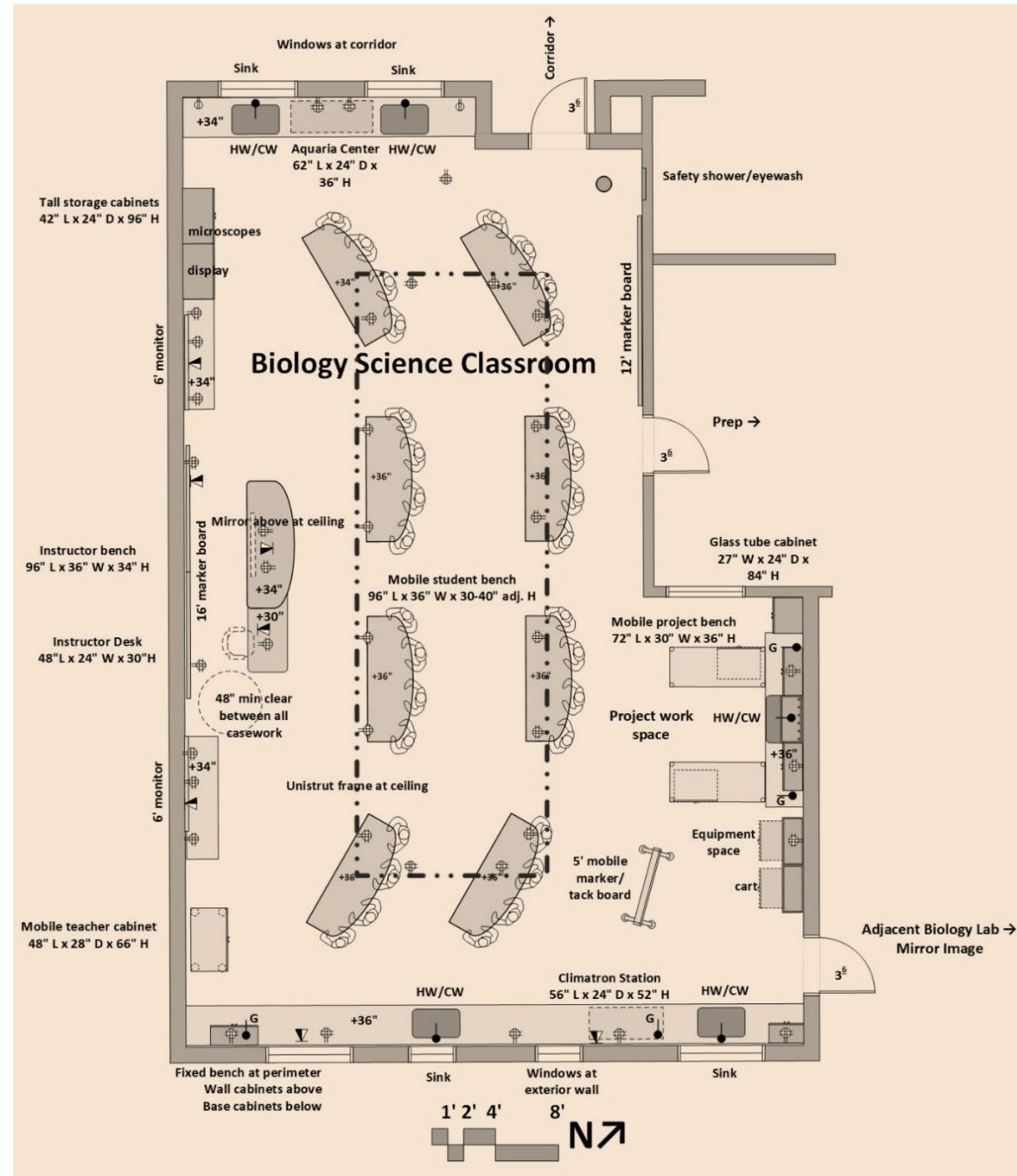


LAB SKETCHBOOK
Waipahu High School
Waipahu, Hawaii
Draft #7
2019 Jan 17



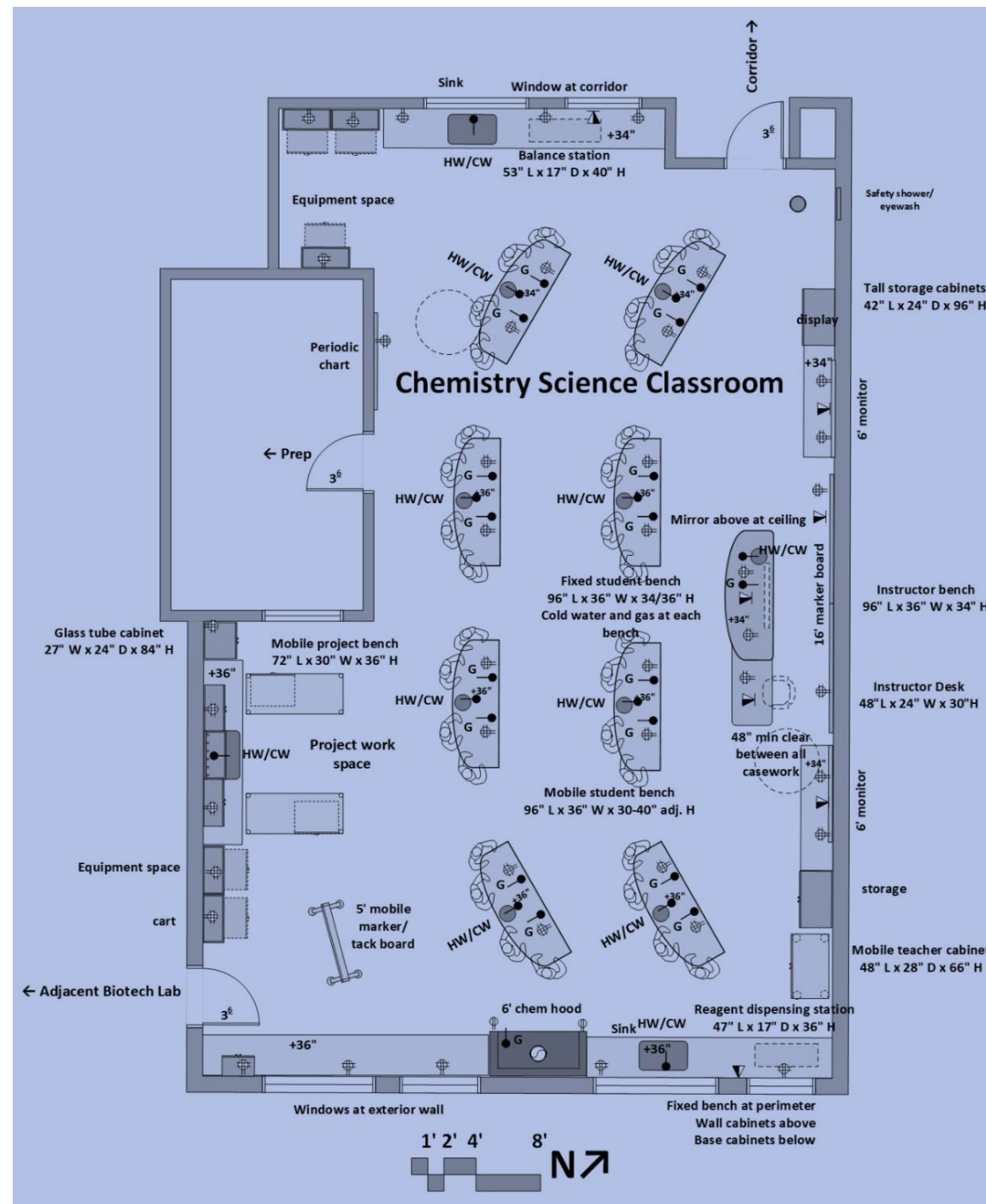
HERA laboratory planners
 Health, Education + Research Associates, Inc.

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EXECUTIVE SUMMARY



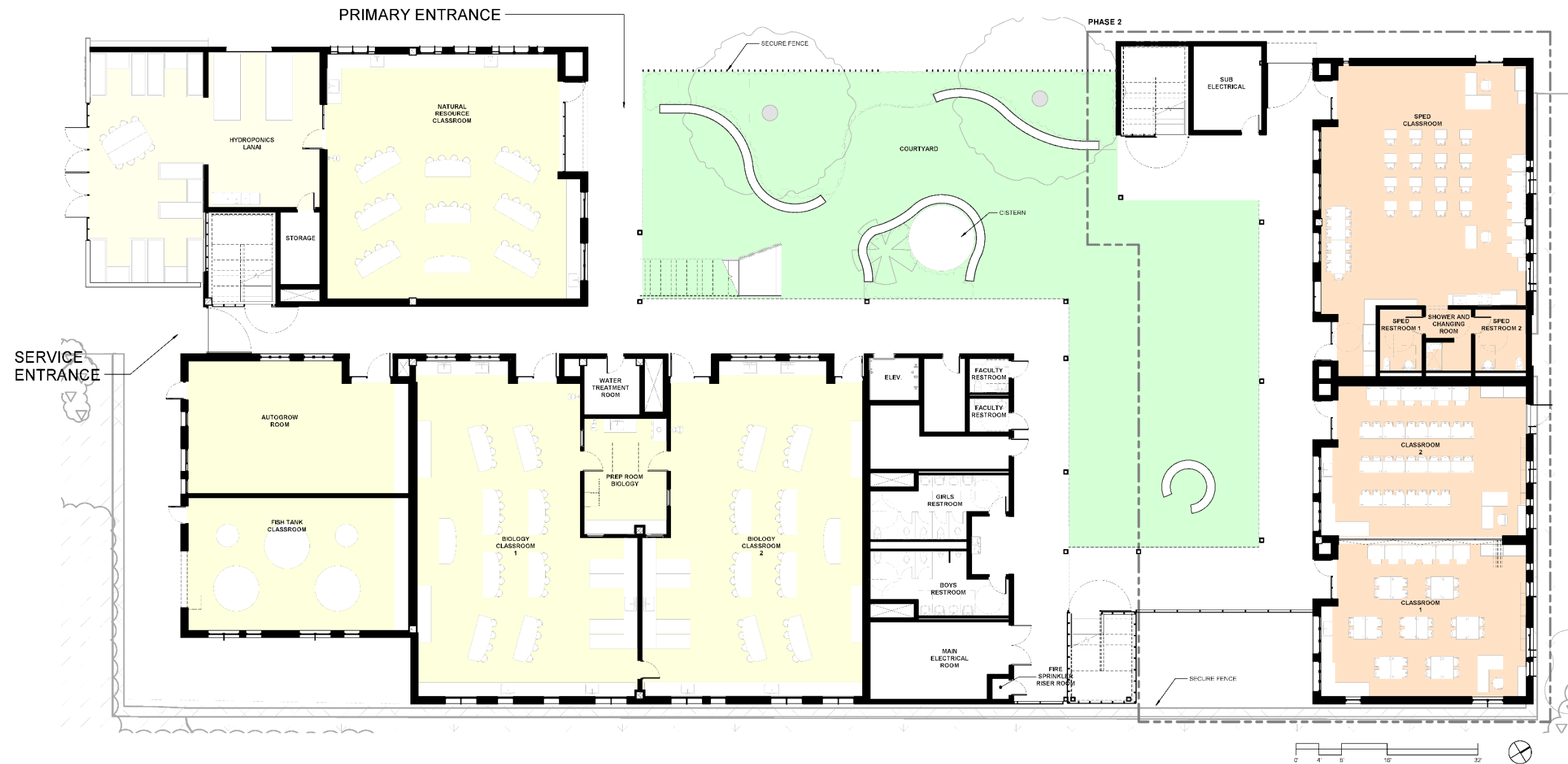
This seventh draft lab sketchbook provides the basis of design for biology, biotech, chemistry, natural resources, and fish tank/auto grow science classrooms for the new Wahipahu High School Classroom Building.

The lab design drawings contained herein represent a design development level of documentation. This document includes MEP systems requirements for each science classroom space.



