



City of Helena
Railroad Urban Renewal District
TAX INCREMENT FINANCING APPLICATION FORM
Community Development Department
Phone (406) 447-8490 Fax (406) 447-8460
citycommunitydevelopment@helenamt.gov

RECEIVED
By April Sparks at 2:25 pm, May 26, 2023

IMPORTANT: APPLICANTS MAY REQUEST UP TO FIFTY PERCENT MATCH (50%) FUNDING FOR PROJECTS THAT ALIGN WITH THE RAILROAD URBAN RENEWAL DISTRICT PLAN. COSTS TO BE PAID WITH RAILROAD URBAN RENEWAL DISTRICT FUNDS MAY NOT BE INCURRED BY THE APPLICANT PRIOR TO FUNDING APPROVAL AND THE SATISFACTION OF ANY CONDITIONS OF SUCH APPROVAL.

CITY STAFF RESERVE THE RIGHT TO RETURN MATERIALS THAT ARE DEEMED INCOMPLETE OR LACK SUFFICIENT SUPPORTING DOCUMENTATION.

ANYONE SEEKING TIF ASSISTANCE FROM THE CITY OF HELENA MUST SUBMIT A WRITTEN APPLICATION FOR EACH TIF-ASSISTED PROJECT. THE FOLLOWING PROCEDURE HAS BEEN DEVELOPED TO EXPEDITE THE REVIEW OF TIF FUNDING REQUESTS.

1. Initial Contact: Contact the City of Helena Community Development Department, 316 N. Park Avenue, Room 445, Helena, MT 59623, (406) 447-8490, citycommunitydevelopment@helenamt.gov, to discuss the project and determine eligibility for TIF assistance.
2. Prepare a Written Application: The Applicant must prepare a written application for each funding request. The City of Helena staff will assist the applicant with any questions in the preparation of the application. The application should address the questions posed in the Project Narrative section.
3. Staff Review: Upon submittal of all necessary information, City staff will review the merits of the project and the need for funding. At any point in the review process, the staff or Board may request more information of the Applicant or solicit comment on the project from other public agencies. Items included in personal financial statements will not be subject to public review or presentation to or comment by other agencies.
4. Board Review and Approval: The RURD TIF Advisory Board will review the project and staff recommendations, and then recommend the funding request or any part thereof, and any special terms of TIF assistance to the City Commission.
5. Development Agreement: The City of Helena and the Applicant must execute a legally binding contract, which establishes the terms and conditions of the TIF assistance.

CHECKLIST ITEMS

- Project Description
- Project Renderings (where applicable)
- Application Form (pages 4-6)
- Project Financing Worksheet (page 7)
- Project Narrative Section (page 9)



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APPLICATION PRIORITY AREAS FOR TIF ASSISTANCE

TIF Applications will be assessed based on the merits of individual projects in relation to the goals and objectives of the Plan, and the project priority areas set by the RURD TIF Advisory Board, which are as follows:

1. RURD Housing Program: Consideration will be given to projects that create or retain affordable housing opportunities in the district.
2. Infrastructure Improvement Program: Consideration will be given to projects that identify and prioritize upgrades to water, sewer, stormwater drainage infrastructure, and vehicular, parking, and pedestrian/bike transportation improvements.
3. Transportation Planning Study Program: Consideration will be given for transportation planning study projects within the Railroad Urban Renewal District to address vehicular and pedestrian/bike transportation planning needs.
4. Demolition Program: Consideration will be given to demolition projects that remove blighted structures in the Railroad Urban Renewal District.
5. Historic Façade & Site Improvement Program: Consideration will be given to projects that restore/rehabilitate historic buildings and other historic site features such as brick paving, fencing, and lighting.
6. Marketing/Branding Project Program: Consideration will be given to projects that work to more fully develop a marketing initiative that is based on the RURD's distinct history and cultural/economic importance. Initiatives should cover a cohesive, comprehensive branding and marketing plan with an associated implementation plan.
7. RURD Planning Study Program: Consideration will be given for planning projects that identify regulatory roadblocks to redevelopment and promote sound urban design through zoning reform for the Railroad Urban Renewal District.



APPLICATION PRIORITY AREAS FOR TIF ASSISTANCE

Applications will be evaluated based on the following measurable objectives for projects and programs (listed in no particular order of priority):

1. Increased Taxable Valuation: Implementation of the project should encourage and/or result in an increase in the URD's tax base.
2. Cost-Benefit Analysis of the Investment/Expenditure: Analysis of how the request cost of the TIF funds compares with the benefits of the project to the District.
3. Leverage-Ratios of Tax Increment Funds to Other Sources: The relationship of private investment to public investment of a project shall be significant enough ensure prudent investment of public funds within the urban renewal district.
4. Health and Safety Concerns: The Project's impact, positive or negative, on the environment in terms of noise, dust, pollution, public safety, traffic congestion, pedestrian access, visual aesthetics, etc.
5. Historic Preservation: The Project's capacity to encourage the preservation and protection of the cultural and economic heritage and physical assets of the district.
6. Density, Infill, and Adaptive Reuse: Projects will be evaluated for their ability to encourage or result in infill and adaptive reuse of underutilized and vacant lots and properties, and to promote more compatible, complementary uses within the District.
7. Cost of Public Services: The Project's ability to improve public services, such as water, sewer, sidewalks, parking, improved traffic circulation, etc., to an area that is currently underserved.
8. Job Creation: Projects that create opportunities for new employment contribute to the economic vitality of the District and community in a variety of ways.
9. Conformance with the goals and objectives of the Railroad URD Plan, Helena Growth Policy, and other Relevant Adopted Plans: The Project's ability to significantly further specific goals found in the current Urban Renewal Plan, Growth Policy, and consistency with other City plans and objectives.
10. Conformance with Requirements for TIF Fund Expenditures, per 7-15-4288, MCA: Projects must cover eligible project activities stated in Montana statutes and be approved by the City Commission to satisfy needs identified in the Railroad Urban Renewal District Plan.



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Project Name: 1429 Helena Avenue Project Date Submitted: 5/26/2023

APPLICANT INFORMATION

Name (First & Last): Larson Building, LLC
 Address: 1437 Helena Ave #8
 City: Helena State: MT Zip Code: 59601
 Phone: 406 459-3344 Cell: 406 459-3344 Other: _____
 Email: iversonmontana@gmail.com

If the applicant is not an individual doing business under his/her own name, the applicant has the status indicated below and is organized or operating under the laws of: State of Montana

- A non-profit or charitable institution/corporation
- A partnership or corporate entity known as Larson Building, LLC
- District Resident
- Local Government
- Other (explain) _____

PROJECT INFORMATION

Building Address: 1429 Helena Ave. Helena, MT 59601
 Legal Description: NORTHERN PACIFIC ADDN, S29, T10 N, R03 W, BLOCK 27, Lot 1 - 9

PROPERTY OWNER INFORMATION

If the property is not owned by the Applicant, written permission from the owner must be included to carry out the project and lease or other materials.

Property Owner (First & Last): _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone: _____ Cell: _____ Other: _____
 Email: _____



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PROJECT ARCHITECTURAL FIRM INFORMATION (WHERE APPLICABLE)

Company/Firm: Slate Architecture
Point of Contact (First & Last): Jacob Augenstein
Address: 1470 N. Roberts St
City: Helena State: MT Zip Code: 59601
Phone: 406 457 0360 Cell: _____ Other: _____
Email: JacobA@slatearch.com

PROJECT FINANCIAL LENDING INSTITUTION (WHERE APPLICABLE)

Company/Institution: Stockman Bank
Point of Contact (First & Last): Steve Fawcett
Address: 3094 North Sanders St
City: Helena State: MT Zip Code: 59601
Phone: 406 447 9015 Cell: 406 581 1070 Other: _____
Email: steve.fawcett@stockmanbank.com

PROJECT CONTRACTOR INFORMATION (WHERE APPLICABLE)

Company/Firm: Sexton Construction
Point of Contact (First & Last): Ed Sexton
Address: 3218 Centennial Dr
City: Helena State: MT Zip Code: 59601
Phone: 406 439 2600 Cell: _____ Other: _____
Email: sextongroupbuilders@bresnan.net

DESCRIPTION OF PROJECT

In a separate attachment, please provide a full written description of your project. Please indicate if the items are existing or new construction.

PROJECT RENDERINGS (IF APPLICABLE)

Submit design schematic and/or site and landscaping plans for project.



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TOTAL COST OF THE PROJECT

Please summarize. A full breakdown of costs is required on the *Project Cost Worksheet*.
The anticipated cost for this project is \$250,170.00

PROPERTY OWNERSHIP

Do you own the property or are you currently purchasing it? Explain.
Larson Building, LLC has owned the building for 10 years

JOB CREATION

Will there be any new permanent or part time jobs as a result of this project excluding construction jobs associated with the development of the project? If so, how many?

Yes. This project will unlock and open up previously unavailable rental space to new and expanding businesses.

We do not know how many jobs.

PROJECT COMPLETION

What is the expected completion date of the project?

Summer of 2023

PROPERTY TAXES

How much are the current annual property taxes including any improvements? Is the payment of taxes current?

The annual property taxes are \$23,873.00. All tax payments are current.



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PROJECT COST & FINANCING SECTION

Summarize the project costs on the Project Cost Worksheet. Use general categories and include items that are in the assistance request. The total cost should include land costs and “soft costs” such as zoning processes, surveys, and permits to enable the RURD Advisory Board to evaluate the entire private investment. If in doubt about an item's eligibility, include it. Staff will review the items and help determine eligibility. Briefly describe how the project will be financed and be sure to include equity and other investments into the project. If financing commitment is contingent on grants or URD TIF commitment to the project, has multiple sources, or other complex factors, provide that information.

NOTE: The TIF Program requests which include demolition/deconstruction activities, public sidewalks, streets, alleys and other right-of-way improvements; and/or work on utility main transmission lines totaling over \$25,000 are subject to Montana Prevailing Wage Rates and must include that in the itemized costs.

PROJECT COST WORKSHEET

Professional Services

1. Architecture and Engineering plans	\$ 22,792.00
2. _____	\$ _____
Subtotal	\$ 22,792.00

Construction/Rehabilitation Costs

1. Site Work	\$ 16,885.00
2. Construction	\$ 86,827.00
3. Mechanical work	\$ 87,575.00
4. Miscellaneous - permits, fees and general costs	\$ 36,091.00
5. _____	\$ _____
6. _____	\$ _____
Subtotal	\$ 227,378.00

Printing, Advertising, etc.

1. _____	\$ _____
2. _____	\$ _____
Subtotal	\$ 0

Other Miscellaneous Costs

1. _____	\$ _____
2. _____	\$ _____
Subtotal	\$ 0

TOTAL PROJECT DEVELOPMENT COSTS

Total \$ 250,170.00



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PROJECT FINANCING WORKSHEET

Owner/Developer Investment

Total applicant investment in the project \$ 250,170.00

Listing of Other Funding Sources & Amounts (Continue on separate sheet if needed)

- 1. Stockman bank \$ 214,904.00
- 2. _____ \$ _____
- 3. _____ \$ _____

Request for Eligible items

Total TIF Request \$ 35,266.00

TOTAL PROJECT FINANCING \$ 250,170.00

Larson Block Remodel	June 9, 2023	
1429 Helena Avenue		
Helena, MT 59602		
GENERAL		
Plan copies	\$185.00	
General labor	\$540.00	
Rental equipment	\$185.00	
Landfill charges	\$690.00	
Demolition	\$4,275.00	
Concrete cutting (inspect 2 core walls)	\$3,554.00	
Exterior site work - parking, removal of existing sidewalk, and repouring of new sidewalk	\$9,500.00	
Framing materials**	\$2,822.00	
Framing labor	\$6,774.00	
Door hardware	\$3,666.00	
Labor to install doors	\$3,882.00	
Exterior doors**	\$2,585.00	
Building permits and inspections**	\$2,974.00	
Overhead	\$8,876.00	
Profit	\$17,750.00	
Supervision	\$1,225.00	
Administrative	\$1,050.00	
TOTAL	\$70,533.00	
TIF request @ 50% of eligible expences	\$35,266.00	



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PROJECT NARRATIVES SECTION:

1. **Description of Project.** Provide a written description of the project, scope of work if a marketing plan or similar plan, number, and types of jobs to be created, etc.
 - a. Compliance with the Railroad URD Plan: Identify how your project supports the Railroad URD Plan and how the project benefits the neighborhood, URD, and community (See Attachment B for Goals and objectives of the Plan).
 - b. Local Zoning and Other Requirements: All projects assisted by Railroad URD TIF funds must, depending on the project location, comply with the City's Zoning Requirements, provide a brief narrative as to how the design successfully meets the requirements of City Zoning. Include any project schematic, site, and landscaping plans.
 - c. Demolition/Deconstruction: If the project request includes removal of structures, it must be done in accordance with to the provisions of Helena City Code Title 3 Chapter 15. Provide a brief narrative on how the building will be removed and whether it is a structure within the city that is individually listed on the National Register of Historic Places, or a property located within the city's historic districts which is designated by the state historic preservation office (SHPO) as primary or contributing.
 - d. Dislocation: If existing tenants are to be dislocated as a result of the project, provide a separate narrative describing how they have been or will be appropriately relocated.
2. **Logistical Considerations.** Provide a brief narrative describing the following:
 - a. Project Feasibility: The Applicant's demonstration of financial readiness and ability to proceed.
 - b. Applicant's Ability to Perform: The Applicant's capability to undertake the relative complexities of the project.
 - c. Timely Completion: The feasibility of completing the project according to the Applicant's proposed project schedule.
 - d. Payment of Taxes: All property taxes, special improvement district assessments, and other assessments on the project property must be paid to date, where applicable.



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PROJECT NARRATIVES SECTION (CONTINUED):

3. **Economic & Community Development Potential:** Provide a brief narrative for the following. If not applicable, please note:
- a. Tax generation: Describe how the project will increase the taxable valuation in the District.
 - b. Relationship of Public and Private Investment: Describe the relationship of private investment to public investment of a project and discuss how it is a prudent investment of public funds within the urban renewal district.
 - c. Job Creation: Are there any jobs created as a result of the project? Please describe.
 - d. Investment Spin-off: Describe any potential for investment spin-off having a positive impact on the District.
 - e. Cost-Benefit Analysis of the Investment/Expenditure: For projects that are \$10,000 or more, a cost-benefit analysis should be completed.
 - f. Health and Safety Concerns: Describe the project's impact, positive or negative, on the environment in terms of noise, dust, pollution, public safety, traffic congestion, pedestrian access, visual aesthetics, etc.
 - g. Historic Preservation: Describe the project's ability to preserve and protect the cultural and economic heritage and physical assets of the district.
 - h. Density, Infill, and Adaptive Reuse: Describe if the project increases density in the RURD through infill and adaptive reuse of existing property(s).
 - i. Cost of Public Services: Describe how the projects will improve public services such as water, sewer, sidewalks parking, improved traffic circulation, etc., to an area currently underserved.
 - j. Housing Component: Describe any housing components to the project. One of the main goals of the Railroad Neighborhood Plan and the Railroad URD Plan is to promote all types of housing in the area.
 - k. Conformance with Requirements for TIF Fund Expenditures, per 7-15-4288, MCA: Projects must cover eligible project activities stated in Montana state statutes (See Attachment A).

ATTACHMENT A: ELIGIBLE ACTIVITIES

As specified by state law, TIF may be used to finance redevelopment activities including the following (from 7-15-4288, M.C.A.):

1. Land acquisition, including acquisition of infrastructure-deficient areas and assemblage of land for development or redevelopment by private enterprise or public agencies, including sale, initial leasing, or retention by the municipality itself at fair value.
2. Demolition and removal of structures.
3. Relocation of occupants.
4. The acquisition, construction, and improvement of public improvements or infrastructure, including streets, roads, curbs, gutters, sidewalks, pedestrian malls, alleys, parking lots and off-street parking facilities, sewers, sewer lines, sewage treatment facilities, storm sewers, waterlines, waterways, water treatment facilities, natural gas lines, electrical lines, telecommunications lines, rail lines, rail spurs, bridges, publicly owned buildings, and any public improvements, and items of personal property to be used in connection with improvements for which the foregoing costs may be incurred.
5. Costs incurred in the exercise of urban renewal powers (found in 7-15-4233, MCA), including urban renewal projects as authorized by the City Commission.
6. Acquisition of infrastructure-deficient areas or portions of areas;
7. Administrative costs associated with the management of the urban renewal area or targeted economic development district;
8. Assemblage of land for development or redevelopment by private enterprise or public agencies, including sale, initial leasing, or retention by the local government itself at its fair value;
9. The compilation and analysis of pertinent information required to adequately determine the needs of the urban renewal area or targeted economic development district;
10. The connection of the urban renewal area or targeted economic development district to existing infrastructure outside the area or district;
11. The provision of direct assistance to secondary value-adding industries to assist in meeting their infrastructure and land needs within the area or district; and
12. The acquisition, construction, or improvement of facilities or equipment for reducing, preventing, abating, or eliminating pollution.

