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REPORT

December 2024

TOWN OF
Londonderry
NEW HAMPSHIRE

**NEW PUBLIC WORKS FACILITY
MASTER PLAN FEASIBILITY STUDY**



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I. Introduction

The Town of Londonderry retained the services of Weston & Sampson to study existing operations and prepare long-term planning solutions for their Department of Public Works (DPW) – comprised of Administration, Engineering, Highway, Buildings & Grounds, Fleet Maintenance and Drop-Off Center divisions. Following initial consideration of relocating the facility, it was determined that the DPW would remain at its current High Range Road location, with a detailed program of renovation and new construction to address the Department’s needs into the foreseeable future. The purpose of this feasibility study is to conceptualize options for a redeveloped facility to optimally support the various divisions (with the exception of Drop-Off Center operations) as well as DPW-wide training sessions, public meetings, and periodic staff accommodation during major weather events. The study process included observing the existing Department facilities and key operations, identifying programmatic building and site needs, drafting conceptual design options, and preparing cost estimates. Additional review and updates to the feasibility study are anticipated once the Town authorizes support and funds to advance the project.

II. Program Assessment

The Project Team prepared a program assessment to identify current and future needs of the DPW. The assessment includes a kick-off discussion with key workforce to understand current program deficiencies in the existing facilities which need to be corrected with the construction of a new facility. The staff interviews were conducted with support by Weston & Sampson’s knowledge of industry practices and familiarity with solutions which have been implemented on recently constructed public works facilities. Copies of our Staff Interview Notes and User Group Analysis are included in [Appendix A](#).

Operational Analysis

The operational analysis was completed through the observation of the existing facilities which are used to support the various Department operations, and a determination of the functional inadequacies and space limitations of the existing building and site components.

The existing operations are supported out of the existing facility located at High Range Road, with an additional satellite facility at the Drop-Off Center at 13 Recovery Way. The High Range Road facility consists of a main Administration and Staff support building constructed in 2015, a multi-purpose Shop building for maintenance operations built in approximately 1970 and subsequently expanded, unheated vehicle, equipment and materials storage in canopy structures, re-purposed trailers, storage containers and utility sheds, salt sheds and a fuel station. This facility has undergone minimal upgrades to support the current operations. As a result, there are several operational inefficiencies which impact the level of service that the DPW is able to provide to the community. These include the following:

- Facility is undersized and is unable to efficiently support current operations which results in a portion of the Department's high-value vehicles and equipment to be stored outdoors or crammed into undersized storage areas. This impacts response times during cold and inclement weather conditions.
- Inadequate space for secure storage of small equipment and materials.
- Limited facilities to support the staff. The Men's locker room is small and cramped, and toilets are located in a separate space. There are no Women's lockers or showers. The Kitchen is small and cannot be used without disruption to meetings or training in the adjacent Muster room.
- Inadequate working conditions including:
 - Poor ventilation
 - Inadequate lighting
 - Confined workshop areas

These deficiencies directly impact operations, safety, and the efficiency of service that the DPW staff is able to provide. A selection of photographs which illustrate some of the deficiencies / inefficient conditions observed in the existing facility has been included in [Appendix B](#) of this report.

Preliminary Programming Interviews

The staff interviews conducted by the Project Team focused on identifying all operational divisions or groups that will occupy the new facility and understanding the operations and services that need to be supported on the site. The interviews focused on staffing requirements and space needs for administration and engineering, shop operations, fleet maintenance, parts and materials, equipment, and vehicles. The information obtained during these interviews included detailed accounts of space deficiencies in the existing facilities which impact day-to-day operations. A summary of the departmental organization and fleet inventory is as follows:

DPW Staffing Summary

Division	Fulltime	Parttime	Future	TOTAL
1. Administration	2	1	1	4
2. Engineering	3		1	4
3. Highway	11	3		14
4. Buildings & Grounds	1		1	2
5. Fleet Maintenance	1		1	2
6. Drop-off Center	0	2		2
Total	18	6	4	28

It is understood that Drop-Off Center operations and staff will remain at the existing remote facility and do not require any dedicated space at High Range Road. Also, the three (3) contract plow drivers working for the Highway division in the Winter do not require any dedicated space and are not counted in the Staffing Summary above.

Vehicles and Equipment:

There are a total of 21 vehicles, 4 pieces of large equipment, and 3 trailers, plus equipment, and attachments in the Fleet Inventory. Most of this requires indoor storage for best reliability and longevity, although some items such as trailers, plows, etc., can be stored under outdoor canopies if necessary.

Indoor Storage Requirements			
Large Vehicles	17	Large Equipment	5
Trailers	3	Medium Equipment	2
Small Vehicles	5	Small Equipment	3
		Extra Small Equipment	*
		Attachments and Plows	35

*This listing does not include miscellaneous small support equipment such as pumps, hand tools, etc. However, provisions for storage of these types of items have been included in the final program for the Shop, Vehicle Maintenance and Vehicle Storage areas.

Space Needs & Room Data Sheets

The data obtained from the operations analysis and interviews were compiled and analyzed by Weston & Sampson. The process included developing a comprehensive space allocation matrix of individual rooms and spaces for each major facility function including offices, office support areas, employee facilities, utility support spaces, workshops and material storage, fleet maintenance, wash area, and fleet storage. The analysis also included diagrammatic, generic floor plans and 3D views for each individual room or space listed in the program matrix.

The space needs assessment identified an initial program requirement of approximately 48,000 gross square feet, as follows:

Initial Space Needs Program:	Area (gsf)
Administration & Employee Facilities	10,290
Workshops	2,620
Fleet Maintenance	8,060
Wash Bay	2,340
Equipment & Vehicle Storage	24,675
Total Building Area	47,985

The detailed initial Space Needs Assessment and corresponding Room Data Sheets are included in [Appendix D](#).

The results of the initial space needs assessment were then reviewed in detail by the Project Team and DPW staff to identify efficiencies and reductions in the program that could be implemented without negatively impacting safety and efficient operations. Attention was focused on the vehicle and equipment storage needs to determine more accurate space requirements. This included a process of identifying what fleet items can be stored outside without substantial impact on longevity and replacement costs, what vehicles and equipment should be stored under canopy cover, and what fleet items must be stored indoors with minimal heat.

With input from the DPW, the Project Team was able to develop a reduced program building total from the initial assessment, including maximizing the re-use of existing office and support space in the Staff/Administration building. This resulted in a reduction of slightly more than 6%, for a total building area of 44,990 gross square feet. Periodic review meetings with the DPW helped to clarify and confirm our understanding of the various operational groups' space needs in a new and renovated facility, as well as the needs of other potential Town users who may utilize the sites' services (i.e. fuel, fleet maintenance, vehicle wash, etc.). This Preferred Concept Design program was then used as a guideline for developing conceptual building plans and site development alternatives.

Program – Preferred Concept Design	Area (gsf)
Administration & Employee Facilities	10,465
Workshops	2,620
Fleet Maintenance	7,525
Wash Bay	1,980
Equipment & Vehicle Storage	22,400
Total Building Area	44,990

Site Requirements and Constraints

In parallel with the development of the building space and operational program discussed above, we also identified the requirements for exterior site elements, including access and parking, vehicle circulation, security fencing and site access control, employee and public parking, fueling facilities, public sand/salt storage, backup generator, dumpsters, bulk materials bins, covered storage canopies, open materials handling areas, sand and salt sheds, stormwater management features, etc. Space requirements for these elements were combined with associated access and maneuvering space and the anticipated footprint of the programmed buildings. This yielded a general planning value for the overall facility of 284,000 square feet (6.52 acres). The actual usable site area at High Range Road is approximately 7.5 acres, confirming that the overall “fit” of the required site and building program is appropriate. The recommended site program is included in [Appendix D](#).

The study team also reviewed the applicable provisions of the Londonderry Zoning By-Law and general environmental permitting requirements for the High Range Road site. No significant constraints to the proposed redevelopment of the site were found. The Zoning and Permitting Review Memorandum is included in [Appendix E](#).

Comparison with Other Communities

The proposed size of the redeveloped Londonderry DPW facility is consistent with recently-constructed or programmed facilities for New England communities of similar character, geographic size, population and street mileage. Comparable examples include the following:

Rochester, NH

- Land Area: 42.8 sq. mi.
- Street Miles: 180
- Population: 29,745
- DPW Building Size: 59,666 sq. ft.
- Facility Size per Capita: 2.01 sq. ft. per capita
- Facility Size per Street Mile: 331 sq. ft. per mile

Londonderry, NH

- Land Area: **41.9** sq. mi.
- Street Miles: **180**
- Population: **23,236**
- DPW Building Size: **46,337** sq. ft.
- Facility Size per Capita: **1.99** sq. ft. per capita
- Facility Size per Street Mile: **257** sq. ft. per mile

Bourne, MA

- Land Area: 52.9 sq. mi.
- Street Miles: 200
- Population: 19,800
- DPW Building Size: 39,040 sq. ft.
- Facility Size per Capita: 1.97 sq. ft. per capita
- Facility Size per Street Mile: 195 sq. ft. per mile

Sandwich, MA

- Land Area: 44.2 sq. mi.
- Street Miles: 150
- Population: 20,260
- DPW Building Size: 37,325 sq. ft.
- Facility Size per Capita: 1.84 sq. ft. per capita
- Facility Size per Street Mile: 250 sq. ft. per mile

III. Conceptual Design Alternatives

Based on the results of the final space needs assessment, the Project Team prepared a series of conceptual site plan options for the redevelopment of the High Range Road Facility. In consultation with the DPW, the Project Team identified multiple phasing scenarios to support operational needs while also taking potential capital funding scenarios and budget constraints into consideration.

The conceptual plans were prepared with the following considerations in mind:

- Maximize the re-use of existing facilities, including the Staff/Administration building, Shops building and the newer salt shed.
- Allow for fueling facility to be accessible 24/7, outside yard gates.
- Arrange interior space to provide efficient circulation patterns.
- Establish a clear visual identity for the redeveloped facility, with a well-defined public entrance centered on the entrance driveway.
- Provide additional parking for emergency storm operations and training events.
- Provide full access and safe vehicle movement around all areas of the facility, with clear separation of public traffic, staff parking, and heavy vehicle circulation.
- Provide bulk material storage areas with adequate yard area for large vehicle maneuvering.
- Maintain safe and functional access to/from the salt operations area under winter storm conditions.

An initial site plan layout was prepared by developing “Block Building Plans”. These Block Building Plans were developed for each of the major space categories for the redeveloped facility as follows:

- Administration & Office Support Areas
- Employee Facilities
- Workshops
- Vehicle Maintenance
- Vehicle / Equipment Storage
- Wash Bay

The various conceptual site plans were reviewed with the DPW to better understand the Town's priorities for the redeveloped new facility and to solicit feedback on site layout preferences. Option C was the DPW's preferred approach, and a series of review meetings clarified the Department's immediate priorities to include the new Vehicle Storage building and Vehicle Maintenance shops. the majority of fleet maintenance functions, a replacement salt shed, fueling, and a wash bay. After completing a comprehensive assessment of the conceptual site plans, the preferred Option C was finalized to incorporate the DPW's feedback. The initial conceptual site plans are included in [Appendix F](#) and the preferred conceptual site plan is included in [Appendix G](#).

IV. Conceptual Cost Estimate and Project Schedule

A conceptual cost estimate was prepared for each scenario, using square foot costs based on historical data for similar DPW facilities. In general, the cost estimate assumes durable, cost-effective building systems, finishes, and equipment as identified in the estimate spreadsheets and as described for renovation and new construction as follows:

- Construction of a new pre-engineered metal building with partial masonry wall finish and concrete protection wall for the vehicle storage, maintenance area, wash bay, and shops.
- Factory foam insulated architectural metal wall panels and standing seam metal roofing.
- Primary industrial support equipment for vehicle maintenance operations.
- Site improvements, including storm water management and paving upgrades.
- Interior renovations to the existing Staff/Administration building to maximize Staff facilities while preserving existing spaces including offices, toilet rooms, sleeping areas, etc.
- Renovations to the existing Shops building to accommodate general trade shops, with the addition of a new enclosed Vehicle Wash Bay at the North side of the building.
- New diesel and gasoline fueling facility with underground tanks and canopy.
- Consolidate general storage – eliminate multiple small structures, trailers, C-boxes, etc.
- Maintaining critical DPW operations on-site during construction
- Include contingency allowances for unanticipated design phase and construction costs.

The preferred building program, as adapted to include the optimized re-use of the Administration/Staff building, the Shop and larger existing Salt Shed, includes approximately 38,400 square feet of new construction, 5,900 square feet of renovated existing space, and approximately 650 square feet of un-renovated existing space. The estimated development budget for the full-build-out of all the identified program elements, including demolition, site improvements, renovation and new construction, plus Owner's soft costs, is approximately \$44,250,000.00.

In order to address potential capital funding scenarios and budget constraints, a series of phased development plans and associated budgets were prepared. These included the following:

Full build out of all required elements, beginning in FY 2025 - \$44,250,00.00.

Phased Construction:

- Phase I – Vehicle Maintenance and Storage, plus overall site development, utilities, stormwater management, etc., beginning in FY 2026 - \$30,220,000.00
- Phase II – Staff and Administration areas (renovation and new construction), new Vehicle Wash and Shop renovations, etc., beginning in FY 2028 - \$9,930,000.00
- Phase III - New Fuel Island, Salt Shed, storage Canopy and remaining site work, beginning in FY 2030 - \$5,080,000.00
- Phase IIIA – Additional Administration and Engineering Suite (addition to the existing Staff/Administration building), beginning in FY 2030 - \$1,810,000.00

Due to escalation, phased implementation of the project carries certain premium costs. These may vary due to unknown future conditions, including construction market conditions, costs of financing, possible design changes, etc., but may be initially characterized as follows:

- Phased Construction FY 2025 – FY 2030, project design documents prepared sequentially for each individual Phase - \$47,040,949.00. Phasing Premium \$2,793,335.00
- Phased Construction FY 2025 – FY 2030, full project design documents for all Phases prepared as part of Phase I - \$46,847,395.00. Phasing Premium \$2,599,781.00

Each conceptual development budget is included in [Appendix H](#).

In the development budgets, the estimated costs for renovation, new building construction and site improvements are based on costs of similar recent construction for which bid prices are available, supplemented by cost data obtained from published sources. Prices are based on anticipated 2025 costs and each successive Phase budget accounts for nominal annual escalation. Adjusted escalation factors should be considered once the actual project timeline has been established by the Town and as construction market conditions continue to evolve.

Due to the preliminary nature of the development of the design for this project, many budget items are based on general building costs per square foot, with site development costs on a per-acre basis. Estimates include a design contingency to allow for scope adjustments which may be identified during the further development of the design. In addition, the estimates include a construction contingency to account for potential unforeseen conditions which may be discovered during construction.

For reference, a comparison graph of total construction cost per square foot, showing data from comparable, recently bid and completed DPW facilities is included in [Appendix I](#).

APPENDIX A
STAFF INTERVIEW NOTES
&
USER GROUP ANALYSIS

Project: Londonderry DPW
Address: DPW Barn, Londonderry, NH 03053
Date: October 24, 2023
Subject: Staff Interview Notes
Attendees: *Weston & Sampson:* Dan Tenney, Matt Doyle, Paul Rudolph, Fred Soule.

Town of Londonderry: Dave Wholly DPW & Facilities Dr; Paul Schacht, DPW Foreman; Ricky Robichaud, B&G Asst Foreman; Karl Anderson, Hwy Asst Foreman; Jim Guzowski, Hwy Chief Mechanic.

STAFFING SUMMARY:

Division/ Department	Admin	Workforce	Future	Seasonal	Locker	Parking
Administration	2*	n/a	n/a	1 Admin. Intern	4	4
Engineering	3*	n/a	+ (1) Ast. Eng.	-	4	4
DPW Admin.	2	n/a	+ (1) Admin. ast.	n/a	2	2
Highway	n/a	9		(3) Part time (Plowing) (3) Contractors (Plowing)	9	15
Building & Grounds	n/a	1	+ (1)	n/a	2	2
Vehicle Maintenance	n/a	1	+ (1)	n/a	2	2
Transfer Station	n/a	n/a	n/a	1 PT**	1	1
TOTAL:	7	11	+ (4)	(8)	24	30

+ (x) – Need future full-time employment.

* – Staff currently located at the town hall offices

** - Staff currently located at the transfer station

General Notes

- Site use to be an EPA super fund site
- Maintenance garage was built in 1970
- If program is combined on one site will need public entrance; currently non-accessible site, no one available on site for complaints / assistance (residents report to Town Hall)
- Move asst. foreman to shared office in admin & provide more space / privacy.
- Currently 3 employees shared single office space in maintenance building.
- Break/lunchroom currently serves as conference room, muster room, meeting room.
- Kitchen currently part of meeting space
- Need larger break room for training, more professional space
- No women's locker currently
- Would like separate muster room from conference room, but can be combined muster/training room
- Desired small conference room for training
- None in current facility.
- Small closet for cleaning supplies would be nice
- Tel/data currently located in mechanical room
- Need tel/data equipment space, maybe not dedicated closet
- Electric panel currently located in mechanical room
- Need electric panel(s), maybe dedicated location
- Need a sign shop
- Signs currently stored throughout trailers on site
- Dedicated sign storage room
 - Storage racks
- Additional storage space for cones, poles, barrels, barricades, etc.
- Parts currently distributed (1st & 2nd floor) within Maintenance Bay
- Three (3) employee shared desk space now
- Provide space for two workstations?
- No accessible bath – admin building provides 2 restrooms
- Currently in a room with CMU walls in garage.
- Need dedicated compressor room adjacent to Mechanics areas
- Utility room – large enough to accommodate large air compressor, HVAC, electrical panels, and storage of cleaning supplies
- Currently cleaning vehicles with power wash / garden hose
- Indoor vehicle storage could be considered in future facility.
- Current fleet is under roof structures, except for two 1 ton dump trucks
- Vehicles are plugged in to keep diesel engines ready to go in winter
- Want larger covered salt & sand barn or desired 3rd shed to keep dry

Town Hall

- Easily accessible building entrance / public for public (behind building)
- Dept. Public Works offices located on second floor of Town Hall

- Relocate cabinet office storage behind Admin Assist. currently behind her workspace in the way
- Admin assistants staffed at Town Hall - *Admin staff may move to new facility if space exists*
- Works efficiently in same location with other town offices
- Current conference room shared between divisions creating clutter – would need a conference room space in new facility
- Private conference room / layout space off the waiting area
- Current conference room shared between divisions creating clutter – would need a conference room space in new facility
- Currently mail room located on first floor
- Would need a mail room for admin. / eng. if operations move
- Copy room accessible on 2nd floor
- Need additional storage to keep cradle to grave files (could be off site)
- Responsible for town invoices, tracking budget & material amount
- Adopting physical files – scan – file to computer process
- Currently sharing layout spaces between divisions
- More countertop / layout space for engineering outside of personal office space
- Accessible bathrooms throughout building
- Currently accessible staff showers if needed
- Would need accessible locker space in new facility

Overview of Divisions:

Space Needs Assessment:

OFFICE & OFFICE SUPPORT	
Name of Space	Description
Vestibule/Lobby	<u>DPW</u> <ul style="list-style-type: none"> • Would like small waiting area; currently non-accessible building, no one available on site for complaints / assistance (residence report to Town Hall) • Small parking area separate from employee parking
	<u>Town Hall</u> <ul style="list-style-type: none"> • Dept. Assist. wants more professional designated area with glass window + service counter • Seating for 3 to 4 visitor chairs a time in lobby • Provide display screen & bulletin board in lobby • Pamphlet wall display space

Public Consulting / Conference Room	<ul style="list-style-type: none"> • Small private conference room for seating of 4 to 6 ppl. • Accessed directly off the public lobby
Public Restroom	<ul style="list-style-type: none"> • Public ADA unisex restroom • Accessed directly off the public lobby
Admin Area (Open Offices)	<ul style="list-style-type: none"> • Department Assistants desk located at window/counter to public lobby • Workstation for 2 staff • Provide space for future engineering staff in open office
Offices (private, shared, open)	<p><u>DPW</u></p> <ul style="list-style-type: none"> • (2) Offices: DPW Director & Head Foreman • Shared office for DPW Assist. foreman (2) <p><u>Town Hall</u></p> <ul style="list-style-type: none"> • (4) Offices: Engineering Director, Asst. Engineer (VACANT), Environment Engineer, Admin. Assistant sized similar to existing
Conference room	<p><u>DPW</u></p> <ul style="list-style-type: none"> • Small conference room for collaborative meeting / training, seating for 4 to 6 ppl. • Larger conference room for seating for 10 to 12 ppl. <p><u>Town Hall</u></p> <ul style="list-style-type: none"> • Conference room space for engineering. If in same building could share with DPW
Copy / Mail Room	<p><u>DPW</u></p> <ul style="list-style-type: none"> • Small printers located in office spaces (separate area not necessary) <p><u>Town Hall</u></p> <ul style="list-style-type: none"> • Small mail /copy room for admin. / eng.
File Storage	<p><u>DPW</u></p> <ul style="list-style-type: none"> • Small storage area for DPW staff. Most files are kept with admin. operation. <p><u>Town Hall</u></p> <ul style="list-style-type: none"> • File Storage room for admin paperwork. Town invoices, tracking budget & material amounts, etc. • Storage space to keep cradle to grave files (could be off site) • Town invoice
Layout Area	<p><u>DPW</u></p> <ul style="list-style-type: none"> • Not required <p><u>Town Hall</u></p> <ul style="list-style-type: none"> • Dedicated layout space for plans / maps for engineering
Admin Restrooms	<ul style="list-style-type: none"> • 1 male, 1 unisex/gender neutral • single user - men & women restroom
Kitchenette	<p><u>DPW</u></p> <ul style="list-style-type: none"> • Small kitchenette in Admin Area • Counter, sink, cabinets, coffee maker, microwave
Storage	<ul style="list-style-type: none"> • Storage closet needed for office supplies

EMPLOYEE FACILITIES	
Name of Space	Description
Staff Entrance	<u>DPW</u> <ul style="list-style-type: none"> • Area for time clock and timecards, communication device storage
Male Locker Room	<u>DPW</u> <ul style="list-style-type: none"> • Full size lockers for all staff (24x24 full height desired) • Part time / seasonal staff do not require lockers • Provide minimum of 2 showers • Urinals, toilet stalls, sinks • Benches/ changing space in front of lockers <u>Town Hall</u> <ul style="list-style-type: none"> • Admin./ Engineering staff should be accounted for in locker room totals.
Female Locker Room	<ul style="list-style-type: none"> • Provide full size lockers (24x24 full height desired) • Benches/ changing space in front of lockers • 1 shower • Toilet, sink
Mudroom / Laundry (sanitation wash-off)	<u>DPW</u> <ul style="list-style-type: none"> • Wet alcove/mud room located near locker room for wet gear
Muster/ Break / Training Room	<u>DPW</u> <ul style="list-style-type: none"> • Combined Break area, Muster & training room • Sized for +/- 30, to fit full staff • Large lunchroom tables & chairs • General kitchen area: cabinets/ counter, stove, Refrigerator, sink, dishwasher, Microwave, coffee maker. • Potential partition wall to separate room • Storage closet associated with Muster room
Bunk Room	<ul style="list-style-type: none"> • Provide individual bunk space for up to 20 staff • Twin sized bed, small side table • Outlets to charge devices.
Storage (i.e. PPE, general)	<ul style="list-style-type: none"> • Provide general storage closet for gear, etc.

UTILITY ROOMS	
Name of Space	Description
Janitor Closet	<ul style="list-style-type: none"> • Small Janitors closet with mop sink, mop rack, cleaning supplies, etc.
Tel/Data Room	<ul style="list-style-type: none"> • Need dedicated tel/data equipment space
Electrical Room	<ul style="list-style-type: none"> • Room for main service electric panel(s)
PL/FP Room	<ul style="list-style-type: none"> • Room for water/sprinkler system to come into building
Mechanical Room	<ul style="list-style-type: none"> • Mech room for new systems

WORKSHOPS & MATERIAL STORAGE	
Name of Space	Description
Carpentry Shop	<ul style="list-style-type: none"> • Workshop space dedicated for carpentry (building maintenance) <ul style="list-style-type: none"> ▪ Secure Tool crib ▪ Cabinet storage ▪ Work bench ▪ Compressed air ▪ Work lighting ▪ A/C ▪ Dust control • Paint storage • Small garage door – for loading / unloading items
Sign Shop	<ul style="list-style-type: none"> • Dedicated sign storage room <ul style="list-style-type: none"> ▪ Storage racks • No printing required (buy signs premade) • Potentially include additional space for storage of cones, poles, barrels, barricades, etc.
Highway Shop	<ul style="list-style-type: none"> • Workbenches • Area for small equipment repairs, maintenance • Garage door – for loading / unloading. • Secure tool crib •
Equipment Storage	<ul style="list-style-type: none"> • Storage for groundskeeping equipment storage (wheelbarrows, compactors, trimmers, rakes, shovels, etc)

FLEET MAINTENANCE	
Name of Space	Description
Maintenance Bays (quantity & sizes)	<ul style="list-style-type: none"> • Min. 20 ft ceiling height to accommodate truck lifts (currently 16ft) • 16' x 18' garage doors to accommodate tall equipment (currently 12'x16') • Min 4.25" 3000psi reinforced concrete floor to accommodate vehicle lift installation • Radiant floor heating, heats the building & helps dry equipment during winter • Portable or fixed vehicle lift for 6 wheel trucks • Overhead bridge crane covering at least 1 garage, 2-ton minimum lifting cap. • All bays include plumbing for compressed air reel on wall, 1 220v outlet, 2 100v outlets • White painted walls to create bright work space • Equivalent of (1) 240W 30,000 lumen light per 400sqft of space • Concrete pad outside garage doors for sanding, rusting scaling, and working outside. Roof to extend over edge of building 20ft providing carport cover
Mechanic's Workshop Area	<ul style="list-style-type: none"> • Welding / fabrication area – 250+ sqft, proper overhead ventilation, min. 2 220v electrical outlets, plumbed for air • Laundry sink and eye wash station accessible directly on either end of the garage
Fluids Room	<ul style="list-style-type: none"> • Fluids storage room – 250+ sqft plumbed for air to accommodate bulk fluid storage, containment area, level with garage floor to accommodate drum dolly access, plumbing for 2 bulk oil systems in garage bay, (currently 120sqft)
Parts / Material Storage	<ul style="list-style-type: none"> • Parts room – 600sf, wired to accommodate hose crimp machine (currently 200sf mezzanine)
Tire Storage	<ul style="list-style-type: none"> • Provide indoor tire storage with direct access to the maintenance bays • Only need tire storage do not do any repair/ mounting in house • Currently tired located in trailer outside
Hydraulic Hose Workshop	<ul style="list-style-type: none"> • Small workshop area
Mechanics Office	<ul style="list-style-type: none"> • Need office space abutting garage – convenient access to computer for diagnostics
Mechanics Toilet	Single user bathroom with direct adjacency to maintenance bays
Compressor Room	<ul style="list-style-type: none"> • Noise of compressor is an issue. • Provide dedicated room for air compressor and any additional utilities Room should be acoustically separated

WASH AREA	
Name of Space	Description
Wash Bay	<ul style="list-style-type: none"> • Drive-thru bay - preferred • Under-carriage wash • Plumbed for 2" fire hose and garden hose hookup, 10ft catwalk around sides for washing large equipment. • Explore possibility of bay doubling as a paint bay – plumbed for air to accommodate spray guns, proper ventilation for painting • Wash equipment room
Knock-Down Pad	<ul style="list-style-type: none"> • Concrete pad outside wash-bay for initial spray down • Catwalk for larger equipment

FLEET STORAGE	
Name of Space	Description
Indoor Storage	<ul style="list-style-type: none"> • Drive-thru center drive aisle – preferred • Sized to fit the main fleet • Storage for additional equipment
Canopy Storage	<ul style="list-style-type: none"> • Canopy storage on sides of salt shed for additional equipment • Trailers, Sander bodies, etc.

TRANSFER STATION	
Name of Space	Description
Site	<ul style="list-style-type: none"> • Current site is 2.1 acres • Current configuration established 2011 • (1) Scrap metal fills per week • Have roll off for large plastic • Cage for propane tanks • Salvation army container for donations • Cardboard recycle bins (semi-circle alignment) • Yard waste & brush piles in the back • Average visit – 10-15 minutes • Current site not adequate for year-round service • Study should show potential layout & cost for transfer station to relocate to alternative site & operate year round • The proposed alternative site (Town Hall location) for the DPW facility includes provision for an adjacent Transfer Station with public access • Transfer station would need separate entrance

Staff Area	<ul style="list-style-type: none"> • Area to collect money (fee doesn't currently cover total operating cost) • Credit card payment (no cash) – Eye-ball amount • Small green shelter added recently – room with 3 sided wall, wood stove • 10x20 cargo container (office/storage) – no long-term storage • Porta-potty next to container • Staff will wave through residents for non-fee items
Driveway Entrance	<ul style="list-style-type: none"> • 1 acre of approach • Required space for car entry • No current back-up of cars

SITE AMENITIES:

- Fuel Island
 - Type:
 - Currently 4,000 gal. diesel fuel
 - Weekly deliveries & bi-weekly in summer
 - Mostly diesel trucks (2) gas trucks (gas fueling at fire station)
 - Desired in ground tanks with a canopy

- Salt Shed
 - Size / Type:
 - Currently two salt sheds (2) 30,000
 - Would like a larger covered salt & sand shed
 - 35 hundred tons

- Bulk Material Bins
- Gravel
- Recycled asphalt
- 1 ½ stone
- 4" stone (confirm)
- Loam (confirm)
- Cold patch (under cover)
- Brush / stump drop off
- Culver / other precast concrete products on site
- Piping (500 to 1,000 ft.) – keep enough for emergency
- Brick and block
- Storing bulk materials outside is fine
- Can access emergency bulk materials from company down the street (Continental Paving)

END

User Group Program Needs
 Londonderry, NH
 11/13/2023

DIVISION	TITLE	TYPE	PRIVATE OFFICE	WORKSTATIONS IN SHARED OFFICE	LOCKERS	MUSTER	PARKING
DPW Administration 2 FT 1 (Future)	DPW & Facilities Director	Admin	✓		Full	1	1
	DPW Foreman	Admin	✓		Full	1	1
	DPW Admin. Assitant (Future)	Admin		✓	Full	1	1
	Admin Assistant	Admin	✓		Full	1	1
1 FT 2 PT	Department Assistant	Admin		✓	Full	1	1
	Intern Staff	Admin		✓	Half	1	1
Engineering 3 FT 1 (Future)	Engineering Director	Admin	✓		Full	1	1
	Environment Engineer	Admin	✓		Full	1	1
	Assistant Engineer	Admin	✓		Full	1	1
	Engineer Staff (Future)	Admin		✓	Full	1	1
Highway 9 FT 3 PT (Plowing) 3 Contractors (Plowing)	Assistant Foreman	Workforce		✓	Full	1	1
	Equipment Operator	Workforce			Full	1	1
	Equipment Operator	Workforce			Full	1	1
	Equipment Operator	Workforce			Full	1	1
	Truck Driver / Laborer	Workforce			Full	1	1
	Truck Driver / Laborer	Workforce			Full	1	1
	Truck Driver / Laborer	Workforce			Full	1	1
	Truck Driver / Laborer	Workforce			Full	1	1
	Truck Driver / Laborer (Plowing)	Seasonal			Half	1	1
	Truck Driver / Laborer (Plowing)	Seasonal			Half	1	1
	Truck Driver / Laborer (Plowing)	Seasonal			Half	1	1
	Contractor (Plowing - not included in staff count)	N/A			N/A	1	1
	Contractor (Plowing - not included in staff count)	N/A			N/A	1	1
Contractor (Plowing - not included in staff count)	N/A			N/A	1	1	
Building & Grounds 1 FT / 1 (Future)	Assistant Foreman	Workforce	✓		Full	1	1
	Laborer (Future)	Workforce			Full	1	1
Fleet Maintenance 1 FT / 1 (Future)	Mechanic Foreman	Workforce	✓		Full	1	1
	Mechanic (Future)	Workforce			Full	1	1
Transfer Station 1 PT / 1 DPW Staff	Town Employee	Workforce			Full	1	1
	Equipment Operator (DPW Staff)	N/A			N/A	N/A	N/A

TOTALS:	ADMIN	OFFICE	WORKSTATIONS	FULL	MUSTER	STAFF
	10	8	5	23	30	30
	WORKFORCE		↑	HALF		VISITOR
	14			4		4
	SEASONAL					
	3					

Full = 18" x 18", full length
 Half = 12" x 12" and/or stacked

workstations - admin area

workstations - shared highway office

APPENDIX B

EXISTING CONDITIONS ASSESSMENT













APPENDIX C
SPACE NEEDS ASSESSMENT
&
ROOM DATA SHEETS

Building Requirements

Area	Description	Proposed SF	Room Data #	Room / Area		Dims. size
				length	width	
Office & Office Support Areas	Vestibule / Waiting / Reception	150	A1	15	10	150
	Small Conference Room / Public Consulting Room	144	A2	12	12	144
	Public Restroom - Single User ADA	56	A3	7	8	56
	DPW Director Office	224	A4	14	16	224
	DPW Foreman Office	144	A5	12	12	144
	Shared Foreman Office (2 Staff)	168	A6	12	14	168
	Conference Room (10-12 ppl)	320	A7	16	20	320
	Staff Bathrooms (Male & Female Single-User)	128	A8	8	16	128
	Kitchenette / Copy	70	A9	7	10	70
	Coat Closet	21	A10	3	7	21
	Supply Closet	120	A11	10	12	120
	IT Closet	100	A12	10	10	100
	Device Charging Area	18	A13	3	6	18
Administration	Admin Open Office (2 staff)	224	A14	14	16	224
	Admin Assistant Office	144	A15	12	12	144
	Plotter / Layout Space	144	A17	12	12	144
	File Storage	120	A18	10	12	120
Engineering	Engineering Director Office	168	A19	14	12	168
	Environment Engineer Office	144	A20	12	12	144
	Assistant Engineer Office	144	A21	12	12	144
	Open Office - (Future Eng. Staff)	144	A22	12	12	144
Subtotal:		2,895				
Area Grossing Factor (10%):		290				
Circulation (30%):		955				
TOTAL:		4,140				

Building Requirements

Area	Description	Proposed SF	Room Data #	Room / Area		Dims. size
				length	width	
Employee Facilities	Staff Entrance	56	B1	7	8	56
	Male Locker / Shower / Toilet	868	B2	28	31	868
	Female Locker / Shower / Toilet	252	B3	14	18	252
	Break / Training / Muster Room	1,440	B4	30	48	1,440
	Storage Closet (<i>Muster Room</i>)	48	B5	6	8	48
	Bunk Room (<i>20 beds</i>)	960	B6	20	48	960
	Janitors Closet / Custodial Storage	64	B7	8	8	64
	Main Electric Room	120	B8	10	12	120
	Mechanical / Utility Room	120	B9	10	12	120
	Plumbing / Fire Protection Room	140	B10	10	14	140
	Public Restroom - (<i>Contractors - Single User ADA</i>)	56	B11	7	8	56
	Laundry Room	64	B13	8	8	64
	Mudroom / Wet Gear Area	112	B14	8	14	112
	Subtotal:		4,300			
Area Grossing Factor (10%):		430				
Circulation (30%):		1,419				
TOTAL:		6,149				

Work Shops &	Sign Shop	252	C1	14	18	252
	Building Maintenance / Carpentry Shop	600	C2	25	24	600
	Material / Supply Storage (<i>Carpentry</i>)	168	C3	12	14	168
	Secure Tool Crib	100	C4	10	10	100
	Highway Shop	980	C5	28	35	980
	Paint Storage	168	C6	12	14	168
	Subtotal:		2,268			
Area Grossing Factor (5%):		113				
Circulation (10%):		238				
TOTAL:		2,620				

Building Requirements

Area	Description	Proposed SF	Room Data #	Room / Area		Dims. size
				length	width	
Fleet Maintenance	Welding Area	400	D1	20	20	400
	Maintenance Equipment/Material Storage	500	D1	20	25	500
	Maintenance Bay	1,100	D1	20	55	1,100
	Maintenance Bay	1,100	D1	20	55	1,100
	Maintenance Bay - (Pull Through)	2,000	D1	25	80	2,000
	Maintenance Workshop	200	D1	10	20	200
	Fluid Storage Room	288	D2	16	18	288
	Maintenance Office / Reference Room (2 ppl)	192	D3	12	16	192
	Mechanic's Toilet (Single-user)	70	D4	7	10	70
	Hydraulic Hose Workshop	80	D5	10	8	80
	Compressor Room	150	D6	10	15	150
	Maintenance Tire Storage	300	D7	12	25	300
	Parts Storage Room	600	D8	20	30	600
		Subtotal:	6,980			
	Area Grossing Factor (5%):	349				
	Circulation (10%):	733				
	TOTAL:	8,062				
Wash Area	Wash Bay	2,160	E1	36	60	2,160
	Wash Equipment Room	180	E1	10	18	180
		Subtotal:	2,340			
		Circulation:	n/a			
	TOTAL:	2,340				
Vehicle & Equipment Storage	Vehicle / Equipment Storage	23,500	F1	100	235	23,500
		Subtotal:	23,500			
		Area Grossing Factor (5%):	1,175			
		Circulation:	n/a			
	TOTAL:	24,675				
PROPOSED FACILITY TOTAL:		47,986				

Building Requirements

Area	Description	Proposed SF	Programmed Site Elements			Notes
			Length	Width	Count	
Salt Sheds	Salt Shed (<i>existing</i>)	11,000				includes canopy footprint
	Sand Shed (<i>New</i>)	5,500				
General Site	Employee Parking	4860	18	9	30	
	Public Parking	648	18	9	4	
	Knock-down pad	1800	60	30		Typically adjacent to Wash Bay
	Fueling Facility	2400	40	60		nominal size, plus access
	Standby Generator	600	20	30		approx pad / clearance dim. Capacity to be verified
	Radio Antenna	196	14	14		existing radio antenna towel pad
	Radio Equip. shelter	240	12	20		Shelter
	Radio Antenna Generator Pad	25	5	5		radio tower generator
	Public Sand/ Salt Pickup / Waste oil drop off Area	600	20	30		covered storage / well lit /outside main gate
Future Fueling	2400	40	60		Future build out for PD/FD/Other town access to fueling	
Material Storage	Gravel	400	20	20		200 tons
	Millings	400	20	20		200 tons
	1-1/2" stone	400	20	20		200 tons
	4" stone	400	20	20		100 tons
	6" stone	400	20	20		100 tons
	Loam	400	20	20		200 yards
	Cold Patch (under cover)	400	20	20		100 yards
	Frames & Grates	n/a				don't store any on site
	Pipe	5000	50	100		500 - 1,000 LF Overall
	Receycled Asphalt	1600	40	40		200 tons
	Brush / Stump	7,500	75	100		
	Tailings	40,000	200	200		
	Sand	1800	60	30		1,500 tons
Dumpster Area	Dumpsters					covered storage / well lit /outside main gate
	C&D Dumpser	160	20	8		
	Metal Dumpser	160	20	8		
	Trash Dumpser	160	20	8		
	Recycling Dumpster	160	20	8		
Storage Garage	General Purpose storage garage	20	40	40		town archive/ Storage - general purpose storage unit

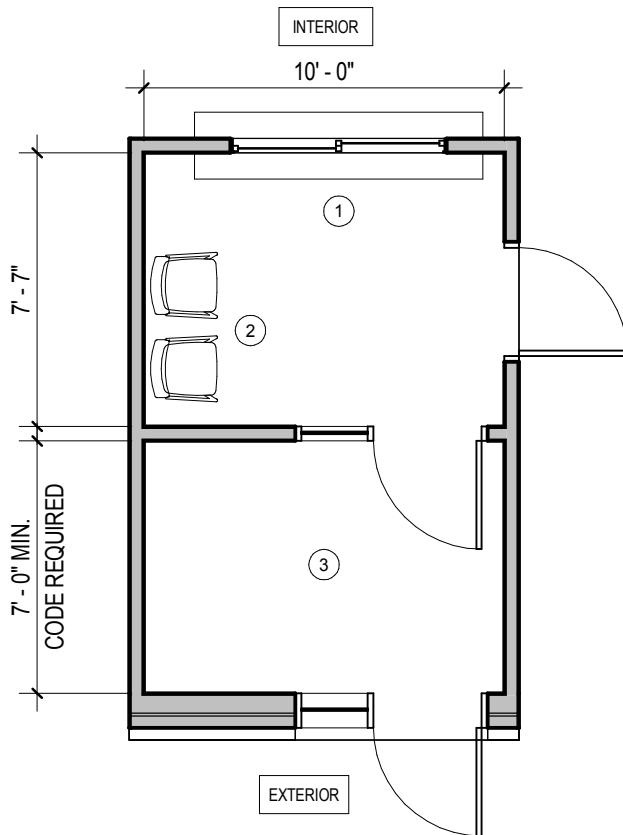
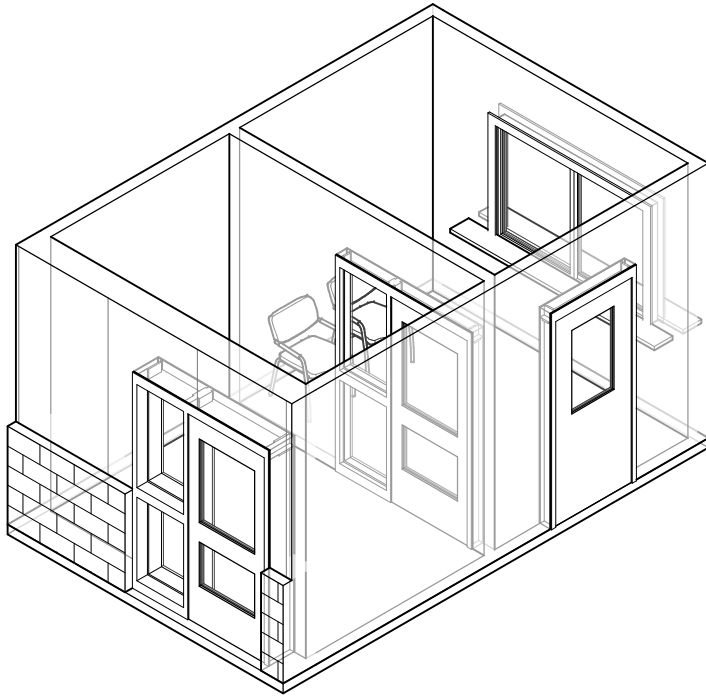
Building Requirements

Area	Description	Proposed SF	Programmed Site Elements			Notes
			Length	Width	Count	
Indoor Storage (unheated)	Road Signs	n/a				200 ct. (Sign shop)
	Cones & Barricades	n/a				C: 100 - 200 B: 50-75 (highway shop)
	Special Event Signage	n/a				200 ct. (Sign shop or Highway shop)
	Abandoned Item Storage	n/a				Generator
	Abandoned/ archived Furniture	n/a				12 - 24 items
	Mortar, ice melt	n/a				6-10 Pallets (pallet dims 48" x 40") (highway shop)
	Seed / Fertilizer	n/a				4-6 Pallets (highway shop)
	Backpack Blowers	n/a				6 (highway shop)
	Weed Trimmers	n/a				6 (highway shop)
	Chainsaws	n/a				6 (highway shop)
	Push Mower	n/a				3 (highway shop)
	Ride Mower	n/a				2 (main storage garage)

Approximate Required Site Size	73,129	NSF
Circulation, Misc. Adjustment Factor (200%)	146,258	
Setback Adjustment Factor (15%)		
Proposed Main Building Footprint	48,000	
Salt Shed Footprint	16,500	
TOTAL REQUIRED SITE SIZE	283,887	GSF
	6.52	Acres

(Excludes Circulation, Maneuvering Space, Etc.)