Glen Berry, AIA
 Laboratory Planning Consultant to WRNS Studio
 glenb@herainc.com

FLOOR PLAN- LEVEL 1



1 FLOOR PLAN - LEVEL 1
1/8" = 1'-0"

11/27/18
WAIPAHU HIGH SCHOOL NEW CLASSROOM BUILDING

WRNSSTUDIO

LEVEL 1 | XX_101
PROJECT # | SCALE: 1/8" = 1'-0"

FLOOR PLAN- LEVEL 2



1 FLOOR PLAN - LEVEL 2
1/8" = 1'-0"

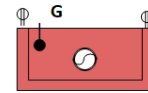
WAIPAHO HIGH SCHOOL NEW CLASSROOM BUILDING ^{11/27/18}

WRNSSTUDIO

LEVEL 2 | XX_102
PROJECT # | SCALE: 1/8" = 1'-0"

SYMBOL LEGEND

Contractor Furnished Equipment



6' chemical fume hood
Constant Volume
On/Off Switch Control at face of hood
Natural Gas valve, pre-piped
110v duplex at each side, pre-wired
Glass panels at side and back



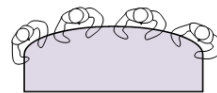
4' fume hood - Accessible
Constant Volume
On/Off Switch Control at face of hood
Natural Gas valve, pre-piped
110v duplex at each side, pre-wired
Glass panels at side and back



24"Wx48"Lx72"H
Metro Shelf Unit
24"wide x 48" long x
72" high



Instructor bench
96" L x 36" W x 34" H
Instructor Desk
48" long x 30" wide x 30" high
Bench integral with desk



Mobile student bench
96" L x 36" W x 30-40" adj. H
Heavy duty 5" casters- lockable
Microscope cabinets below at each end



Mobile teacher cabinet
48" L x 28" D x 66" H
Heavy duty 5" diam casters- lockable



Mobile project bench
72" L x 30" W x 36" H
Heavy duty 5" diam casters- lockable
Mobile base cabinet below
30" wide x 24" deep x 24" high
Heavy duty casters



Mobile project bench
72" L x 30" W x 36" H
Heavy duty 5" diam casters- lockable
Heavy duty casters



Lab benchtop work surface
Epoxy resin



Tall storage cabinets
42" L x 24" D x 96" H
Width varies by location
Lockable
For microscopes or lab supplies or display



Glass tube cabinet
27" W x 24" D x 84" H



Equipment space
24" deep shelf above
Unistrut frame at wall



Wall cabinet
15" deep x 36" high x width varies
Framed glass doors



8' lab sink- stainless steel



Lab sink-
Size varies by location



Lab sink with drying rack/shelf above
Size varies by location



Safety shower/eyewash
Tempered water
Floor drain



Trench drain



6' monitor



16' marker board



Flammable storage cabinet- not vented



Corrosive storage cabinet- vented



Overhead unistrut
service carrier
Plumbing/power grid



HW/CW
Hot/Cold water mixing valve



G
Gas ball valve



CW hose bib
Cold water



HW/CW Spray
Hot/Cold water mixing spray valve



110v elec fourplex
Dedicated circuit at equipment spaces
Maximum of 2 per circuit at bench outlets



110v elec duplex
Maximum of 4 per circuit at bench outlets



Ceiling mount service column with 4
fourplex 110v elec



Hardwire Data box- data outlets by Owner

Owner Furnished Equipment



4' biological safety cabinet/laminar flow hood
Class II Type A
No external exhaust



5' mobile marker/tack board



Aquaponics/Hydroponics Systems

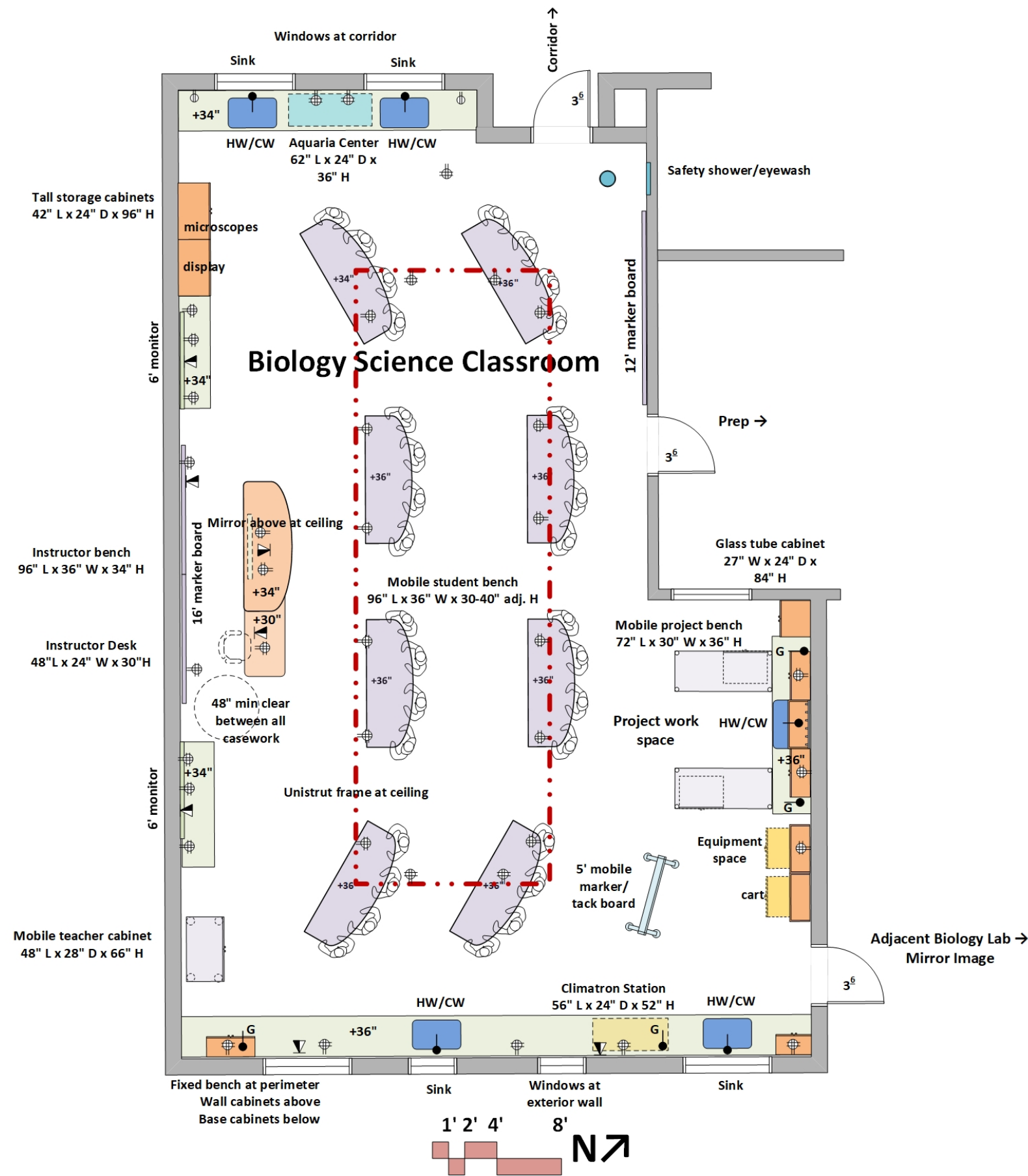


Fish tank

BIOLOGY SCIENCE CLASSROOM

Mobile Chevron Scheme

Mirror image for adjacent Biology Classroom



ARCHITECTURAL

Occupancy: E
 Floor: Vinyl tile or sealed concrete
 Walls: metal stud with gypsum board, enamel paint
 Ceiling: acoustic tile at 10'
 Doors: 3'-6"x8'-0" with view window
 Sound attenuation: NC 45 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
 Humidity: 30-70% relative
 Dedicated exhaust with on/off control

PLUMBING

Domestic tepid water at safety shower/eyewash
 Floor drain at safety shower/eyewash
 Hot/Cold water at lab sinks with vacuum breaker
 Natural gas at perimeter bench

ELECTRICAL

115v20a1ph outlets at walls and ceiling
 Overhead power reel cords at ceiling
 Hardwire and wireless data
 Lighting: LED at 600 LUX

CONTRACTOR FURNISHED EQUIPMENT

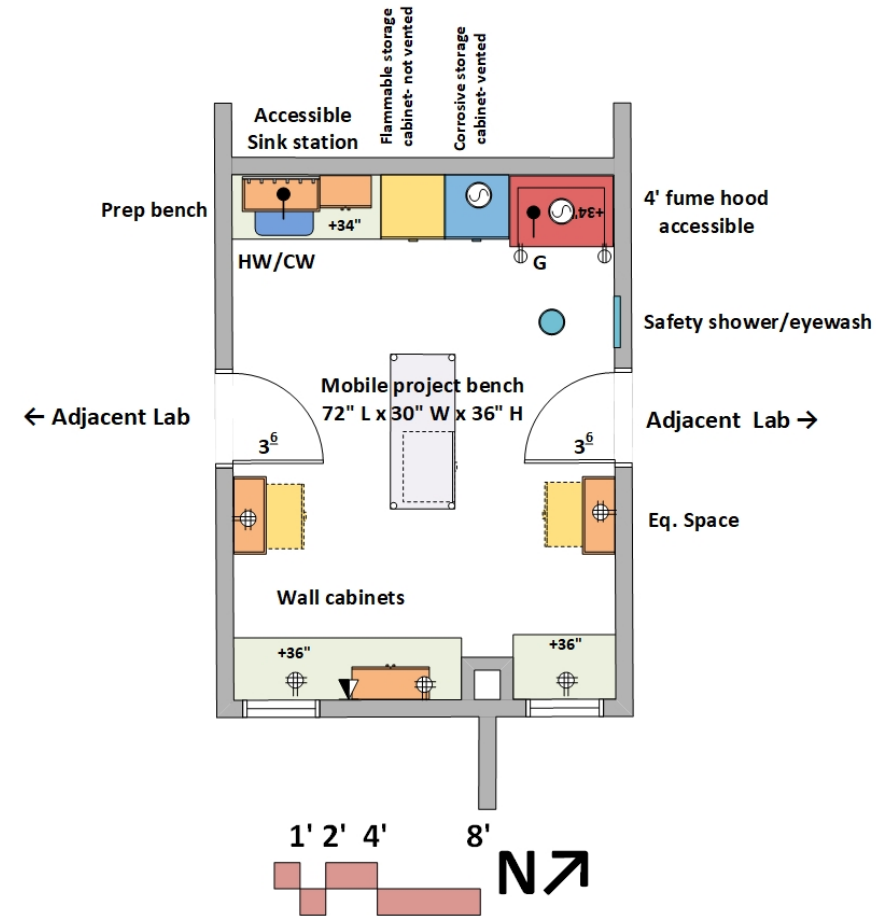
Safety shower/eyewash
 Mobile student benches
 Instructor bench and desk
 Casework
 Sinks and fittings
 Monitors
 Mirror at ceiling above instructor bench
 Unistrut frame at ceiling

SCHOOL FURNISHED EQUIPMENT

Climatron station
 Aquaria center
 Benchtop instruments
 Refrigerators
 Freezers
 Mobile marker/tack board

BIOLOGY PREP

Located between pair of Biology Science Classrooms



ARCHITECTURAL

Occupancy: E
 Floor: Vinyl tile or sealed concrete
 Walls: metal stud with gypsum board, enamel paint
 Ceiling: acoustic tile at 10'
 Doors: 3'-6"x8'-0" with view window
 Sound attenuation: NC 45 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
 Humidity: 30-70% relative
 Dedicated exhaust with on/off control
 Exhaust at Corrosive Storage cabinet

PLUMBING

Domestic tepid water at safety shower/eyewash
 Floor drain at safety shower/eyewash
 Hot/Cold water at lab sinks with vacuum breaker
 Natural gas at fume hood

ELECTRICAL

115v20a1ph outlets at walls and ceiling
 Overhead power reel cords at ceiling
 Hardwire and wireless data
 Lighting: LED at 600 LUX

CONTRACTOR FURNISHED EQUIPMENT

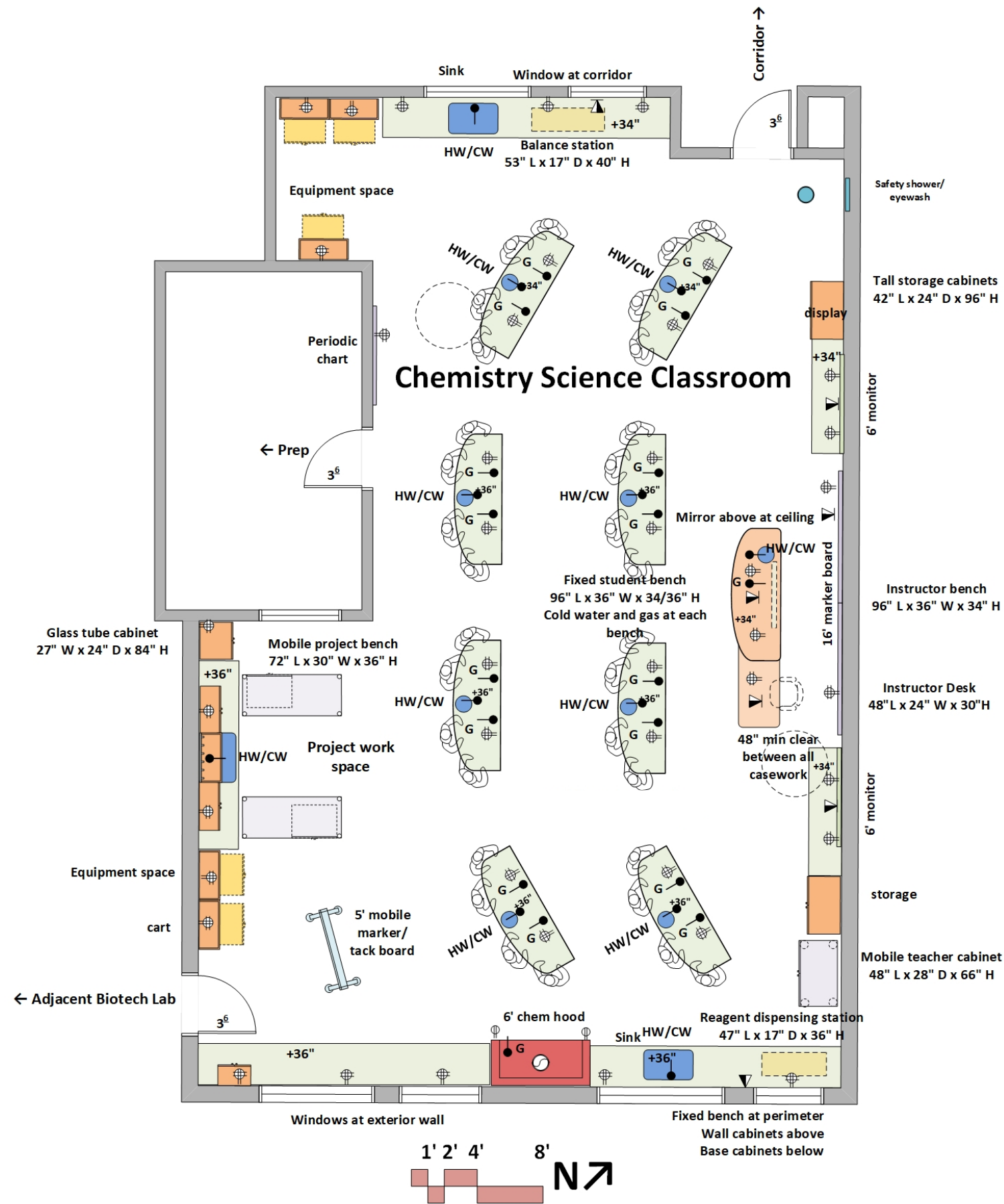
Safety shower/eyewash
 Lab casework, sinks, tops, fittings
 Chemical fume hood with on/off control
 Chemical storage cabinets- Corrosive (with exhaust); Flammable (no exhaust)