ATTACHMENT B: GOALS OF THE RAILROAD URD

Goal #1: Emphasize the District's Historic Importance

1. Promote the railroad depot area as a defining feature of the District.
2. Review and update as needed the 2003 Architectural Guidelines and formally adopt as guidelines.
3. Work with the BNSF and others to pursue how best to highlight the railroad's historic importance and unique potential for observing railcar operations from the depot area.
4. Develop interpretive signage with a consistent appearance.
5. Retain and restore/rehabilitate historic buildings and other historic features such as brick paving, fencing, and lighting.
6. Develop and market programs and activities that incorporate education on the area's historic importance.
7. Develop an image "brand" for the District, based on its distinctive character and history.

Goal #2: Increase Property Utilization and Function

1. Provide technical assistance and planning to identify vacant and underutilized properties for redevelopment.
2. Provide for a mix of uses within the District.
3. Strive for neighborhood commercial options—places to shop and eat within walking distance of work, schools, and homes.
4. Provide for a variety of residential housing, including affordable workforce housing and special needs housing.
5. Prepare properties for redevelopment by facilitating land assemblage and property transfer.
6. Work with city planning and zoning and private interests to identify regulatory roadblocks to improving property and identify solutions.
7. Consider the unique differences in various parts of the District and identify planning and project approaches as necessary for those areas.

Goal #3: Expand and Diversify the District's Economy

1. Promote and market the District as a place to do business - highlight what makes the District uniquely qualified for various businesses.
2. Upgrade and expand on existing broad-band capabilities to attract high tech businesses.
3. Develop the District's historic and proposed mix of residential, commercial and light industrial uses as a unique, identifying feature for businesses.
4. Work with business leaders and individual businesses to provide maximum opportunity, consistent with the sound needs of the municipality as a whole, for the rehabilitation or redevelopment of the Helena Railroad District by private enterprise.
5. Develop partnerships among existing property owners, new/expanding businesses and the local government to increase economic activity
6. Work with Helena College to identify training opportunities to expand and diversify District businesses.
7. Encourage projects that provide opportunities for college students to live and/or work near the campus.
8. Encourage businesses that can benefit from proximity to the college.
9. Potential for live-work building concepts, e.g., artist studios with retail and living space.

ATTACHMENT B: GOALS OF THE RAILROAD URD

Goal #4: Create an Inviting Venue

1. Develop planning tools to address eight key urban design elements identified by the Urban Land Institute: imageability, enclosure, human scale, transparency, complexity, coherence, legibility and linkage.
 - Imageability - Features or landmarks that make the area distinct, recognizable and memorable.
 - Enclosure - Streets and public spaces that are visually defined with trees, buildings, and other vertical elements to create outdoor spaces.
 - Human Scale - Building dimensions, architectural details, signage, public lighting, sidewalks, and street widths which are more intimate landscapes for pedestrians
 - Transparency - Street-level storefront windows, doors and entryways, courtyards, etc. that invite passersby to look in.
 - Complexity - An area with a visual richness from architectural diversity, landscape elements, street furniture, signage, and human activity.
 - Coherence - A sense of visual order, influenced by consistency and complementarity of scale, character, and arrangement of buildings, landscaping, and other physical elements.
 - Legibility - Ease with which people can navigate the area, including layout of streets
 - Linkage - The physical and visual connections that unify various elements - e.g., from building to street, one side of street to the other.
2. Develop “Entryways” and wayfinding signage- for example, entryway arches or other features at key intersections into the District, and distinctive signage for locating specific sites.
3. Promote Street art that reflects the District’s historic foundations.

Goal #5: Address Public Infrastructure Needs

1. Plan and prioritize public infrastructure in coordination with the city’s transportation planning system and capital improvements planning process.
2. Consider and plan for primary motorized access to/from the District, including:
 - a. Montana Avenue Railroad Crossing - and possible potential under-over-pass;
 - b. Other Railroad Crossings;
 - c. Malfunction Junction; and
 - d. Other major connections into/within District: Lyndale, Helena, Boulder Avenue.
3. Plan for motorized access within the district, including:
 - e. Memorial Park transportation improvements; and
 - f. Establishing criteria for prioritizing other street improvements in the district.
4. Address non-motorized transportation needs, including:
 - g. Trail Systems and Non-Motorized Crossings of Montana Avenue;
 - h. Safe routes to School;
 - i. Sidewalks, Complete Streets;
 - j. Railroad crossings; and
 - k. Connections to the region-wide trail systems.
5. Identify and prioritize upgrades to water, sewer and stormwater drainage infrastructure.
6. Plan for specific parking needs of various businesses. Develop guidelines that reflect urban design elements identified in Goal #4 “Create an Inviting Venue.”

ATTACHMENT B: GOALS OF THE RAILROAD URD

Goal #6: Provide for Public and Environmental Health

1. Promote compatible adjoining land uses and avoid adjacent uses with potential for public health or safety issues.
2. Reduce air, noise, and other environmental pollution problems.
3. Support green infrastructure/green development.
4. Provide recreational opportunities including trails, and "active" parks with playgrounds.
5. Provide complete streets with access for those with disabilities.

1. Description of Project

The project is located at 1429 Helena Ave and 1437 Helena Ave. Adapting and reusing approximately 11,000 sq ft of outdated and underutilized space. This project will bring a 120 year old space into compliance with ADA, including relevant mechanical upgrades necessary to support improved utilization of existing space. Two off-street dedicated ADA parking spots are also included in this project. The TIF application is for project costs that relate to the exterior of the building: primarily ADA parking lot, accessible sidewalk and building facade.

a. Compliance with Railroad URD Plan:

i. Increase Property Utilization and Function: This project will prepare for the redevelopment of underutilized space, creating an infill opportunity. This project will unlock previously vacant space and create appropriately sized spaces for businesses in the district. Much of the space in question was built out as a Grocery store (Brackmans) and was 6,550 sq ft in size. This project breaks that space into 3 suites – 2 that are about 1,000 sq ft each and 1 that is 3,400 sq ft, with the remainder being common space. The project creates a common ADA accessible hallway and 2 common ADA bathrooms. The project will make the necessary investments so that additional tenant uses will be authorized within the rentable space. Through a common hallway an additional 4,500 sq ft will also be served by ADA access and ADA bathrooms.

ii. Expand and Diversify the District's Economy: This project will put new commercial space into the market, available for neighborhood jobs and businesses. The space will be more appropriately sized for the business mix that is currently in the district. This project makes 11,000 sq ft of space previously inaccessible space, ADA accessible. The project also creates two dedicated, off-street ADA parking spots on a city block that currently has none. This project will open up new spaces for rent that were not previously useable and will increase the allowable uses. The district is known for its diversity of businesses, this project will support and encourage new businesses to site in the district.

iii. Emphasize the Districts Historic Importance: The subject building was listed as a contributing property on the National Register of Historic Places in October of 1990. This project rehabilitates interior space without impacting the historic significance of the building (see attachment).

b. Local Zoning and Other Requirements: The B-1 (neighborhood business) district provides for a compatible mixture of residential, public, and small-scale commercial uses that serve as transitions between zoning districts. This project complies with City Zoning. The plans have been submitted and approved by the City. See Attached.

c. Demolition/Deconstruction: The Demolition in this project consists of primarily widening doorways and sidewalks to be ADA compliant.

d. Dislocation: N/A

2. Logistical Considerations

a. Project Feasibility

i. The applicant has the financial ability to take on this project. Financing is in place.

b. Applicant's Ability to Perform

- i. The applicant is working with Slate Architecture, IMEG (Mechanical Engineers) and Sexton Construction as the General Contractor.
 - c. Timely Completion
 - i. Subcontractors are scheduled and ready to work. Project will be complete in summer of 2023
 - d. Payment of Taxes
 - i. All taxes and assessments are current.
- 3. **Economic & Community Development Potential**
 - a. Tax Generation:
 - i. This project will increase the taxable value of the subject property. Better utilizing the existing footprint will, through the income approach to valuation, increase the taxable value.
 - b. Relationship of Public and Private Investment:
 - i. The TIF request makes up less than 15% of the total project cost. The TIF request is for 50% of the qualified expenses. The result of this investment will be a more accessible and inclusive neighborhood core.
 - ii. In addition to the direct increase in taxable value, public investment in the improvements will continue to be a catalyst for other owners to improve their properties.
 - c. Job Creation:
 - i. Previously vacant space has already been leased to new tenants which will result in job creation in the area. Also, new, previously underutilized space will become available for additional businesses to open or expand.
 - d. Investment Spin-off:
 - i. Better utilization of existing space will lead to synergies in the neighborhood with new and existing businesses benefiting through increase consumer traffic and awareness.
 - e. Cost-Benefit Analysis of the Investment/Expenditure:
 - i. This investment, along with investments made by others in the neighborhood are collectively sending a message to prospective businesses that the district is alive and open for business. With this, and other investments, there is expected to be improvements in the tax base that will pay back into the TIF, and in the future pay into the general fund of the City of Helena through increased tax collections.
 - f. Health and Safety Concerns
 - i. We do not anticipate any negative health or safety concerns. We do expect that this investment will make many businesses and non-profits more accessible to those that the space was previously inaccessible to.
 - g. Historic Preservation
 - i. I have met the Historic Preservation office on site, and they reviewed the proposed changes. This project is not expected to negatively impact the historical character of the building or neighborhood. The primary impact will be increased accessibility.
 - h. Density, Infill, and Adaptive reuse

- i. Density infill, and adaptive reuse are where this project really shines. This project takes space that was vacant and unrentable, and other space that was underutilized due to inaccessibility, and prepares it to be utilized to its potential. The changes will make the space available for many more uses now that it will be accessible. Space that used to sit dark will now have an active business in it.
- i. Cost of Public Services:
 - i. All city utilities currently serve the project area. The additional infill will have no negative impact on city services, and in fact, increased utilization of existing infrastructure will occur. Two dedicated off-street ADA parking spots will also be added to a city block that currently has none. We do not anticipate any parking issues as a result of the project. The project area is blessed with parking resources that exceed current demand.
- j. Housing Component:
 - i. This project does not have a housing component.
- k. Conformance with Requirements for TIF Fund Expenditures, per 7-15- 4288, MCA:
 - i. This project is similar to other TIF projects funded in Helena in recent years.

United States Department of the Interior
National Park Service

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NATIONAL REGISTER OF HISTORIC PLACES REGISTRATION FORM

1. Name of Property

historic name: Helena Railroad Depot Historic District

other name/site number: Sixth Ward Commercial District; Depot District

2. Location

street & number:

not for publication: n/a

Roughly bounded by Railroad/Helena Avenues; Gallatin Street; North Sanders Street; and North Harris Street

city/town: Helena

vicinity: n/a

state: Montana

code: MT

county: Lewis and Clark

code: 049

zip code: 59601

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register Criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

Signature of certifying official/Title

Date

Montana State Historic Preservation Office

State or Federal agency or bureau

In my opinion, the property meets does not meet the National Register criteria.

Signature of commenting or other official

Date

State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is:

Signature of the Keeper

Date of Action

- entered in the National Register see continuation sheet
- determined eligible for the National Register see continuation sheet
- determined not eligible for the National Register see continuation sheet
- removed from the National Register see continuation sheet
- other (explain): _____

[Handwritten Signature]

12/15/04

5. Classification

Ownership of Property: Multiple/Private/Local Government

Number of Resources within Property

Contributing Noncontributing

Category of Property: District

19 4 building(s)

Number of contributing resources previously listed in the National Register: n/a

1 ___ sites

1 ___ structures

2 ___ objects

Name of related multiple property listing: n/a

23 4 TOTAL

6. Function or Use

Historic Functions:

DOMESTIC/hotel, multiple dwelling, single dwelling, secondary structure

COMMERCE/TRADE/business, warehouse, restaurant, specialty store

RELIGION/church school, religious facility

EDUCATION/school

LANDSCAPE/park

TRANSPORTATION/rail-related; road-related (vehicular)

Current Functions:

DOMESTIC/multiple dwelling, single dwelling, secondary structure

COMMERCE/TRADE/ business, warehouse, restaurant, specialty store

EDUCATION/school

LANDSCAPE/park

TRANSPORTATION/rail-related; road-related (vehicular)

7. Description

Architectural Classification:

LATE 19TH AND EARLY 20TH CENTURY REVIVALS

Colonial Revival, Classical Revival

LATE 19TH AND EARLY 20TH CENTURY AMERICAN MOVEMENTS/

Bungalow/Craftsman

OTHER/False-Front Commercial; Western Commercial

Materials:

foundation: STONE, CONCRETE

walls: WOOD, BRICK, STUCCO, ASPHALT, STONE

roof: ASPHALT

other: n/a

Narrative Description

The Helena Railroad Depot Historic District consists of twenty-three buildings, one site (park), one structure (brick street) and three objects (a park bench, granite marker, and a 1902 steam locomotive) constructed between 1884 and 1956. The Northern Pacific Railway Depot, historically called "Union Station", functions as the visual and physical center or hub of the district. Other primary elements include an architect-designed Colonial Revival style church, the Larson Block at 1401-1437 Helena Avenue, and a segment of brick street with embedded trolley tracks. The street was graded by the City of Helena in 1883 in anticipation of the railroad's arrival; the brick paving was laid in 1915.¹ Four commercial buildings in the district retain their original false-front design, the only examples of 1880s false front urban buildings in Helena to retain that unique form. These demonstrate the stagnation of the district and lack of financial resources to remodel and rebuild. Although the false fronts exhibit various degrees of alteration, the form remains wholly intact on each example. They are the footprints of the first 1880s buildings, constructed to serve the Northern Pacific Railroad, and today are relatively unlovely examples of an urban area whose heyday has long passed. The district also includes three residences (a gable front with Craftsman style elements, a side gable vernacular, and a Craftsman Bungalow), a masonry commercial warehouse, and outbuildings that contribute to the historic character of the district. The simple buildings included within the district boundaries and the changes that occurred in them over time during the historic period visually document the rise and decline of railway travel and the working class neighborhood that the district served. Only one minor building garage does not contribute to the historic district.

¹ Helena Daily Herald, June 12, 1888; Montana Record Herald, July 12, 1939.

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Continuation Sheet

Section number 7

Helena Railroad Depot Historic District
Lewis and Clark County, MT

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**The Larson Block, 1401-1437 Helena Avenue (one contributing building)**

The Larson Block is a commercial block bounded on the north by Helena Avenue, the east by North Sanders Street, the south by Gallatin Avenue and the west by North Roberts Street. Originally a series of individually owned and constructed storefronts and businesses, the Larson Block has been considered a single entity since 1948. That year, extensive remodeling resulted in a largely unified appearance. Ownership, function and appearance overlap over three distinct sections of the building. The western one-third of the building is two stories while the remainder is one story. The west end of the block, two stories in height, functions as a single unit at the second story, and houses ten apartments. The walls are all brick and brick veneer. Stucco covers the east, one-story end of the building and the east half of the two-story section. The Larson Block houses approximately thirteen businesses, in the same configuration as displayed on the 1950 Sanborn Map. The building rests on a concrete foundation, has a flat roof sheathed in asphalt and is roughly triangular in shape. The front elevation of the building faces north.

Westernmost section. The westernmost portion of the building is not stuccoed, and retains much of its pre-earthquake character, and original Western Commercial style elements. A row of soldier-coursed brick functions as its cornice. There are three decorative terra cotta garland panels located just below the roofline on the façade (north elevation). A centered, arched pedestrian door provides access to the building from the north elevation. This original opening contains a vintage aluminum-framed, two-light door and decorative fanlight transom. Two diamond-shaped terra cotta panels above and stone blocks on either side of the doorframe at the sidewalk further define the entry. Single, six-over-one

light double hung windows flank the entry, and feature arched fanlight transoms above. To the east, a large original storefront has been infilled with contrasting blond brick and two large plate glass windows. A five light transom is located across the original opening space, and its easternmost light has been filled. To the west of the entry are two, evenly-spaced, six-over-one light double hung windows. Eight windows within original openings span the second story. Four feature arched lintels filled with original decorative brickwork. From east to west the window styles are: a one-light casement, a one-light casement with an arched lintel, a one-over-one double-hung with an arched lintel, three one-over-one light double-hungs, and two one-light casements with arched lintels.

The west elevation of the Larson Block features a ribbon of three modern one-light fixed windows centered within the first story and shaded by a metal awning. North of these windows, brick fills an original entry. South of the windows is a hand painted wood panel sign reading "HANK'S BARBER SHOP." The second story contains two, evenly-spaced one-light casements within original, arched window openings, similar to those on the façade. Between the windows is a large stucco panel bordered with brick. The panel reads "LARSON COMMERCIAL CENTER 1400 HELENA AVENUE" in raised lettering. Additional signage includes a lighted sign, mounted perpendicular to the north side of the wall that reads "HANK'S BARBER SHOP," with a lighted, spinning barber pole beneath.