VERY APPROXIMATE, HIGHLY VARIABLE WITH SITE CONDITIONS AND CONSTRAINTS



VESTIBULE / WAITING / RECEPTION - 150 SF
 $3/16" = 1'-0"$

ROOM FINISHES:

CEILING: GYPSUM BOARD, PAINTED

WALLS: GYPSUM WALL BOARD, PAINTED

FLOORS: CERAMIC TILE

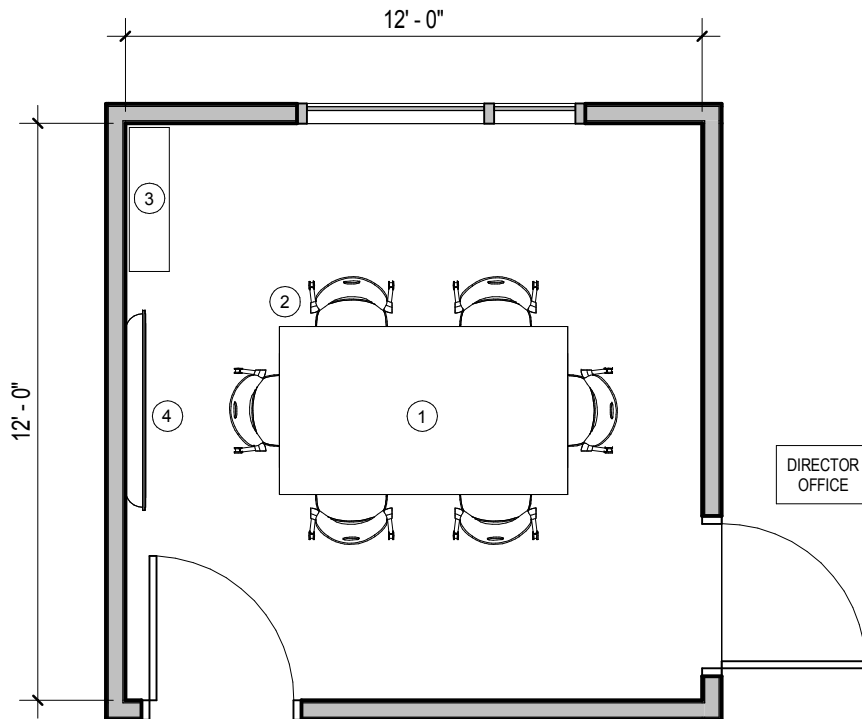
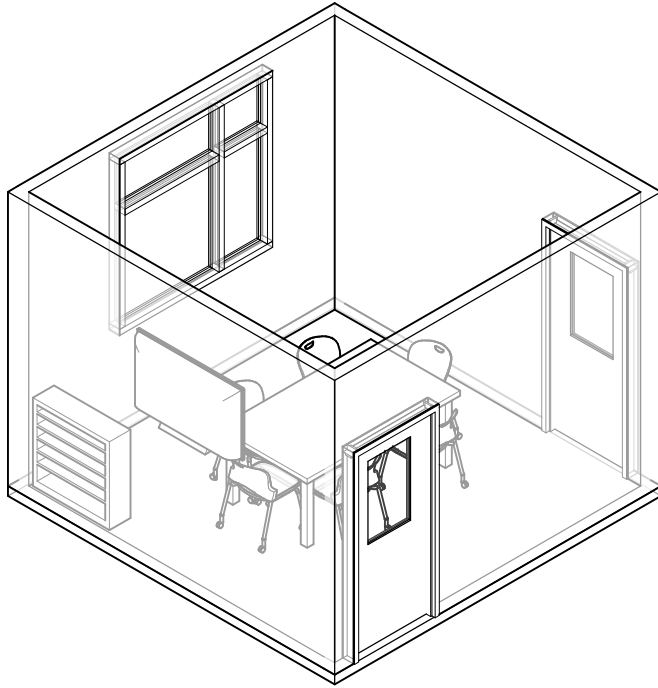
MEP/DATA REQUIREMENTS:

- ELECTRICAL OUTLETS
- TEL / DATA OUTLET JACKS
- HEATING / COOLING
- OCCUPANCY SENSORS FOR LIGHTING CONTROLS
- NATURAL LIGHTING W/ WINDOWS

COMPONENTS:

1. CHECK-IN COUNTER AND SLIDE WINDOW
2. (2) WAITING CHAIRS
3. VESTIBULE

DRAFT



SMALL CONFERENCE ROOM - 144 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: CARPET TILE

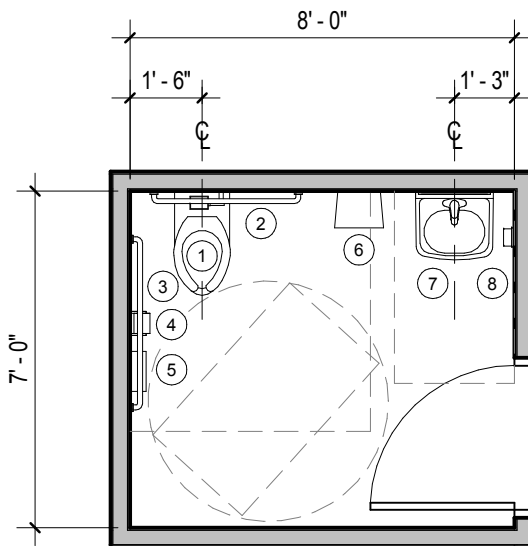
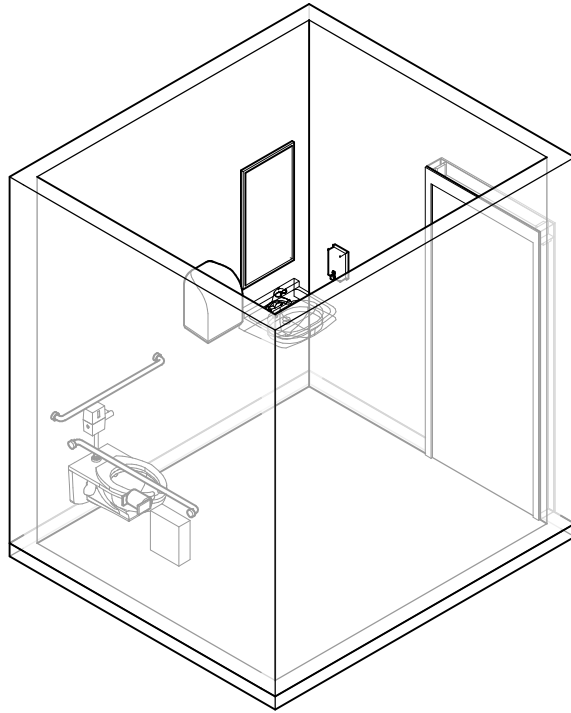
MEP/DATA REQUIREMENTS:

- DUPLEX ELECTRICAL OUTLETS
- TEL/DATA OUTLET JACKS
- NATURAL LIGHTING W/ WINDOWS
- OCCUPANCY SENSORS FOR LIGHTING CONTROLS
- HEATING / COOLING

COMPONENTS:

1. CONFERENCE TABLE
2. (6) CHAIRS
3. BOOKCASES
4. TV SCREEN

DRAFT



PUBLIC RESTROOM - SINGLE USER ADA - 56 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: MOISTURE RESISTANT ACT TILE

WALLS: CERAMIC TILE / MOISTURE RESISTANT GYPSUM WALL BOARD, PAINTED

FLOORS: CERAMIC TILE

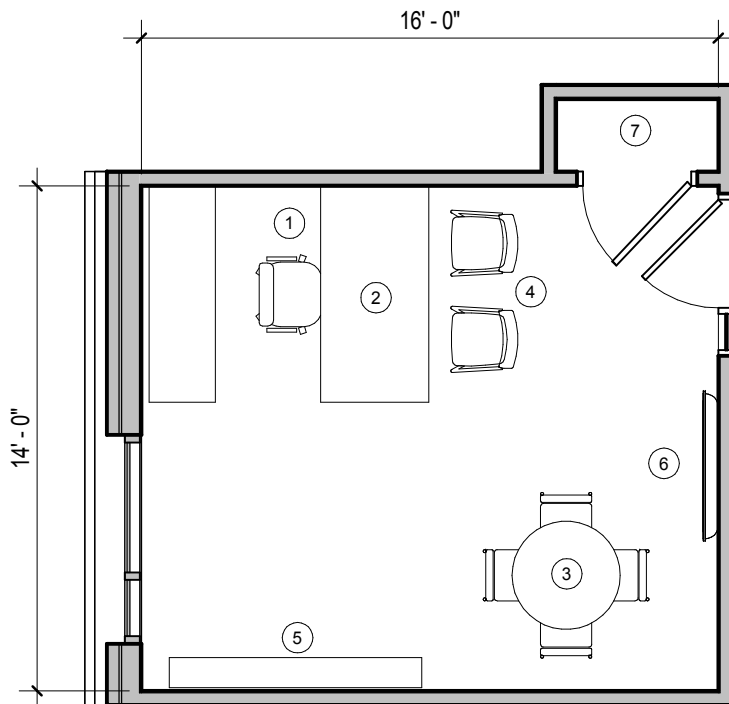
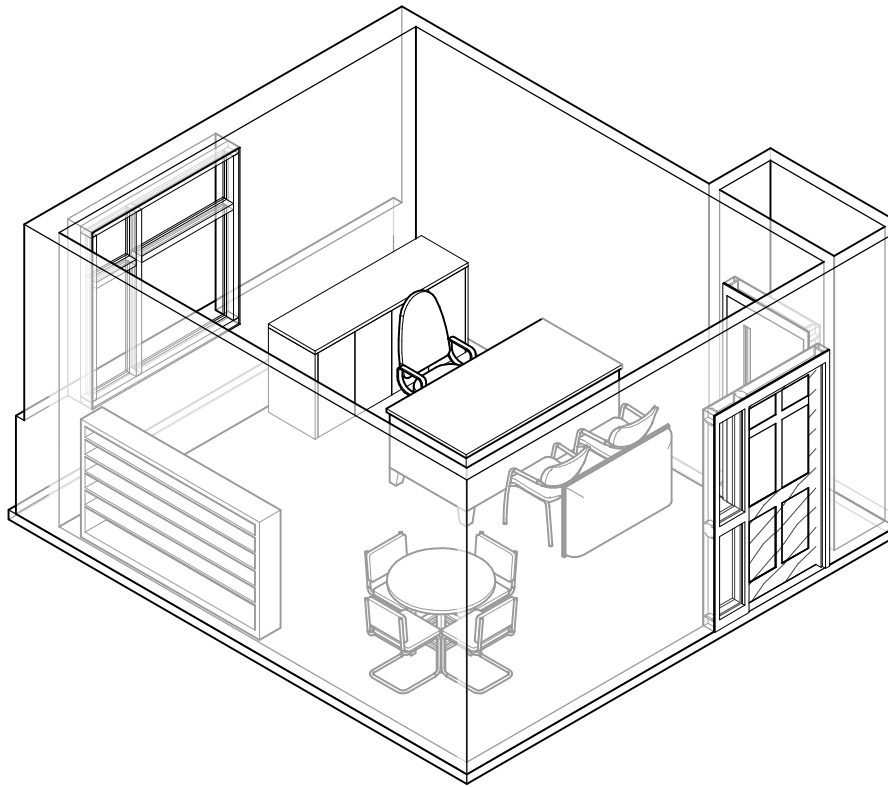
MEP/DATA REQUIREMENTS:

- GFI ELECTRICAL OUTLETS
- HEATING / COOLING
- OCCUPANCY SENSORS FOR LIGHTING CONTROLS

COMPONENTS:

1. WALL HUNG TOILET
2. 36" GRAB BAR
3. 42" GRAB BAR
4. TOILET PAPER DISPENSER
5. SANITARY NAPKIN DISPOSAL RECEPTICLE
6. PAPER TOWEL DISPENSER
7. WALL HUNG SINK & MIRROR
8. SOAP DISPENSER

DRAFT



DPW DIRECTOR OFFICE - 224 SF
 3/16" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: CARPET TILE

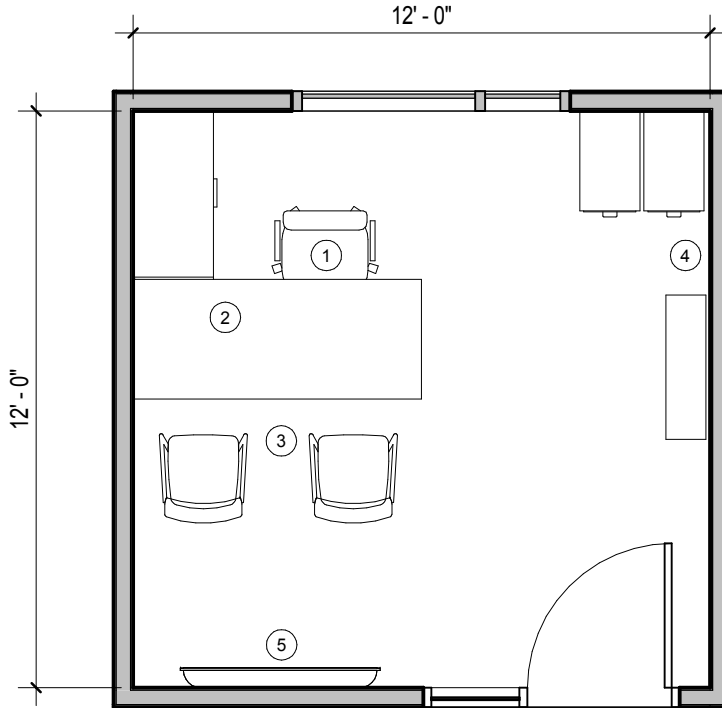
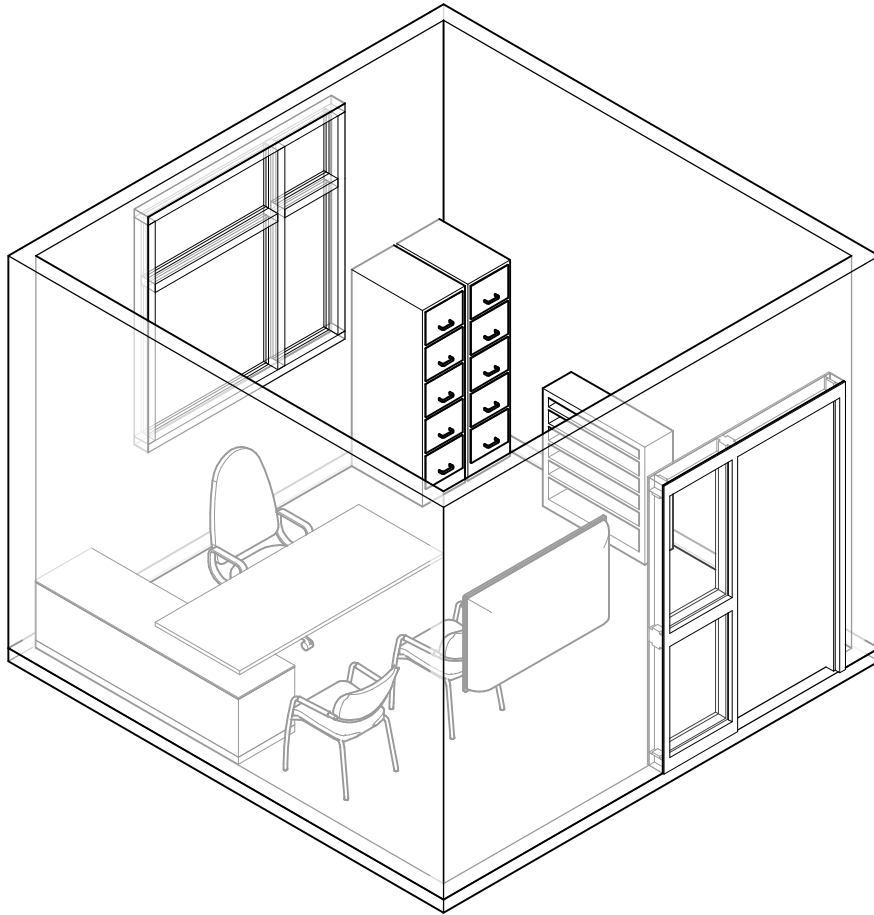
MEP/DATA REQUIREMENTS:

- DUPLEX ELECTRICAL OUTLETS
- TEL/DATA OUTLET JACKS
- NATURAL LIGHTING W/ WINDOWS
- OCCUPANCY SENSORS FOR LIGHTING CONTROLS
- HEATING / COOLING

COMPONENTS:

1. EXECUTIVE CHAIR
2. DESK
3. MEETING TABLE
4. (2) CHAIRS
5. BOOKCASE
6. TV MONITOR
7. CLOSET

DRAFT



DPW FOREMAN OFFICE - 144 SF

1/4" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: CARPET TILE

MEP/DATA REQUIREMENTS:

DUPLEX ELECTRICAL OUTLETS

TEL/DATA OUTLET JACKS

NATURAL LIGHTING W/ WINDOWS

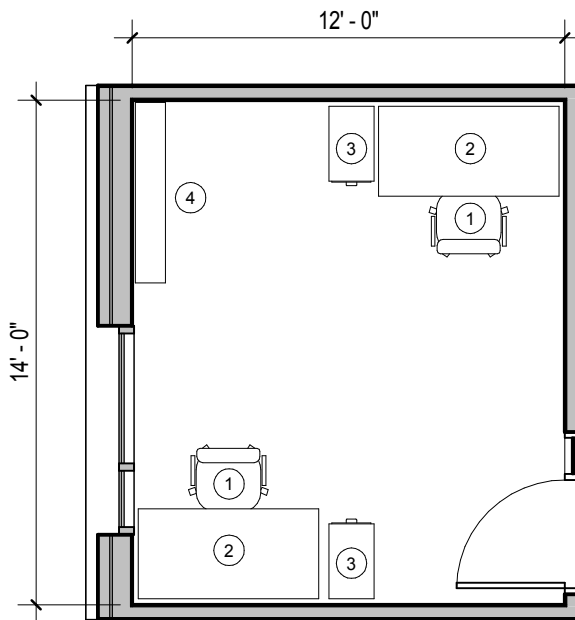
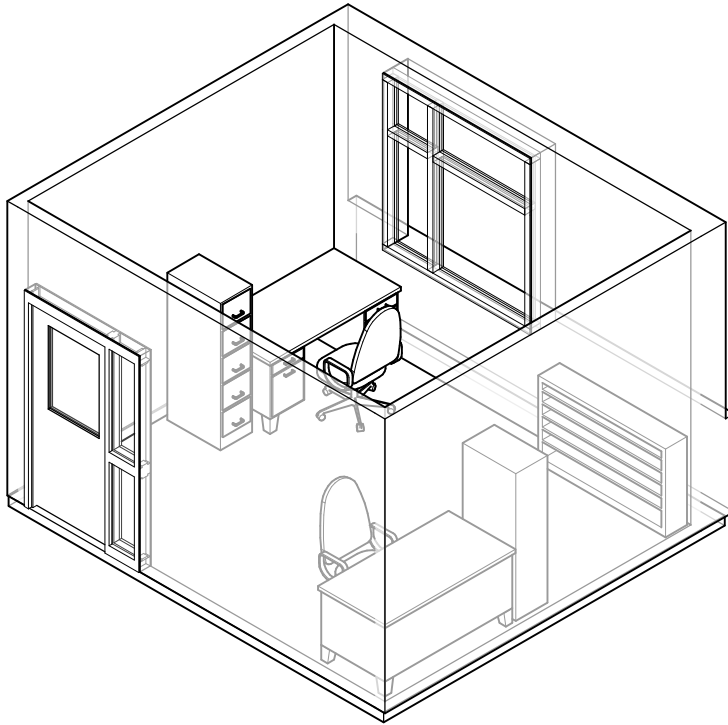
OCCUPANCY SENSORS FOR LIGHTING CONTROLS

HEATING / COOLING

COMPONENTS:

1. EXECUTIVE CHAIR
2. WORKSTATION
3. GUEST CHAIRS
4. BOOKCASE / FILE CABINETS
5. TV MONITOR

DRAFT



SHARED FOREMAN OFFICE - 168 SF
 3/16" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: RESILIENT FLOORING

MEP/DATA REQUIREMENTS:

- DUPLEX ELECTRICAL OUTLETS
- TEL/DATA OUTLET JACKS
- NATURAL LIGHTING W/ WINDOWS
- OCCUPANCY SENSORS FOR LIGHTING CONTROLS
- HEATING / COOLING

COMPONENTS:

1. (2) EXECUTIVE CHAIR
2. (2) WORKSTATION
3. (2) FILE CABINET
4. BOOKCASE / FILE CABINETS

DRAFT

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: CARPET TILE

MEP/DATA REQUIREMENTS:

DUPLEX ELECTRICAL OUTLETS

TEL/DATA OUTLET JACKS

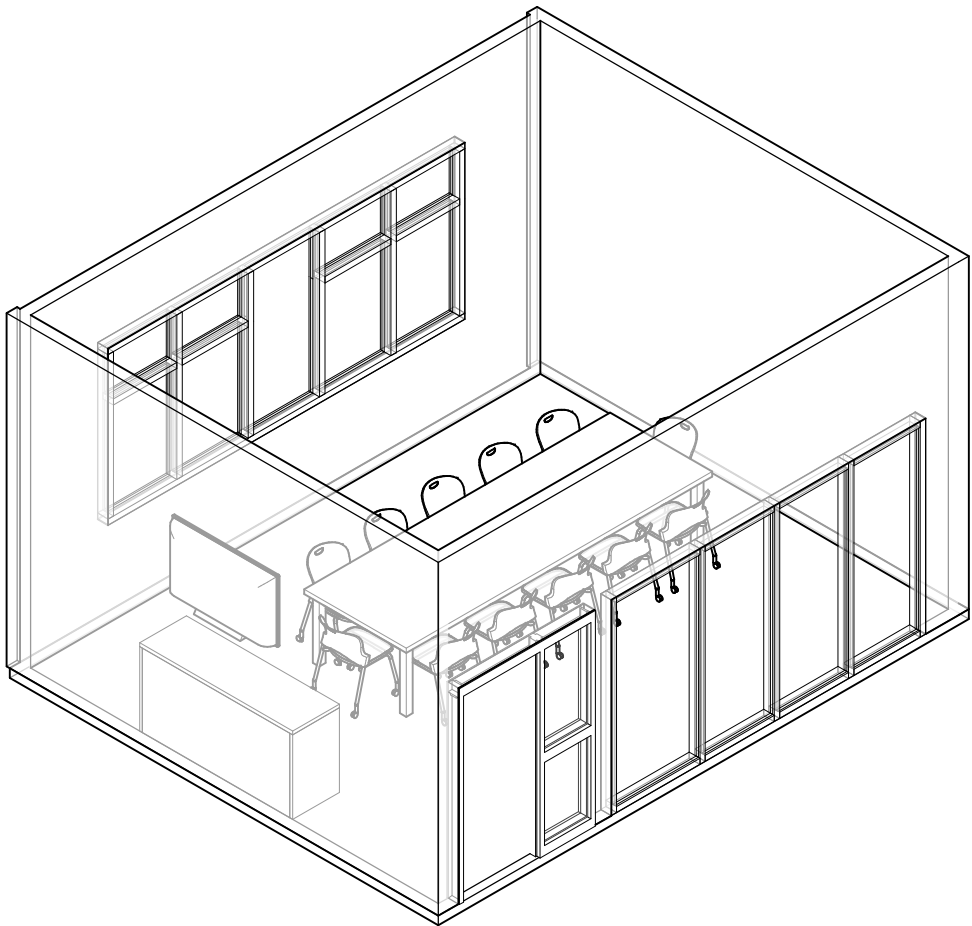
NATURAL LIGHTING W/ WINDOWS

OCCUPANCY SENSORS FOR LIGHTING CONTROLS

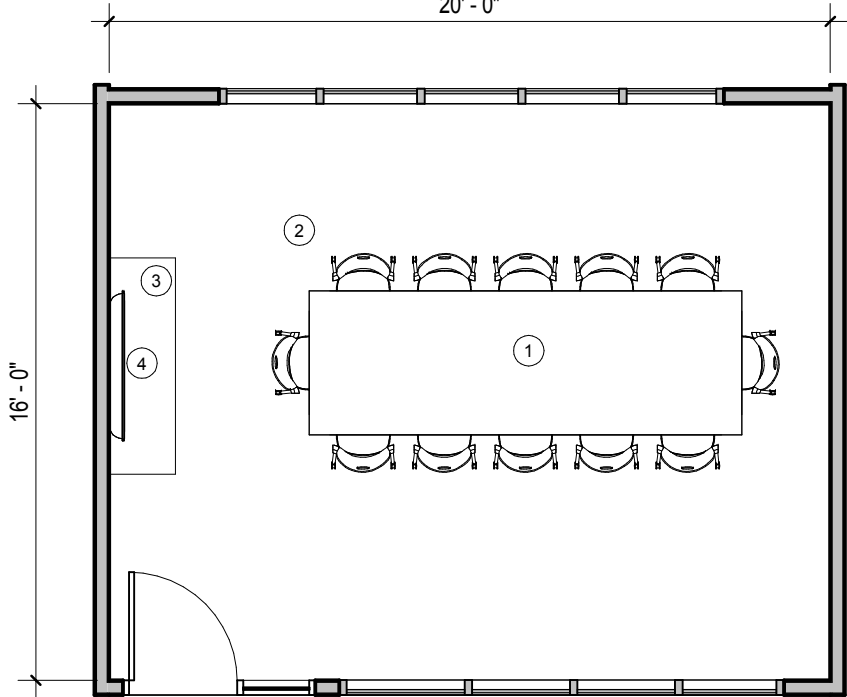
HEATING / COOLING

COMPONENTS:

- 1. CONFERENCE TABLE
- 2. (12) CHAIRS
- 3. CREDENZA DESK

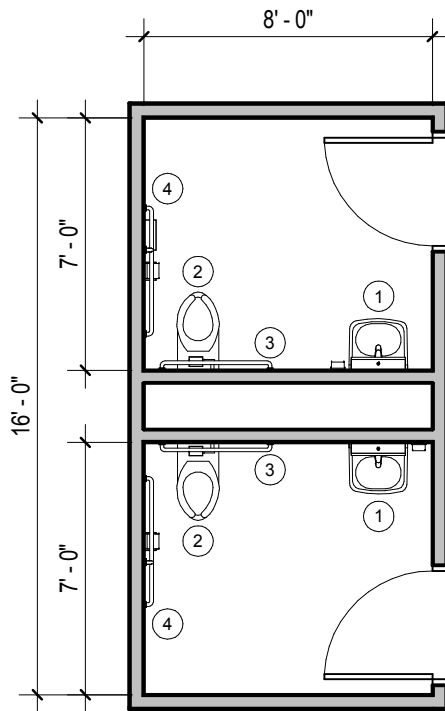
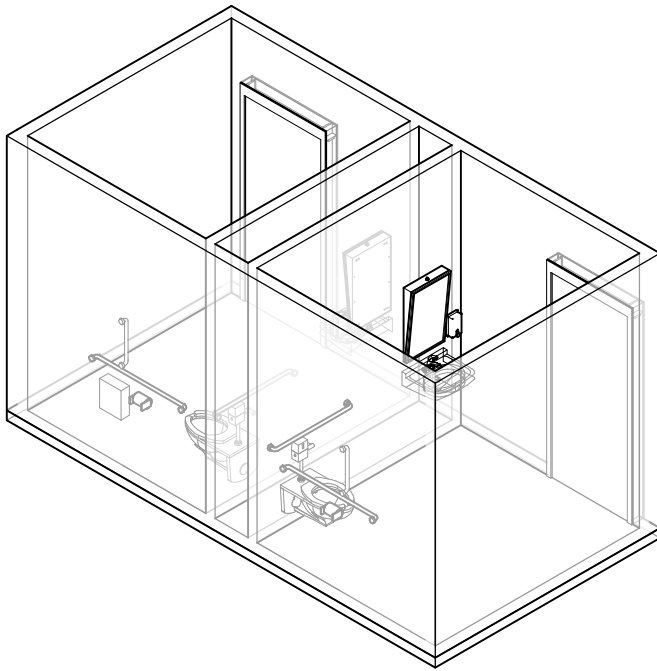


20' - 0"



CONFERENCE ROOM - 320 SF
3/16" = 1'-0"

DRAFT



STAFF BATHROOMS (MALE & FEMALE SINGLE USER) - 128 SF
 3/16" = 1'-0"

ROOM FINISHES:

CEILING: MOISTURE RESISTANT
ACT TILE

WALLS: CERAMIC TILE /
MOISTURE RESISTANT
GYPSUM WALL BOARD,
PAINTED

FLOORS: CERAMIC TILE

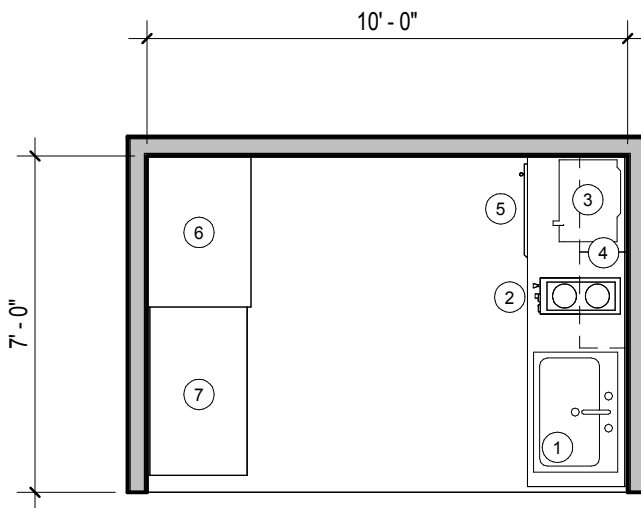
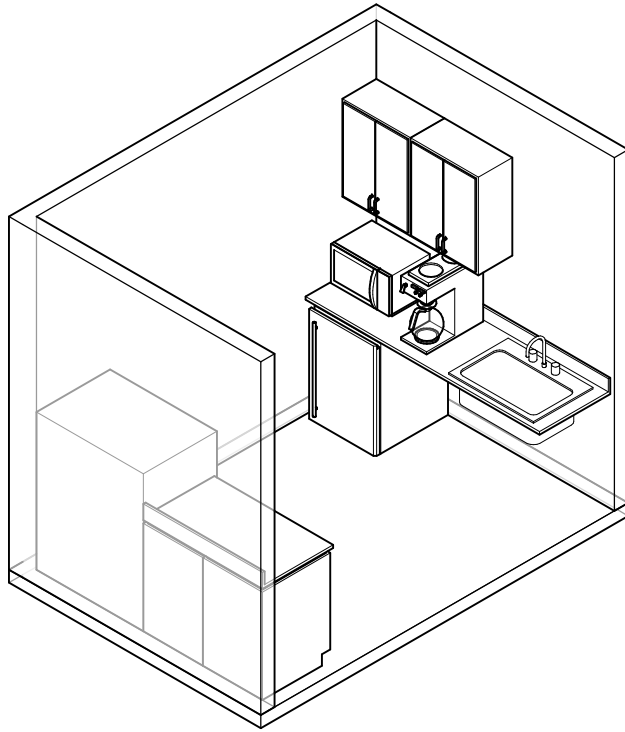
MEP/DATA REQUIREMENTS:

- GFI ELECTRICAL OUTLETS
- HEATING / COOLING
- OCCUPANCY SENSORS
FOR LIGHTING CONTROLS

COMPONENTS:

1. (2) WALL HUNG SINK
2. (2) WALL HUNG TOILET
3. (2) 36" GRAB BAR
4. (2) 48" GRAB BAR

DRAFT



KITCHENETTE / COPY - 70 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: ACOUSTICAL CEILING TILE

WALLS: GYPSUM WALL BOARD, PAINTED

FLOORS: VCT

MEP/DATA REQUIREMENTS:

DUPLEX ELECTRICAL OUTLETS

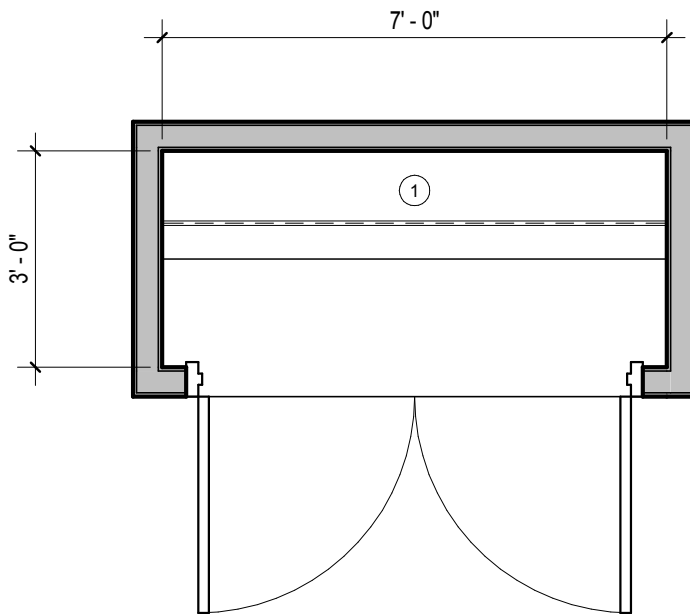
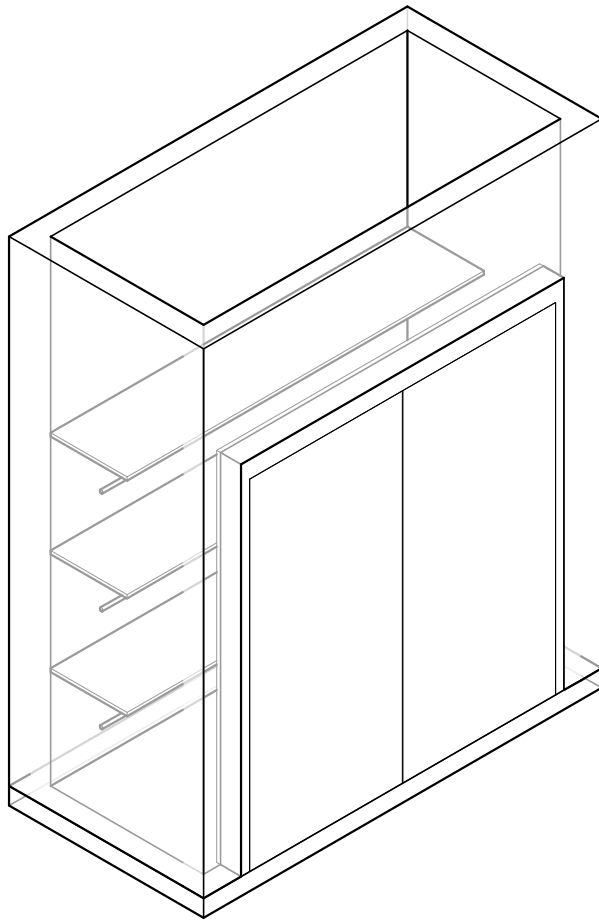
OCCUPANCY SENSORS FOR LIGHTING CONTROLS

HEATING / COOLING

COMPONENTS:

1. SINK
2. COFFEE MAKER
3. MICROWAVE
4. 24" UPPER CABINETS
5. MINI FRIDGE
6. PRINT / COPY MACHINE
7. LAYOUT TABLE / 21" BASE CABINETS

DRAFT



COAT CLOSET - 21 SF

3/8" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GYPSUM WALL BOARD,
PAINTED

FLOORS: RESILIENT FLOORING

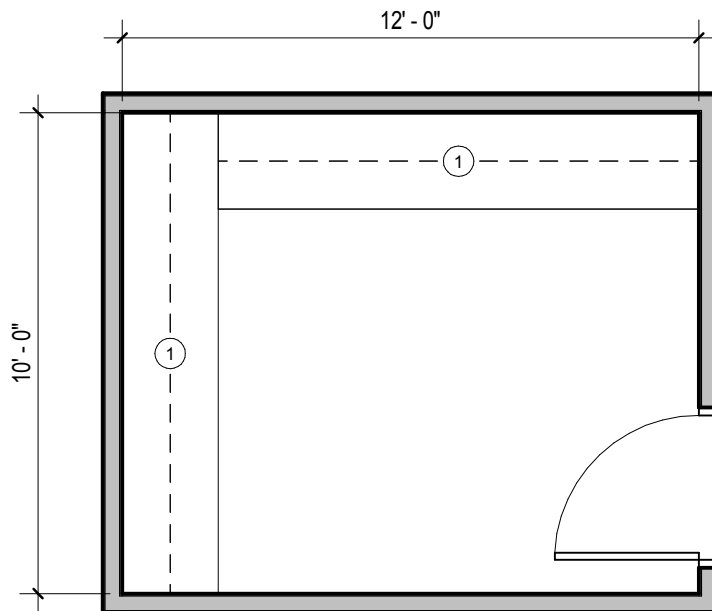
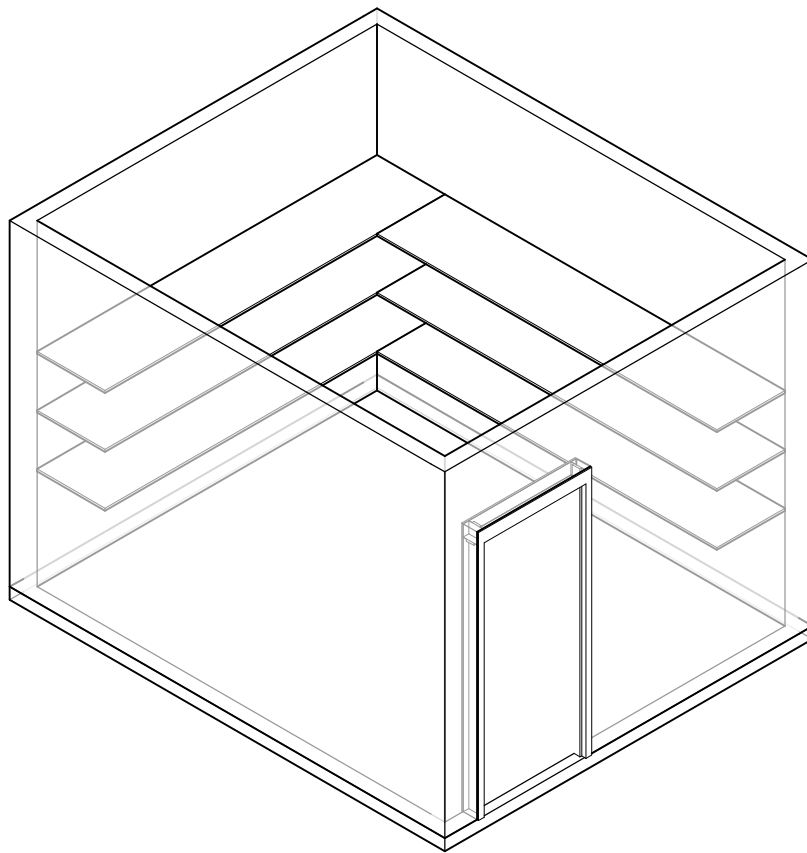
MEP/DATA REQUIREMENTS:

- ELECTRICAL OUTLETS

COMPONENTS:

1. WALL MOUNTED SHELVING

DRAFT



SUPPLY CLOSET - 120 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GYPSUM WALL BOARD,
PAINTED

FLOORS: RESILIENT FLOORING

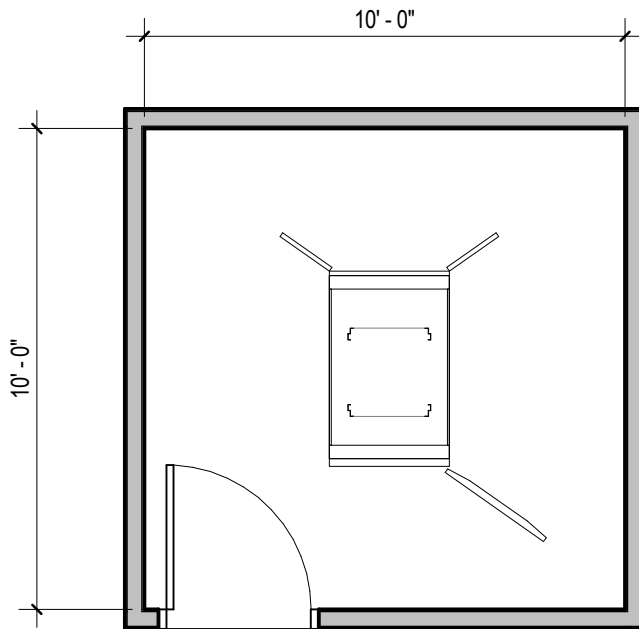
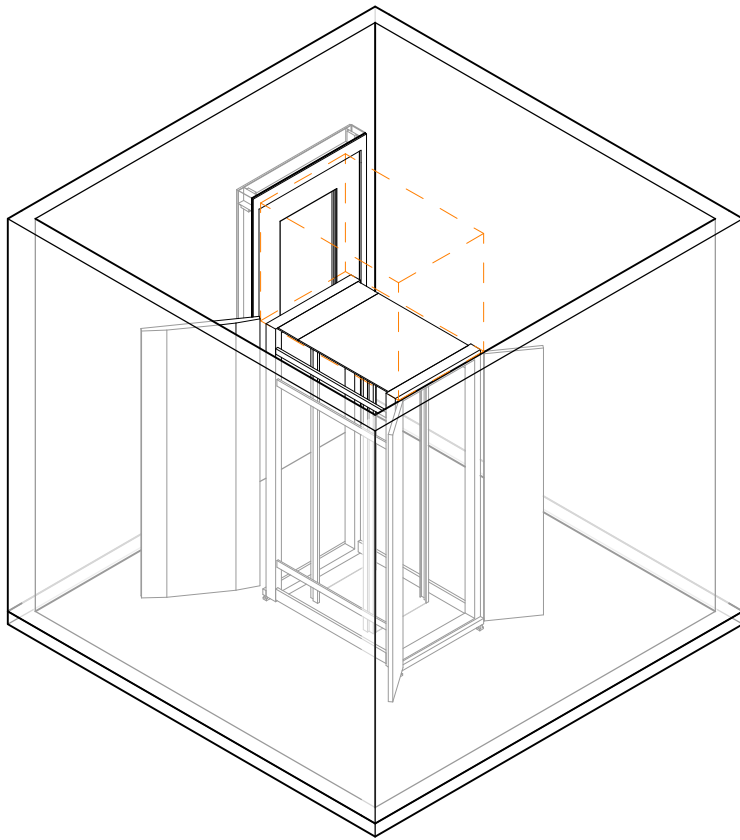
MEP/DATA REQUIREMENTS:

- ELECTRICAL OUTLETS

COMPONENTS:

1. WALL MOUNTED SHELVING

DRAFT



TEL / DATA ROOM - 100 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GYPSUM BOARD,
PAINTED

FLOORS: RESILIENT FLOORING

MEP/DATA REQUIREMENTS:

DUPLEX ELECTRICAL OUTLETS

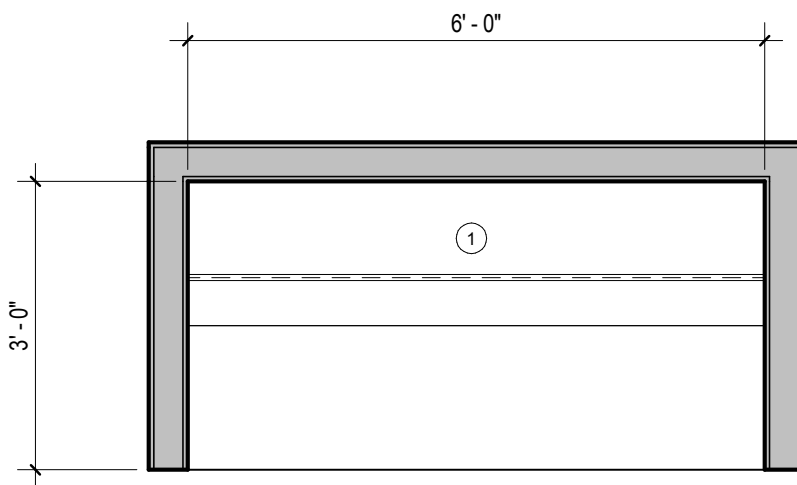
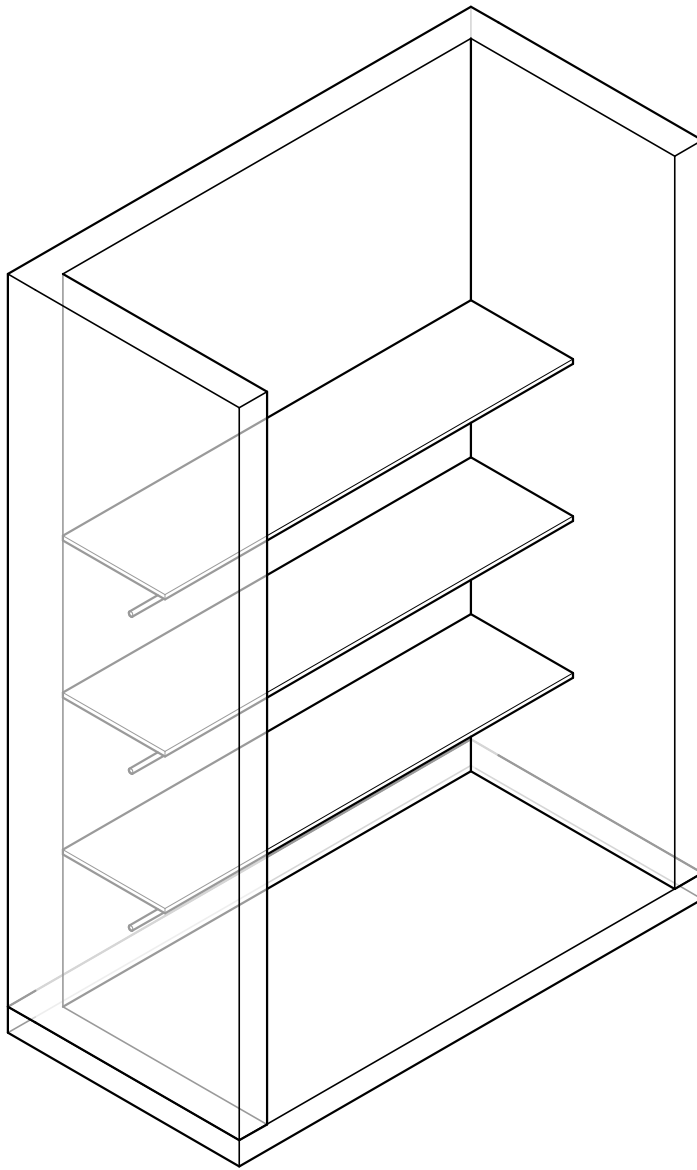
DATA OUTLET JACKS

RACK-MOUNTED POWER

COMPONENTS:

1. DATA RACK
2. PLYWOOD BACK BOARD FOR BUILDING SYSTEM COMPONENTS (SECURITY, CABLE, ETC.)

DRAFT



DEVICE CHARGING AREA - 18 SF

1/2" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GYPSUM BOARD,
PAINTED

FLOORS: RESILIENT FLOORING

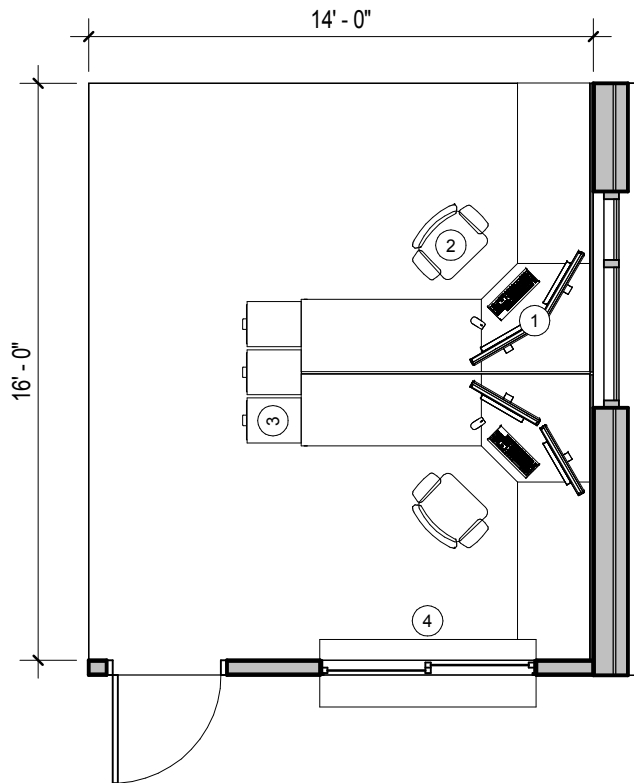
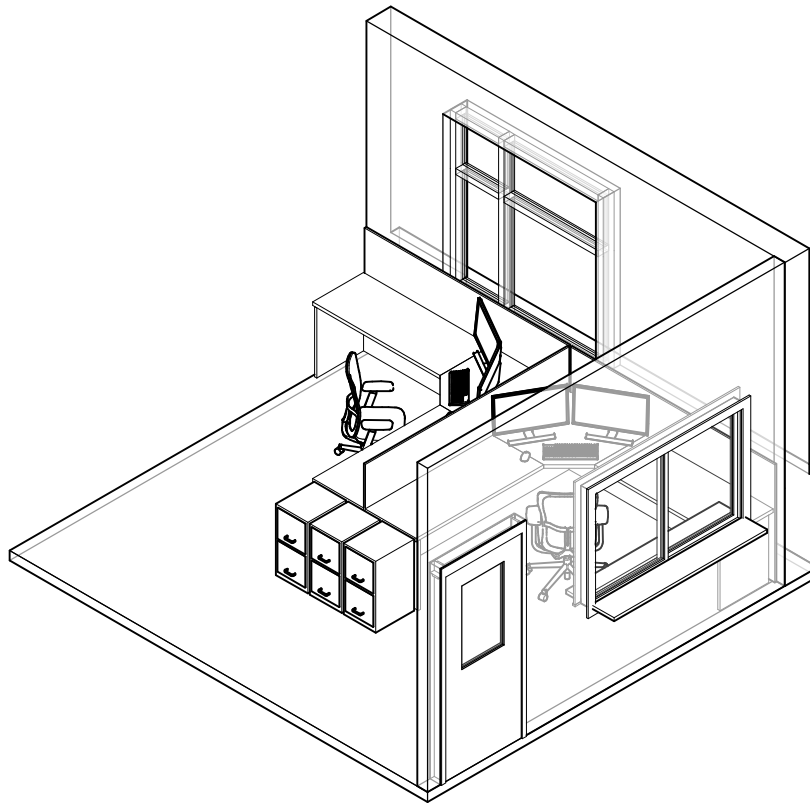
MEP/DATA REQUIREMENTS:

- ELECTRICAL OUTLETS

COMPONENTS:

1. (3) SHELVING SYSTEM

DRAFT



ADMIN OPEN OFFICE- 224 SF
 3/16" = 1'-0"

ROOM FINISHES:

CEILING: ACOUSTICAL CEILING TILE

WALLS: GYPSUM BOARD, PAINTED

FLOORS: CARPET TILE

MEP/DATA REQUIREMENTS:

ELECTRICAL OUTLETS

TEL / DATA OUTLET JACKS

HEATING / COOLING

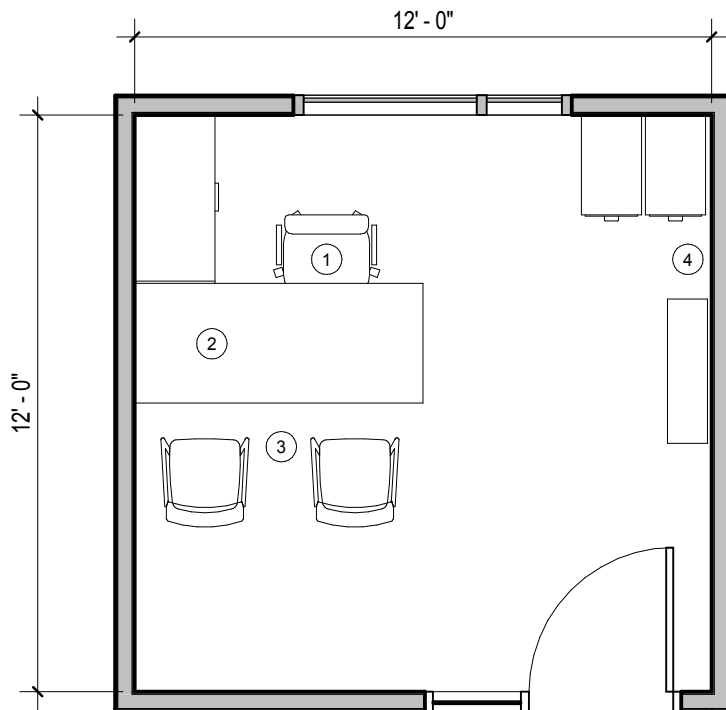
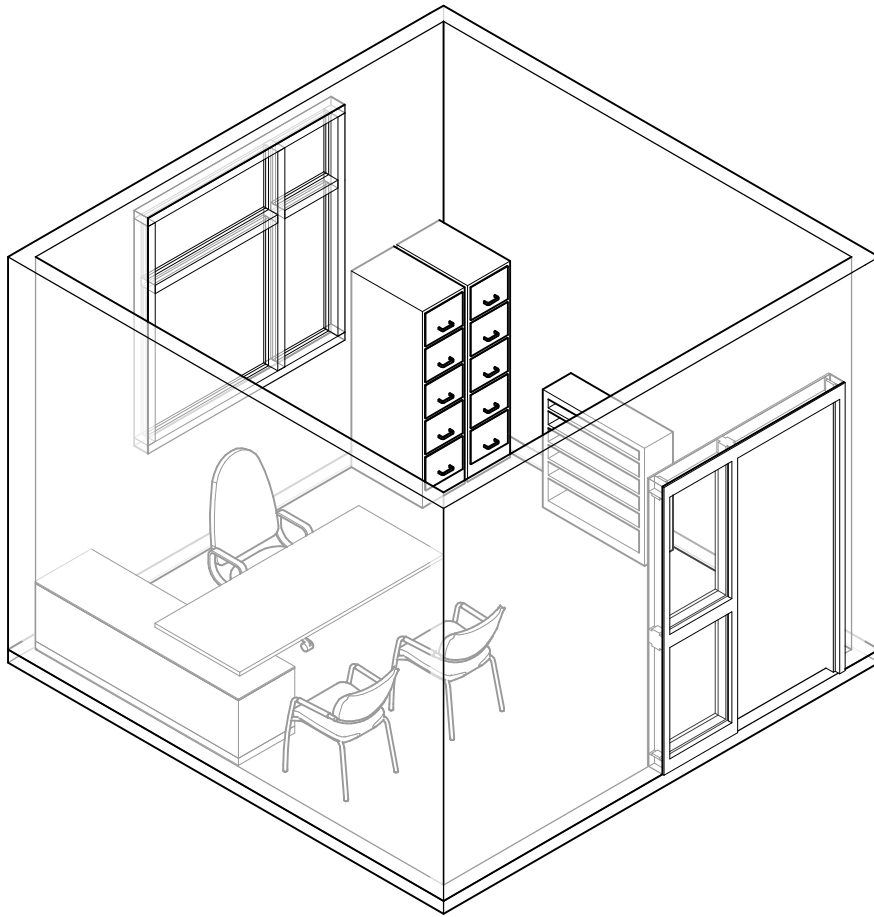
OCCUPANCY SENSORS FOR LIGHTING CONTROLS

NATURAL LIGHTING W/ WINDOWS

COMPONENTS:

1. (2) WORKSTATIONS
2. (2) EXECUTIVE CHAIRS
3. FILE STORAGE
4. RECEPTION WINDOW

DRAFT



ADMIN ASSISTANT OFFICE - 144 SF

1/4" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: CARPET TILE

MEP/DATA REQUIREMENTS:

DUPLEX ELECTRICAL OUTLETS

TEL/DATA OUTLET JACKS

NATURAL LIGHTING W/ WINDOWS

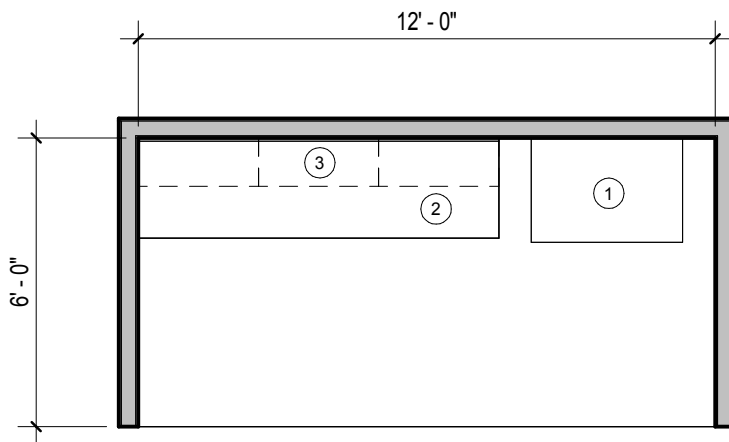
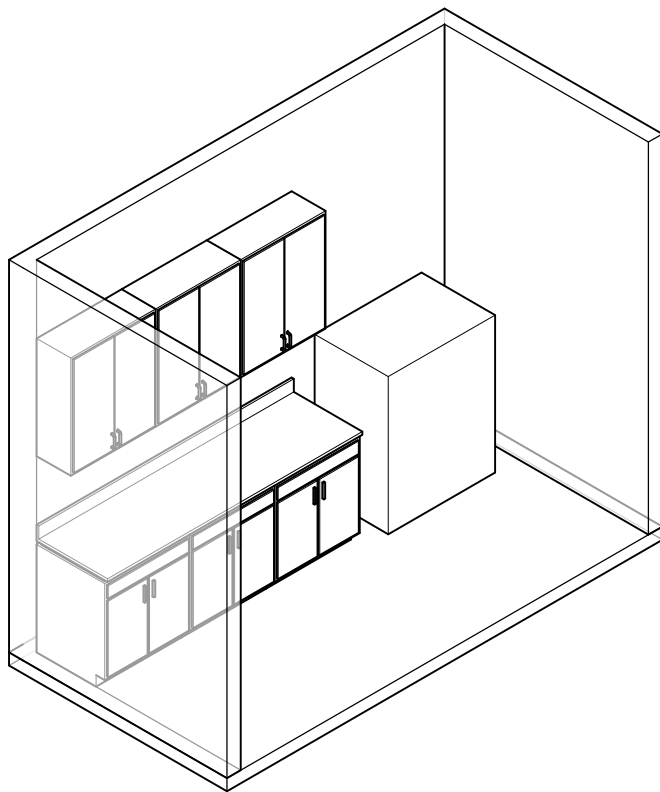
OCCUPANCY SENSORS FOR LIGHTING CONTROLS

HEATING / COOLING

COMPONENTS:

1. EXECUTIVE CHAIR
2. WORKSTATION
3. GUEST CHAIRS
4. BOOKCASE / FILE CABINETS

DRAFT



COPY / FILE / MAIL AREA - 72 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: CARPET TILE

MEP/DATA REQUIREMENTS:

ELECTRICAL OUTLETS

TEL/DATA OUTLET JACKS

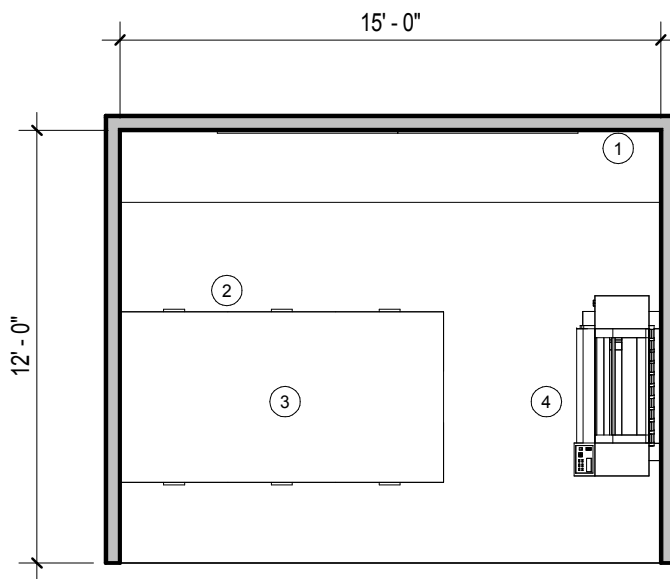
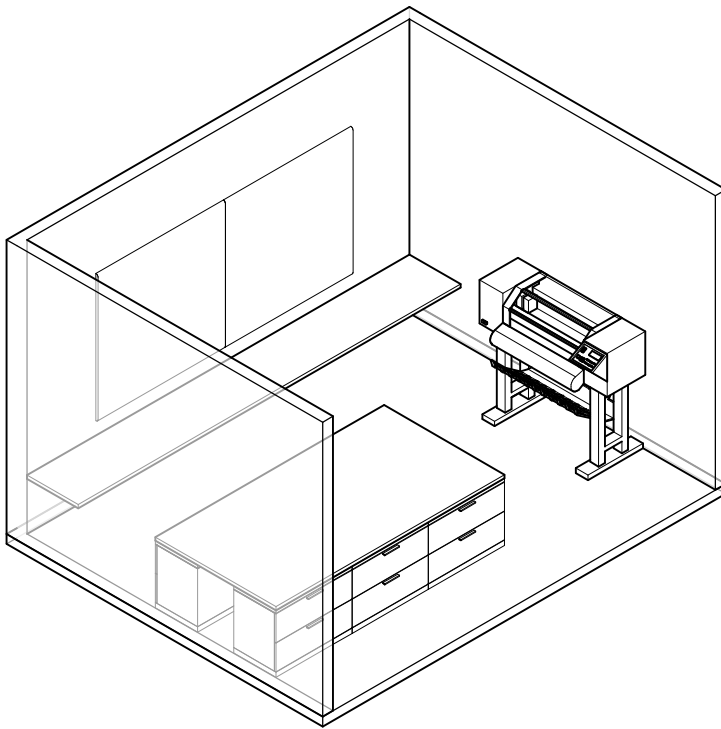
OCCUPANCY SENSORS FOR LIGHTING CONTROLS

HEATING / COOLING

COMPONENTS:

1. PRINTER
2. WORK COUNTER / LOWER CABINETS
3. UPPER CABINETS W/ U.C. LIGHTING

DRAFT



PLOTTER / LAYOUT SPACE - 180 SF
 3/16" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: CARPET TILE

MEP/DATA REQUIREMENTS:

ELECTRICAL OUTLETS

TEL/DATA OUTLET JACKS

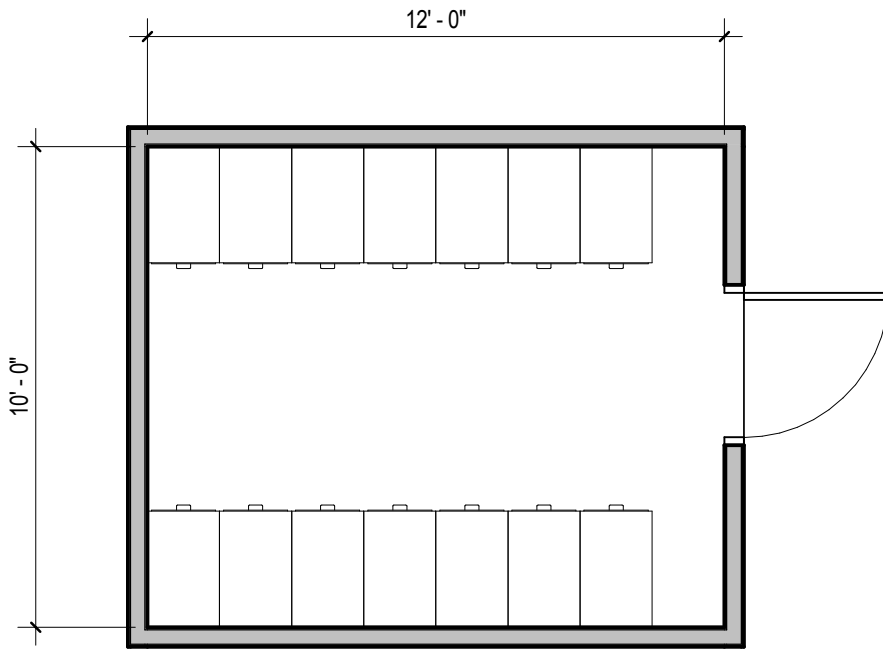
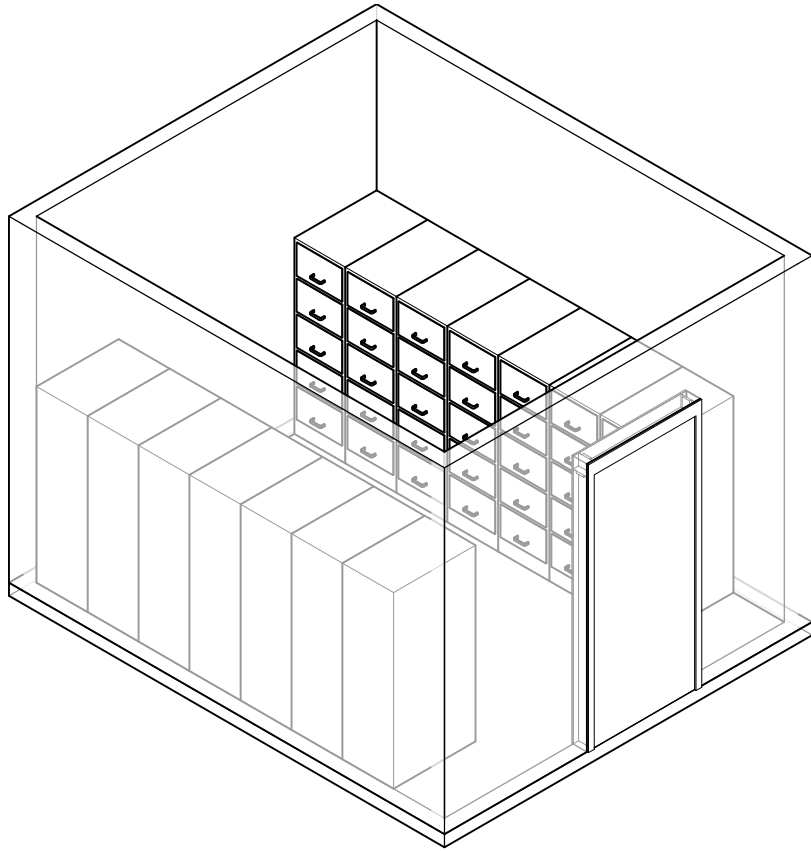
OCCUPANCY SENSORS FOR LIGHTING CONTROLS

HEATING / COOLING

COMPONENTS:

1. COUNTER (ALONG WALL)
2. (6) FLAT FILES
3. LAYOUT COUNTER TOP (ABOVE FLAT FILES)
4. PLOTTER

DRAFT



FILE STORAGE - 120 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: CARPET TILE

MEP/DATA REQUIREMENTS:

ELECTRICAL OUTLETS

TEL/DATA OUTLET JACKS

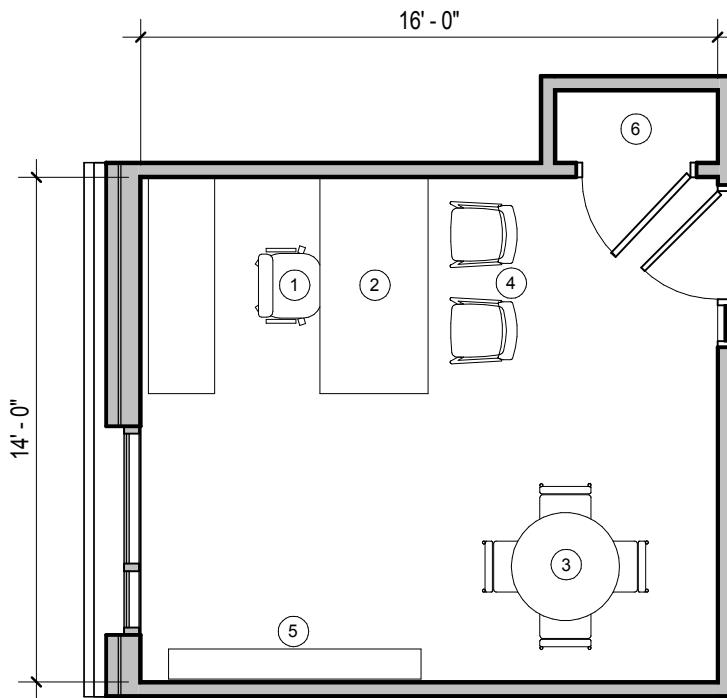
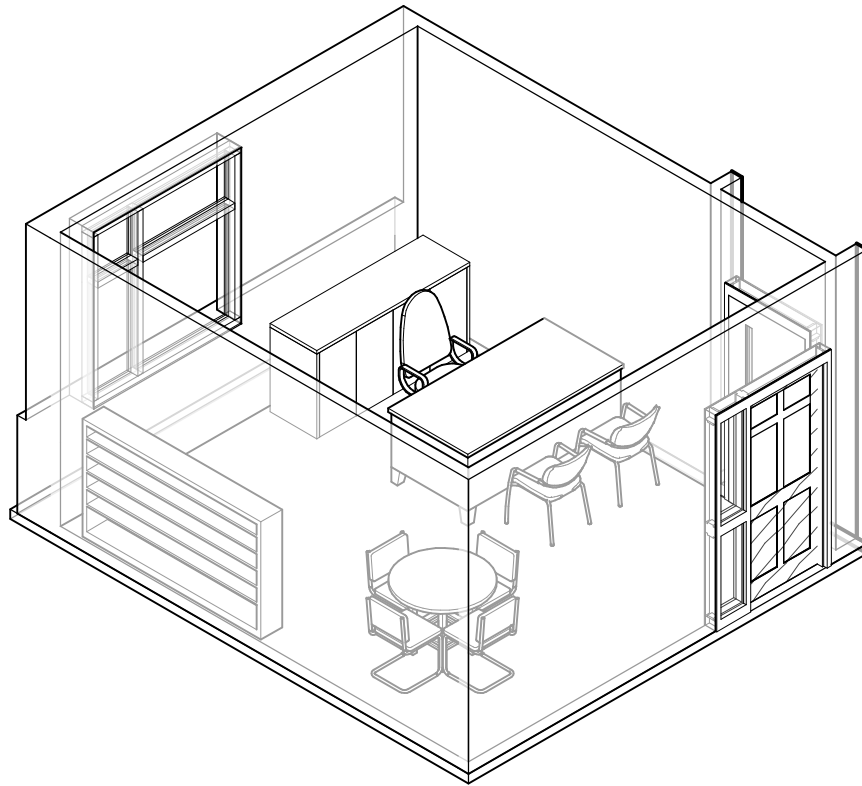
OCCUPANCY SENSORS FOR LIGHTING CONTROLS

HEATING / COOLING

COMPONENTS:

1. (14) 18" X 24" FILE CABINETS

DRAFT



ENGINEERING DIRECTOR OFFICE - 224 SF
 $3/16'' = 1'-0''$

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: CARPET TILE

MEP/DATA REQUIREMENTS:

DUPLEX ELECTRICAL OUTLETS

TEL/DATA OUTLET JACKS

NATURAL LIGHTING W/ WINDOWS

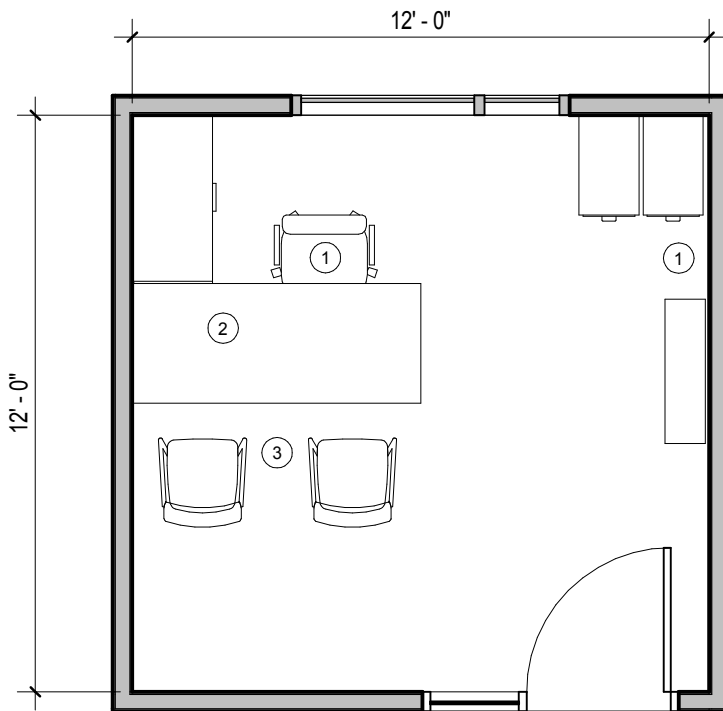
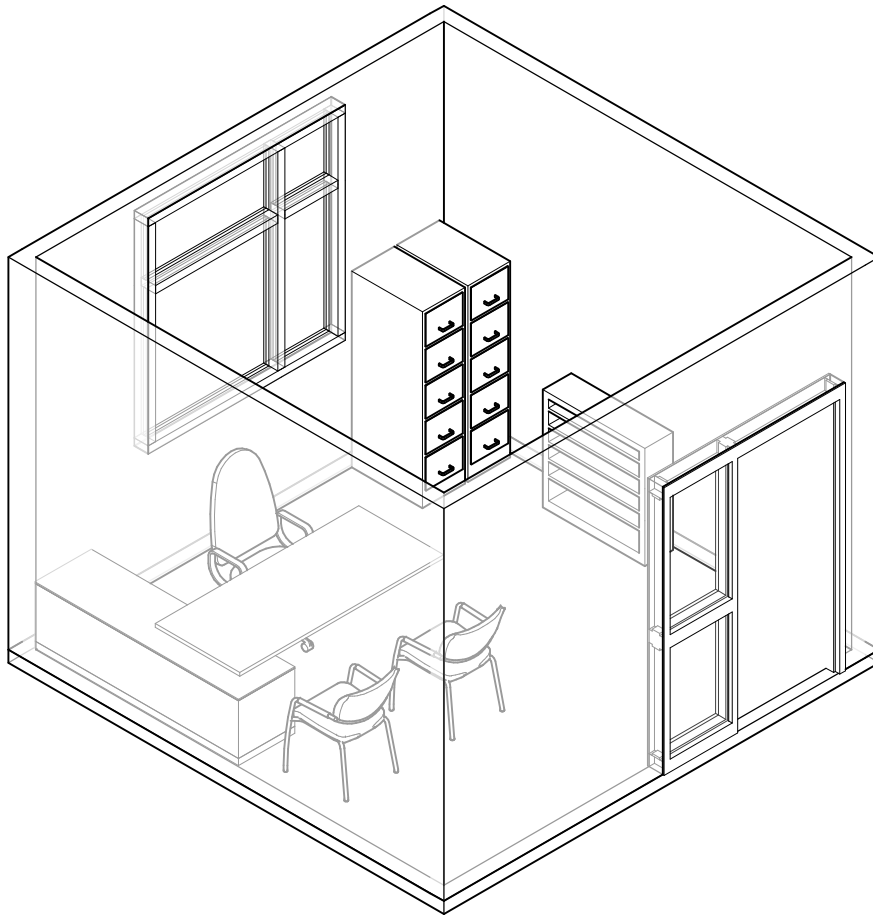
OCCUPANCY SENSORS FOR LIGHTING CONTROLS

HEATING / COOLING

COMPONENTS:

1. EXECUTIVE CHAIR
2. WORKSTATION
3. MEETING TABLE
4. (2) CHAIRS
5. BOOKCASE
6. CLOSET

DRAFT



ENVIRONMENT ENGINEER OFFICE - 144 SF

1/4" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: CARPET TILE

MEP/DATA REQUIREMENTS:

DUPLEX ELECTRICAL OUTLETS

TEL/DATA OUTLET JACKS

NATURAL LIGHTING W/ WINDOWS

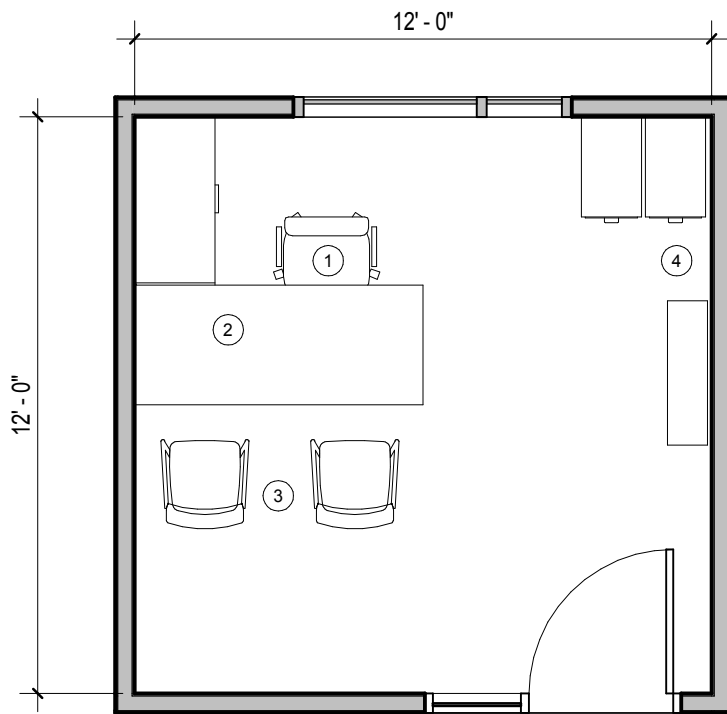
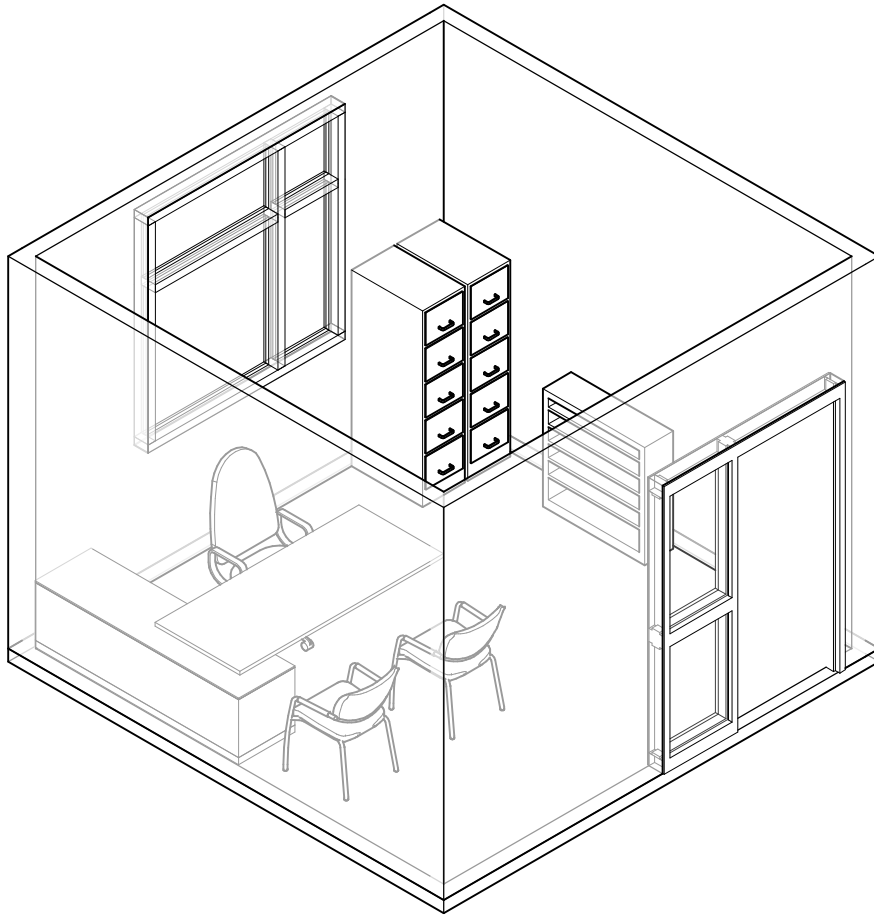
OCCUPANCY SENSORS FOR LIGHTING CONTROLS

HEATING / COOLING

COMPONENTS:

1. EXECUTIVE CHAIR
2. WORKSTATION
3. GUEST CHAIRS
4. BOOKCASE / FILE CABINETS

DRAFT



ASSISTANT ENGINEER OFFICE - 144 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: CARPET TILE

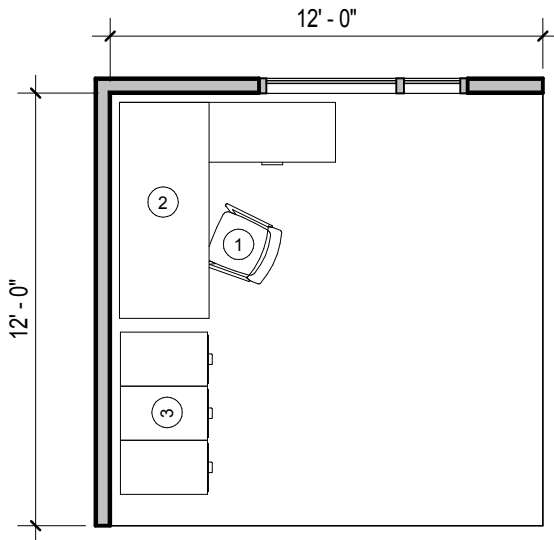
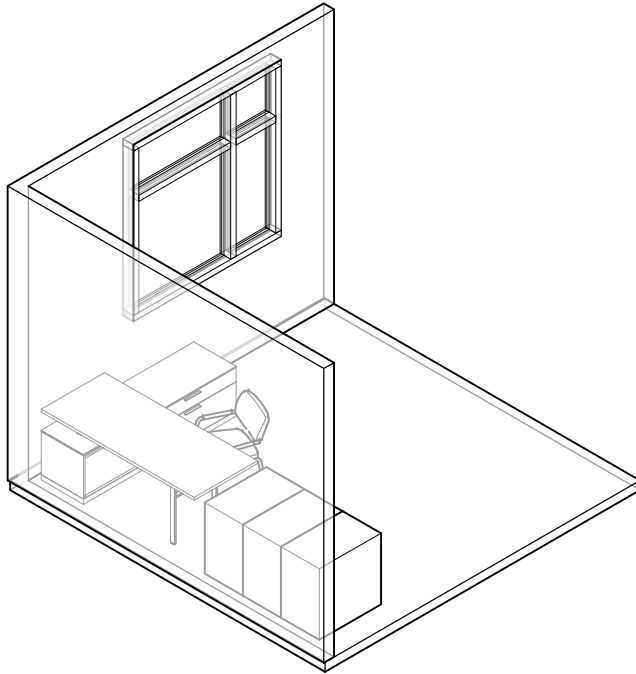
MEP/DATA REQUIREMENTS:

- DUPLEX ELECTRICAL OUTLETS
- TEL/DATA OUTLET JACKS
- NATURAL LIGHTING W/ WINDOWS
- OCCUPANCY SENSORS FOR LIGHTING CONTROLS
- HEATING / COOLING

COMPONENTS:

1. EXECUTIVE CHAIR
2. WORKSTATION
3. GUEST CHAIRS
4. BOOKCASE / FILE CABINETS

DRAFT



OPEN OFFICE - (FUTURE ENG.) - 144 SF
 $\frac{3}{16}'' = 1'-0''$

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: CARPET TILE

MEP/DATA REQUIREMENTS:

DUPLEX ELECTRICAL OUTLETS

TEL/DATA OUTLET JACKS

NATURAL LIGHTING W/ WINDOWS

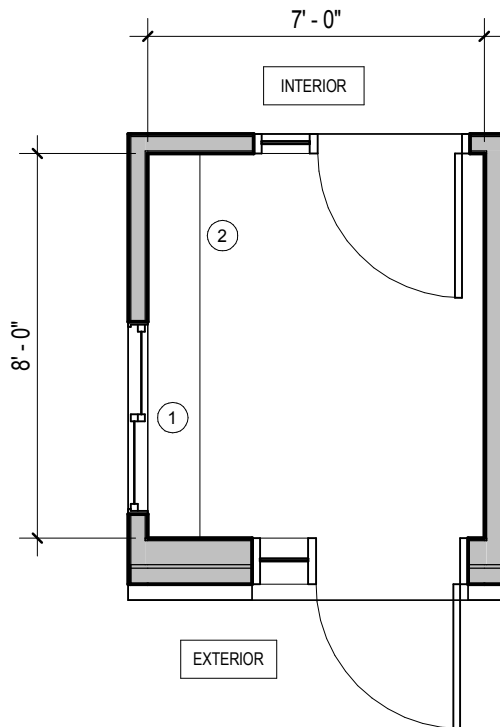
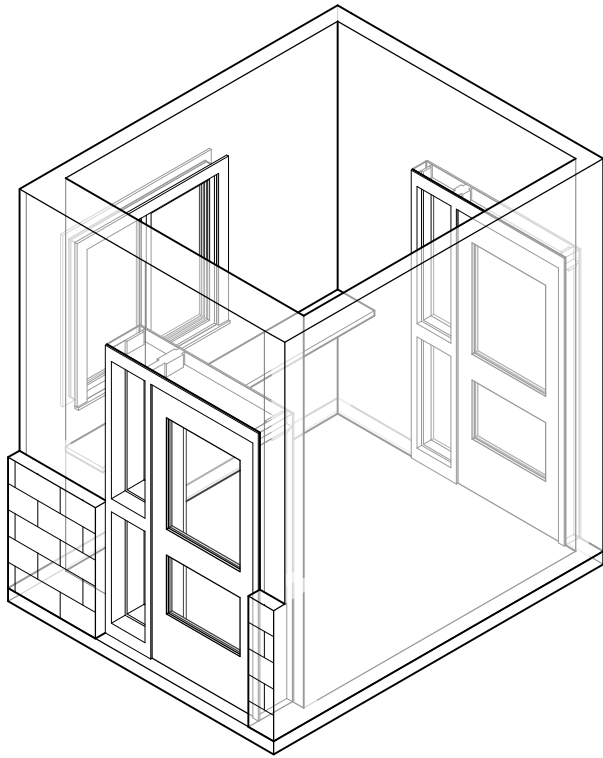
OCCUPANCY SENSORS FOR LIGHTING CONTROLS

HEATING / COOLING

COMPONENTS:

1. (1) OFFICE CHAIR
2. (1) WORKSTATION
3. FILE CABINETS

DRAFT



STAFF ENTRANCE - 56 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: GYPSUM BOARD, PAINTED

WALLS: GYPSUM WALL BOARD, PAINTED

FLOORS: CERAMIC TILE

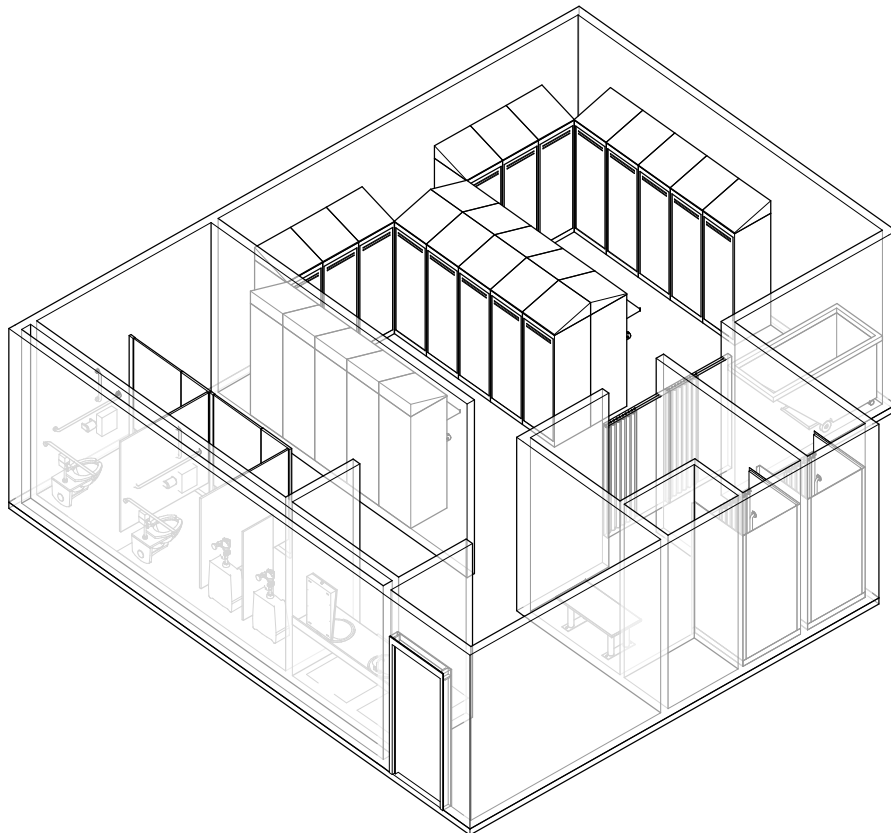
MEP/DATA REQUIREMENTS:

- DUPLEX ELECTRICAL OUTLETS
- TEL / DATA OUTLET JACKS
- HEATING / COOLING
- OCCUPANCY SENSORS FOR LIGHTING CONTROLS
- NATURAL LIGHTING W/ WINDOWS

COMPONENTS:

1. CHECK-IN COUNTER AND SLIDE WINDOW

DRAFT



ROOM FINISHES:

CEILING: ACT TILE

WALLS: CERAMIC TILE /
MOISTURE RESISTANT
GYPSUM WALL BOARD,
PAINTED

FLOORS: RESINOUS FLOORING

MEP/DATA REQUIREMENTS:

GFI ELECTRICAL OUTLETS

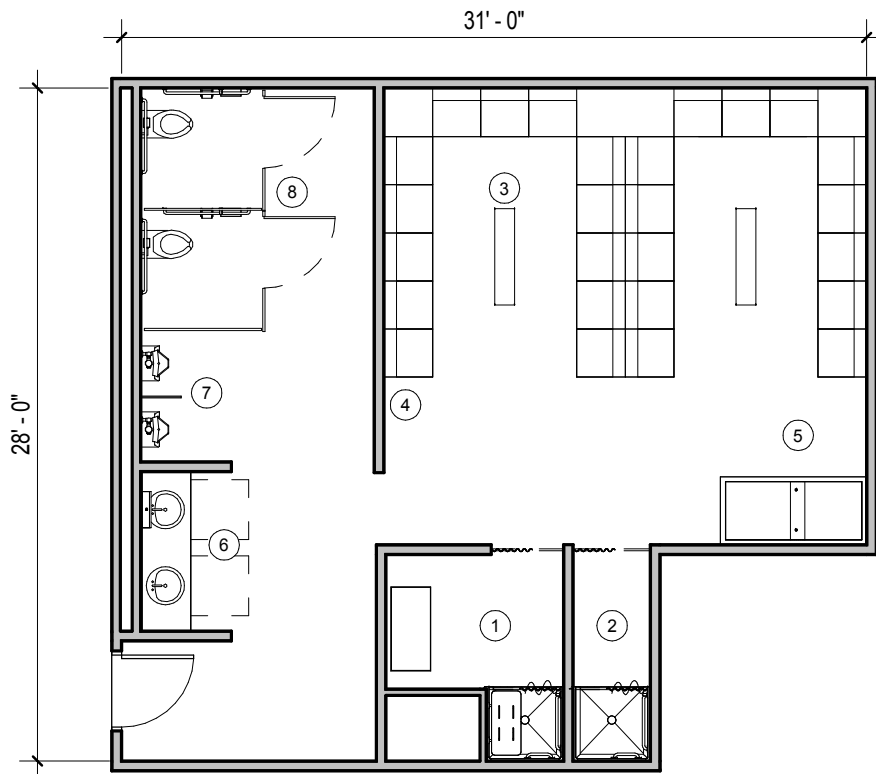
OCCUPANCY SENSORS FOR
LIGHTING CONTROLS

HEATING

COOLING

COMPONENTS:

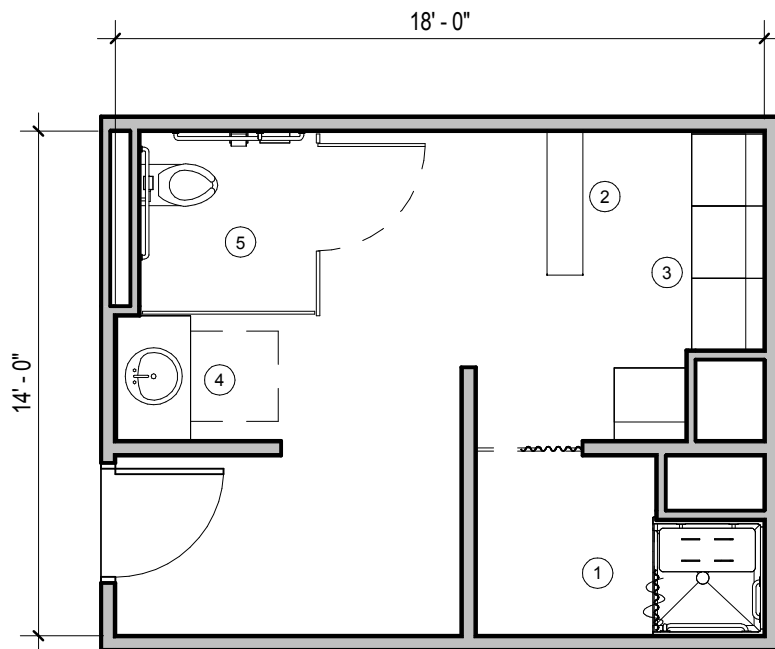
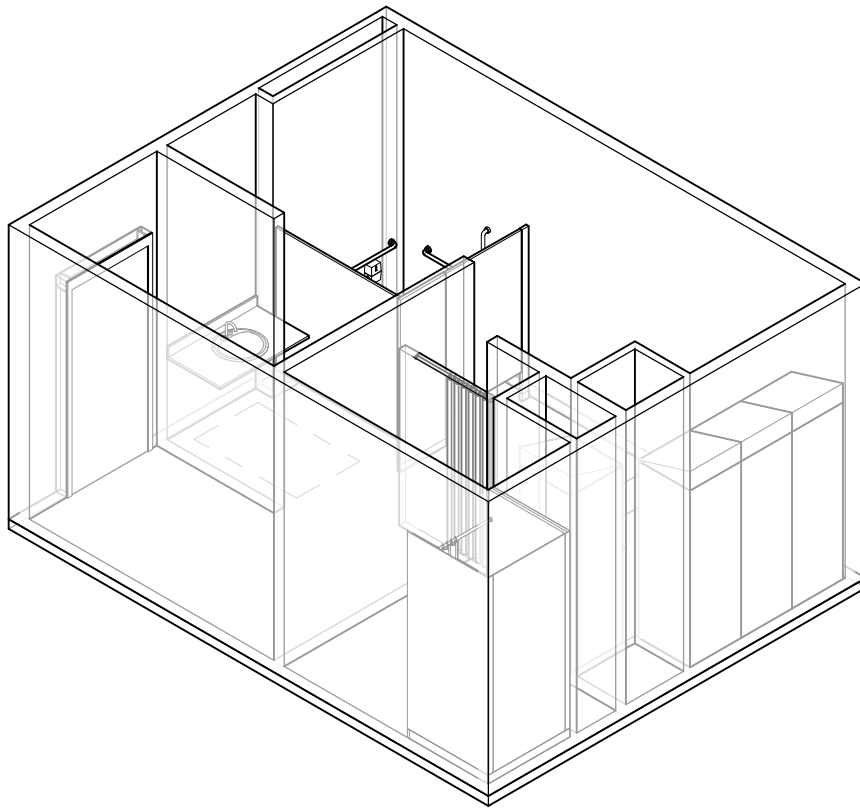
1. ADA SHOWER STALL
2. STANDARD SHOWER STALL
3. BENCH
4. (26) 24" X 24" LOCKERS
(ELEVATED BASE)
5. UNIFORM DROP-OFF / PICK-UP
6. COUNTER, SINK & MIRROR
7. WALL HUNG URINAL
8. ADA STALL



MALE LOCKER ROOM - 780 SF

1/8" = 1'-0"

DRAFT



FEMALE LOCKER / SHOWER / TOILET - 252 SF
 3/16" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: CERAMIC TILE /
 MOISTURE RESISTANT
 GYPSUM WALL BOARD,
 PAINTED

FLOORS: RESINOUS FLOORING

MEP/DATA REQUIREMENTS:

GFI ELECTRICAL OUTLETS

OCCUPANCY SENSORS FOR
 LIGHTING CONTROLS

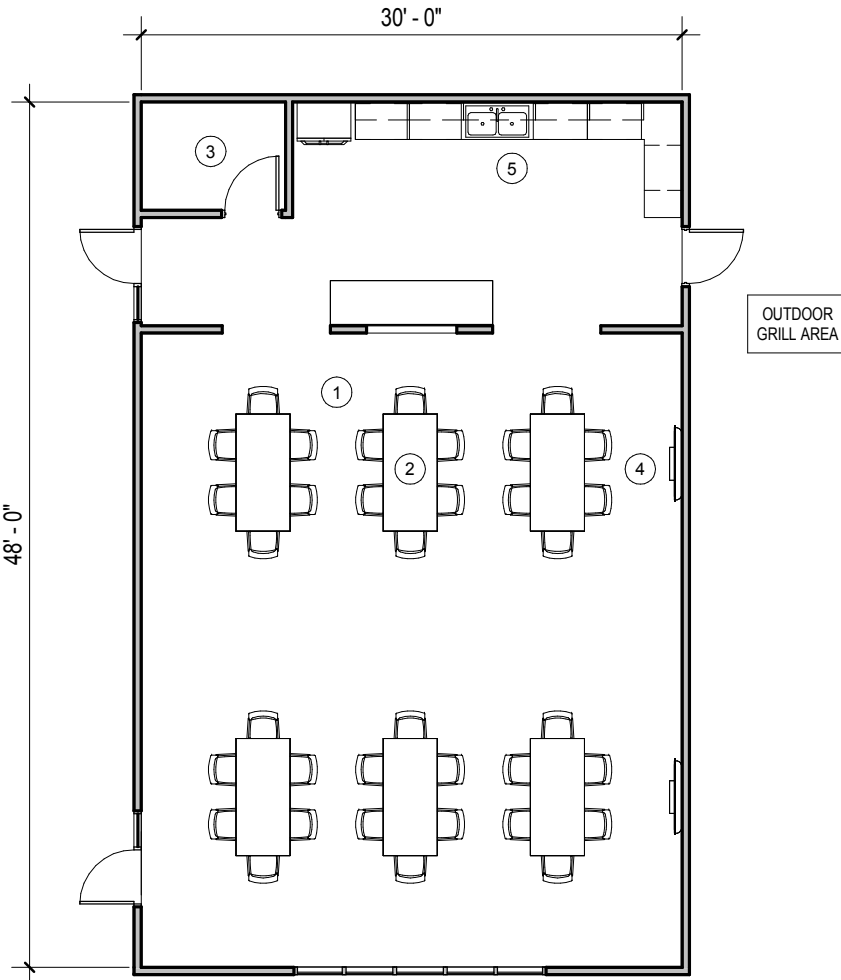
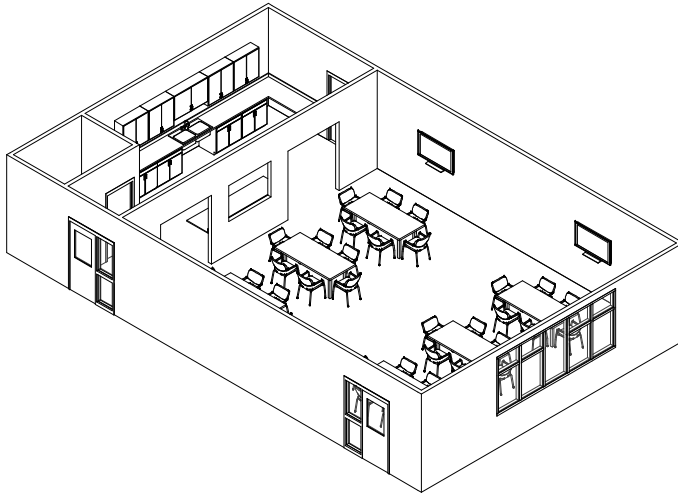
HEATING

COOLING

COMPONENTS:

1. ADA SHOWER STALL
2. BENCH
3. (4) 24" X 24" LOCKERS
4. COUNTER, SINK & MIRROR
5. ADA STALL

DRAFT



BREAK / TRAINING / MUSTER ROOM - 1,440 SF
 3/32" = 1'-0"

ROOM FINISHES:

CEILING: ACOUSTICAL CEILING TILE

WALLS: GYPSUM WALL BOARD, PAINTED

FLOORS: RESILIENT FLOORING

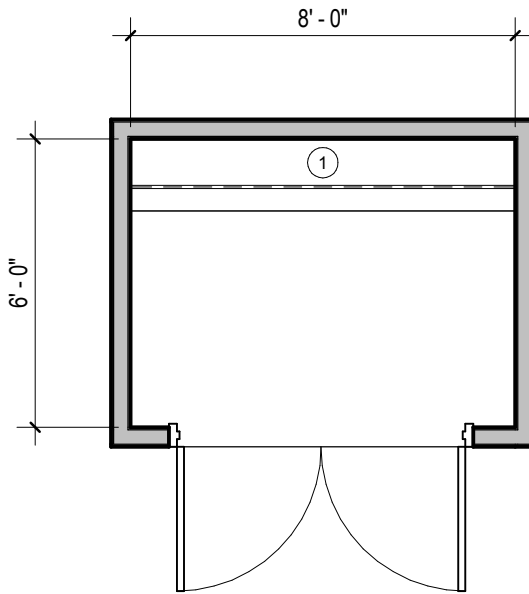
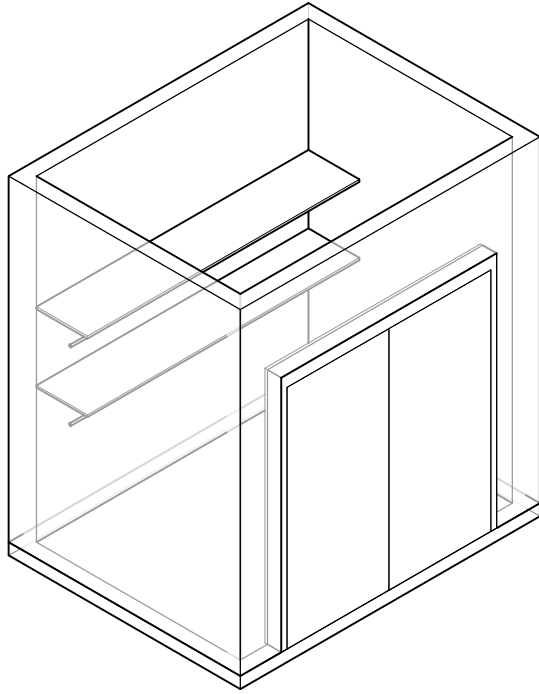
MEP/DATA REQUIREMENTS:

- DUPLEX ELECTRICAL OUTLETS
- TEL/DATA OUTLET JACKS
- NATURAL LIGHTING W/ WINDOWS
- OCCUPANCY SENSORS FOR LIGHTING CONTROLS
- HEATING / COOLING

COMPONENTS:

1. (36) TASK CHAIRS
2. (6) TABLES
3. STORAGE CLOSET
4. (2) WALL MOUNTED TELEVISION
5. KITCHEN, INCLUDES (TBD):
 - SOLID SURFACE COUNTERS
 - BASE & WALL CABINETS
 - STAINLESS STEEL SINK
 - REFRIGERATOR
 - GAS COOKTOP W/ HOOD
 - GAS RANGE OVEN W/ HOOD
 - MICROWAVE

DRAFT



STORAGE CLOSET - 48 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GYPSUM WALL BOARD,
PAINTED

FLOORS: RESILIENT FLOORING

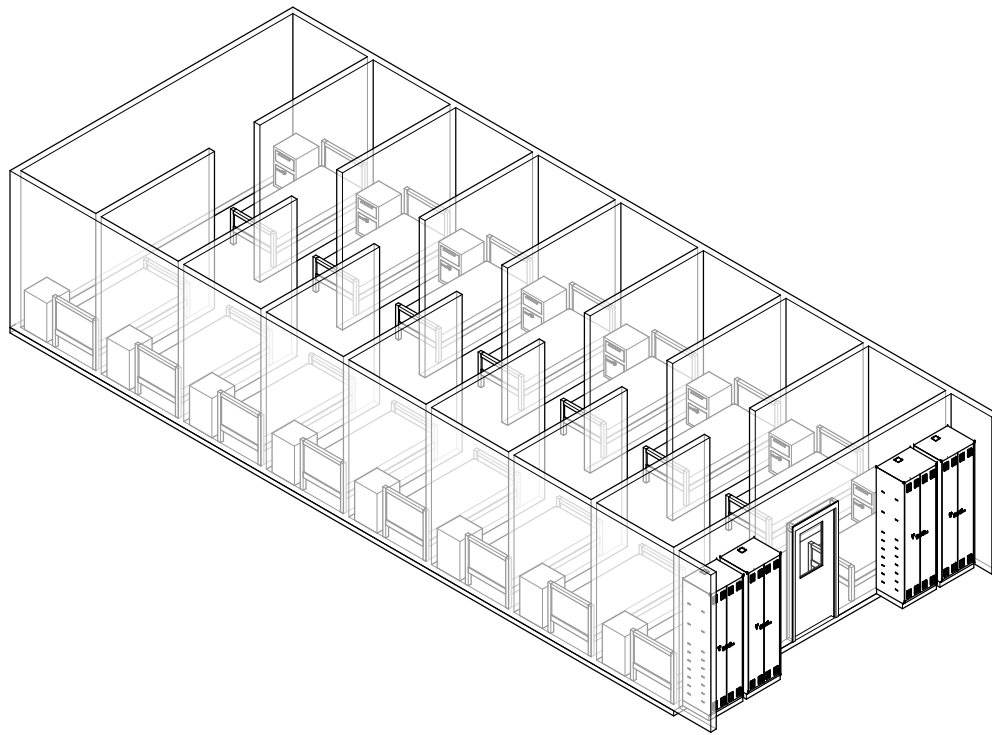
MEP/DATA REQUIREMENTS:

- ELECTRICAL OUTLETS

COMPONENTS:

1. WALL MOUNTED SHELVING

DRAFT



ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: CARPET TILE

MEP/DATA REQUIREMENTS:

HEATING

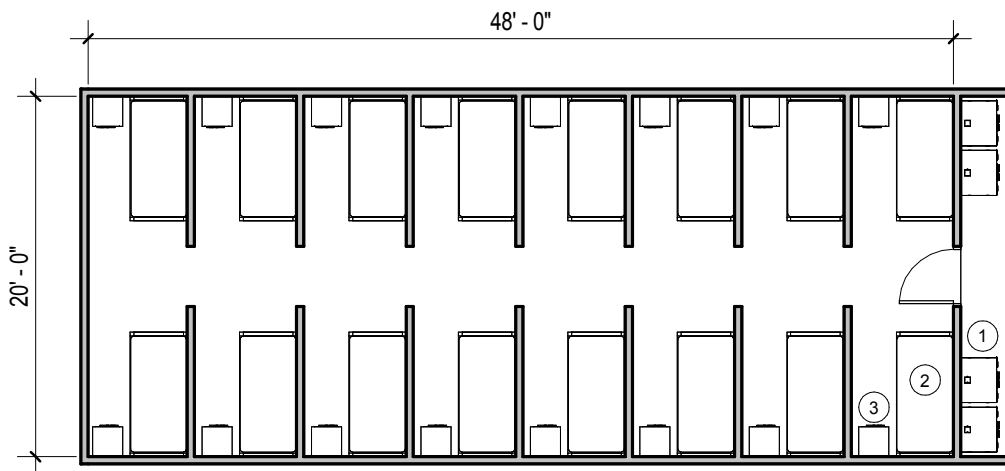
COOLING

DUPLEX ELECTRICAL OUTLETS

DATA OUTLET JACKS

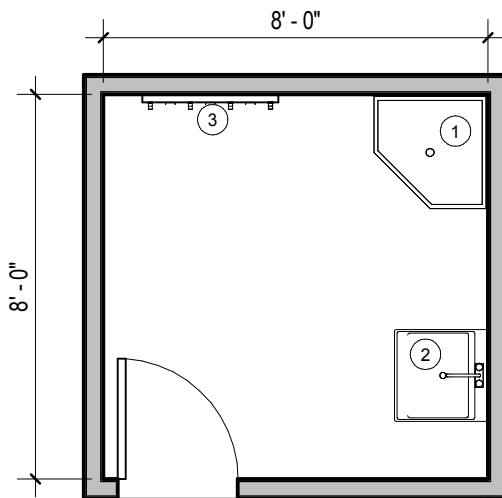
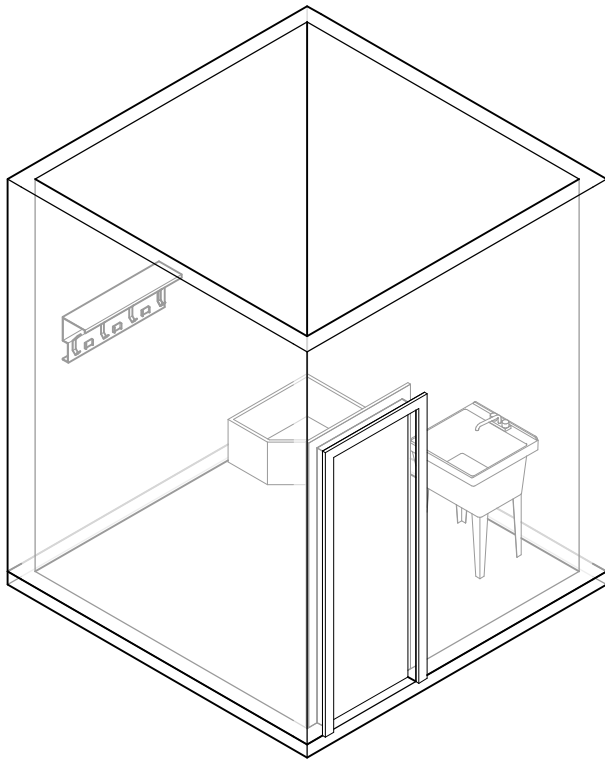
COMPONENTS:

1. BOOT STORAGE
2. (16) 38" X 82" TWIN BUNK BEDS
3. NIGHTSTAND



BUNK ROOM - 960 SF
 3/32" = 1'-0"

DRAFT



JANITOR CLOSET / CUSTODIAL STORAGE - 64 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: MOISTURE RESISTANT
ACT TILE

WALLS: GYPSUM WALL BOARD,
PAINTED

FLOORS: RESINOUS FLOORING

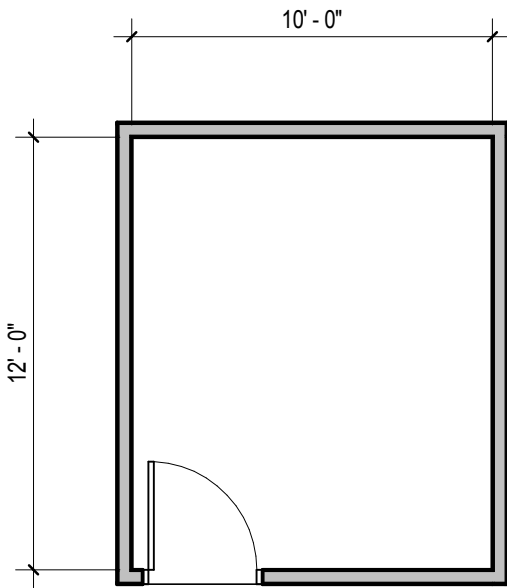
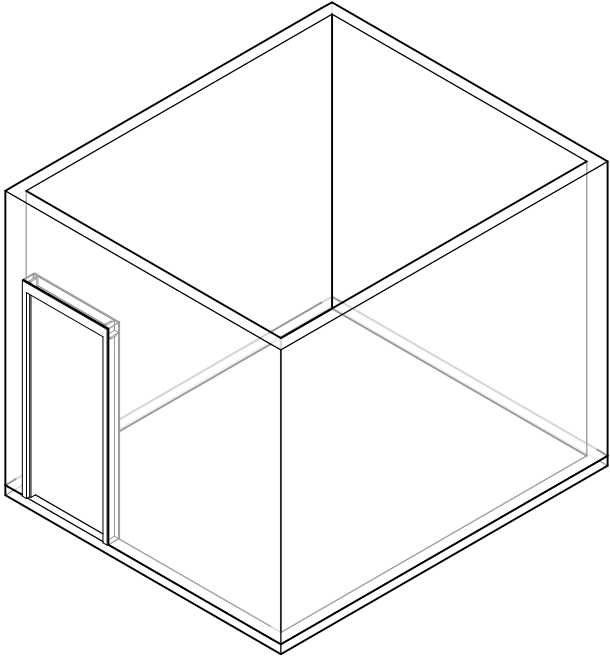
MEP/DATA REQUIREMENTS:

DUPLEX ELECTRICAL OUTLETS

COMPONENTS:

1. FRP PANELING AT SINK
2. UTILITY SINK
3. UTILITY SHELF W/
MOP & BROOM HOLDERS

DRAFT



MAIN ELECTRIC ROOM - 120 SF
 3/16" = 1'-0"

ROOM FINISHES:

CEILING: MOISTURE RESISTANT
ACT TILE

WALLS: GYPSUM BOARD,
PAINTED

FLOORS: RESILIENT FLOORING

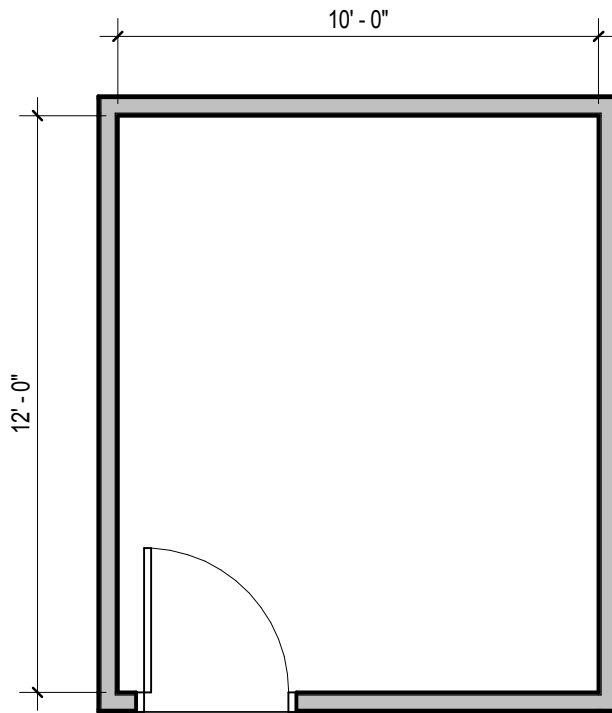
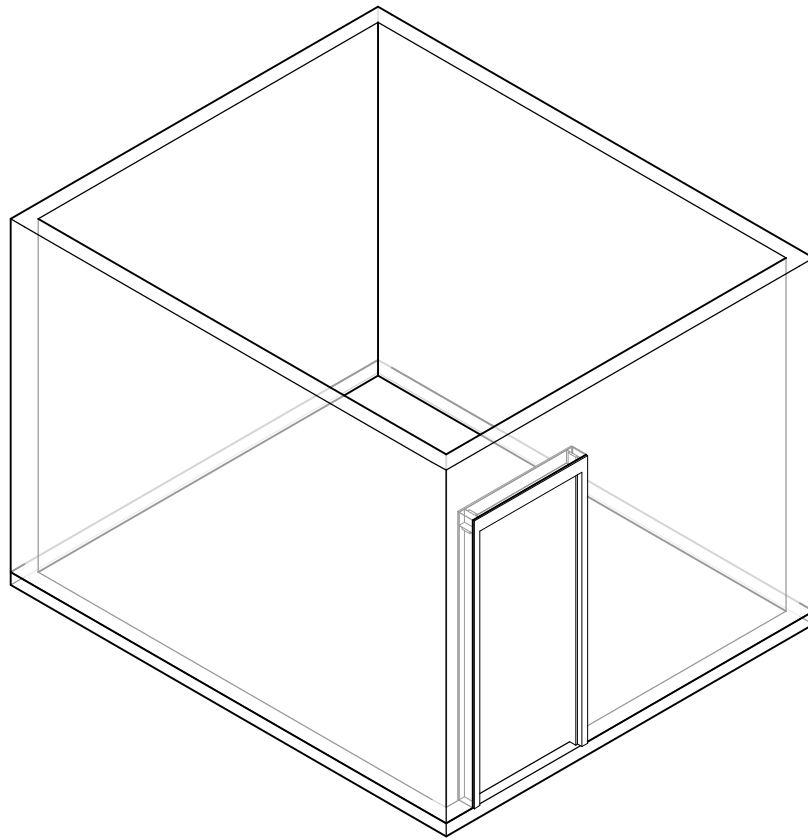
MEP/DATA REQUIREMENTS:

DUPLEX ELECTRICAL OUTLETS
 DATA OUTLET JACKS

COMPONENTS:

1. WALL MOUNTED PANELS

DRAFT



MECHANICAL / UTILITY ROOM - 120 SF

1/4" = 1'-0"

ROOM FINISHES:

CEILING: OPEN TO STRUCTURE

WALLS: CMU, PAINTED

FLOORS: SEALED CONCRETE

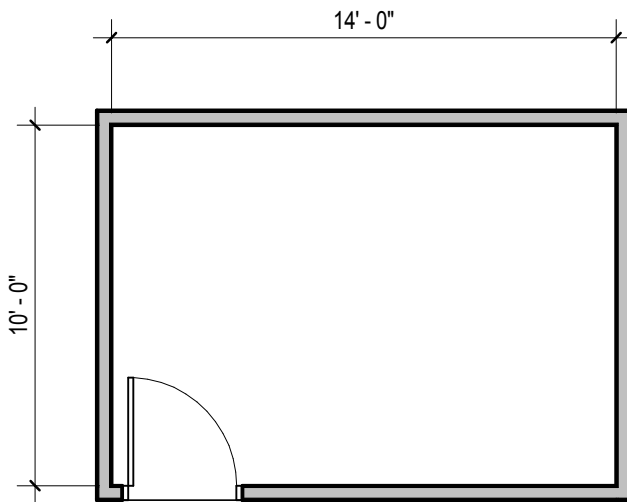
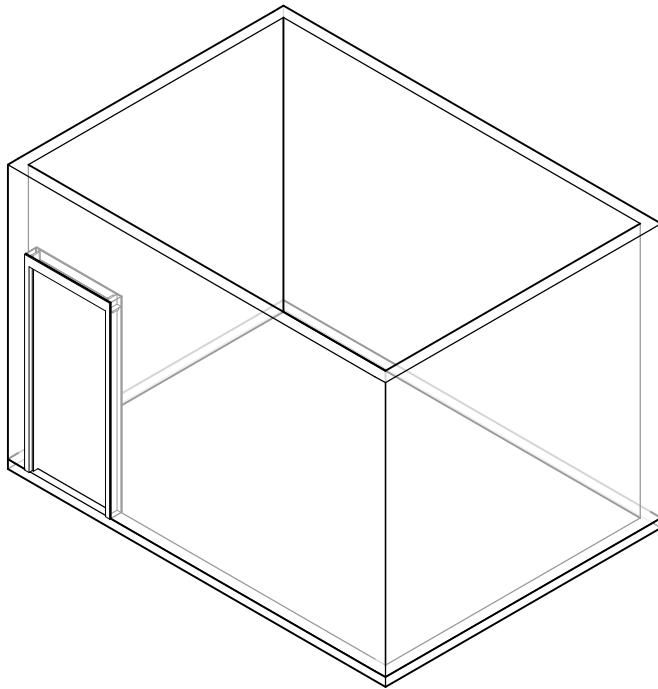
MEP/DATA REQUIREMENTS:

DUPLEX ELECTRICAL OUTLETS

TEL/DATA OUTLET JACKS

COMPONENTS:

DRAFT



PLUMBING / FIRE PROTECTION ROOM - 140 SF
 $3/16" = 1'-0"$

ROOM FINISHES:

CEILING:

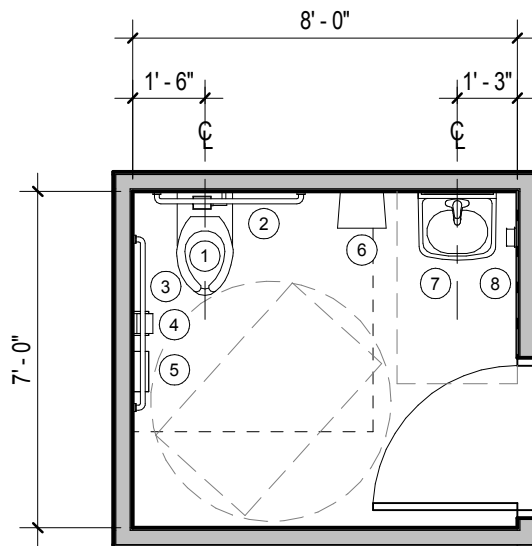
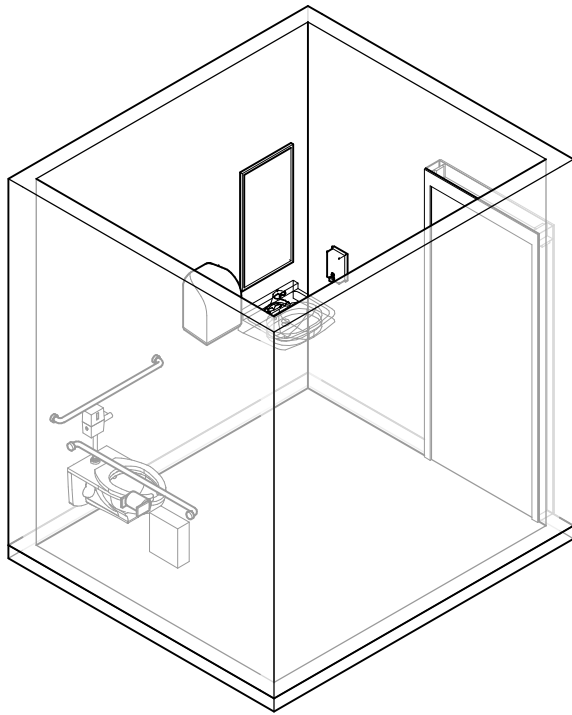
WALLS:

FLOORS:

MEP/DATA REQUIREMENTS:

COMPONENTS:

DRAFT



RESTROOM - (CONTRACTORS - SINGLE USER ADA) - 56 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: MOISTURE RESISTANT ACT TILE

WALLS: CERAMIC TILE / MOISTURE RESISTANT GYPSUM WALL BOARD, PAINTED

FLOORS: CERAMIC TILE

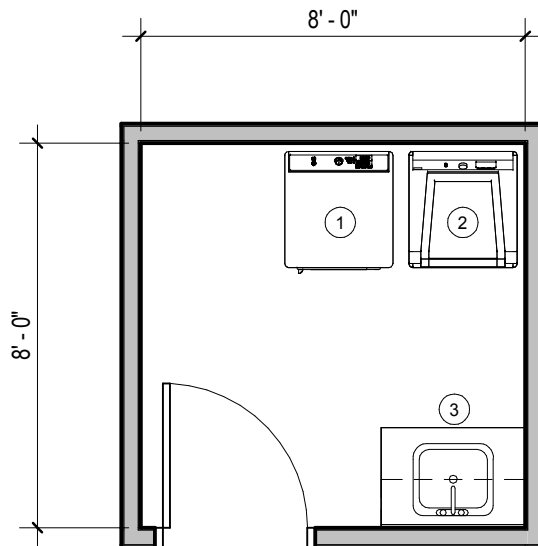
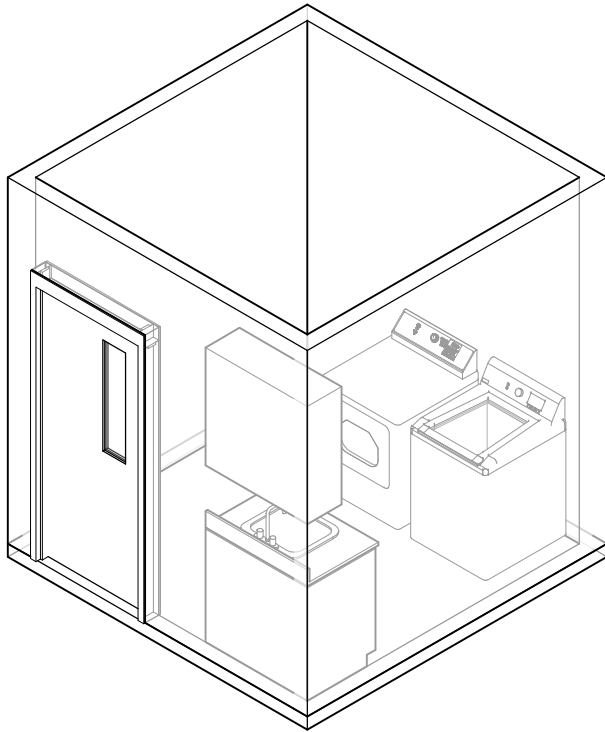
MEP/DATA REQUIREMENTS:

- GFI ELECTRICAL OUTLETS
- HEATING / COOLING
- OCCUPANCY SENSORS FOR LIGHTING CONTROLS

COMPONENTS:

1. WALL HUNG TOILET
2. 36" GRAB BAR
3. 42" GRAB BAR
4. TOILET PAPER DISPENSER
5. SANITARY NAPKIN DISPOSAL RECEPTICLE
6. PAPER TOWEL DISPENSER
7. WALL HUNG SINK & MIRROR
8. SOAP DISPENSER

DRAFT



LAUNDRY ROOM - 64 SF

1/4" = 1'-0"

ROOM FINISHES:

CEILING:

WALLS:

FLOORS:

MEP/DATA REQUIREMENTS:

GFI ELECTRICAL OUTLETS

OCCUPANCY SENSORS FOR LIGHTING CONTROLS

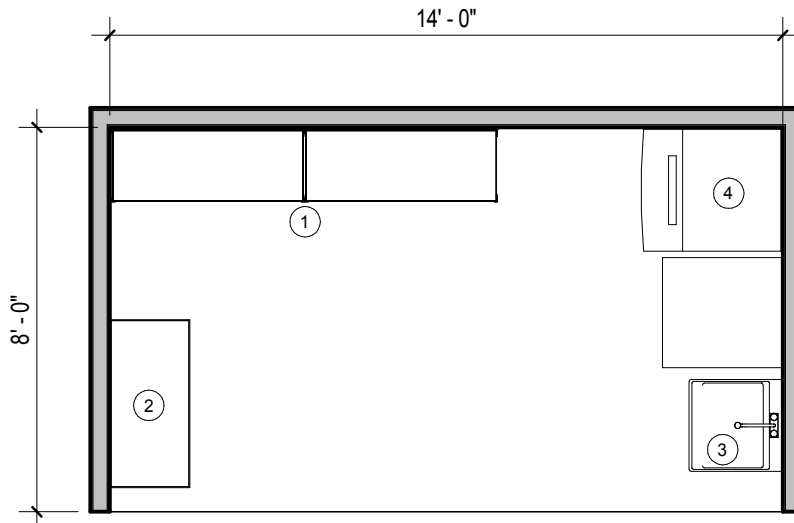
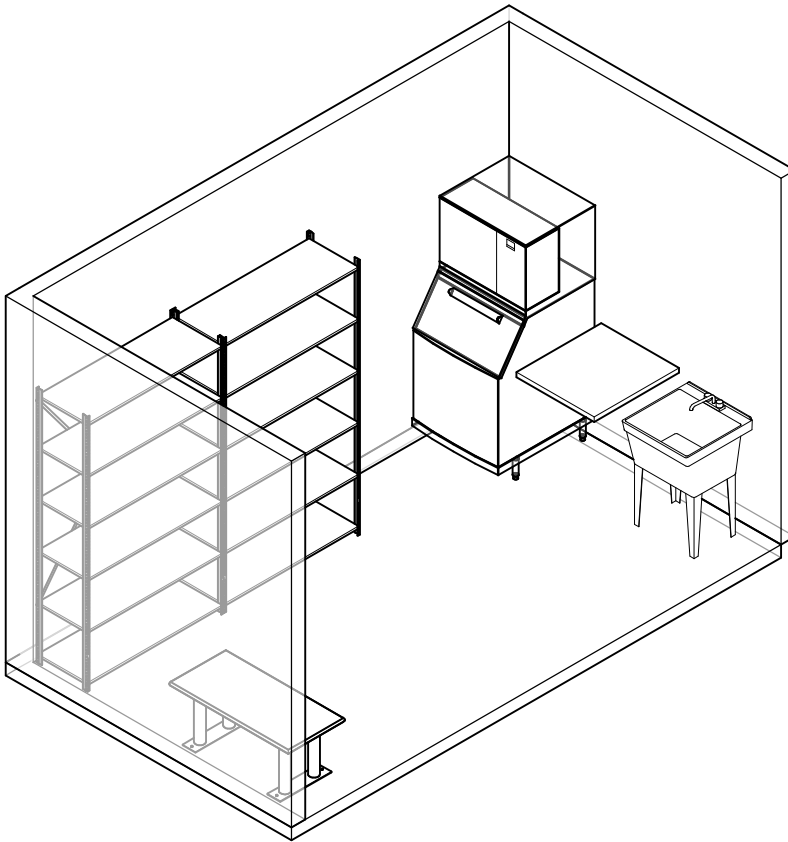
HEATING

COOLING

COMPONENTS:

1. CLOTHES WASHER
2. CLOTHES DRYER
3. COUNTER, SINK, & CABINETS (BELOW & ABOVE)
4. WALL MOUNTED UNIFORM RACK

DRAFT



MUDROOM / WET GEAR AREA - 112 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: OPEN TO STRUCTURE

WALLS: CMU, PAINTED

FLOORS: SEALED CONCRETE

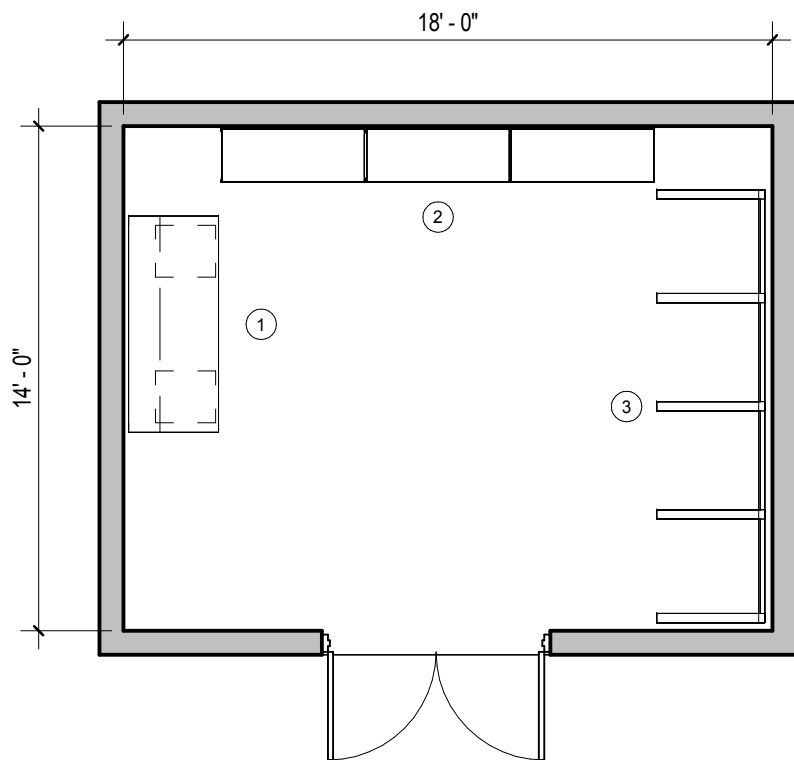
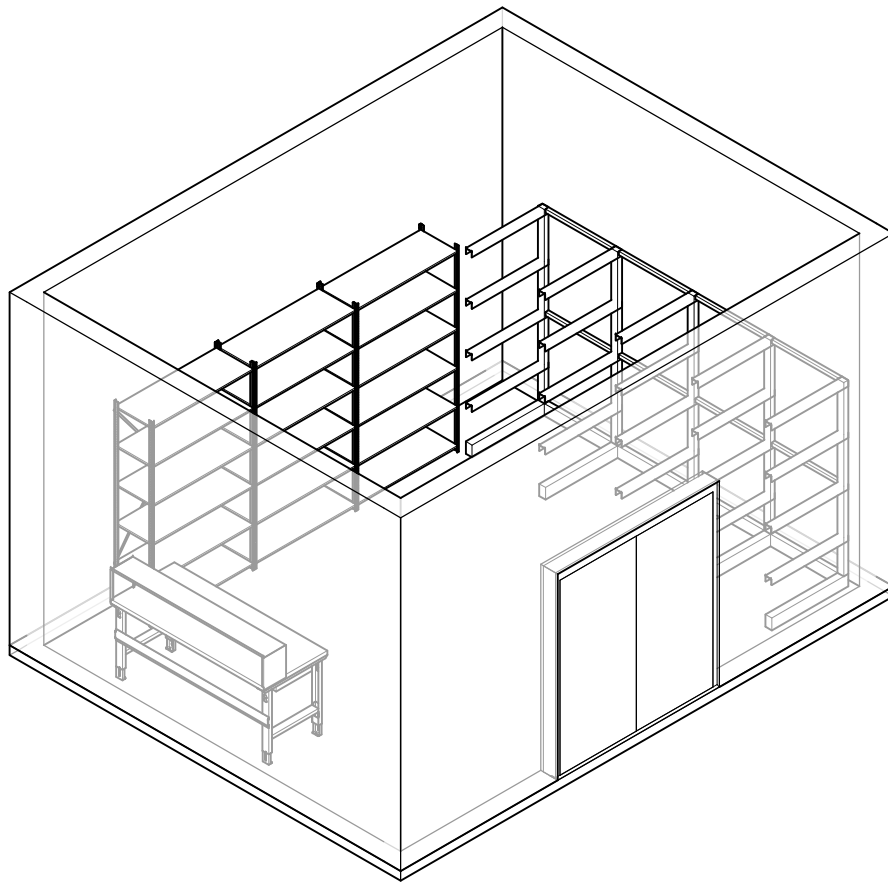
MEP/DATA REQUIREMENTS:

- DUPLEX ELECTRICAL OUTLETS

COMPONENTS:

1. (2) 48" x 18" x 84" UTILITY SHELVING
2. BENCH
3. SINK
4. WATER COOLER / ICE MACHINE

DRAFT



SIGN SHOP - 252 SF
 3/16" = 1'-0"

ROOM FINISHES:

CEILING: OPEN TO STRUCTURE

WALLS: CMU, PAINTED

FLOORS: RESILIENT FLOORING

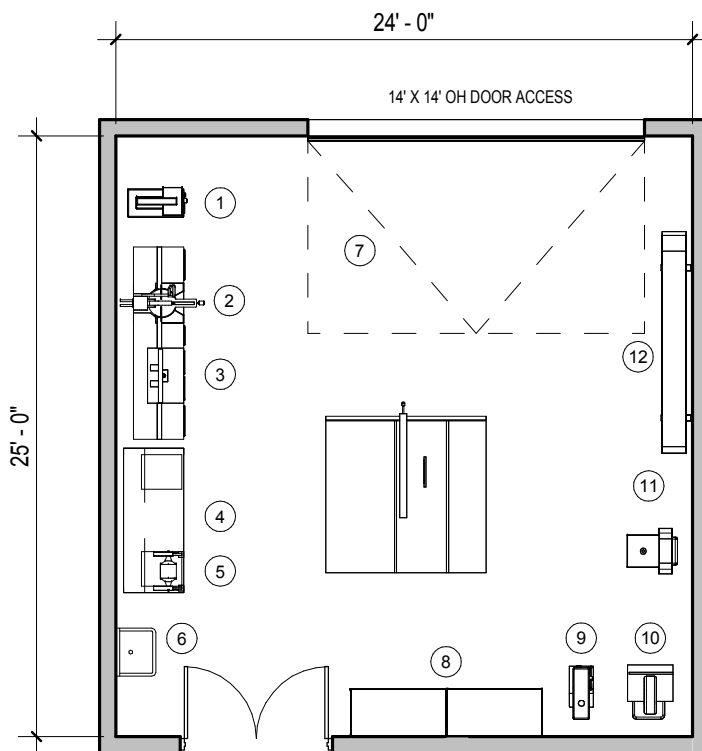
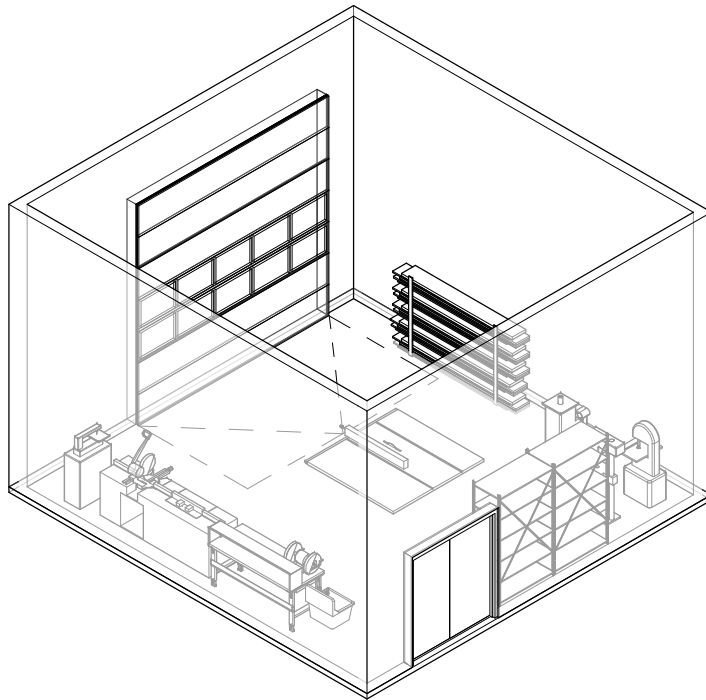
MEP/DATA REQUIREMENTS:

- HEATING / COOLING
- COMPRESSED AIR PROVISIONS
- DUPLEX ELECTRICAL OUTLETS
- DATA OUTLET JACKS

COMPONENTS:

1. WORKBENCH
2. (3) 48" x 18" x 84" UTILITY SHELVING
3. CANTILEVER STORAGE RACK

DRAFT



BUILDING MAINTENANCE / CARPENTRY SHOP - 600 SF
 1/8" = 1'-0"

ROOM FINISHES:

CEILING: OPEN TO STRUCTURE

WALLS: CMU, PAINTED

FLOORS: SEALED CONCRETE

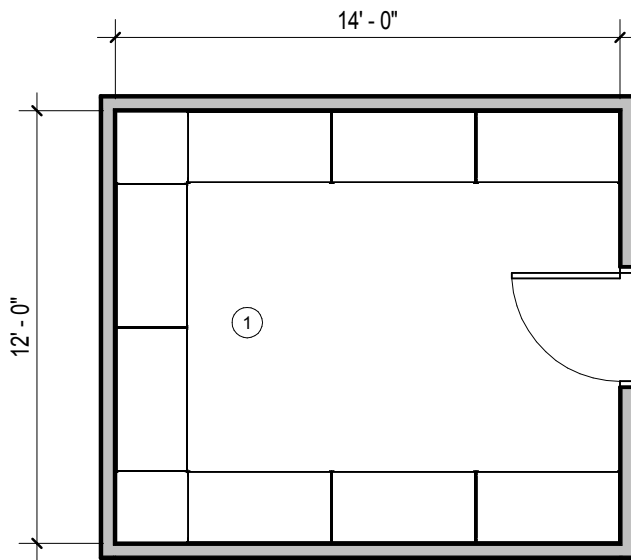
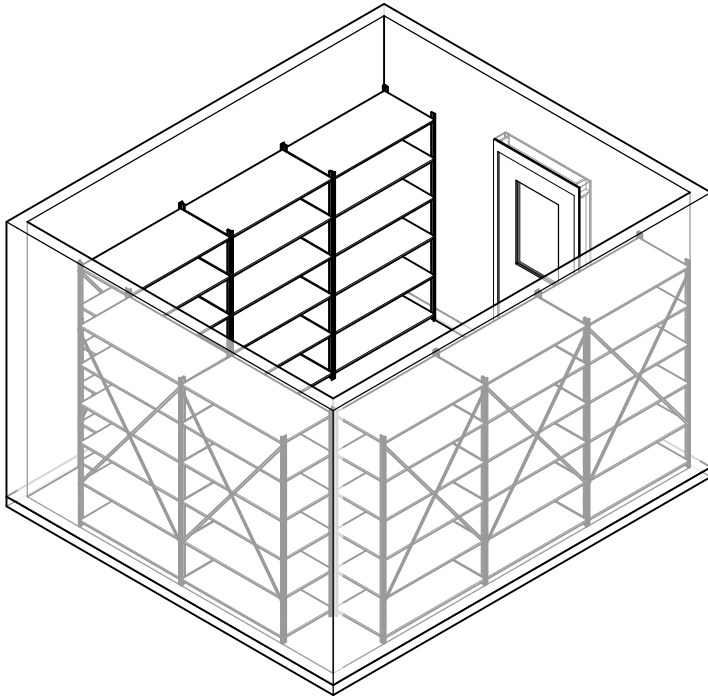
MEP/DATA REQUIREMENTS:

- HEATING / COOLING
- DUPLEX ELECTRICAL OUTLETS
- DUST COLLECTION

COMPONENTS:

1. JIG SAW
2. BENCH W/ MITER SAW
3. ROUTER SAW
4. WORK / LAYOUT BENCH
5. BENCH GRINDER
6. UTILITY SINK
7. TABLE SAW
8. UTILITY SHELVING
9. DRILL PRESS
10. BAND SAW
11. DRUM SANDER
12. LUMBER RACK

DRAFT



MATERIAL / SUPPLY STORAGE - 168 SF
 3/16" = 1'-0"

ROOM FINISHES:

CEILING: OPEN TO STRUCTURE

WALLS: CMU, PAINTED

FLOORS: SEALED CONCRETE

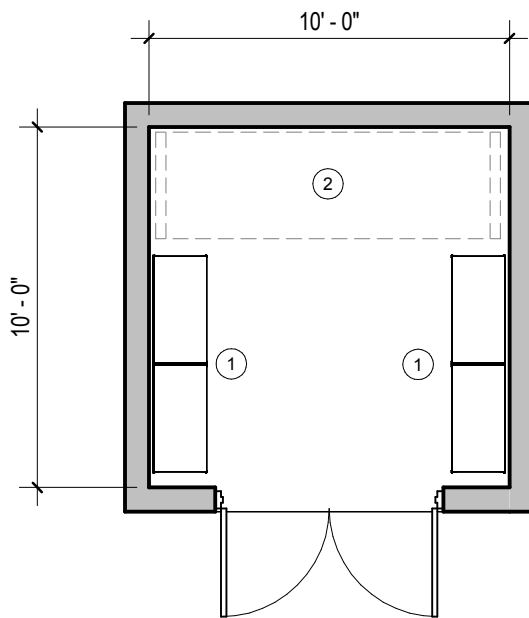
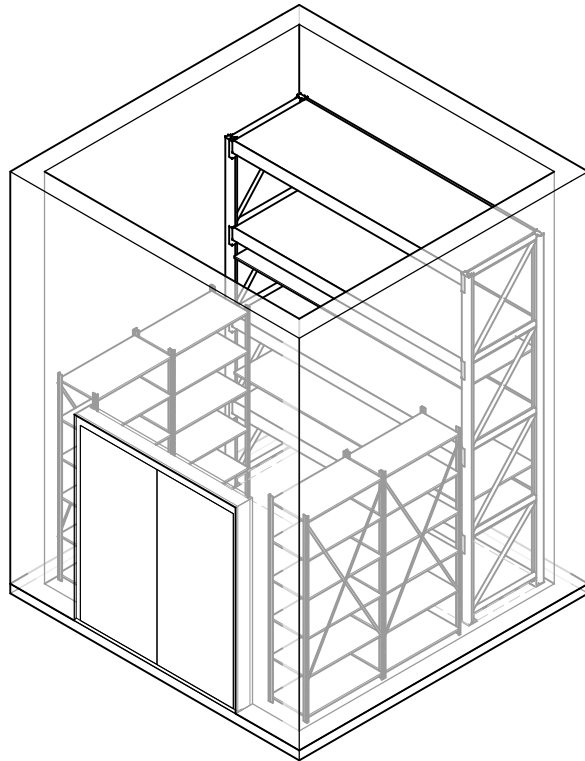
MEP/DATA REQUIREMENTS:

- DUPLEX ELECTRICAL OUTLETS

COMPONENTS:

1. (8) 48" x 18" x 84" UTILITY SHELVING

DRAFT



SECURE TOOL CRIB - 100 SF
 $3/16" = 1'-0"$

ROOM FINISHES:

CEILING: OPEN TO STRUCTURE

WALLS: CMU, PAINTED OR WIRE CAGE

FLOORS: SEALED CONCRETE

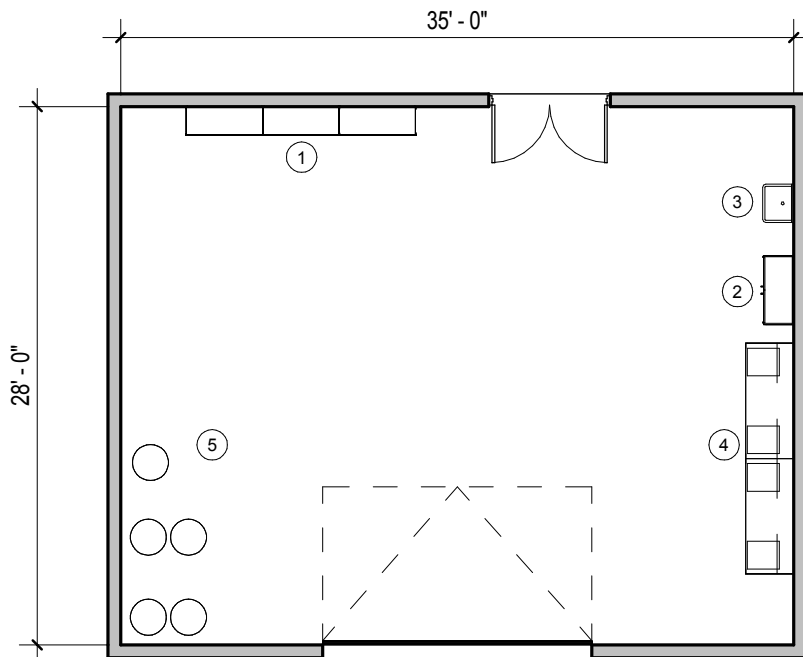
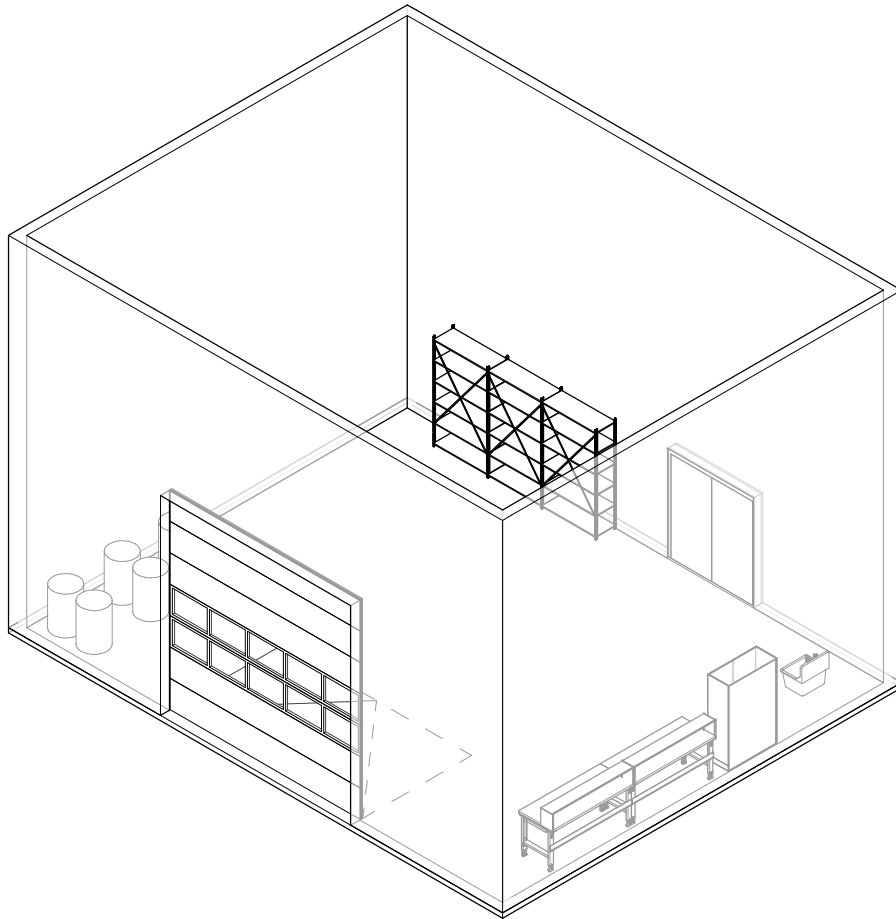
MEP/DATA REQUIREMENTS:

- DUPLEX ELECTRICAL OUTLETS

COMPONENTS:

1. UTILITY SHELVING
2. 3' DEEP HEAVY DUTY STORAGE SHELVING

DRAFT



HIGHWAY SHOP - 980 SF

1" = 10'-0"

ROOM FINISHES:

CEILING: OPEN TO STRUCTURE

WALLS: METAL PANEL /
CONCRETE, PAINTED

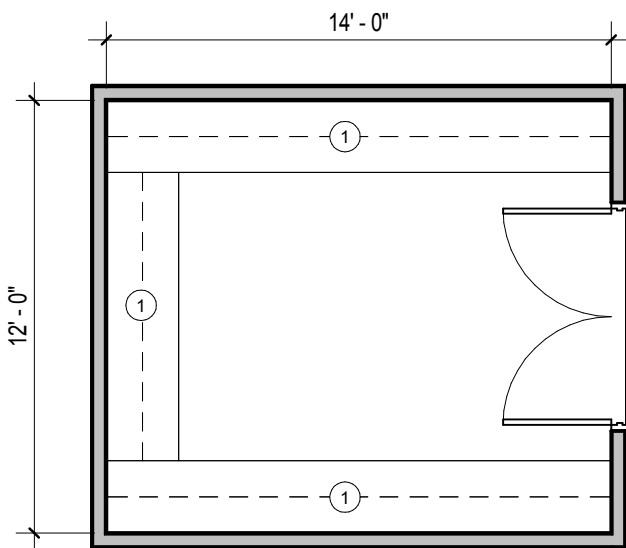
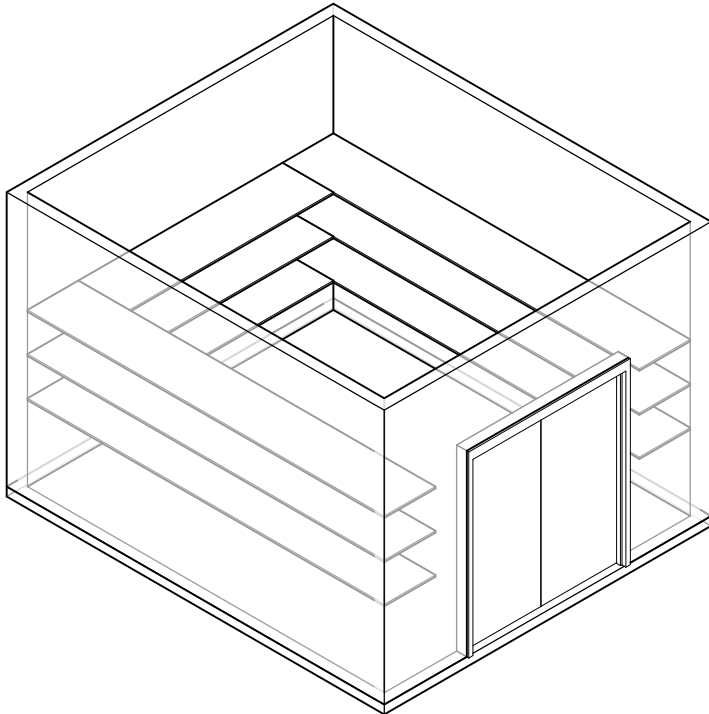
FLOORS: SEALED CONCRETE

MEP/DATA REQUIREMENTS:

COMPONENTS:

1. UTILITY SHELVING
2. FREE STANDING CABINET
3. SINK
4. WORKBENCH
5. GAS CAN STORAGE AREA

DRAFT



PAINT STORAGE - 168 SF
 3/16" = 1'-0"

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GYPSUM WALL BOARD,
PAINTED

FLOORS: SEALED CONCRETE

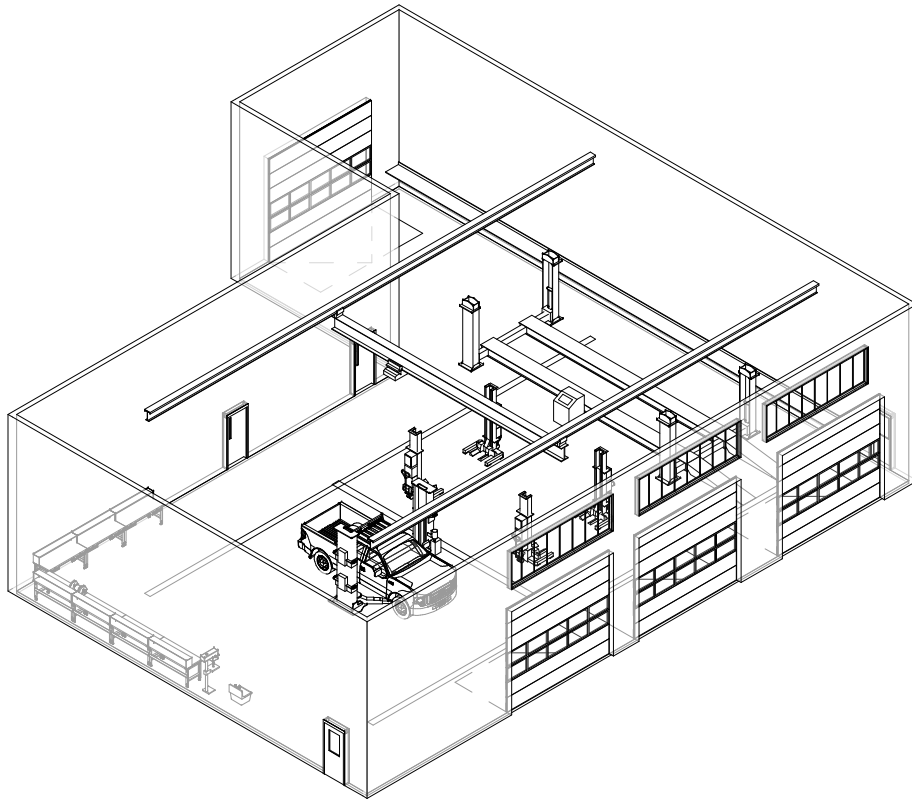
MEP/DATA REQUIREMENTS:

- ELECTRICAL OUTLETS

COMPONENTS:

1. WALL MOUNTED SHELVING

DRAFT



ROOM FINISHES:

CEILING: OPEN TO STRUCTURE

WALLS: METAL PANEL /
CONCRETE, PAINTED

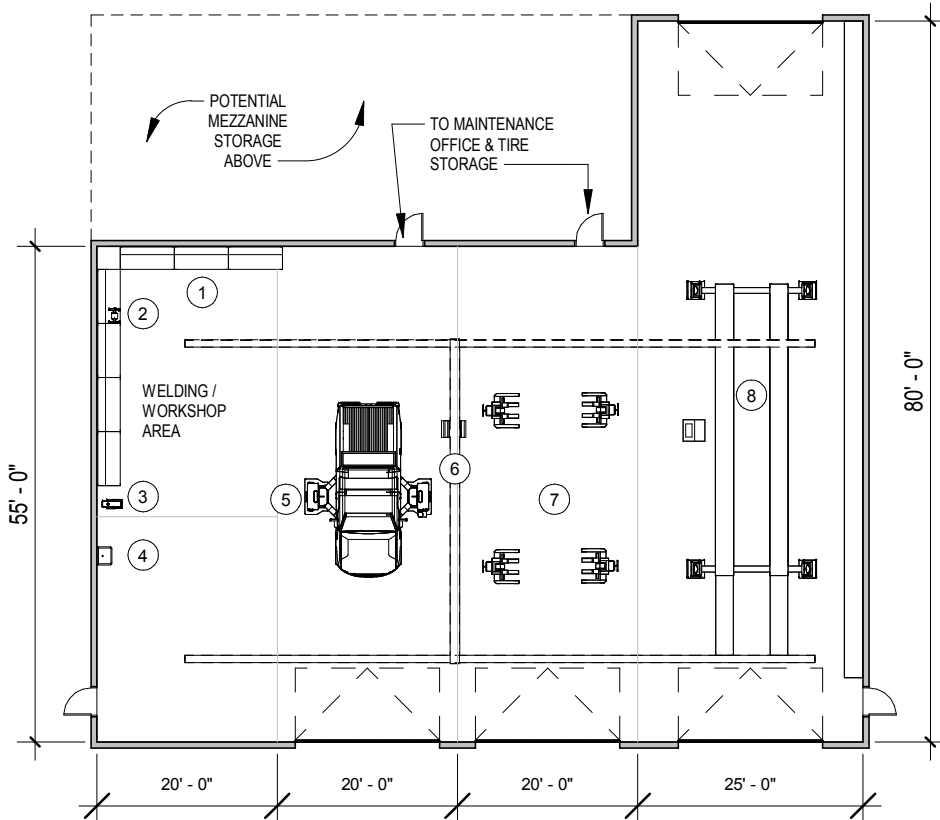
FLOORS: SEALED CONCRETE

MEP/DATA REQUIREMENTS:

- HEATING (RADIANT FLOOR)
- DUPLEX ELECTRICAL OUTLETS
- SPECIALITY EQUIP. ELECTRICAL OUTLETS
- DATA OUTLET JACKS
- VENTILATION

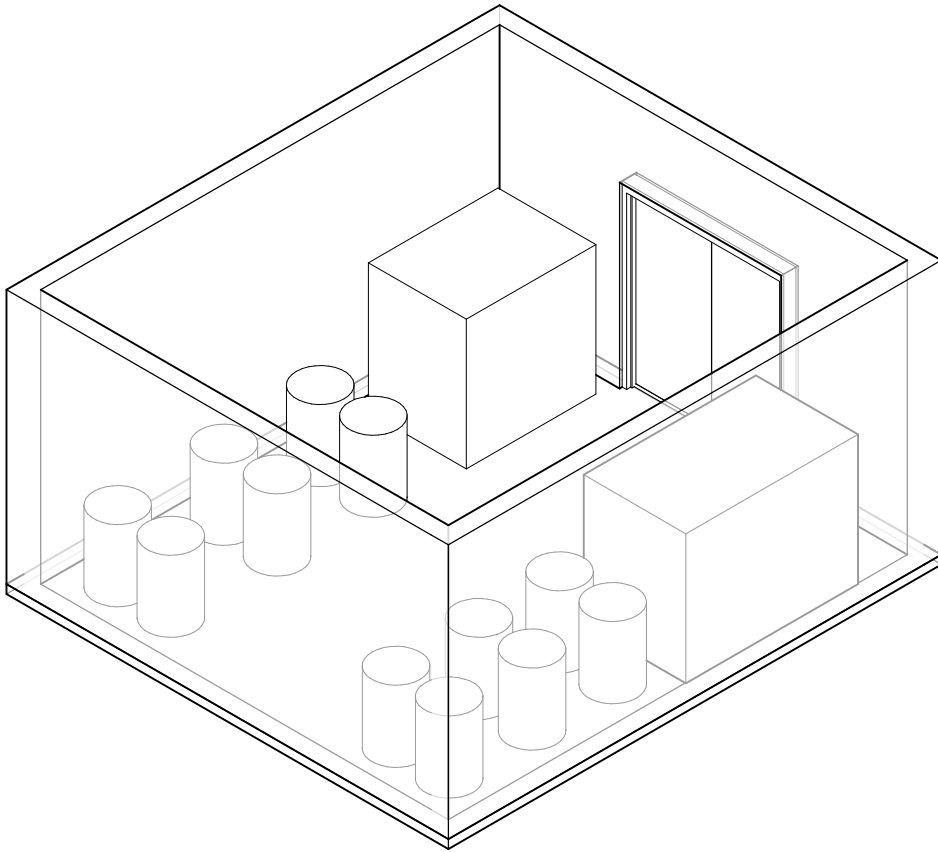
COMPONENTS:

1. WORK BENCH
2. BENCH GRIDER
3. DRILL PRESS
4. SHOP SINK
5. CAR LIFT
6. OVERHEAD BRIDGE CRANE
7. FOUR POST LIFT
8. HEAVY LIFT



MAINTENANCE BAYS - 5,300 SF
3/64" = 1'-0"

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ROOM FINISHES:

CEILING: OPEN TO STRUCTURE

WALLS: CMU, PAINTED

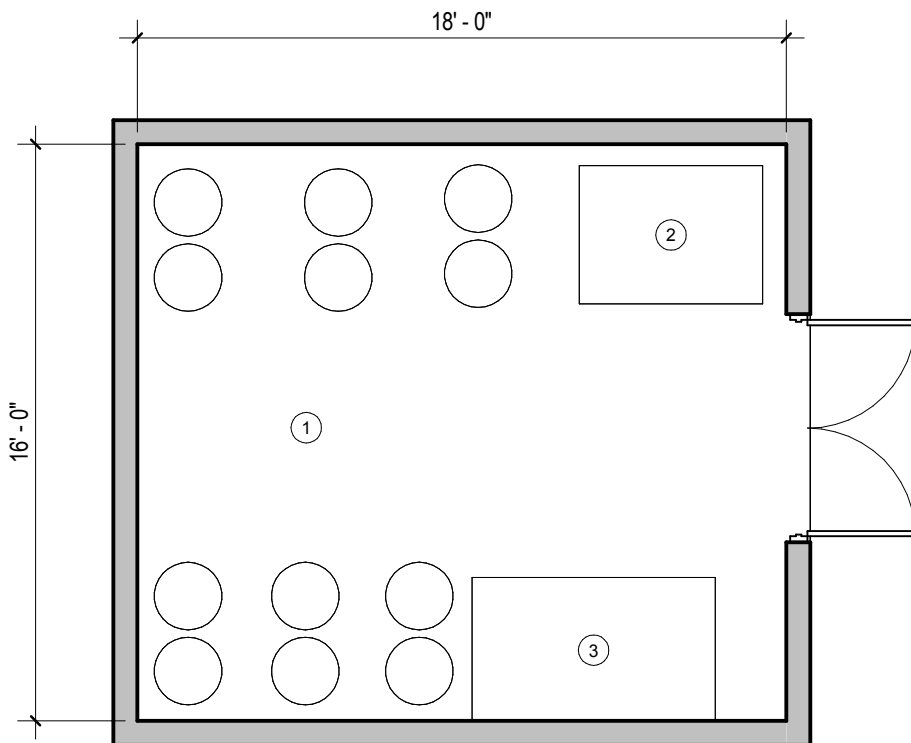
FLOORS: SEALED CONCRETE

MEP/DATA REQUIREMENTS:

- HEATING
- GFI ELECTRICAL OUTLETS
- DEDICATED EXHAUST SYSTEM
- COMPRESSED AIR FOR PHNEUMATIC PUMPS
- CONTAINMENT SUMP

COMPONENTS:

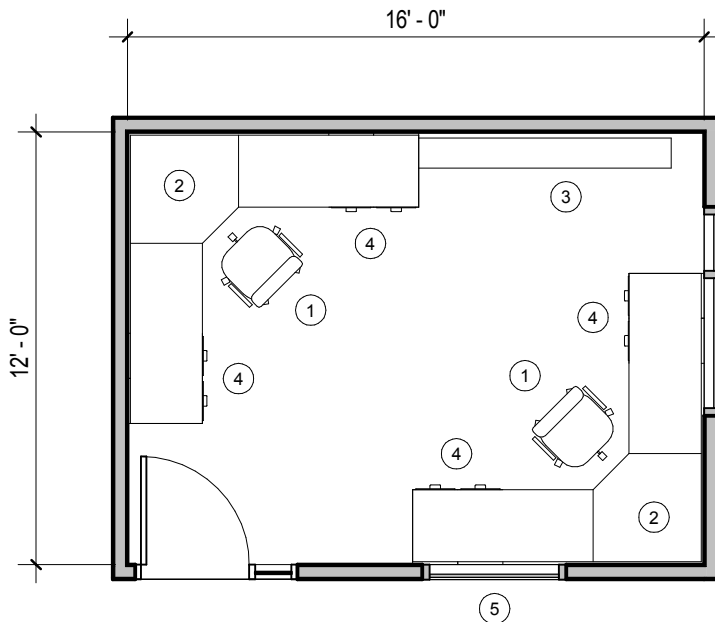
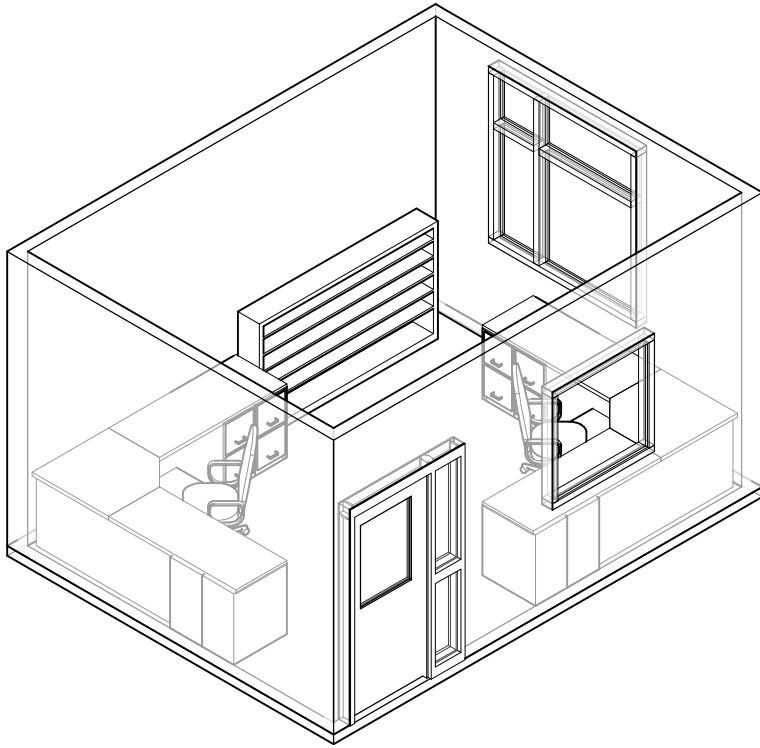
1. FLOOR SPACE FOR 55 GAL DRUM STORAGE
2. 500 GAL TANK
3. 750 GAL TANK



FLUID STORAGE ROOM - 288 SF

3/16" = 1'-0"

DRAFT



MAINTENANCE OFFICE / REFERENCE ROOM - 192 SF
 $3/16" = 1'-0"$

ROOM FINISHES:

CEILING: ACT TILE

WALLS: GWB, PAINTED

FLOORS: RESILIENT FLOORING

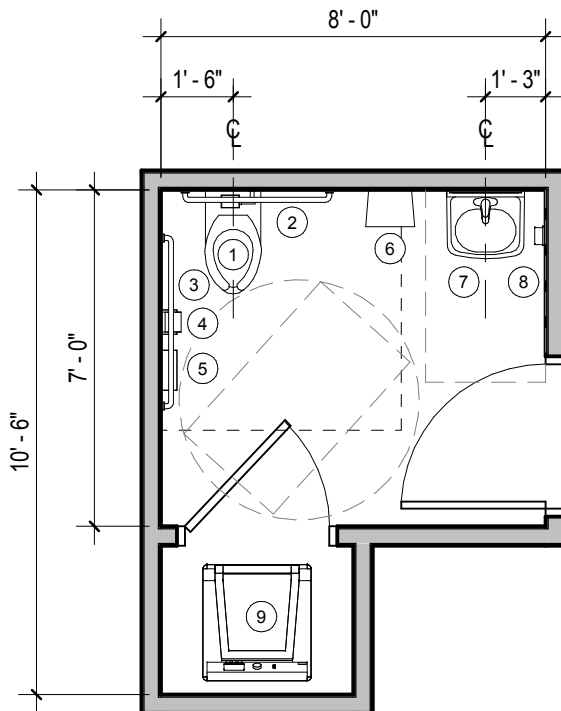
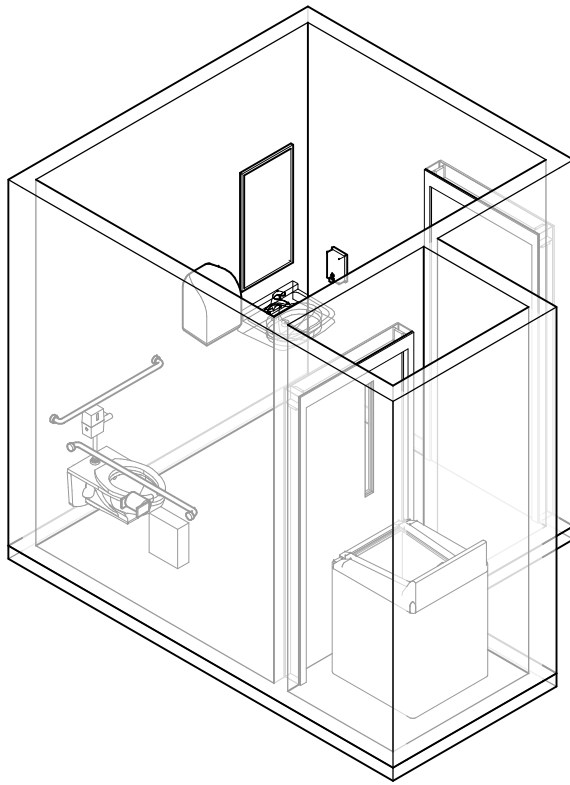
MEP/DATA REQUIREMENTS:

- HEATING / COOLING
- DUPLEX ELECTRICAL OUTLETS

COMPONENTS:

1. (2) EXECUTIVE CHAIRS
2. (2) WORKSTATIONS
3. BOOKCASE
4. FILE CABINET
5. WINDOW VIEWING TO MAINTENANCE BAYS

DRAFT



MECHANIC'S TOILET (SINGLE-USER) - 70 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: MOISTURE RESISTANT ACT TILE

WALLS: CERAMIC TILE / MOISTURE RESISTANT GYPSUM WALL BOARD, PAINTED

FLOORS: CERAMIC TILE

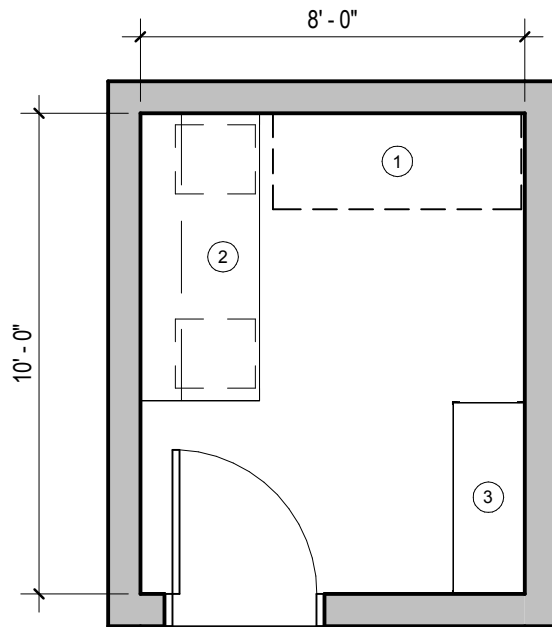
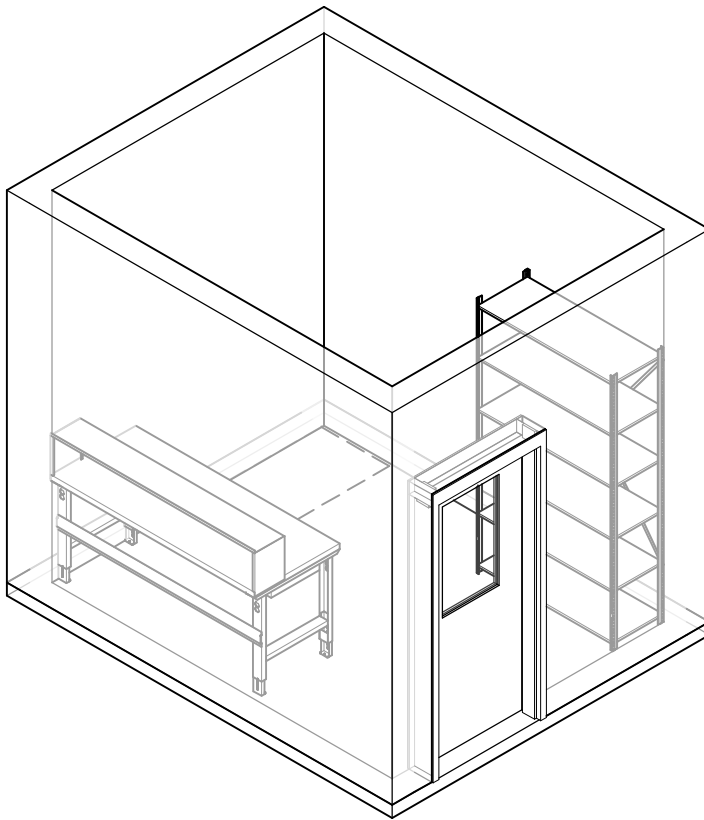
MEP/DATA REQUIREMENTS:

- GFI ELECTRICAL OUTLETS
- HEATING / COOLING
- OCCUPANCY SENSORS FOR LIGHTING CONTROLS

COMPONENTS:

1. WALL HUNG TOILET
2. 36" GRAB BAR
3. 42" GRAB BAR
4. TOILET PAPER DISPENSER
5. SANITARY NAPKIN DISPOSAL RECEPTICLE
6. PAPER TOWEL DISPENSER
7. WALL HUNG SINK & MIRROR
8. SOAP DISPENSER
9. STACKED WASHER/DRYER

DRAFT



HYDRAULIC HOSE SHOP - 80 SF
 1/4" = 1'-0"

ROOM FINISHES:

CEILING: OPEN TO STRUCTURE

WALLS: CMU, PAINTED

FLOORS: SEALED CONCRETE

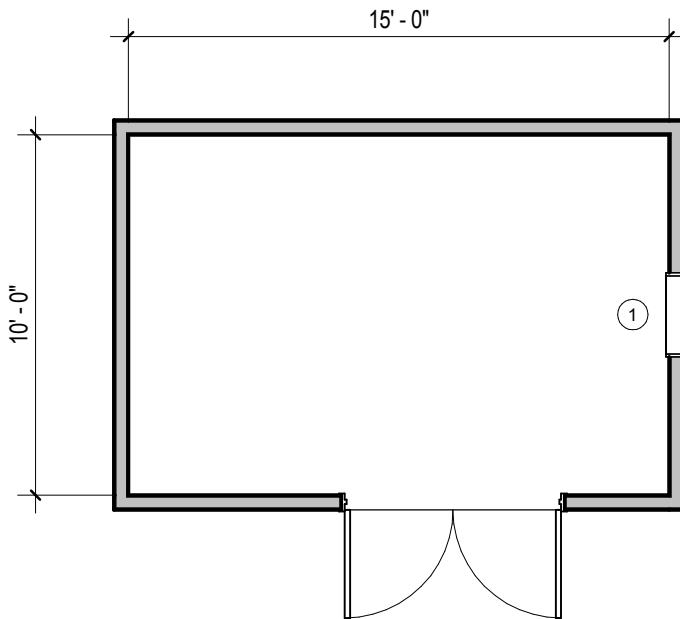
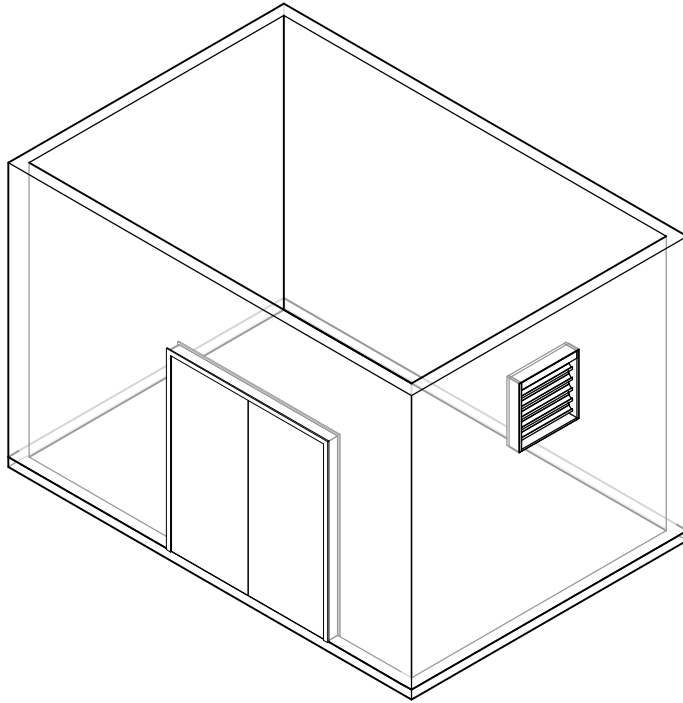
MEP/DATA REQUIREMENTS:

- HEATING / COOLING
- DUPLEX ELECTRICAL OUTLETS

COMPONENTS:

1. (3) HANGING REELS FOR HOSES
2. CHOP SAW WORKBENCH
3. UTILITY SHELVING FOR PARTS STORAGE

DRAFT



COMPRESSOR ROOM - 150 SF
 3/16" = 1'-0"

ROOM FINISHES:

CEILING: OPEN TO STRUCTURE

WALLS: CMU, PAINTED

FLOORS: SEALED CONCRETE

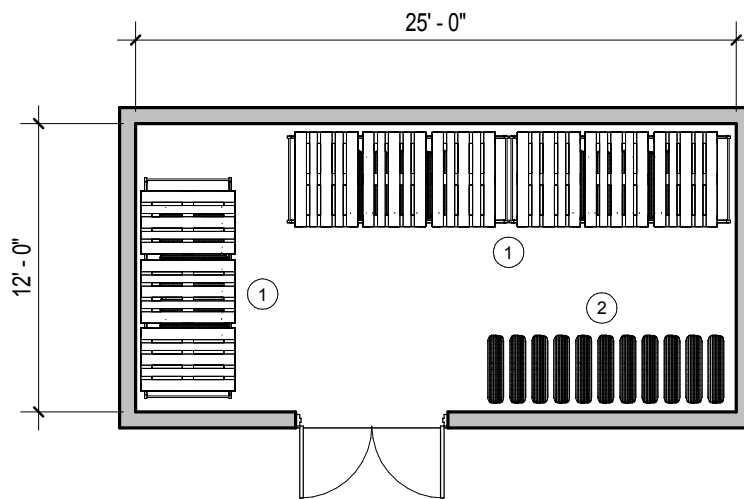
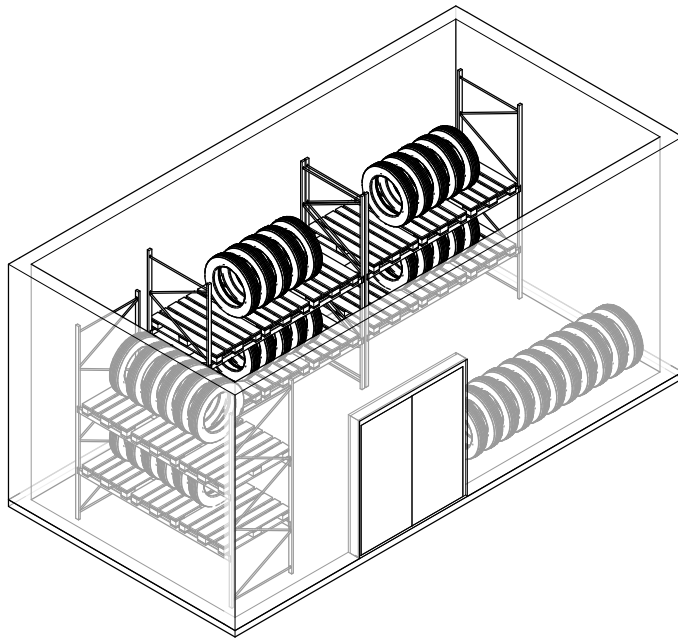
MEP/DATA REQUIREMENTS:

- HEATING
- DUPLEX ELECTRICAL OUTLETS

COMPONENTS:

1. LOUVER

DRAFT



MAINTENANCE TIRE STORAGE - 300 SF
 1/8" = 1'-0"

ROOM FINISHES:

CEILING: OPEN TO STRUCTURE

WALLS: CMU, PAINTED

FLOORS: SEALED CONCRETE

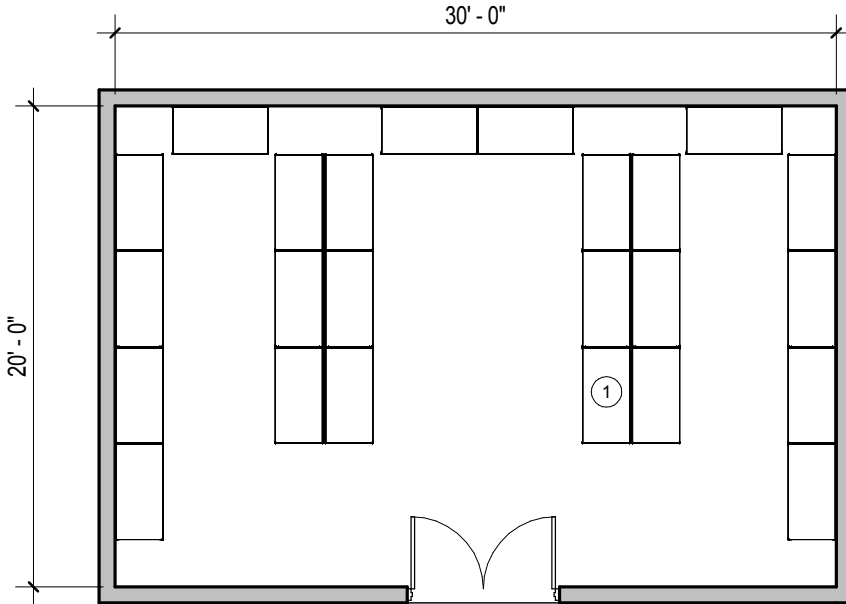
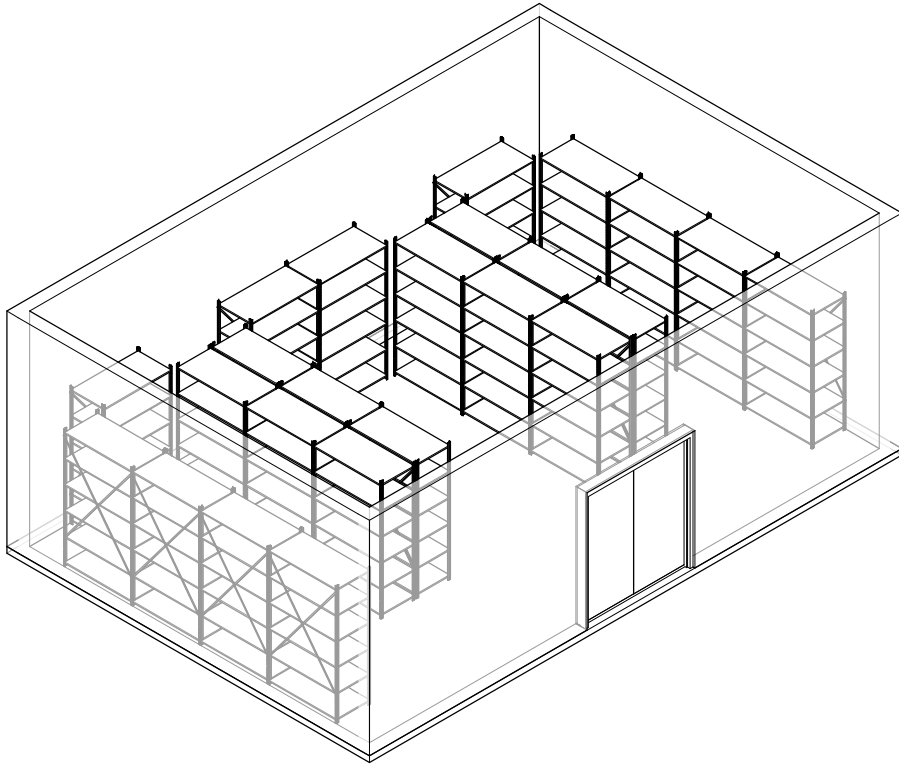
MEP/DATA REQUIREMENTS:

- DUPLEX ELECTRICAL OUTLETS
- DATA OUTLET JACKS

COMPONENTS:

1. TIRE STORAGE RACKS
2. FLOOR STORAGE FOR LARGE TIRES

DRAFT



PARTS STORAGE - 600 SF
 1/8" = 1'-0"

ROOM FINISHES:

CEILING: OPEN TO STRUCTURE

WALLS: CMU, PAINTED

FLOORS: SEALED CONCRETE

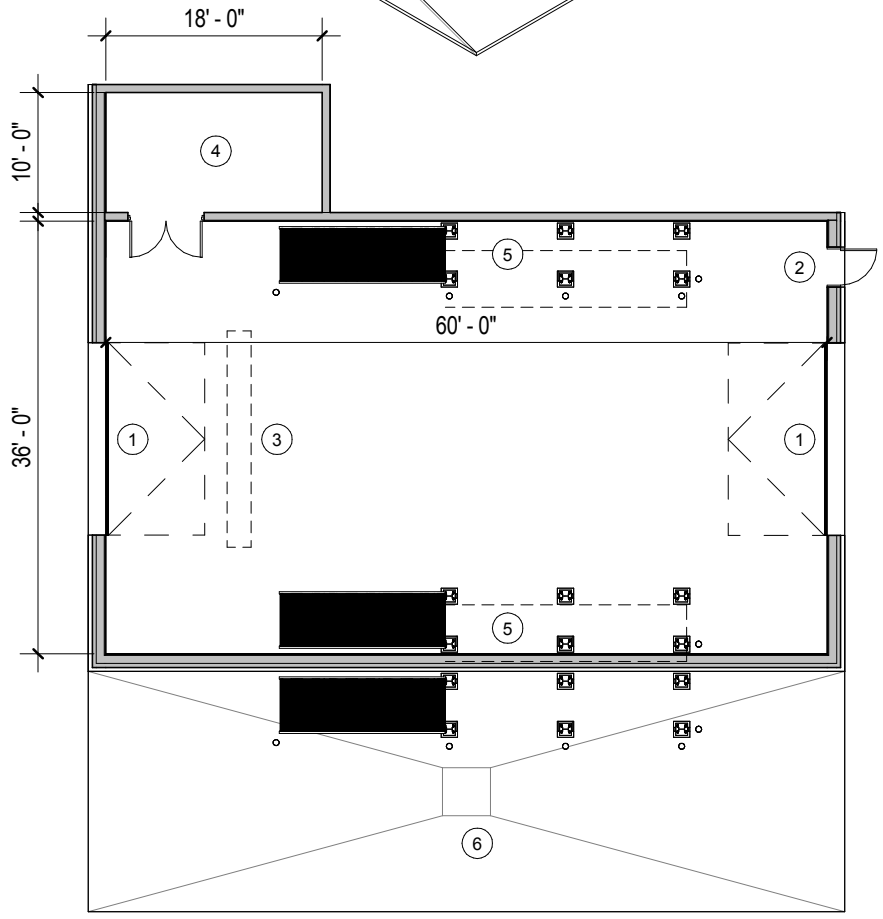
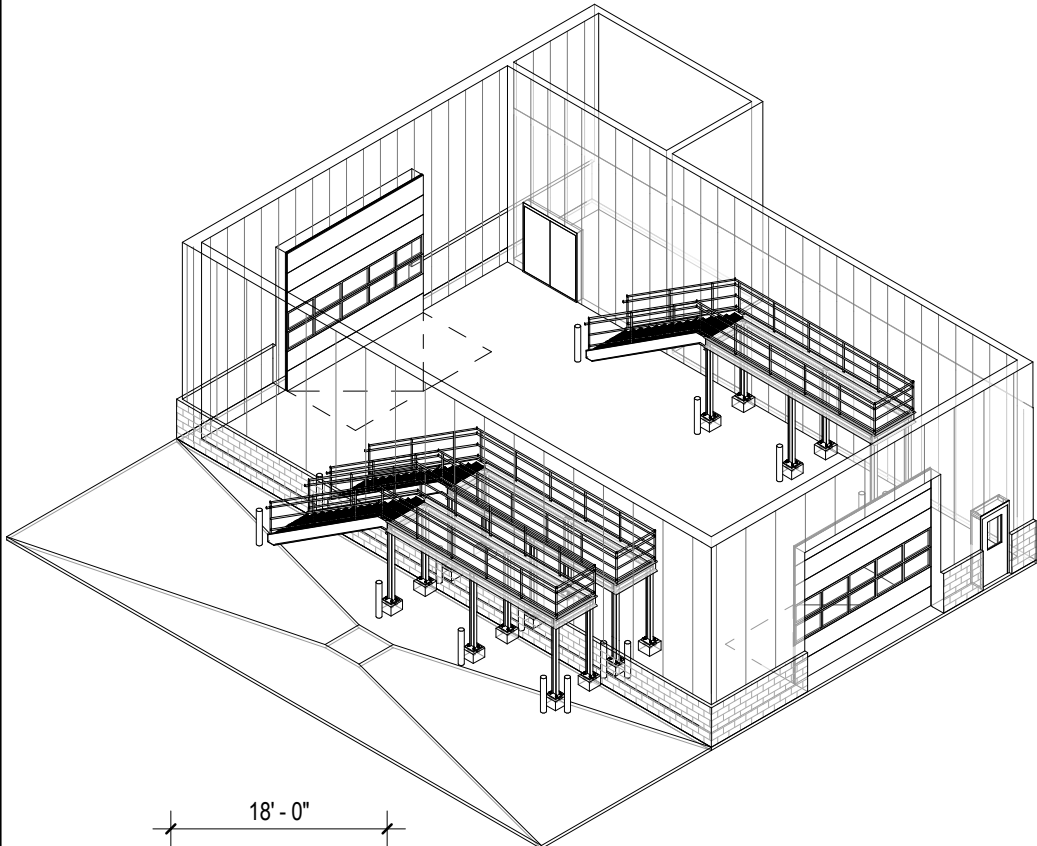
MEP/DATA REQUIREMENTS:

- DUPLEX ELECTRICAL OUTLETS

COMPONENTS:

1. (24) 48" x 18" x 84" UTILITY SHELVING

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WASH BAY - 2,160 SF
 1/16" = 1'-0"

ROOM FINISHES:

CEILING: PVC PANEL

WALLS: PVC PANEL

FLOORS: SEALED CONCRETE

MEP/DATA REQUIREMENTS:

- HEATING
- GFI ELECTRICAL OUTLETS
- VENTILATION
- WATERPROOF DEVICES
- 2" WATER SUPPLY

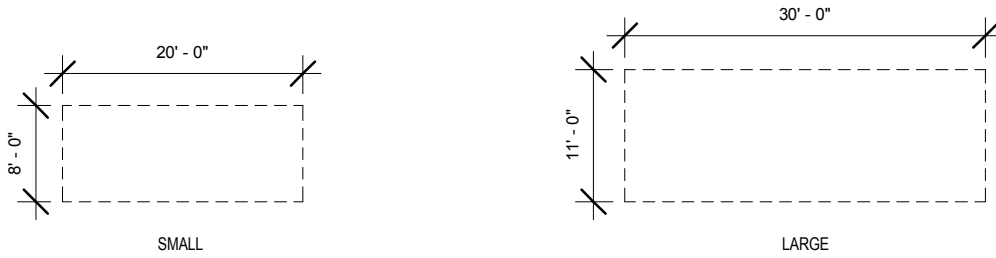
COMPONENTS:

1. POLYCARBONATE SECTIONAL DOORS
2. STAINLESS STEEL DOORS AND FRAMES
3. UNDERCARRIAGE WASH
4. MANUAL WASH EQUIP. PACKAGE
5. FIXED CATWALKS
6. EXTERIOR KNOCKDOWN PAD

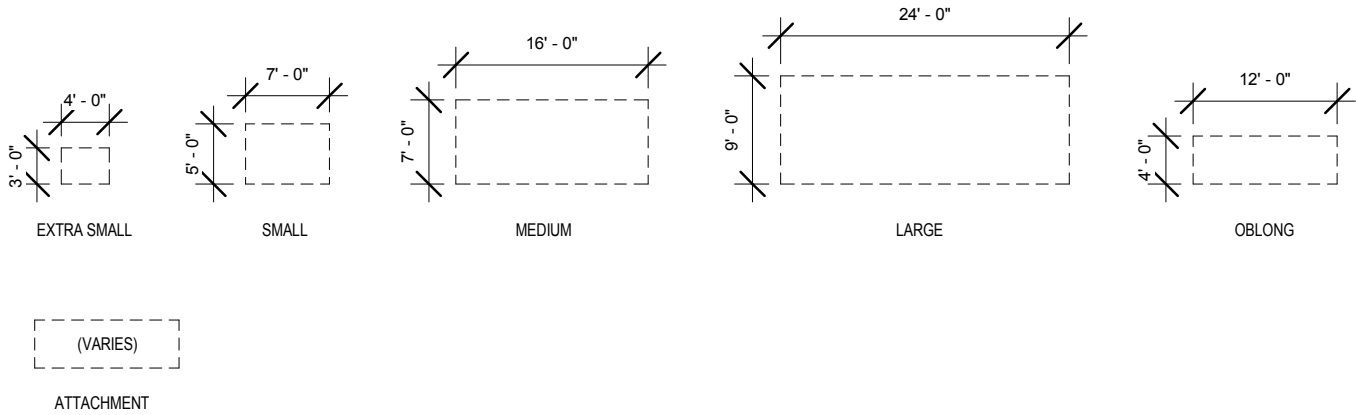
DRAFT

FLEET TYPES:

VEHICLES:

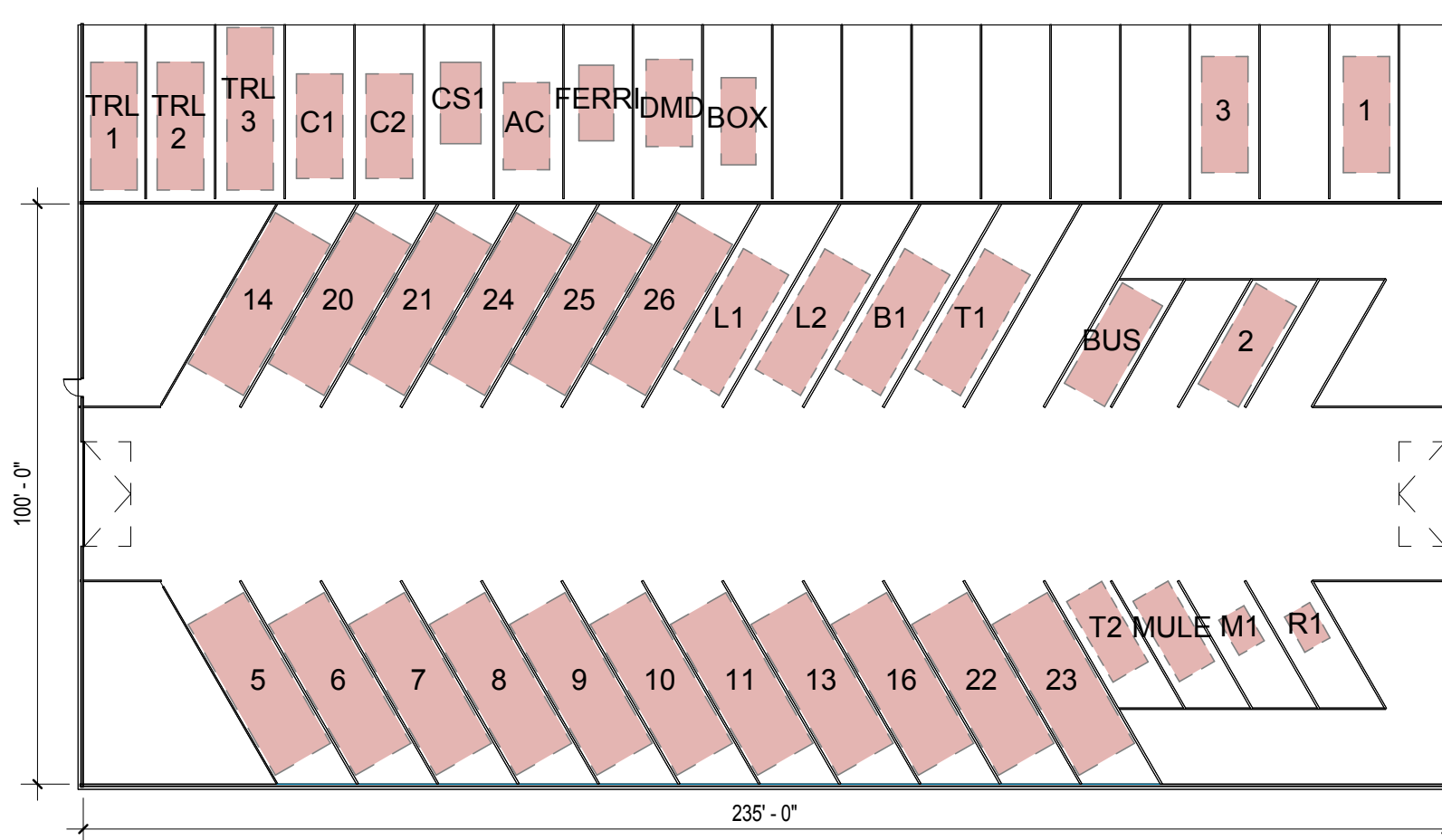
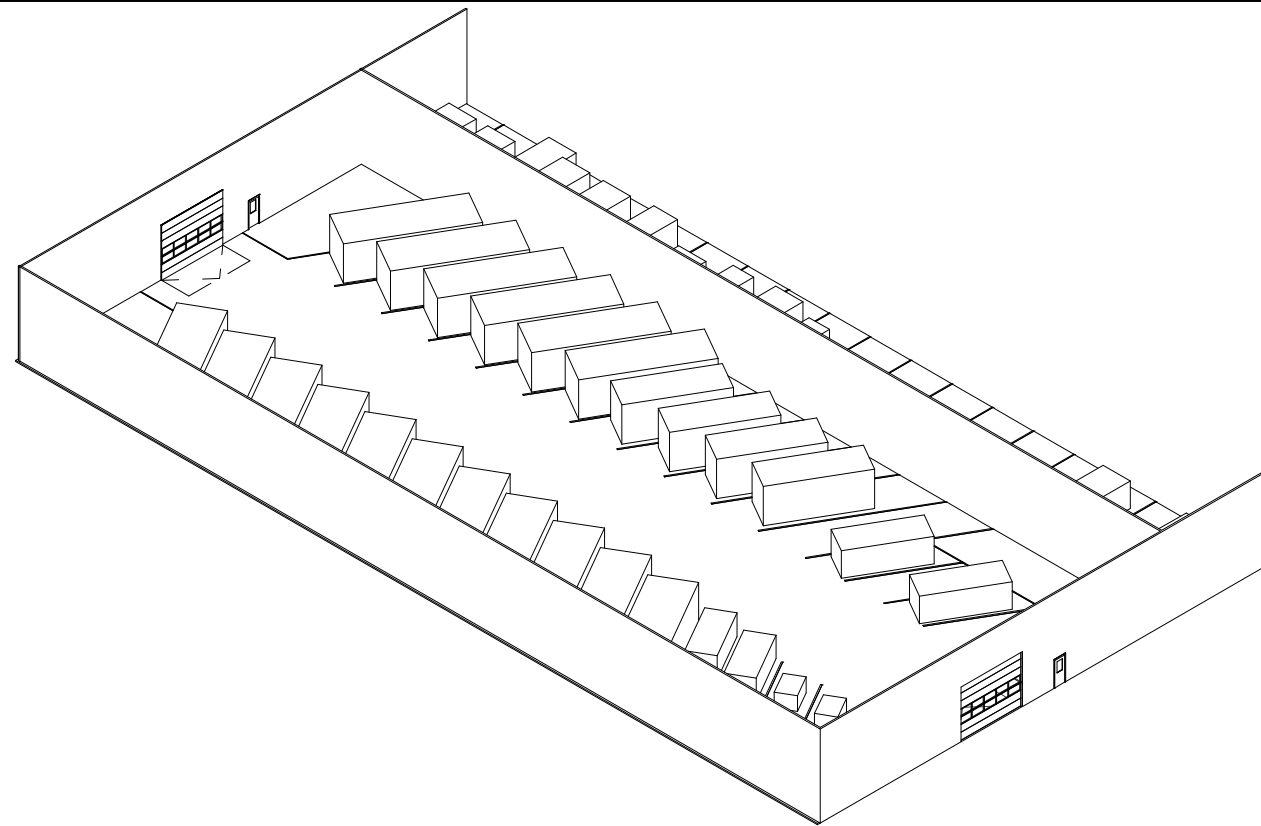


EQUIPMENT:



STORAGE PROVISIONS:

TYPE	DESCRIPTION
INDOOR	FORMAL PARKING STALL
FLOOR	DEDICATED FLOOR STORAGE
CANOPY	UNDER CANOPY COVER
OUTSIDE	EXPOSED TO CLIMATE ON SITE



ROOM FINISHES:

CEILING: OPEN TO STRUCTURE

WALLS: METAL PANEL /
CONCRETE, PAINTED

FLOORS: SEALED CONCRETE

MEP/DATA REQUIREMENTS:

- HEATING / COOLING
- VENTILATION

COMPONENTS:

1. LARGE VEHICLE
2. SMALL VEHICLE
3. EQUIPMENT

① VEHICLE / EQUIPMENT STORAGE - 23,500 SF
1" = 30'-0"

DRAFT

REVISED

SPACE NEEDS ASSESSMENT

Building Requirements

Area	Description	Proposed SF	Existing SF	Room Data #	Room / Area		Dims. size
					length	width	
Office & Office Support Areas	Vestibule / Waiting / Reception	100		A1	15	10	150
	Small Conference / Public Consulting Room	192		A2	12	12	144
	Public Restroom - Single User ADA	nic		A3	7	8	56
	Existing Office	192	192				
	Existing Office	192	192				
	DPW Director Office w/closet	280		A4	14	16	224
	DPW Foreman Office w/closet	200		A5	12	12	144
	Shared Foreman Office (2 Staff - in Open Office, below)	nic		A6	12	14	168
	Large Conference Room (10-12 ppl)	320		A7	16	20	320
	Men's Toilet Room (existing)	136	136	A8	8	16	128
	Kitchenette / Coffee Bar	81		A9	7	12	84
	Coat Closet (under new stair)	24		A10	3	7	21
	Supply Closet	48	24	A11	10	12	120
	IT Closet	48		A12	10	10	100
	Storage Closet	32					
Device Charging Area	nic		A13	3	8	24	
Administration	Admin Open Office (2 staff plus 2 Foremen)	288		A14	14	16	224
	Admin Assistant Office	nic		A15	12	12	144
	Copy / File / Mail Area	104		A16	6	12	72
	File Storage	104		A18	10	12	120
Engineering (Phase IIIA)	Plotter / Layout Space	264		A17	12	15	180
	Engineering Director Office	280		A19	14	16	224
	Environment Engineer Office	144		A20	12	12	144
	Assistant Engineer Office	144		A21	12	12	144
	Open Office - (Future Eng. Staff)	288		A22	12	12	144
	Subtotal:	3,461	544				
	Area Grossing Factor (10%):	346	54				
	Circulation (30%):	1,142	72				(12% for existing areas)
	TOTAL:	4,949	670				

Building Requirements

Area	Description	Proposed SF	Existing SF	Room Data #	Room / Area		Dims. size
					length	width	
Employee Facilities	Staff Entrance	128		B1	7	8	56
	Staff Vestibule	56					
	Male Locker / Shower / Toilet	480	272	B2	26	25	650
	Female Locker / Shower / Toilet	145	136	B3	14	18	252
	Break / Training / Muster Room (in Garage)	1,440	480	B4	30	48	1,440
	Kitchen	256	176				
	Storage Closet <i>(included in Muster Room SF)</i>			B5	8	8	64
	Storage Closet (under existing stairs)	24	24				
	Bunk Room <i>(20+ beds)</i> (Upper Level)	1,008		B6	72	14	1,008
	Janitors Closet / Custodial Storage	40		B7	6	6	36
	Main Electric Room (part of VM)			B8	10	12	120
	Mechanical / Utility Room (on Garage Mezzanine)		56	B9	10	12	120
	Plumbing / Fire Protection Room (part of VM)			B10	10	14	140
	Public Restroom - <i>(Contractors - Single User ADA)</i>	64		B11	8	8	64
	Laundry Room	24		B13	8	6	48
Mudroom / Wet Gear Area	192		B14	8	14	112	
	Subtotal:	3,857	1,144				
	Area Grossing Factor (10%):	386	114				
	Circulation (30%):	1,273	151				
							(12% for existing areas)
	TOTAL:	5,516	1,409				

Work Shops & Storage	Sign Shop	252		C1	14	18	252
	Building Maintenance / Carpentry Shop	600		C2	25	24	600
	Material / Supply Storage <i>(Carpentry)</i>	168		C3	12	14	168
	Secure Tool Crib	100		C4	10	10	100
	Highway Shop	980		C5	28	35	980
	Paint Storage	168		C6	12	14	168
		Subtotal:	2,268	903			
	Area Grossing Factor (5%):	113	45				
	Circulation (10%):	238	95				
							existing areas assigned proportionately
	TOTAL:	2,620	1,044				

Building Requirements

Area	Description	Proposed SF	Existing SF	Room Data #	Room / Area		Dims. size
					length	width	
Fleet Maintenance	Welding Area	350	120	D1	14	25	350
	Maintenance Equipment/Material Storage	216	275	D1	12	18	216
	Maintenance Bay	1,440		D1	24	60	1,440
	Maintenance Bay	1,440		D1	24	60	1,440
	Maintenance Bay - (Pull Through)	1,500	1,500	D1	25	60	1,500
	Maintenance Workshop	350	200	D1	14	25	350
	Fluid Storage Room	325		D2	13	25	325
	Maintenance Office / Reference Room (2 ppl)	192	150	D3	12	16	192
	Mechanic's Toilet (Single-user)	64	55	D4	8	8	64
	Hydraulic Hose Workshop	96		D5	12	8	96
	Compressor Room - Mezzanine			D6	10	15	150
	Maintenance Tire Storage	350	150	D7	14	25	350
	Parts Storage Room	450	150	D8	18	25	450
	Parts and Equipment Storage - Mezzanine				25	60	1,500
	Water / Fire Protection Room	144		B10	9	16	144
	Electrical Room	144		B8	9	16	144
		Subtotal:	7,061	2,600	existing areas assigned proportionately		
	Area Grossing Factor (5%):	353	130				
	Circulation (1.5%):	111	273				
	TOTAL:	7,525	3,003				
Wash Area	Wash Bay	1,800		E1	30	60	1,800
	Wash Equipment Room	180		E1	10	18	180
		Subtotal:	1,980	-			
		Circulation:	n/a	n/a			
	TOTAL:	1,980	-				
Vehicle & Equipment Storage	Vehicle / Equipment Storage (Large Garage)	24,000		F1	100	240	24,000
	(Adjust for Lunchroom / Muster Room)	(1,600)					
	Subtotal:	22,400	-				
	Circulation:	n/a					
	TOTAL:	22,400	-				
PROPOSED FACILITY TOTAL:		44,991	6,127	<i>Existing</i>			

Building Requirements

Area	Description	Proposed SF	Programmed Site Elements			Notes
			Length	Width	Count	
Salt Sheds	Salt Shed (<i>existing</i>)	11,000				includes canopy footprint
	Salt Shed 2 (<i>existing</i>)	3,500				
General Site	Employee Parking	4860	18	9	30	
	Public Parking	648	18	9	4	
	Knock-down pad	1800	60	30		Typically adjacent to Wash Bay
	Fueling Facility	2400	40	60		nominal size, plus circulation
	Standby Generator	600	20	30		approx pad / clearance dim. Capacity to be verified
	Radio Antenna	196	14	14		existing radio antenna tower pad
	Radio Equip. shelter	240	12	20		Shelter
	Radio Antenna Generator Pad	25	5	5		radio tower generator
	Public Sand/ Salt Pickup	240	10	24		covered storage / well lit /outside main gate
Material Storage	Gravel	400	20	20		200 tons
	Millings	400	20	20		200 tons
	1-1/2" stone	400	20	20		200 tons
	4" stone	400	20	20		100 tons
	6" stone	400	20	20		100 tons
	Loam	400	20	20		200 yards
	Cold Patch (under cover)	400	20	20		100 yards
	Frames & Grates	n/a				none stored on site
	Pipe	5000	50	100		500 - 1,000 LF Overall
	Receycled Asphalt	1600	40	40		200 tons
	Brush / Stump	7,500	75	100		
	Tailings	40,000	200	200		
	Sand	1800	60	30		1,500 tons
Dumpster Area	Dumpsters					covered storage / well lit /outside main gate
	C&D Dumpser	160	20	8		
	Metal Dumpser	160	20	8		
	Trash Dumpser	160	20	8		
	Recycling Dumpster	160	20	8		
Storage Garage	General Purpose storage garage	1,600	40	40		Town archive/ Storage - general purpose storage unit. Not part of DPW programming or pricing

Building Requirements

Area	Description	Proposed SF	Programmed Site Elements			Notes
			Length	Width	Count	
Indoor Storage - unheated (included in building program areas)	Road Signs	n/a				200 ct. (Sign shop)
	Cones & Barricades	n/a				C: 100 - 200 B: 50-75 (highway shop)
	Special Event Signage	n/a				200 ct. (Sign shop or Highway shop)
	Abandoned Item Storage	n/a				Generator
	Abandoned/ archived Furniture	n/a				12 - 24 items
						6-10 Pallets (pallet dims 48" x 40") (highway shop)
	Mortar, ice melt	n/a				
	Seed / Fertilizer	n/a				4-6 Pallets (highway shop)
	Backpack Blowers	n/a				6 (highway shop)
	Weed Trimmers	n/a				6 (highway shop)
	Chainsaws	n/a				6 (highway shop)
	Push Mower	n/a				3 (highway shop)
Ride Mower	n/a				2 (main storage garage)	

Approximate Required Site Size	86,449	NSF
Circulation, Misc. Adjustment Factor (200%)	172,898	
Setback Adjustment Factor (15%)		
Proposed Main Buildings Footprint	-	
TOTAL REQUIRED SITE SIZE	259,347	GSF
	5.95	Acres

(Excludes Circulation, Maneuvering Space, Etc.)

