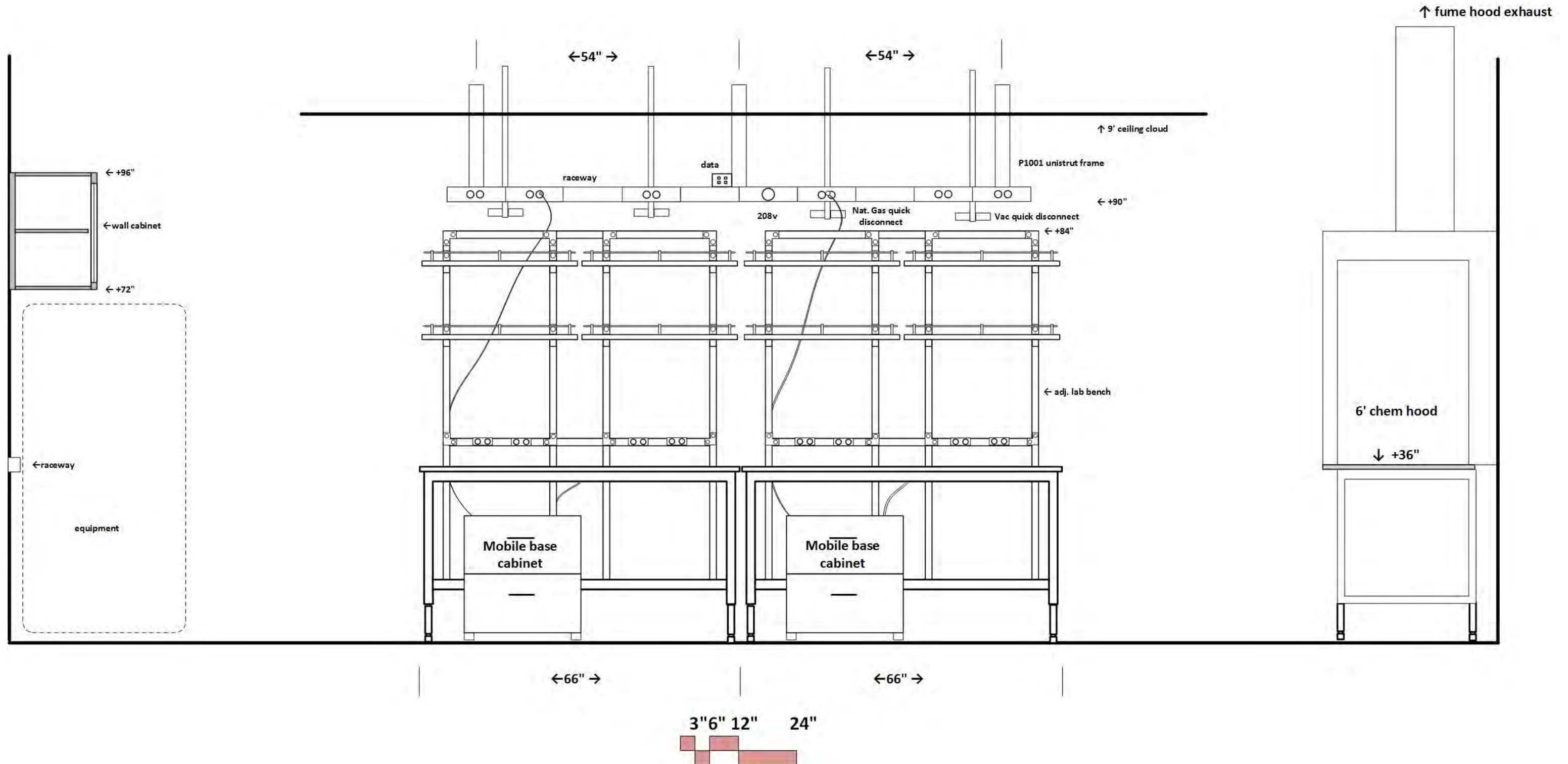
RESEARCH LAB

Elevation D



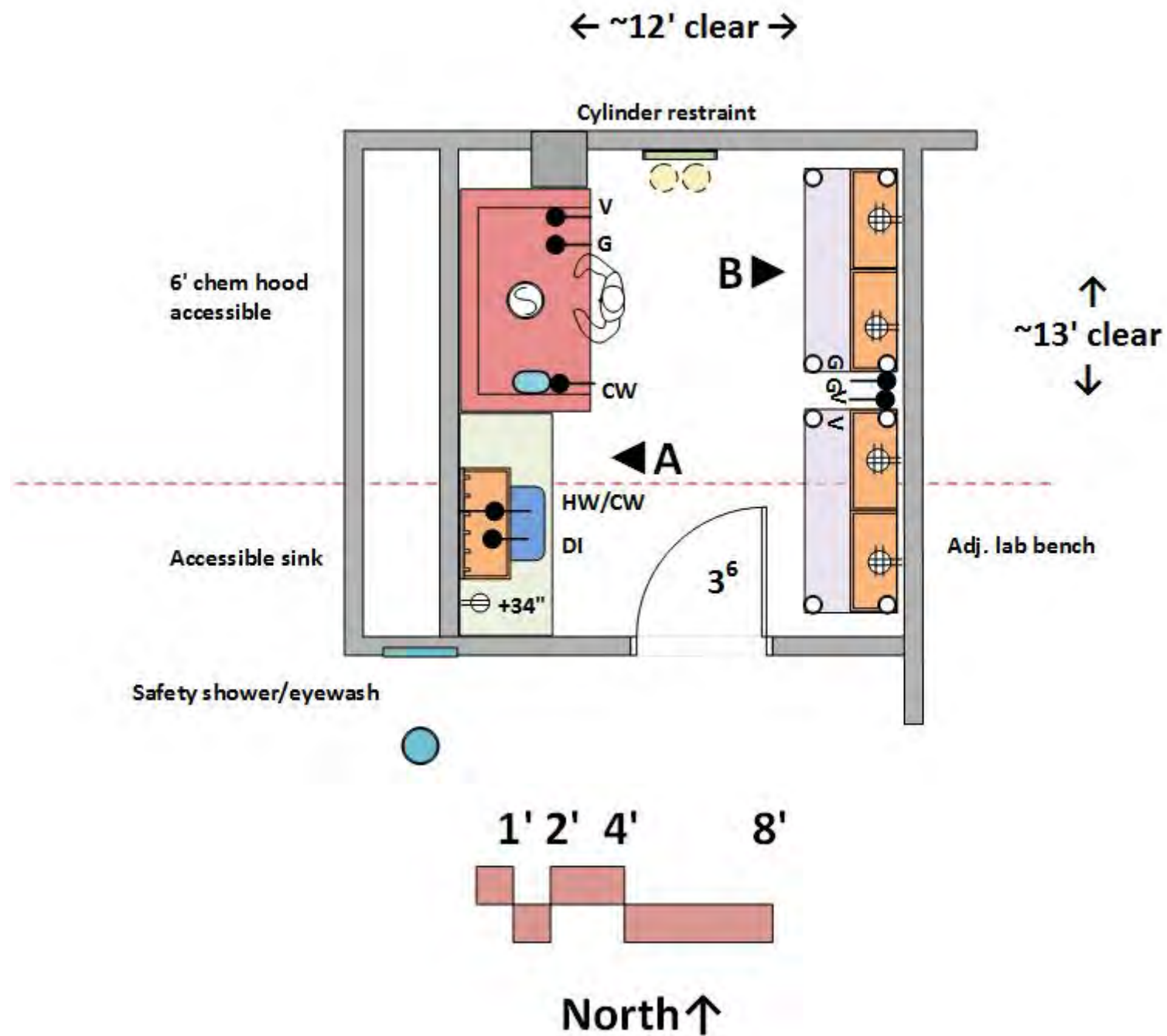
RESEARCH LAB

Elevation E



RESEARCH LAB

Single Module- accessible



ARCHITECTURAL

Occupancy: B
 Floor: vinyl tile
 Walls: gypsum board and enamel paint
 Ceiling: open to structure
 Doors: 3"x8" framed glass
 Acoustic Attenuation: NC 40 or less
 Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 24/7/365
 Temperature: 66-74 deg. F, +/- 2 deg. F
 100% exhaust- no recirculation of air
 Fume hood exhaust on emergency power supply
 (6) air changes per hour minimum occupied (air change rate may be higher due to equipment heat gain)
 (4) air changes per hour unoccupied
 Pressure: negative
 Humidity: Ambient
 Equipment Heat Gain: 50 btuh/sf
 800 c.f.m. exhaust at fume hood (VAV)

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 208v power at equipment spaces
 Stand-by power for equipment
 Data & Wireless data
 Lighting: indirect LED @ 600 LUX
 Task lights below wall cabinets
 Provide light switches at door

PLUMBING

Hot/Cold water (HW/CW) at sink with vacuum breakers
 DI water at sink
 Natural gas and vacuum
 Domestic water and drain at safety shower/eyewash

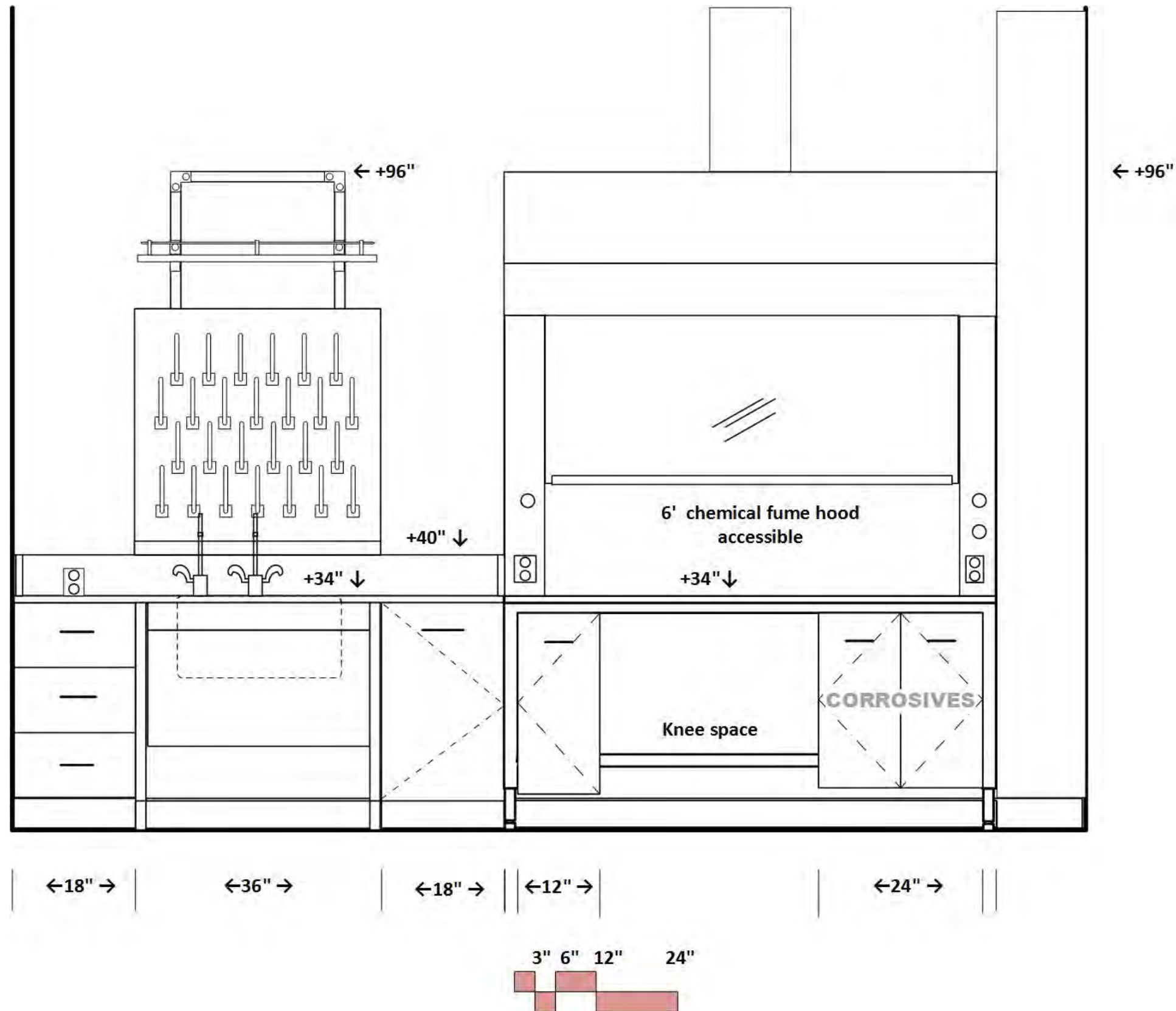
CONTRACTOR FURNISHED EQUIPMENT

Wood casework - base cabinets, wall cabinets, tall cabinets
 Epoxy resin tops and sinks
 Faucets & fittings
 Accessible fume hood
 Safety shower/eyewash
 Fire Extinguisher
 Cylinder restraint

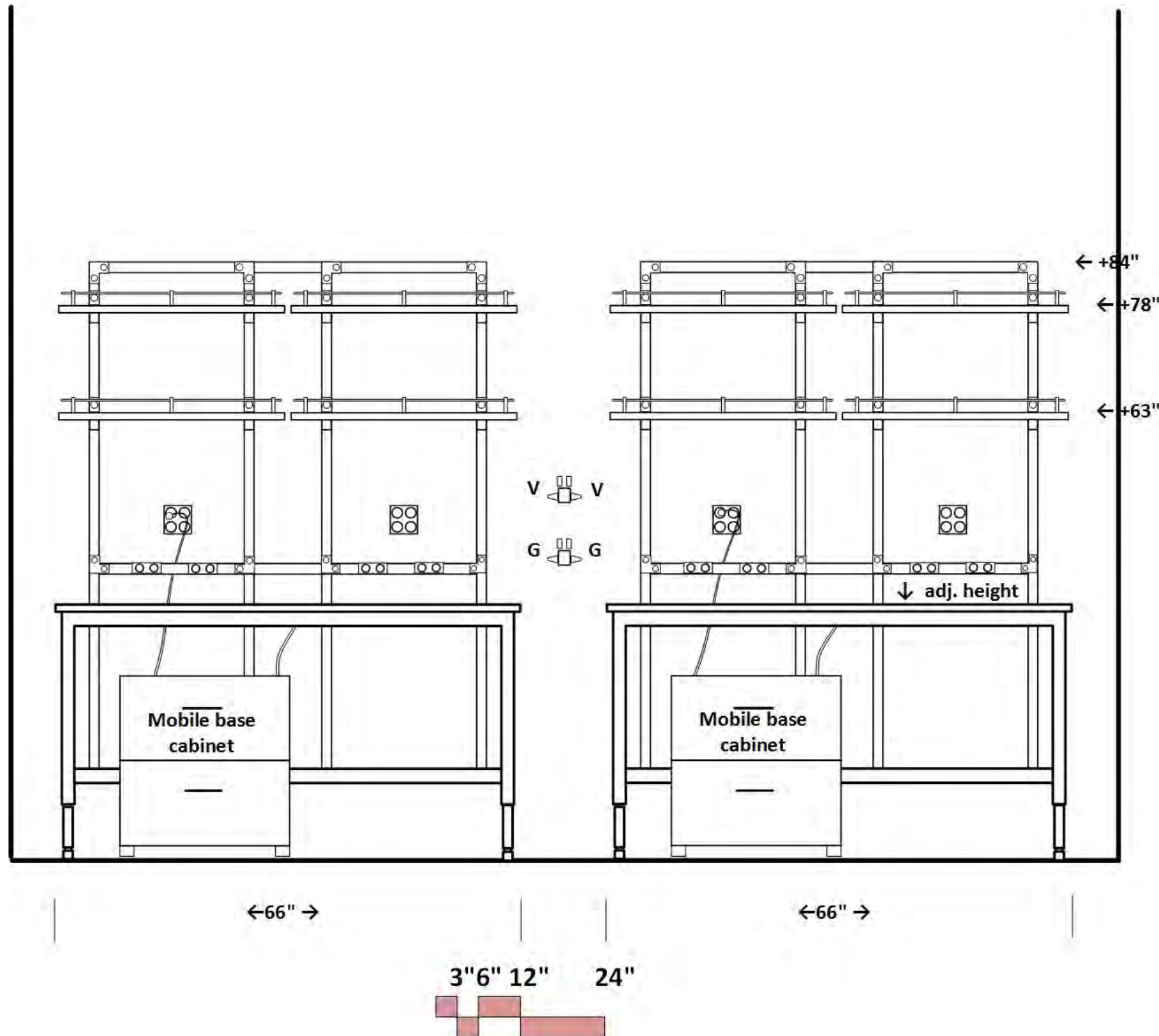
OWNER FURNISHED EQUIPMENT

Chairs
 Benchtap analytical instruments

RESEARCH LAB
Single Module- Elevation A



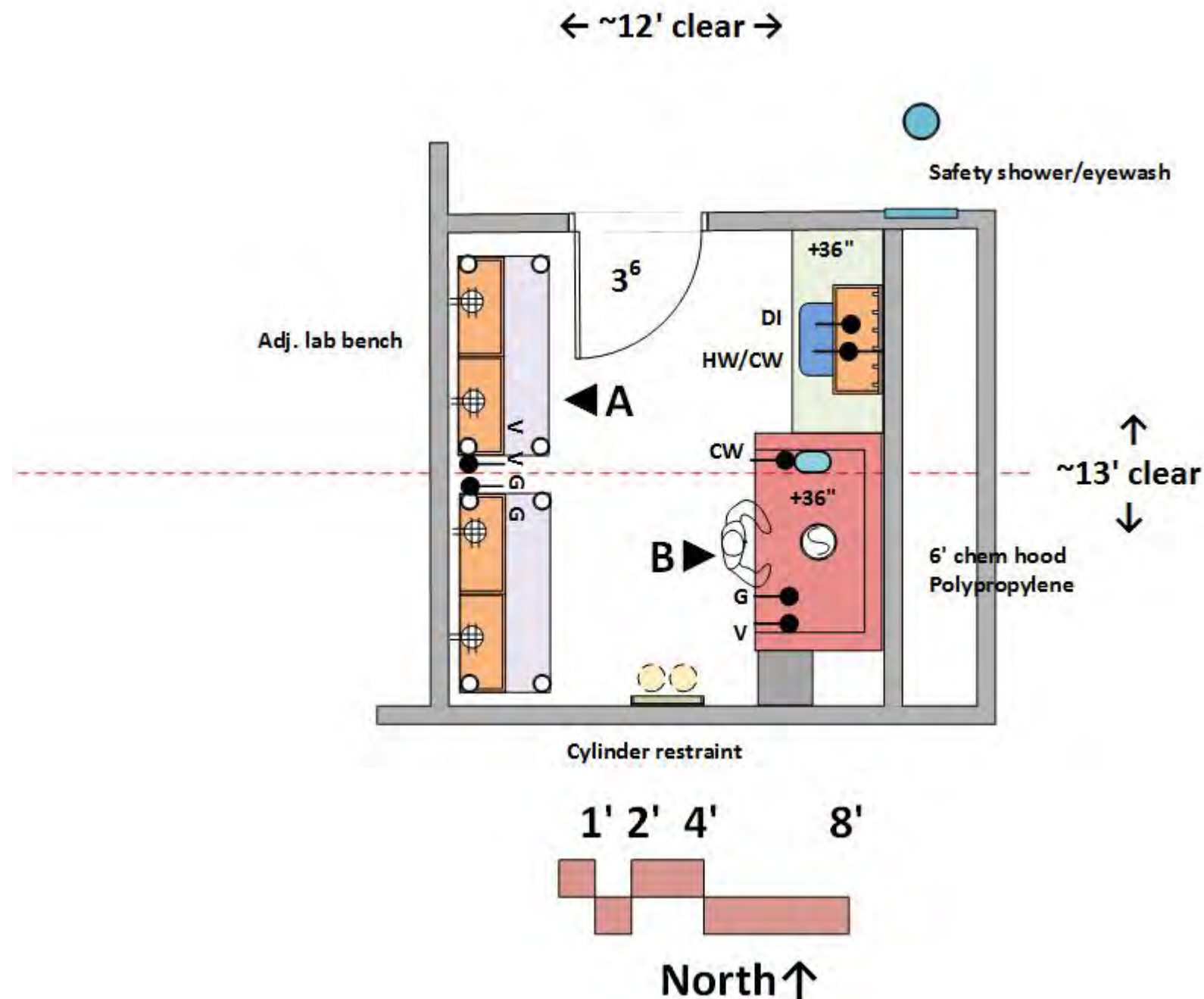
RESEARCH LAB
Single Module- Elevation B



RESEARCH LAB SUPPORT

Acid Lab

(Perchloric Acid; HF; Aqua Regia)



ARCHITECTURAL

Occupancy: B
 Floor: vinyl tile
 Walls: gypsum board and enamel paint
 Ceiling: open to structure
 Doors: 3'x8' framed glass
 Acoustic Attenuation: NC 40 or less
 Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 24/7/365
 Temperature: 66-74 deg. F, +/- 2 deg. F
 100% exhaust- no recirculation of air
 Fume hood exhaust on emergency power supply
 (6) air changes per hour minimum occupied (air change rate may be higher due to equipment heat gain)
 (4) air changes per hour unoccupied
 Pressure: negative
 Humidity: Ambient
 Equipment Heat Gain: 50 btuh/sf
 800 c.f.m. exhaust at fume hood (VAV)

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 208v power at equipment spaces
 Stand-by power for equipment
 Data & Wireless data
 Lighting: indirect LED @ 600 LUX
 Task lights below wall cabinets
 Provide light switches at door

PLUMBING

Hot/Cold water (HW/CW) at sink with vacuum breakers
 Natural gas and vacuum
 DI water at sink
 Domestic water and drain at safety shower/eyewash

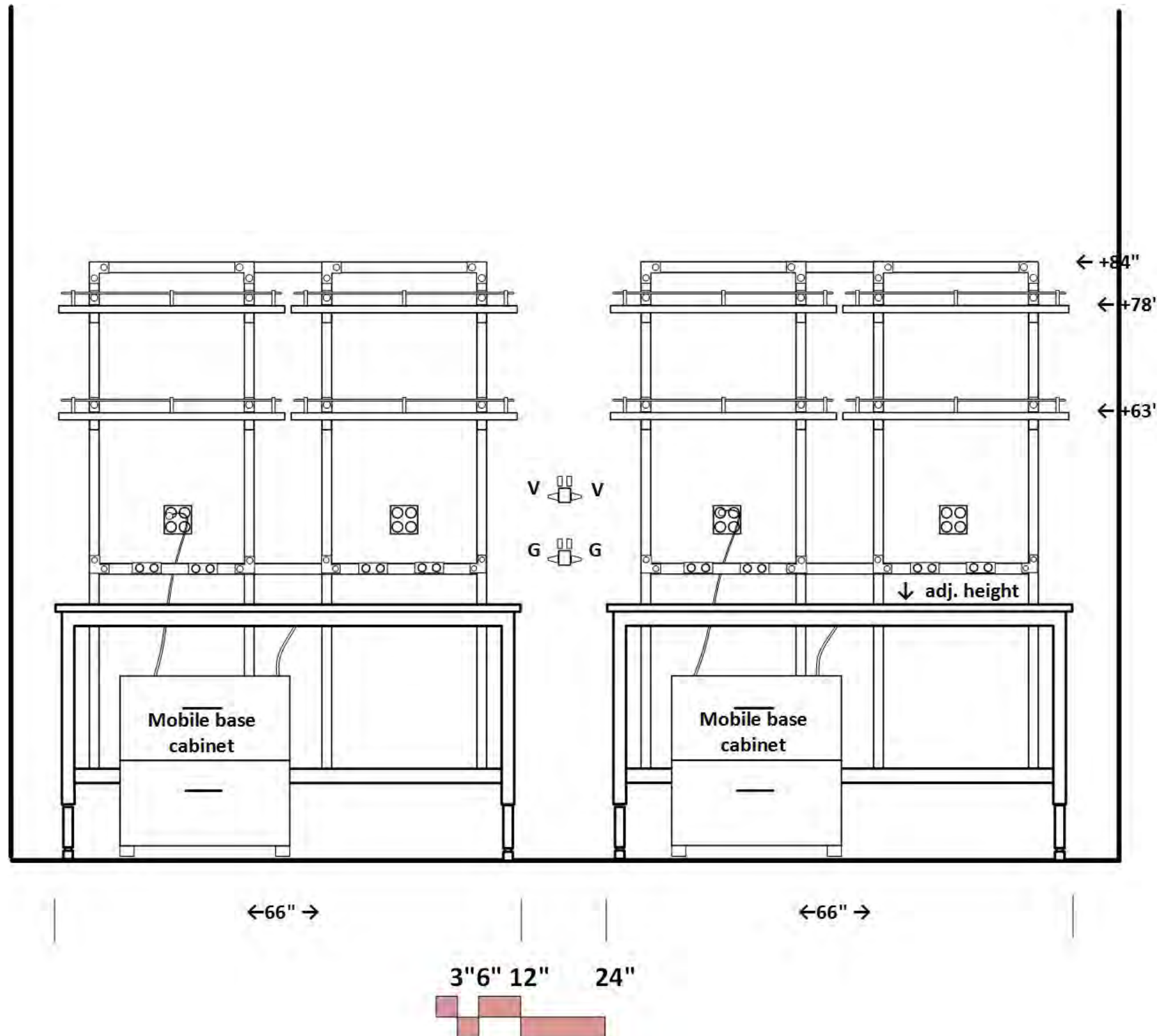
CONTRACTOR FURNISHED EQUIPMENT

Wood casework - base cabinets, wall cabinets, tall cabinets
 Epoxy resin tops and sinks
 Faucets & fittings
Chemical fume hoods- specialty use hoods required for perchloric acid, HF, and Aqua Regia procedures
 Safety shower/eyewash
 Fire Extinguisher
 Cylinder restraint

OWNER FURNISHED EQUIPMENT

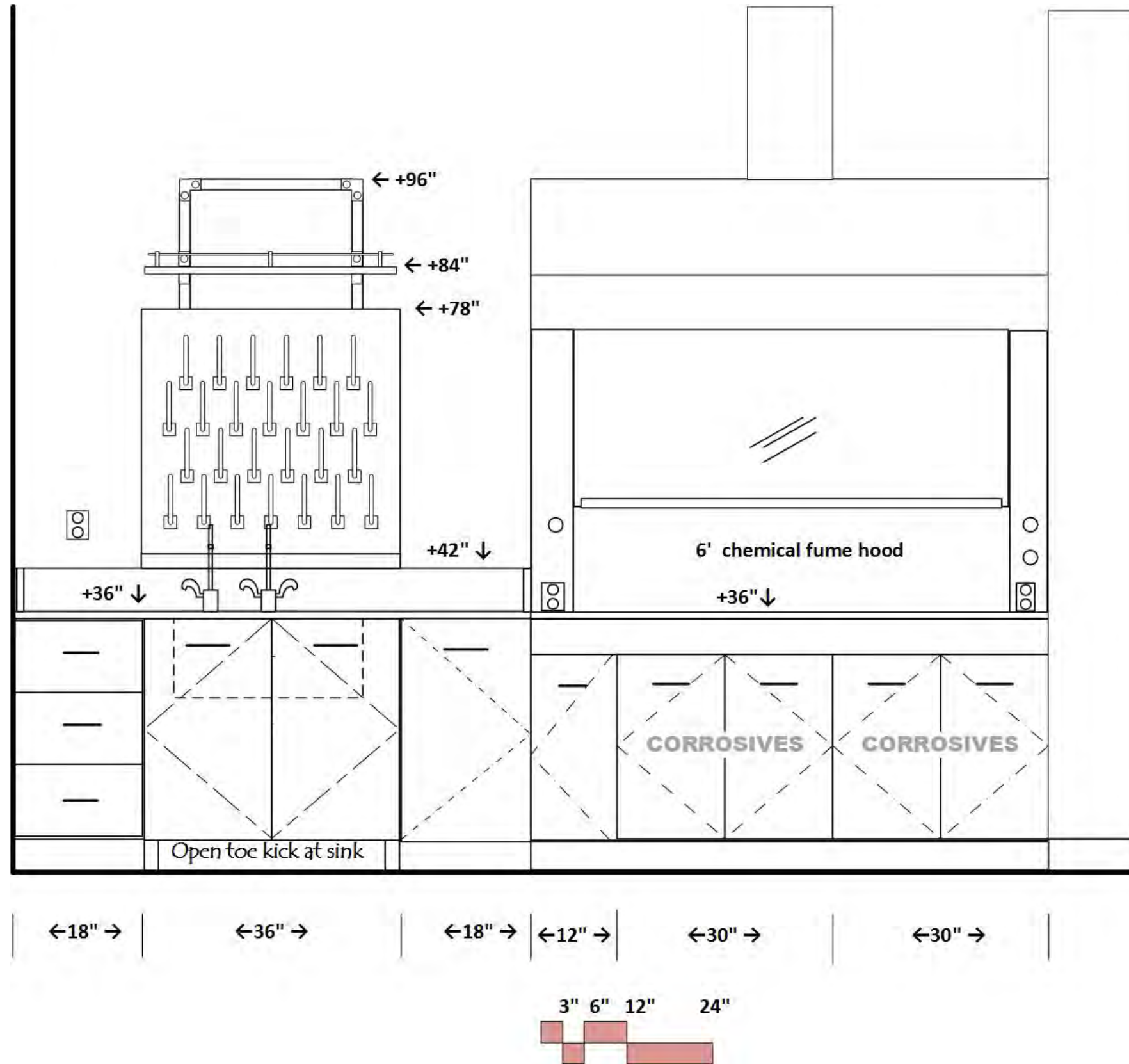
Chairs
 Benchttop analytical instruments

RESEARCH LAB SUPPORT
Acid Lab- Elevation A



RESEARCH LAB SUPPORT

Acid Lab- Elevation B



Note: Fume hood to be all polypropylene-
no metal parts in fume hood- this lab only

PD/GS OFFICE

Similar for 4 rooms

ARCHITECTURAL

Occupancy: B
 Floor: vinyl tile
 Walls: gypsum board and enamel paint
 Ceiling: 9' cloud/open to structure
 Doors: 3°x8° framed glass
 Windows: existing to remain, if any
 Daylight attenuation: at exterior windows, if any
 Acoustic Attenuation: NC 35 or less
 Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 24/7/365
 Temperature: 66-74 deg. F, +/- 2 deg. F
 100% exhaust- no recirculation of air
 (4) air changes per hour minimum occupied (air change rate may be higher due to equipment heat gain)
 (2) air changes per hour unoccupied
 Pressure: negative
 Humidity: Ambient
 Equipment Heat Gain: 25 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Data & Wireless data
 Lighting: indirect LED @ 600 LUX
 Task lights below wall cabinets
 Provide light switches at door