The south (rear) elevation of the westernmost portion of the Larson Block features four entries, two at both the west and east sides. The two west entries have modern two-light glass doors and transoms above. The easternmost door is paneled wood with four lights. There is no transom space above. The door immediately to the west contains a modern, wood-framed door with a single, full-length light and an infilled transom. A ribbon of three original, wood-frame, one-over-one light double hung windows is centered within the first story. Another single double-hung is located east of center. Across the second story are seven original one-over-one light double hung windows of alternating size.

Central, two-story, stuccoed section. The east side of the two-story portion of the Larson Block functions as a storefront at the first story and apartments above. The apartments are part of a larger apartment complex that includes all of the Larson Block's second story. At the first story, the north elevation is equally divided into three bays by pilasters. The two west bays each contain large display windows within original openings. The east bay contains a centered, recessed glass door entry flanked by plate-glass display windows. Glass block fills the

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Helena Railroad Depot Historic District
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clerestory space above each of these storefronts. A smooth, concrete belt course, painted off-white in contrast to the tan stucco above, separates the two stories. Decorative concrete also caps each of the pilasters. The course and caps continue across the east two-thirds of the Larson Block, and serve as a unifying architectural feature for the building as a whole. The stuccoed second story contains seven evenly spaced windows: alternating one-light casements and one-over-one light double hungs.

The south (rear elevation) of the stuccoed two-story portion of the building features three entries. The two west entries are each flanked by stone-silled window openings. These windows and doors are boarded over. The east entry is glass and flanked by a plate glass display window. A partially in-filled window is located at the east end of the elevation. It has glass blocks on the lower zone, while the upper zone is boarded-over.

One-story, east portion. The east side of the Larson Block is one-story, and displays the same architectural features described above. This portion of the building houses a series of storefronts, each with a central, recessed entry flanked by plate glass display windows, and glass block clerestories. The concrete belt course continues across the elevation above the storefronts. The space above the course is stucco, painted tan. The entries all have modern doors with fixed, full-length fixed windows. The storefronts are delineated on the east by rough-faced stone pilasters that are remnants of the old Grand Pacific Hotel. The canted entry from the old hotel still functions as an entry on the northeast corner of the building. It is recessed, flanked by the stone pilasters and has sidelights, a glass-block transom and a modern door with a fixed, full-length window. The east elevation (facing North Sanders) has seven window openings all with glass blocks and decorative terra cotta lintels. An entry is located slightly right-of-center on the elevation; it has a steel door.

Finally, on the Gallatin Street side of the building (south, rear elevation) that is single story, the walls are comprised of brick, of which much of it is covered in stucco. All of the window openings have glass blocks, while two still have casement window units incorporated into the window openings. There are also three entries in the section. All have steel doors and are sheltered by awnings.

**St. Mary's Church and School, 1421-1425 North Roberts Street (one contributing building)**

St. Mary's Church and School at 1425 North Roberts is a two-and-one-half-story Colonial Revival style building with a combination hip and gable roof sheathed in asphalt shingles, a concrete over granite foundation, and a stone water table. The brick veneer is clad in stucco, and the building faces west. The eaves are cornice around the entire building. The central portion of the building extends forward, forming a simple tripartite façade.

On the façade (west elevation) there is a pedimented gable with a porthole attic vent. The second floor has three sets of fixed, one-over-one double-hung windows with transoms. Some of the transoms have been boarded over. The primary entry is centered on the façade and reached by concrete steps and a stoop flanked by an iron railing. The entry has sidelights and transom sidelights that have been partially in-filled. The wood door has a single-light fixed and rounded window. A gable roofed hood with exposed brackets and rafters shelters the entryway. The entry is flanked by two paired one-over-one double-hung windows facing west. The façade of the main building has a one-over-one double-hung window on each side. To each side of the extended front section there are two one-over-one double-hung windows, one on the first floor and one on the second.

The north elevation has a hip-roofed dormer with soffits and decorative cornice. The dormer walls are wood shingled, and there is a centered pair of one-over-one double-hung windows. There are two groups of windows on both the second and first floors. The windows are one-over-one double-hung with transoms, and each group consists of a single window flanked by a pair. The five-window grouping thus occurs on both stories and gives a total of twenty windows on the combined floors. Some of the windows and transoms have been in-filled, but the configuration of the windows is still apparent.

The south elevation exhibits the same window pattern as the north façade and has an identical dormer. There is an entry central to the façade accessed by a wheelchair ramp. A shed-roofed vestibule of stuccoed wood frame with exposed rafters opens toward the east. There is a coal chute to the right of the entry, under the ramp. Some of the windows and transoms have been in-filled, but the configuration of the windows is still apparent.

HELENA AVENUE RENTAL REMODEL

JOHN IVERSON
1429 HELENA AVENUE
HELENA, MT 59602

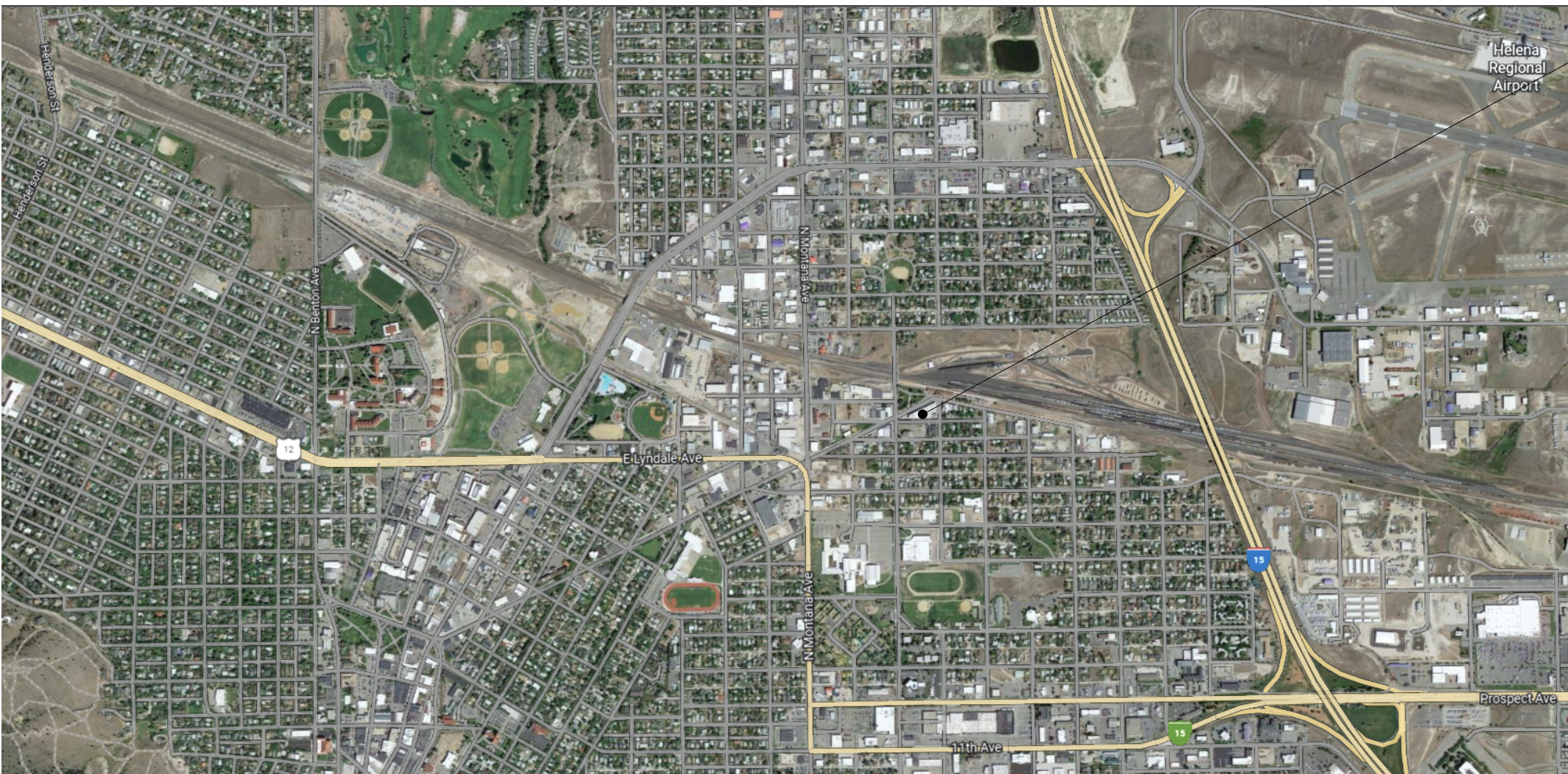
TEAM MEMBERS

OWNER: JOHN IVERSON
1423 HELENA AVENUE
HELENA, MT
TEL: 406.459.3344

ARCHITECT: SLATE ARCHITECTURE
1470 N. ROBERTS ST.
HELENA, MT 59601
TEL: 406.457.0360
CONTACT: SCOTT CROMWELL

M.E.P.: IMEG CORP
1003 11TH AVENUE
SUITE A
HELENA, MONTANA 59601
TEL: 406.545.5429
CONTACT: JULIE HEITMAN, ELEC.
- ANDREW BYL, MECH.

VICINITY MAP



SITE



PROJECT SPECIFIC NOTES

- THE DOCUMENTS CONSIST OF THESE DRAWINGS AND SPECIFICATIONS MANUAL EXCLUSIVELY.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NEW MATERIALS (U.N.O.) AND QUALIFIED CRAFTS PERSONS TO COMPLETE THE WORK.
- DOCUMENTS SHOW THE DESIGN INTENT OF THE PROJECT AND MAY NOT SHOW MINOR DETAILS OF PROPOSED INSTALLATIONS. THE INCLUSION OF THESE MINOR DETAILS IS IMPLIED TO PROVIDE A COMPLETE PROJECT AND ARE TO BE INCLUDED AS PART OF THE BID.
- IT IS THE GENERAL CONTRACTORS RESPONSIBILITY TO INSPECT THE SITE AND EXISTING CONDITIONS PRIOR TO PROCEEDING WITH EACH INSTALLATION OF PART OF THE WORK. DISCREPANCIES MUST BE REPORTED TO THE ARCHITECT PRIOR TO PROCEEDING.
- THE GENERAL CONTRACTOR IS TO COORDINATE THE INSTALLATION OF MATERIALS AND WORK OF OTHERS WHO ARE NOT SUB-CONTRACTORS TO THE G.C. YET ARE REQUIRED TO PROVIDE A COMPLETE PROJECT. AREAS OF WORK REQUIRING COORDINATION INCLUDE BUT ARE NOT LIMITED TO THOSE INDICATED AS N.I.C. IN THE CONSTRUCTION DOCUMENTS.
- DIMENSIONS ARE SHOWN ON THE DRAWINGS. DO NOT SCALE THE DRAWINGS.
- ALL DIMENSIONS ARE DETERMINED AS FOLLOWS: EXISTING CONSTRUCTION: FACE OF EXISTING WALL, MATERIAL, NEW CONSTRUCTION: FACE OF STUD.
- ALL HEIGHTS ARE DIMENSIONAL FROM THE TOP OF FINISHED FLOOR (A.F.F.) UNLESS NOTED OTHERWISE.
- ALL SHOP DRAWINGS DIMENSIONS TO BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR.
- IN THE CASE OF CONTRADICTIONS, ASSUME THE MORE COSTLY APPROACH FOR BIDDING PURPOSES. BRING ALL CONTRADICTIONS TO THE ATTENTION OF THE ARCHITECT.
- WHERE CONDITION OF FINISH ARISES THAT NO DETAIL OR NOTE COVERS, MATCH DETAIL TO EXISTING SITUATION OF SIMILAR CONDITION
- GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REPAIR AND REFINISHING OF ALL HOLES OR DAMAGE ENCOUNTERED IN WORK AS A RESULT OF NECESSARY CUTTING, PATCHING, OR DEMOLITION BY ALL TRADES PERFORMING WORK.
- GENERAL CONTRACTOR TO PROVIDE ALL REQUIRED BLOCKING, ANCHORAGES FOR ACCESSORIES, MILLWORK, GRAB BARS, MECHANICAL AND ELECTRICAL ITEMS.
- WHERE COLUMNS AND STUD WALLS ALIGN, GYPSUM BOARD TO BE CONTINUOUS OVER COLUMNS.
- SEAL ALL PENETRATIONS IN FLOORS, WALLS AND ROOF TIGHT AROUND DUCTS, PIPES, VENTS, SOIL-PIPES, TRAPS, ETC. CONTRACTOR TO COORDINATE.
- ALL MECHANICAL AND ELECTRICAL LINES TO BE INSTALLED TIGHT TO STRUCTURE WHERE POSSIBLE IN ALL INSTANCES.
- IN PAINTED OR FINISHED ROOMS, ALL HORIZONTAL AND VERTICAL PIPING AND CONDUITS SHALL BE FURRED TO MATCH ROOM FINISH AS INDICATED. WHEN DUCT WORK, PIPES, MECHANICAL UNITS, JUNCTION BOXES AND CONDUIT ARE EXPOSED IN PAINTED ROOMS, PAINT TO MATCH ADJACENT FINISH.

GRAPHIC SYMBOLS
1/4" = 1'-0"

- Lou Antonick
FIRE
Larson Building LLC
1429 Helena Ave.
Helena, Montana 59601
TEL: 406.545.5429
CONTACT: JULIE HEITMAN, ELEC.
- ANDREW BYL, MECH.
- FIRE: All work is subject to field verification and additional items may need to be added, corrected, moved or deleted. Please call the Building Division for all inspections and system testing.
 - FIRE: Every area containing fire protection, fire detection, utilities, or other equipment used during emergency operations shall be clearly identified. Signage shall be of a durable material, permanently installed, and have a red background with white 1 1/2 lettering.
 - FIRE: Fire extinguishers placed per 2012 International Fire Code (IFC) section 906 and National Fire Protection Association (NFPA) 10 (2010).
 - FIRE: Applicable sections of 2012 International Fire Code (IFC), Chapter 33 "Fire Safety during Construction and Demolition"
 - FIRE: The site must remain accessible to all emergency services during construction. Please post after hours contact numbers in an area accessible for emergency responders to make contact.
 - FIRE: For any welding or hot work ensure all applicable sections of 2012 IFC, Chapter 35 "Welding and other Hot work" is in place.
 - FIRE: The address posted per 2012 IFC, section 505. The numbers must contrast with the background and must be clearly visible from the street.
 - FIRE: For Fire Department Access and fire protection water supply this project must meet all requirements in the 2012 International Fire Code (IFC), Chapter 5, and any adopted and/or associated appendices.
 - FIRE: The fire alarm system must be third party reviewed. A licensed contractor must install the system and it must meet all applicable codes and standards including, but not limited to NFPA 72 (2010) and 2012 IFC Chapter 9. If less than 20 total device changes, the plans can be reviewed locally through submittal to the Building Division.
 - FIRE: For the FAAP AND FACP locations, please contact the Fire Marshal. There may need to be more than one FAAP installed for this building.
 - FIRE: As-built for the fire alarm system must be in a documentation box at the fire alarm control panel and fire sprinkler riser room.
 - FIRE: Vehicle impact protection per 2012 IFC, section 312 if required.
 - FIRE: A Knox box installed on the front address side of the building and the back of the building no higher than 5 feet off the ground.
 - FIRE: Means of egress must not be affected during this project and must be available. Occupants must evacuate during any emergency. The fire alarm and fire sprinkler system must be fully operational at the end of each day, or fire watch must be in place.
 - FIRE: Development of a plan for "fire watch" emergency notification and emergency evacuation when work is being conducted.
 - FIRE: Any security and/or access control must be installed using applicable code requirements from 2021 IBC, Chapter 10.
 - FIRE: Any storage must meet 2012 IFC section 315. Combustibles can't be stored in the common lobby.

Think Asbestos!
Before you renovate or demolish
INSPECT for Asbestos using a Montana accredited inspector
NOTIFY Montana's Department of Environmental Quality
PERMIT Asbestos activities with DEQ
406-444-5300
<https://deq.mt.gov/programs/air/programs/asbestos>

It's the Law!
DEQ

NOTE: Plans and specs shall not be changed, modified or altered without authorization from The City of Building Division.

This permit shall be null and void if work or construction authorized is not commenced within 180 days, or if construction or work is suspended or abandoned for a period of 180 days at any time after work has commenced.

The holder of this permit will be required to comply with all applicable provisions of the building code and city ordinances in effect even if the necessity for compliance is discovered after issuance of the permit.