APPENDIX D

FLEET INVENTORY

TOWN ID #	DIVISION	MODEL TYPE	MAKE / MODEL	SIZE	FLEET TYPE	DIMENSIONS			STORAGE NEEDS				COMMENTS
						LENGTH	WIDTH	HEIGHT	INSIDE	FLOOR	CANOPY	OUTSIDE	
1	HIGHWAY	PICKUP	2014 FORD F150	SMALL	VEHICLE	20' - 0"	8' - 0"	7' - 0"	●				
2	HIGHWAY	PICKUP	2012 CHEVY SILVERADO	SMALL	VEHICLE	20' - 0"	8' - 0"	7' - 0"	●				
3	HIGHWAY	PICKUP	2018 FORD F350	SMALL	VEHICLE	20' - 0"	8' - 0"	7' - 0"	●				
5	HIGHWAY	DUMP	2013 INTERNATIONAL 7400	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
6	HIGHWAY	DUMP	2016 INTERNATIONAL 7400	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
7	HIGHWAY	DUMP	2018 INTERNATIONAL 7400	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
8	HIGHWAY	DUMP	2011 INTERNATIONAL 7400	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
9	HIGHWAY	DUMP	2009 INTERNATIONAL 7400	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
10	HIGHWAY	DUMP	2013 INTERNATIONAL 7400	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
11	HIGHWAY	DUMP	2013 INTERNATIONAL 7400	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
13	HIGHWAY	DUMP	2001 INTERNATIONAL 4900	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
14	HIGHWAY	PICKUP DUMP	2015 FORD F350	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
16	HIGHWAY	DUMP	2012 INTERNATIONAL 7400	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
20	HIGHWAY	PICKUP DUMP	2019 FORD F350	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
21	HIGHWAY	PICKUP DUMP	2020 FORD F350	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
22	HIGHWAY	DUMP	2021 FREIGHTLINER 108SD	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
23	HIGHWAY	DUMP	2021 FREIGHTLINER 108SD	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
24	HIGHWAY	PICKUP DUMP	2022 FORD F350	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
25	HIGHWAY	DUMP	2022 FREIGHTLINER 108SD	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
26	HIGHWAY	DUMP	2022 FREIGHTLINER 108SD	LARGE	VEHICLE	30' - 0"	11' - 0"	10' - 0"	●				
AC	HIGHWAY	TRAILER - AIR COMPRESSOR	2006 SULLAIR CONEQ	VARIABLES	ATTACHMENT	15' - 0"	8' - 0"	5' - 0"			●		
B1	HIGHWAY	BACKHOE	2010 CATERPILLAR 430-E	LARGE	EQUIPMENT	24' - 0"	9' - 0"	10' - 0"		●			
BOX	HIGHWAY	ATTACHEMENT GRADER BOX	72" GRADER BOX	VARIABLES	ATTACHMENT	15' - 0"	6' - 0"	5' - 0"			●		
BUS	HIGHWAY	BUS	2013 FREIGHTLINER 3500	SMALL	VEHICLE	20' - 0"	8' - 0"	7' - 0"	●				
C1	HIGHWAY	TRAILER - CHIPPER	2019 MORBARK 1821	VARIABLES	ATTACHMENT	18' - 0"	8' - 0"	9' - 0"			●		
C2	HIGHWAY	TRAILER - CHIPPER	1997 MORBARK EZ	VARIABLES	ATTACHMENT	18' - 0"	8' - 0"	9' - 0"			●		
CS1	HIGHWAY	TRAILER - SEALER	2016 CIMLINE MAGMA	VARIABLES	ATTACHMENT	14' - 0"	7' - 0"	8' - 0"			●		
DMD	HIGHWAY	ATTACHEMENT MOWER	DIAMOND FLAIL MOWER	VARIABLES	ATTACHMENT	15' - 0"	8' - 0"	5' - 0"			●		
FERRI	HIGHWAY	ATTACHEMENT MOWER	FERRI OFFSET MOWER	VARIABLES	ATTACHMENT	13' - 0"	6' - 0"	5' - 0"			●		
L1	HIGHWAY	LOADER	2008 VOLVO L60F	LARGE	EQUIPMENT	24' - 0"	9' - 0"	10' - 0"		●			
L2	HIGHWAY	LOADER	2019 CATERPILLAR 926M	LARGE	EQUIPMENT	24' - 0"	9' - 0"	10' - 0"		●			

TOWN ID #	DIVISION	MODEL TYPE	MAKE / MODEL	SIZE	FLEET TYPE	DIMENSIONS			STORAGE NEEDS				COMMENTS
						LENGTH	WIDTH	HEIGHT	INSIDE	FLOOR	CANOPY	OUTSIDE	
M1	HIGHWAY	MOWER	2009 EXMARK LAZER-Z	SMALL	EQUIPMENT	7' - 0"	5' - 0"	4' - 0"		•			
MULE	HIGHWAY	ATV	2003 KAWASAKI MULE 3010	MEDIUM	EQUIPMENT	16' - 0"	7' - 0"	6' - 0"		•			
R1	HIGHWAY	ROLLER	2021 DYNAPAC CC900G	SMALL	EQUIPMENT	7' - 0"	5' - 0"	4' - 0"		•			
T1	HIGHWAY	TRACTOR	2007 CHALLENGER	LARGE	EQUIPMENT	24' - 0"	9' - 0"	10' - 0"		•			
T2	HIGHWAY	TRACTOR	2011 BOBCAT CTS450	MEDIUM	EQUIPMENT	16' - 0"	7' - 0"	6' - 0"		•			
TRL 1	HIGHWAY	TRAILER	1997 HUDSON HD14	VARIES	ATTACHMENT	22' - 0"	8' - 0"	4' - 0"		•	•		
TRL 2	HIGHWAY	TRAILER	2007 BRI-MAR EH82014	VARIES	ATTACHMENT	22' - 0"	8' - 0"	4' - 0"		•	•		
TRL 3	HIGHWAY	TRAILER	1988 INTERSTATE 40DA	VARIES	ATTACHMENT	28' - 0"	8' - 0"	4' - 0"		•	•		

TYPE	COUNT	INSIDE	FLOOR	CANOPY	OUTSIDE
X-LARGE VEHICLE	0	0	0	0	0
LARGE VEHICLE	17	17	0	0	0
MEDIUM VEHICLE	0	0	0	0	0
SMALL VEHICLE	4	4	0	0	0
LARGE EQUIPMENT	4	0	4	0	0
MEDIUM EQUIPMENT	2	0	2	0	0
OBLONG EQUIPMENT	0	0	0	0	0
SMALL EQUIPMENT	2	0	2	0	0
X-SMALL EQUIPMENT	0	0	0	0	0
MISC. EQUIPMENT	0	0	0	0	0
ATTACHMENT	10	0	3	10	0
TOTAL	39	21	11	10	0

APPENDIX E
ZONING MEMORANDUM
&
RECEPTOR MAPS

MEMORANDUM

TO: File

FROM: Nicholas Hung

DATE: February 1, 2024

SUBJECT: Londonderry Department of Public Works Facility Zoning and Permitting Review

SITE INFORMATION:

Parameter	Information	Notes:
Site Address:	120 High Range Road	
Parcel ID:	006-006-0	
Size (acres):	13.98	
Zoning District	Agricultural Residential (AR-1)	
Book/Page:	5570/1704	

ZONING INFORMATION:

Zoning District: Agricultural Residential (AR-1)

Zoning Map Date: April 24, 2023

Zoning By-Law Date: Amended ongoing at Town Meetings

Overlay Districts:

District	Applicable	Notes:
Rte 28 Overlay District	NO	
Rte 102 Overlay District	NO	
Airport Overlay District (AD)	NO	
Historic Overlay District	NO	
Groundwater Protection District	YES	

DIMENSIONAL REGULATIONS:

DIMENSION	Required	Notes
Min. Lot Size (s.f.)	35,000 single (1-2 Br) 40,000 single (3+ Br) 52,500 duplex (2-4 Br) 60,000 duplex (5+ Br)	
Min. Frontage (ft.)	100 single (1-2 Br) 150 single (3+ Br) 150 duplex (2-4 Br) 200 duplex (5+ Br)	
Setbacks (ft.)	Front: 40 Side: 15 Rear: 15	
Maximum Height	35 feet	Design Parameter for Salt Shed

PERMITTING SUMMARY:

- 1) Municipal Separate Storm Sewer System Discharge Permit (NHR041031) MS4 Permit (The Town needs to address the unauthorized stormwater discharges into Bear Meadow to comply)
- 2) Town to update “Storm Water Management Program (SWMP)” – if the proposed scope of work implements best management practices (“BMPS”) with respect to storm water management at the DPW Facility then the Town should provide EPA the with a copy of such modifications.
- 3) New Hampshire Department of Environmental Services (NHDES) Groundwater Discharge Permit – Groundwater Classification Area GA2 (SALT SHED SHOULD BE COVERED)
- 4) NHDES Floor Drain Registration – Registration and notification form for floor drains and discharges to groundwater
- 5) NHDES Holding Tank Registration – for holding tanks that receive wastewater from floor drains in areas where regulate contaminates are used or stored. (WASH BAY FLOOR DRAINS)
- 6) NHDES - Alteration of Terrain Permit (AoT)

AoT regulations require a permit whenever a project proposes to disturb more than 100,000 square feet of contiguous terrain (50,000 square feet, if any portion of the project is within the protected shoreland). In addition to these larger disturbances, **disturbances of greater than 2,500 square feet over terrain having grades of greater than 25%, may also require an AoT permit.**

- 7) Planning Board Site Plan Review (Londonderry, NH)

Required per section 5.8.16 “Specifications for Plans and Documents” of the Zoning Ordinance

- 8) Stormwater Discharge Permit
Required for all land disturbance exceeding one (1) acre of land, **per Section 3.A.1. of the Londonderry Stormwater Regulations.**

GENERAL NOTES:

1. This zoning and permitting analysis review, does not include construction permits such as Building, Electrical, Demo permits, etc.
2. This Site is not located within a FEMA Flood Hazard Zone.
3. The Environmental Receptor Map shows a small section of freshwater forested/shrub wetlands within the southern portion of the parcel.
4. The parcel is located within the Pennichuck Waterworks Service Area.
5. The parcel is located within the Beaver Brook Headwaters-Kendall Pond Watershed.
6. The Potential Pollutant Sources for the Londonderry Watershed Figure shows the site contains:
 - aboveground storage tanks
 - underground storage tanks
 - Salt Storage Facilities
 - Superfund Site (Former Superfund Site: Town Garage/Radio Beacon site)
7. Superfund Site background info: The Town Garage property is believed to be the source area for this contamination. An open floor drain was removed from the Town Garage in 1996. After EPA placed the site on the Superfund program's National Priorities List (NPL) in 1989, EPA assessed site conditions and determined that the extension of a public water supply system to the affected areas eliminated the immediate threat to human health. Institutional controls are no longer required for this site as the site was deleted from the NPL in July 2014.

DESIGN AND PERMITTING CONSIDERATIONS

Zoning Ordinance	Notes
Town of Londonderry, NH Zoning Ordinance 2 DEFINITIONS	
Accessory Use or Accessory Structure: A use or structure which is incidental to, subordinate to, and customarily found in connection with a principal use or structure and which is situated on the same lot as the principal use or structure, except that where specifically provided in the applicable regulations, accessory off-street parking or loading facilities or private recreational facilities need not be located on the same lot.	
Frontage: The continuous linear extent of a lot measured along any highway or right-of-way from the intersection of one side lot line to the intersection of the other side lot line of the same lot.	
<p>Setback: Open area, located on the same lot with a structure or group of structures, between the structure or outer structure of a group and the nearest lot or street line, unoccupied and unobstructed from the ground upward, except as provided in these regulations.</p> <ul style="list-style-type: none"> a. Setback, Front: Extends across the full width of the lot, between the front street line (or proposed front street line) and the nearest line of the structure or enclosed portion thereof. The depth of the setback is the shortest horizontal distance between the front existing or proposed street line and the nearest point of structure or enclosed portion thereof. b. Setback, Rear: Extends across the full width of the lot, between the rear lot line and the nearest line of the structure, porch or projection thereof. The depth of the setback is the shortest horizontal distance between the rear lot line and the nearest point of structure, porch or projection. c. Setback, Side: Extends between the side lot line or side street line (proposed side street line, if such line falls within the lot) and the nearest line of the structure, porch or projection thereof, extending from the front setback to the rear setback, or, in the absence of either of such setbacks, to the front street line and/or rear lot line. The width of a side setback is the shortest distance between the side lot line and the nearest point of structure, porch or projection. 	
Site Plan: To the extent required by the Planning Board, a plan indicating the location of existing and proposed structures, paved areas, walkways, vegetative cover, existing and proposed grades, initial landscaping, and screening within a site proposed for development which is to be submitted to the Planning Board for approval prior to the release of building permits on the site.	See Appendix A "Site Plan Application Checklist"
Structure: Anything constructed, the use of which requires permanent location on the ground, or attached to something having permanent location on the ground. Antenna, awnings, driveways, exterior lighting fixtures, fire hydrants, gardens, mailboxes, parking surfaces, retaining walls less than three feet in height, survey monuments, temporary storage areas, walks, and similar minor structures shall not be considered structures for bulk regulation purposes. In addition, unenclosed ground level decks, and unenclosed elevated decks which project no more than ten (10) feet from the principal structure, shall not be considered structures for lot coverage purposes when constructed onto a single-family attached dwelling.	Design Parameter – Above ground storage tank
Variance: Such departure from the terms of this Ordinance as the Board of Adjustment, upon appeal in specific cases, is empowered to authorize only under terms of Section 8.1 and applicable statutes of the State of New Hampshire.	

Zoning Ordinance	Notes
Town of Londonderry, NH	
4.1.2 Use Table	
Public Facilities - Use Permitted by Right in AR-1 District	
The minimum setback between septic systems and wetlands shall meet New Hampshire Department of Environmental Services requirements.	75' Septic Setback
Agricultural Residential (AR-1)	
Uses Permitted by Right: "Public Facilities" "Public Utilities" "Recreational Facilities, Public"	
Below are listed under "Business Uses"	May not apply
"Motor Vehicle Maintenance, Major Repair and Painting" – Use not Permitted	
"Outdoor Storage of goods or materials (not to exceed 5-10% of the gross floor area) as an Accessory Use" – Use not Permitted	Will DPW require outdoor storage?
"Repair services" – Use not Permitted	
Parking Requirements	
A minimum of two parking spaces per dwelling unit shall be provided in the AR-I district. (4.2.1.5)	
Perimeter buffer: A perimeter buffer to separate and screen incompatible land uses shall surround the development lot except where streets enter the development lot. The buffer shall include a combination of physical space and vertical elements such as plants, berms, fences or walls, as approved by the Board. The width of the buffer area shall vary according to the abutting zoning district as follows: a. Agricultural-residential: one hundred feet (100') where directly abutting; fifty feet (50') where highway separates R-III and AR-I district. (4.2.2.3.B.8)	Show on Plans
Buffer reductions by conditional use permit The following buffer reductions may be permitted by conditional use permit: expansion of existing structures permitted in Section 4.1.2 to within no less than 50 feet of any wetland; construction of a new structure permitted in Section 4.1.2 to within 50 feet of any wetland; provided all of the following conditions are met: a. The structure for which the exception is sought cannot feasibly, after consideration of all reasonable alternatives, be constructed on a portion or portions of the lot which lies outside the CO District or the application of the CO District eliminates greater than 50% of the buildable area located on the parcel. Zoning Ordinance, Town of Londonderry, NH – 06/06/2022 Page 54 b. The proposed structure and use must be consistent with the intent of the CO District, and provisions must be made to ensure the structure's drainage will not adversely impact any wetlands and be consistent with the purpose and intent of this section. c. There shall be no construction of parking areas within the area for which the conditional use permit is sought. d. The maximum building coverage in the outer-50 feet of the buffer area shall be no greater than 50%. Best management practices must be demonstrated to the satisfaction of the Planning Board. (4.6.1.4.B.2)	50' Wetland Buffer

<p>Spill Prevention, Control and Countermeasure (SPCC Plan) Conditional uses, as described under Section 4.6.8.8, part (A), using regulated substances shall submit a spill control and countermeasure (SPCC) plan to the [Fire Chief, Health officer or Emergency Management officer] who shall determine whether the plan will prevent, contain, and minimize releases from ordinary or catastrophic events such as spills, floods or fires that may cause large releases of regulated substances (4.6.8.12)</p>	
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<p>Site Plan Review 5.8.16 “Specifications for Plans and Documents”</p>	
<p>Specifications for plans and documents shall be in accordance with the Town of Londonderry Site Plan Regulations unless otherwise stated in this section.</p>	
<p>Site Plan: the site plan shall consist of a development plan, mitigation plan, and reclamation plan. The site plan shall be processed in accordance with the Town of Londonderry Site Plan Regulations.</p>	
<p>Development Plan: The Development Plan shall show how the mining and excavation uses proposed on the site conform to Town Regulations. The Development Plan includes a site plan that shows the location of physical site features and extraction and processing features.</p>	
<p>Mitigation Plan: The Mitigation Plan relates to the development plan and includes a site plan, narrative and cross-section that explain, illustrate and show mining procedures, practices, policies and methods that meet operational standards. The Mitigation Plan shall be at the same scale as the development plan, and covering the same area.</p>	
<p>Reclamation Plan: The Reclamation Plan shows how the site is to be restored or redeveloped after all mining is concluded. The Reclamation Plan shall show either the final reuse and site configuration after the mining and excavation is ended or the interim holding use of the site and ground surface treatment until a later end-state reuse of the site is Zoning Ordinance, Town of Londonderry, NH – 06/06/2022 Page 129 identified. The Reclamation Plan shall be at the same scale as the development plan, and covering the same area.</p>	

<p>Design Standards and Requirements for Improvements Design standards and requirements for improvements shall be in accordance with the Town of Londonderry Site Plan Regulations unless otherwise noted in Section 5.8. (5.8.17)</p>	
<p>Fences located in the front yard of residential properties may not exceed four (4) feet in height except for agricultural fences for the confinement of livestock. The front yard, for the purpose of this section, shall be that portion of the property encompassing the area from the front property line to the 40 foot setback line. For corner lots fronting on two public rights-of-way the front yard shall apply to both property lines abutting both rights-of-way.</p> <ol style="list-style-type: none"> 1. The height of fences located at the front setback line of residential properties shall be limited to the height restrictions established for the AR-I district. 2. Fences located along the side and rear property lines in the AR-I district shall not exceed six (6) feet in height. <p>(5.14.B)</p>	
<p>Parking Facilities All parking areas within ten (10) feet of any structure shall have a curb or substantial bumper not less than four (4) feet from the structure. (5.17.3.B)</p>	

<p>Parking for Disabled Persons Handicapped Parking Spaces - Parking spaces designed to accommodate the needs of the handicapped shall be required per state and federal law, and in accordance with the Town of Londonderry Site Plan Regulations, as most recently amended, and Section 1106 of the Building Code. (5.17.5)</p>	
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Site Plan Regulations	Notes
Town of Londonderry, NH	
<p>Storm Drain System (3.07a): The proposed development shall provide for proper surface drainage so that removal of surface waters will not adversely affect neighboring properties or the public storm water system and will conserve flooding, erosion and sedimentation.</p> <ol style="list-style-type: none"> 1. The drainage system shall be designed so that the post development runoff rate does not exceed the pre-development runoff rate. Detention/retention areas may be used to achieve this requirement. Underground detention structures may be permitted where they are determined by the Town to be a reasonable application without detriment to adjacent properties and Page 20 of 100 Revised 11-9-2022 environmental systems, or contrary to the public interest. . Underground detention structures shall be designed, constructed and maintained in accordance with the New Hampshire Stormwater Manual, Volumes 1, 2 and 3, dated December 2008 (or latest revision). 2. Surface water runoff shall be carried away in a system of swales, drainways, culverts and channels to a natural watercourse or existing drainage facilities. 3. Where a site is traversed by a watercourse, drainage way, channel or stream there shall be provided an easement conforming to the lines of such watercourse. 4. A culvert or other drainage facility shall be large enough to accommodate runoff from its entire upstream area. 5. When a proposed drainage system will carry water across land outside the site appropriate drainage rights must be secured and indicated on the plan. 6. Where it is anticipated that the additional runoff incident to the development of the site will overload the existing downstream drainage facility the Board may withhold approval of the project until provisions have been made for the improvement of said potential condition. 7. Where the Department of Public Works determines that the downstream, offsite drainage system is substandard, the Planning Board may require the applicant to improve the drainage system. 	
<p>Hydraulic Grade Line (HGL) (3.07c):</p> <ol style="list-style-type: none"> 1. Closed Conduit - Closed conduit systems shall be designed to convey the appropriate design storm required by the regulations under gravity flow conditions with no more than full flow pipe conditions 2. Open Channels and Swales - For open channels and swales, the HGL shall be shown for the appropriate design storm required by the regulations 3. Detention Basins/Ponds - The HGL shall be shown for the 50-year flood event. 	

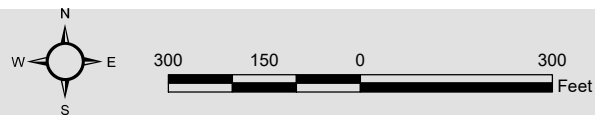
NH SECTION 485-A:17	Notes
485-A:17 Terrian Alternation	
I. Any person proposing to dredge, excavate, place fill, mine, transport forest products or undertake construction in or on the border of the surface waters of the state, and any person proposing to significantly alter the characteristics of the terrain, in such a manner as to impede the natural runoff or create an unnatural runoff	Yes – Grading, Detention/Infiltration Ponds, Tree Clearing

NH ENV-WQ 1500	Notes
Env-Wq 1503.02 Permit Required	
(a) Subject to (b), below, no person shall dredge, excavate, place fill, mine, transport forest products, or undertake construction in or on the borders of surface waters of the state and no person shall undertake any activity that will significantly alter the characteristics of the terrain without a general permit by rule, a timber harvesting permit by rule, or an alternation of terrain (AOT) permit obtained in accordance with this chapter.	Yes – Grading, Detention/Infiltration Ponds, Tree Clearing



- Legend**
- Limit of Work
 - NH National Hydrography Dataset_Waterbody
 - NH Wetlands Basemap
 - NH National Hydrography Dataset_Flowline
 - NH National Hydrography Dataset_Area
 - Designated_Rivers_24k
 - Conservation and Public Lands

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



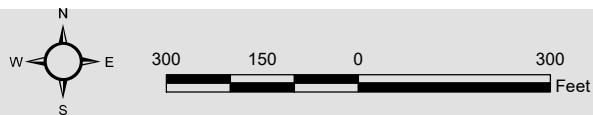
Data Source: NH GRANIT, NHDES OneStop

FIGURE 1
120 High Range Road
Londonderry, NH
Environmental Resources Map





Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Data Source: NH GRANIT, NHDES OneStop

- Legend**
- ▭ Limit of Work
 - Public Water Supplies
 - Water Well Inventory
 - ▲ Remediation_Sites
 - ▲ Aboveground_Storage_Tank_Sites
 - ▭ Air_Facility_Systems
 - ▲ Environmental_Monitoring_Sites_Nonsecure
 - ▲ Asbestos_Disposal_Sites
 - ▭ Groundwater_Classification_Areas_GA1
 - ▭ Groundwater_Classification_Areas_GA2
 - ▭ Hazardous_Waste_Generators
 - ▭ Local_Potential_Contamination_Sources
 - ▭ NPDES_Outfalls
 - ▭ Outstanding_Resource_Water_Watersheds
 - ▲ Solid_Waste_Facilities
 - ▲ Underground_Storage_Tank_Sites

FIGURE 2

120 High Range Road
Londonderry, NH

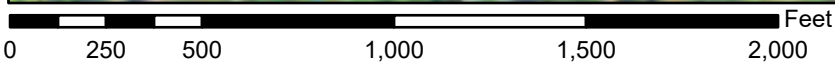
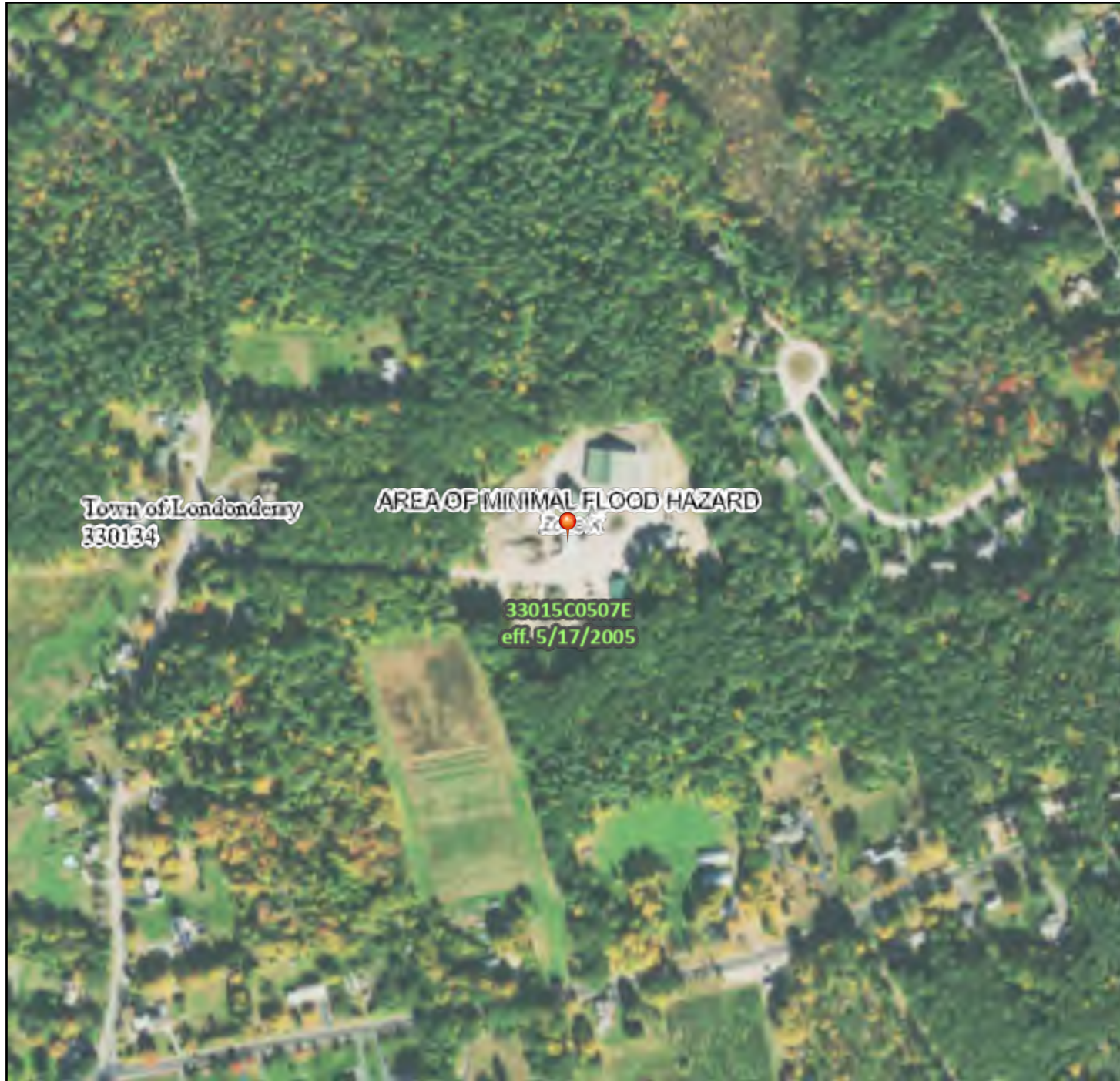
Human Receptor Map



National Flood Hazard Layer FIRMette



71°23'49"W 42°51'51"N



1:6,000

71°23'12"W 42°51'25"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary
MAP PANELS		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

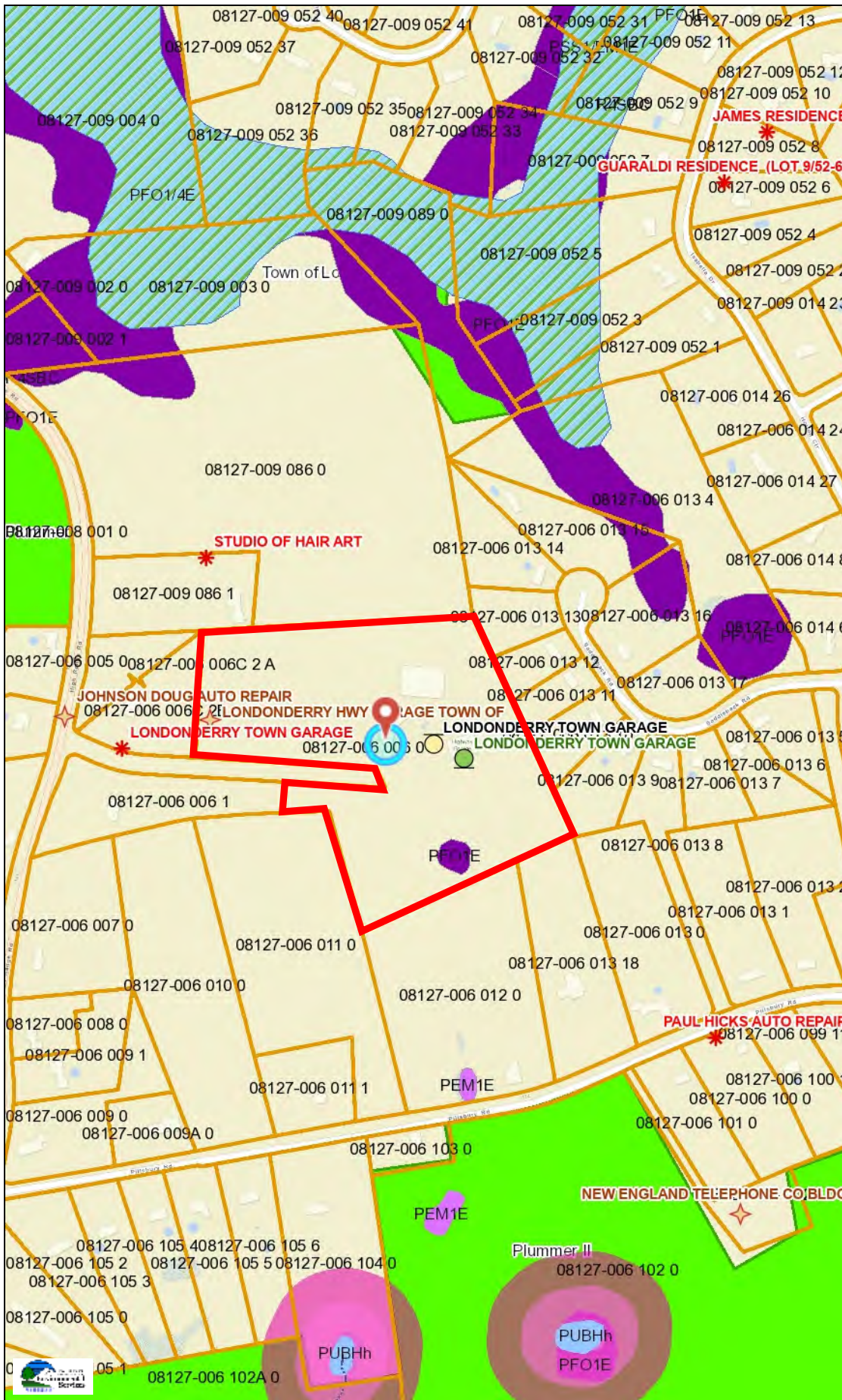


This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **2/1/2024 at 1:53 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Map By



Legend

- Aboveground Storage Tank
- Air Facility Systems
- Asbestos Disposal Sites
- Automobile Salvage Yards
- Environmental Monitoring Site Nonsecure
- Groundwater Classification / GA1
- Groundwater Classification / GA2
- Hazardous Waste Generator
- Local Potential Contamination Sources
- NPDES Outfalls
- Outstanding Resource Water Watersheds
- Remediation Sites
- Solid Waste Facilities
- Underground Storage Tank - Designated_River_Corridor
- No
- Yes
- <all other values>
- Dam Inventory
- Parcels
- Additional Lines
- Stream Centerlines
- Perennial Stream
- Intermittent Stream
- Artificial Paths
- Fourth Order and Greater
- 4th Order
- 5th Order
- 6th Order
- 7th Order
- 8th Order
- Water Bodies
- Lake/Pond
- Reservoir
- Estuary
- Swamp/Marsh

Map Scale

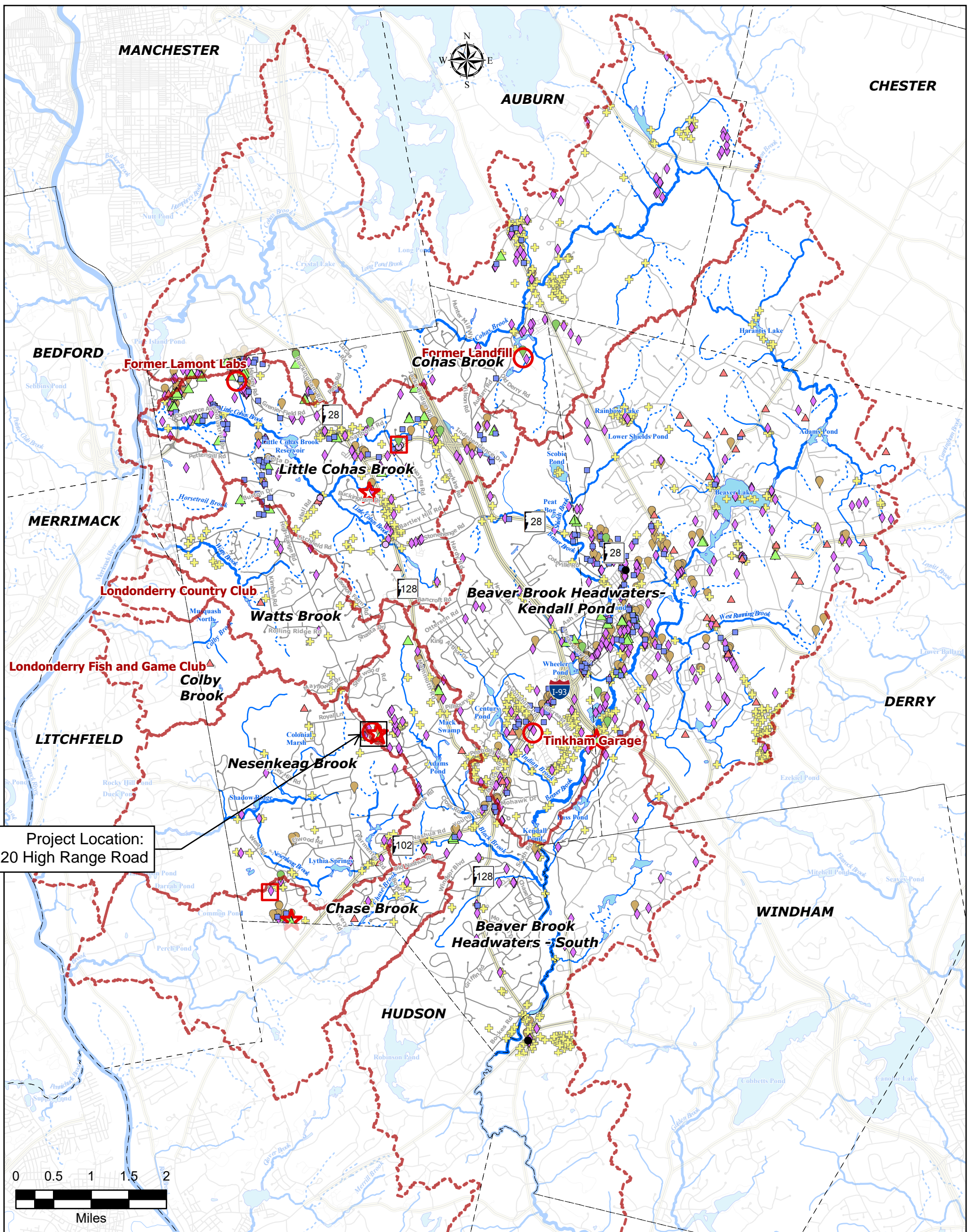
1: 5,000

© NH DES, <http://des.nh.gov>

Map Generated: 2/2/2024



Notes



Project Location:
120 High Range Road



Figure 6-1

Potential Pollutant Sources for the Londonderry Watersheds



Comprehensive Environmental Inc.

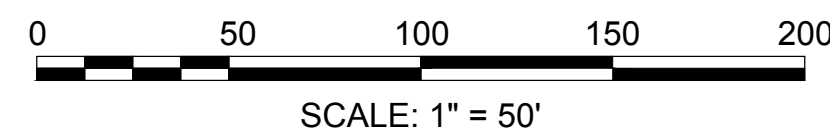
Data Sources: GRANIT, NHDES, SNHPC, Town of Londonderry.

Legend

- Salt Storage Facilities
- Solid Waste Disposal Site
- Superfund Site
- Other Solid Waste Facilities
- Auto Salvage Yards
- NPDES Outfalls
- Other Potential Pollutant Sources
- Hazardous Waste Generators
- Aboveground Storage Tanks
- Remediation Sites
- Environmental Monitoring Sites
- Underground Storage Tanks
- Pond
- Watershed
- Perennial Stream
- Intermittent Stream



TRUE



DPW FEASIBILITY STUDY

APPENDIX F

INITIAL CONCEPTUAL SITE PLANS









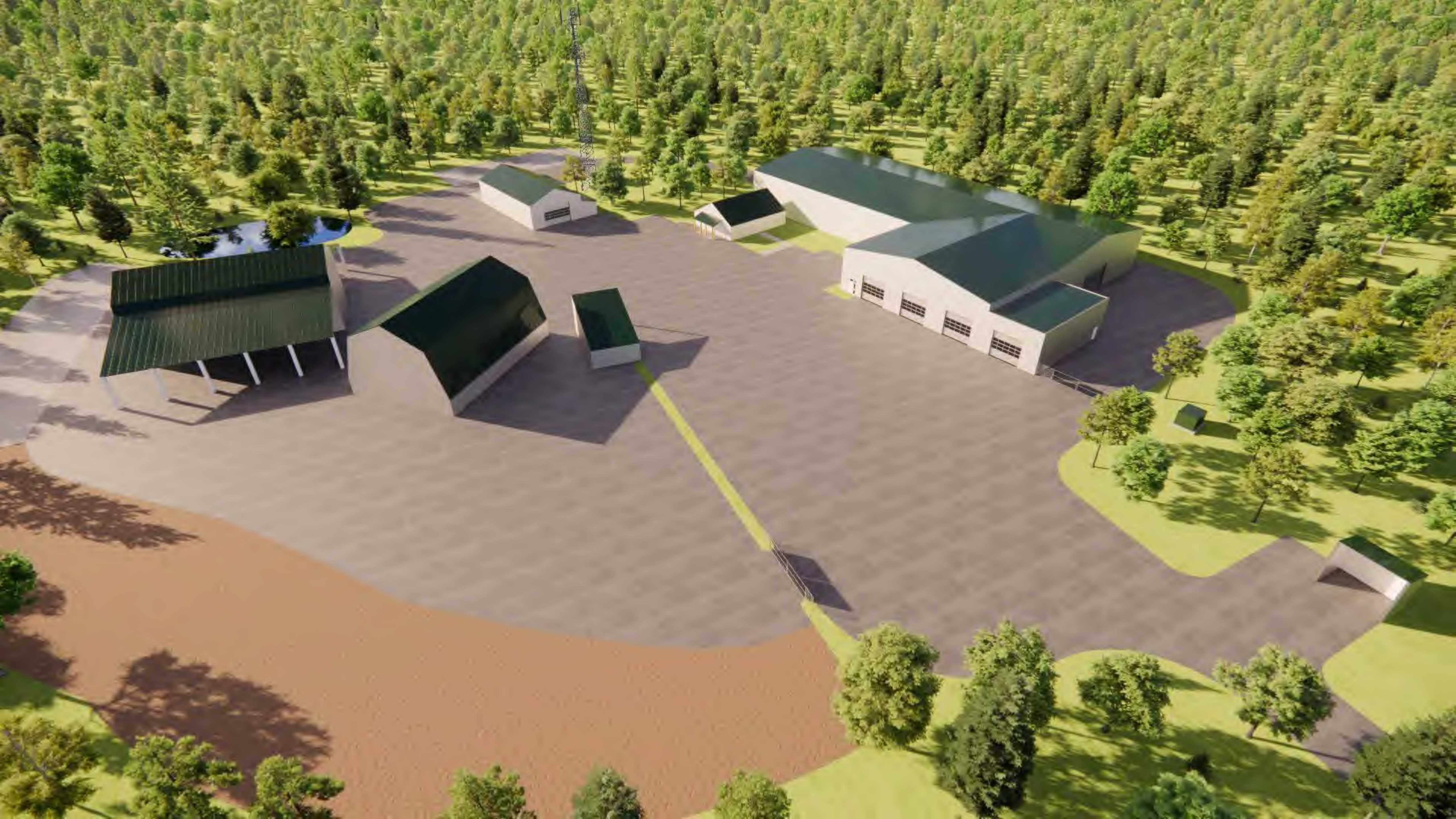




APPENDIX G

PREFERRED CONCEPTUAL SITE PLAN









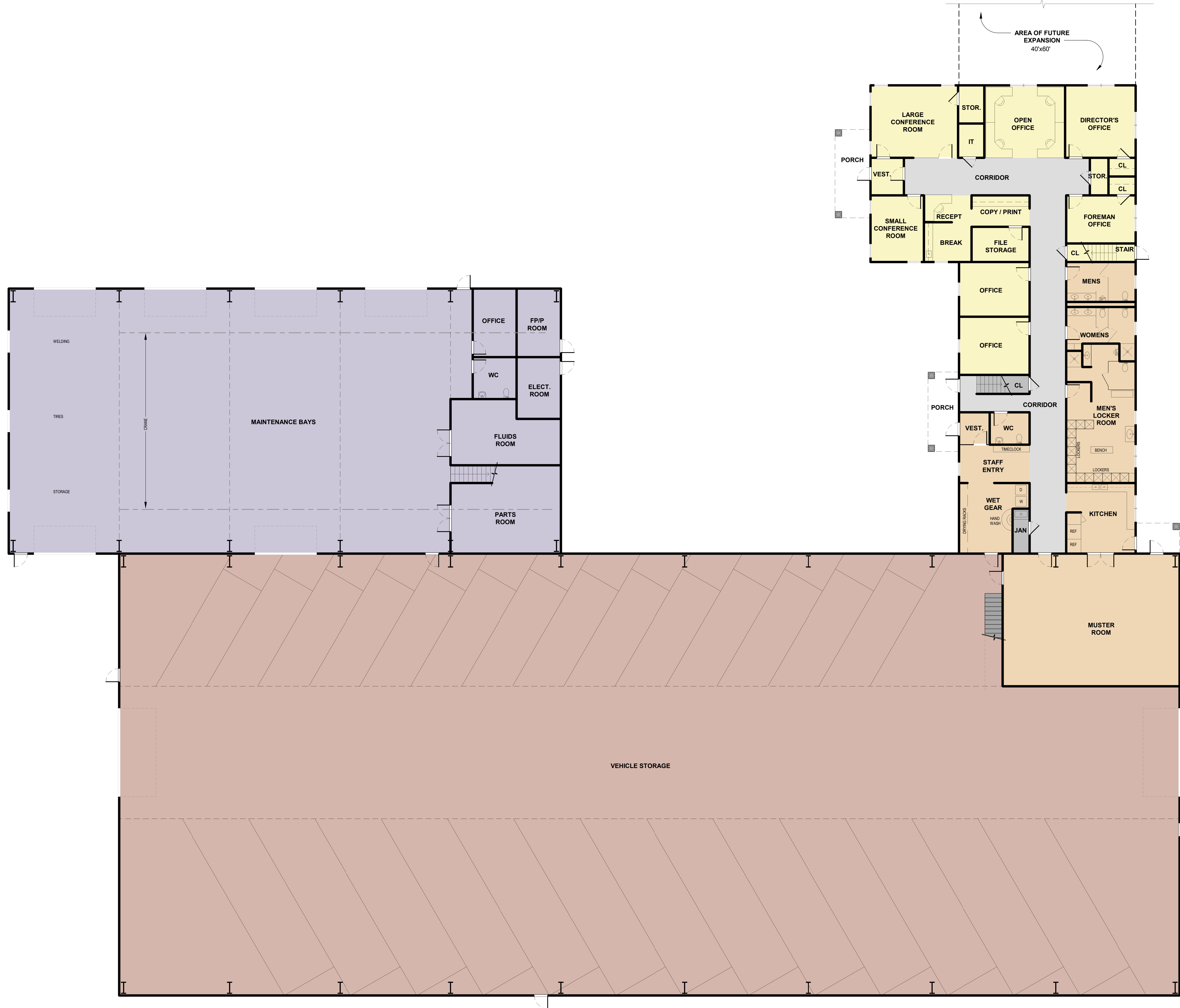


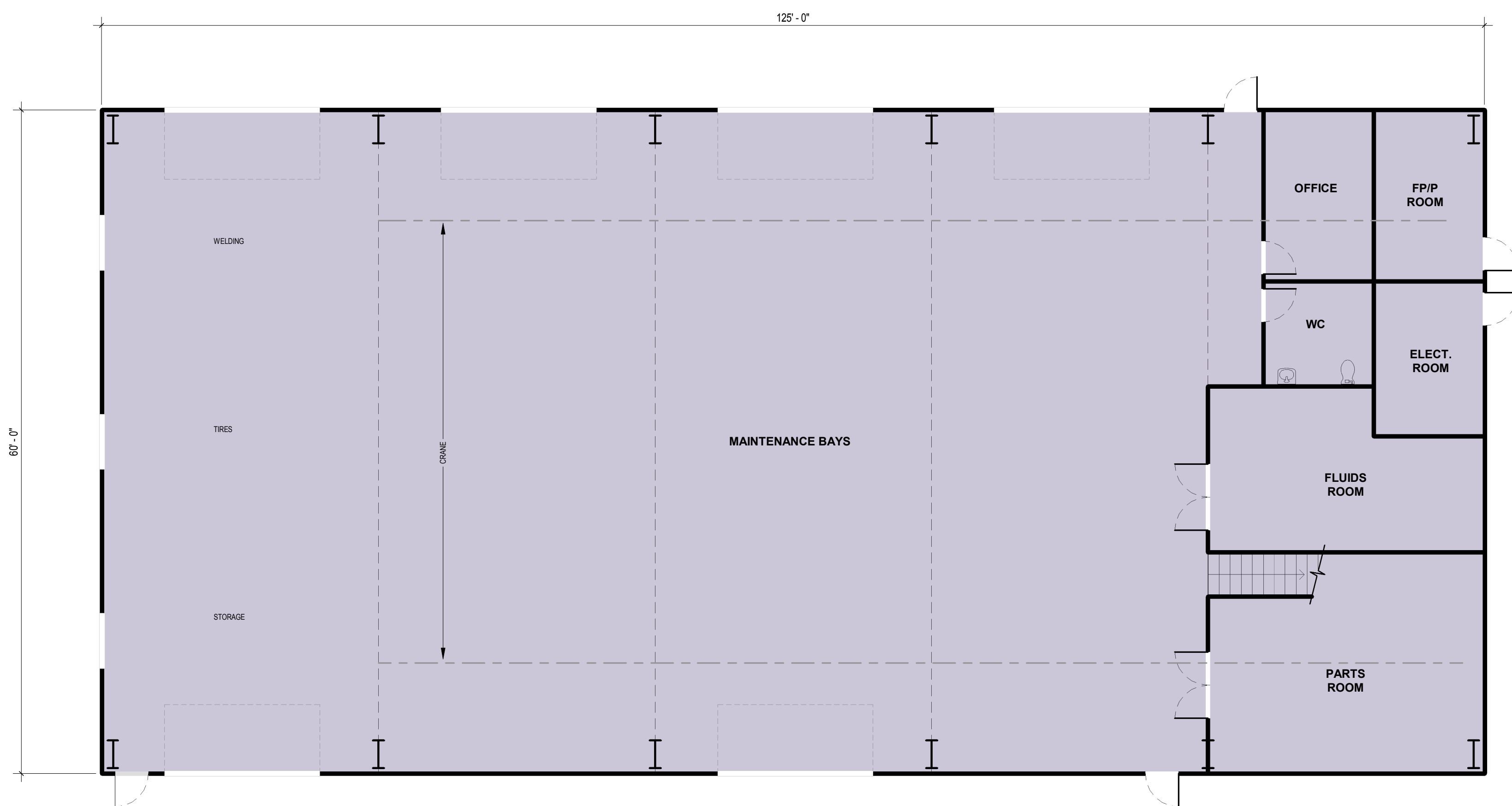






CONCEPTUAL FLOOR PLANS





② PARTIAL CONCEPT PLAN AT VEHICLE MAINTENANCE
1/8" = 1'-0"