PLUMBING

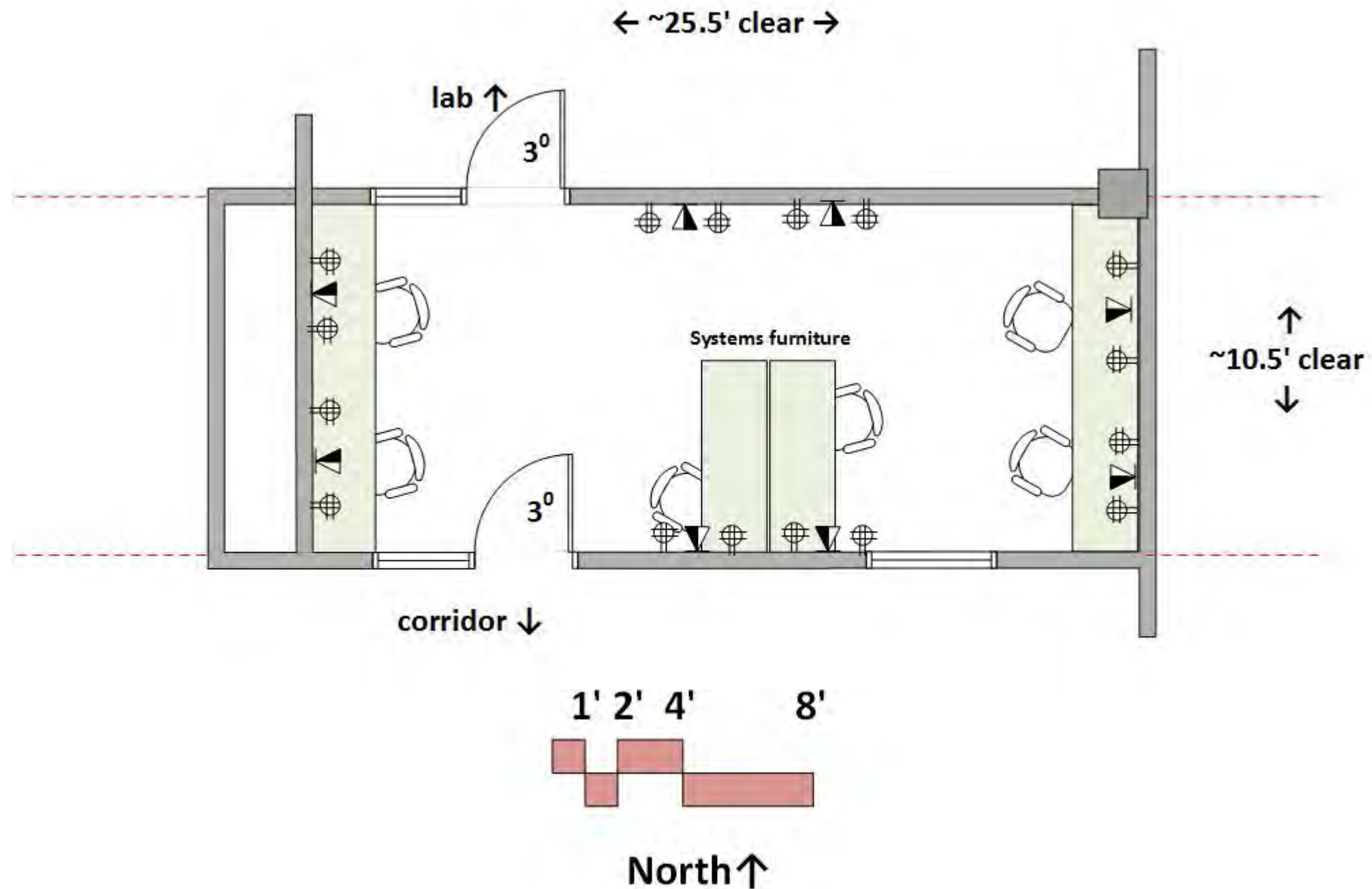
None

CONTRACTOR FURNISHED EQUIPMENT

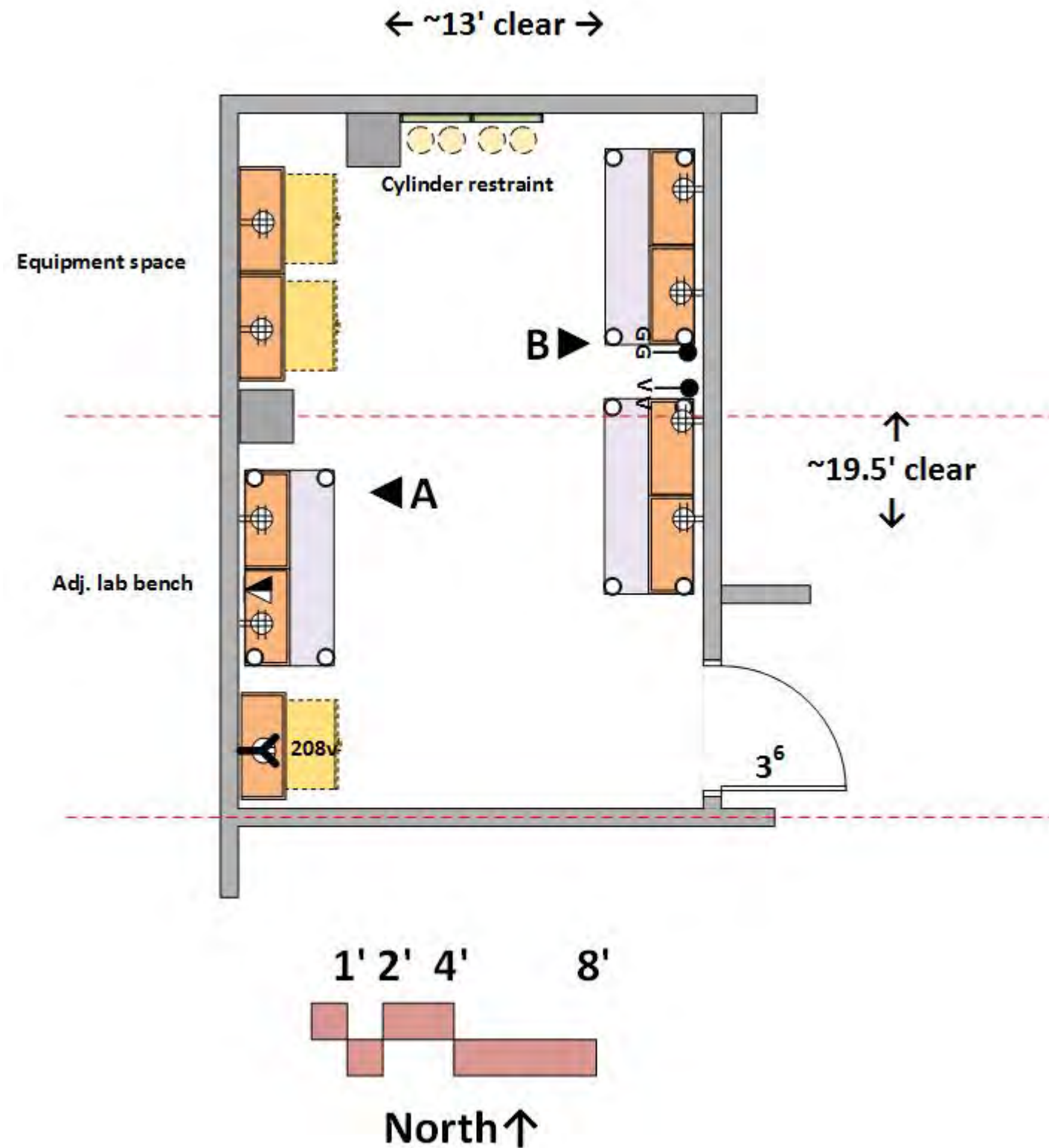
None

OWNER FURNISHED EQUIPMENT

Systems furniture
 Marker surfaces applied to walls



RESEARCH LAB SUPPORT Instrument Room



ARCHITECTURAL

Occupancy: B
 Floor: vinyl tile
 Walls: gypsum board and enamel paint
 Ceiling: 9" acoustic tile
 Doors: 3⁶x8⁰ framed glass
 Daylight attenuation: at exterior windows (if any)
 Acoustic Attenuation: NC 40 or less
 Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 24/7/365
 Temperature: 66-74 deg. F, +/- 2 deg. F
 100% exhaust- no recirculation of air
 (6) air changes per hour minimum occupied (air change rate may be higher due to equipment heat gain)
 (4) air changes per hour unoccupied
 Pressure: positive or negative depending upon use
 Humidity: Ambient
 Equipment Heat Gain: 50 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 208v power at equipment spaces
 Stand-by power for equipment
 Data & Wireless data
 Lighting: indirect LED @ 600 LUX
 Provide light switches at door

PLUMBING

Natural gas and vacuum
 Local cylinder gases

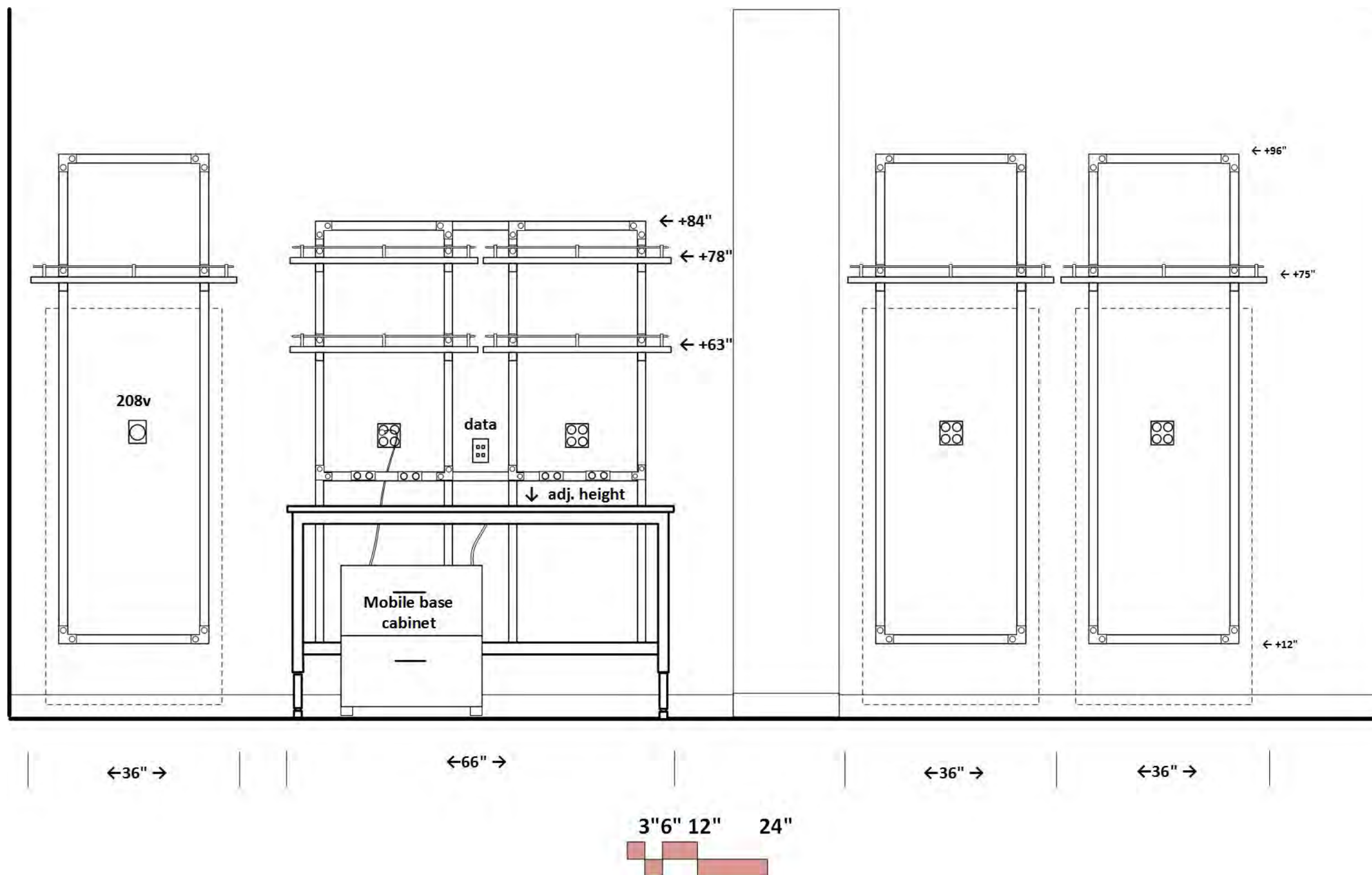
CONTRACTOR FURNISHED EQUIPMENT

Mobile lab benches
 Cylinder restraint

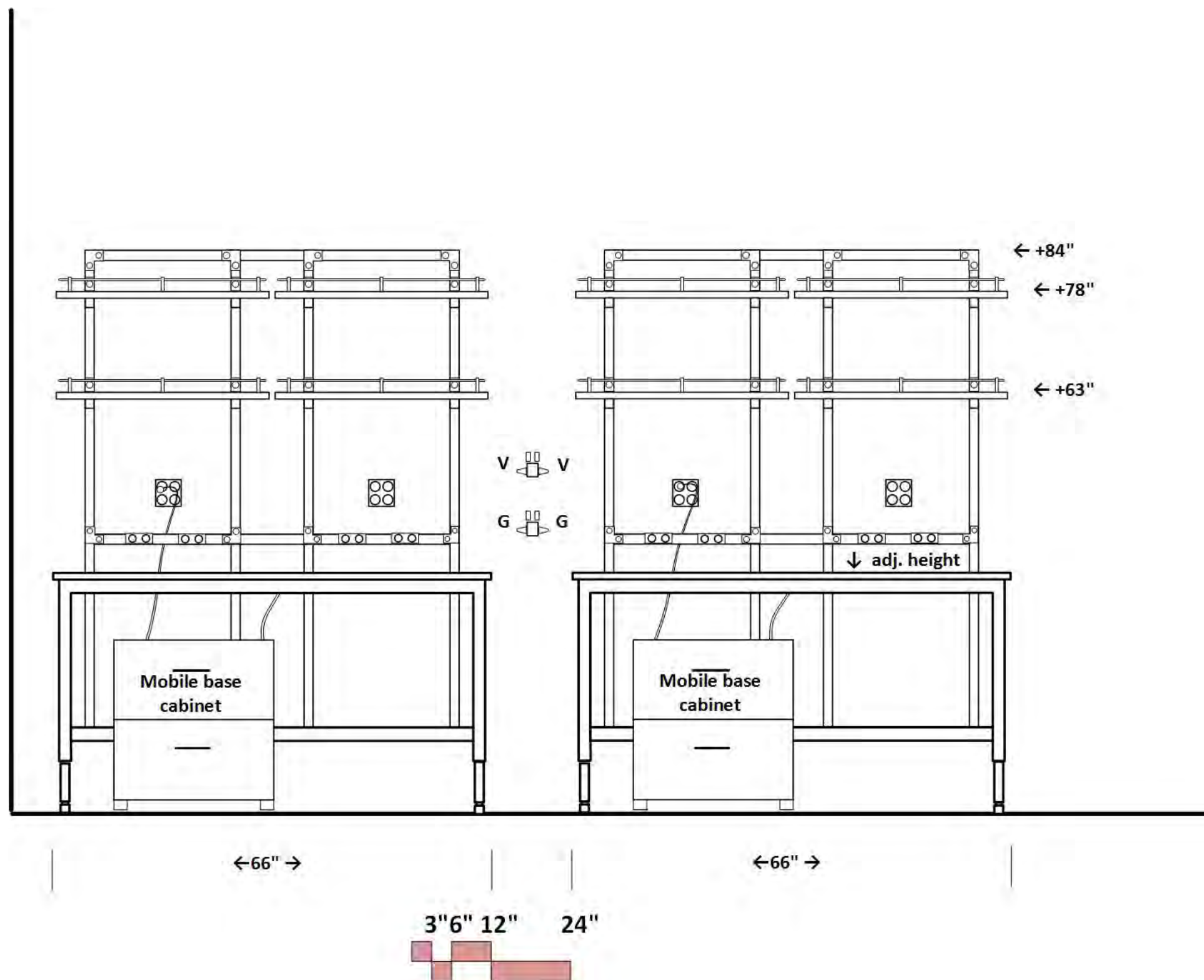
OWNER FURNISHED EQUIPMENT

Chairs
 Benchtop analytical instruments

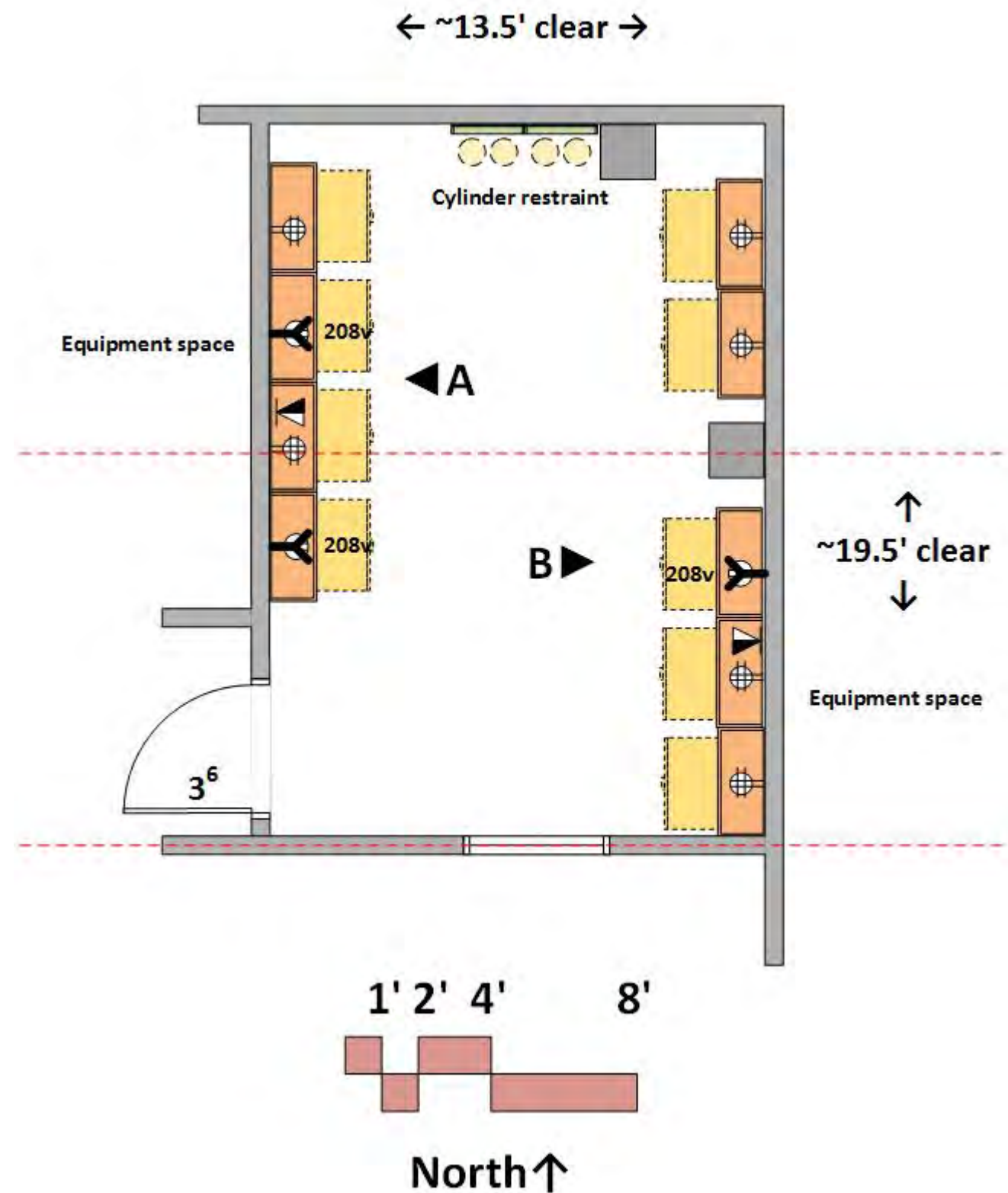
RESEARCH LAB SUPPORT Instrument Room- Elevation A



RESEARCH LAB SUPPORT
Instrument Room- Elevation B



RESEARCH LAB SUPPORT Equipment Room



ARCHITECTURAL

Occupancy: B
 Floor: vinyl tile
 Walls: gypsum board and enamel paint
 Ceiling: open to structure
 Doors: 3⁶x8⁰ framed glass
 Acoustic Attenuation: NC 40 or less
 Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 24/7/365
 Temperature: 66-74 deg. F, +/- 2 deg. F
 100% exhaust- no recirculation of air
 (8) air changes per hour minimum occupied (air change rate may be higher due to equipment heat gain)
 (4) air changes per hour unoccupied
 Pressure: negative
 Humidity: Ambient
 Equipment Heat Gain: 75 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 208v power
 Stand-by power for all outlets
 Data & Wireless data
 Lighting: indirect LED @ 600 LUX
 Provide light switches at door

PLUMBING

None

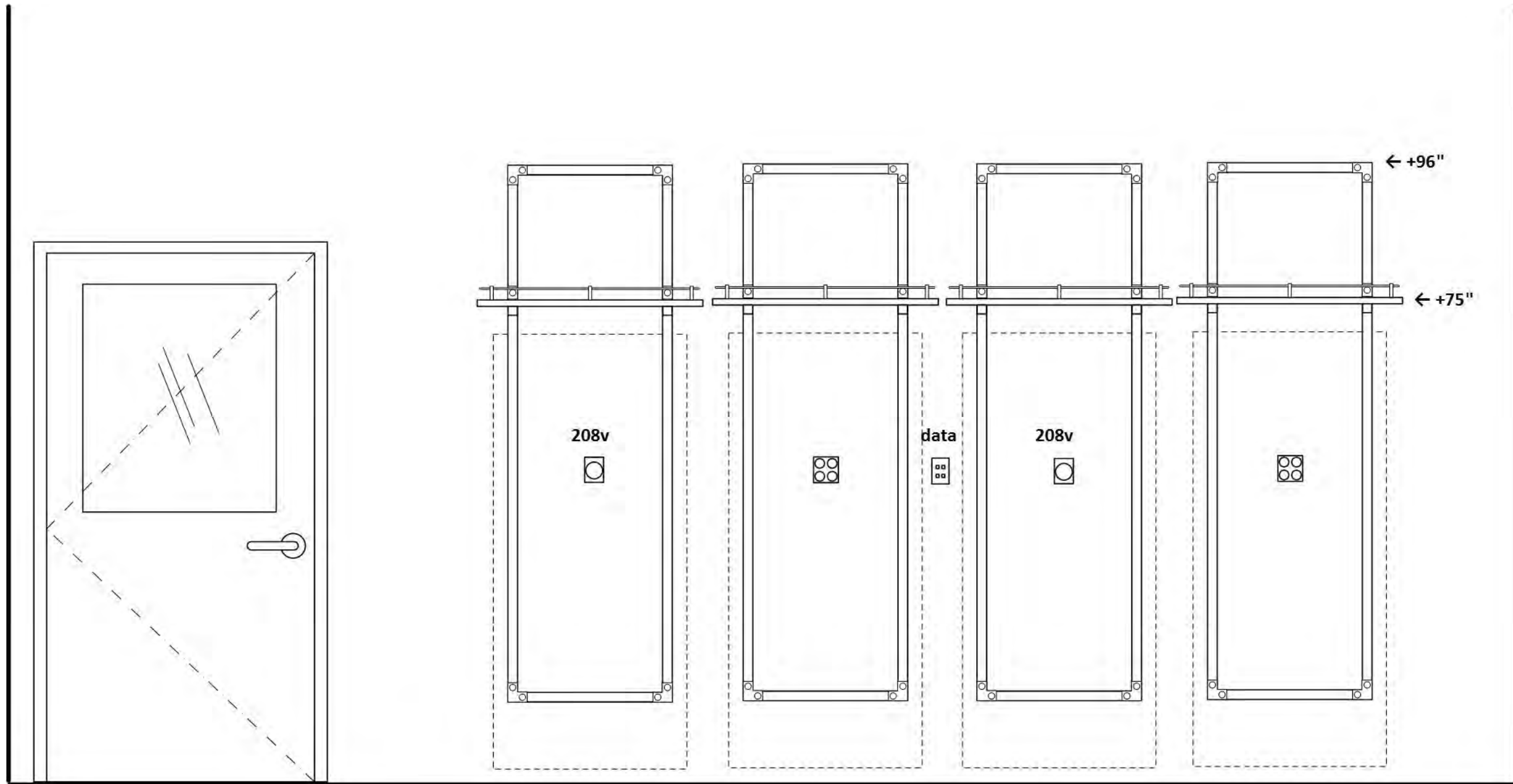
CONTRACTOR FURNISHED EQUIPMENT

Wood casework – wall shelves above equipment spaces
 Cylinder restraint

OWNER FURNISHED EQUIPMENT

Floor equipment- refrigerators, freezers, centrifuges

**RESEARCH LAB SUPPORT
Equipment Room- Elevation A**

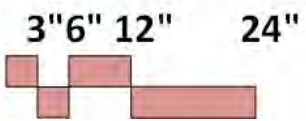


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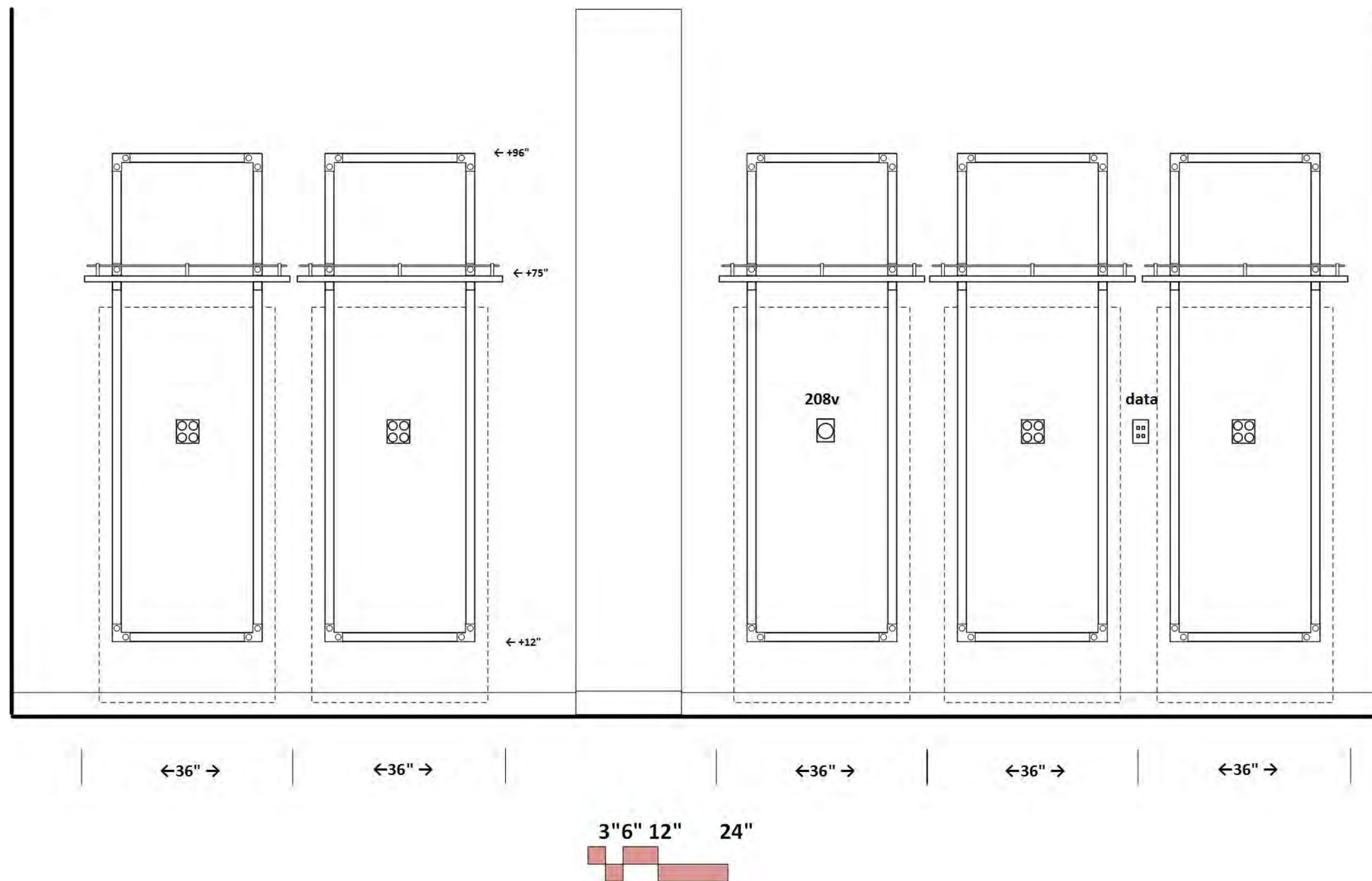
←36" →

←36" →

←36" →



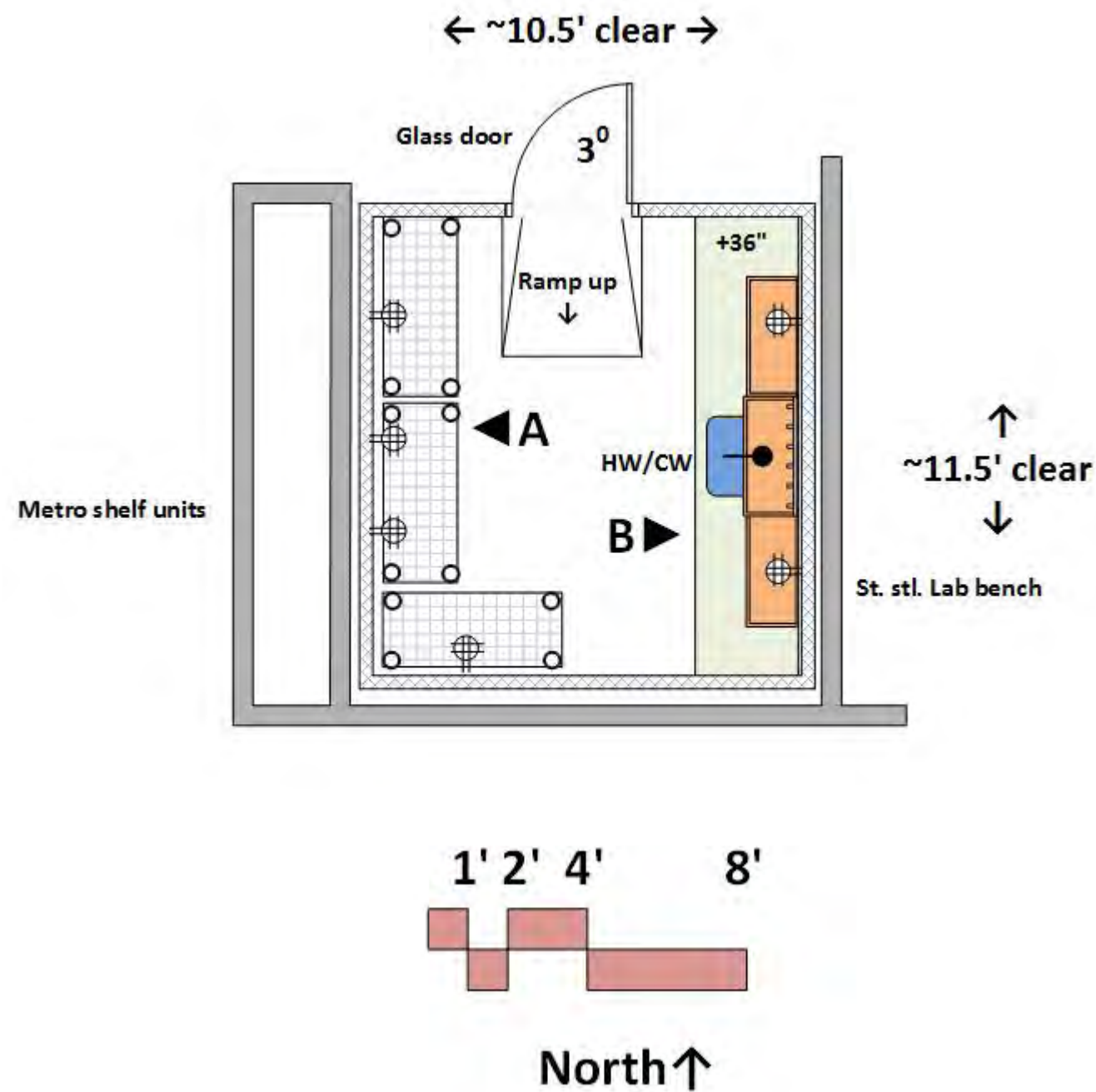
RESEARCH LAB SUPPORT
Equipment Room- Elevation B



RESEARCH LAB SUPPORT Controlled Environment Room



Photo of glass door at env room



ARCHITECTURAL

Occupancy: B
 Floor: diamond plate aluminum with 2" insulation
 Mark floor with safety graphics
 Walls: 4" insulated metal panels with white epoxy powder coat finish
 Ceiling: 8' eggcrate
 Doors: 3°x7° framed glass
 Windows: none
 Acoustic Attenuation: NC 40 or less
 Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 24/7/365
 Temperature: 4-40 deg C variable
 50 cfm fresh air supply
 Pressure: positive
 Humidity: Ambient
 Equipment Heat Gain: 25 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Data & Wireless data
 Lighting: indirect LED @ 60 LUX
 Provide light switches at door

PLUMBING

Hot/Cold water (HW/CW) at sink with vacuum breakers

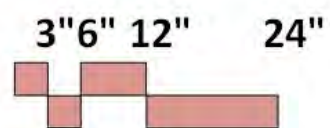
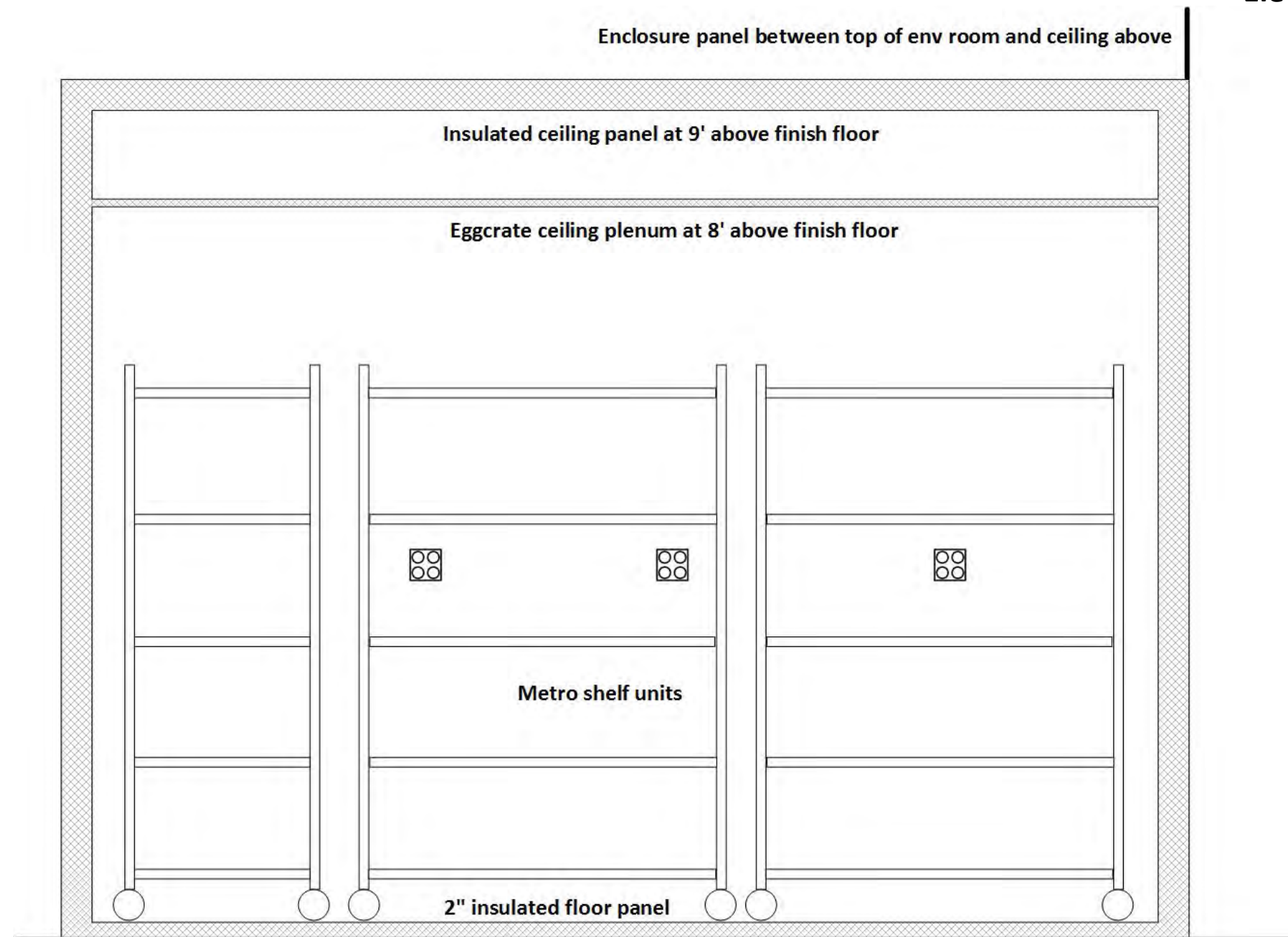
CONTRACTOR FURNISHED EQUIPMENT