SCHOOL FURNISHED EQUIPMENT

Benchtop instruments
 Refrigerator and/or freezer

CHEMISTRY SCIENCE CLASSROOM

Fixed Island Scheme



ARCHITECTURAL

Occupancy: E
 Floor: Vinyl tile or sealed concrete
 Walls: metal stud with gypsum board, enamel paint
 Ceiling: acoustic tile at 10'
 Doors: 3'-6"x8'-0" with view window
 Sound attenuation: NC 45 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
 Humidity: 30-70% relative
 Dedicated exhaust with on/off control

PLUMBING

Domestic tepid water at safety shower/eyewash
 Floor drain at safety shower/eyewash
 Hot/Cold water at lab sinks with vacuum breaker
 Natural gas at island benches

ELECTRICAL

115v20a1ph outlets at walls and island benches
 Hardwire and wireless data
 Lighting: LED at 600 LUX

CONTRACTOR FURNISHED EQUIPMENT

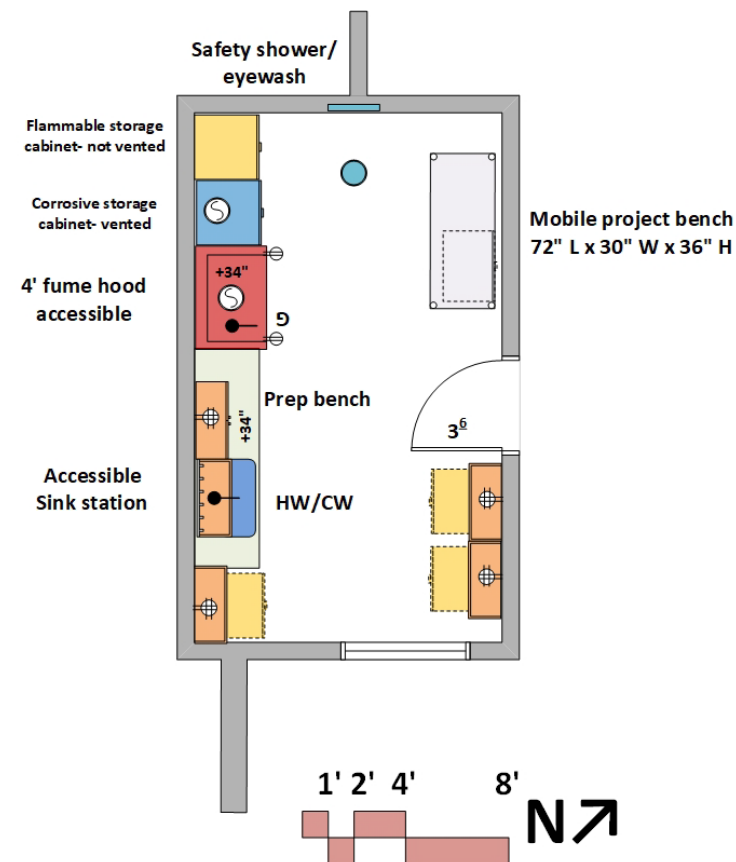
Safety shower/eyewash
 Mobile project benches
 Instructor bench and desk
 Fixed island student benches
 Casework
 Sinks and fittings
 Monitors
 Mirror at ceiling above instructor bench
 Chemical fume hood with on/off control

SCHOOL FURNISHED EQUIPMENT

Balance station
 Reagent dispensing station
 Benchttop instruments
 Refrigerators

CHEMISTRY PREP

Located between Chemistry and Biotech Science Classrooms



ARCHITECTURAL

Occupancy: E
 Floor: Vinyl tile or sealed concrete
 Walls: metal stud with gypsum board, enamel paint
 Ceiling: acoustic tile at 10'
 Doors: 3'-6"x8'-0" with view window
 Sound attenuation: NC 45 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
 Humidity: 30-70% relative
 Dedicated exhaust with on/off control

PLUMBING

Domestic tepid water at safety shower/eyewash
 Floor drain at safety shower/eyewash
 Hot/Cold water at lab sinks with vacuum breaker
 Natural gas at fume hood

ELECTRICAL

115v20a1ph outlets at walls and ceiling
 Overhead power reel cords at ceiling
 Hardwire and wireless data
 Lighting: LED at 600 LUX

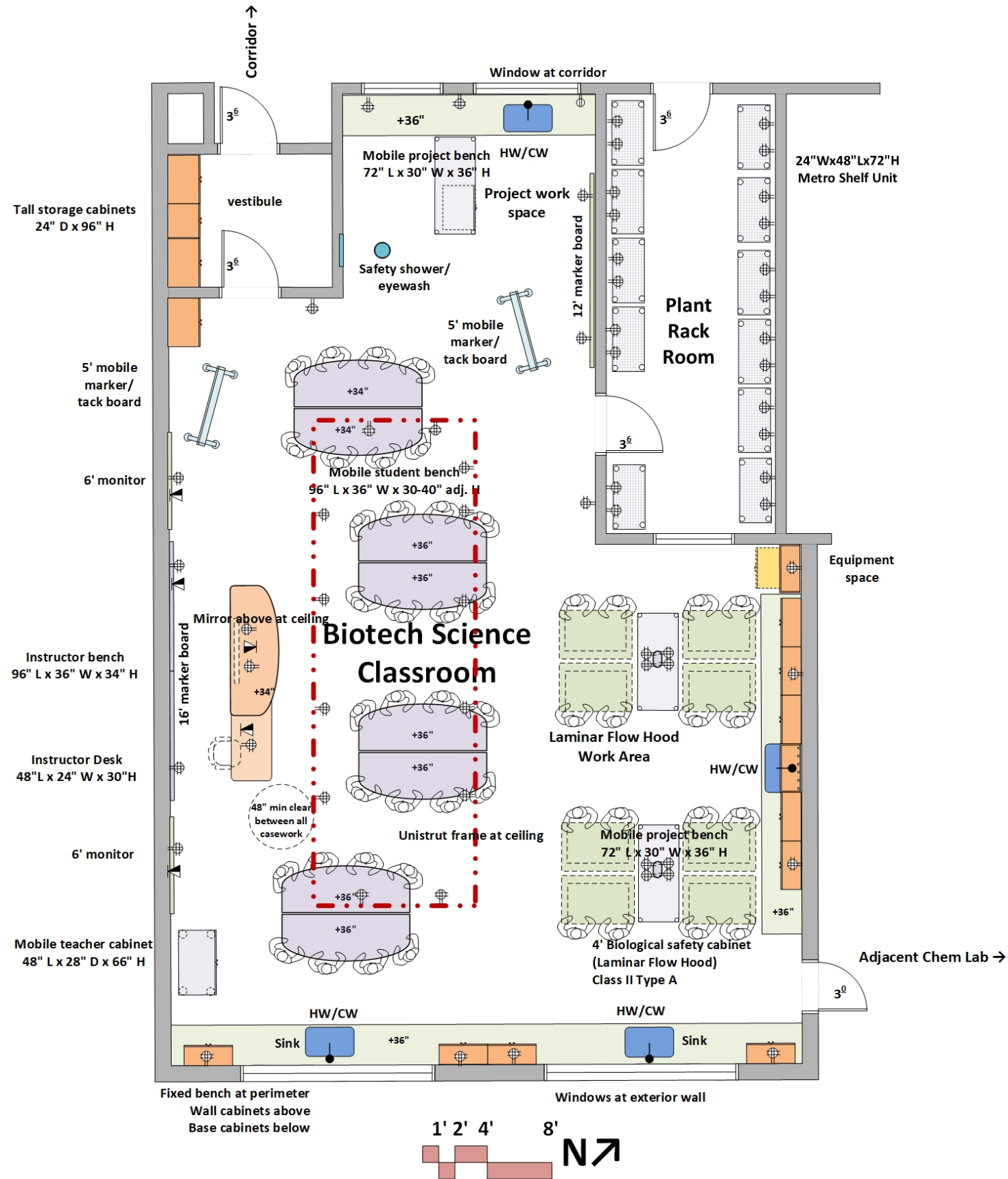
CONTRACTOR FURNISHED EQUIPMENT

Safety shower/eyewash
 Lab casework, sinks, tops, fittings
 Chemical fume hood with on/off control
 Chemical storage cabinets

SCHOOL FURNISHED EQUIPMENT

Benchtop instruments
 Refrigerator

BIOTECH SCIENCE CLASSROOM



ARCHITECTURAL

Occupancy: E
 Floor: Vinyl tile or sealed concrete
 Walls: metal stud with gypsum board, enamel paint
 Ceiling: acoustic tile at 10'
 Doors: 3'-6"x8'-0" with view window
 Sound attenuation: NC 45 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
 Humidity: 30-70% relative
 Dedicated exhaust with on/off control

PLUMBING

Domestic tepid water at safety shower/eyewash
 Floor drain at safety shower/eyewash
 Hot/Cold water at lab sinks with vacuum breaker

ELECTRICAL

115v20a1ph outlets at walls and ceiling
 Overhead power reel cords at ceiling
 Hardwire and wireless data
 Lighting: LED at 600 LUX

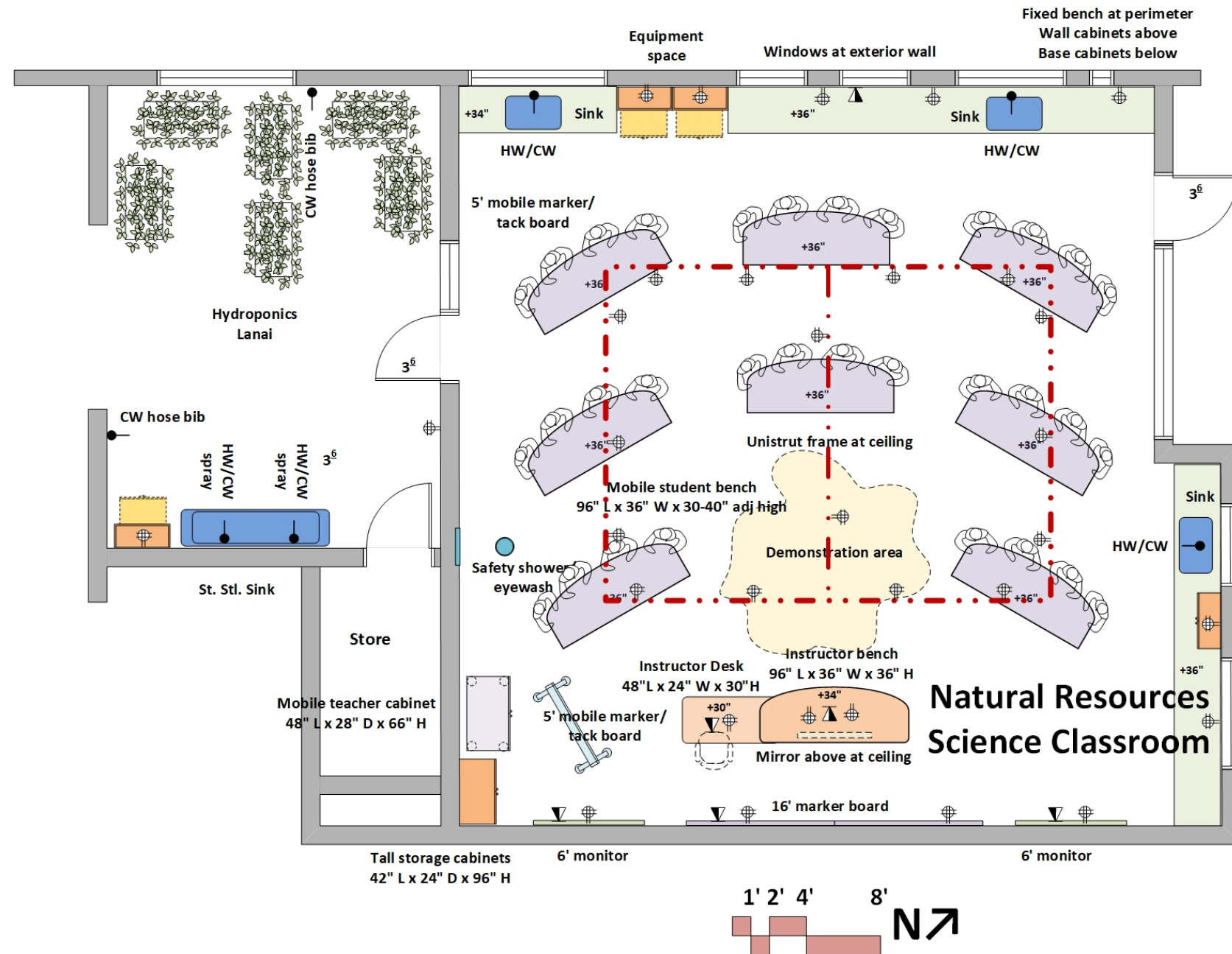
CONTRACTOR FURNISHED EQUIPMENT

Safety shower/eyewash
 Mobile student benches
 Instructor bench and desk
 Casework
 Sinks and fittings
 Monitors
 Metro shelf units in Plant Rack Room
 Unistrut frame at ceiling