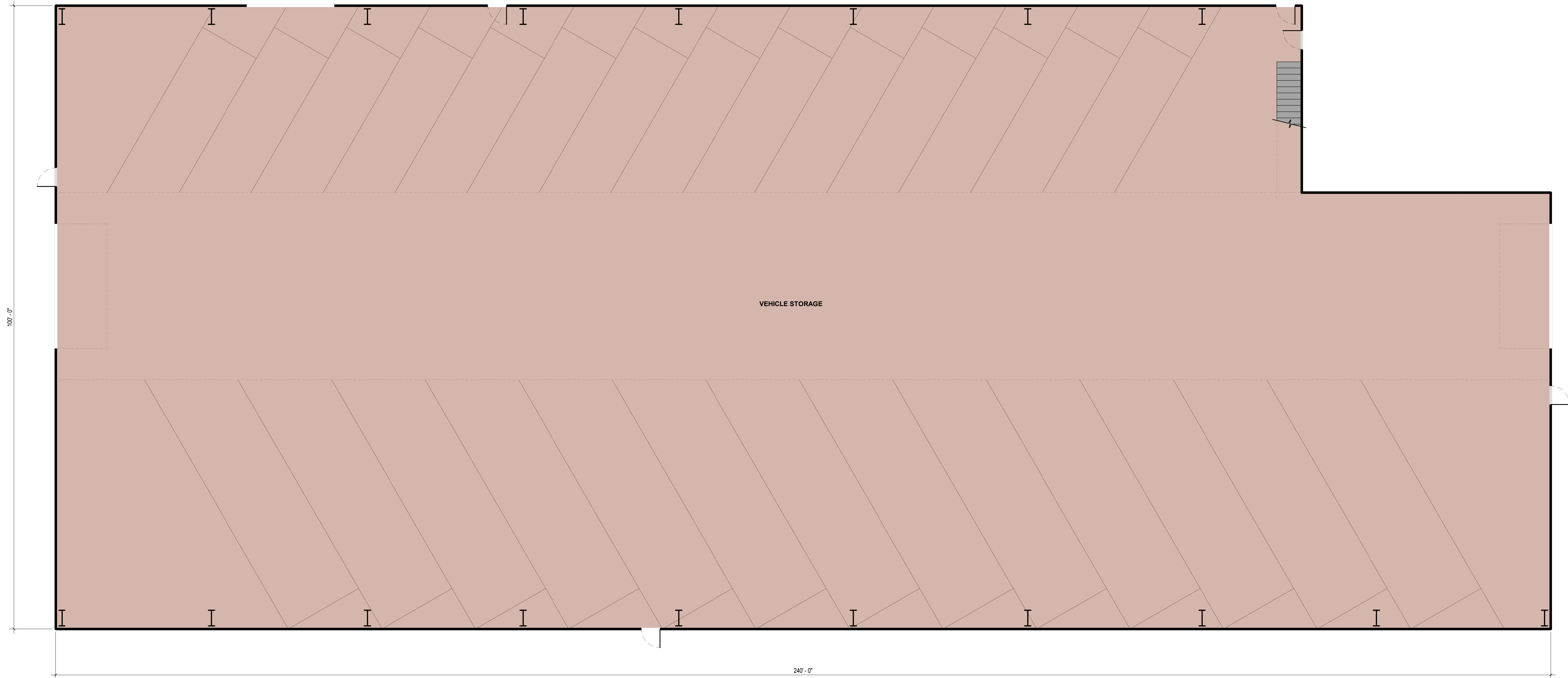


① PARTIAL CONCEPT PLAN AT ADMIN AREA
1/8" = 1'-0"



TRUE





① PARTIAL CONCEPT PLAN AT VEHICLE STORAGE
 1/8" = 1'-0"



APPENDIX H

BUDGETARY COSTS
&
PHASING SCENARIOS

1. ONE-TIME FULL BUILDOUT Costs per SF base on Year: **escalated to 2026**

New Building Construction	Size (SF)	Cost/SF	Cost
Administration -Offices/ Office Support	2,400	\$ 525	\$ 1,260,000
Employee Facilities	2,533	\$ 550	\$ 1,393,150
Town Admin. / Engineering - Offices / Office Support	1,600	\$ 525	\$ 840,000
Shops		\$ 575	\$ -
Vehicle Maintenance (not including equipment)	7,500	\$ 575	\$ 4,312,500
Wash	1,980	\$ 625	\$ 1,237,500
Vehicle/Equipment Storage	22,400	\$ 325	\$ 7,280,000
Ground Improvements (based on 1st floor area)	39,900	\$ 30	\$ 1,197,000
Assumed Mezzanines Area	8,700	\$ 200	\$ 1,740,000
Open Canopy Storage (SF)	1,920	\$ 250	\$ 480,000
Public Salt Open Canopy Storage (SF)	240	\$ 250	\$ 60,000
(Insert "X" below if applicable)			
New Construction Building Size and Cost Subtotals:	38,413		\$ 19,800,150
Building Cost per SF:	\$ 515		

Renovation	Size (SF)	Cost/SF	Cost
Full Office Interior Renovation (gut & replace)	720	\$ 150	\$ 108,000
Full Employee Facilities Interior Fit-out	1280	\$ 263	\$ 336,000
Maintenance Renovations (clean/h&v/elec/walls)	2,900	\$ 288	\$ 833,750
Shops Renovation (clean/h&v/elec/walls)	1,020	\$ 213	\$ 216,750
Garage Renovation (clean/h&v/elec)		\$ 188	\$ -
Mezzanine Renovations (gut & replace)		\$ 163	\$ -
Renovation Subtotal:	5920		\$ 1,494,500
Building Cost per SF (Renovation):	\$ 252		

Industrial Equipment	QTY	Size (SF)	Unit Price	Cost
(Insert "X" below if applicable)				
- Manual Wash Equipment	1	X	\$ 105,000	\$ 105,000
- Automatic Undercarriage Wash	1	X	\$ 80,000	\$ 80,000
-Fully Automatic Vehicle Wash with fixed Spray Arches	1		\$ 350,000	
-Fully Automatic Vehicle Wash with Rolling Grantry	1		\$ 650,000	
- Heavy Duty Inground Lift (flush Mounted)	1		\$ 225,000	
- Heavy Duty Drive on Platform Vehicle Lift (flush mounted)	1		\$ 175,000	
- Heavy Duty Mobile Column Lifts (6 Individual Portable Columns)	1	X	\$ 95,000	\$ 95,000
- Two Post vehicle lift (16,000 lb capacity minimum)	2	X	\$ 65,000	\$ 130,000
- Bridge Crane	1	X	\$ 110,000	\$ 110,000
- Monorail	1	X	\$ 65,000	\$ 65,000
- Overhead Fluid Distribution and Waste Fluid Collection System	1	X	\$ 135,000	\$ 135,000
- Miscellaneous Shop and Support Equipment	1	X	\$ 75,000	\$ 75,000
- Storage Shelving / Benches / Racks	1	X	\$ 55,000	\$ 55,000
- Exhaust Removal System	2	X	\$ 35,000	\$ 70,000
Industrial Equipment Subtotal:				\$ 920,000

Fuel System	QTY	Size (SF)	Cost/SF	Cost
(Insert "X" below if applicable)				
- New Aboveground Tanks		X	\$ 125,000	\$ -
- New Underground Tanks	2	X	\$ 100,000	\$ 200,000
-Equipment (pumps, dispensers, fuel management, tank monitoring, etc)	1	X	\$ 275,000	\$ 275,000
-Fuel Island Canopy	1	X	\$ 115,000	\$ 115,000
-Fuel Island Fire Suppression	1	X	\$ 70,000	\$ 70,000
-Concrete tank pad & drive pad	1	X	\$ 65,000	\$ 65,000
-Fuel Island Electrical	1	X	\$ 55,000	\$ 55,000
-Relocate Existing Aboveground Tank			\$ 40,000	
Fuel System Subtotal:				\$ 780,000

Site Development		Size	Cost/Acre	
Site Development (acres) (assumes level site with no contamination, existing structures/utilities, etc.)		5	\$ 550,000	\$ 2,750,000
		(Insert "X" below if applicable)		
Specialty Site Work (e.g. steep grades, retaining walls, contamination etc.)		X	\$ 500,000	\$ 500,000
Salt Shed		X	\$ 1,000,000	\$ 1,000,000
Total Site Work:				\$ 4,250,000
Escalation and Design Contingency				
Subtotal Bldg, Equip, & Site:				\$ 27,244,650
Design Contingency (10%):				\$ 2,724,465
8% Escalation to: 2024				\$ 2,397,529
6% Escalation to: 2025				\$ 1,922,383
4% Escalation to: 2026				\$ 1,371,561
4% Escalation to: 2027				
4% Escalation to: 2028				
4% Escalation to: 2029				
4% Escalation to: 2030				
Total Escalation & Design Contingency:				\$ 8,415,938
Total Construction:				\$ 35,660,588
Total Construction Cost/SF:				\$ 804
Owner's Soft Costs				
A&E Fees (design, bid, const.)			(Assume 10% of Const. Value)	\$ 3,566,059
A&E Special Services			(Assume 1.5% of Const. Value)	\$ 534,909
Owner's Project Manager Fees			(Assume 4% of Const. Value)	\$ 1,426,424
Furnishings (FFE)			Allowance	\$ 100,000
Communication. / Low Voltage System			Allowance	\$ 75,000
Temporary Facilities			Allowance	\$ 50,000
Printing Cost - Advertisement			Allowance	\$ 10,000
Legal Costs			Allowance	\$ 50,000
Utility Backcharges			Allowance	\$ 50,000
Commissioning			Allowance	\$ 65,000
Moving Costs			Allowance	\$ 40,000
Construction Tests & Inspections			Allowance	\$ 80,000
Owner's Contingency			Allowance	\$ 400,000
Construction Contingency (6%)			Allowance	\$ 2,139,635
Total Soft Costs:				\$ 8,587,026
OPINION OF PROBABLE TOTAL PROJECT COST (rounded)				\$ 44,250,000

Town of Londonderry NH		Weston & Sampson		
2. PHASE I - VEHICLE MAINTENANCE AND STORAGE		Costs per SF base on Year: escalated to 2026		
New Building Construction		Size (SF)	Cost/SF	Cost
Administration -Offices/ Office Support			\$ 525	\$ -
Employee Facilities			\$ 550	\$ -
Town Admin. / Engineering - Offices / Office Support			\$ 525	
Shops			\$ 575	\$ -
Vehicle Maintenance (not including equipment)		7,500	\$ 575	\$ 4,312,500
Wash			\$ 625	\$ -
Vehicle/Equipment Storage		24,000	\$ 325	\$ 7,800,000
Ground Improvements (based on 1st floor area)		31,500	\$ 30	\$ 945,000
Assumed Mezzanines Area		8,700	\$ 200	\$ 1,740,000
Open Canopy Storage (SF)			\$ 250	\$ -
Public Salt Open Canopy Storage (SF)		240	\$ 250	\$ 60,000
		(Insert "X" below if applicable)		
New Construction Building Size and Cost Subtotals:		31,500		\$ 14,857,500
Building Cost per SF:		\$ 472		
Renovation		Size (SF)	Cost/SF	Cost
Full Office Interior Renovation (gut & replace)			\$ 238	\$ -
Full Employee Facilities Interior Fit-out			\$ 263	\$ -
Maintenance Renovations (clean/h&v/elec/walls)			\$ 288	\$ -
Shops Renovation (clean/h&v/elec/walls)			\$ 213	\$ -
Garage Renovation (clean/h&v/elec)			\$ 188	\$ -
Mezzanine Renovations (gut & replace)			\$ 163	\$ -
Renovation Subtotal:		0		\$ -
Building Cost per SF (Renovation):		#DIV/0!		
Industrial Equipment		Size (SF)	Unit Price	
		QTY	(Insert "X" below if applicable)	
- Manual Wash Equipment			\$ 105,000	
- Automatic Undercarriage Wash			\$ 80,000	
-Fully Automatic Vehicle Wash with fixed Spray Arches		1	\$ 350,000	
-Fully Automatic Vehicle Wash with Rolling Grantry		1	\$ 650,000	
- Heavy Duty Inground Lift (flush Mounted)		1	\$ 225,000	
- Heavy Duty Drive on Platform Vehicle Lift (flush mounted)		1	\$ 175,000	
- Heavy Duty Mobile Column Lifts (6 Individual Portable Columns)		1	X	\$ 95,000 \$ 95,000
- Two Post vehicle lift (16,000 lb capacity minimum)		2	X	\$ 65,000 \$ 130,000
- Bridge Crane		1	X	\$ 110,000 \$ 110,000
- Monorail		1	X	\$ 65,000 \$ 65,000
- Overhead Fluid Distribution and Waste Fluid Collection System		1	X	\$ 135,000 \$ 135,000
- Miscellaneous Shop and Support Equipment		1	X	\$ 75,000 \$ 75,000
- Storage Shelving / Benches / Racks		1	X	\$ 55,000 \$ 55,000
- Exhaust Removal System		2	X	\$ 35,000 \$ 70,000
Industrial Equipment Subtotal:				\$ 735,000
Fuel System		Size (SF)	Cost/SF	
		QTY	(Insert "X" below if applicable)	
- New Aboveground Tanks		2	\$ 125,000	
- New Underground Tanks			\$ 100,000	
-Equipment (pumps, dispensers, fuel management, tank monitoring, etc)		1	\$ 275,000	
-Fuel Island Canopy		1	\$ 115,000	
-Fuel Island Fire Suppression		1	\$ 70,000	
-Concrete tank pad & drive pad		1	\$ 65,000	
-Fuel Island Electrical		1	\$ 55,000	
-Relocate Existing Aboveground Tank		1	\$ 40,000	
Fuel System Subtotal:				\$ -

Site Development		Size	Cost/Acre	
Site Development (acres) (assumes level site with no contamination, existing structures/utilities, etc.)		5	\$ 550,000	\$ 2,750,000
		(Insert "X" below if applicable)		
Specialty Site Work (e.g. steep grades, retaining walls, contamination etc.)		X	\$ 500,000	\$ 500,000
Salt Shed			\$ 1,000,000	
Total Site Work:				\$ 3,250,000
Escalation and Design Contingency				
			Subtotal Bldg, Equip. & Site:	\$ 18,842,500
			Design Contingency (10%):	\$ 1,884,250
8%	Escalation to: 2024			\$ 1,658,140
6%	Escalation to: 2025			\$ 1,329,527
4%	Escalation to: 2026			\$ 948,577
4%	Escalation to: 2027			
4%	Escalation to: 2028			
4%	Escalation to: 2029			
4%	Escalation to: 2030			
Total Escalation & Design Contingency:				\$ 5,820,493
			Total Construction:	\$ 24,662,993
			Total Construction Cost/SF:	\$ 783
Owner's Soft Costs				
A&E Fees (design, bid, const.)		(Assume 10% of Const. Value)		\$ 2,466,299
A&E Special Services		(Assume 1.5% of Const. Value)		\$ 369,945
Owner's Project Manager Fees		(Assume 4% of Const. Value)		\$ 986,520
Furnishings (FFE)		Allowance		\$ 10,000
Communication. / Low Voltage System		Allowance		\$ 35,000
Temporary Facilities		Allowance		\$ -
Printing Cost - Advertisement		Allowance		\$ 10,000
Legal Costs		Allowance		\$ 40,000
Utility Backcharges		Allowance		\$ 50,000
Commissioning		Allowance		\$ 25,000
Moving Costs		Allowance		\$ 10,000
Construction Tests & Inspections		Allowance		\$ 40,000
Owner's Contingency		Allowance		\$ 30,000
Construction Contingency (6%)		Allowance		\$ 1,479,780
Total Soft Costs:				\$ 5,552,544
OPINION OF PROBABLE TOTAL PROJECT COST (rounded)				\$ 30,220,000

Town of Londonderry NH		Weston & Sampson		
C. PHASE II - Staff, Administration, Vehicle Wash & Shops		Costs per SF base on Year: escalated to 2028		
New Building Construction		Size (SF)	Cost/SF	Cost
Administration -Offices/ Office Support		2,400	\$ 525	\$ 1,260,000
Employee Facilities		933	\$ 550	\$ 513,150
Town Admin. / Engineering - Offices / Office Support			\$ 525	
Shops			\$ 575	\$ -
Vehicle Maintenance (not including equipment)			\$ 575	\$ -
Wash		1,980	\$ 625	\$ 1,237,500
Vehicle/Equipment Storage			\$ 325	\$ -
Ground Improvements (based on 1st floor area)		5,000	\$ 30	\$ 150,000
Assumed Mezzanines Area			\$ 200	\$ -
Open Canopy Storage (SF)			\$ 250	\$ -
Public Salt Open Canopy Storage (SF)			\$ 250	\$ -
		(Insert "X" below if applicable)		
New Construction Building Size and Cost Subtotals:		5,313		\$ 3,160,650
Building Cost per SF:		\$ 595		
Renovation		Size (SF)	Cost/SF	Cost
Full Office Interior Renovation (gut & replace)		720	\$ 238	\$ 171,000
Full Employee Facilities Interior Fit-out		1280	\$ 263	\$ 336,000
Maintenance Renovations (clean/h&v/elec/walls)		2900	\$ 288	\$ 833,750
Shops Renovation (clean/h&v/elec/walls)		1020	\$ 213	\$ 216,750
Garage Renovation (clean/h&v/elec)			\$ 188	\$ -
Mezzanine Renovations (Muster Room under VS Mezzanine)		1600	\$ 163	\$ 260,000
Renovation Subtotal:		7520		\$ 1,817,500
Building Cost per SF (Renovation):		\$ 242		
Industrial Equipment		Size (SF)	Unit Price	
		(Insert "X" below if applicable)		
	QTY			
- Manual Wash Equipment	1	X	\$ 105,000	\$ 105,000
- Automatic Undercarriage Wash	1	X	\$ 80,000	\$ 80,000
-Fully Automatic Vehicle Wash with fixed Spray Arches	1		\$ 350,000	
-Fully Automatic Vehicle Wash with Rolling Grantry	1		\$ 650,000	
- Heavy Duty Inground Lift (flush Mounted)	1		\$ 225,000	
- Heavy Duty Drive on Platform Vehicle Lift (flush mounted)	1		\$ 175,000	
- Heavy Duty Mobile Column Lifts (6 Individual Portable Columns)	1		\$ 95,000	
- Two Post vehicle lift (16,000 lb capacity minimum)	2		\$ 65,000	
- Bridge Crane	1		\$ 110,000	
- Monorail	1		\$ 65,000	
- Overhead Fluid Distribution and Waste Fluid Collection System	1		\$ 135,000	
- Miscellaneous Shop and Support Equipment	1		\$ 75,000	
- Storage Shelving / Benches / Racks	1		\$ 55,000	
				\$ 185,000
Fuel System		Size (SF)	Cost/SF	
		(Insert "X" below if applicable)		
	QTY			
- New Aboveground Tanks	2		\$ 125,000	
- New Underground Tanks			\$ 100,000	
-Equipment (pumps, dispensers, fuel management, tank monitoring, etc)	1		\$ 275,000	
-Fuel Island Canopy	1		\$ 115,000	
-Fuel Island Fire Suppression	1		\$ 70,000	
-Concrete tank pad & drive pad	1		\$ 65,000	
-Fuel Island Electrical	1		\$ 55,000	
-Relocate Existing Aboveground Tank	1	X	\$ 40,000	\$ 40,000
Fuel System Subtotal:				\$ 40,000

Site Development		Size	Cost/Acre	
Site Development (acres) (assumes level site with no contamination, existing structures/utilities, etc.)		1	\$ 400,000	\$ 400,000
		(Insert "X" below if applicable)		
Specialty Site Work (e.g. steep grades, retaining walls, contamination etc.)			\$ 500,000	
Salt Shed			\$ 1,000,000	
Total Site Work:				\$ 400,000
Escalation and Design Contingency				
			Subtotal Bldg, Equip, & Site:	\$ 5,603,150
			Design Contingency (10%):	\$ 560,315
8%	Escalation to: 2024			\$ 493,077
6%	Escalation to: 2025			\$ 395,358
4%	Escalation to: 2026			\$ 282,076
4%	Escalation to: 2027			\$ 293,359
4%	Escalation to: 2028			\$ 305,093
4%	Escalation to: 2029			
4%	Escalation to: 2030			
Total Escalation & Design Contingency:				\$ 2,329,279
			Total Construction:	\$ 7,932,429
			Total Construction Cost/SF:	\$ 618
Owner's Soft Costs				
A&E Fees (design, bid, const.)		(Assume 10% of Const. Value)		\$ 793,243
A&E Special Services		(Assume 1.5% of Const. Value)		\$ 118,986
Owner's Project Manager Fees		(Assume 4% of Const. Value)		\$ 317,297
Furnishings (FFE)		Allowance		\$ 50,000
Communication. / Low Voltage System		Allowance		\$ 25,000
Temporary Facilities		Allowance		\$ 50,000
Printing Cost - Advertisement		Allowance		\$ 10,000
Legal Costs		Allowance		\$ 50,000
Utility Backcharges		Allowance		
Commissioning		Allowance		\$ 20,000
Moving Costs		Allowance		\$ 40,000
Construction Tests & Inspections		Allowance		\$ 20,000
Owner's Contingency		Allowance		\$ 30,000
Construction Contingency (6%)		Allowance		\$ 475,946
Total Soft Costs:				\$ 2,000,472
OPINION OF PROBABLE TOTAL PROJECT COST (rounded)				\$ 9,930,000

Town of Londonderry NH		Weston & Sampson		
D. PHASE III - Fuel Island, Salt Shed, Canopy, 100% Site		Costs per SF base on Year: escalated to 2030		
New Building Construction		Size (SF)	Cost/SF	Cost
Administration -Offices/ Office Support			\$ 525	\$ -
Employee Facilities			\$ 550	\$ -
Town Admin. / Engineering - Offices / Office Support			\$ 525	
Shops			\$ 575	\$ -
Vehicle Maintenance (not including equipment)			\$ 575	\$ -
Wash			\$ 625	\$ -
Vehicle/Equipment Storage			\$ 325	\$ -
Ground Improvements (based on 1st floor area)			\$ 30	\$ -
Assumed Mezzanines Area			\$ 200	\$ -
Open Canopy Storage (SF)	1,920		\$ 250	\$ 480,000
Public Salt Open Canopy Storage (SF)			\$ 250	\$ -
		(Insert "X" below if applicable)		
New Construction Building Size and Cost Subtotals:		-		\$ 480,000
Building Cost per SF:		#DIV/0!		
Renovation		Size (SF)	Cost/SF	Cost
Full Office Interior Renovation (gut & replace)			\$ 238	\$ -
Full Employee Facilities Interior Fit-out			\$ 263	\$ -
Maintenance Renovations (clean/h&v/elec/walls)			\$ 288	\$ -
Shops Renovation (clean/h&v/elec/walls)			\$ 213	\$ -
Garage Renovation (clean/h&v/elec)			\$ 188	\$ -
Mezzanine Renovations (gut & replace)			\$ 163	\$ -
Renovation Subtotal:		0		\$ -
Building Cost per SF (Renovation):		#DIV/0!		
Industrial Equipment		Size (SF)	Unit Price	
	QTY	(Insert "X" below if applicable)		
- Manual Wash Equipment	1		\$ 105,000	
- Automatic Undercarriage Wash	1		\$ 80,000	
-Fully Automatic Vehicle Wash with fixed Spray Arches	1		\$ 350,000	
-Fully Automatic Vehicle Wash with Rolling Grantry	1		\$ 650,000	
- Heavy Duty Inground Lift (flush Mounted)	1		\$ 225,000	
- Heavy Duty Drive on Platform Vehicle Lift (flush mounted)	1		\$ 175,000	
- Heavy Duty Mobile Column Lifts (6 Individual Portable Columns)	1		\$ 95,000	
- Two Post vehicle lift (16,000 lb capacity minimum)	2		\$ 65,000	
- Bridge Crane	1		\$ 110,000	
- Monorail	1		\$ 65,000	
- Overhead Fluid Distribution and Waste Fluid Collection System	1		\$ 135,000	
- Miscellaneous Shop and Support Equipment	1		\$ 75,000	
- Storage Shelving / Benches / Racks	1		\$ 55,000	
- Exhaust Removal System	2		\$ 35,000	
Industrial Equipment Subtotal:				\$ -
Fuel System		Size (SF)	Cost/SF	
	QTY	(Insert "X" below if applicable)		
- New Aboveground Tanks			\$ 125,000	
- New Underground Tanks	2	X	\$ 100,000	\$ 200,000
-Equipment (pumps, dispensers, fuel management, tank monitoring, etc)	1	X	\$ 275,000	\$ 275,000
-Fuel Island Canopy	1	X	\$ 115,000	\$ 115,000
-Fuel Island Fire Suppression	1	X	\$ 70,000	\$ 70,000
-Concrete tank pad & drive pad	1	X	\$ 65,000	\$ 65,000
-Fuel Island Electrical	1	X	\$ 55,000	\$ 55,000
-Relocate Existing Aboveground Tank			\$ 40,000	
Fuel System Subtotal:				\$ 780,000

Site Development		Size	Cost/Acre	
Site Development (acres) (assumes level site with no contamination, existing structures/utilities, etc.)		1	\$ 400,000	\$ 400,000
		(Insert "X" below if applicable)		
Specialty Site Work (e.g. steep grades, retaining walls, contamination etc.)			\$ 500,000	
Salt Shed		X	\$ 1,000,000	\$ 1,000,000
Total Site Work:				\$ 1,400,000
Escalation and Design Contingency				
			Subtotal Bldg, Equip. & Site:	\$ 2,660,000
			Design Contingency (10%):	\$ 266,000
8%	Escalation to: 2024			\$ 234,080
6%	Escalation to: 2025			\$ 187,690
4%	Escalation to: 2026			\$ 133,911
4%	Escalation to: 2027			\$ 139,267
4%	Escalation to: 2028			\$ 144,838
4%	Escalation to: 2029			\$ 150,631
4%	Escalation to: 2030			\$ 156,657
Total Escalation & Design Contingency:				\$ 1,413,074
			Total Construction:	\$ 4,073,074
			Total Construction Cost/SF:	#DIV/0!
Owner's Soft Costs				
A&E Fees (design, bid, const.)		(Assume 10% of Const. Value)		\$ 407,307
A&E Special Services		(Assume 1.5% of Const. Value)		\$ 61,096
Owner's Project Manager Fees		(Assume 4% of Const. Value)		\$ 162,923
Furnishings (FFE)		Allowance		
Communication. / Low Voltage System		Allowance		\$ 15,000
Temporary Facilities		Allowance		
Printing Cost - Advertisement		Allowance		\$ 10,000
Legal Costs		Allowance		\$ 50,000
Utility Backcharges		Allowance		
Commissioning		Allowance		\$ 15,000
Moving Costs		Allowance		
Construction Tests & Inspections		Allowance		\$ 15,000
Owner's Contingency		Allowance		\$ 25,000
Construction Contingency (6%)		Allowance		\$ 244,384
Total Soft Costs:				\$ 1,005,711
OPINION OF PROBABLE TOTAL PROJECT COST (rounded)				\$ 5,080,000

Town of Londonderry NH		Weston & Sampson		
D. PHASE IIIA - Additional Admin & Engineering Suite		Costs per SF base on Year: escalated to 2030		
New Building Construction		Size (SF)	Cost/SF	Cost
Administration -Offices/ Office Support			\$ 525	\$ -
Employee Facilities			\$ 550	\$ -
Town Admin. / Engineering - Offices / Office Support		1,600	\$ 525	\$ 840,000
Shops			\$ 575	\$ -
Vehicle Maintenance (not including equipment)			\$ 575	\$ -
Wash			\$ 625	\$ -
Vehicle/Equipment Storage			\$ 325	\$ -
Ground Improvements (based on 1st floor area)		1,600	\$ 30	\$ 48,000
Assumed Mezzanines Area			\$ 200	\$ -
Open Canopy Storage (SF)			\$ 250	\$ -
Public Salt Open Canopy Storage (SF)			\$ 250	\$ -
		(Insert "X" below if applicable)		
New Construction Building Size and Cost Subtotals:		1,600		\$ 888,000
Building Cost per SF:		\$ 555		
Renovation		Size (SF)	Cost/SF	Cost
Full Office Interior Renovation (gut & replace)			\$ 238	\$ -
Full Employee Facilities Interior Fit-out			\$ 263	\$ -
Maintenance Renovations (clean/h&v/elec/walls)			\$ 288	\$ -
Shops Renovation (clean/h&v/elec/walls)			\$ 213	\$ -
Garage Renovation (clean/h&v/elec)			\$ 188	\$ -
Mezzanine Renovations (gut & replace)			\$ 163	\$ -
Renovation Subtotal:		0		\$ -
Building Cost per SF (Renovation):		#DIV/0!		
Industrial Equipment		Size (SF)	Unit Price	
		(Insert "X" below if applicable)		
	QTY			
- Manual Wash Equipment	1		\$ 105,000	
- Automatic Undercarriage Wash	1		\$ 80,000	
-Fully Automatic Vehicle Wash with fixed Spray Arches	1		\$ 350,000	
-Fully Automatic Vehicle Wash with Rolling Grantry	1		\$ 650,000	
- Heavy Duty Inground Lift (flush Mounted)	1		\$ 225,000	
- Heavy Duty Drive on Platform Vehicle Lift (flush mounted)	1		\$ 175,000	
- Heavy Duty Mobile Column Lifts (6 Individual Portable Columns)	1		\$ 95,000	
- Two Post vehicle lift (16,000 lb capacity minimum)	2		\$ 65,000	
- Bridge Crane	1		\$ 110,000	
- Monorail	1		\$ 65,000	
- Overhead Fluid Distribution and Waste Fluid Collection System	1		\$ 135,000	
- Miscellaneous Shop and Support Equipment	1		\$ 75,000	
- Storage Shelving / Benches / Racks	1		\$ 55,000	
- Exhaust Removal System	2		\$ 35,000	
Industrial Equipment Subtotal:				\$ -
Fuel System		Size (SF)	Cost/SF	
		(Insert "X" below if applicable)		
	QTY			
- New Aboveground Tanks			\$ 125,000	
- New Underground Tanks	2		\$ 100,000	
-Equipment (pumps, dispensers, fuel management, tank monitoring, etc)	1		\$ 275,000	
-Fuel Island Canopy	1		\$ 115,000	
-Fuel Island Fire Suppression	1		\$ 70,000	
-Concrete tank pad & drive pad	1		\$ 65,000	
-Fuel Island Electrical	1		\$ 55,000	
-Relocate Existing Aboveground Tank			\$ 40,000	
Fuel System Subtotal:				\$ -

Site Development		Size	Cost/Acre	
Site Development (acres) (assumes level site with no contamination, existing structures/utilities, etc.)		0.06	\$ 400,000	\$ 24,000
		(Insert "X" below if applicable)		
Specialty Site Work (e.g. steep grades, retaining walls, contamination etc.)			\$ 500,000	
Salt Shed			\$ 1,000,000	
Total Site Work:				\$ 24,000
Escalation and Design Contingency				
			Subtotal Bldg, Equip. & Site:	\$ 912,000
			Design Contingency (10%):	\$ 91,200
8%	Escalation to: 2024			\$ 80,256
6%	Escalation to: 2025			\$ 64,351
4%	Escalation to: 2026			\$ 45,912
4%	Escalation to: 2027			\$ 47,749
4%	Escalation to: 2028			\$ 49,659
4%	Escalation to: 2029			\$ 51,645
4%	Escalation to: 2030			\$ 53,711
Total Escalation & Design Contingency:				\$ 484,482
			Total Construction:	\$ 1,396,482
			Total Construction Cost/SF:	\$ 873
Owner's Soft Costs				
A&E Fees (design, bid, const.)		(Assume 10% of Const. Value)		\$ 139,648
A&E Special Services		(Assume 1.5% of Const. Value)		\$ 20,947
Owner's Project Manager Fees		(Assume 4% of Const. Value)		\$ 55,859
Furnishings (FFE)		Allowance		\$ 10,000
Communication. / Low Voltage System		Allowance		\$ 7,000
Temporary Facilities		Allowance		
Printing Cost - Advertisement		Allowance		\$ 10,000
Legal Costs		Allowance		\$ 50,000
Utility Backcharges		Allowance		
Commissioning		Allowance		\$ 10,000
Moving Costs		Allowance		
Construction Tests & Inspections		Allowance		\$ 10,000
Owner's Contingency		Allowance		\$ 20,000
Construction Contingency (6%)		Allowance		\$ 83,789
Total Soft Costs:				\$ 417,244
OPINION OF PROBABLE TOTAL PROJECT COST (rounded)				\$ 1,810,000

LONDONDERRY DEPARTMENT OF PUBLIC WORKS

High Range Road - Renovations and New Construction



December 2024

DEVELOPMENT SUMMARY **A**

A. Phased (Sequential) Design and Construction

all A/E fees phase-by-phase

	FY25	Full Build FY26	Phase I FY26	FY27	Phase II FY28	FY29	Phase III FY30	Phase IIIA FY30
Full Build Full Building and Site Program		\$ 35,660,588						
Phase I Vehicle Maintenance, Vehicle & Equipment Storage, 85% Site Development			\$ 24,662,993					
Phase II Expanded Staff Facilities, Administration, Shops, Vehicle Wash					\$ 7,932,429			
Phase III Fuel Island, Salt Shed, Canopy, 100% Site Development							\$ 4,073,074	
Phase IIIA Additional Engineering and Administration Space								\$ 1,396,482
Soft Costs	\$ 8,587,026	\$ 5,552,544	\$ 2,000,472	\$ 1,005,711	\$ 417,244			
Total	\$ 44,247,614	\$ 30,215,537	\$ 9,932,901	\$ 5,078,784	\$ 1,813,726			
Full Build		\$ 44,247,614					total phased	\$ 47,040,949

\$ 2,793,335
phasing premium

DEVELOPMENT SUMMARY

B

B. Full Build Design to CD's in FY25

A/E fees front-loaded to FY25

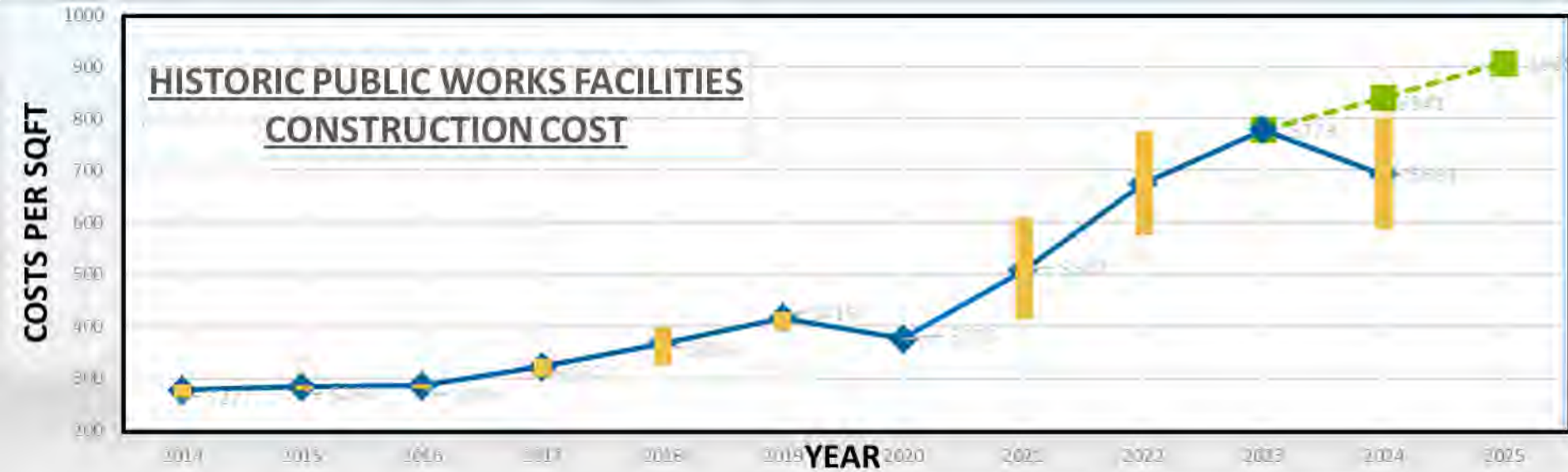
Phased Procurement and Construction

		FY25	Full Build FY26	Phase I FY26	FY27	Phase II FY28	FY29	Phase III FY30	Phase IIIA FY30
Full Build	Full Building and Site Program		\$ 35,660,588						
Phase I	Vehicle Maintenance, Vehicle & Equipment Storage, 85% Site Development			\$ 24,662,993					
Phase II	Expanded Staff Facilities, Administration, Shops, Vehicle Wash					\$ 7,932,429			
Phase III	Fuel Island, Salt Shed, Canopy, 100% Site Development							\$ 4,073,074	
Phase IIIA	Additional Engineering and Administration Space								\$ 1,396,482
Soft Costs	70% of total design fees in FY25	#####	\$ 5,716,349	\$ 3,567,173		\$ 1,361,912		\$ 677,828	\$ 304,827
Total		\$2,870,677	\$ 41,376,937	\$ 28,230,166		\$ 9,294,341		\$ 4,750,902	\$ 1,701,309
			Full Build \$ 44,247,614					total phased \$ 46,847,395	

\$ 2,599,781
 phasing premium

APPENDIX I

PRICING TRENDS
FOR
COMPARABLE DPW CONSTRUCTION



APPENDIX J

INDOOR VS. OUTDOOR VEHICLE STORAGE

WHY PUT VEHICLES AND EQUIPMENT INDOORS?

1. Employee Safety
2. Public Safety
3. Protection of Equipment
4. Stormwater Pollution Control
5. **Cost Effective Operations**
6. Efficient Operations

Analyses has shown that it will cost 2 – 3 times more to store equipment outdoors over the life of a building

Cost to Construct Storage Garage

- Construction
- Maintenance
- Operation

VERSUS

Cost Associated with Exterior Storage

- Increased Vehicle Maintenance
- Decrease in Vehicle Life Expectancy
- Non-Productive Labor
- Operational impacts
- Employee Safety & Environmental