Stainless steel casework - base cabinets, wall shelves
 Stainless steel tops and sink
 Faucets & fittings
 Metro shelving units

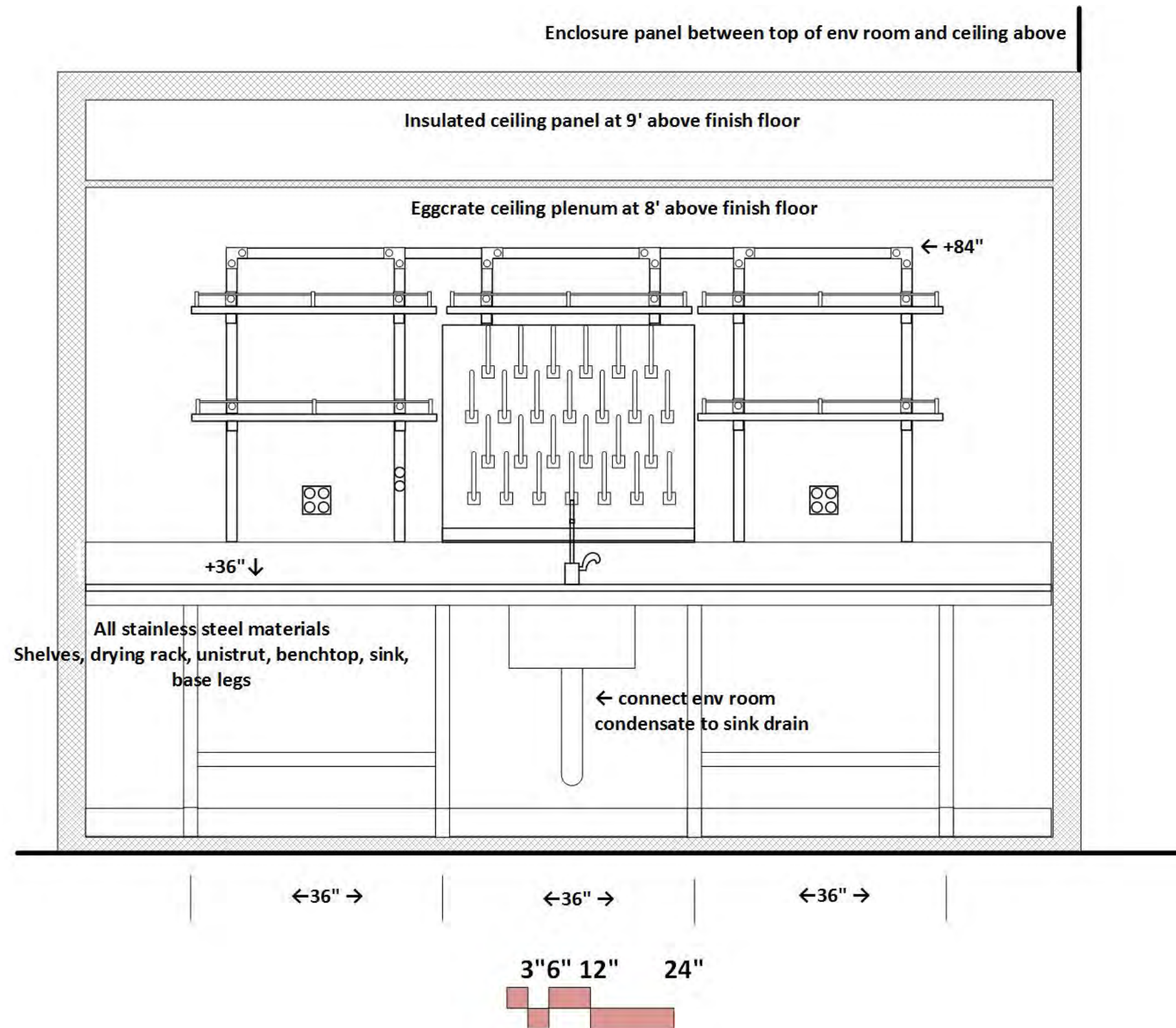
OWNER FURNISHED EQUIPMENT

Benchtop analytical instruments

RESEARCH LAB SUPPORT
Controlled Environment Room-
Elevation A

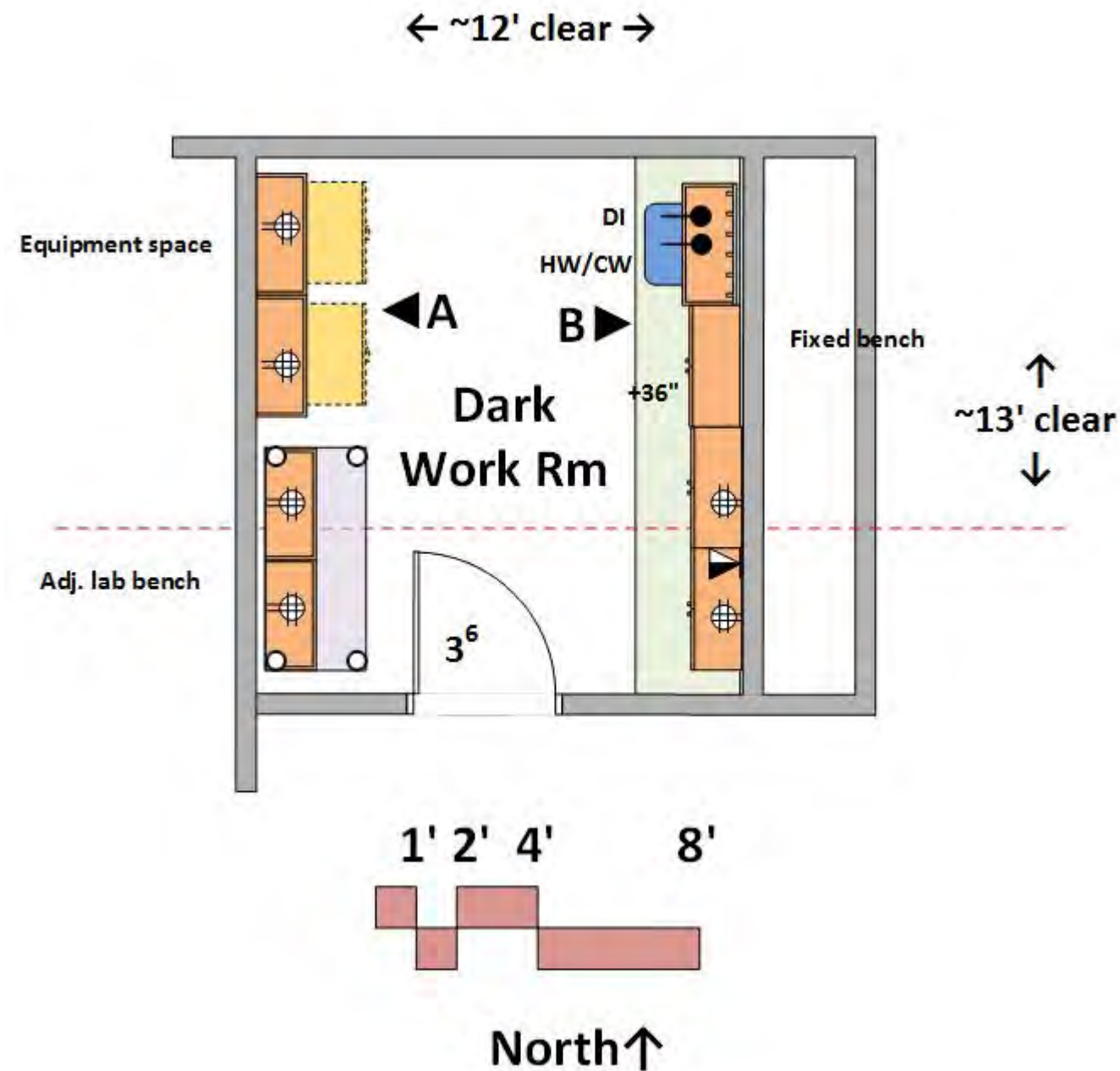


RESEARCH LAB SUPPORT
Controlled Environment Room-
Elevation B



RESEARCH LAB SUPPORT

Dark Work Room



ARCHITECTURAL

Occupancy: B
 Floor: vinyl tile
 Walls: gypsum board and enamel paint
 Ceiling: mylar acoustic tile
 Doors: 3⁶x8⁰ opaque with light seal
 Windows: none
 Acoustic Attenuation: NC 40 or less
 Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 24/7/365
 Temperature: 66-74 deg. F, +/- 2 deg. F
 100% exhaust- no recirculation of air; Exhaust on emergency power supply
 (8) air changes per hour minimum occupied (air change rate may be higher due to equipment heat gain)
 (4) air changes per hour unoccupied
 Pressure: negative
 Humidity: Ambient
 Equipment Heat Gain: 25 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Data & Wireless data
 Lighting: indirect LED @ 600 LUX
 Task lights below wall cabinets
 Provide light switches at door

PLUMBING

Hot/Cold water (HW/CW) at sink with vacuum breakers
 DI water at sink

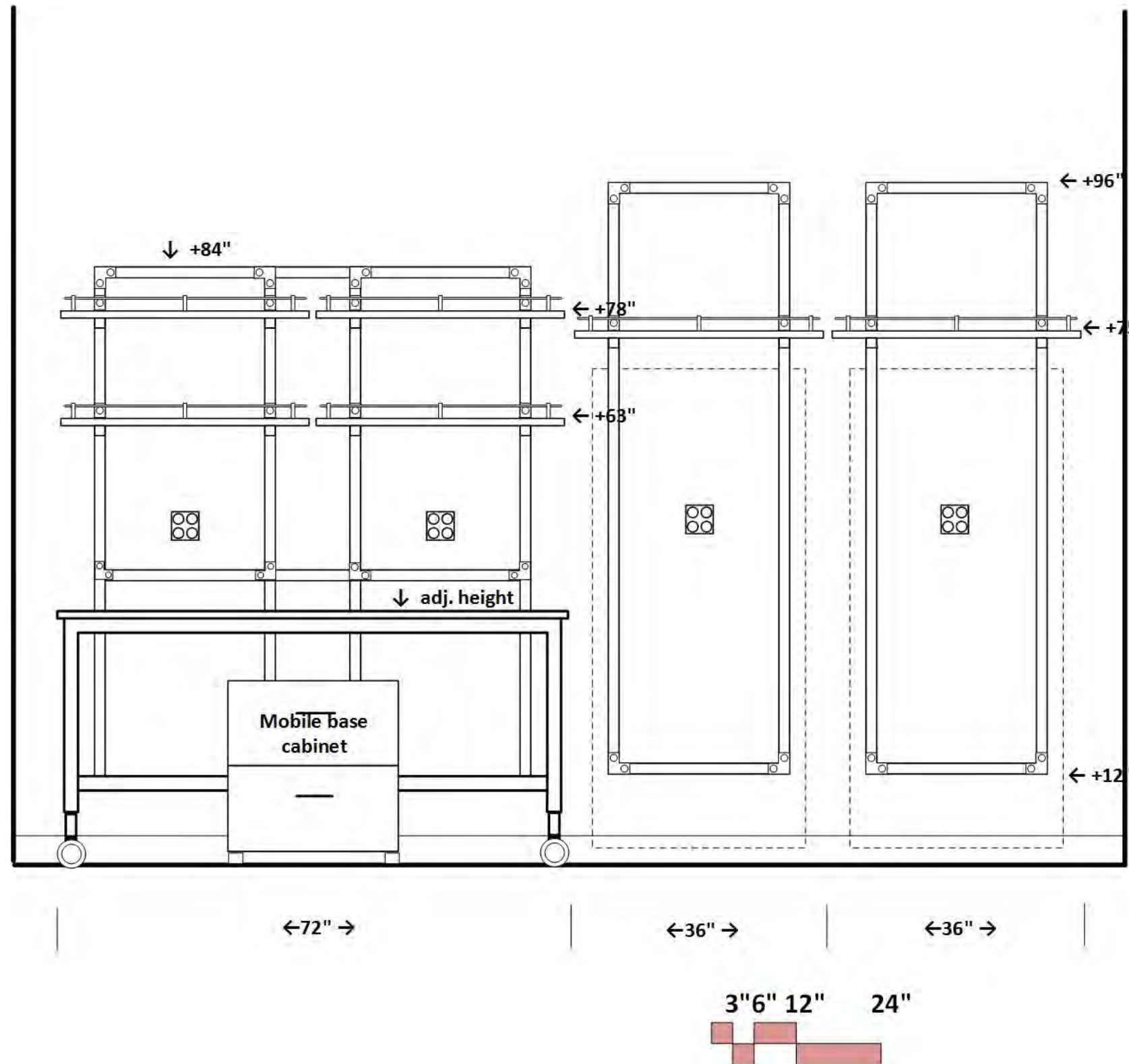
CONTRACTOR FURNISHED EQUIPMENT

Wood casework - base cabinets, wall cabinets, tall cabinets
 Epoxy resin tops and sinks
 Faucets & fittings
 Fire Extinguisher
 Mobile lab benches

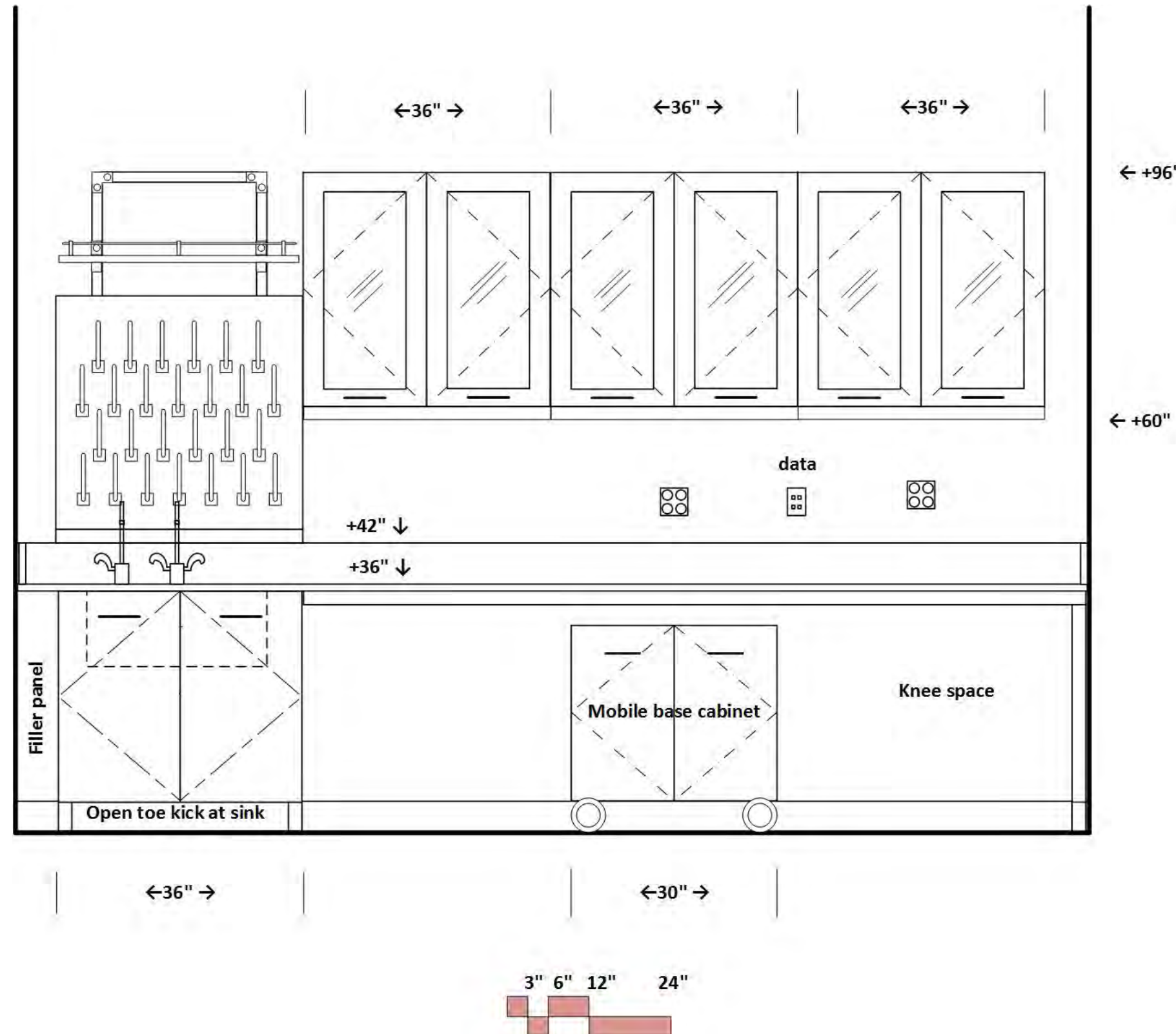
OWNER FURNISHED EQUIPMENT

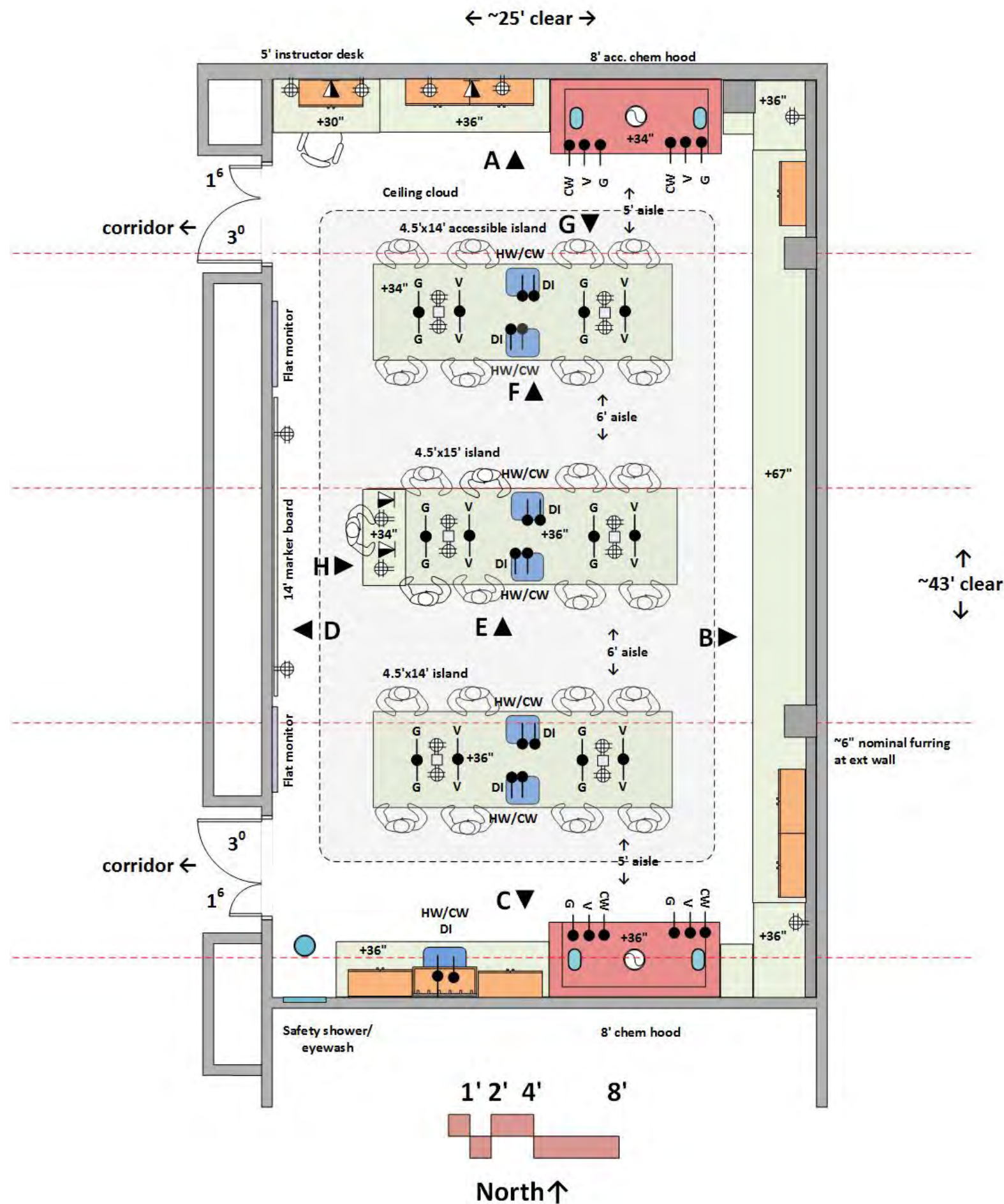
Chairs
 Benchtap analytical instruments

RESEARCH LAB SUPPORT
Dark Work Room- Elevation A



RESEARCH LAB SUPPORT
Dark Work Room- Elevation B





TEACHING LAB

General Chemistry- North Wing

Similar for 6 labs in north wing; 4 labs in center wing
Reduce section drawers at exterior wall to accommodate space available in Center Wing Labs

ARCHITECTURAL

Occupancy: B
Floor: vinyl tile; Walls: gypsum board and enamel paint
Ceiling: 9' cloud/open to structure acoustic tile
Doors: 3'0"/1'6"x7'0" pair with window
Windows: Existing to remain, if any
Daylight attenuation: at exterior windows, if any
Acoustic Attenuation: NC 40 or less
Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 6 am to 11 pm; Temperature: 66-74 deg. F, +/- 2 deg. F
100% exhaust- no recirculation of air
Fume hood exhaust on emergency power supply
(6) air changes per hour minimum occupied (air change rate may be higher due to equipment heat gain)
(4) air changes per hour unoccupied
Pressure: negative to corridor; Humidity: Ambient
Equipment Heat Gain: 25 btuh/sf
1200 c.f.m. exhaust at each fume hood (VAV)

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
Data & Wireless data
Lighting: indirect LED @ 600 LUX with multi-level switching
Task lights below wall cabinets
Provide light switches at door

PLUMBING

Hot/Cold water (HW/CW) at sinks with vacuum breakers
Natural gas and vacuum
DI water at sinks
Domestic water and drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

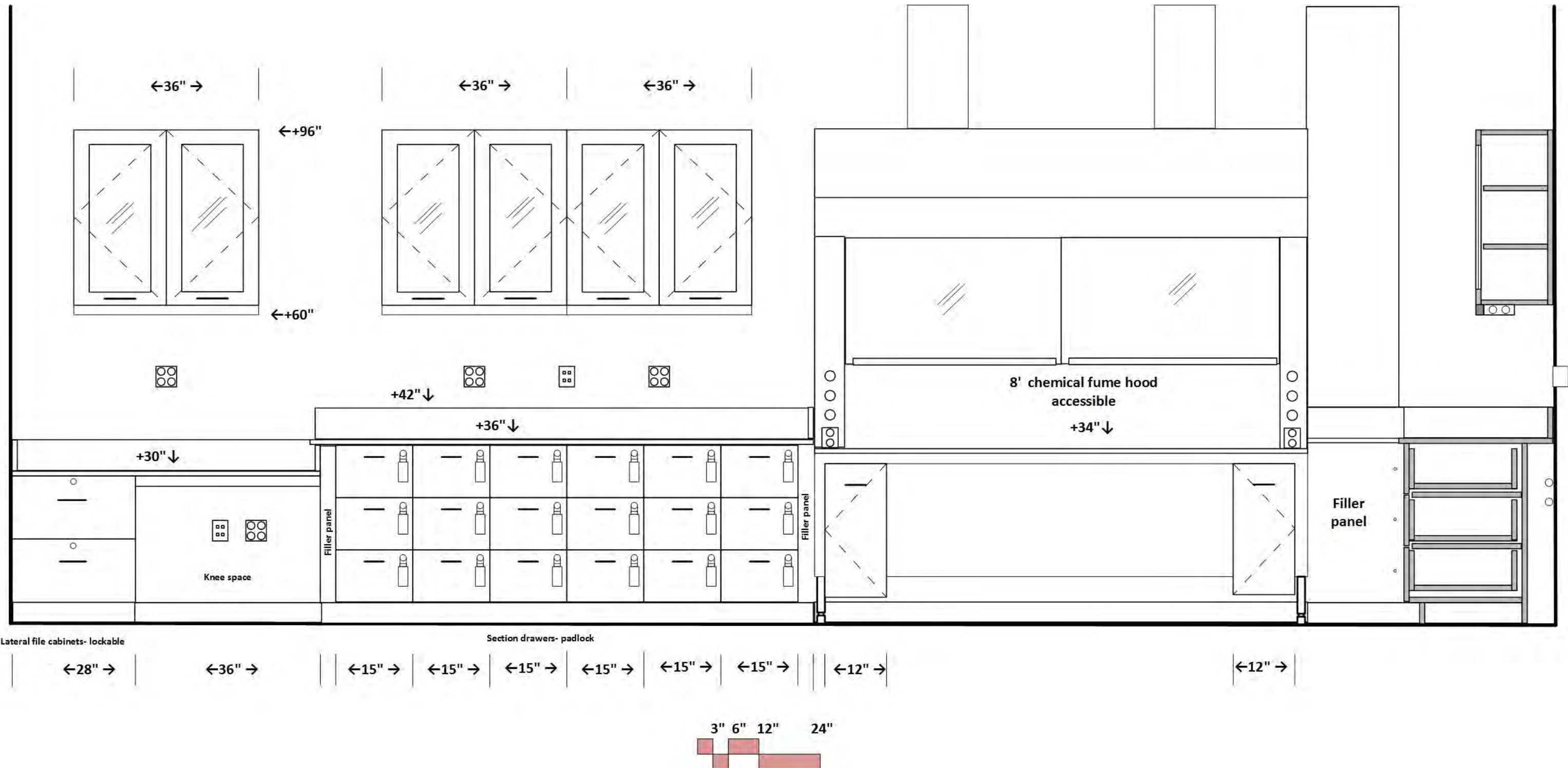
Wood casework - base cabinets, wall cabinets, tall cabinets
360 section drawers requested per lab for Gen Chem Labs
362 section drawers as drawn
Fewer drawers will be available in Center Wing labs
Epoxy resin tops and sinks
Faucets & fittings
Chemical fume hoods
Safety shower/eyewash
Fire Extinguisher; Marker boards

OWNER FURNISHED EQUIPMENT

Chairs; Carts
Benchtop analytical instruments
Projection system; flat screen monitors