SCHOOL FURNISHED EQUIPMENT

Biological Safety Cabinets (Laminar Flow Hoods)
 Benchtop instruments
 Refrigerator
 Plant lighting at metro shelves in Plant Rack Room

NATURAL RESOURCES SCIENCE CLASSROOM Mobile Island Scheme



ARCHITECTURAL

Occupancy: E
 Floor: Vinyl tile or sealed concrete
 Walls: metal stud with gypsum board, enamel paint
 Ceiling: acoustic tile at 10'
 Doors: 3'-6"x8'-0" with view window
 Two Pair 3'-0" doors at exterior
 Sound attenuation: NC 45 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
 Humidity: 30-70% relative
 Dedicated exhaust with on/off control

PLUMBING

Domestic tepid water at safety shower/eyewash
 Floor drain at safety shower/eyewash
 Hot/Cold water at lab sinks with vacuum breaker
 Natural gas at perimeter bench
 Hose bibs at Hydroponics systems

ELECTRICAL

115v20a1ph outlets at walls and ceiling
 Overhead power reel cords at ceiling
 Hardwire and wireless data
 Lighting: LED at 600 LUX

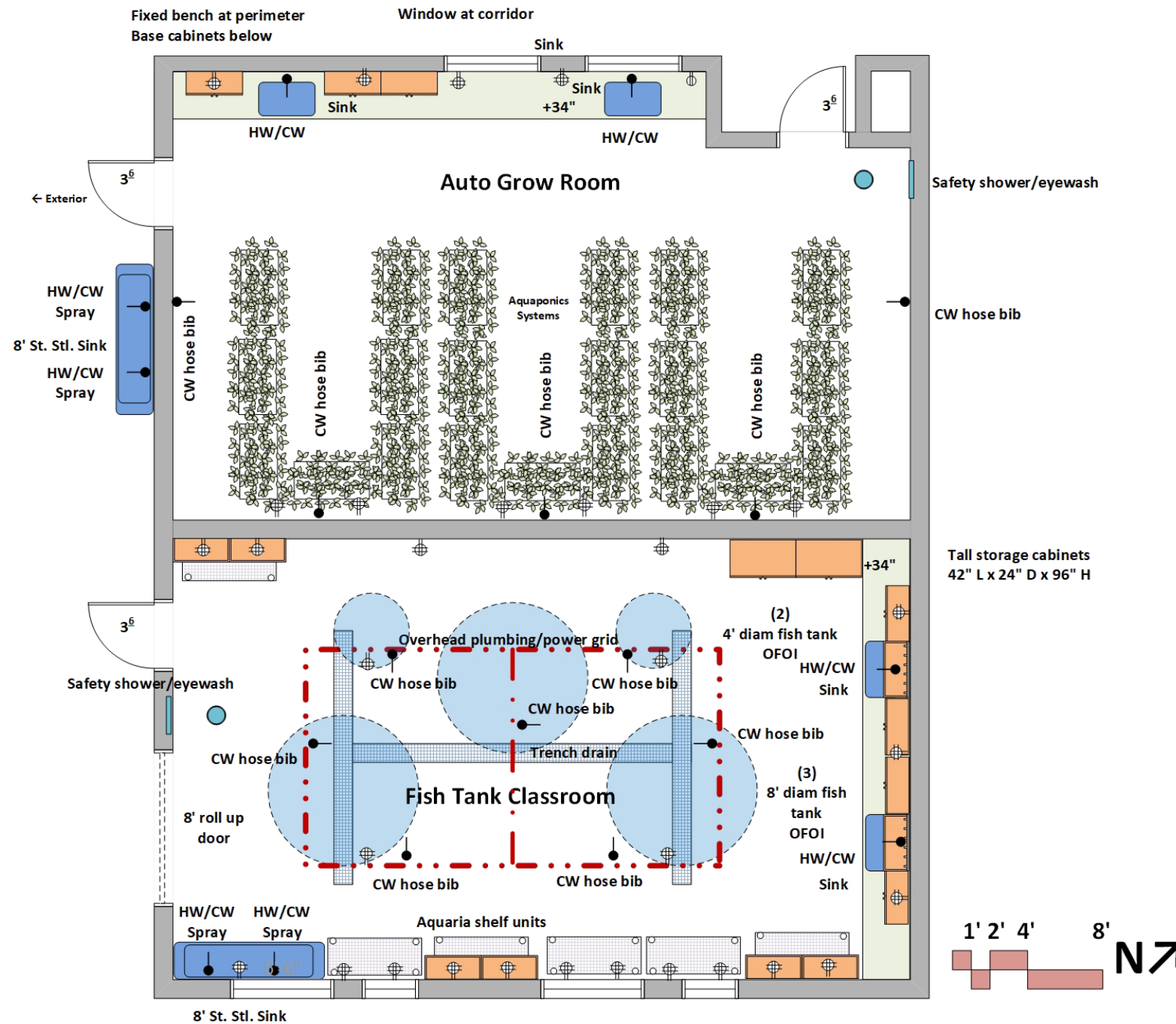
CONTRACTOR FURNISHED EQUIPMENT

Safety shower/eyewash
 Casework
 Instructors bench and desk
 Mobile student benches
 Sinks and fittings
 Unistrut frame at ceiling

SCHOOL FURNISHED EQUIPMENT

Benchttop instruments
 Refrigerator and/or freezer
 Hydroponics systems

FISH TANK SCIENCE CLASSROOM & AUTO GROW ROOM



ARCHITECTURAL

Occupancy: E
 Floor: Vinyl tile or sealed concrete
 Walls: metal stud with gypsum board, enamel paint
 Ceiling: acoustic tile at 10'
 Doors: 3'-6"x8'-0" with view window
 Two Pair 4'-0" doors to exterior and/or roll up door
 Sound attenuation: NC 45 or less
 Security: card key access

STRUCTURAL

Vibration attenuation: 4,000 microinches per second or less

MECHANICAL

Temperature: 70 deg F +/- 2 deg F
 Humidity: 30-70% relative
 Dedicated exhaust with on/off control

PLUMBING

Domestic tepid water at safety shower/eyewash
 Floor drain at safety shower/eyewash
 Hot/Cold water at lab sinks with vacuum breaker
 Trench drain at center area
 Domestic cold water hose bibs at overhead grid
 Hose bibs at exterior for Aquaponics Systmes

ELECTRICAL

115v20a1ph outlets at walls and ceiling
 Overhead power reel cords at ceiling
 Hardwire and wireless data
 Lighting: LED at 600 LUX

CONTRACTOR FURNISHED EQUIPMENT

Safety shower/eyewash
 Casework
 Mobile lab benches
 Sinks and fittings
 Chemical fume hood with on/off control