INDEX OF DRAWINGS

GENERAL		MECHANICAL	
G001	COVER SHEET	M0.0	MECHANICAL & PLUMBING COVER SHEET
G002	ADA STANDARDS	M1.1	BASEMENT & FIRST FLOOR DEMO PLANS - MECHANICAL
G100	CODE REVIEW & EGRESS PLAN	M2.1	FIRST FLOOR PLAN - MECHANICAL
		M2.2	BASEMENT & FIRST FLOOR PLANS - PLUMBING
		M3.1	MECHANICAL DETAILS
		M4.1	MECHANICAL SCHEDULES
		M5.1	MECHANICAL SPECIFICATIONS
		M5.2	MECHANICAL SPECIFICATIONS
ARCHITECTURAL			
A2.1	PARTIAL SITE PLAN - ADA PARKING		
A3.3	FLOOR & DEMO PLAN - CORR. & RESTROOMS		
A4.1	BUILDING SECTIONS, DOOR SCHEDULE & ELEVATIONS		
ELECTRICAL		ELECTRICAL	
		E0.0	ELECTRICAL COVER SHEET
		E1.0	FLOOR PLAN - ELECTRICAL
		E1.1	BASEMENT & FIRST FLOOR DEMO PLANS - ELECTRICAL
		E2.1	BASEMENT & FIRST FLOOR PLANS - ELECTRICAL
		E3.1	ELECTRICAL ONE-LINE DIAGRAMS
		E4.1	ELECTRICAL SCHEDULES
		E4.2	ELECTRICAL SCHEDULES
		E5.1	ELECTRICAL SPECIFICATIONS
		E5.2	ELECTRICAL SPECIFICATIONS

ABBREVIATIONS

A	A.F.F. ABOVE FINISHED FLOOR OAHU ALT. AIR HANDLING UNIT ALUM. ALUMINUM AMP. AMPERE APPROX. APPROXIMATE APT. APARTMENT ARCH. ARCHITECT	B	B.O. BELOW FINISH BD. BOARD BLOG. BUILDING BM. BEAM BOT. BOTTOM BRG. BEARING BSMT. BASEMENT BTUH. BRITISH THERMAL UNIT PER HOUR	C	C.O. CLEAN OUT CAP. CAPACITY CFPI. CONTRACTOR FURNISHED, CONTRACTOR INSTALLED CFOI. CONTRACTOR FURNISHED, OWNER INSTALLED CGI. CORNER GUARD CGL. CENTERLINE CLG. CEILING CLO. CLOSET CLR. CLEAR CMU. CONCRETE MASONRY UNIT COL. COLUMN CONC. CONCRETE CONST. CONSTRUCTION CORR. CORRIDOR CPT. CARPET CT. CERAMIC TILE CW. COLD WATER	D	D.S. DOWNSPOUT DBL. DOUBLE DEPT. DEPARTMENT DF. DRINKING FOUNTAIN DIA.D. DIAMETER DMG. DIAGONAL DIM. DIMENSION DISP. DISPENSER DIST. DISTANCE DN. DOWN DNL. DETAIL DWT. DISHWASHER	E	EA. EAST E.I.F.S. EXTERIOR INSULATION FINISH SYSTEM E.J. EXPANSION JOINT ELEC. ELECTRICAL ELEV. ELEVATION EMERG. EMERGENCY EPDM. ETHYLENE PROPYLENE DIENE MONOMER EPS. EXTRUDED POLYSTYRENE EQ. EQUIP. EXIST. EXISTING EXT. EXTERIOR	F	F.C.O. FLOOR CLEAN OUT FD. FLOOR DRAIN FE. FIRE EXTINGUISHER F.F.E. FIRE EXTINGUISHER CABINET F.F.F. FINISH FLOOR FIN. FINISH FLR. FLOOR FLUOR. FLUORESCENT FT. FOOT FTG. FOOTING FURN. FURNACE, FURNITURE	G	GALV. GALVANIZED G.C. GENERAL CONTRACTOR G.D. GROUND CLEAN OUT G.D. GARBAGE DISPOSAL GFI. GROUND FAULT INTERRUPTER GLU-LAM. GLUE LAMINATED GND. GROUND GPM. GALLONS PER MINUTE G.D. GYPSUM WALL BOARD G.J. GUTTER EXPANSION JOINT	H	HDWR. HARDWARE HM. HOLLOW METAL HORZ. HORIZONTAL HR. HOUR HT. HEIGHT HVAC. HEATING, VENTILATING, & AIR CONDITIONING HW. HOT WATER	I	INFO. INCHES INST. INFORMATION INSUL. INSULATION INT. INTERIOR	J	JAN. JANITOR JST. JOINT JT. JOINT	K	K.O. KNOCK OUT KIP. 1000 POUNDS KIT. KITCHEN	L	LAB. LABORATORY LAM. LAMINATED LBS. POUNDS LHS. LEFT HAND	M	MACH. MACHINE MAINT. MAINTENANCE MATL. MATERIAL MAX. MAXIMUM MECH. MECHANICAL MEZZ. MEZZANINE MFR. MANUFACTURER MIN. MINIMUM MIR. MIRROR MISC. MISCELLANEOUS MTL. METAL	N	N.I.C. NORTH N.T.S. NOT TO SCALE NO.# NUMBER	O	O.C. ON CENTER OFDI. OWNER FURNISHED, OWNER INSTALLED OFCI. OWNER FURNISHED, CONTRACTOR INSTALLED OFF. OFFICE OPNG. OPENING OSB. ORIENTED STRAND BOARD OZ. OUNCE	P	PSI. POUNDS PER SQUARE FOOT PT. PAINT PTD. PAPER TOWEL DISPENSER	Q	QT. QUARRY TILE	R	R. RADIUS R.C.P. REFLECTED CEILING PLAN	R.O.	R.O. ROUGH OPENING R.O.W. RIGHT OF WAY RD. ROOF DRAIN WH. WATER HEATER REBAR REINFORCING BAR RECEPT RECEPTION	REFL.	REFLECTED REVISION REF. REFRIGERATOR RH. RIGHT HAND RM. ROOM RR. RESTROOM	S	S. SEALED S. SOUTH S. SANITARY SC. SOLIDCORE SCHED. SCHEDULE SD. SOAP DISPENSER SEC. SECOND SECT. SECTION SHT. SHEET SHTG. SHEETING SPEC. SPECIFICATION SQ. SQUARE SS. STAINLESS STEEL STC. SOUND TRANSMISSION LEVEL STL. STEEL STRUCT. STRUCTURAL SURF. SURFACE SUSP. SUSPENDED SVF. SHEET VINYL FLOORING	T	T&B. TOP & BOTTOM T&G. TONGUE & GROOVE T.G. TEMPERED GLAZING TEL. TELEPHONE TEMP. TEMPORARY TERR. TERRAZZO T.F.E. TOP OF FOOTING ELEVATION T.O. TOP OF FOOTING TPD. TOILET PAPER PLAM. PLASTIC LAMINATE PLAS. PLASTIC PLY. PLYWOOD PR. PAIR PSF. PREFABRICATED POUNDS PER SQUARE FOOT UNFIN. UNFINISHED UNO. UNLESS NOTED OTHERWISE	U	U.L. UNDERWRITER'S LABORATORY UNFIN. UNFINISHED UNO. UNLESS NOTED OTHERWISE	V	UTIL. UTILITY VAR. VARIES VB. VINYLBASE VCT. VINYL COMPOSITION TILE VERT. VERTICAL VEST. VESTIBULE	W	W. WEST WI. WITH W/O. WITH OUT WC. WATER CLOSET WD. WOOD WH. WATER HEATER WT. WEIGHT WP. WALL PROTECTION W.W.F. WELDED WIRE FABRIC
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ABBREVIATIONS.

1/4" = 1'-0"

RECEIVED
02/22/2023
BUILDING DIVISION
CITY OF HELENA



1470 N. ROBERTS STREET
HELENA, MT 59601
TEL | 406.457.0360
www.slatearchitecture.com



100%
CONSTRUCTION
DOCUMENTS

REVISIONS		
1	01/30/2023	City Review
3	02/21/2023	City Review

IVERSON BLOCK, HELENA AVE. RENTAL
JOHN IVERSON
1429 HELENA AVE.
HELENA, MT 59601

Project No. | 2022015
Issue Date | 12/02/2022

COVER SHEET

PERMIT COPY
THIS SET OF APPROVED
PLANS TO BE ON JOB SITE
AT ALL TIMES

Sheet No.

G001

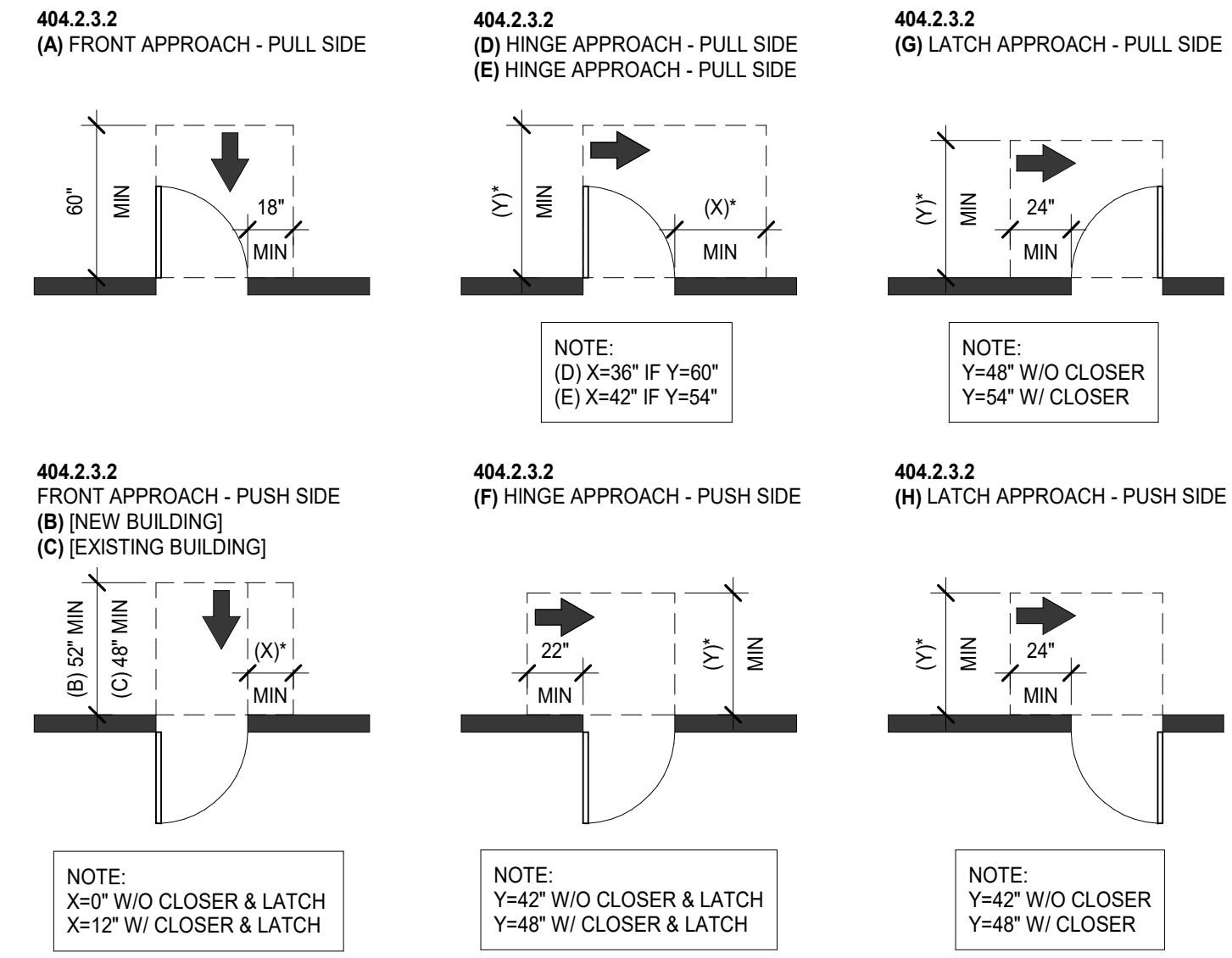
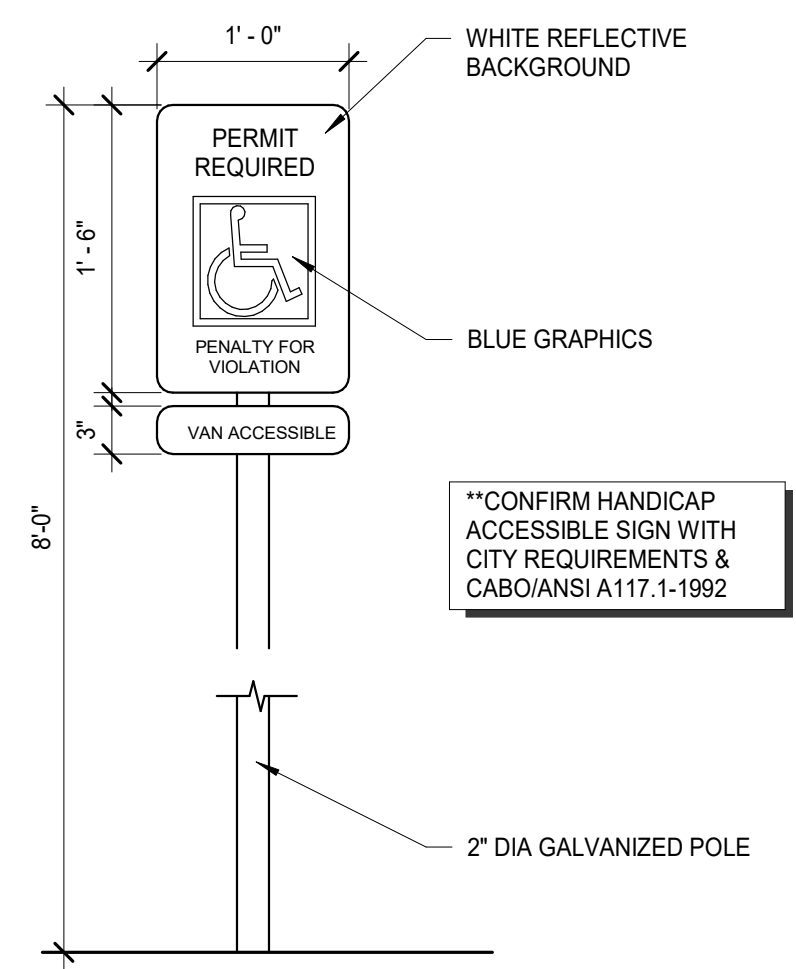
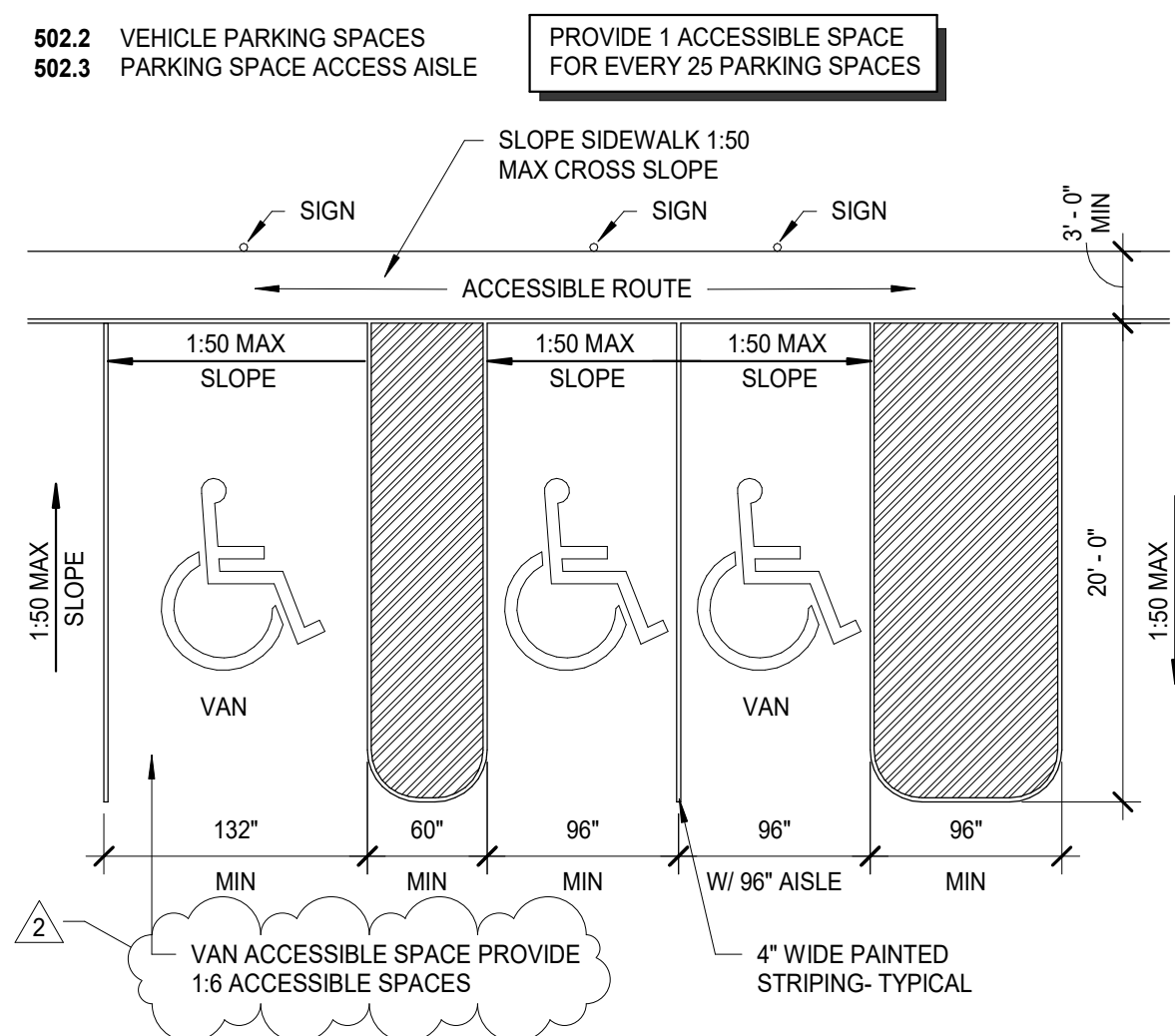
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APPROVED
City of Helena Building Division

Approval of this document does not authorize the violation of any state, county, or city law or regulation.
Permit Number: BCOM22-00131
By: CRN
Date: 2/24/23
Remarks: Subject to field inspection

IT IS UNLAWFUL TO OCCUPY THIS BUILDING PRIOR TO THE FINAL INSPECTION



ANSI
ICC/ANSI 117.1-2017

ADA 2010

ADA INFORMATION SHOWN IS IN ACCORDANCE WITH STANDARD ADA MINIMUM REQUIREMENTS. IF MATERIALS/PRODUCTS SPECIFIED OR JOB CONDITIONS DO NOT MEET THESE REQUIREMENTS, NOTIFY THE ARCHITECT. LAST REVISED: 10/2022.