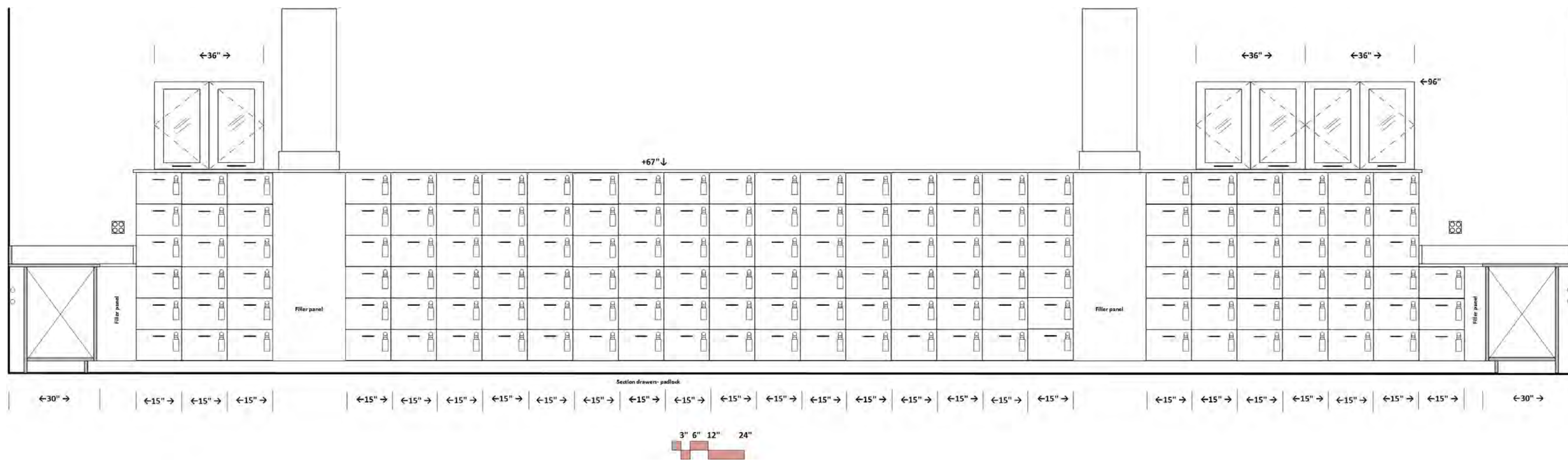
TEACHING LAB

General Chemistry- Elevation A



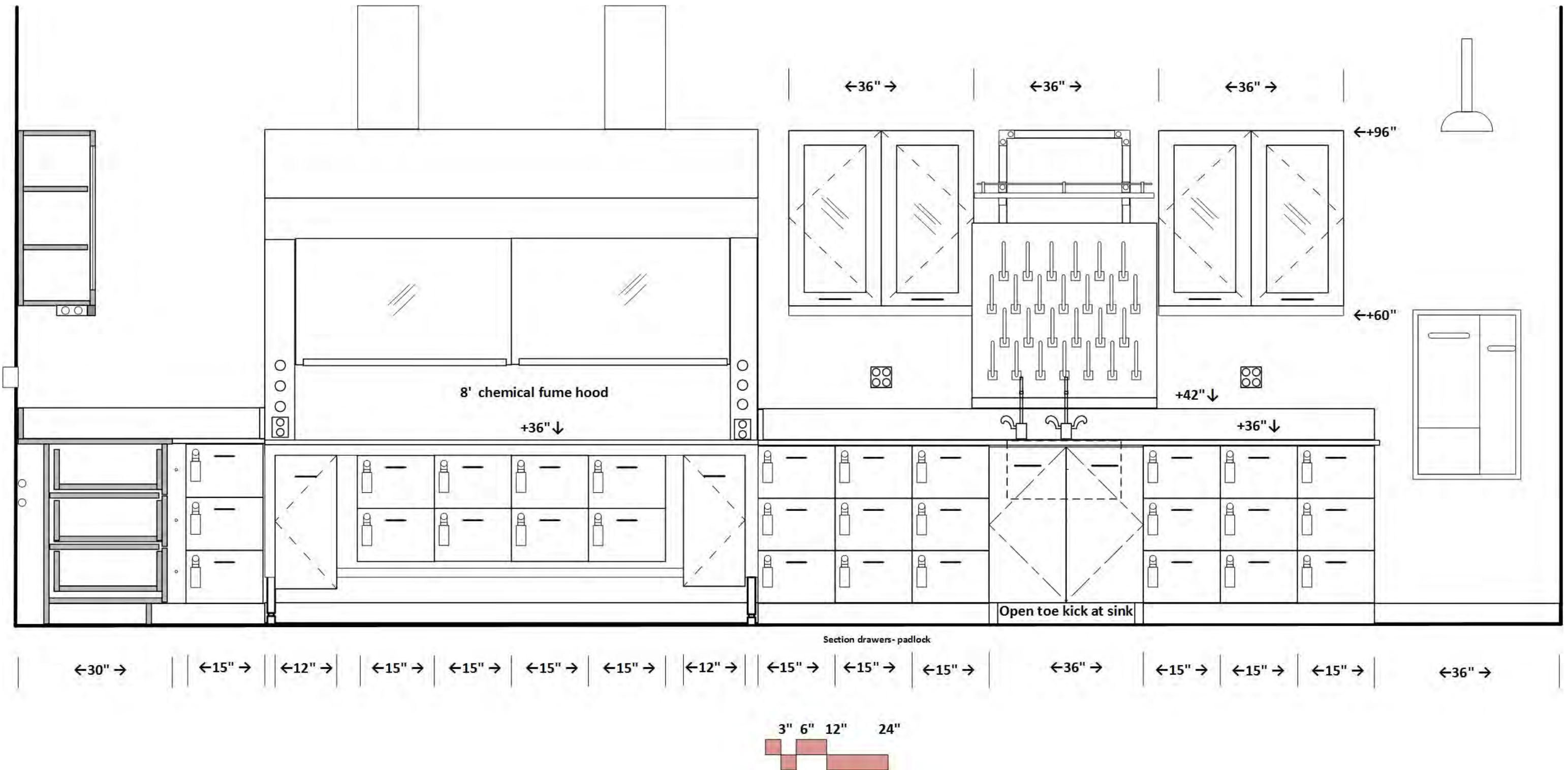
TEACHING LAB

General Chemistry- Elevation B



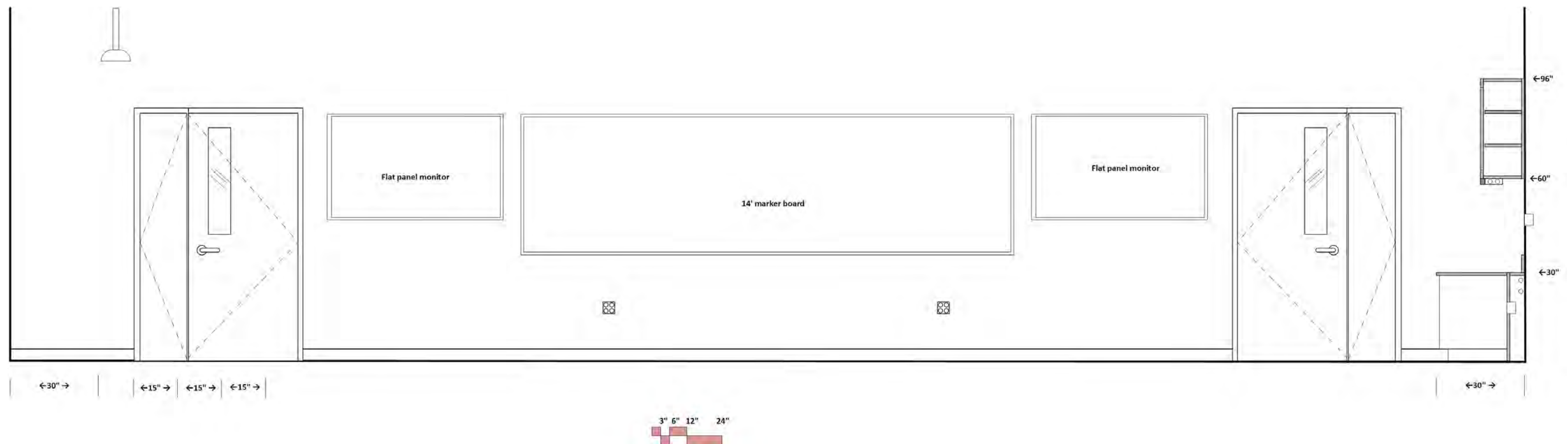
TEACHING LAB

General Chemistry- Elevation C



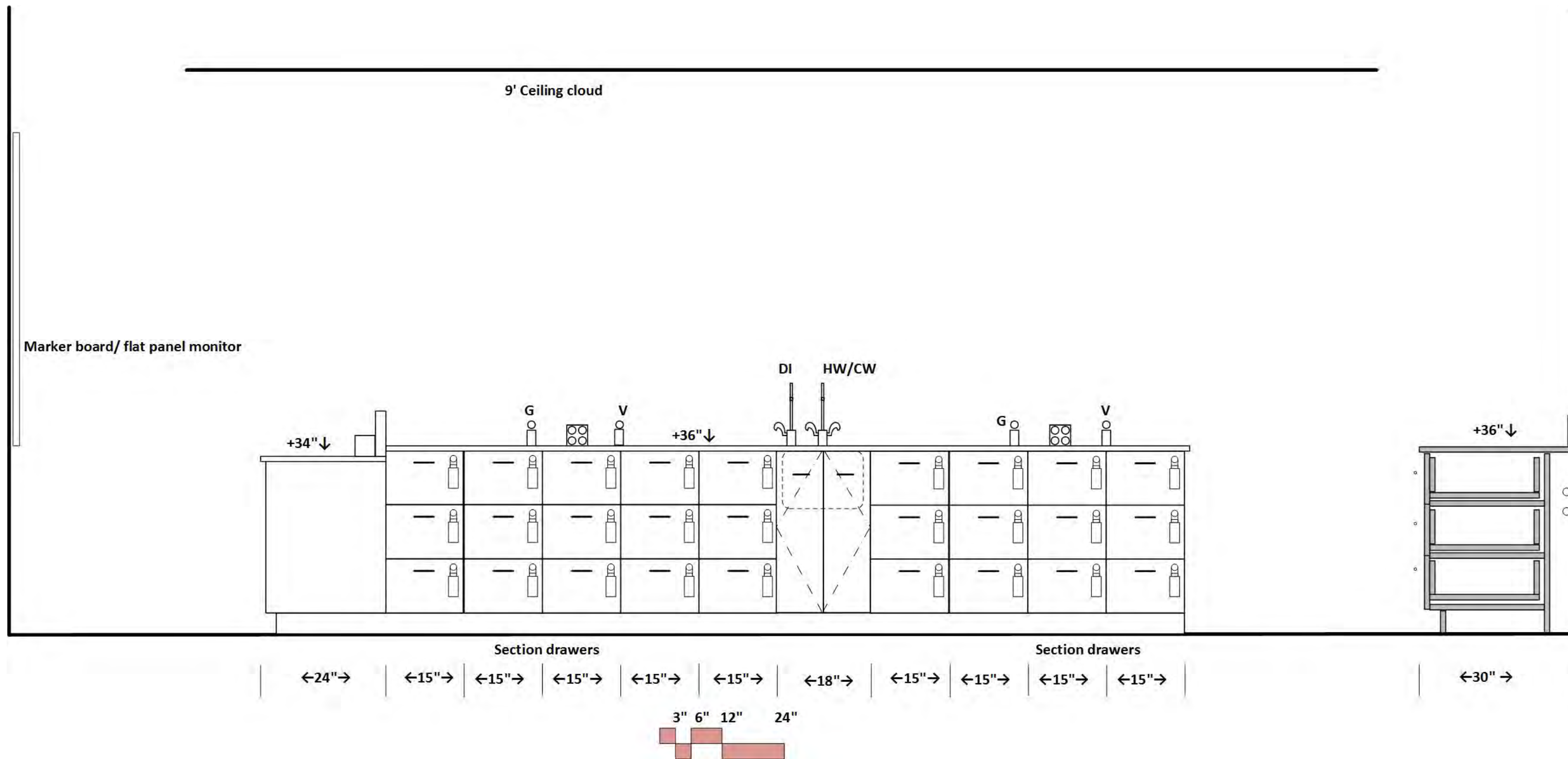
TEACHING LAB

General Chemistry- Elevation D



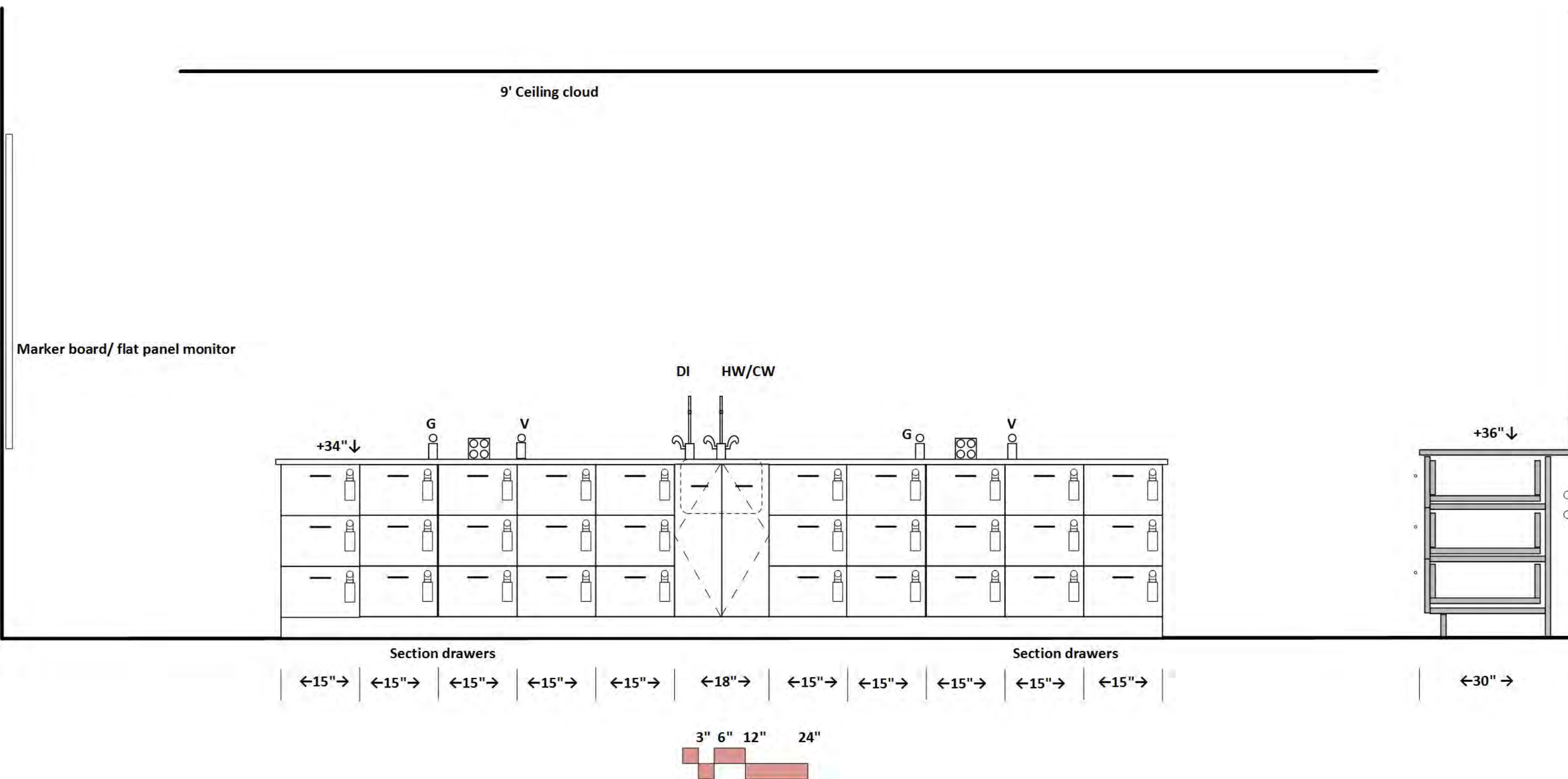
TEACHING LAB

General Chemistry- Elevation E



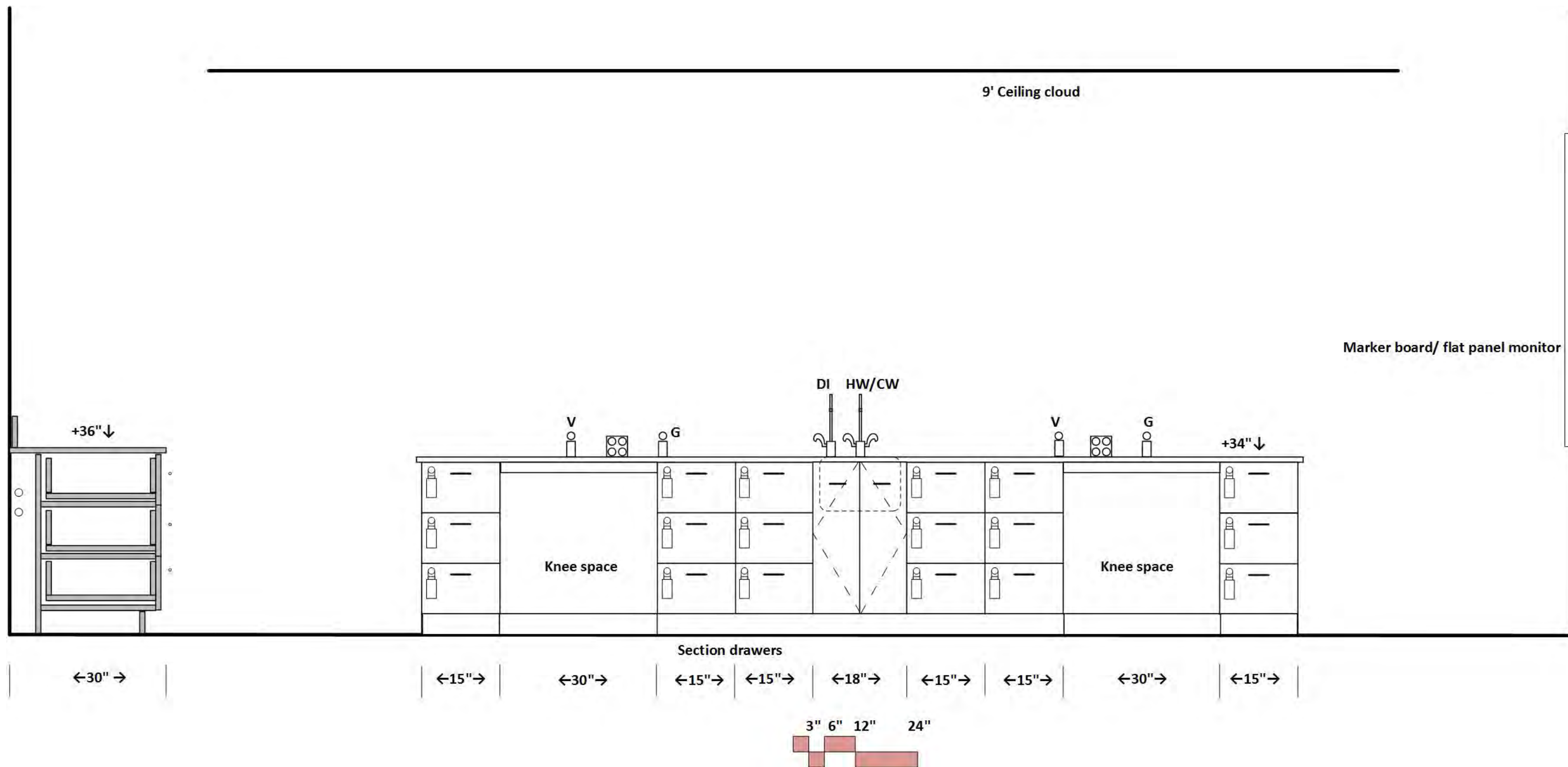
TEACHING LAB

General Chemistry- Elevation F

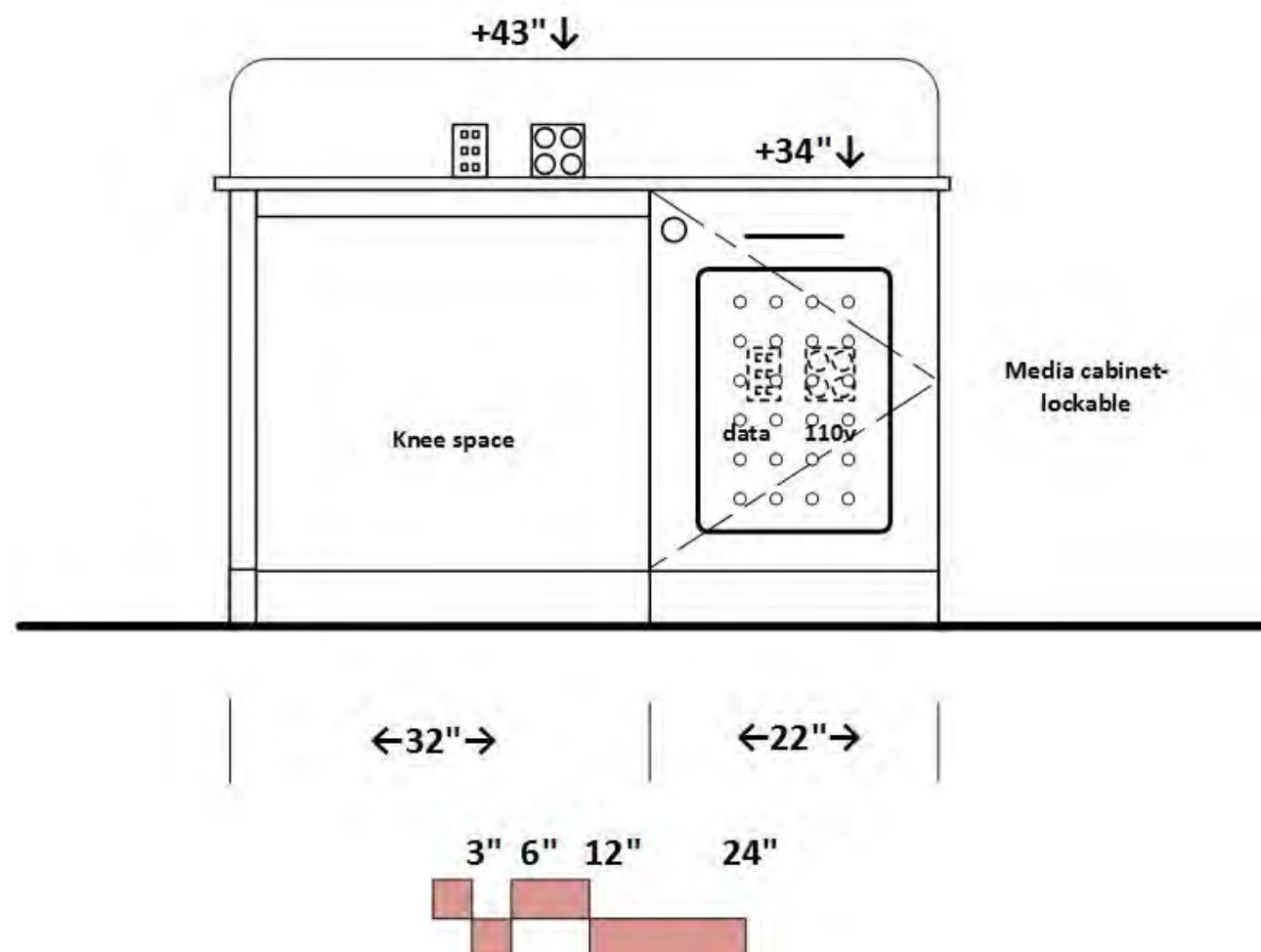


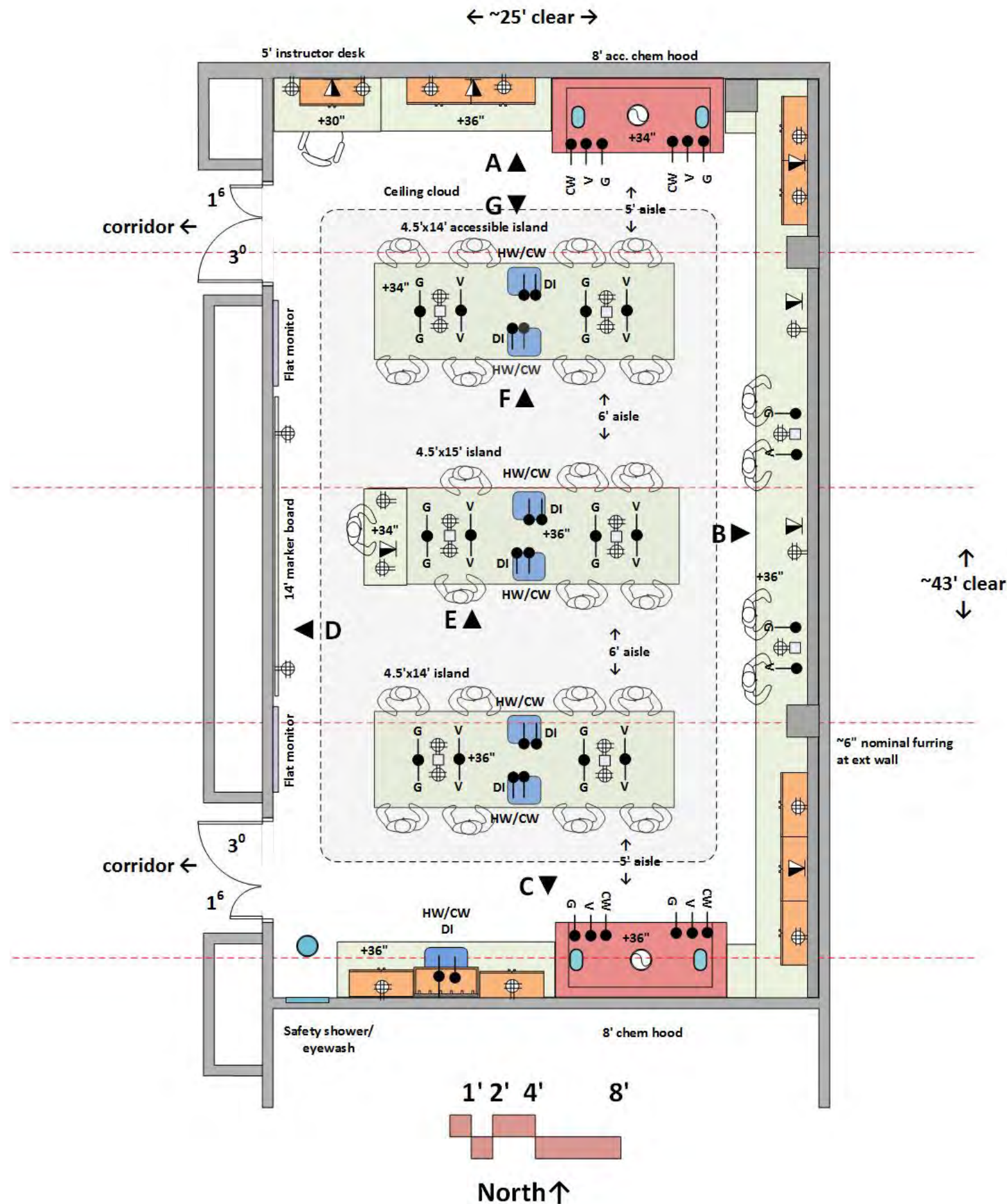
TEACHING LAB

General Chemistry- Elevation G



TEACHING LAB
General Chemistry- Elevation H





TEACHING LAB

Biochemistry- North Wing

Similar for Earth Science

ARCHITECTURAL

Occupancy: B
 Floor: vinyl tile; Walls: gypsum board and enamel paint
 Ceiling: 9' cloud/open to structure acoustic tile
 Doors: 3'x8' framed glass
 Windows: Existing to remain, if any
 Daylight attenuation: at exterior windows
 Acoustic Attenuation: NC 40 or less
 Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 6 am to 11 pm; Temperature: 66-74 deg. F, +/- 2 deg. F
 100% exhaust- no recirculation of air
 Fume hood exhaust on emergency power supply
 (6) air changes per hour minimum occupied (air change rate may be higher due to equipment heat gain)
 (4) air changes per hour unoccupied
 Pressure: negative to corridor; Humidity: Ambient
 Equipment Heat Gain: 25 btuh/sf
 1200 c.f.m. exhaust at each fume hood (VAV)

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Data & Wireless data
 Lighting: indirect LED @ 600 LUX with multi-level switching
 Task lights below wall cabinets
 Provide light switches at door

PLUMBING

Hot/Cold water (HW/CW) at sinks with vacuum breakers
 Natural gas and vacuum
 DI water at sinks
 Domestic water and drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

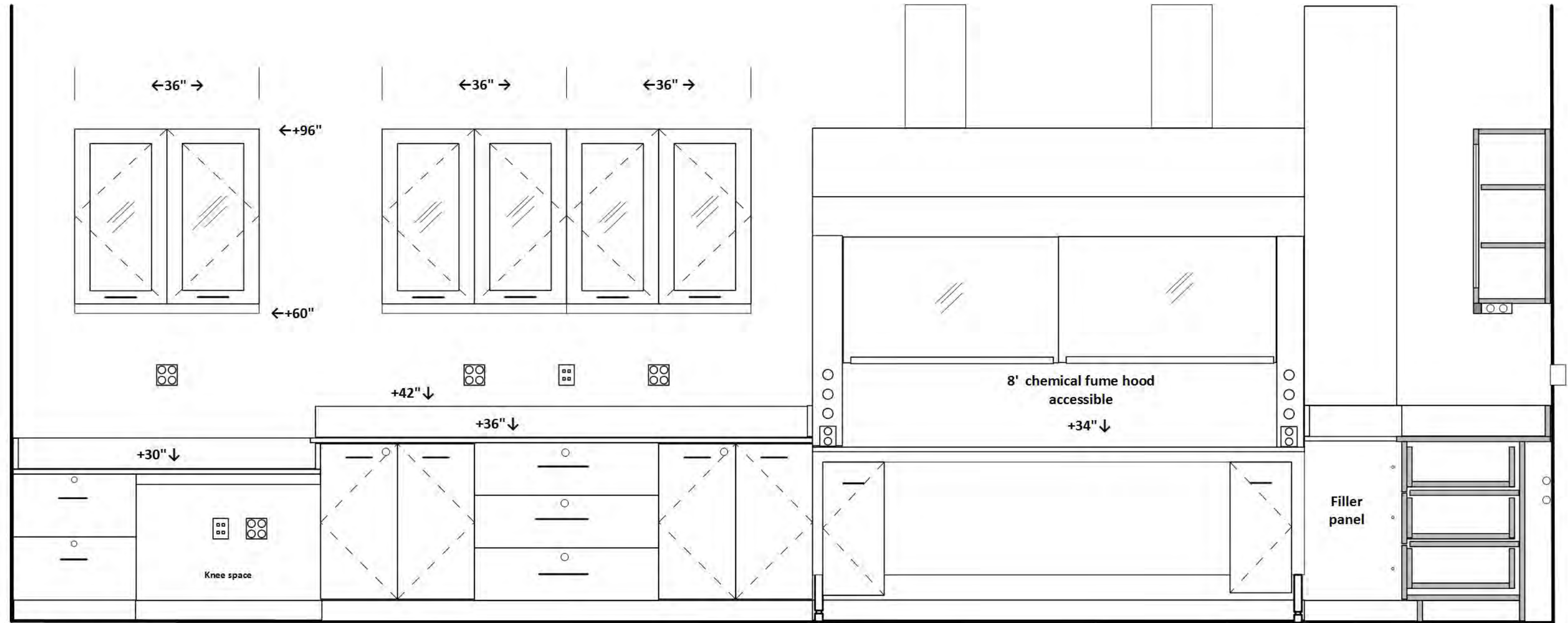
Wood casework - base cabinets, wall cabinets, tall cabinets
 Epoxy resin tops and sinks
 Faucets & fittings
 Chemical fume hoods
 Safety shower/eyewash
 Fire Extinguisher
 Marker boards

OWNER FURNISHED EQUIPMENT

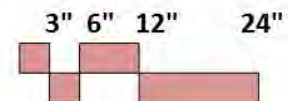
Chairs
 Benchtop analytical instruments
 Projection system; flat screen monitors
 Carts