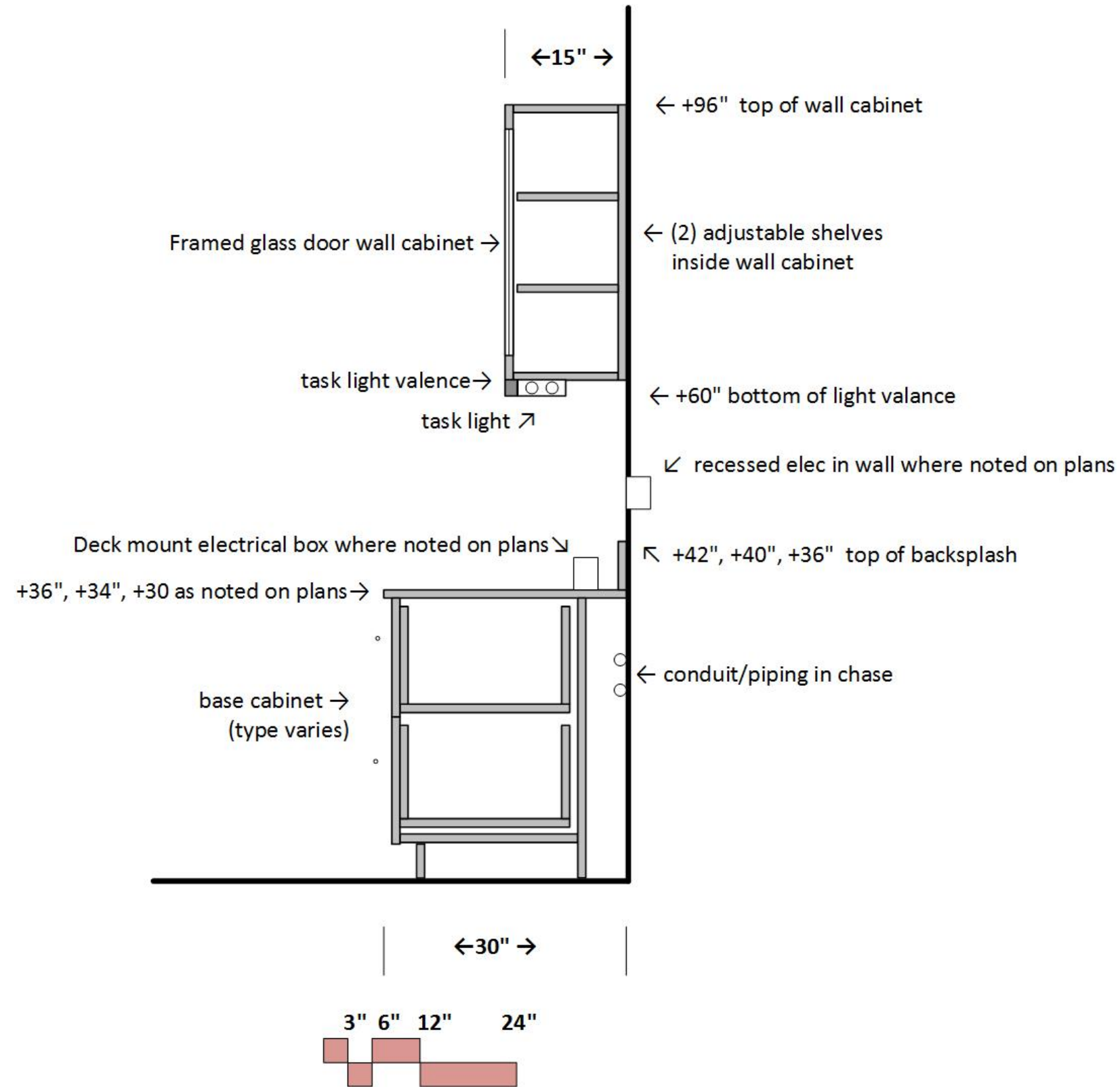
SCHOOL FURNISHED EQUIPMENT

Fish tanks
 Tank piping distribution system
 Aquaponics Systems

SECTION DETAILS

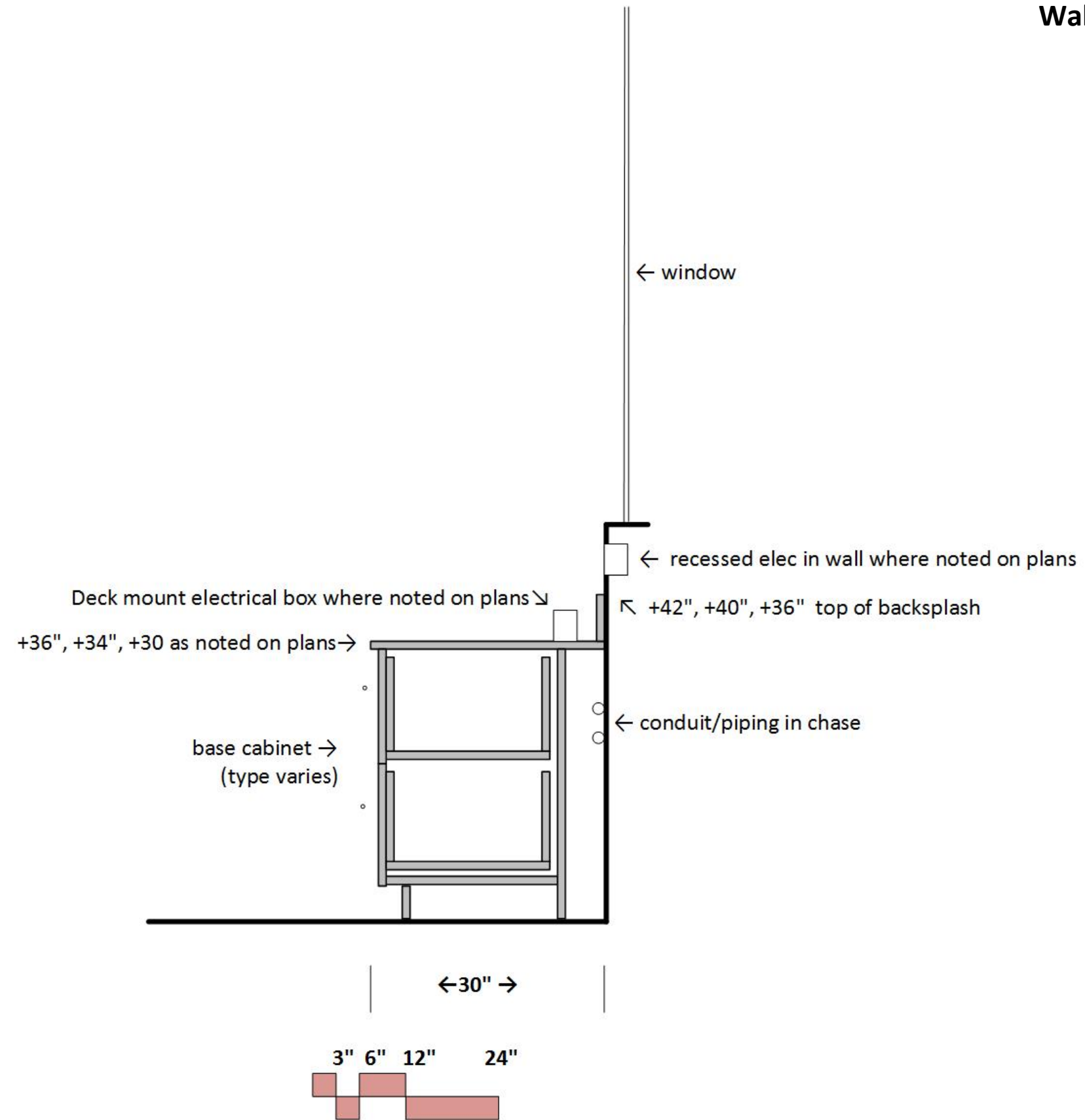
SECTION DETAIL 01

Wall Bench/Wall Cabinet



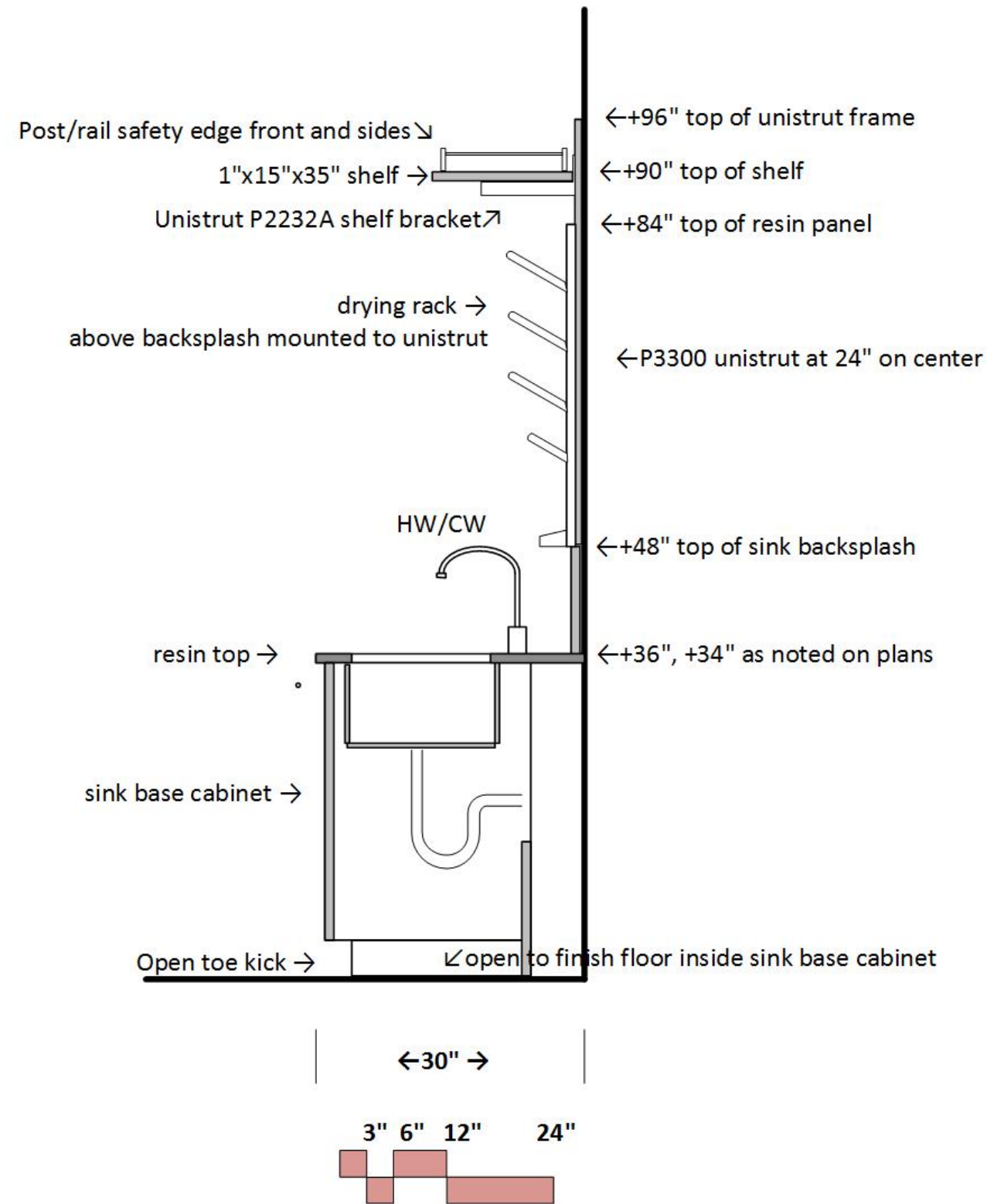
SECTION DETAIL 02

Wall Bench/Window



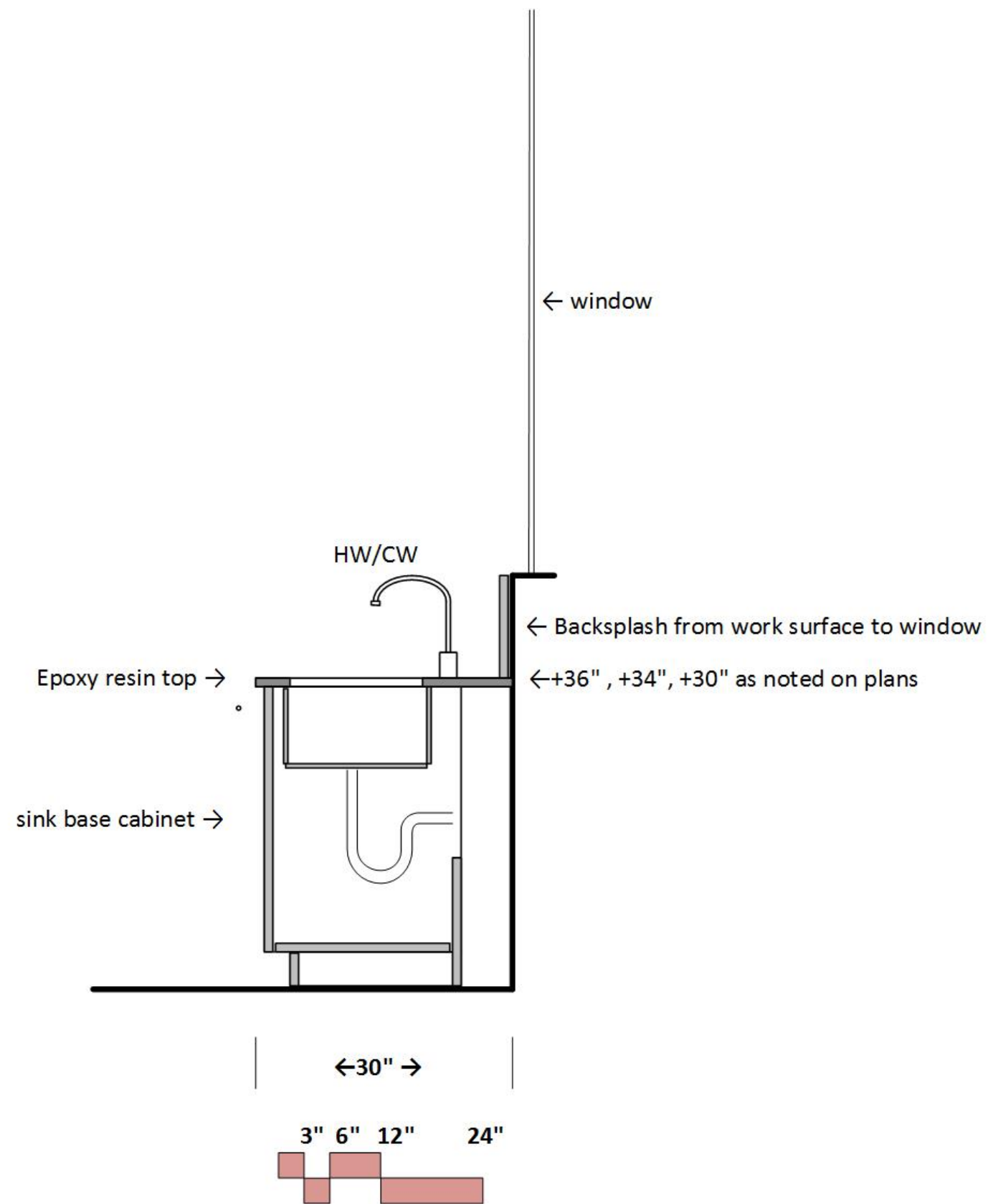
SECTION DETAIL 03

Sink Bench/Drying Rack



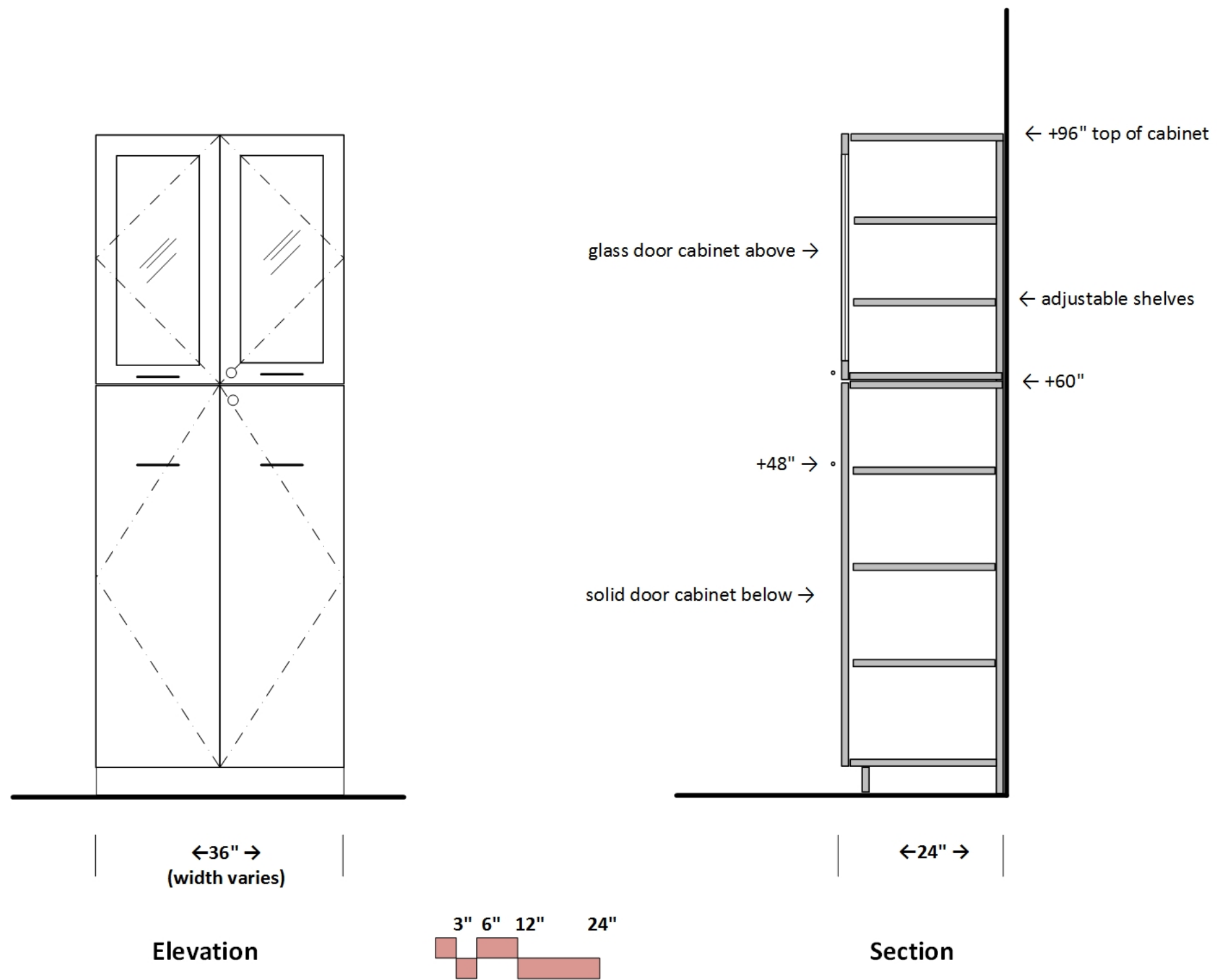
SECTION DETAIL 04

Sink Bench/Window



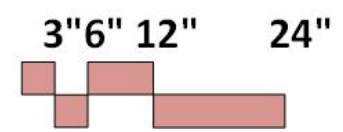
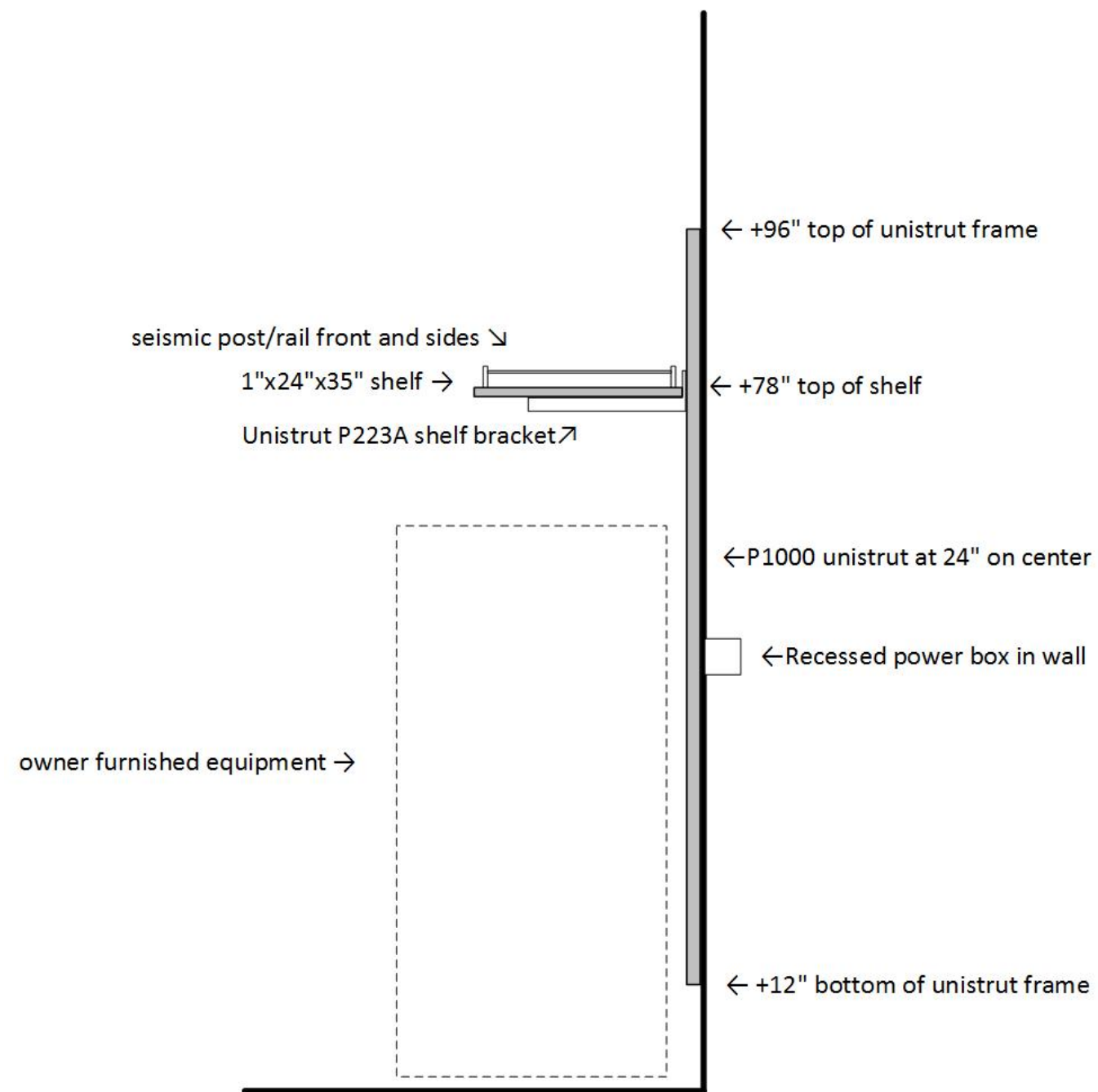
SECTION DETAIL 05