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CITY OF HELENA

PRELIMINARY
NOT FOR
CONSTRUCTION

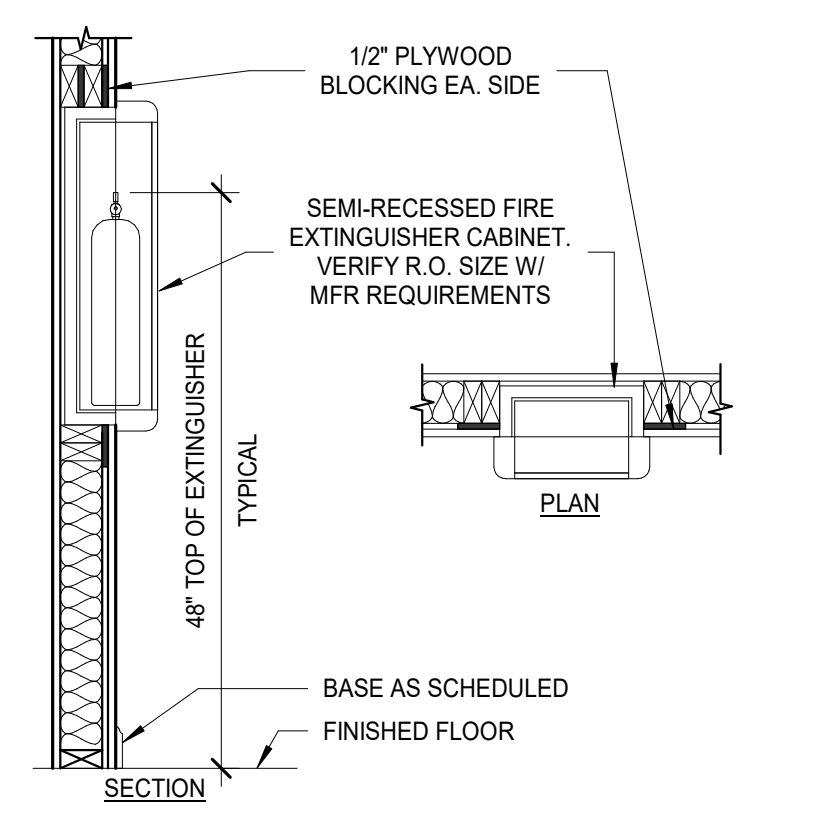
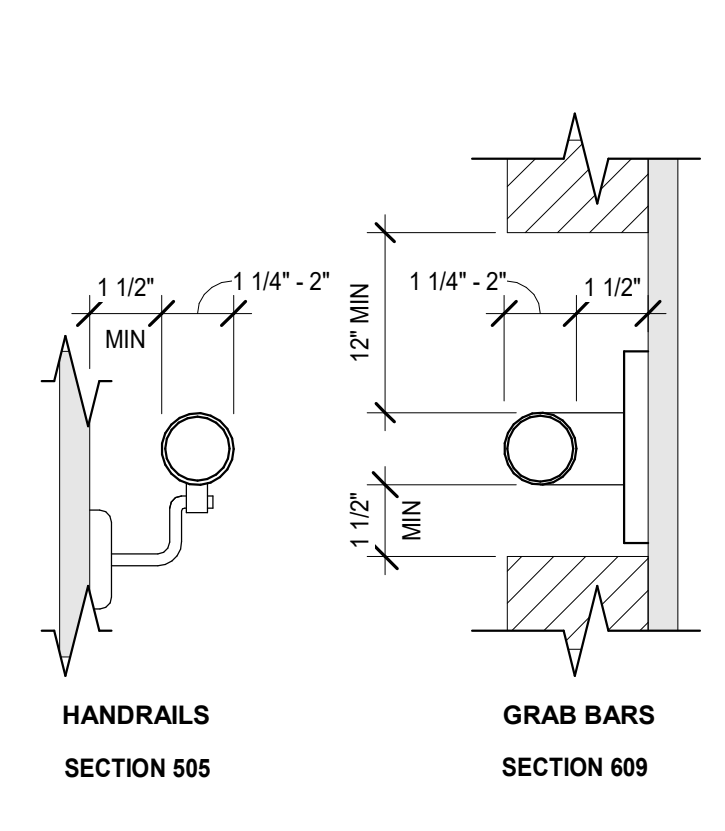
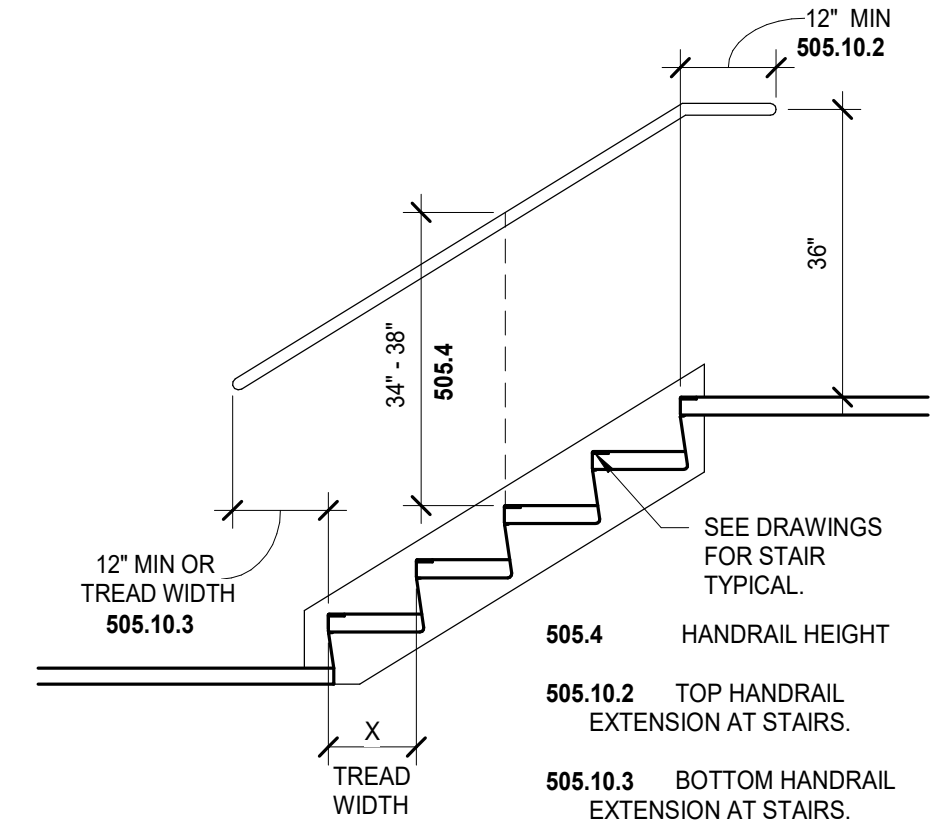
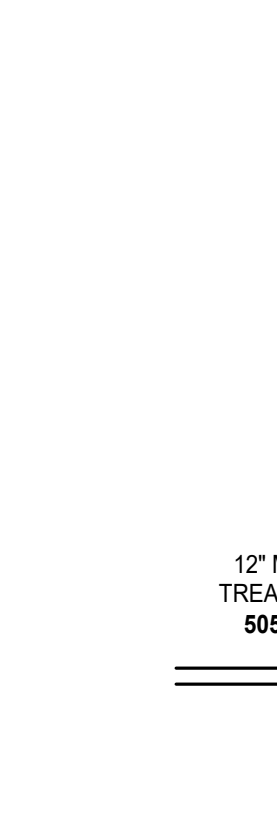
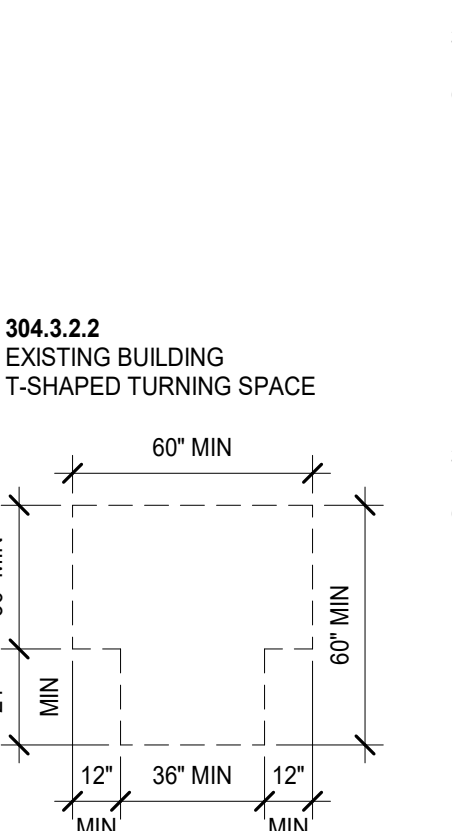
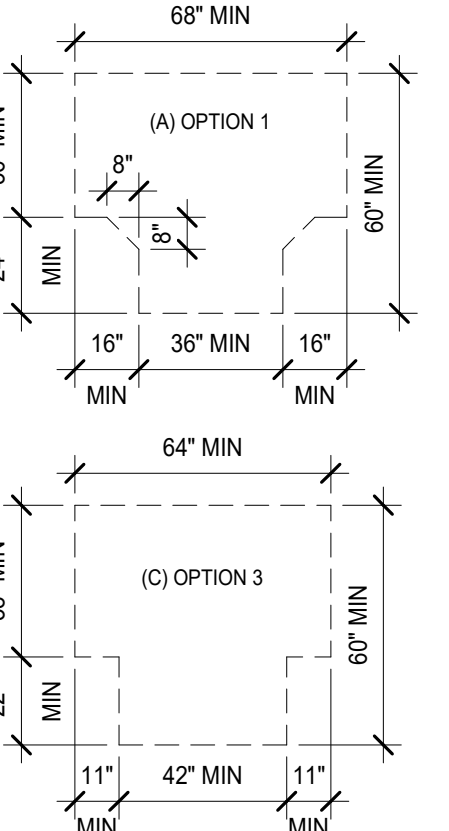
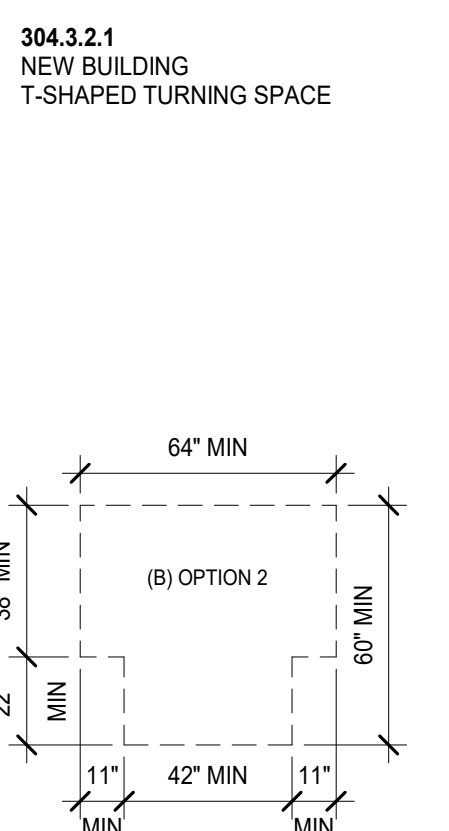
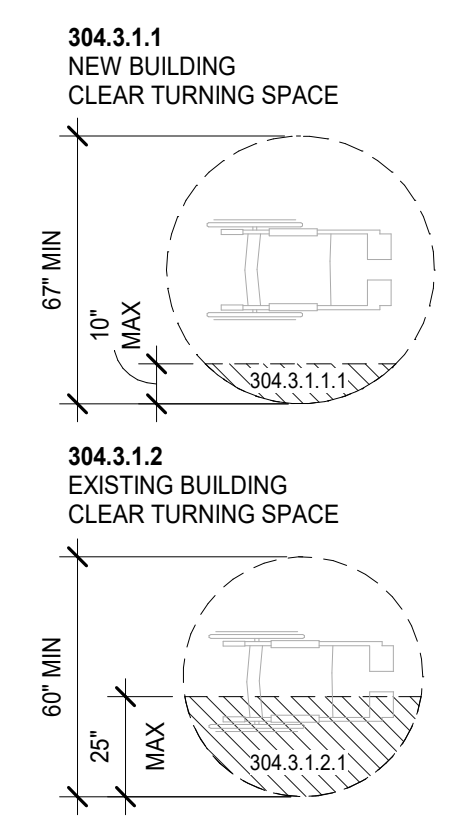
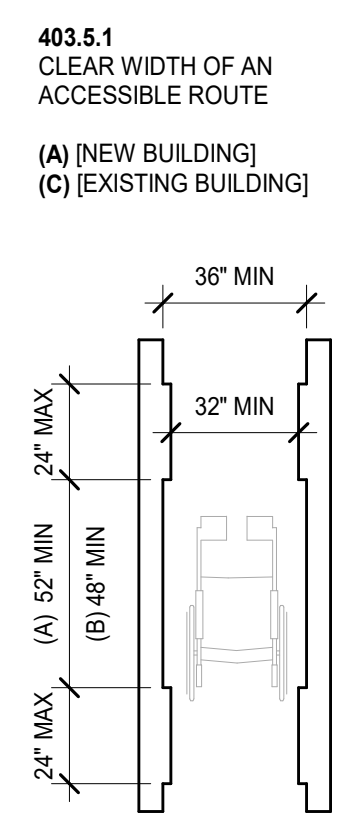
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CONSTRUCTION
DOCUMENTS