TEACHING LAB

Biochemistry- Elevation A

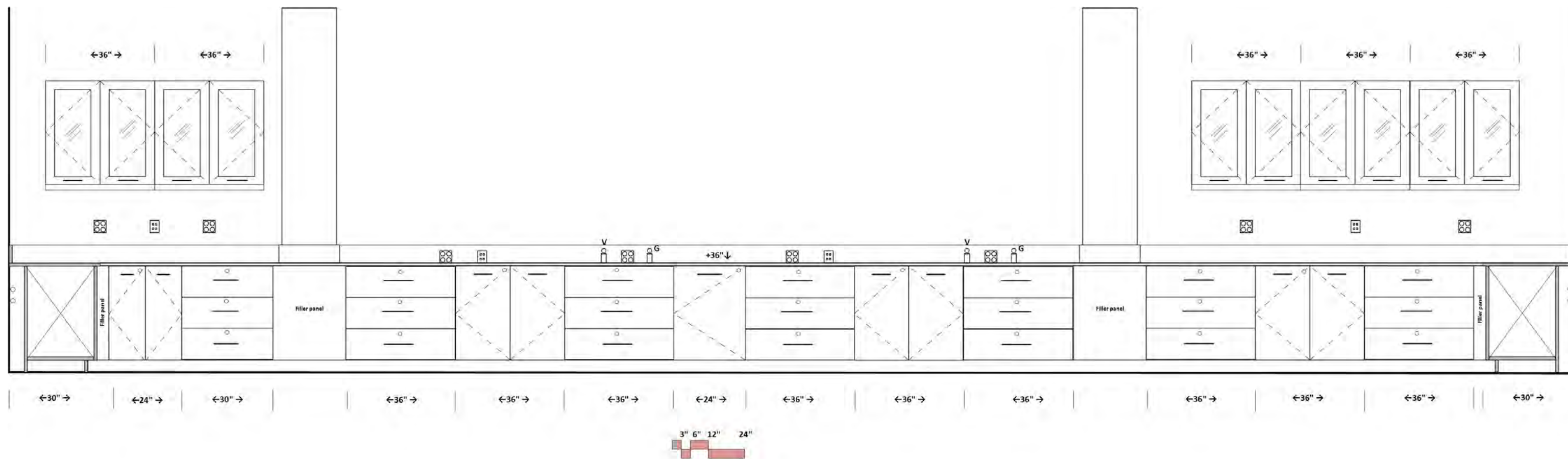


Lateral file cabinets- lockable



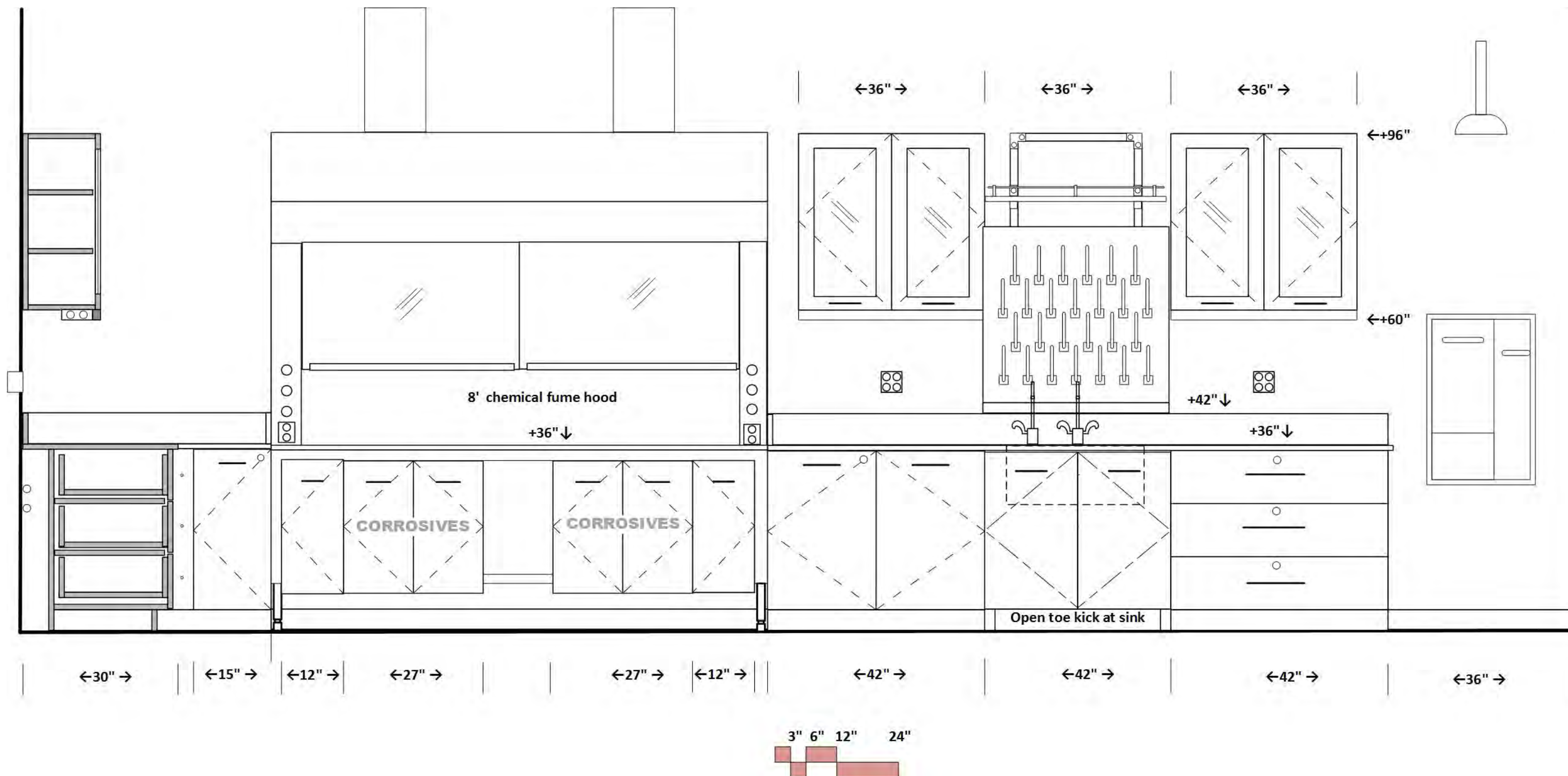
TEACHING LAB

Biochemistry- Elevation B



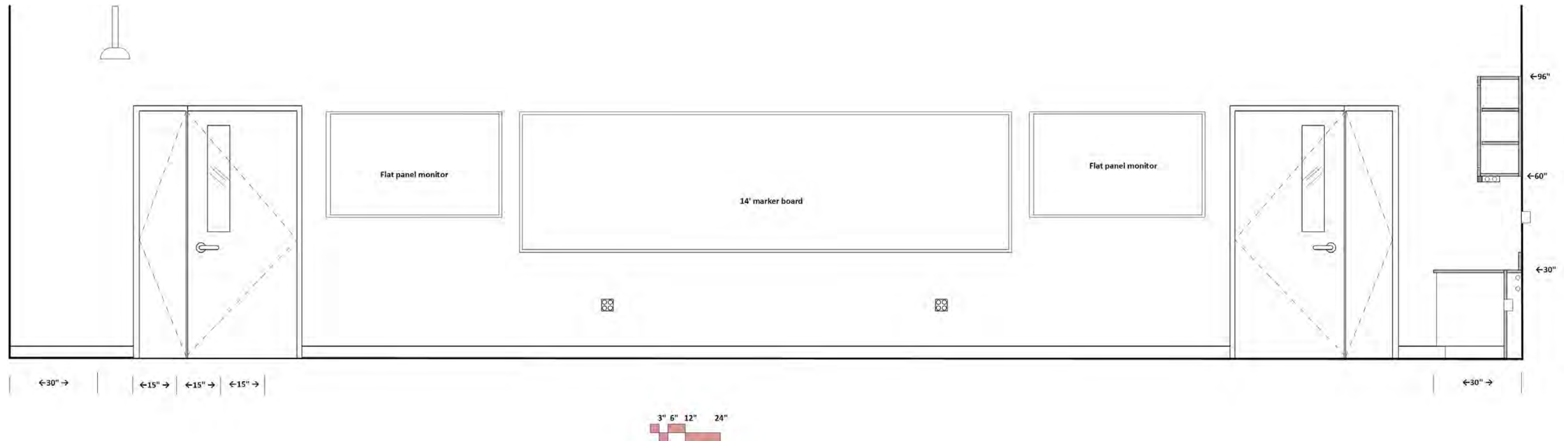
TEACHING LAB

Biochemistry- Elevation C



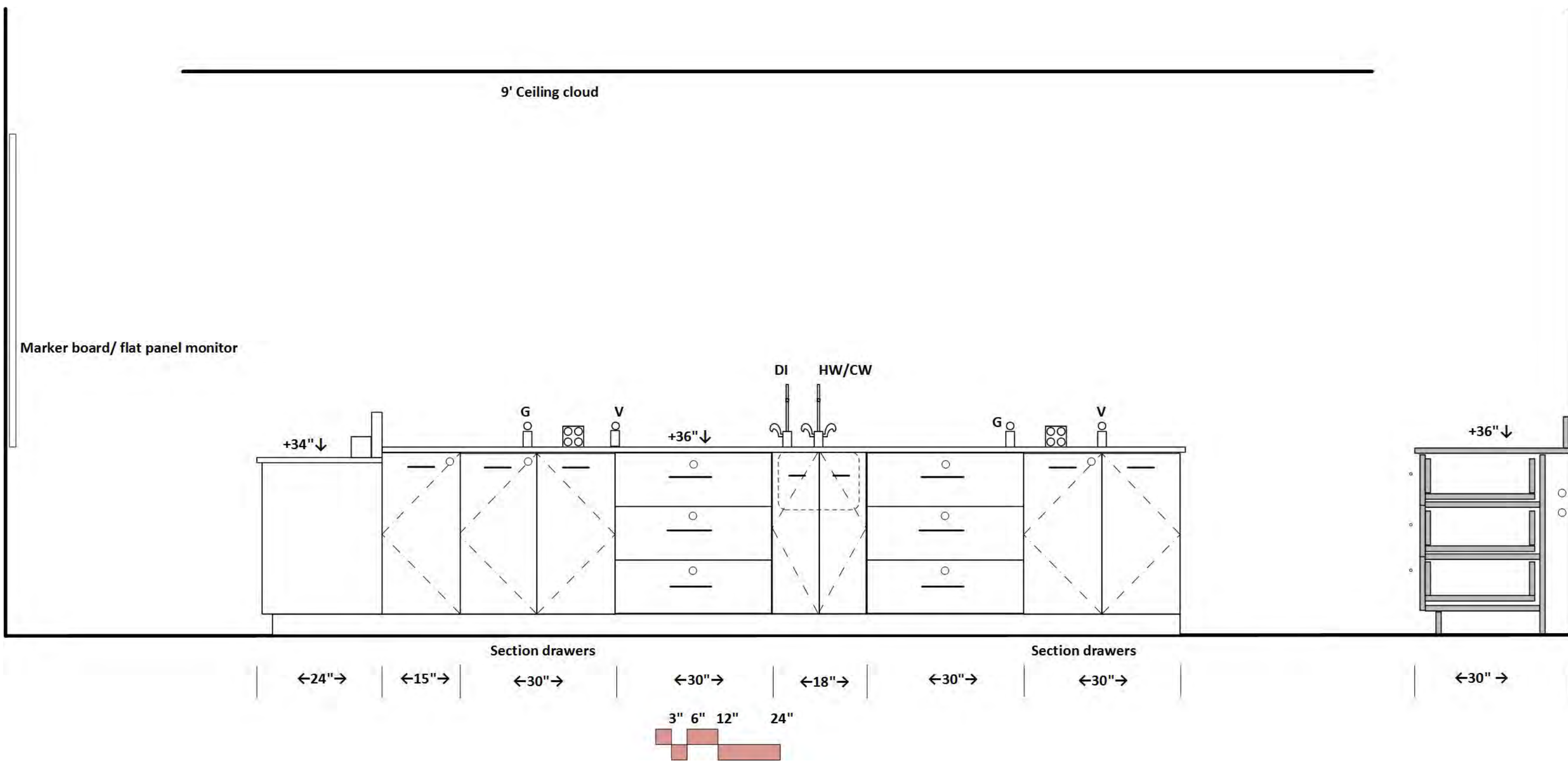
TEACHING LAB

Biochemistry- Elevation D

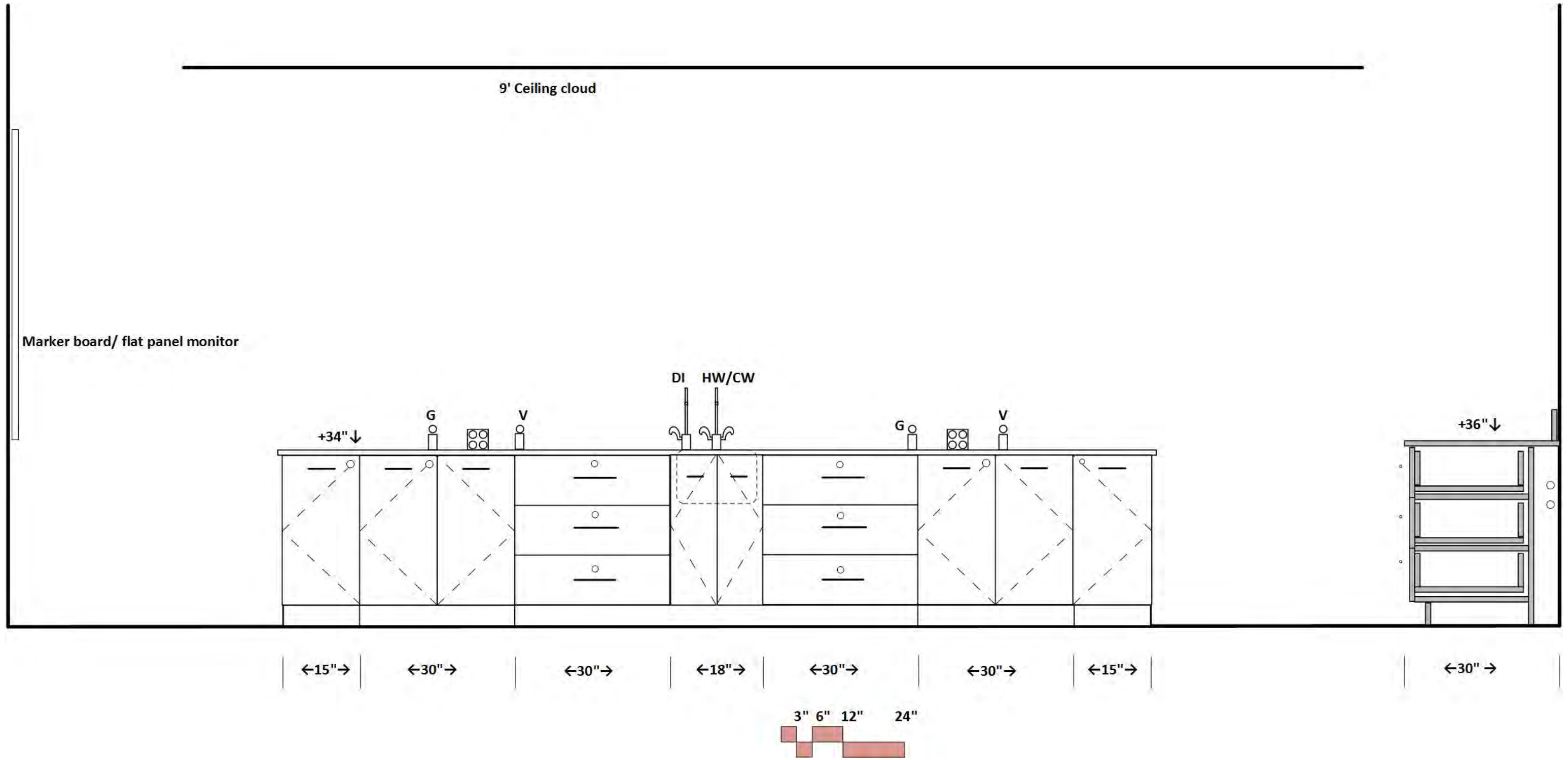


TEACHING LAB

Biochemistry- Elevation E

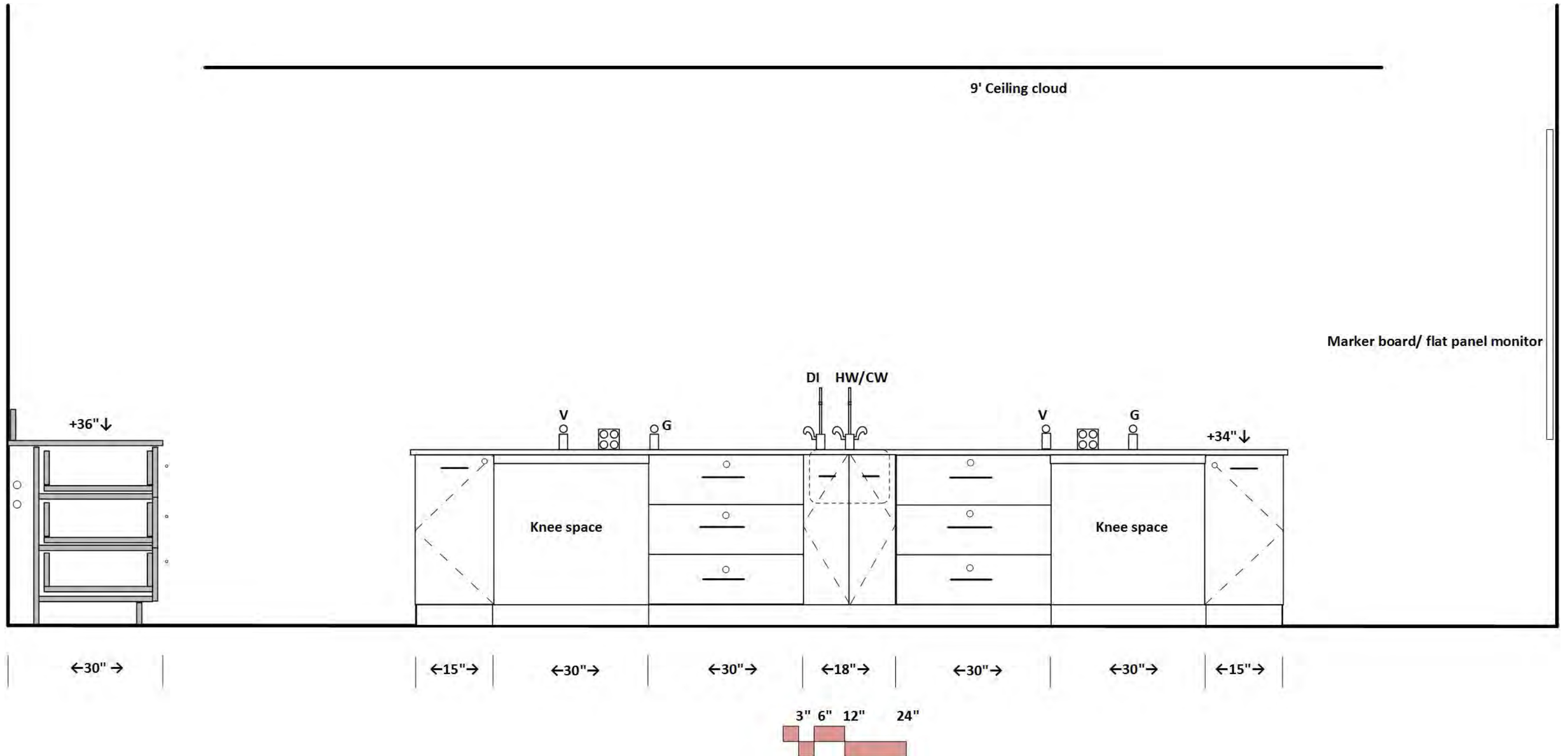


TEACHING LAB
Biochemistry- Elevation F



TEACHING LAB

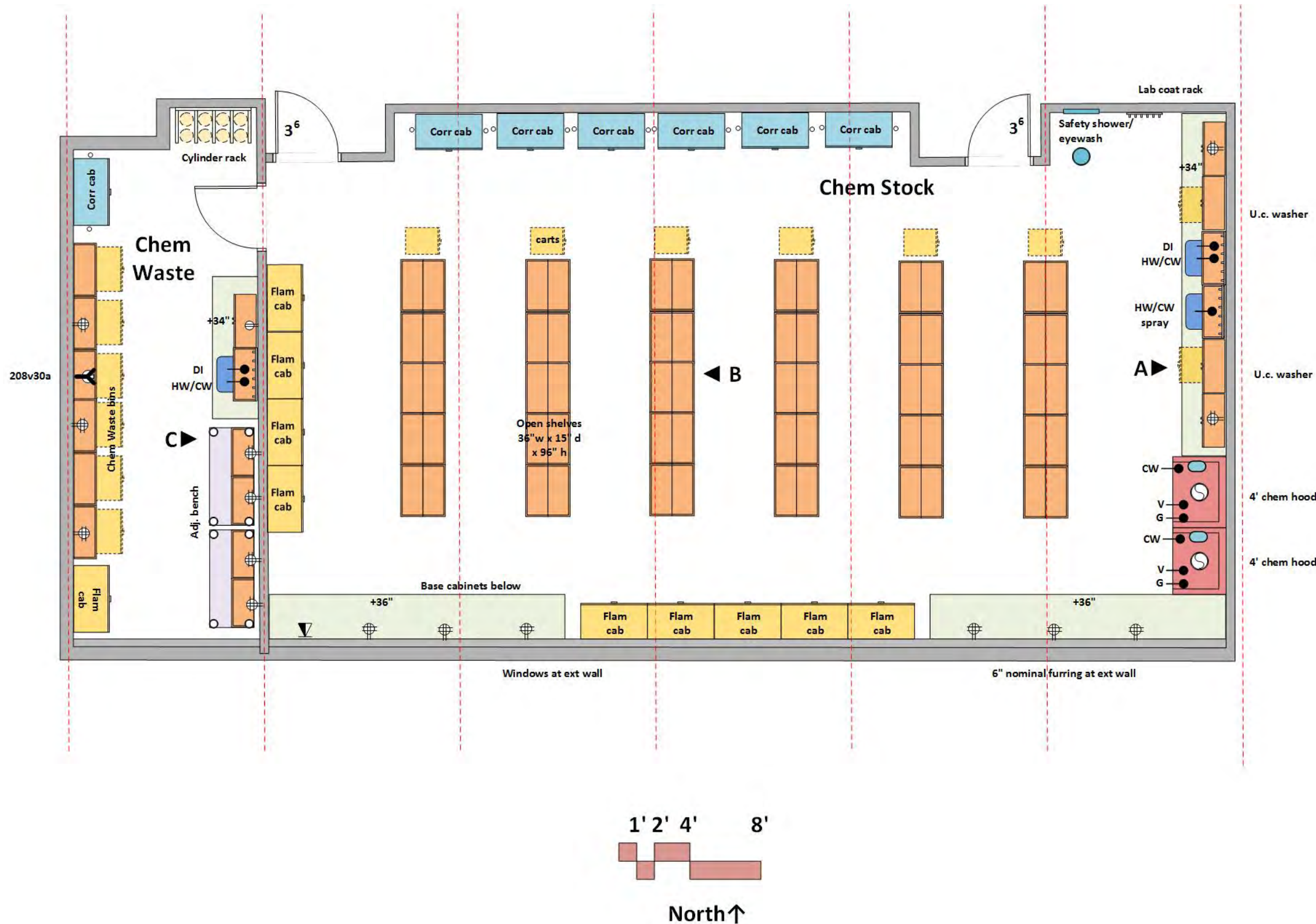
Biochemistry- Elevation G



TEACHING LAB SUPPORT

Chem Stock Room/Chem Waste Room

1st floor Center Wing- S.W. corner



ARCHITECTURAL

Occupancy: B
 Floor: vinyl tile
 Walls: gypsum board and enamel paint
 Ceiling: 9' cloud/open to structure
 Doors: 3⁶x8⁰ framed glass
 Windows: Existing to remain, if any;
 Daylight attenuation: at exterior windows
 Acoustic Attenuation: NC 40 or less
 Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 6 am to 11 pm
 Temperature: 66-74 deg. F, +/- 2 deg. F
 100% exhaust- no recirculation of air
 Fume hood exhaust on emergency power supply
 (6) air changes per hour minimum occupied (air change rate may be higher due to equipment heat gain)
 (4) air changes per hour unoccupied
 Pressure: negative to corridor; Humidity: Ambient
 Equipment Heat Gain: 25 btuh/sf
 500 c.f.m. exhaust at each fume hood (VAV)

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Stand-by power at equipment space
 208v power on stand-by
 Data & Wireless data
 Lighting: indirect LED @ 600 LUX
 Task lights below wall cabinets
 Provide light switches at door

PLUMBING

Hot/Cold water (HW/CW) at sinks with vacuum breakers
 Hot water at u.c. washers
 Natural gas and vacuum
 DI water at sinks and u.c. washers (rinse cycle)
 Domestic water and drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

Wood casework - base cabinets, wall cabinets, tall cabinets
 Epoxy resin tops and sinks
 Faucets & fittings
 Chemical fume hoods
 Safety shower/eyewash
 Fire Extinguisher
 Chemical storage cabinets

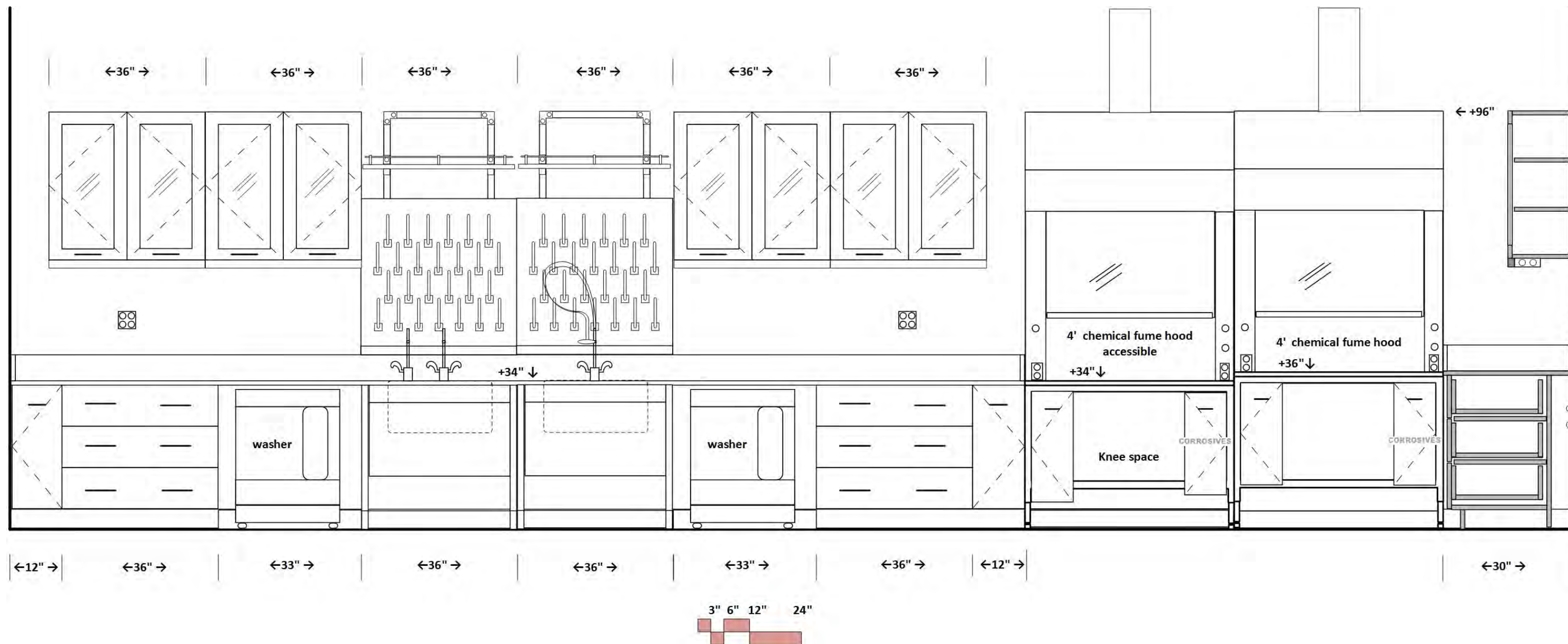
OWNER FURNISHED EQUIPMENT

Chairs
 Benchtop analytical instruments
 Carts
 Floor equipment- refrigerators/freezers

TEACHING LAB SUPPORT

Chem Stock Room/Chem Waste Room

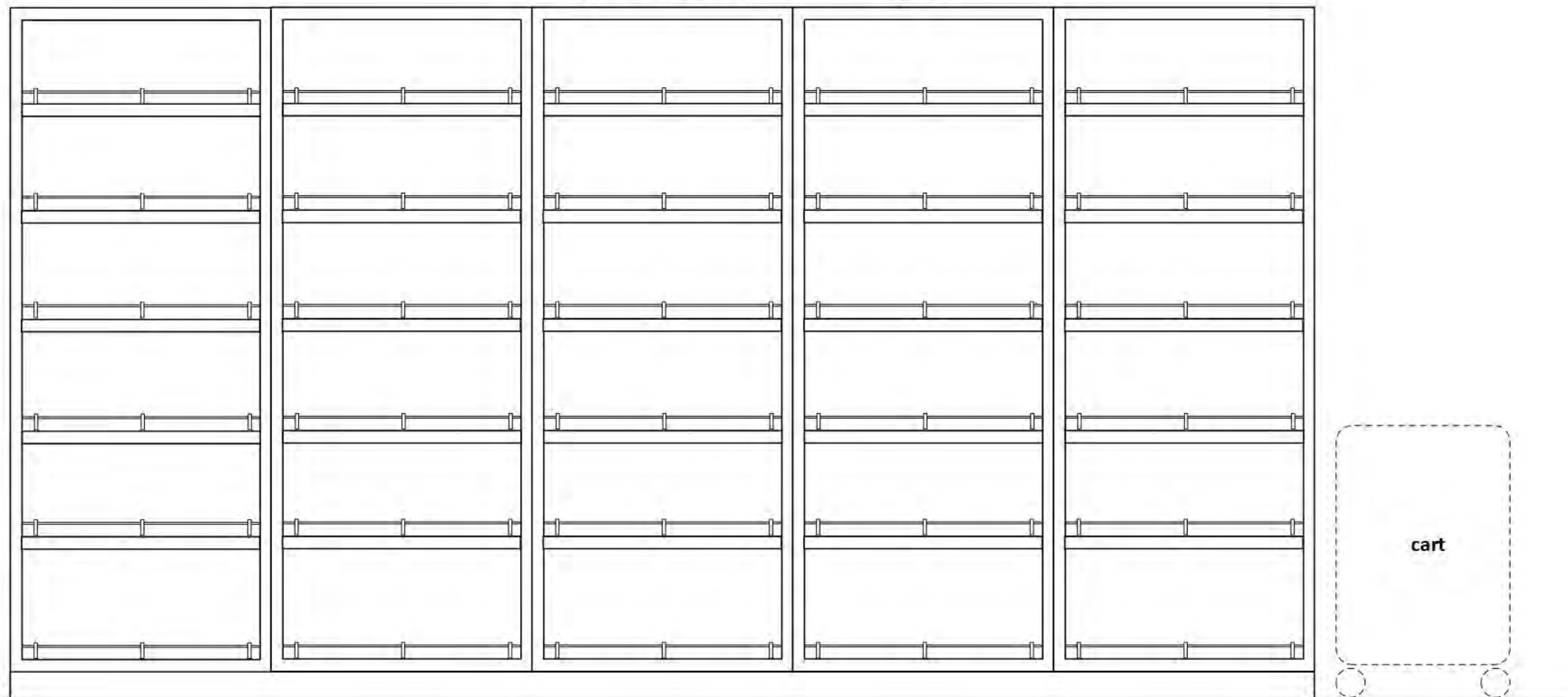
Elevation A



TEACHING LAB SUPPORT
Chem Stock Room/Chem Waste Room
Elevation B

Open shelf cabinets

↓ +96"



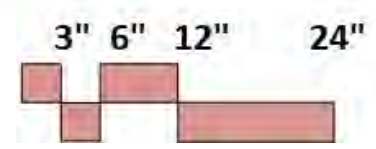
←36" →

←36" →

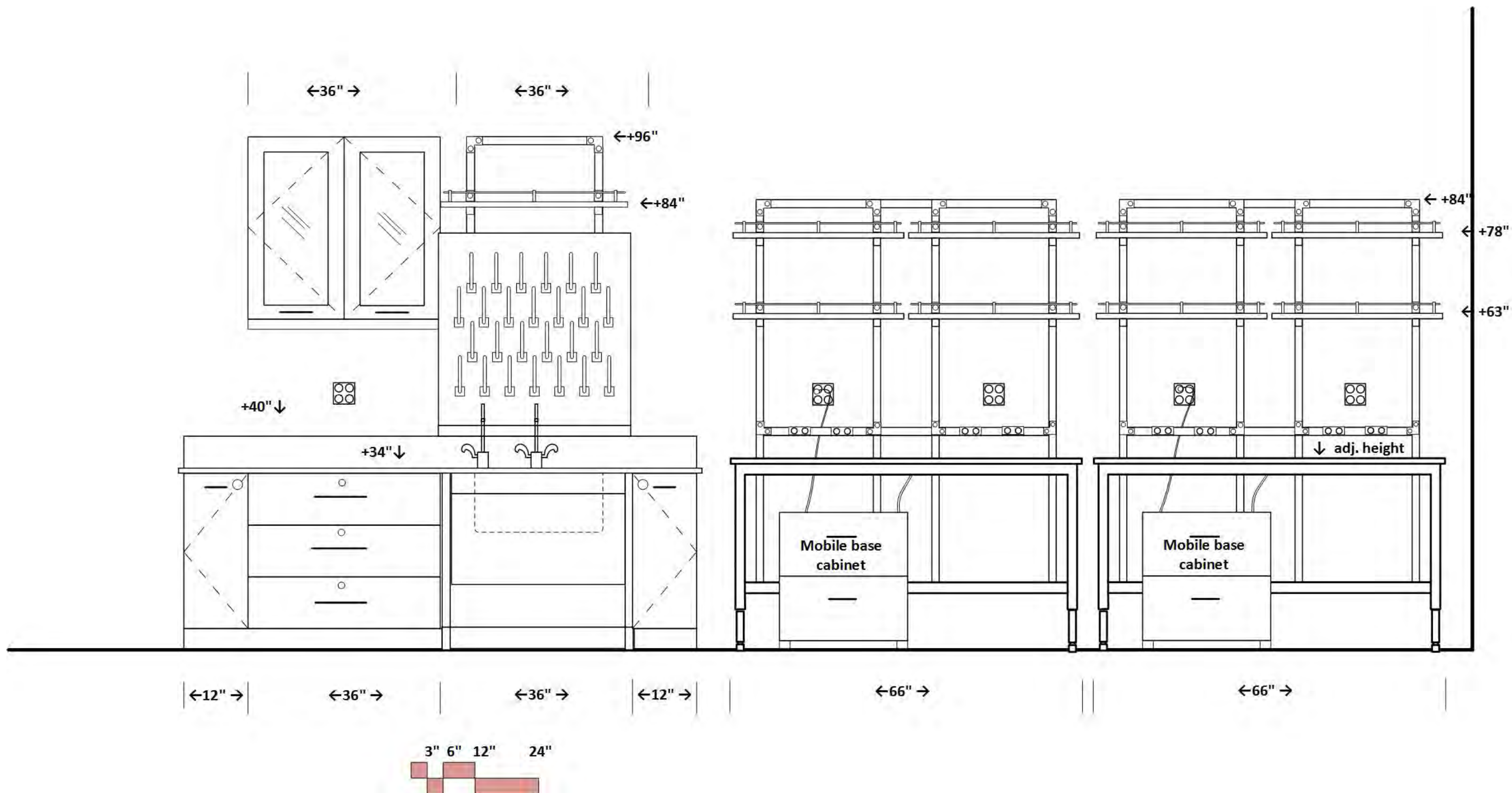
←36" →

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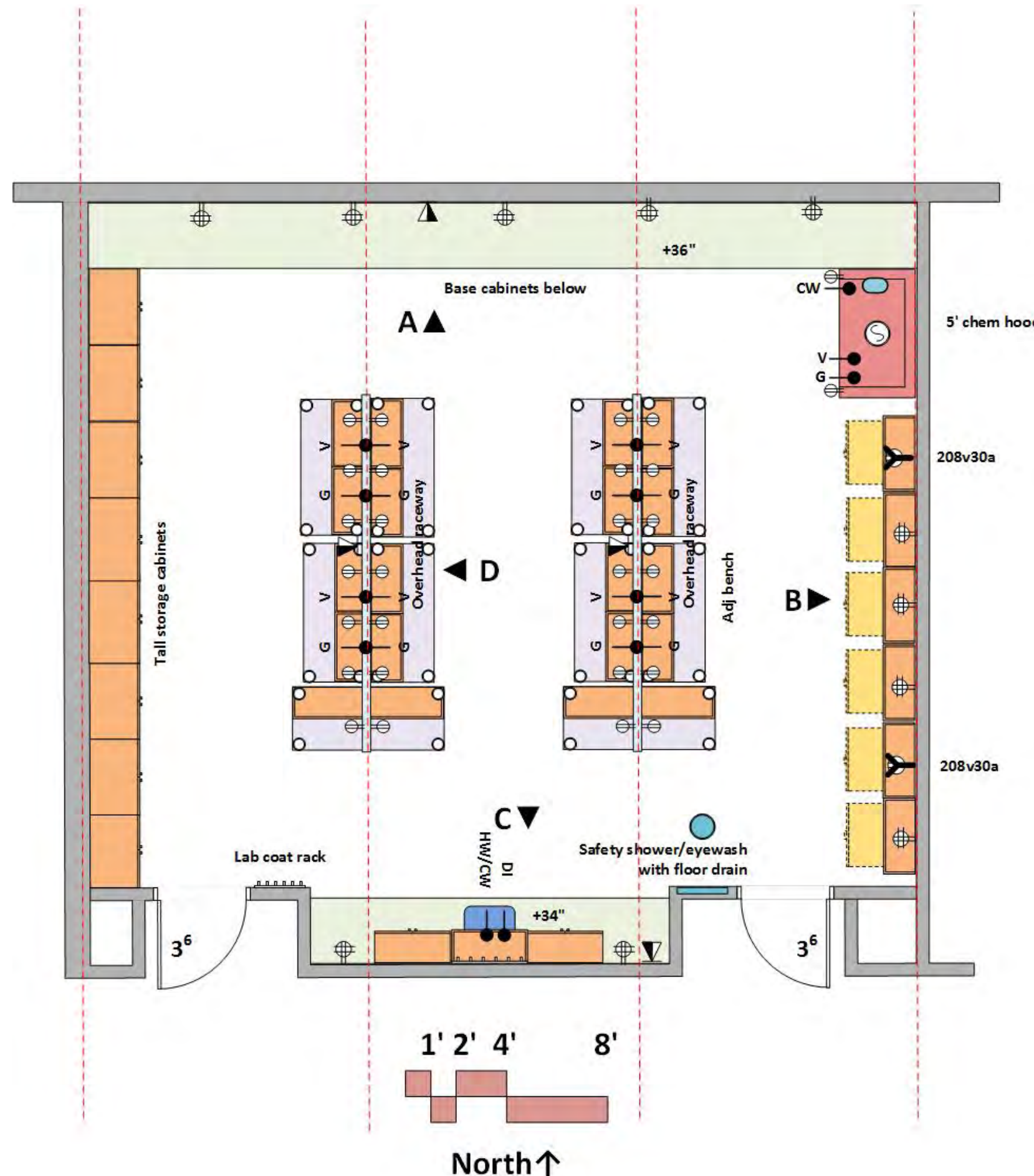
TEACHING LAB SUPPORT
Chem Stock Room/Chem Waste Room
Elevation C



TEACHING LAB SUPPORT

Prep/Stage

1st Floor Center Wing- N.W. Corner



ARCHITECTURAL

Occupancy: B
 Floor: vinyl tile
 Walls: gypsum board and enamel paint
 Ceiling: 9' cloud/open to structure
 Doors: 3⁶x8⁰ framed glass
 Windows: Existing to remain, if any
 Daylight attenuation: at exterior windows
 Acoustic Attenuation: NC 40 or less
 Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 6 am to 11 pm
 Temperature: 66-74 deg. F, +/- 2 deg. F
 100% exhaust- no recirculation of air
 (6) air changes per hour minimum occupied (air change rate may be higher due to equipment heat gain)
 (4) air changes per hour unoccupied
 Pressure: negative to corridor; Humidity: Ambient
 700 c.f.m. exhaust at each fume hood (VAV)
 Equipment Heat Gain: 50 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Stand-by power at equipment space
 208v power on stand-by
 Data & Wireless data
 Lighting: indirect LED @ 600 LUX
 Task lights below wall cabinets
 Provide light switches at door

PLUMBING

Hot/Cold water (HW/CW) at sinks with vacuum breakers
 Natural gas and vacuum
 DI water at sinks
 Domestic water and drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