Tall Storage Cabinet



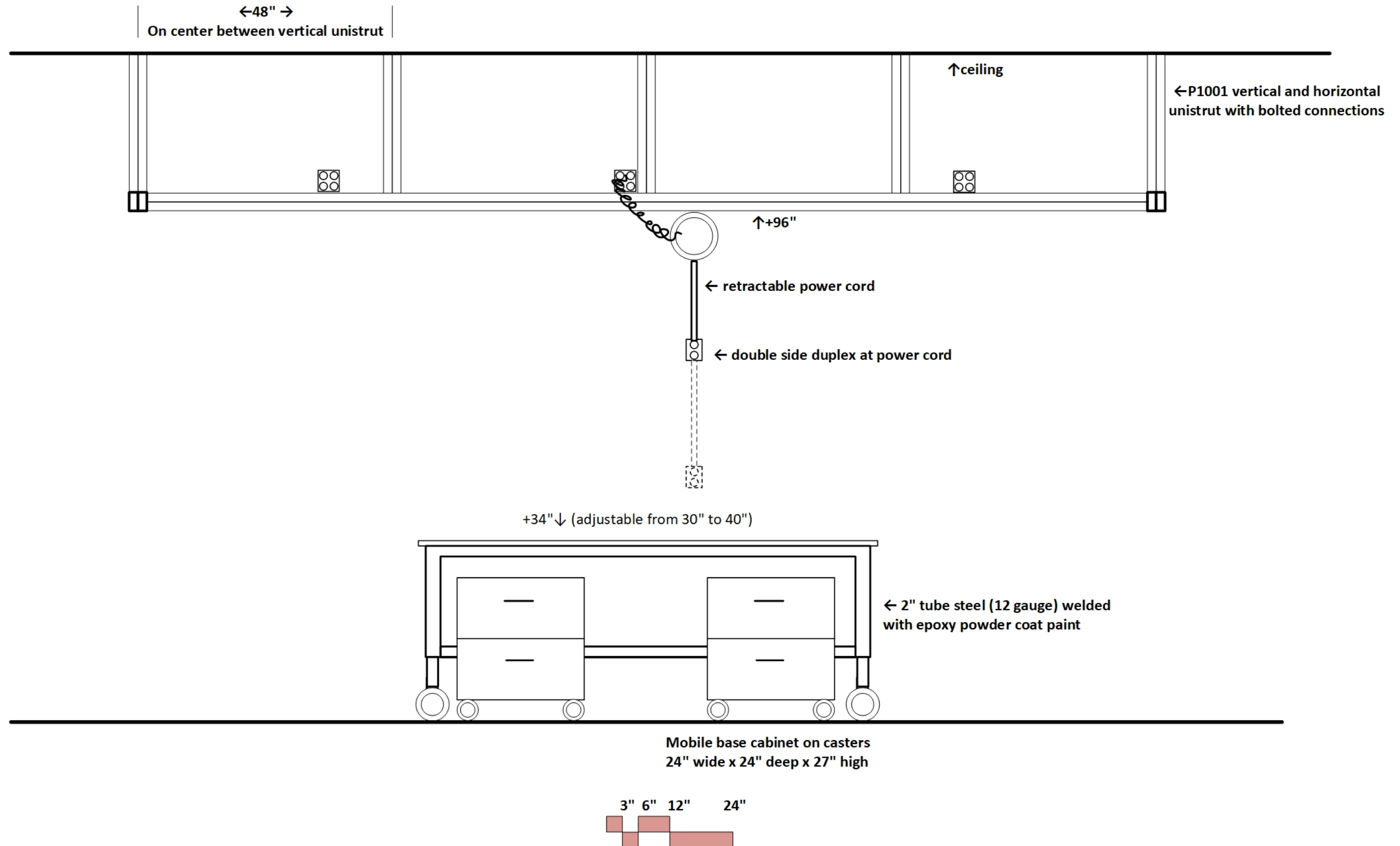
SECTION DETAIL 06

Equipment Space



SECTION DETAIL 07

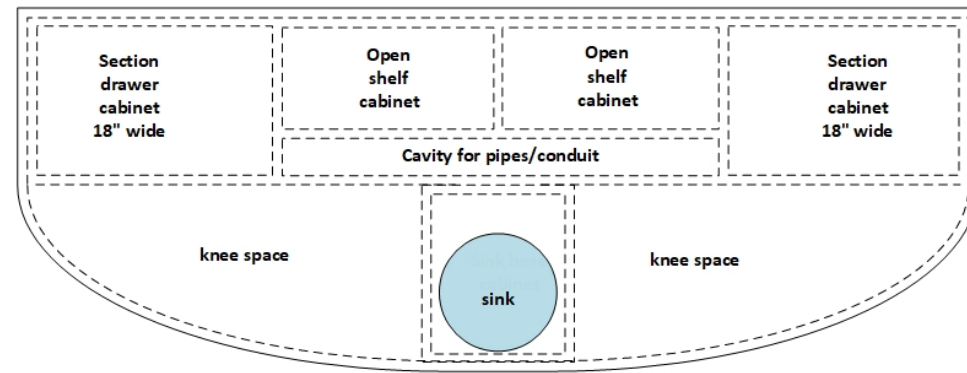
Mobile Lab Bench/Unistrut Above



SECTION DETAIL 08

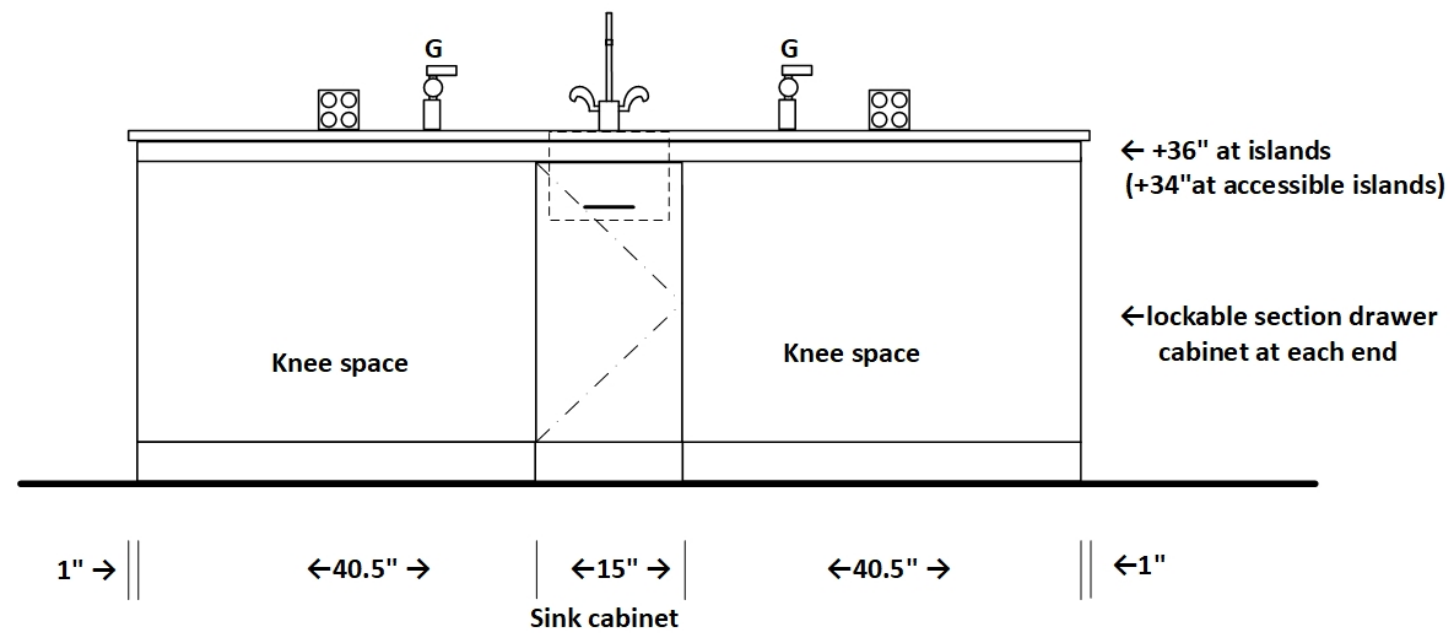
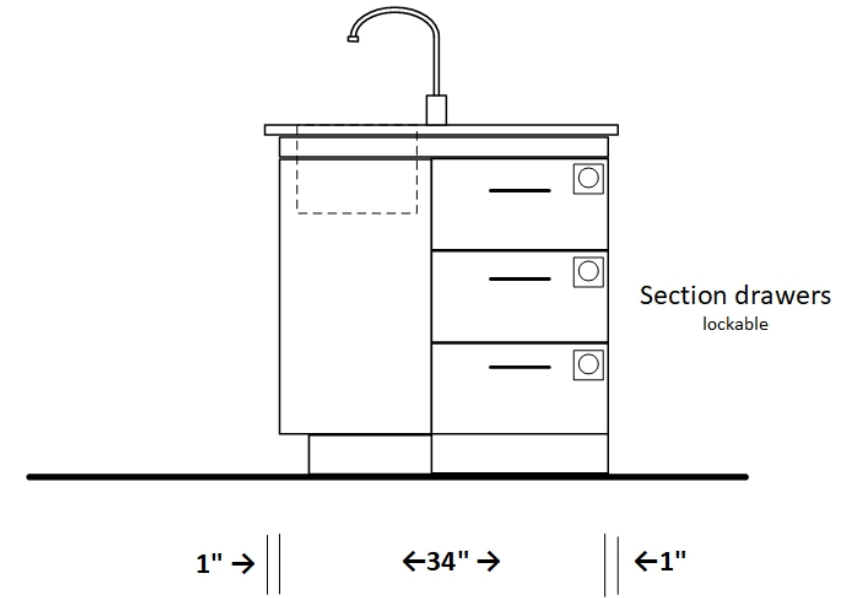
Fixed Island Bench- Chemistry Lab

Top View

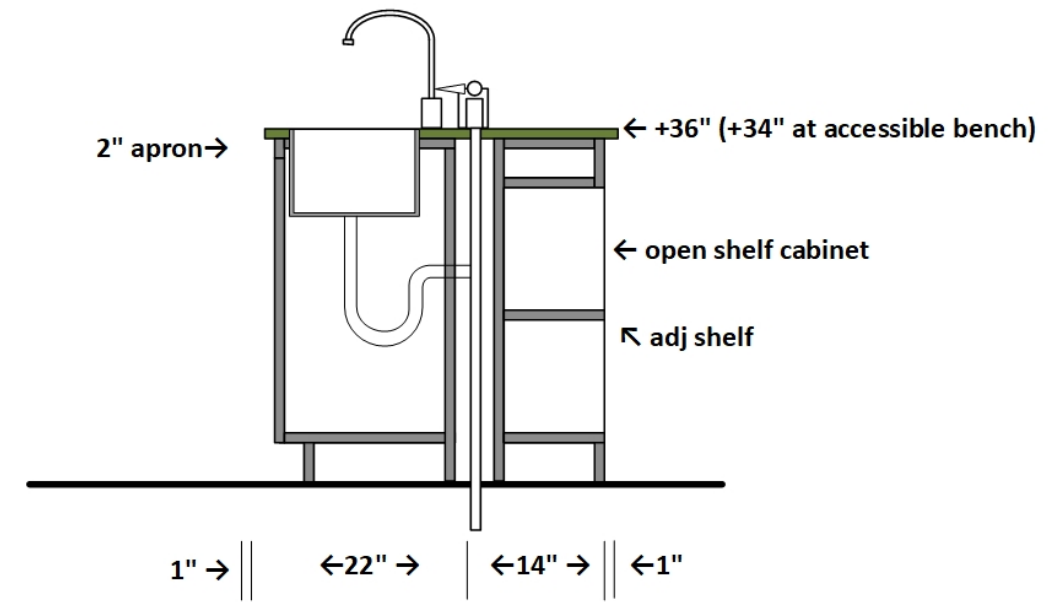


↑98" x 36" epoxy resin top

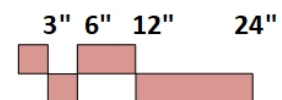
Side Elevation



Front Elevation



Section



PHOTOS OF SIMILAR LABS

PHOTOS OF SIMILAR LABS



Life Science teaching lab- Miramar College, San Diego.