REVISIONS		
2	02/10/2023	City Review Comments

1 HANDICAP PARKING
FOR REFERENCE ONLY

2 ACCESSIBLE PARKING SIGN
FOR REFERENCE ONLY

3 ADA MANEUVERING CLEARANCES
FOR REFERENCE ONLY

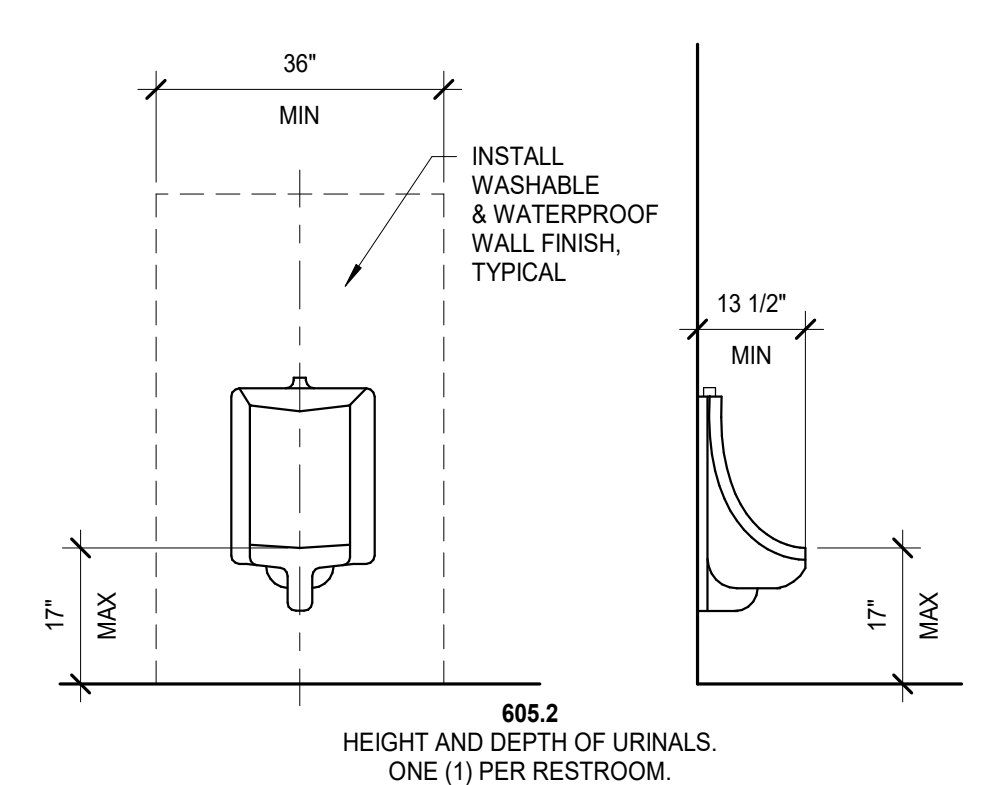
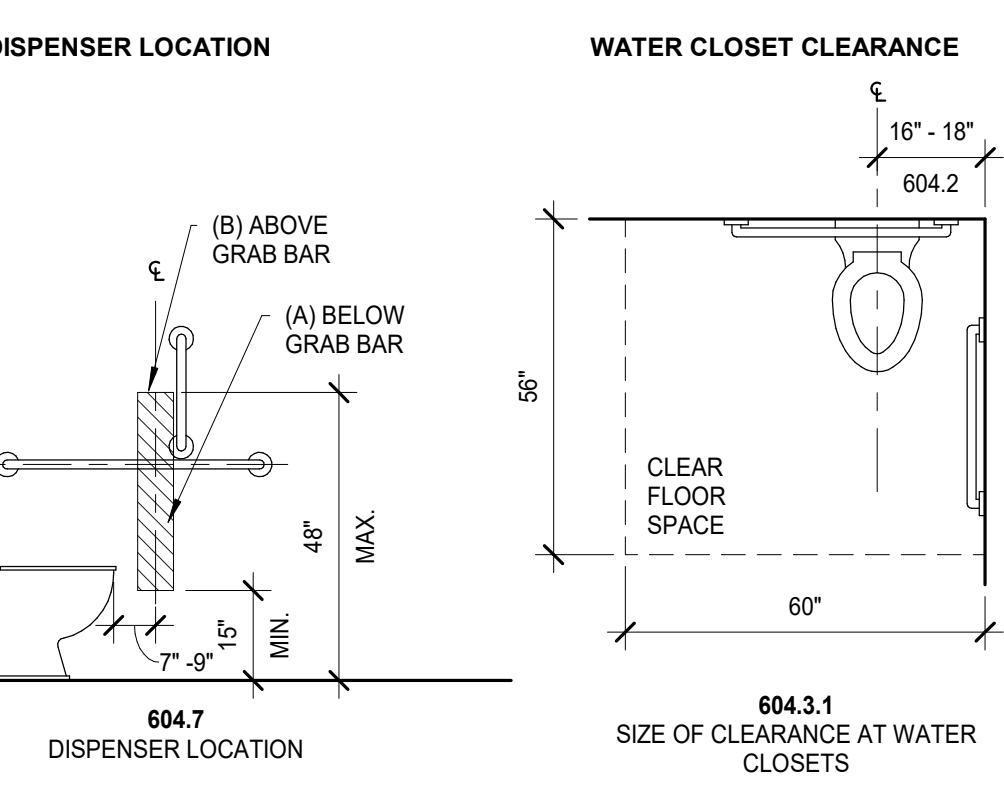
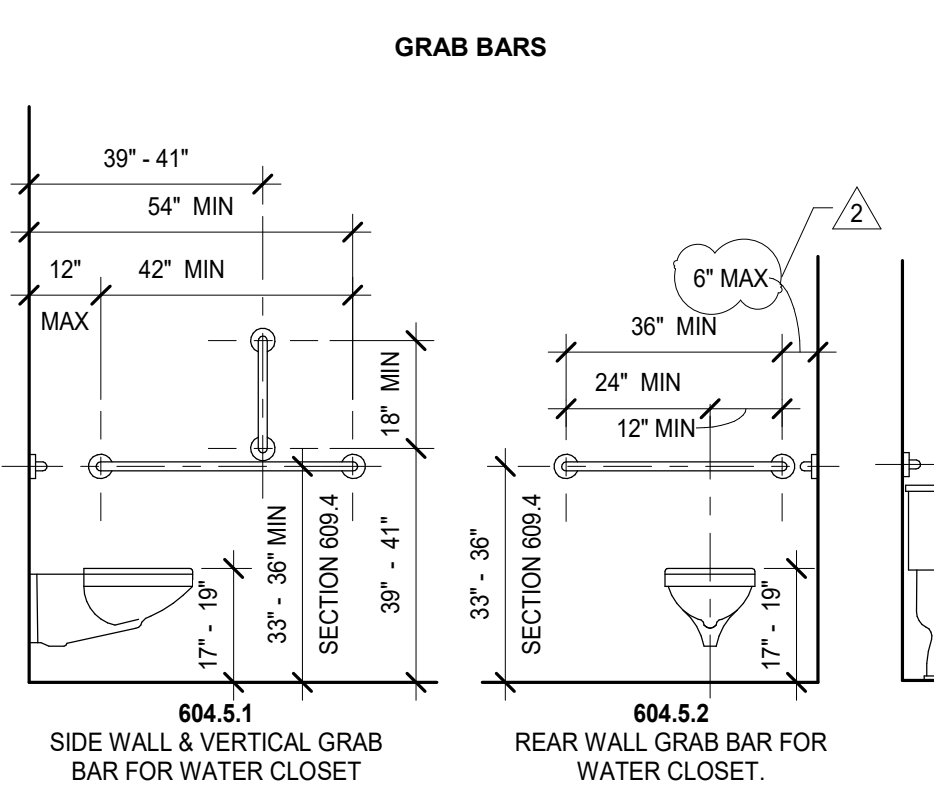
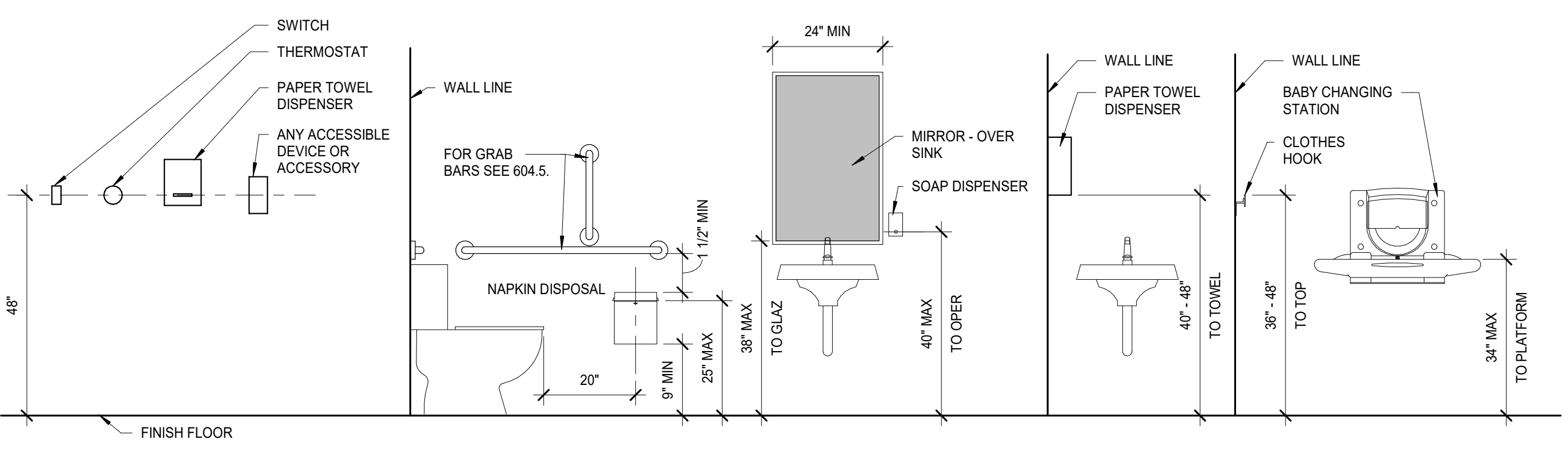


4 ADA FLOOR SPACE CLEARANCE
FOR REFERENCE ONLY

5 ADA HANDRAIL EXTENSIONS
FOR REFERENCE ONLY

6 ADA HANDRAILS & GRAB BARS
FOR REFERENCE ONLY

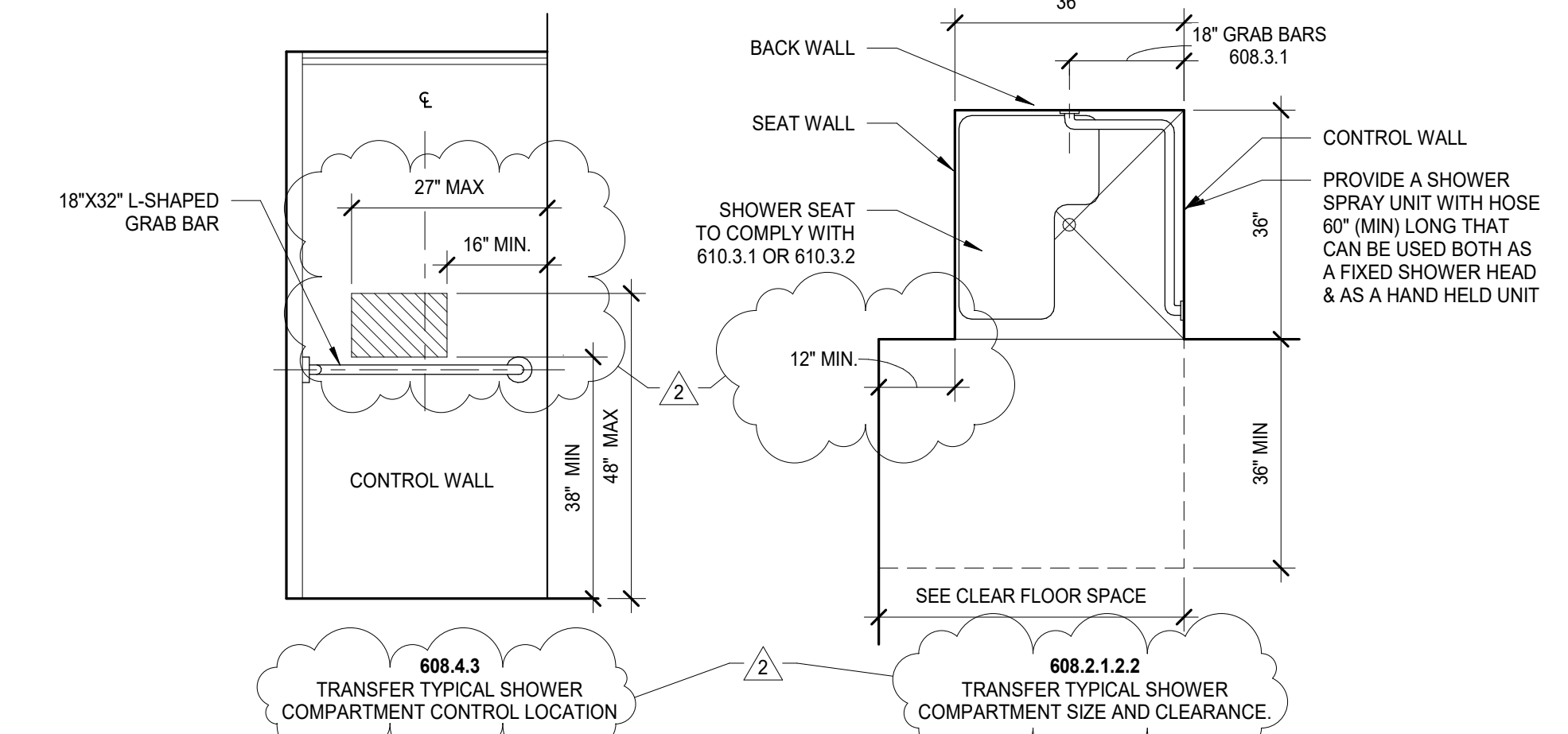
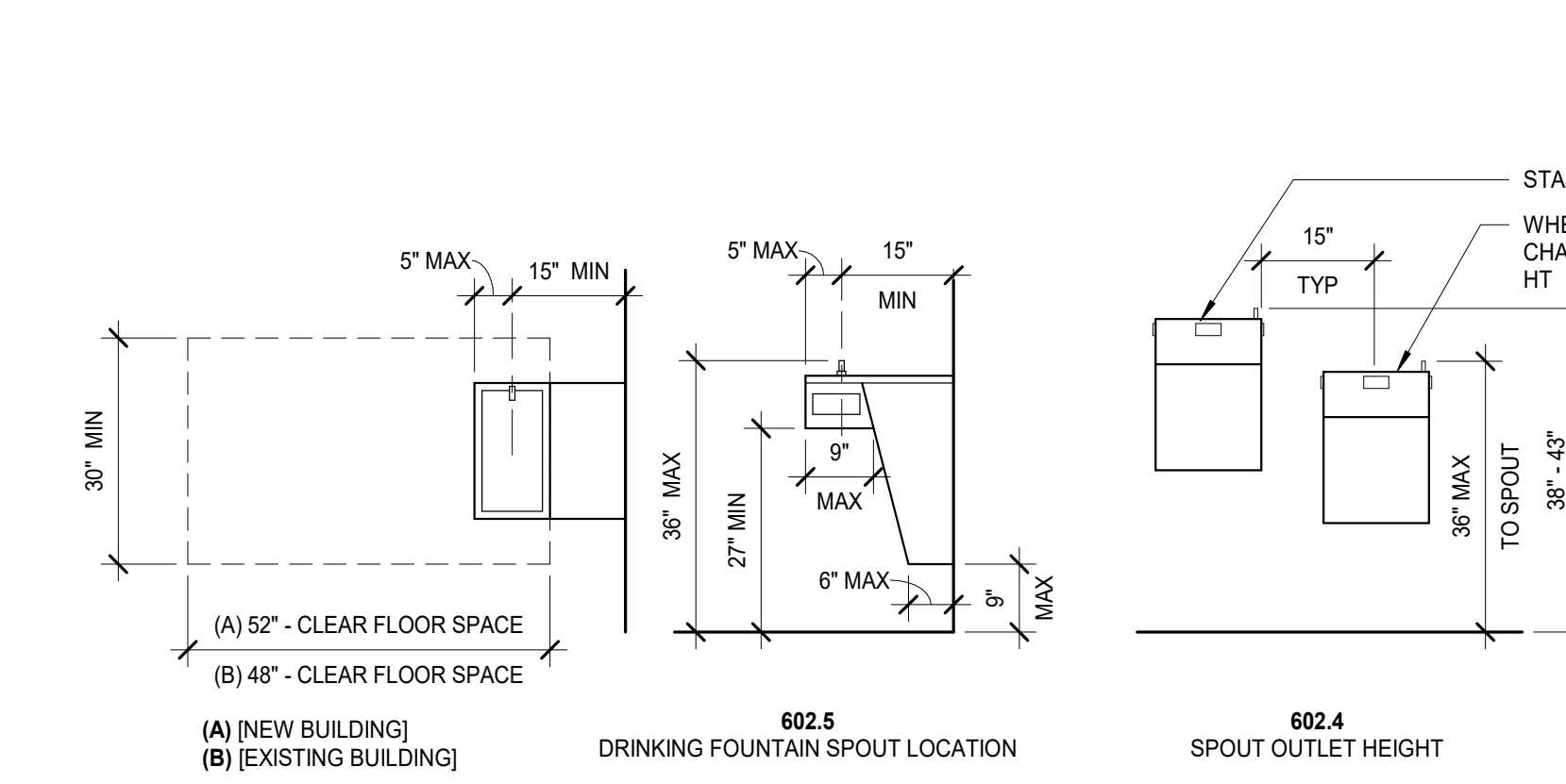
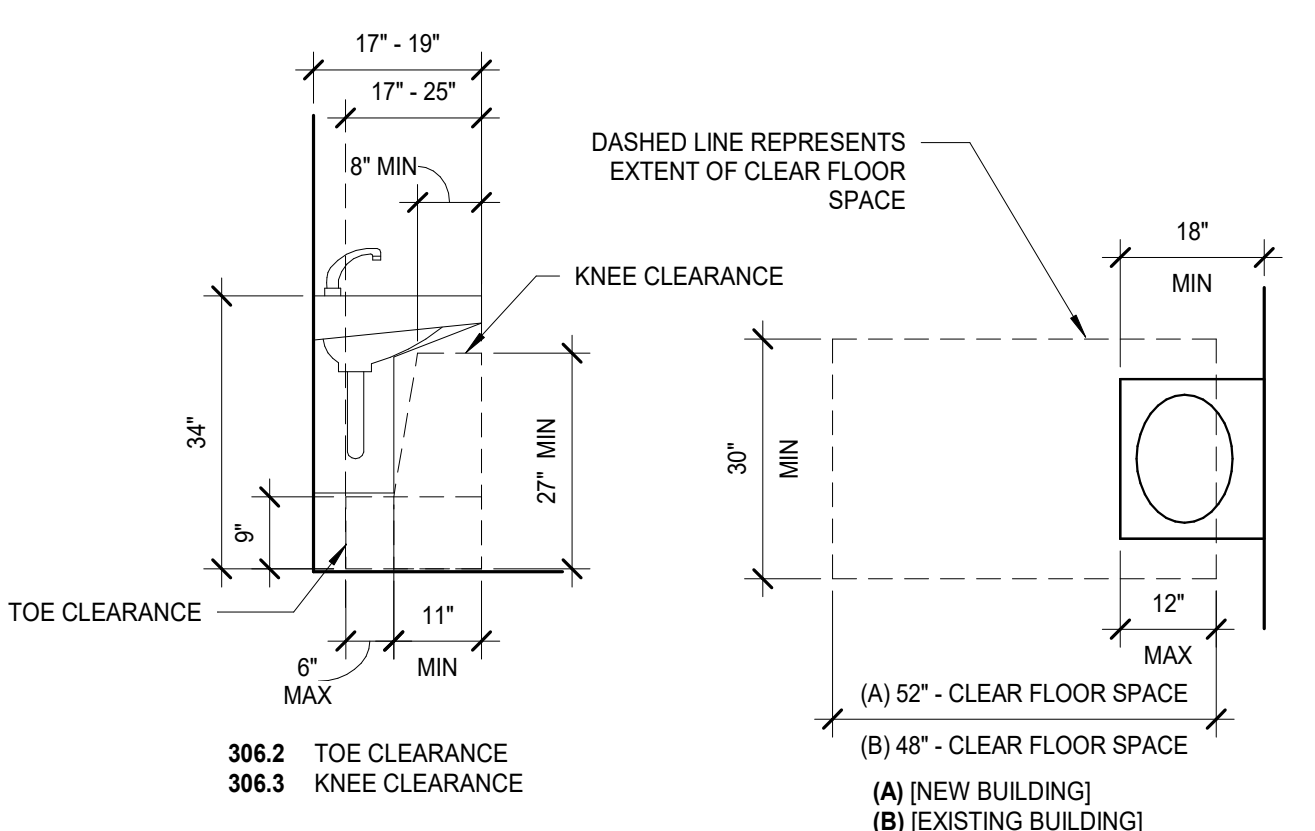
7 FIRE EXTINGUISHER CABINET
FOR REFERENCE ONLY