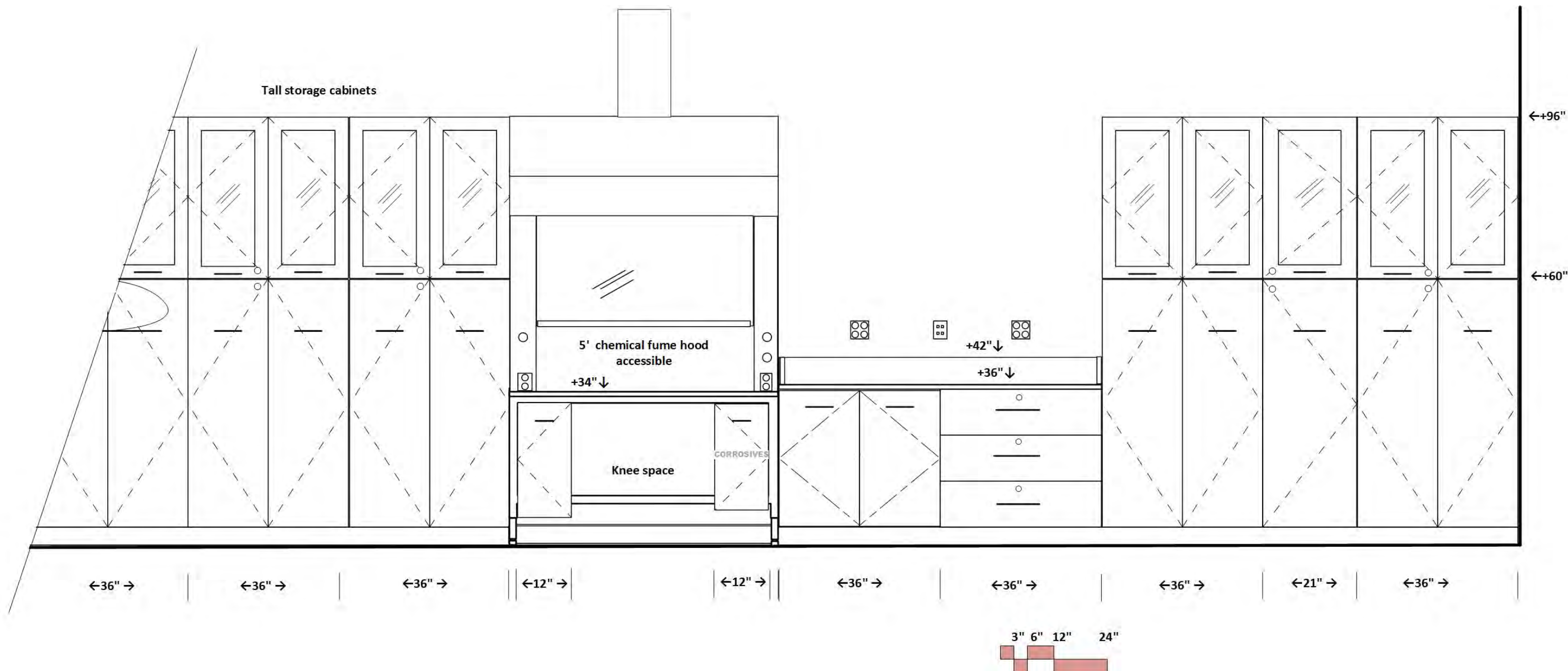
Wood casework - base cabinets, wall cabinets, tall cabinets
 Epoxy resin tops and sinks
 Faucets & fittings
 5' chemical fume hood
 Safety shower/eyewash
 Fire Extinguisher; coat rack
 Chemical storage cabinets

OWNER FURNISHED EQUIPMENT

Benchtop analytical instruments
 Carts
 Floor equipment- refrigerators/freezers

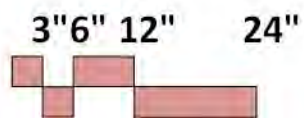
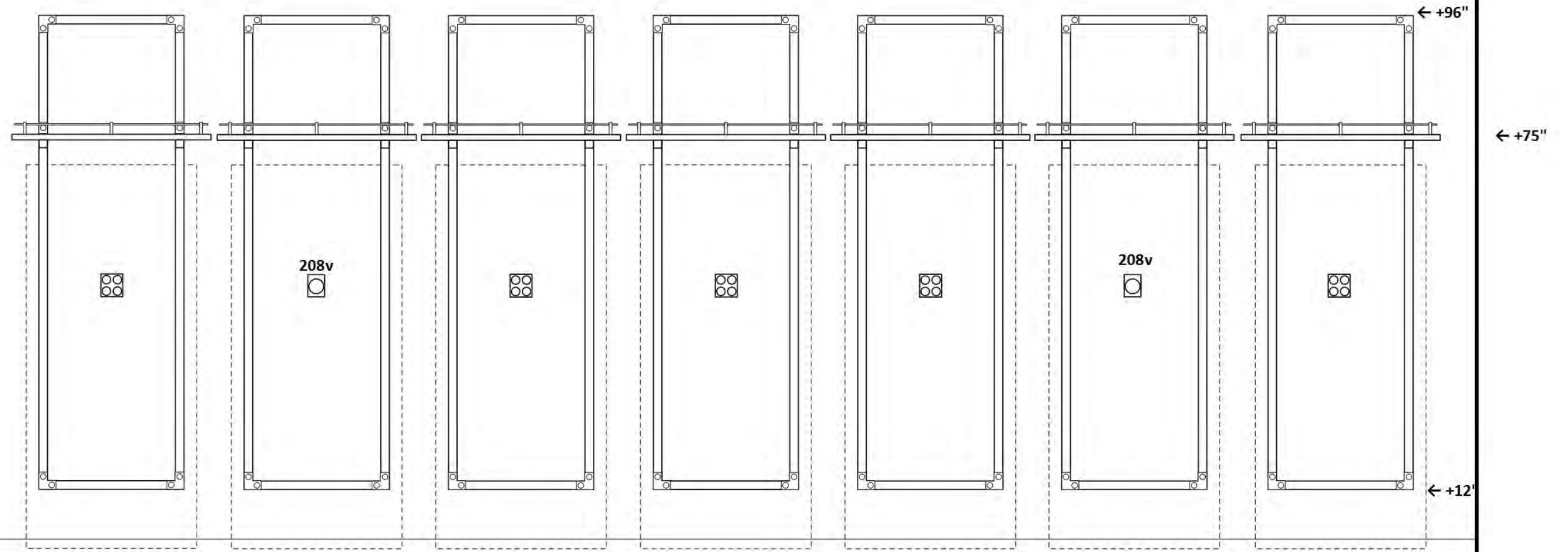
TEACHING LAB SUPPORT

Prep/Stage- Elevation A



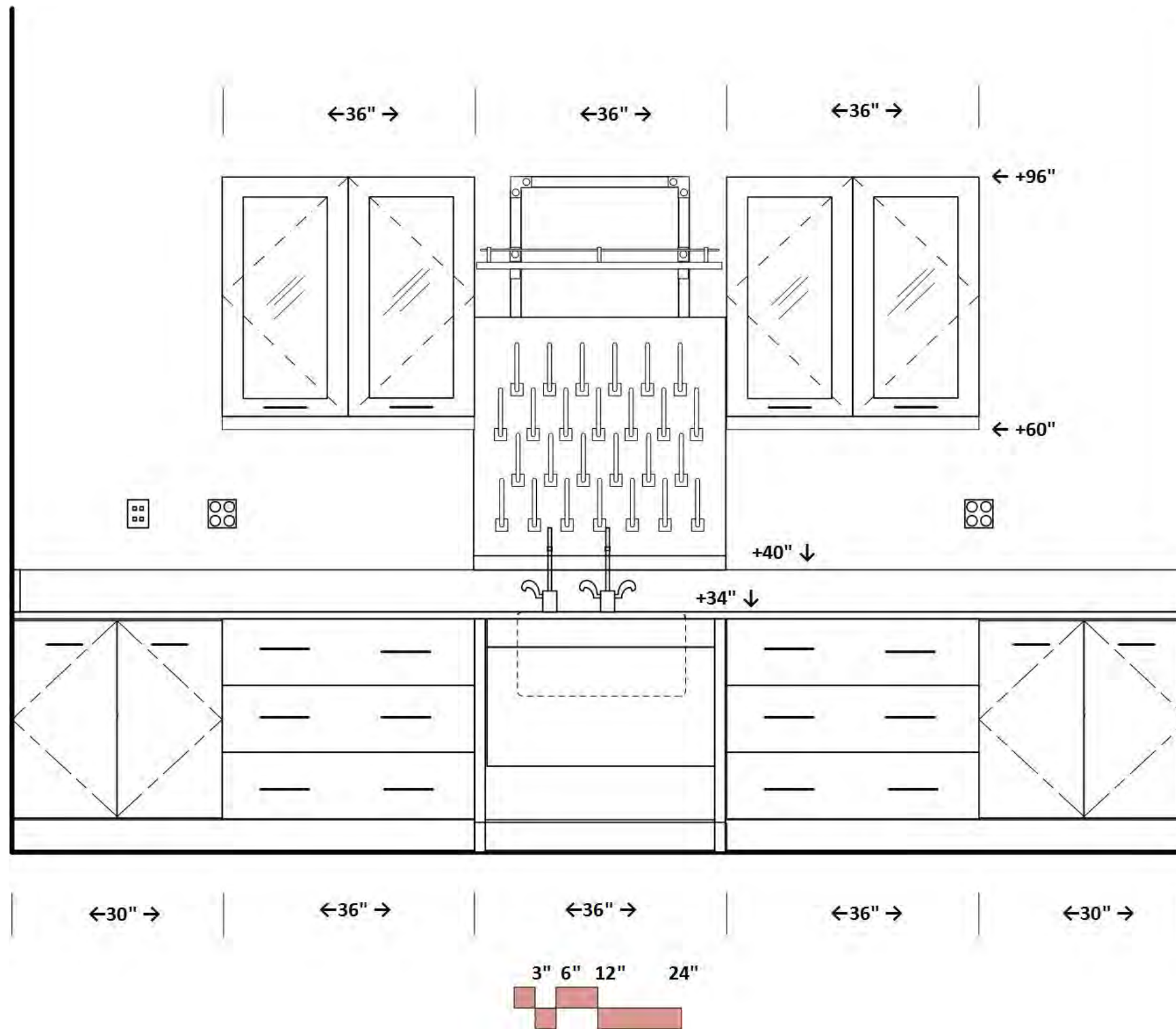
TEACHING LAB SUPPORT

Prep/Stage- Elevation B

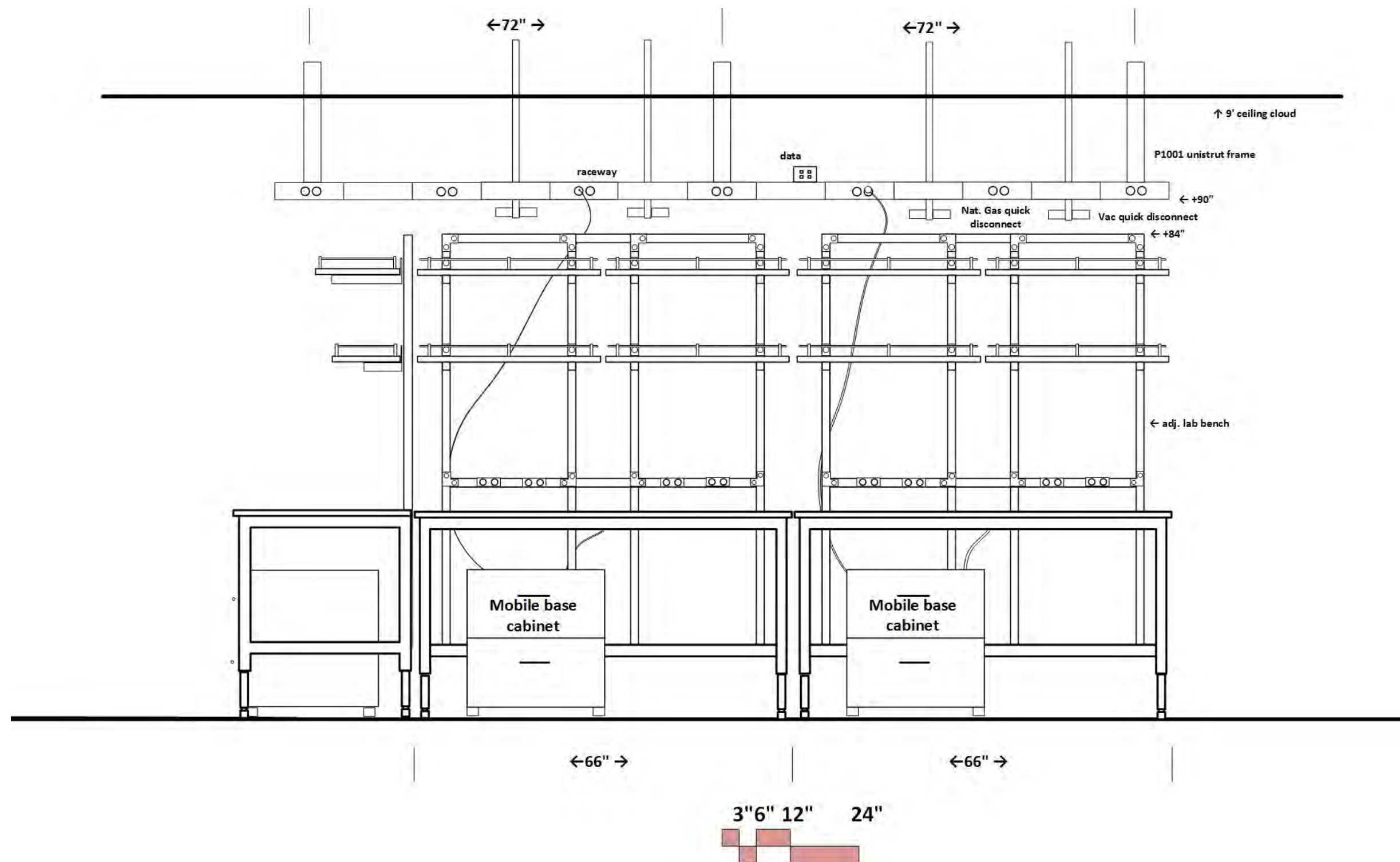


TEACHING LAB SUPPORT

Prep/Stage- Elevation C



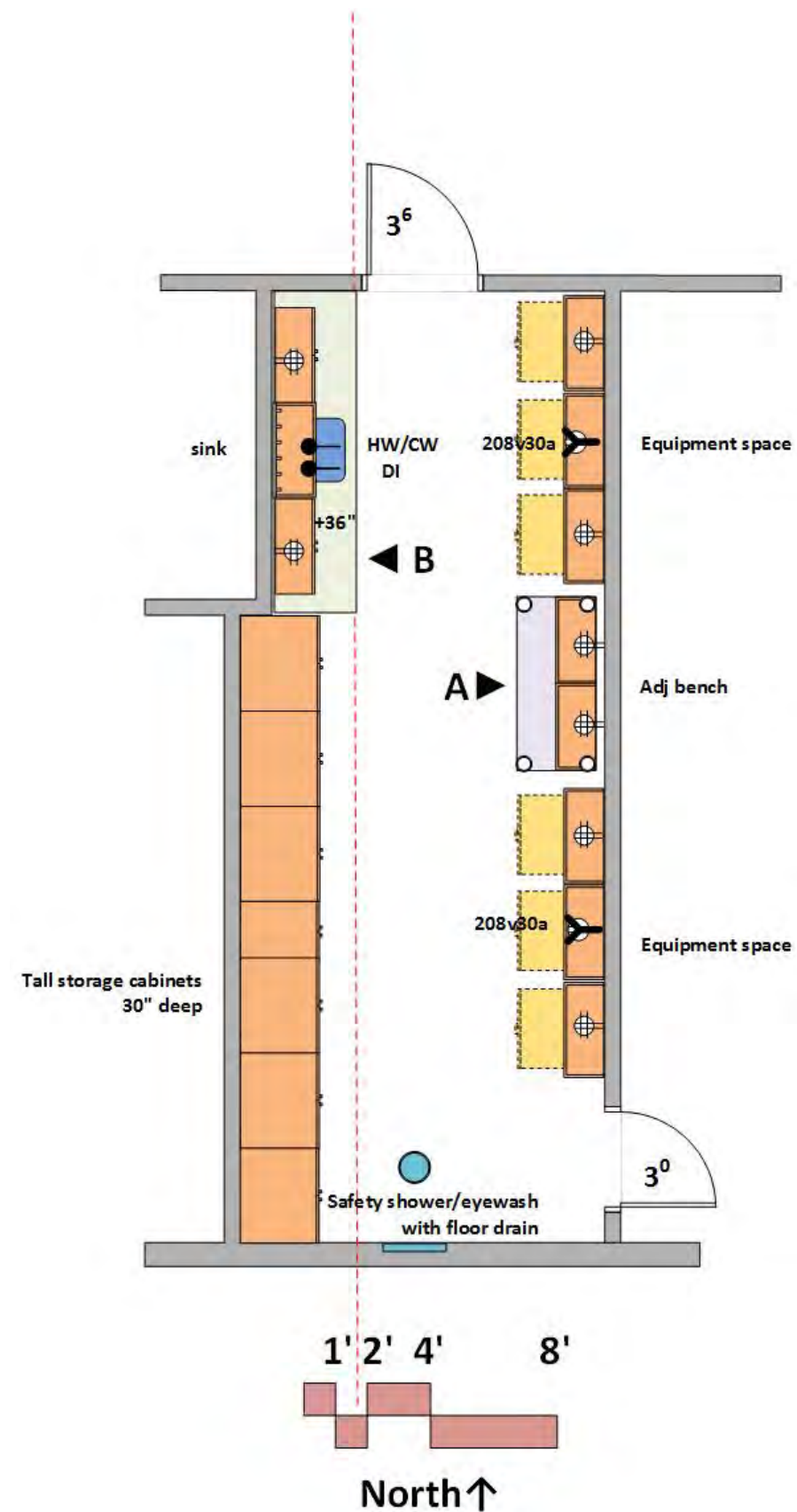
TEACHING LAB SUPPORT Prep/Stage- Elevation D



TEACHING LAB SUPPORT

Prep/Stage

1st Floor Center Wing- South side, center



ARCHITECTURAL

Occupancy: B
 Floor: vinyl tile
 Walls: gypsum board and enamel paint
 Ceiling: 9' cloud/open to structure
 Doors: 3⁶x8⁰ framed glass
 Windows: Existing to remain, if any
 Daylight attenuation: at exterior windows
 Acoustic Attenuation: NC 40 or less
 Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 6 am to 11 pm
 Temperature: 66-74 deg. F, +/- 2 deg. F
 100% exhaust- no recirculation of air
 (6) air changes per hour minimum occupied (air change rate may be higher due to equipment heat gain)
 (4) air changes per hour unoccupied
 Pressure: negative to corridor; Humidity: Ambient
 700 c.f.m. exhaust at each fume hood (VAV)
 Equipment Heat Gain: 50 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Stand-by power at equipment space
 208v power on stand-by
 Data & Wireless data
 Lighting: indirect LED @ 600 LUX
 Task lights below wall cabinets
 Provide light switches at door

PLUMBING

Hot/Cold water (HW/CW) at sinks with vacuum breakers
 Natural gas and vacuum
 DI water at sinks
 Domestic water and drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

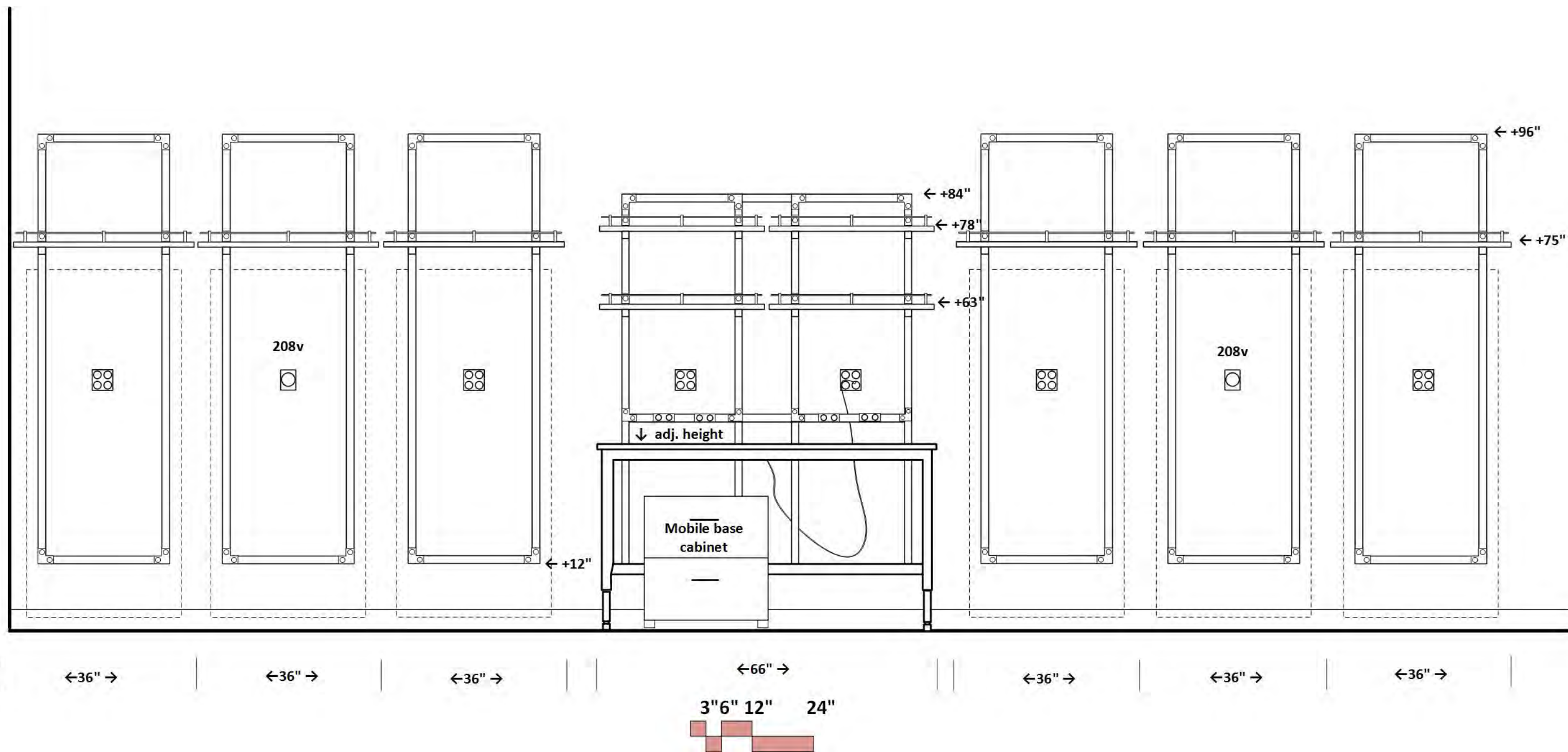
Wood casework - base cabinets, wall cabinets, tall cabinets
 Epoxy resin tops and sinks
 Faucets & fittings
 5' chemical fume hood
 Safety shower/eyewash
 Fire Extinguisher; coat rack
 Chemical storage cabinets

OWNER FURNISHED EQUIPMENT

Benchtop analytical instruments
 Carts
 Floor equipment- refrigerators/freezers

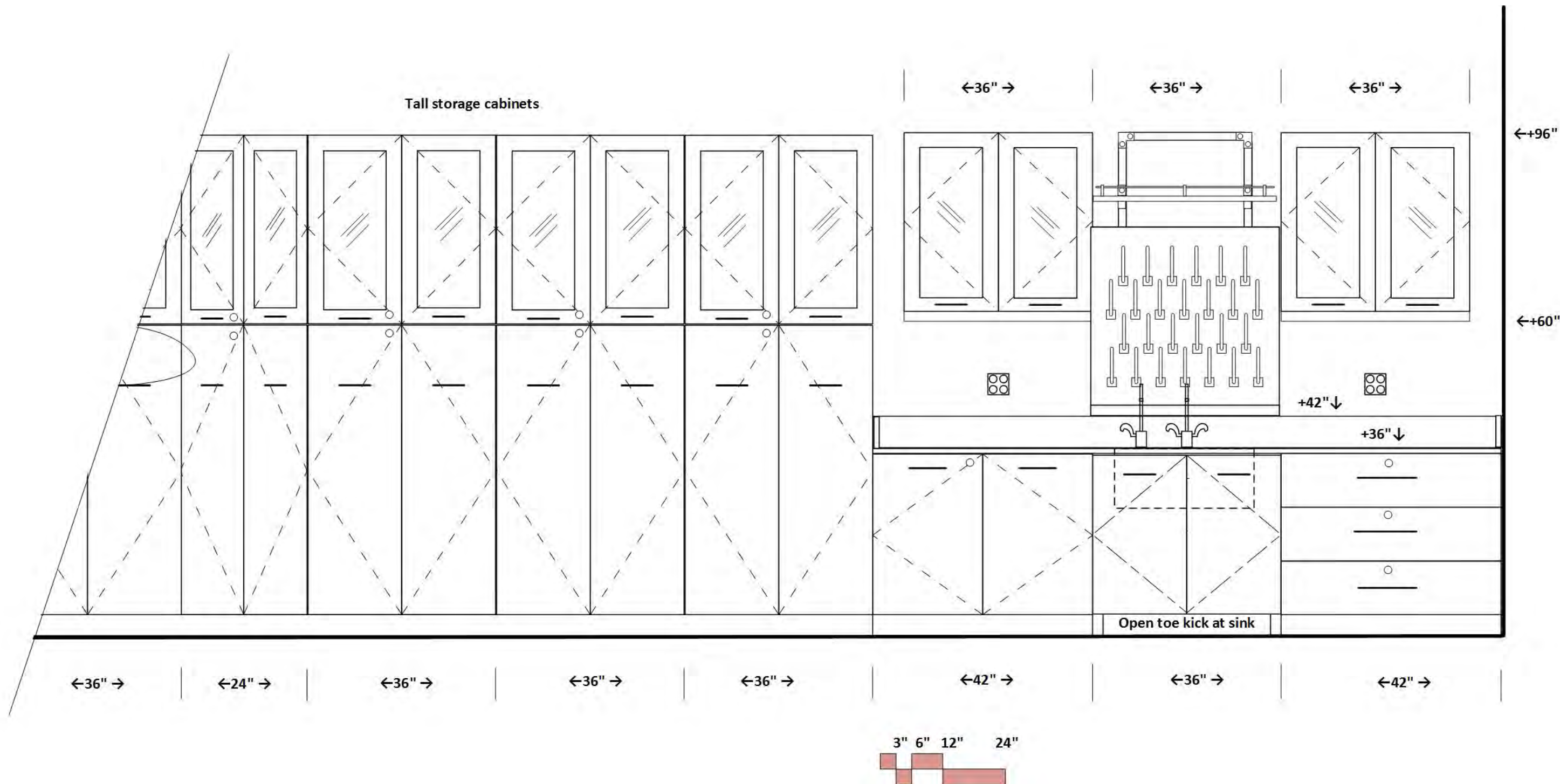
TEACHING LAB SUPPORT

Prep/Stage- Elevation A



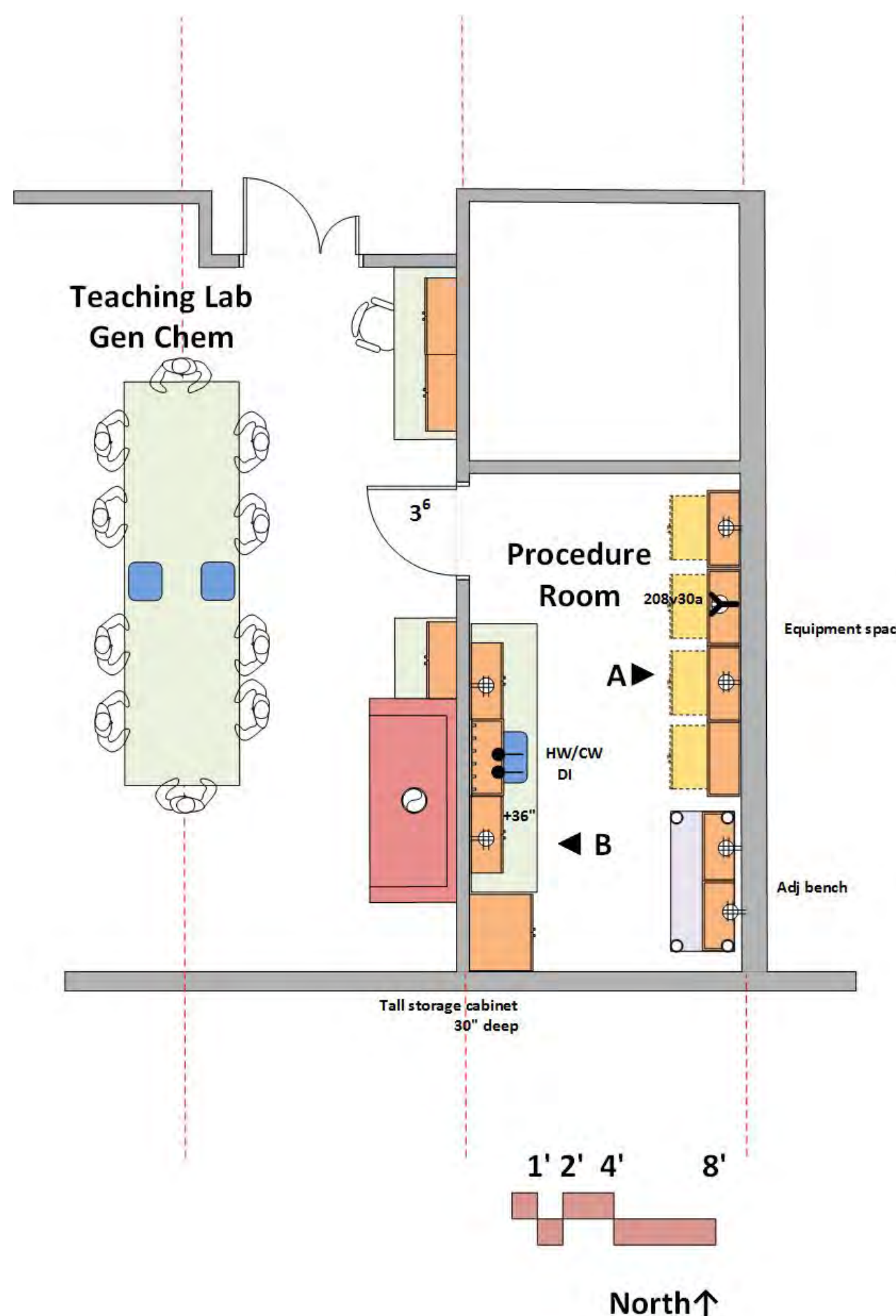
TEACHING LAB SUPPORT

Prep/Stage- Elevation B



TEACHING LAB SUPPORT Procedure Room

1st Floor Center Wing- East Side



ARCHITECTURAL

Occupancy: B
 Floor: vinyl tile
 Walls: gypsum board and enamel paint
 Ceiling: 9' cloud/open to structure
 Doors: 3⁶x8⁰ framed glass
 Windows: Existing to remain, if any
 Daylight attenuation: at exterior windows
 Acoustic Attenuation: NC 40 or less
 Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 6 am to 11 pm
 Temperature: 66-74 deg. F, +/- 2 deg. F
 100% exhaust- no recirculation of air
 (6) air changes per hour minimum occupied (air change rate may be higher due to equipment heat gain)
 (4) air changes per hour unoccupied
 Pressure: negative to corridor; Humidity: Ambient
 700 c.f.m. exhaust at each fume hood (VAV)
 Equipment Heat Gain: 50 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
 Stand-by power at equipment space
 208v power on stand-by
 Data & Wireless data
 Lighting: indirect LED @ 600 LUX
 Task lights below wall cabinets
 Provide light switches at door

PLUMBING

Hot/Cold water (HW/CW) at sinks with vacuum breakers
 Natural gas and vacuum
 DI water at sinks
 Domestic water and drain at safety shower/eyewash