This lab has mobile lab benches with overhead power cord reels.

Fixed perimeter bench with sinks.

PHOTOS OF SIMILAR LABS



Life Science teaching lab- Marin Academy (K-12), San Raphael, CA.

This lab has mobile lab benches with overhead power cord reels.

Fixed perimeter bench with sinks.

Mobile lab benches can be reconfigured in many patterns.



PHOTOS OF SIMILAR LABS



Chemistry teaching lab- De La Salle High School, Concord, CA.

Fixed peninsula scheme.



PHOTOS OF SIMILAR LABS



Life Science Lab Keck College, Claremont, CA.

These are glass side chemical fume hoods designed for teaching labs.

They allow for observation of many students during a demonstration.

EQUIPMENT CUT SHEETS

FUME HOOD CUT SHEET

4' glass side/back hood

4' Protector ClassMate Laboratory Hood



View online: <https://www.labconco.com/product/4-protector-classmate-laboratory-hood-10/6758>



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: 160405102

Specifications

- **Weight:** 435.0 lbs
- **Weight metric:** 197.3 kg
- **Dimensions:** 48.0" w x 32.7" d x 59.0" h
- **Dimensions metric:** 121.9 x 81.9 x 149.9 cm
- **Electrical:** 100-115V, 50/60 Hz, 10A
- **Product Subcategory:** Educational
- **Nominal Width:** 4'
- **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

Description

Features (All Models)

- SEFA 1 High Performance Hood.
- Patented design.
- By-pass airflow design.
- Glacier white powder-coated steel frame.
- Ergonomic air foil with aerodynamic Clean-Sweep airflow openings.
- Low-profile, ADA-compliant spill trough.
- Clear, 1/4" thick, tempered safety glass sides, back and removable baffle.
- 5° angled, 1/4" thick tempered safety glass stationary viewing panel and 3/16" thick chain-driven sash with anti-racking shaft and powder-coated steel frame that provides 37.5" high visibility.
- Powder-coated sash handle with aerodynamic Clean-Sweep airflow openings.
- High-performance, 3-piece glass baffle that pivots for cleaning.
- Cord-Keeper slots on left and right side of air foil.
- Pre-wired LED lighting, light switch and blower switch.
- Powder-coated stainless steel tissue screen located directly below exhaust outlet.
- Removable front panel, side panels and interior cover plates for access to plumbing and electrical wiring.
- Powder-coated stainless steel 12.81" ID exhaust connection.

Vertical-Rising Sash Models Feature

- Sash stop at 18" height from work surface (60% open). Can be field modified to 14" from work surface. Fully open sash is 28" from work surface.

Combination Sash Models Feature

- Combination horizontal-sliding/vertical-rising sashes that allow the operator to use the hood with the sashes half open either horizontally or vertically.
- Sash stop at 14" height from work surface (50% vertical opening). Can be field modified to 18" from work surface. Fully open sash is 28" from work surface.

Fixtured Models May 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 GFCI electrical duplex receptacle on lower right side.

Required Accessories (Not Included)

FUME HOOD CUT SHEET

4' pass thru hood

4' Protector Pass-Through Laboratory Hood with 2 fixtures, 1 receptacle, left window, 115V

View online: <https://www.labconco.com/product/4-protector-pass-through-laboratory-hood-with-2-fixtures-1-receptacle-le/5324>



Overview

Protector Pass-Through Laboratory Hoods offer sashes on two sides allowing operation on either side of the fume hood. An audible alarm sounds to prevent simultaneous opening of both sashes. With unobstructed visibility from either side, this hood is ideal for conducting chemistry demonstrations. An optional right-side or left-side viewing window further enhances visibility. These hoods may also be installed in the wall between two rooms for sample preparation.

Catalog Number: 113407002

Specifications

- **Weight:** 420.0 lbs
- **Weight metric:** 190.5 kg
- **Dimensions:** 48.0" w x 33.4" d x 59.0" h
- **Dimensions metric:** 121.9 x 84.8 x 149.9 cm
- **Electrical:** 100-115 volts, 50/60 Hz, 10 amps
- **Product Subcategory:** Educational, General Chemistry
- **Nominal Width:** 4'
- **Region:** International, U.S. and Canada
- **Blower Requirements:** Remote blower required
- **Conformance:** ADA, ANSI Z9.5, ASHRAE 110, ASTM E84, CAN/CSA C22.2, CFR 29, NFPA 45, SEFA 1, UL 1805, UL 61010
- **Electrical Duplexes:** 1
- **Enclosure Height:** 59.0"
- **Lighting:** T8 fluorescent
- **Service Fixtures:** 2
- **Style:** Benchtop

Description

Features

- By-pass airflow design and by-pass blocks, one for each sash
- Glacier white powder-coated steel and aluminum exterior
- Powder-coated steel Eco-Foil™ air foil with Clean-Sweep™ airflow openings.
- Cord-Keeper™ slots on left and right side of air foil
- Chemical-resistant molded composite panel interior sides and pre-set baffle with flame spread less than 25 per ASTM E84
- Powder-coated aluminum sash handle with Clean-Sweep™ openings and Clean-Sweep™ slots on the powder-coated steel sash tracks
- Two tempered safety glass vertical-rising sashes with cable pulleys and sash stops mounted at 25" (63.5 cm) opening height
- 37.5" (95.3 cm) high sightline from the work surface to the header panel
- Audible alarm that sounds when both sashes are open at the same time
- Removable front and side panels and front access panels for access to plumbing and electrical wiring
- Pre-wired T8 fluorescent lighting with vapor-proof design, one on each side and ADA-compliant light and blower switches on the front side
- Factory prepared for up to eight service fixtures, four on each side
- Powder-coated stainless steel 12.81" ID exhaust connection

Side Window Models Feature

- Right or left side-mounted tempered safety glass window, 14.9" x 23.9" (37.8 x 60.7 cm)

Fixture Models May Features

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

Required Accessories (Not Included)

- Remote blower
- Ductwork
- Work surface

FUME HOOD CUT SHEET

6' glass side/back hood

Can be located at exterior windows

6' Protector ClassMate Laboratory Hood



View online: <https://www.labconco.com/product/6-protector-classmate-laboratory-hood-10/6778>



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: 160605102

Specifications

- **Weight:** 610.0 lbs
- **Weight metric:** 276.7 kg
- **Dimensions:** 72.0" w x 32.7" d x 59.0" h
- **Dimensions metric:** 182.9 x 81.9 x 149.9 cm
- **Electrical:** 100-115V, 50/60 Hz, 10A
- **Product Subcategory:** Educational
- **Nominal Width:** 6'
- **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

Description

Features (All Models)

- SEFA 1 High Performance Hood.
- Patented design.
- By-pass airflow design.
- Glacier white powder-coated steel frame.
- Ergonomic air foil with aerodynamic Clean-Sweep airflow openings.
- Low-profile, ADA-compliant spill trough.
- Clear, 1/4" thick, tempered safety glass sides, back and removable baffle.
- 5° angled, 1/4" thick tempered safety glass stationary viewing panel and 3/16" thick chain-driven sash with anti-racking shaft and powder-coated steel frame that provides 37.5" high visibility.
- Powder-coated sash handle with aerodynamic Clean-Sweep airflow openings.
- High-performance, 3-piece glass baffle that pivots for cleaning.
- Cord-Keeper slots on left and right side of air foil.
- Pre-wired LED lighting, light switch and blower switch.
- Powder-coated stainless steel tissue screen located directly below exhaust outlet.
- Removable front panel, side panels and interior cover plates for access to plumbing and electrical wiring.
- Powder-coated stainless steel 12.81" ID exhaust connection.

Vertical-Rising Sash Models Feature

- Sash stop at 18" height from work surface (60% open). Can be field modified to 14" from work surface. Fully open sash is 28" from work surface.

Combination Sash Models Feature

- Combination horizontal-sliding/vertical-rising sashes that allow the operator to use the hood with the sashes half open either horizontally or vertically.
- Sash stop at 14" height from work surface (50% vertical opening). Can be field modified to 18" from work surface. Fully open sash is 28" from work surface.

Fixture Models May 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 GFCI electrical duplex receptacle on lower right side.



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. (910kg). 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.

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



Dry Storage — Chrome or Super Erecta Brite™



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



Mobile Stem Caster Cart



Mobile Dolly Truck

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

10.01A

Metro shelf units to be specified with heavy duty, locking casters, Super Adjustable shelf clips.



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





PRODUCT DIMENSIONS

DOMESTIC SIZES

LAB SINK CUT SHEET

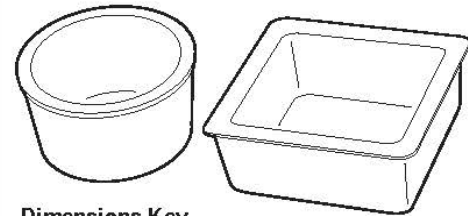
Standard Dropln® Sinks

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
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	

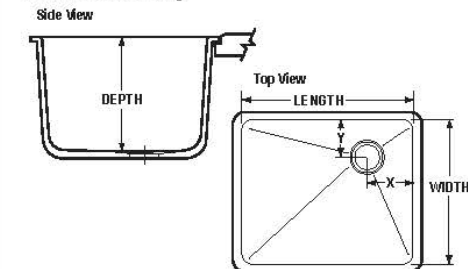
ADA compliant sinks are designated by this symbol.

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

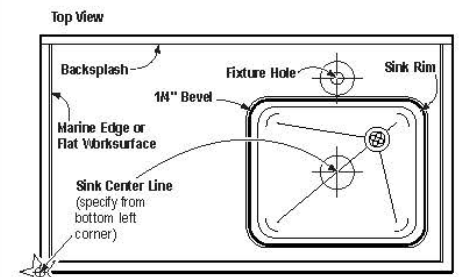
Dropln® Sink Styles



Dimensions Key



Installation Detail



Typical Lab Sink: D61
30" long x 16" wide x 17.8" deep

Accessible Lab Sink: A26.
18" long x 15" wide x 5/11" deep

Chemistry Island Sink: DRS12
12" round x 7.8" deep

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
D64*	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
D68*	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:

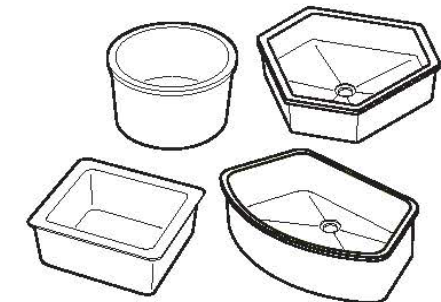
* Available only from Taylor, TX, plant (colors: Black Onyx, Gray, Graphite, Tan, Forest Green and Steel Blue).

** Available only from Canton, MI, plant (colors: Black Onyx, Gray and Alpine White).

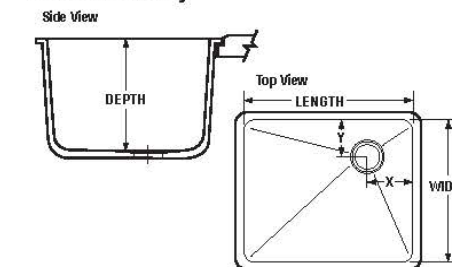
ADA compliant sinks are designated by this symbol.

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

Dropln® Sink Styles



Dimensions Key

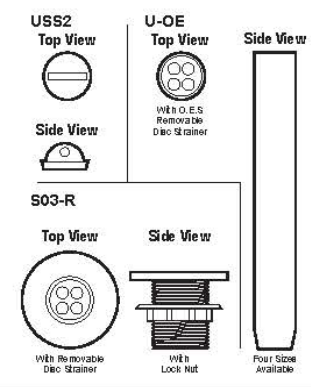


Sink Outlets & Accessories

Part No.	Description	Color Availability							Dimensions (in)		
		Black Onyx	Gray	Graphite	Forest Green	Steel Blue	Tan	Alpine White	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



WWW.DURCON.COM

206 Allison Drive • Taylor, TX 76574 • Phone: 512.595.8000 • Fax: 512.595.8400 • E-mail: sales@durcon.com

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Rev. 02/08

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Rev. 02/08



J-9620

INSTITUTIONAL GROUP
MULTI-STATION
SURGEON'S WASH-UP SINK
with SENSOR FAUCETS

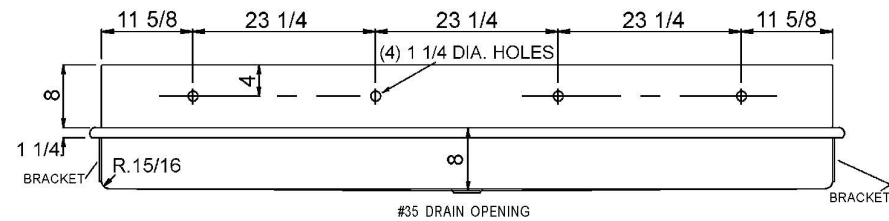
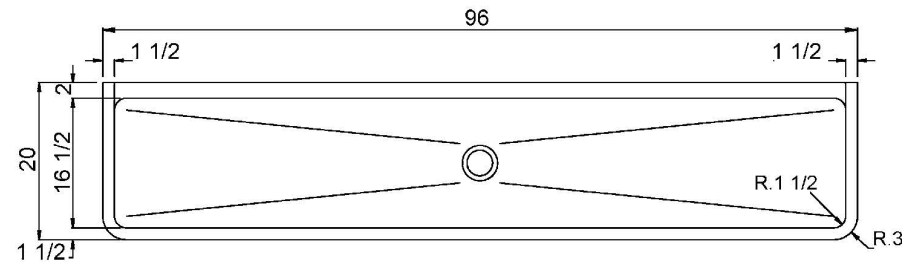
SUBMITTAL DATA



SPECIFICATION
 Seamless welded construction of 14 ga. type 304 stainless steel. 1-1/2" roll rim on front and sides. Interior surfaces polished with a Hand-Blended Just Finish. Exposed exterior surfaces to have a brush standard finish. Supported by two two 14 gauge, type 304 stainless steel wall brackets and 14 gauge stainless steel wall clips. Drain punched for Just J-35-FS drain. Certified to ASME/CSA B45.4; UPC; IPC.