8 ADA ACCESSIBLE DEVICES & ACCESSORIES HEIGHT
FOR REFERENCE ONLY

9 ADA ACCESSIBLE TOILET
FOR REFERENCE ONLY

10 ADA URINAL HEIGHT AND DEPTH
FOR REFERENCE ONLY



11 ADA SINK CLEARANCE
FOR REFERENCE ONLY

12 ADA WATER FOUNTAIN
FOR REFERENCE ONLY

13 ADA SHOWER CLEARANCES
FOR REFERENCE ONLY

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IVERSON BLOCK, HELENA AVE. RENTAL

JOHN IVERSON
1429 HELENA AVE.
HELENA, MT 59601

Project No. | 2022015
Issue Date | 12/02/2022

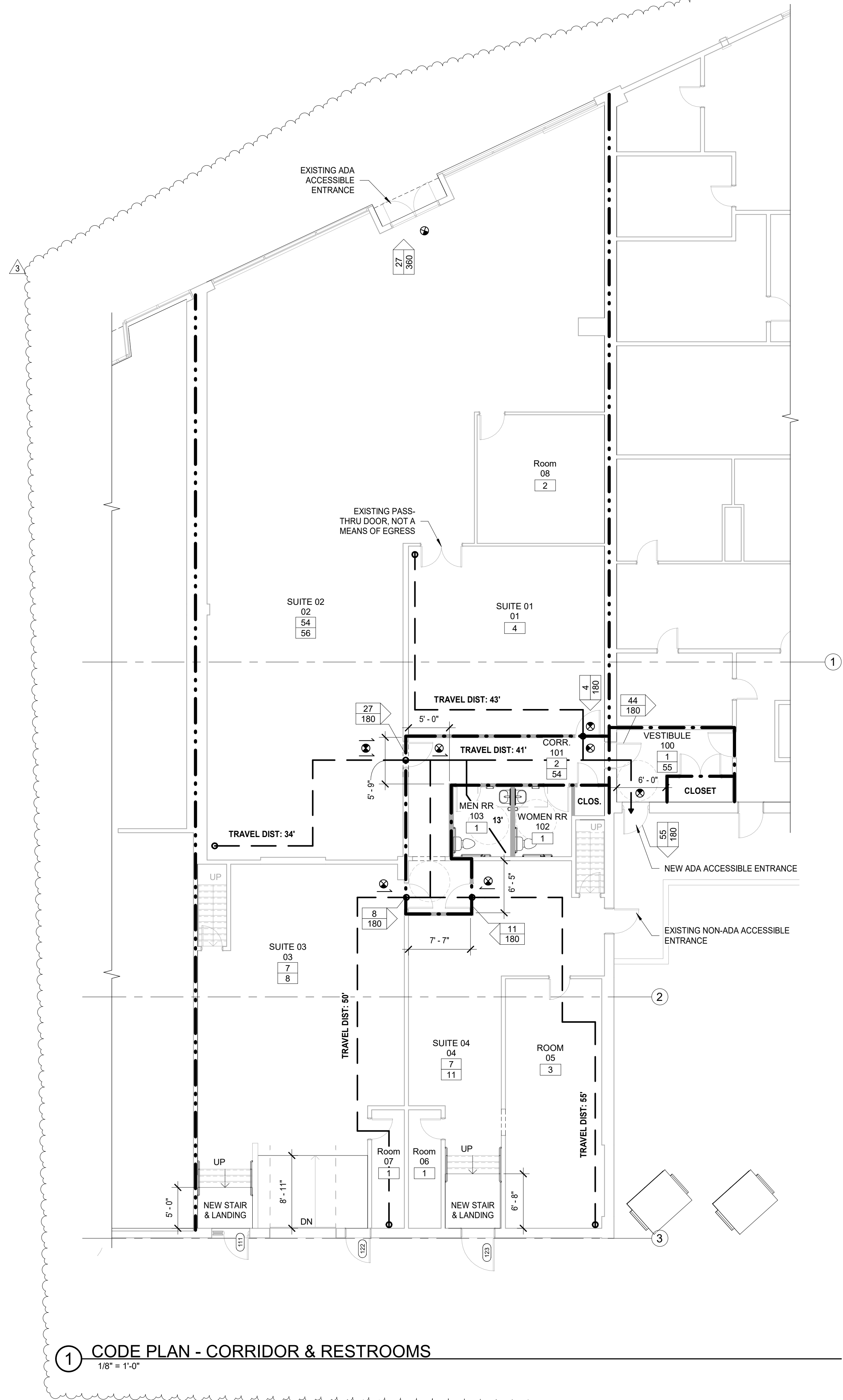
ADA STANDARDS

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1 CODE PLAN - CORRIDOR & RESTROOMS
1/8" = 1'-0"

CODE ANALYSIS

CODES:

- BUILDING: 2021 INTERNATIONAL BUILDING CODE (IBC)
- EXISTING: 2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
- MECHANICAL: 2021 INTERNATIONAL MECHANICAL CODE (IMC)
- PLUMBING: 2021 UNIFORM PLUMBING CODE (UPC)
- ELECTRICAL: 2020 NATIONAL ELECTRICAL CODE (NEC)
- FIRE: 2021 INTERNATIONAL FIRE CODE
- ENERGY: 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
- ACCESSIBILITY: 2017 ANSI 117.1

BUILDING AREA:

- TOTAL BUILDING AREA: 6,570 S.F.
- TENANT FINISH AREA: 520 S.F.

OCCUPANCY TYPE: IBC SECT. 302.1
"A3" ASSEMBLY OCCUPANCY (RECREATION) ← Exercise Room
"B" BUSINESS OCCUPANCY

CONSTRUCTION TYPE: IBC TABLE 601 TYPE V-B

PERMITTED: A3 = 7,500 SF
6,000 SF TABLE + (AREA INCREASE TOTAL PERIMETER 470' OPEN LENGTH 160 OPEN) 25% INCREASE
ACTUAL AREA: 6,570 SF

OCCUPANCY SEPARATION: IBC TABLE 509.1
NON-SEPARATED

LOCATION ON PROPERTY: N/A

FIRE RESISTANCE RATING: IBC TABLE 601
PERMITTED: NONE REQUIRED
↓
STRUCTURAL FRAME
EXTERIOR BEARING WALLS
EXTERIOR NONBEARING WALLS
INTERIOR NONBEARING WALLS
INTERIOR NONBEARING WALLS
FLOOR CONSTRUCTION
ROOF CONSTRUCTION

EXTERIOR WALL FIRE SEPERATION: IBC TABLE 705.5
NONE REQUIRED

FINISH WALL & CEILING FINISH: IBC TABLE 803.13

EXIT ENCLOSURE & PASSAGEWAYS A
CORRIDORS B
ROOMS AND ENCLOSED SPACES C

AUTOMATIC SPRINKLER SYSTEMS: IBC SECTION 903
NONE

FLOOR AREA ALLOWANCES: IBC TABLE 1004.5
OCCUPANT LOAD: BUSINESS AREA - 150 GROSS (SEE PLANS)
OCCUPANT LOAD: EXERCISE ROOM - 50 GROSS (SEE PLANS)

EXIT CALCULATION: IBC SECTION 1006

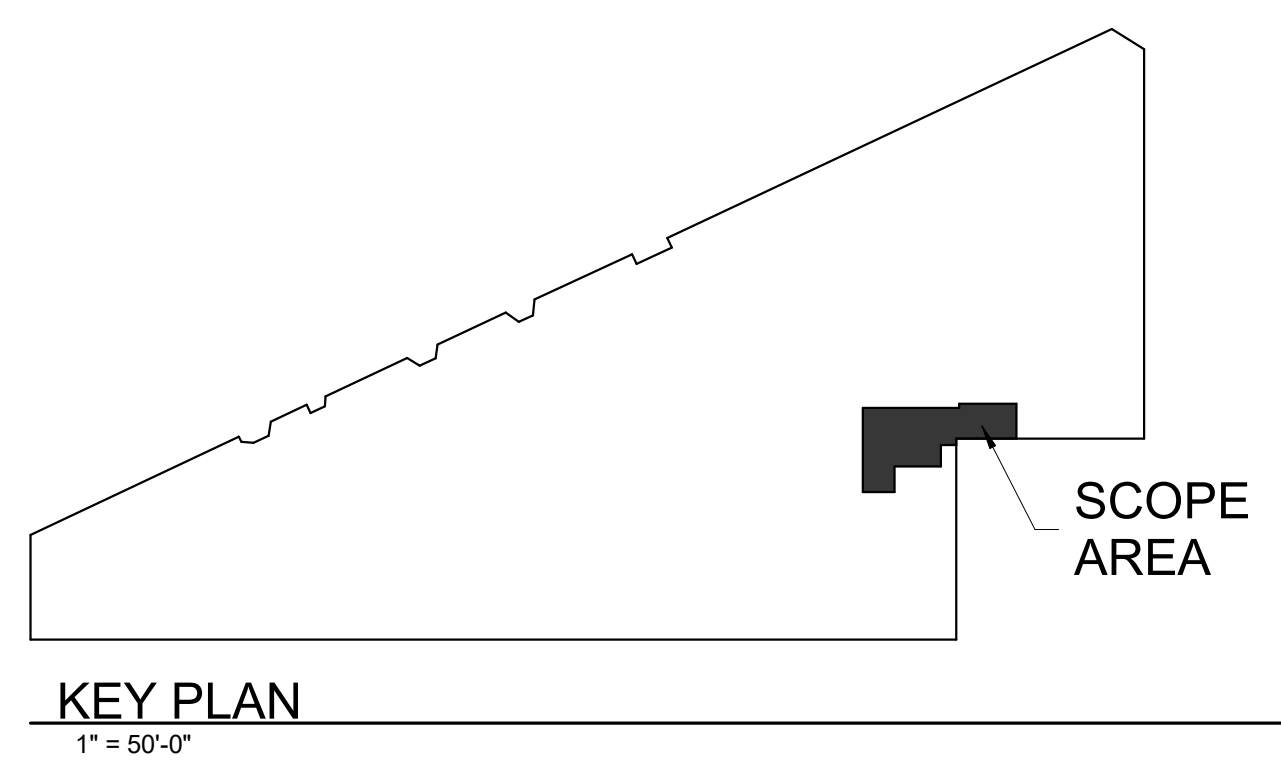
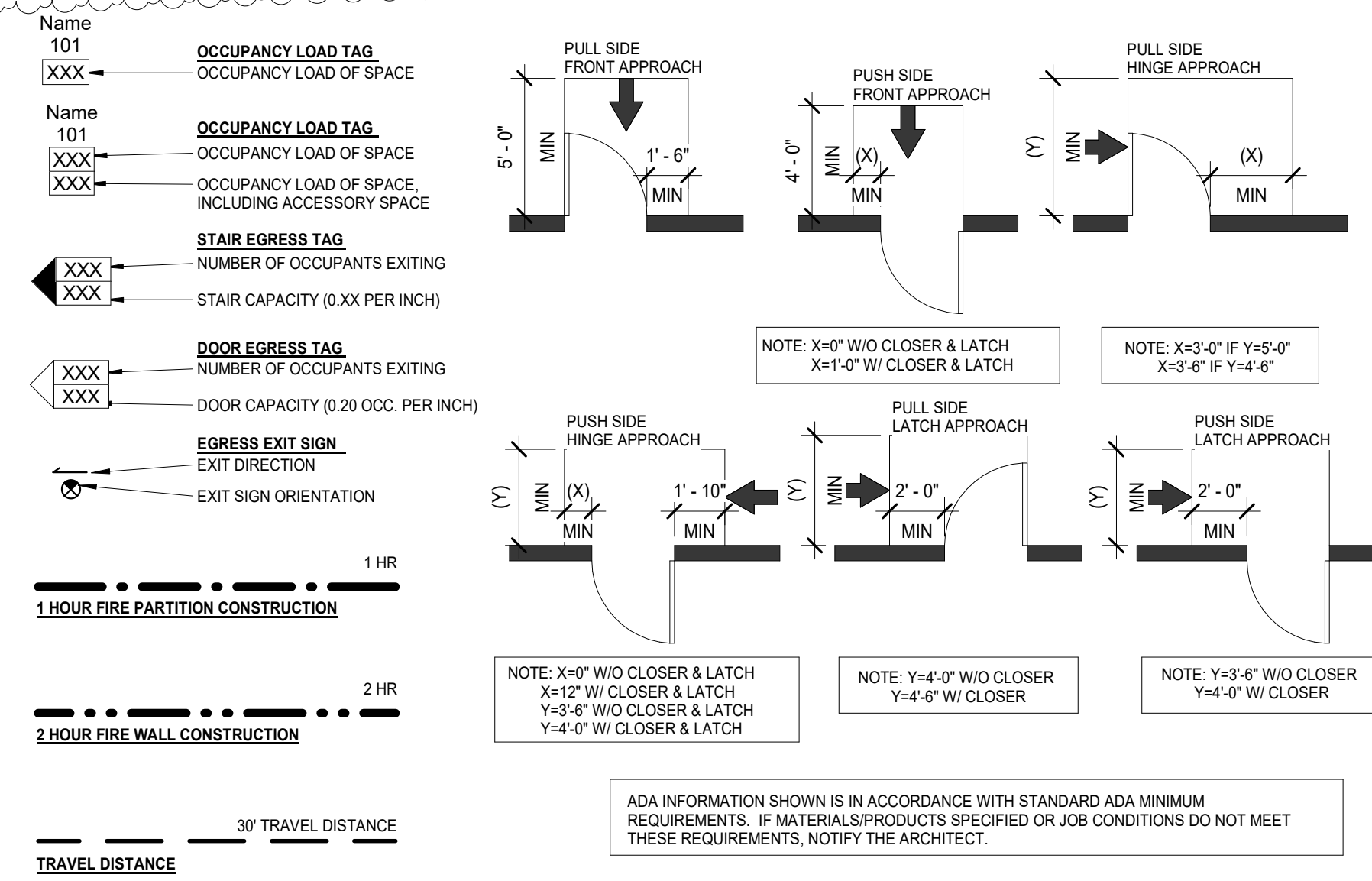
SUITE 01: B REQUIRED: 1 | (1) NEW
SUITE 02: A-3 REQUIRED: 2 | (1) NEW, (1) EXISTING
SUITE 03: B REQUIRED: 1 | (1) NEW, (1) EXISTING
SUITE 04: B REQUIRED: 1 | (1) NEW, (1) EXISTING