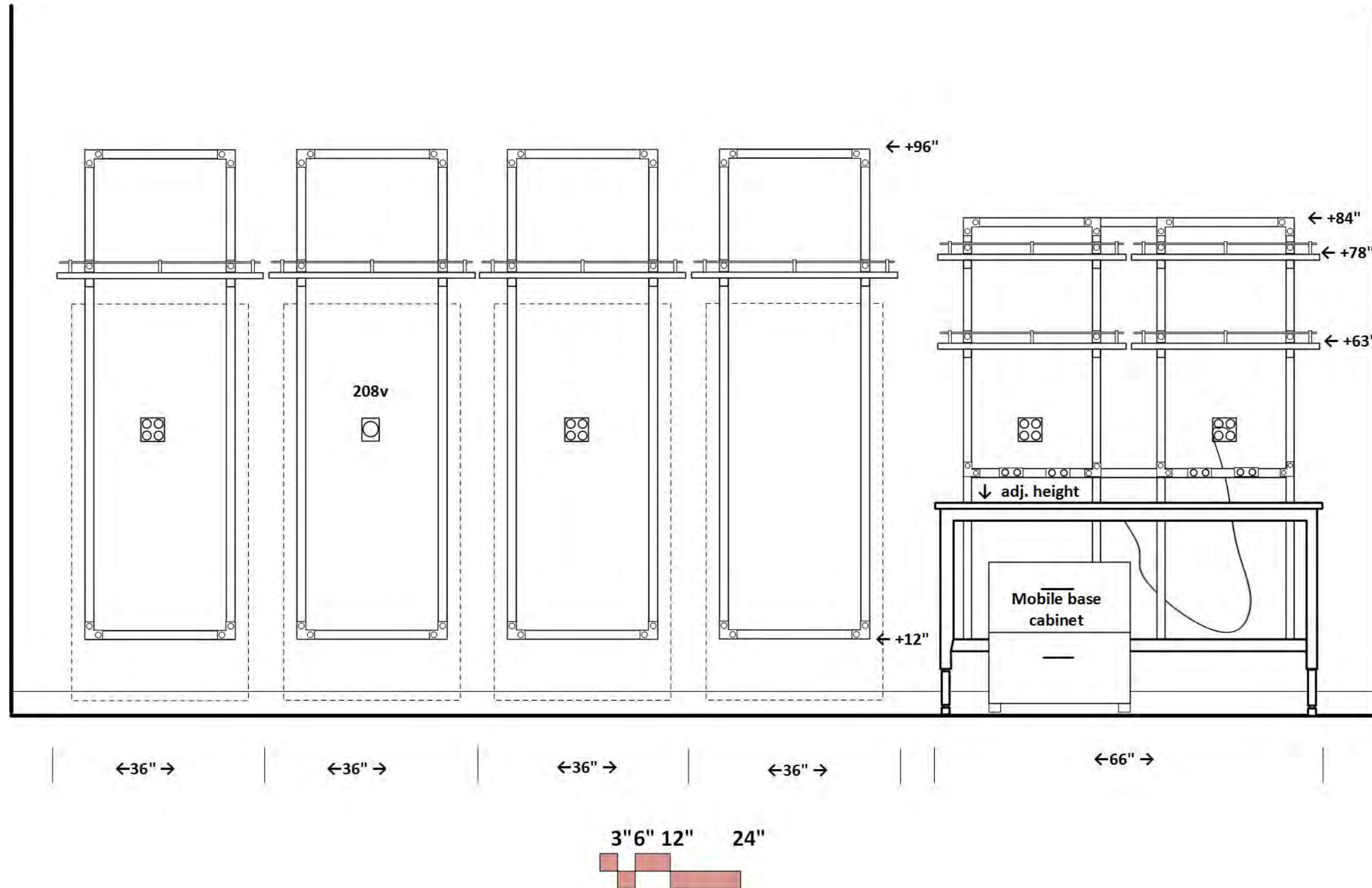
CONTRACTOR FURNISHED EQUIPMENT

Wood casework - base cabinets, wall cabinets, tall cabinets
 Epoxy resin tops and sinks
 Faucets & fittings
 5' chemical fume hood
 Safety shower/eyewash
 Fire Extinguisher; coat rack
 Chemical storage cabinets

OWNER FURNISHED EQUIPMENT

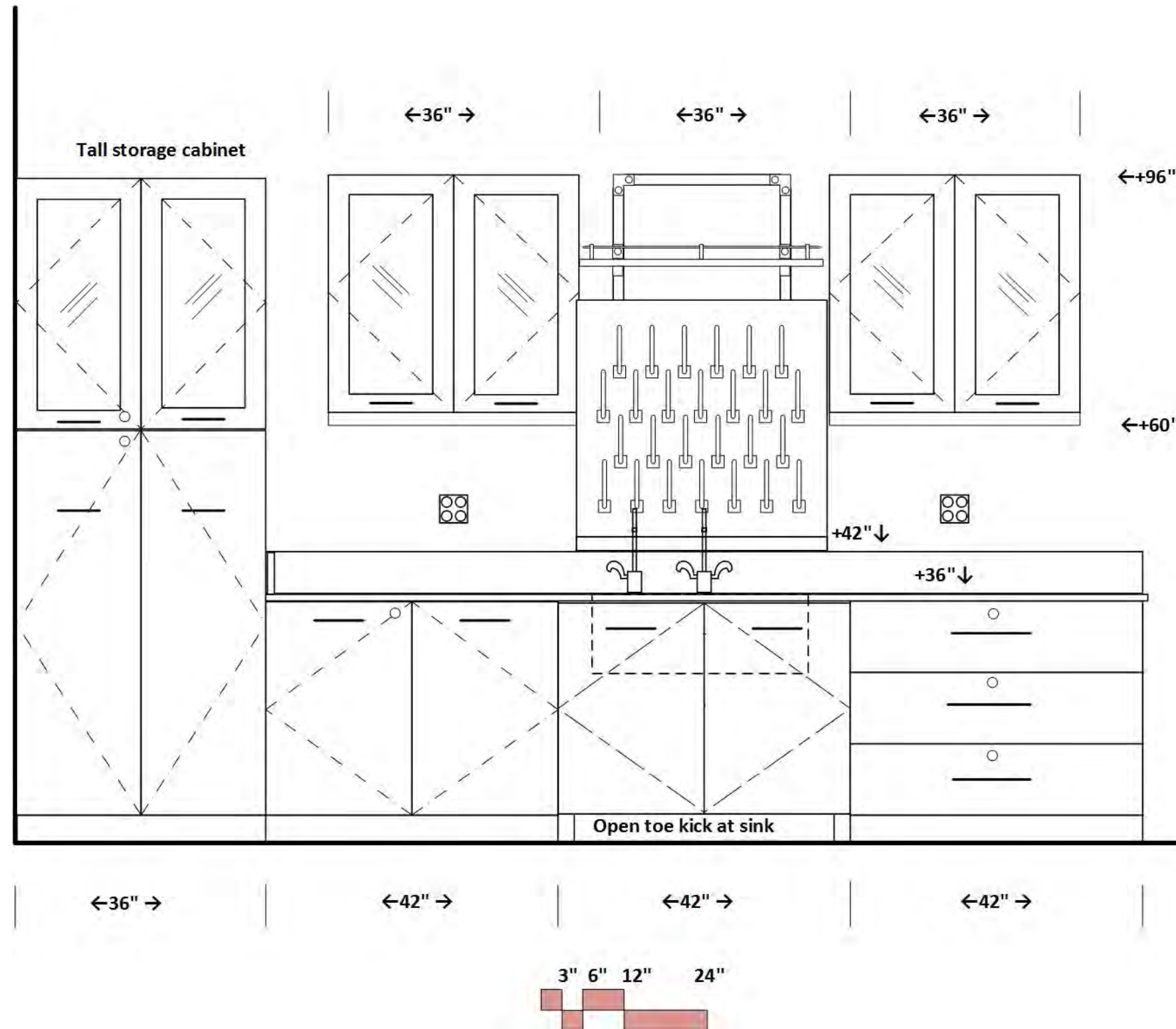
Benchtop analytical instruments
 Carts
 Floor equipment- refrigerators/freezers

TEACHING LAB SUPPORT Procedure Room- Elevation A



TEACHING LAB SUPPORT

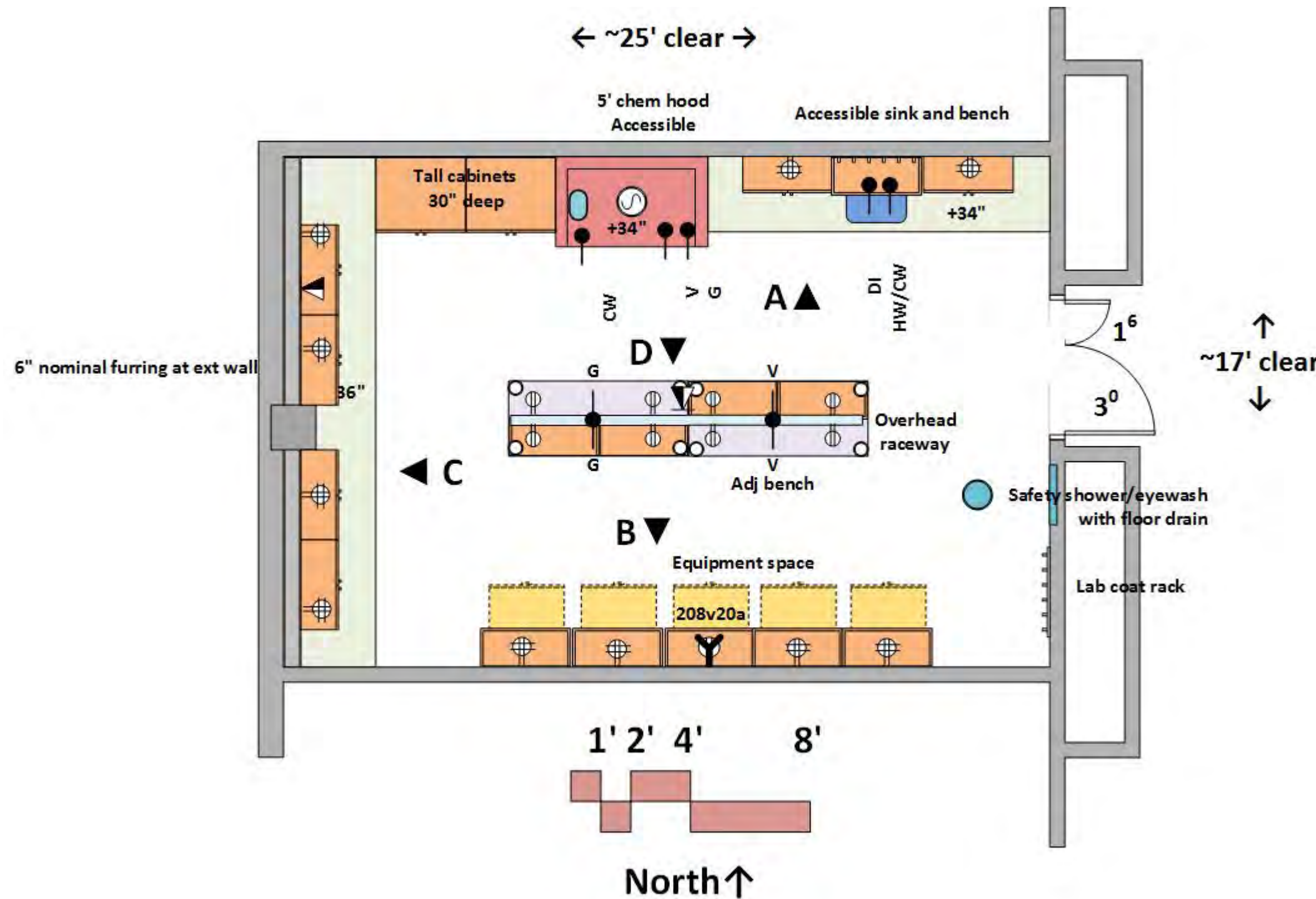
Procedure Room- Elevation B



TEACHING LAB SUPPORT

Prep/Stage

1st Floor North Wing; 2nd Floor North Wing
Similar for 4 rooms



ARCHITECTURAL

Occupancy: B
Floor: vinyl tile
Walls: gypsum board and enamel paint
Ceiling: 9' cloud/open to structure
Doors: 3'x8' framed glass
Windows: Existing to remain, if any
Daylight attenuation: at exterior windows
Acoustic Attenuation: NC 40 or less
Security: key or card reader access

STRUCTURAL

Vibration attenuation: existing structure

MECHANICAL

Hours of operation: 6 am to 11 pm
Temperature: 66-74 deg. F, +/- 2 deg. F
100% exhaust- no recirculation of air
(6) air changes per hour minimum occupied (air change rate may be higher due to equipment heat gain)
(4) air changes per hour unoccupied
Pressure: negative to corridor; Humidity: Ambient
700 c.f.m. exhaust at each fume hood (VAV)
Equipment Heat Gain: 50 btuh/sf

ELECTRICAL

110v fourplex and duplex outlets (maximum of four duplex per circuit)
Stand-by power at equipment space
208v power on stand-by
Data & Wireless data
Lighting: indirect LED @ 600 LUX; Task lights below wall cabinets
Provide light switches at door

PLUMBING

Hot/Cold water (HW/CW) at sinks with vacuum breakers
Natural gas and vacuum
DI water at sink
Domestic water and drain at safety shower/eyewash

CONTRACTOR FURNISHED EQUIPMENT

Wood casework - base cabinets, wall cabinets, tall cabinets
Epoxy resin tops and sinks
Faucets & fittings
5' chemical fume hood
Safety shower/eyewash
Fire Extinguisher; coat rack
Chemical storage cabinets

OWNER FURNISHED EQUIPMENT

Benchtop analytical instruments; Carts
Floor equipment- refrigerators/freezers

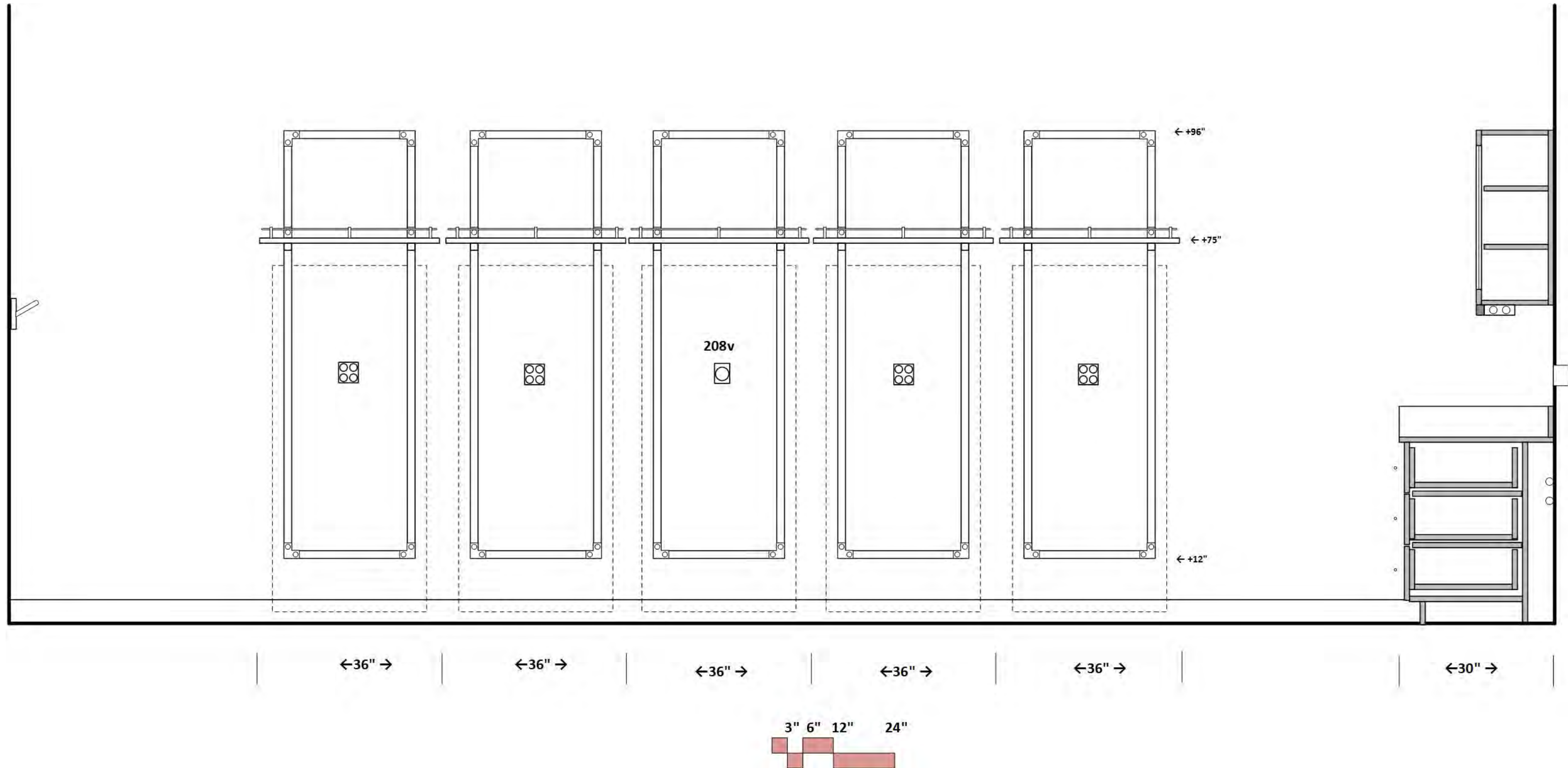
TEACHING LAB SUPPORT

Prep/Stage- Elevation A



TEACHING LAB SUPPORT

Prep/Stage- Elevation B



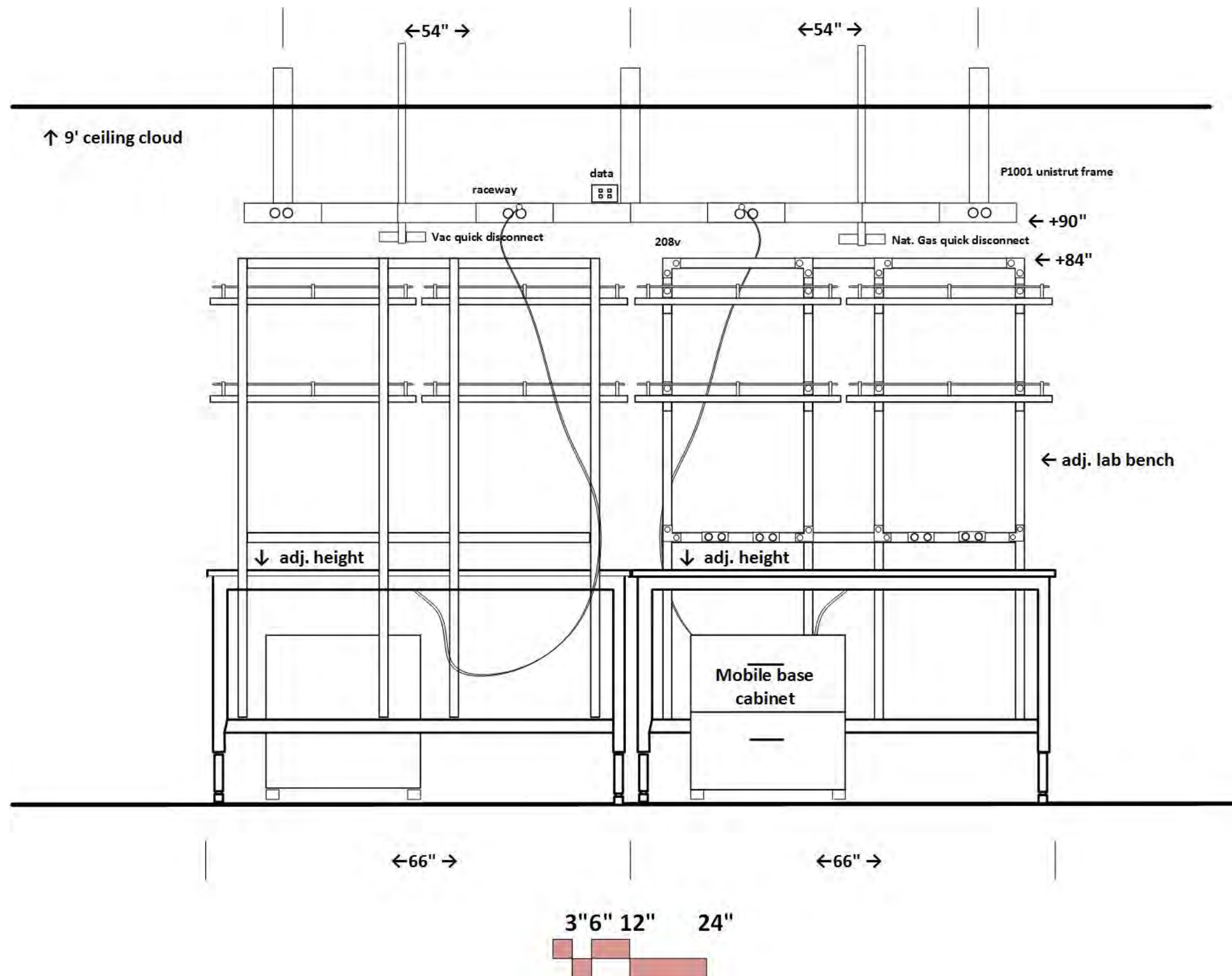
TEACHING LAB SUPPORT

Prep/Stage- Elevation C



TEACHING LAB SUPPORT

Prep/Stage- Elevation D



Fume Hood Cut Sheet

All fume hoods VAV

Protector® XStream® Laboratory Hoods



Protector XStream Laboratory Hood 9840600 is shown with SpillStopper Work Surface 9849800, Protector Acid Storage Cabinet 9901100 and Protector Standard Storage Cabinet 9900100. Blower, ductwork, work surface and base cabinets must be ordered separately.

All models conform to the following regulations and standards:

- SEFA 1-2002
- NFPA 45-2000
- ASTM E84-01
- ASHRAE 110-95
- ANSI Z9.5-1993
- UL 3101-1/61010-1
- CAN/CSA C22.2 No. 1010.1
- UL 1805
- CE Conformity Marking (230 volt models)†

Fixed models feature:

- Two pre-plumbed service fixtures with forged brass valves, lower right side with brass tubing for gas and lower left side with copper tubing for cold water. Components for converting either or both fixtures to air and vacuum are provided. **Inlet tubing is not provided.**
- One pre-wired 115 volt, 20 amp electrical duplex receptacle on lower right side.

All models require (not included):

- **Remote Blower.** See back pocket.
- **Ductwork.** See back pocket.
- **Work Surface.** See pages 92-95.
- **Base Cabinet or Stand.** See pages 96-106.

Optional accessories for on-site installation include:

- **Service Fixture Kits.** See page 107.
- **Electrical Duplex Kits.** See page 108.
- **Guardian Jr. and Digital Airflow Monitor Kits.** See page 108.
- **Distillation Grid Kits.** See page 110.
- **Sash Stop Kits.** See page 108.
- **Snuffer Fire Extinguishers.** See page 110.
- **Ceiling Enclosure and Rear Finish Panel Kits.** See page 109.

* U.S. Patent No. 6,461,233

† pending

⚠ Heights of switches, electrical receptacle and service fixtures meet requirements of ADA.

⚠ Exclusive Feature

- Removable front and side panels and front and interior service access panels for access to plumbing and electrical wiring.
- Pre-wired T8 fluorescent lighting, ADA-compliant light and blower switches for 115 volt, 60 Hz operation.
- Sash stop located at 18" sash opening position.
- Epoxy-coated stainless steel, 12.81" ID exhaust connection(s).

Contact Labconco at **800-821-5525** or **816-333-8811** for ordering information on explosion-proof lighting and other sash configurations and for blower sizing assistance.

Ordering Information

Protector® XStream® Laboratory Hoods

ASHRAE 110-95 tests show less than 0.05 ppm leak rate when tested at 4.0 fpm; at OSHA-approved 60, 80, and 100 fpm face velocity and sash positions of 18" and 28". To ensure performance at 60 fpm, Labconco engineers challenged the Protector XStream Hood at less

than ideal conditions such as 30 fpm cross drafts, modified ASHRAE test procedures and average face velocities lower than 60 fpm. Contact Labconco for a technical paper with complete ASHRAE test data.

Total Exhaust CFM and Static Pressure @ 18" Sash Opening (60% open)

Nominal Width	100 fpm	s.p.	80 fpm	s.p.	60 fpm	s.p.	CFM Savings at 60 fpm vs. 100 fpm	Total Average Annual Dollar Savings at 60 fpm vs. 100 fpm*
4 feet	470	0.11"	380	0.07"	280	0.04"	190	\$760
5 feet	610	0.13"	490	0.08"	370	0.05"	240	\$960
6 feet	750	0.15"	600	0.10"	450	0.06"	300	\$1200
8 feet	1060	0.12"	850	0.08"	640	0.04"	420	\$1680

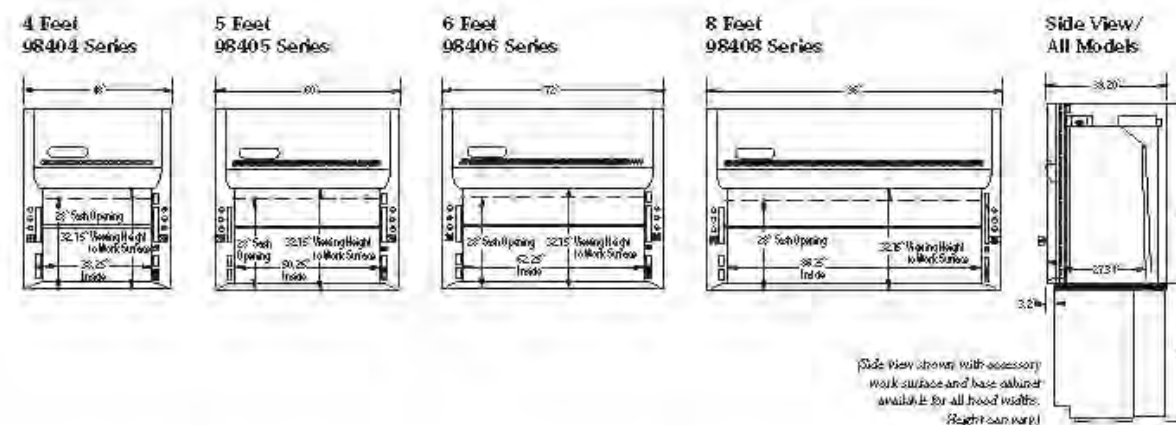
Total Exhaust CFM and Static Pressure @ 28" Sash Opening (100% open)

Nominal Width	100 fpm	s.p.	80 fpm	s.p.	60 fpm	s.p.	CFM Savings at 60 fpm vs. 100 fpm	Total Average Annual Dollar Savings at 60 fpm vs. 100 fpm*
4 feet	730	0.25"	590	0.18"	440	0.08"	290	\$1160
5 feet	960	0.30"	770	0.19"	580	0.11"	380	\$1520
6 feet	1180	0.36"	940	0.23"	710	0.13"	470	\$1880
8 feet	1660	0.28"	1330	0.18"	1000	0.10"	660	\$2640

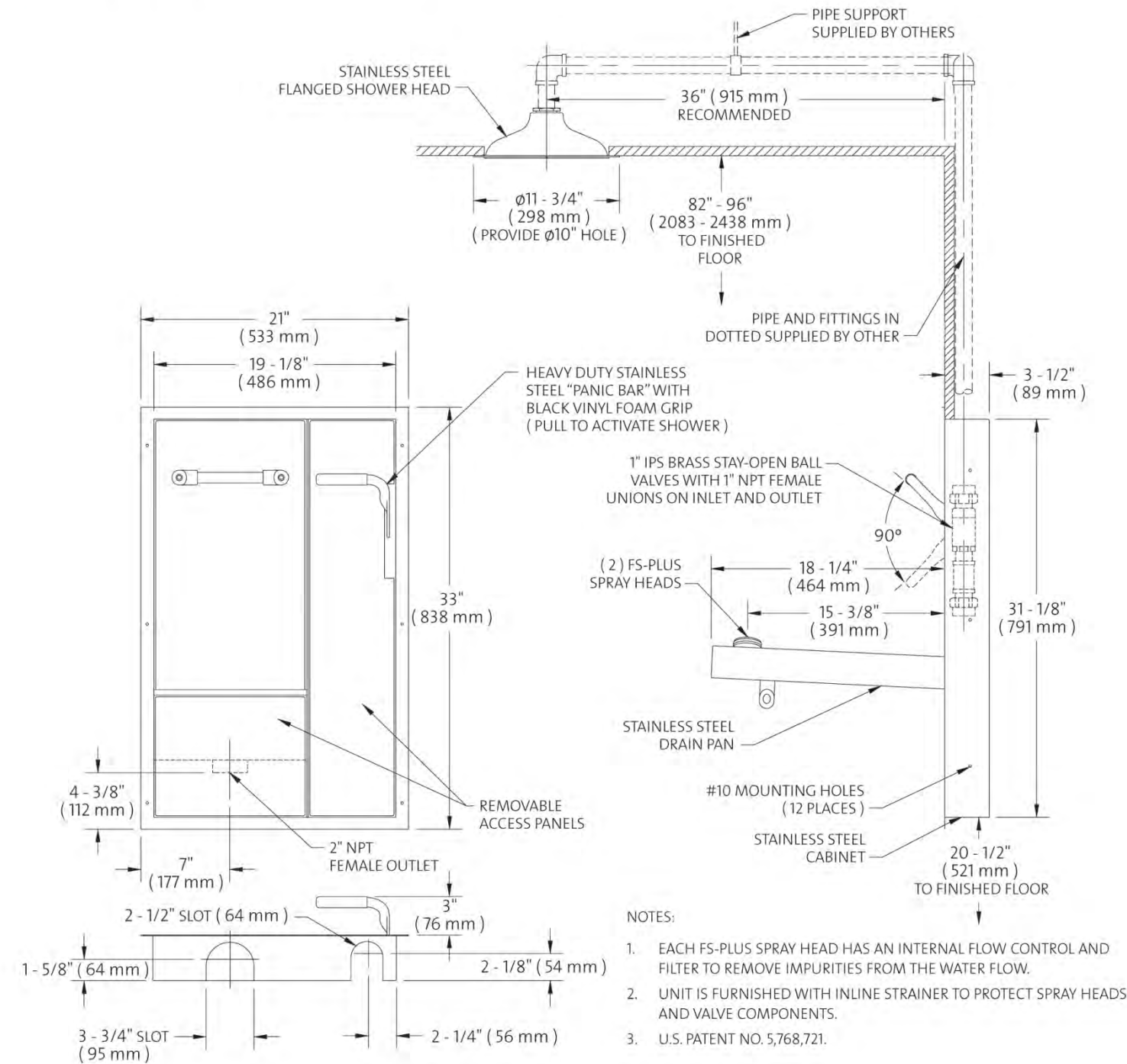
*Based on average annual dollar per CFM usage of \$4.00, fume hood operating 24 hours a day and 5 days per week (6240 hours per year).

Catalog Number	Nominal Width	Electrical Requirements	Exterior Depth	Interior Working Depth	Fluorescent Lamps	Service Fixtures	Electrical Duplex	Exhaust Collar(s)	Shipping Wt. lbs./kg
9840400	4 feet	115 volts, 60 Hz	39.20"	27.3"	(2) 25 watt	None	None	12.81" ID	400/181
9840401	4 feet	115 volts, 60 Hz	39.20"	27.3"	(2) 25 watt	2	1	12.81" ID	400/181
9840402**	4 feet	230 volts, 50 Hz	39.20"	27.3"	(2) 25 watt	None	None	12.81" ID	400/181
9840403**	4 feet	230 volts, 50 Hz	39.20"	27.3"	(2) 25 watt	2	None	12.81" ID	400/181
9840500	5 feet	115 volts, 60 Hz	39.20"	27.3"	(2) 32 watt	None	None	12.81" ID	460/209
9840501	5 feet	115 volts, 60 Hz	39.20"	27.3"	(2) 32 watt	2	1	12.81" ID	460/209
9840502**	5 feet	230 volts, 50 Hz	39.20"	27.3"	(2) 32 watt	None	None	12.81" ID	460/209
9840503**	5 feet	230 volts, 50 Hz	39.20"	27.3"	(2) 32 watt	2	None	12.81" ID	460/209
9840600	6 feet	115 volts, 60 Hz	39.20"	27.3"	(2) 32 watt	None	None	12.81" ID	520/236
9840601	6 feet	115 volts, 60 Hz	39.20"	27.3"	(2) 32 watt	2	1	12.81" ID	520/236
9840602**	6 feet	230 volts, 50 Hz	39.20"	27.3"	(2) 32 watt	None	None	12.81" ID	520/236
9840603**	6 feet	230 volts, 50 Hz	39.20"	27.3"	(2) 32 watt	2	None	12.81" ID	520/236
9840800	8 feet	115 volts, 60 Hz	39.20"	27.3"	(4) 25 watt	None	None	(2) 12.81" ID	700/318
9840801	8 feet	115 volts, 60 Hz	39.20"	27.3"	(4) 25 watt	2	1	(2) 12.81" ID	700/318
9840802**	8 feet	230 volts, 50 Hz	39.20"	27.3"	(4) 25 watt	None	None	(2) 12.81" ID	700/318
9840803**	8 feet	230 volts, 50 Hz	39.20"	27.3"	(4) 25 watt	2	None	(2) 12.81" ID	700/318

**International electrical configuration



- **SSBF2160** Recessed Safety Station with Drain Pan, Stainless Steel Shower Head
- **SSBF2162** Recessed Safety Station with Drain Pan and Daylight Drain, Stainless Steel Shower Head

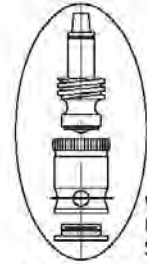
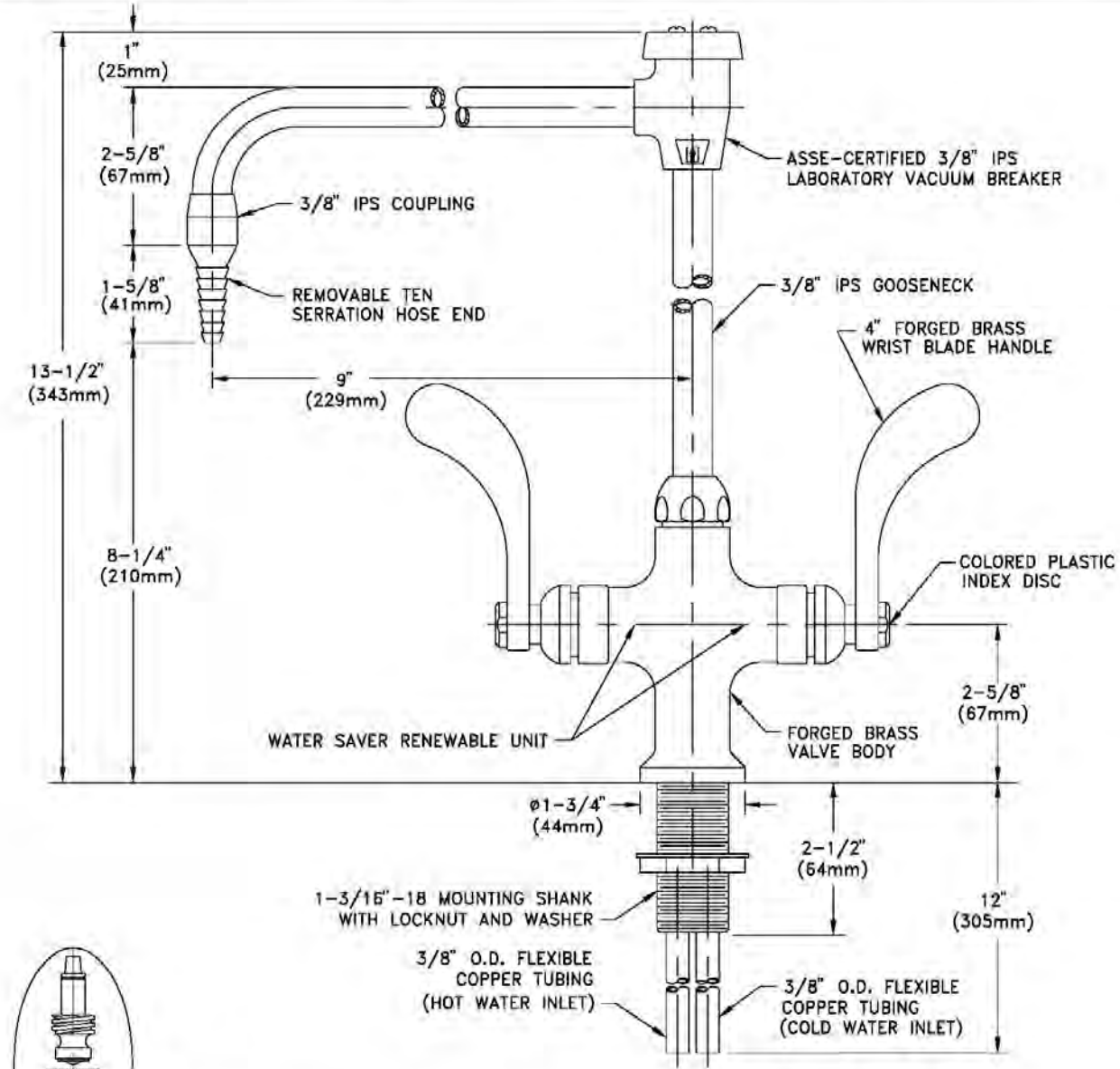


COLORTECH

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

Laboratory Service Fixtures by
WaterSaver Faucet Co.