Sink certified to ASME A112.19.3/CSA B45.4; Uniform Plumbing Code (UPC); International Plumbing Code (IPC), by NSF International. Certified less fittings.



APPROVED FOR MANUFACTURING

MODEL NO.: **J-9620** QTY: _____

JOB NAME: _____

TAG/ITEM: _____

CUSTOMER: _____

SIGNATURE: _____



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JUST MANUFACTURING COMPANY 9233 KING STREET . FRANKLIN PARK . ILLINOIS . 60131-2111
 PH: 847-678-5150 . FAX: 847-678-6817 . E-MAIL: custserv@justmfg.com . www.justmfg.com

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J9620

STAINLESS STEEL SINK CUT SHEET

To be specified with stainless steel legs at each of four corners.

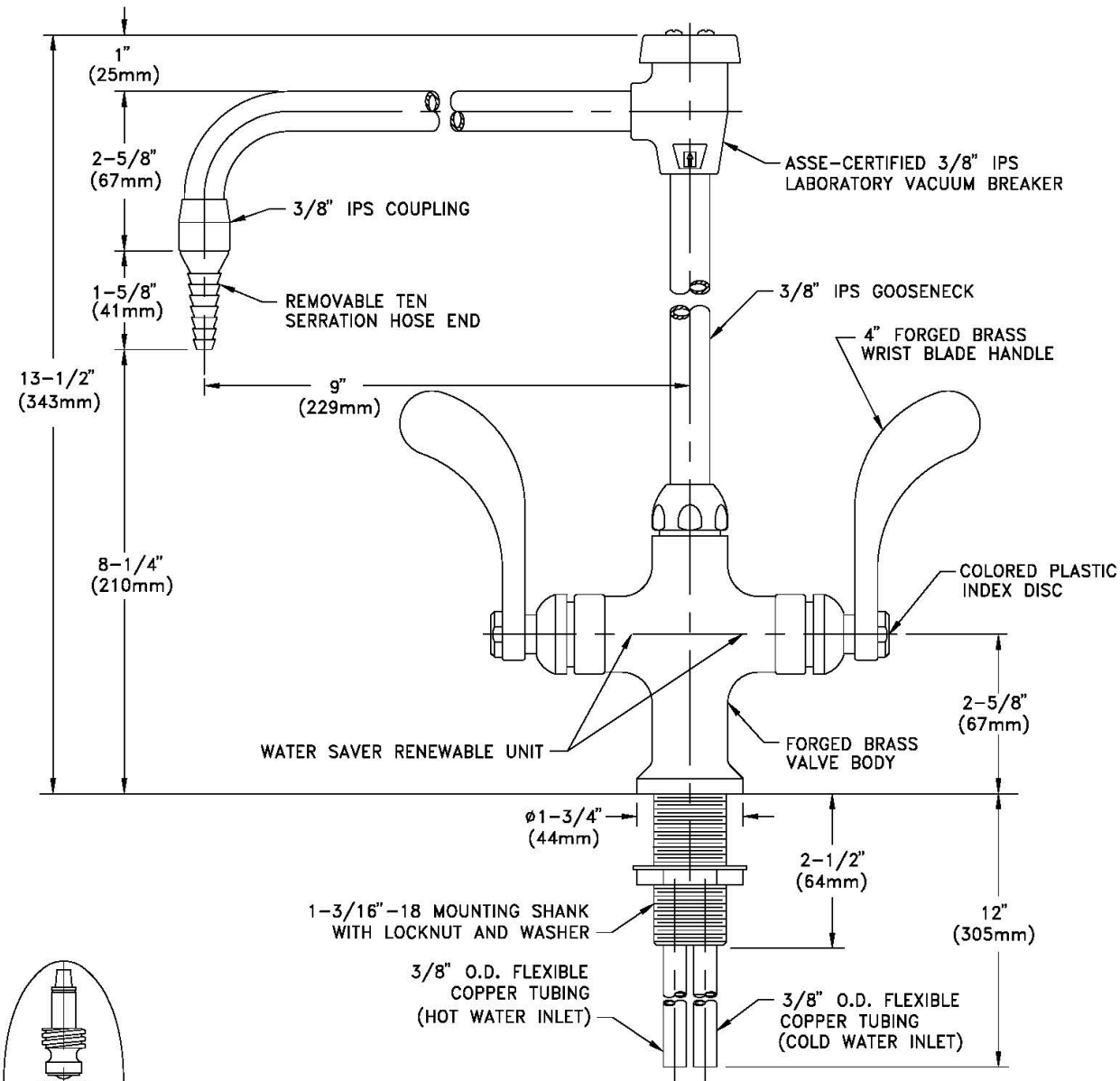
HOT/COLD WATER VALVE CUT SHEET

COLORTECH

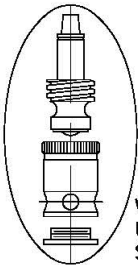
701 West Erie Street Phone 312 666 5500
Chicago, Illinois 60610 Fax 312 666 8597

Laboratory Service Fixtures by
WaterSaver Faucet Co.

CT414-9VB-BH
LABORATORY MIXING FAUCET, DECK MOUNTED, 9" RIGID/SWING VACUUM BREAKER GOOSENECK, WRIST
BLADE HANDLES



Satin Chrome finish with clear epoxy.



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

HOT/COLD WATER SPRAY FAUCET CUT SHEET



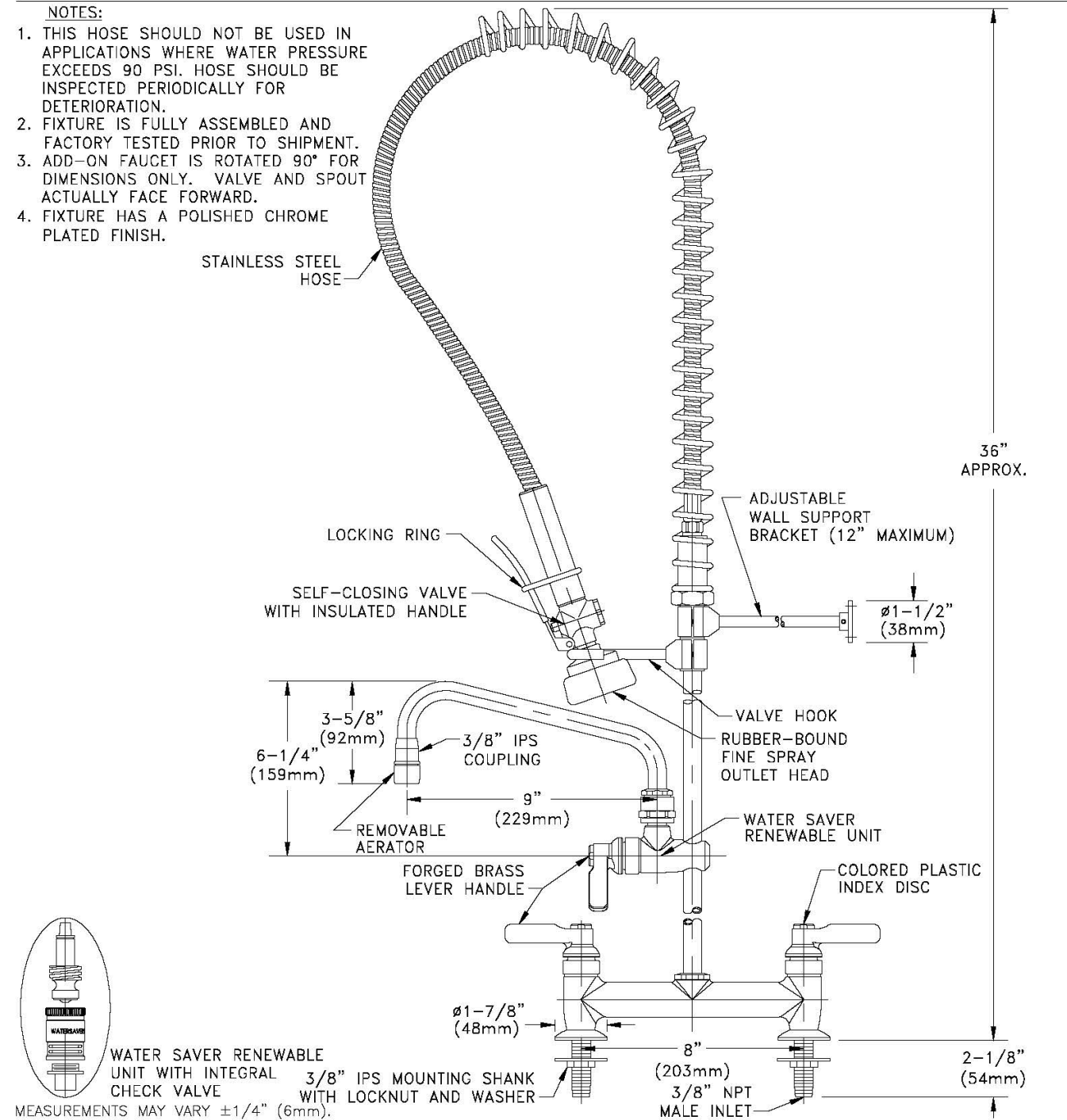
WaterSaver Faucet
701 W Erie St
Chicago, IL 60654

312 666 5500 TELEPHONE
312 666 5501 FACSIMILE
wsflab.com

PR1511AOF-LE-WSA
PRE-RINSE UNIT, HOT AND COLD WATER, DECK MOUNTED, ADD-ON FAUCET, 9" SWING SPOUT,
LEVER HANDLES

NOTES:

1. THIS HOSE SHOULD NOT BE USED IN APPLICATIONS WHERE WATER PRESSURE EXCEEDS 90 PSI. HOSE SHOULD BE INSPECTED PERIODICALLY FOR DETERIORATION.
2. FIXTURE IS FULLY ASSEMBLED AND FACTORY TESTED PRIOR TO SHIPMENT.
3. ADD-ON FAUCET IS ROTATED 90° FOR DIMENSIONS ONLY. VALVE AND SPOUT ACTUALLY FACE FORWARD.
4. FIXTURE HAS A POLISHED CHROME PLATED FINISH.



Panel mount version will be specified to conform with sink design.

Drawing Number: _____ Revision Number: 042213-TEC

SAFETY SHOWER/EYEWASH CUT SHEET



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.

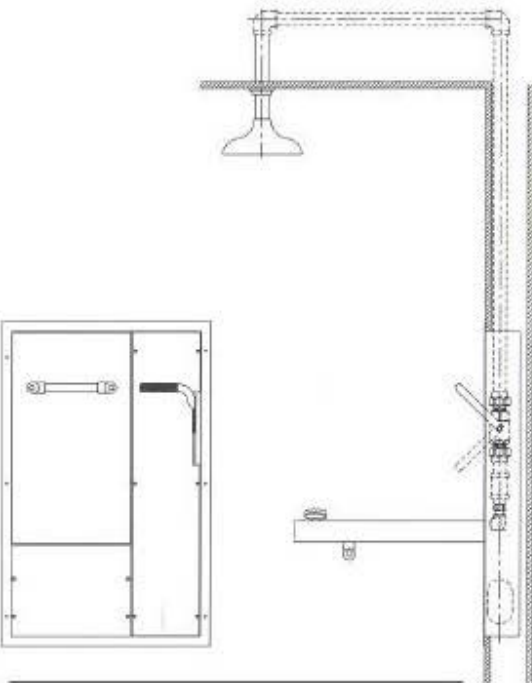
U.S. Patent: 5,768,721

Available Options:

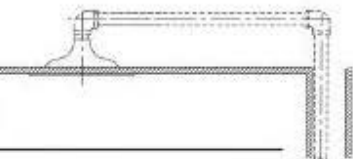
AP280-220 Electric Light and Alarm Horn. Flashing light is mounted on wall above unit. Alarm horn is recess mounted in wall next to light. Light is illuminated and horn sounds when either eye/face wash or shower is activated. See page 87 for complete information.

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.

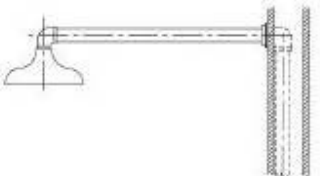
CTSSBF2150
Recessed Safety Station
with Drain Pan



CTSSBF2160
Same as above except with recess mounted shower head.



CTSSBF2170
Same as above except with wall mounted shower head.



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