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: _____

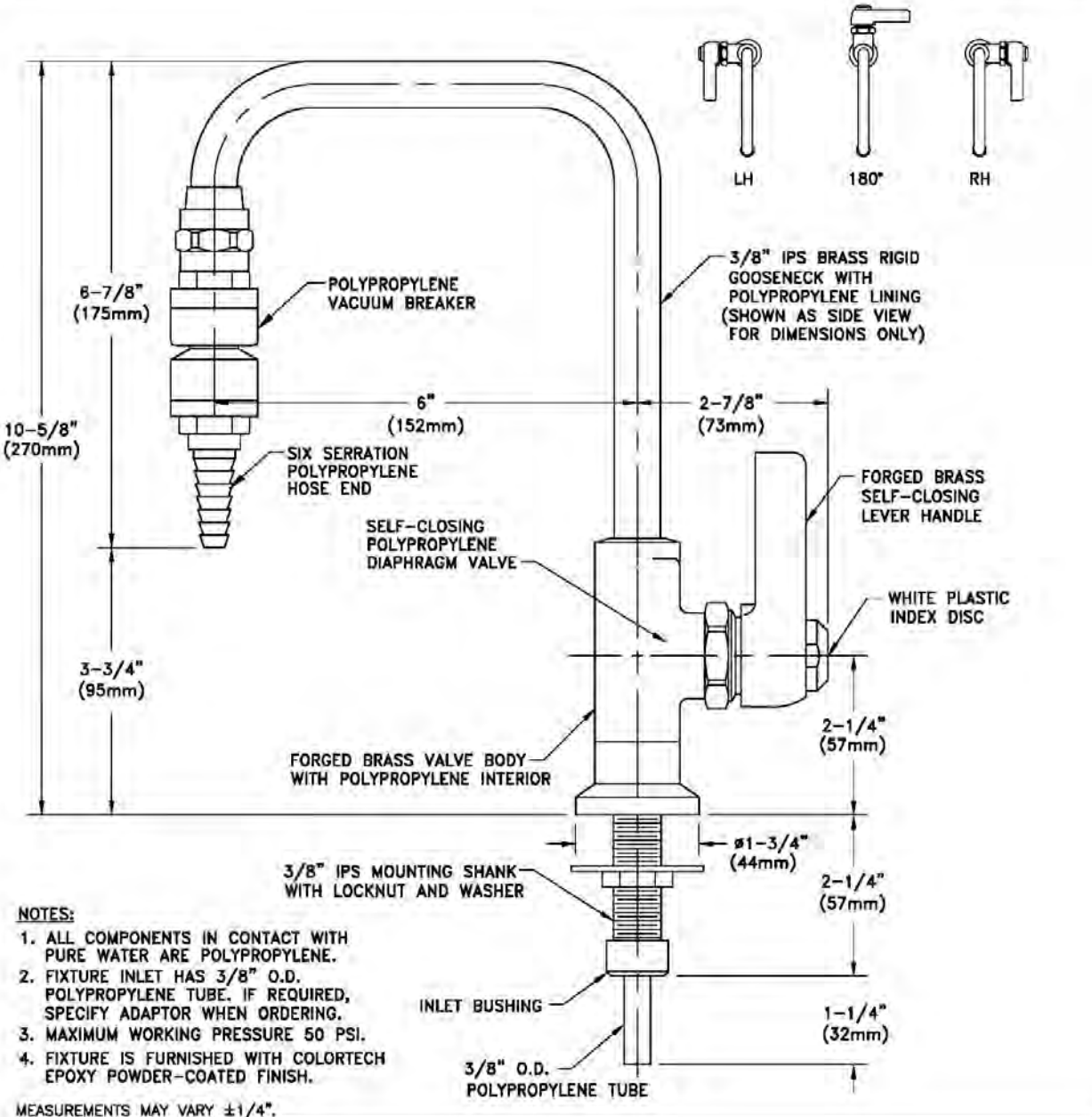
Revision Number: 031803-KJS

COLORTECH

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

Laboratory Service Fixtures by
WaterSaver Faucet Co.

CT7853SC-7110-LE
DECK MOUNTED FIXTURE FOR DISTILLED, DEIONIZED AND ULTRA-PURE WATER WITH ALL-POLYPROPYLENE INTERIOR LINING, 6" RIGID GOOSENECK, SELF-CLOSING OPERATION, POLYPROPYLENE VACUUM BREAKER AND LEVER HANDLE



- NOTES:**
1. ALL COMPONENTS IN CONTACT WITH PURE WATER ARE POLYPROPYLENE.
 2. FIXTURE INLET HAS 3/8" O.D. POLYPROPYLENE TUBE. IF REQUIRED, SPECIFY ADAPTOR WHEN ORDERING.
 3. MAXIMUM WORKING PRESSURE 50 PSI.
 4. FIXTURE IS FURNISHED WITH COLORTECH EPOXY POWDER-COATED FINISH.
- MEASUREMENTS MAY VARY ±1/4".

Drawing Number: _____ Revision Number: **090497-WK**



PRODUCT DIMENSIONS

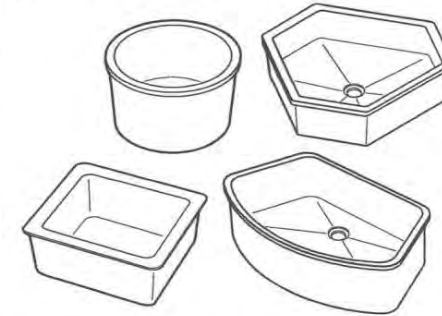
DOMESTIC SIZES

Sink Cut Sheet

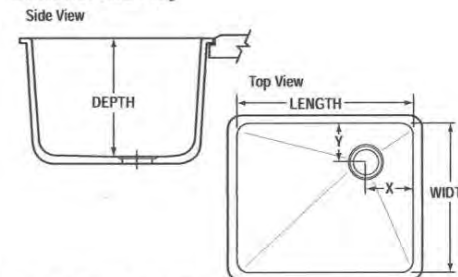
Standard Dropln® Sinks

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
D24(C)	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	

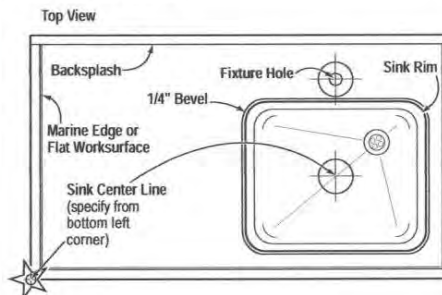
Dropln® Sink Styles



Dimensions Key



Installation Detail

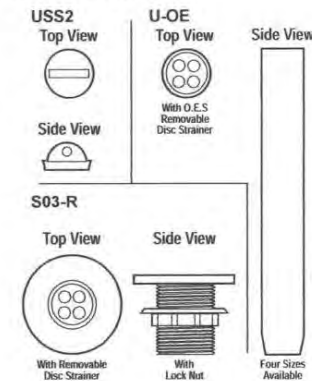


Special Order Dropln® Sinks

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	4.75	8.0
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*	End	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 they are Special Order Sinks, available as noted:
 * Available only from Taylor, TX, plant (colors: Black Ornyx, Gray, Graphite, Tan, Forest Green and Steel Blue).
 ** Available only from Canton, MI, plant (colors: Black Ornyx, Gray and Alpine White)
 ♿ ADA compliant sinks are designated by this symbol.
 All Dimensions are nominal. Exterior dimensions vary by MFG location. Cutsheets available upon request.

Outlets & Accessories



Accessible sink:
A26: 18"Lx15"Wx5/11"D
 located at all accessible sink locations

Large Lab Sink:
D61: 30"Lx16"Wx17.8"D

Standard Lab Sink:
D68: 30"Lx16"Wx10"D

Chemistry Student Island Sink:
DRS12: 12" round x 7.8"D

WWW.DURCON.COM

206 Allison Drive • Taylor, TX 76754 • Phone: 512.595.8000 • Fax: 512.595.8400 • E-mail: sales@durcon.com

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Rev. 02/08

Gas/Vacuum Valve Cut Sheet

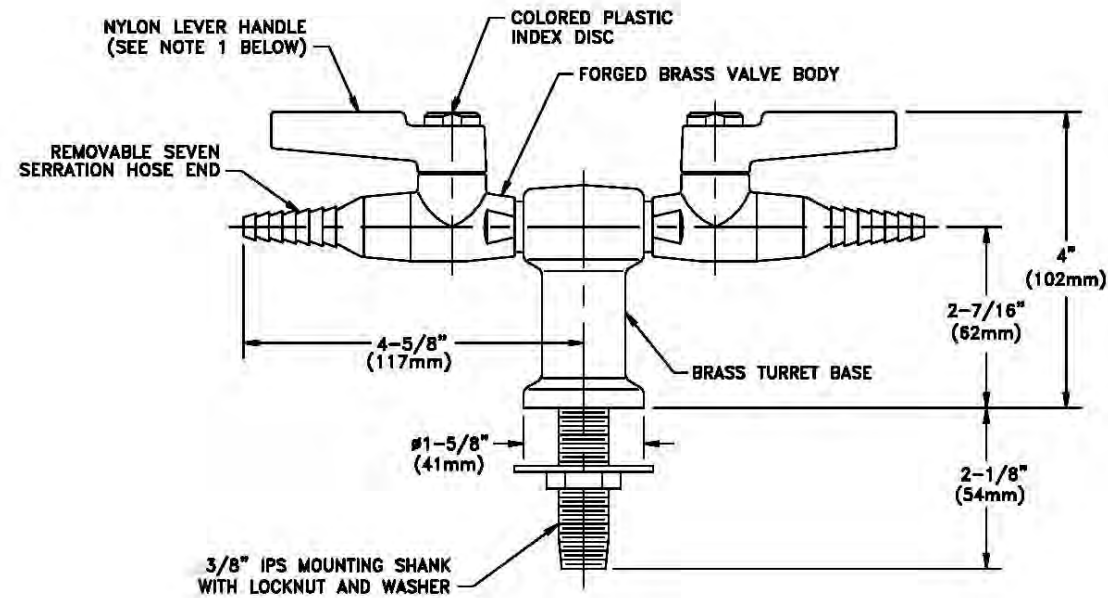
COLORTECH

Laboratory Service Fixtures by
WaterSaver Faucet Co.

CT4200-232SWSA

DECK MOUNTED TURRET BASE WITH TWO LABORATORY BALL VALVES AT 180° AND MOUNTING SHANK

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



Single Turret Valve at wall bench

Double Turret Valve at island bench or peninsula bench

NOTES:

1. VALVE IS FURNISHED WITH A BLACK NYLON LEVER HANDLE AS STANDARD. A COLORED NYLON HANDLE AND A CHROME PLATED FORGED BRASS HANDLE ARE ALSO AVAILABLE.
2. VALVE IS FACTORY ASSEMBLED AND TESTED AT 125 PSI. MAXIMUM WORKING PRESSURE IS 75 PSI.
3. VALVE IS CERTIFIED FOR GAS SERVICE BY CANADIAN STANDARDS ASSOCIATION UNDER STANDARD ANSI Z21.15-1997/CGA9.1-M97.
4. FIXTURE IS FURNISHED WITH COLORTECH WHITE POWDER-COATED FINISH.

MEASUREMENTS MAY VARY ±1/4".

Drawing Number: _____

Revision Number: 082406-SJP



Flexible Laboratory Fittings
Quick Connects - Bodies



QCBL Series Quick Connect Bodies

WaterSaver keyed quick connect fittings are designed specifically for laboratory applications. They are designed to provide maximum performance and durability for the life of the lab.

Features of WaterSaver keyed quick connect bodies include the following:

- Quick connect bodies are available in either polished chrome plated brass or Type 316 stainless steel.
- Bodies have an internal shut-off valve that closes when the plug is disengaged. Internal valve components are stainless steel to assure compatibility with the service and to assure durable performance.
- Quick connects are certified by CSA International for use with natural gas.
- The quick connect keying system is based upon the inner and outer diameters of the sleeves on the body and plug. Therefore, quick connect plugs can be assembled only into the correct body. There is no possibility of inadvertently mixing services.
- Quick connect bodies and plugs are color coded to designate the service and to facilitate matching the correct body and plug.
- Quick connect bodies are furnished with an internal locking feature. When used with a locking plug, the plug can be installed in a fixed orientation. When used with a non-locking plug, the plug may be installed in any orientation and will rotate in the body.
- Quick connect bodies are designed to be installed on piping systems, gas manifold systems or directly to valves or instrumentation. Bodies are available with a choice of inlet connections to facilitate installation.

WaterSaver Faucet Co. 312 666 5500 telephone
701 West Erie Street 312 666 5501 fax
Chicago, IL 60654 wslab.com



Flexible Laboratory Fittings
Stainless Steel/Stainless Steel Hose Assemblies



Stainless steel braided hose with corrugated stainless steel inner core

Corrugated Stainless Steel Hose with Stainless Steel Overbraid

WaterSaver stainless steel/stainless steel hose assemblies are designed for use with our keyed quick connect fittings. Features of WaterSaver hose assemblies include the following:

- Hose has an inner core of corrugated stainless steel and a braided stainless steel exterior layer. Hose is thus resistant to cutting or abrasion. Hose is rated to 1000 PSI burst pressure, 300 PSI maximum working pressure.
- Braided stainless steel hose assemblies may be specially cleaned and packaged for high purity gas applications.
- End fittings are permanently attached to hose with a barb fitting and crimped ferrule. End connections swivel to prevent kinking or twisting of hose. Hoses are available with a variety of end connections for maximum flexibility.

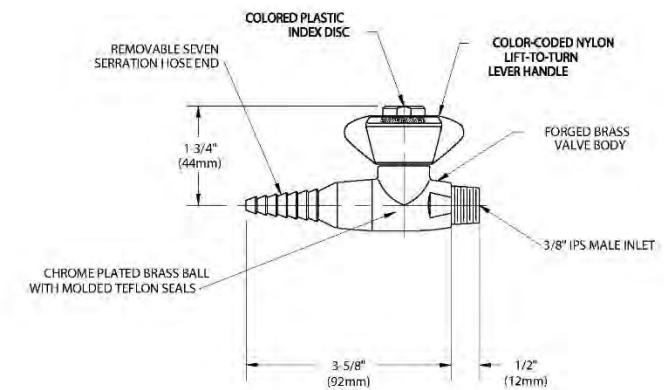
WaterSaver Faucet Co. 312 666 5500 telephone
701 West Erie Street 312 666 5501 fax
Chicago, IL 60654 wslab.com

Gas/Vacuum Quick Disconnect Cut Sheet

At research lab islands



CT4260
LABORATORY BALL VALVE WITH LIFT/TURN LEVER HANDLE, REMOVABLE SERRATED HOSE END



NOTES:

- LABORATORY BALL VALVE ASSEMBLY IS CERTIFIED BY CSA INTERNATIONAL TO COMPLY WITH ANSI Z21.15 AND CGA 9.1.
- HANDLE LOCKS IN CLOSED POSITION. LIFT HANDLE TO UNLOCK AND OPEN VALVE.
- FIXTURE IS FULLY ASSEMBLED AND FACTORY TESTED AT 125 PSI AIR PRESSURE. MAXIMUM WORKING PRESSURE IS 75 PSF.
- SPECIFY IF CLEANING FOR OXYGEN AND HIGH PURITY GASES IS REQUIRED.
- VALVE HAS COLORTECH EPOXY POWDER COATED FINISH. SPECIFY COLOR (WHITE, GRAY OR TAN) WHEN ORDERING.

MEASUREMENTS MAY VARY ±1/64" (1mm).
WaterSaver Faucet Co. 312 666 5500 telephone
701 West Erie Street 312 666 5501 fax
Chicago, IL 60654 wslab.com

Drawing Number:

Revised: 121312-TEC

Undercounter Washer Cut Sheet

Provide DI water for rinse cycle
Model 4400431- 208v

SteamScrubber® Laboratory Glassware Washers

SPECIFICATIONS & ORDERING INFORMATION



SteamScrubber Laboratory Glassware Washer 4400330 is shown with 48-Pin Insert 4591601, Petri Dish Insert 4589701, Bulk Tube Insert 4542100, Utensil Holder 4542500 and BOD Bottle Insert 4589201.



All models feature:

- Upper and lower standard open racks of Type 304 stainless steel
- LCD information center, Display button, Run/Cancel button, scroll buttons and selection buttons to program and monitor cycles
- Pump to recirculate 96 gal/min (363 liters) when operated on 115 Volts, 60 Hz and 230 Volts, 50 Hz and 112 gal/min (424 liters/min) on 230 Volts, 60 Hz
- Drain pump to evacuate over 7 gal/min (26 liters/min)
- Purified water pump to bring non-pressurized or pressurized purified water into the tank for up to six pure water rinses
- Steam generator that produces hot vapor before the WASH 2 cycle (RINSE ONLY and PLASTIC programs excluded)
- Aluminum-backed insulation and fiberglass blanket for thermal and sound insulation
- Operation at 58 decibels
- Manual-fill detergent dispenser for powder or liquid detergent
- Manual-fill rinse aid solution dispenser
- Forced air drying programmable up to 99 minutes and from 38-70°C (100-158° F)
- Seven factory-set cycle programs: RINSE ONLY, PLASTIC, GLASS, GLASS PLUS, SCIENCE, SCIENCE PLUS, and DRY ONLY. All 208/230 Volt models have three additional programs for a total of ten: INTENSE, INTENSE PLUS and EXTREME.
- Two user-set cycle programs
- Alarms with display for HOT GLASS, PLEASE WAIT, WATER LOW, WATER HIGH, OVERFLOW, LIQ DETER, RINSE AID DRAIN FAIL and LOW TEMP. Audible alarms self cancel after one minute.
- User-set delayed start (up to 8 hours)

- Type 304 stainless steel top, door, tank, upper, middle and lower wash arms. Freestanding models also have stainless steel exterior sides and top.
- One-piece, stainless steel, fine mesh particle drain filter
- Four leveling feet
- 3/8" Female NPT inlet fitting for hot tap water connection
- Factory-installed drain hose and band clamp
- Two year warranty on parts and labor
- Made in the U.S.A.
- IQ/OQ available. Visit www.labconco.com or call 800-821-5525.

All models conform to:

- UL 3101-1/61010-1
- CAN/CSA C22.2 No. 1010-1
- CE Conformity Marking (208/230 Volt models only)

All models require:

- Minimum inlet water temperature 49° C (120° F)
- Recommended inlet water temperature 60° C (140° F)
- Minimum purified water pressure 0 psi
- Water consumption per fill 3.4 gallons (13 liters)
- Hot tap water pressure at the washer 20-120 psi (138-827 KPa)
- Hot tap water flow rate 1.25 gallons (4.7 liters) per minute
- 3/8" OD copper tubing for connection to the water inlet valve
- Purified water with supply piping minimum 3/8" ID to permit at least 0.9 gallon (3.4 liters) per minute flow

Options include:

- Freestanding and undercounter styles
- Water temperature to 82° C (180° F) on 115 Volt models and 93° C (199° F) on 230 Volt models
- Clear tempered safety glass viewing window and 25-watt interior light that illuminates when door is latched

Optional accessories and companion products on pages 18 - 22 include:

- Base Stand
- Upper and Lower Spindle Racks
- Baskets and Inserts
- Freestanding-to-Mobile Conversion Kits
- Drain Water Cooling Kit
- LabSolutions Detergents and Rinse
- ScrubberMate Cart, Glassware Carts and Carboy Caddy
- WaterPro RO Stations and accessories

Catalog #	Style	Electrical Requirements	Maximum Internal Water Temperature	Viewing Window and Light	Overall Dimensions with Door Closed	Shipping Weight
4400320	Undercounter	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	No	24.1" w x 27.4" d x 34.1-36.1" h	206 lbs. (93 kg)
4400321	Undercounter	208/230 Volts, 50/60 Hz, 12 Amps	93° C (199° F)	No	24.1" w x 27.4" d x 34.1-36.1" h	206 lbs. (93 kg)
4400330	Undercounter	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	Yes	24.1" w x 27.4" d x 34.1-36.1" h	206 lbs. (93 kg)
4400331	Undercounter	208/230 Volts, 50/60 Hz, 12 Amps	93° C (199° F)	Yes	24.1" w x 27.4" d x 34.1-36.1" h	206 lbs. (93 kg)
4400420	Freestanding	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	No	24.2" w x 27.5" d x 34.2-36.2" h	235 lbs. (107 kg)
4400421	Freestanding	208/230 Volts, 50/60 Hz, 12 Amps	93° C (199° F)	No	24.2" w x 27.5" d x 34.2-36.2" h	235 lbs. (107 kg)
4400430	Freestanding	115 Volts, 60 Hz, 16 Amps	82° C (180° F)	Yes	24.2" w x 27.5" d x 34.2-36.2" h	235 lbs. (107 kg)
4400431	Freestanding	208/230 Volts, 50/60 Hz, 12 Amps	93° C (199° F)	Yes	24.2" w x 27.5" d x 34.2-36.2" h	235 lbs. (107 kg)

■ Exclusive Labconco feature

SteamScrubber® Laboratory Glassware Washers

FEATURES & BENEFITS

For washing and drying primarily beakers and other wide-mouth or specialized glassware.

- **Steam generator.** Produces hot vapor to penetrate and soften dried contaminants for more effective cleaning.
- **Forced air drying system.** Hot air is blown into the tank to dry glassware. No separate dryer or oven is needed.
- **Dual pumps,** one for washing and one for draining, reduce the potential for cross contamination.
- **Powerful pump recirculates water at a high rate** to dislodge dried contaminants for thorough cleaning. Water recirculates at 96 gal/min (363 liters/min) on 115 Volt, 60 Hz and 230 Volt, 50 Hz models and 112 gal/min (424 liters/min) on 230 Volt, 60 Hz models.
- **Versatile rack options.** The standard open racks are interchangeable with optional upper and lower spindle racks. Additional racks are sold separately. See page 18.
- **Full two year warranty.** Is provided against defects in materials and workmanship.

■ **User-set delayed start (up to 8 hours)** may be programmed so that the washer operates during off-peak hours when electricity may be less expensive and more plentiful.

■ **Up to 6 pure water rinses may be programmed.** A built-in purified water pump draws from a storage tank or pressurized source for final rinses.

■ **360° rotating upper, middle and lower wash arms** distribute water and detergent.

■ **Attractive and durable Type 304 stainless steel door and tank.** Freestanding models also have stainless steel sides and top.

■ **Detergent dispenser for powder or liquid detergent.** Releases a manually premeasured amount ensuring clean labware.

■ **Quiet, energy-efficient operation at 58 decibels.** Aluminum-backed, sound-deadening insulation and fiberglass blanket absorb noise and optimize internal tank temperature to conserve energy.



■ **INCLUDES Upper and lower stainless steel standard open racks.** Accommodate a variety of accessory inserts holding the broadest range of glassware. Inserts are sold separately. See pages 18 and 19.

■ **Sanitizing high heat.** Water temperature reaches 93° C (199° F) on 230 Volt models to sanitize glassware and for enhanced washing, rinsing and faster drying.

■ **Rinse solution dispenser.** Allows manual addition of mildly acidic rinse to alter pH and eliminate alkaline detergent carry-over. The dispenser holds approximately 170 milliliters, enough for 40 or more cycles.

■ **Alarms sound and/or display on the LCD** to alert the user to abnormal or unsafe events such as HOT GLASS and OVERFLOW.

■ **Optional clear tempered safety glass viewing window with 25-watt interior light** allows observation of the cycle in progress. Available standard on some models.

■ **ETL-listed.** Washers carry the ETL mark signifying they are certified to UL Standard 3101-1/61010-1 and CAN/CSA C22.2 No. 1010.1.

■ **CE Mark.** Washers conform to the CE (European Community) requirements for electrical safety and electromagnetic compatibility.



■ Exclusive Labconco feature



90 Gallon Safety Cabinet

90 Gallon Safety Cabinet

EAGLE Model 1992/9010 Safety Cabinet

Constructed of 18-gauge steel, sides, top, bottom, and doors are double-walled with a 1 1/2" air space between walls. Both vents, with 2" threaded fittings, have fire baffle and cap. Cabinets come in yellow high gloss powder finish with red warning, plus grounding attachment, 3-point key lock, and 2" raised, leakproof door sill. Each shelf is adjustable, supported by 4 brackets, and can support 350 pounds. Available in two door manual (Model 1992) and self closing (Model 9010) models.

Both models 1992 and 9010 have 2 shelves with a depth of 30"

Cabinets meet NFPA Code 30 and OSHA requirements.



Flammable cabinets do not require external exhaust venting

90 Gallon Safety Cabinet			
Model No.	Dimensions	Door Style	Weight
1992	43"x34"x65"	2 Manual Close	475 lbs.
9010	43"x34"x65"	2 Self Close	475 lbs.

Click on image to enlarge

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[New Products](#) • [Safety Cans](#) • [Safety Cabinets](#) • [Spill Containment](#) • [Guards & Protectors](#)



POLY ACID-CORROSIVE SAFETY STORAGE CABINET



EAGLE Poly Acid/Corrosive Safety Cabinet

Eagle's new non-metallic "Poly Acid Cabinets" are constructed of 100% polyethylene for excellent resistance to harmful acid vapors and spills, making these cabinets suitable for storing aggressive chemicals such as sulphuric, hydrochloric and nitric acids.

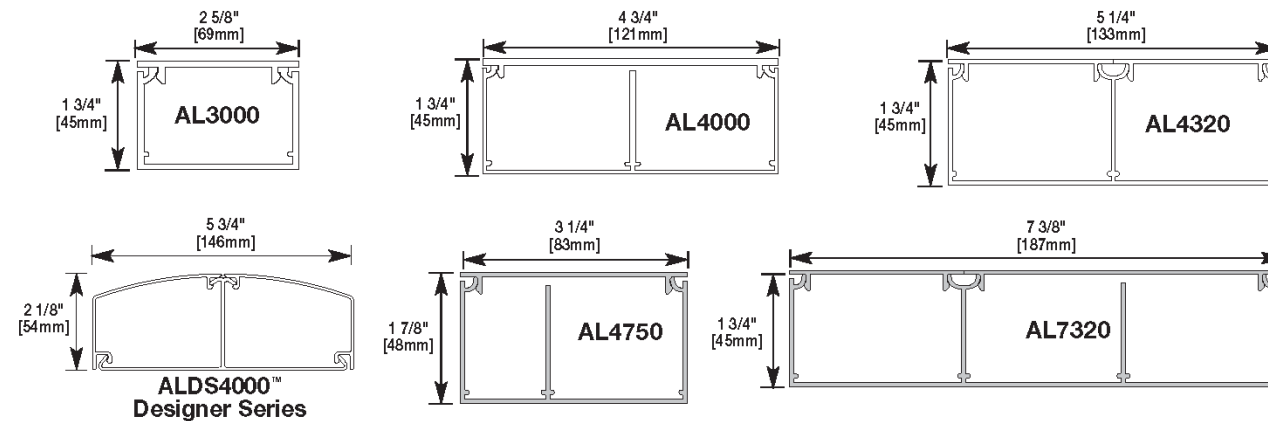
Independent upper and lower compartments allow for segregation of reactive chemicals. Includes two 3/8" threaded inserts on top sides for wall anchors. The base of the cabinet is flush to floor and sides. Bottom shelves remove for easy cleaning of sump areas. Available in blue, shown here, or [white](#).

Each cabinet section requires exhaust venting per Div. 22

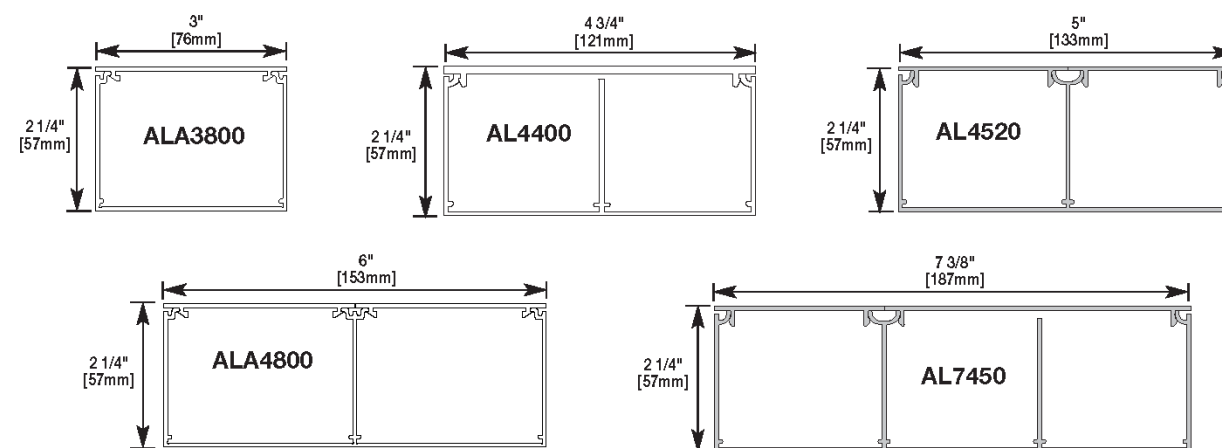
CRAP-44 Poly Acid Safety Cabinet

EAGLE Poly Acid/Corrosive Cabinet					
Model	Capacity	Door Specs	Shelves	Size (WxDxH)	Weight
CRA-P44	44 gal.	4 Manual Closing	8	35" x 22" x 65"	130 lbs.
CRA-P44W	44 gal.	4 Manual Closing	8	35" x 22" x 65"	130 lbs.

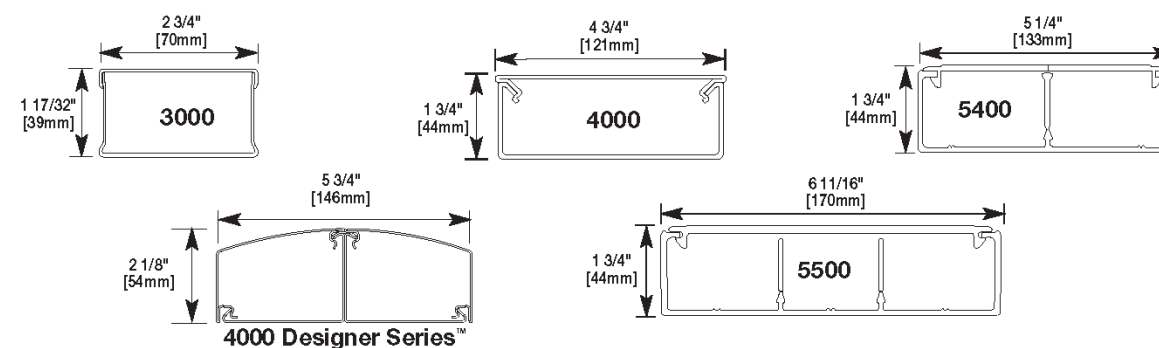
Isoduct® Aluminum Low Profile



Isoduct® Aluminum Large Capacity



Steel & Nonmetallic



ED317R7 - Updated April 2006 - For latest specs visit www.wiremold.com

Provide single compartment extruded aluminum raceway at all locations where raceway is required- **ALA3800** 2.25" deep x 3" high.

Provide 12" removable cover plates.

To be specified per Division 26.