DISTANCE TO EXITS: IBC SECTION 1017.2
200 FT. MAX.; LESS THAN 200 FT. PROVIDED

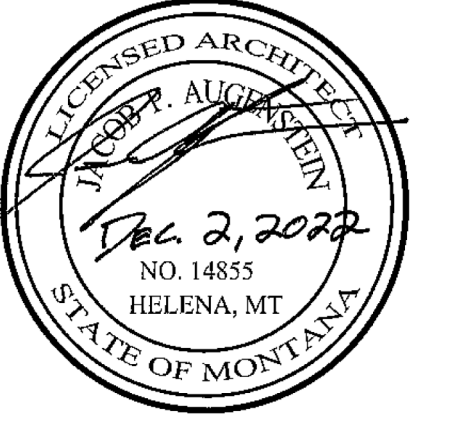
ROOF CONSTRUCTION: IBC TABLE 1505.1
EXISTING, NOT APPLICABLE

CODE LEGEND & ADA CLEARANCES

3/16" = 1'-0"



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REVISIONS

1	01/30/2023	City Review
2	02/10/2023	City Review
3	02/21/2023	City Review

IVERSON BLOCK, HELENA AVE. RENTAL
JOHN IVERSON
1429 HELENA AVE.
HELENA, MT 59601

Project No. | 2022015
Issue Date | 12/02/2022

CODE REVIEW &
EGRESS PLAN

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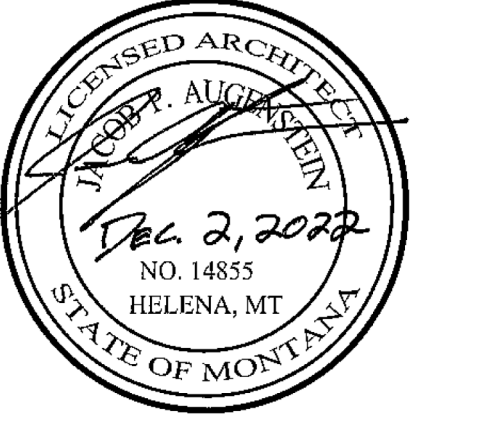
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3	02/21/2023 City Review

IVERSON BLOCK, HELENA AVE. RENTAL

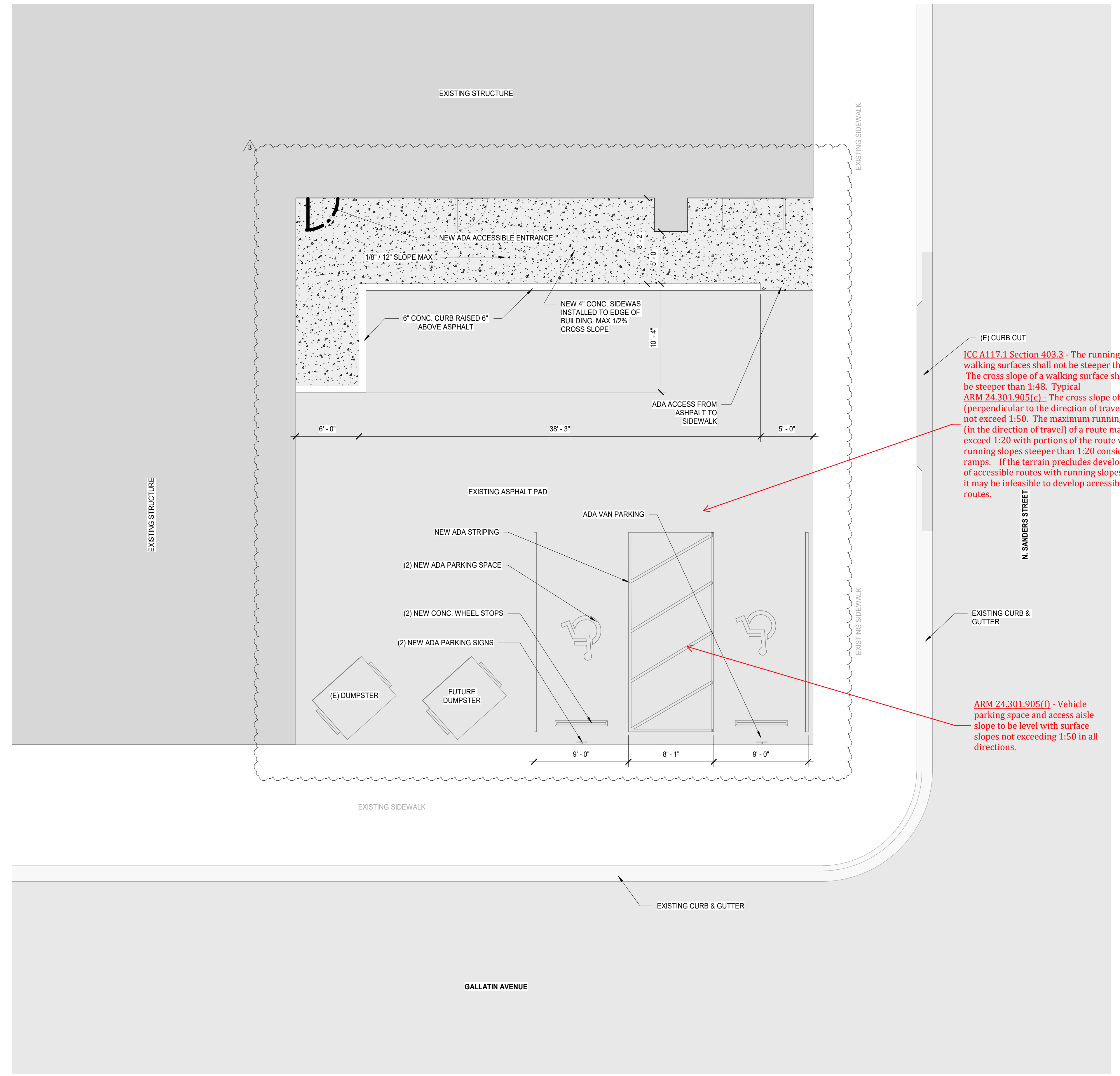
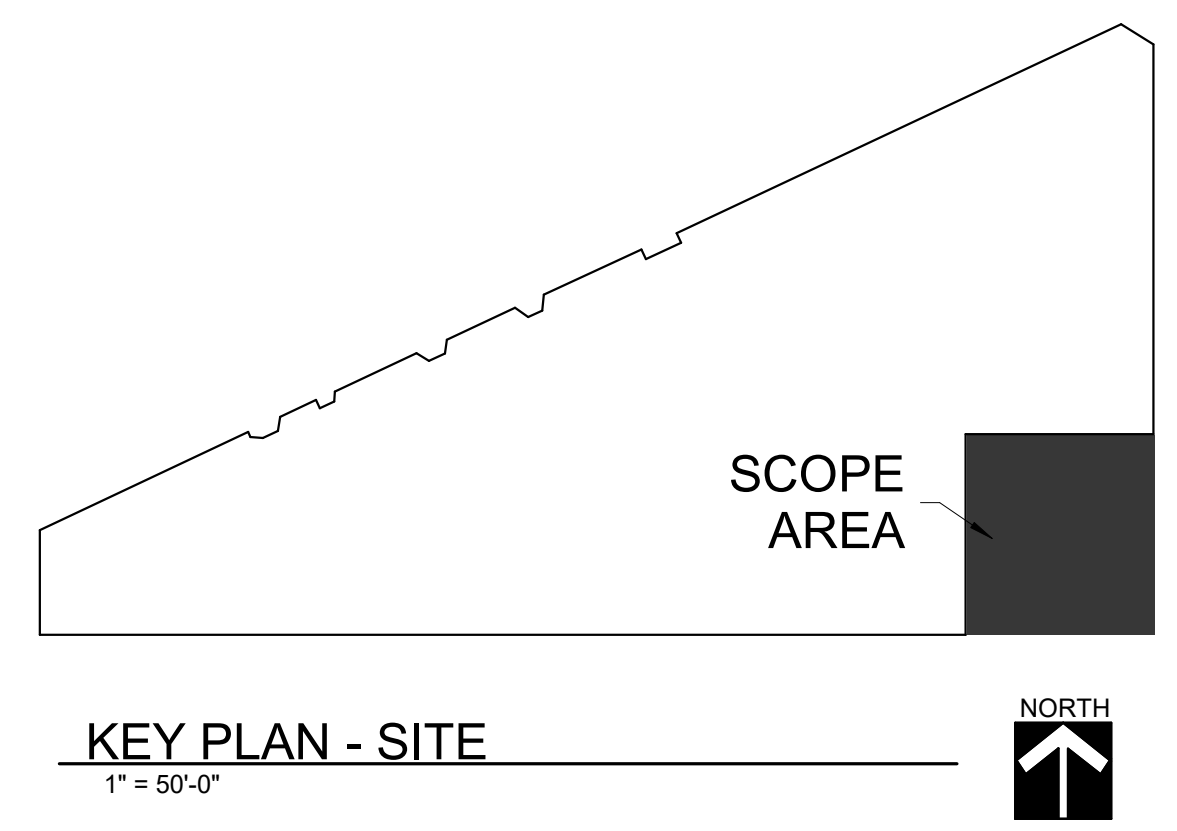
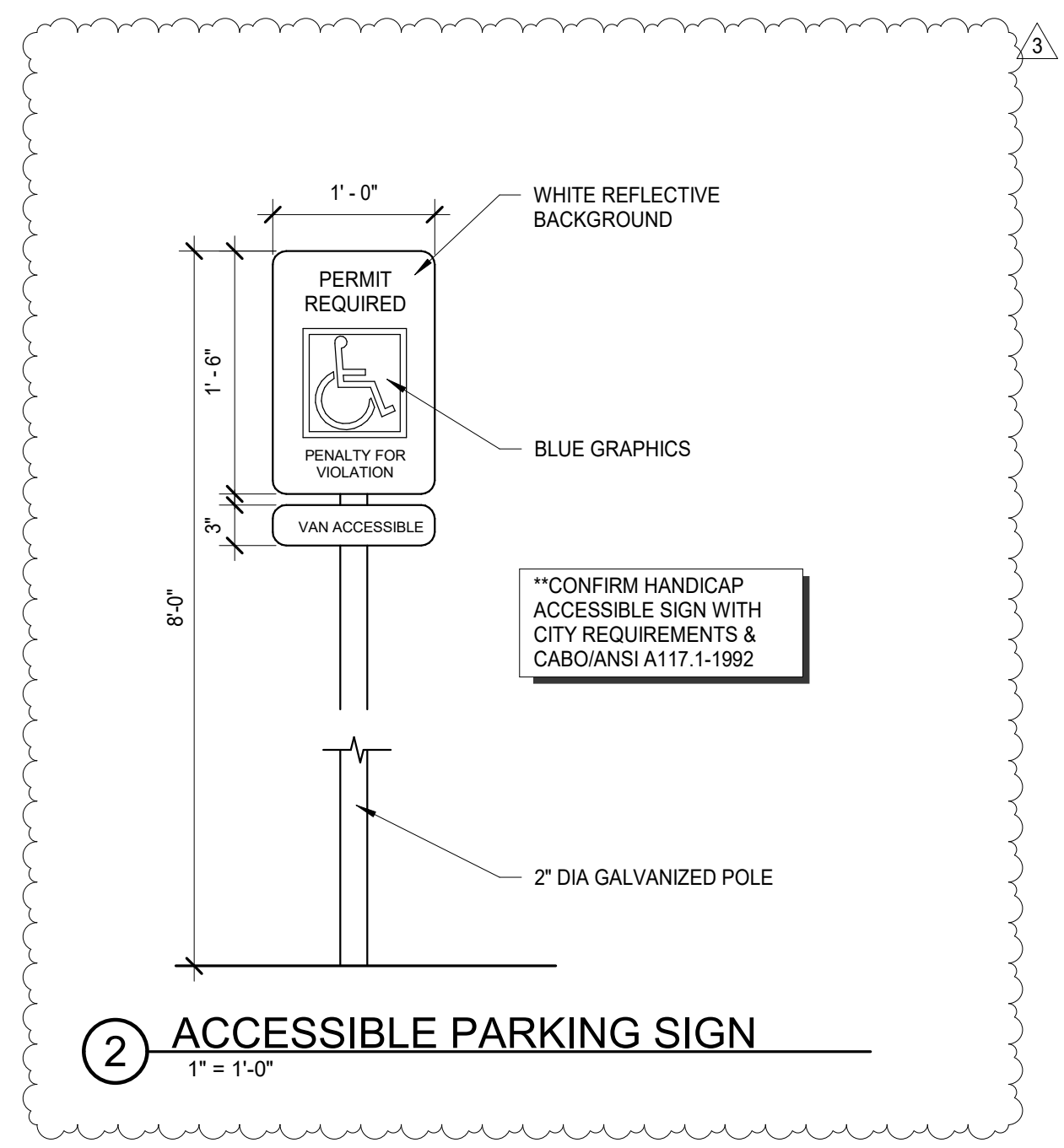
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PARTIAL SITE PLAN
- ADA PARKING

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Sheet No. **A2.1**

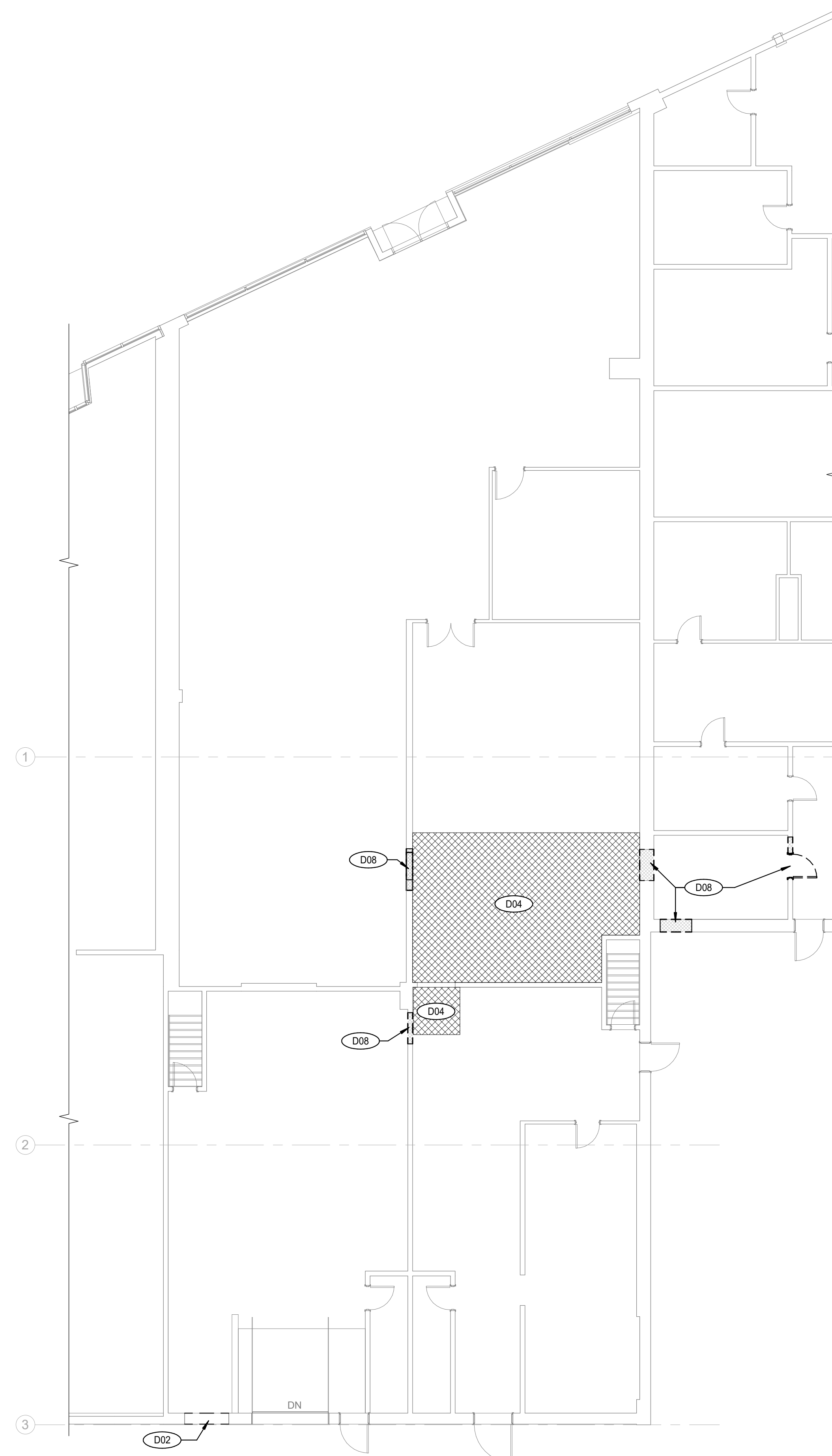


ICC A117.1 Section 403.3 - The running slope of walking surfaces shall not be steeper than 1:20. The cross slope of a walking surface shall not be steeper than 1:48. Typical
ARM 24.301.905(c) - The cross slope of a route (perpendicular to the direction of travel) shall not exceed 1:50. The maximum running slope (in the direction of travel) of a route may not exceed 1:20 with portions of the route with running slopes steeper than 1:20 considered ramps. If the terrain precludes development of accessible routes with running slopes of 1:8 it may be infeasible to develop accessible routes.

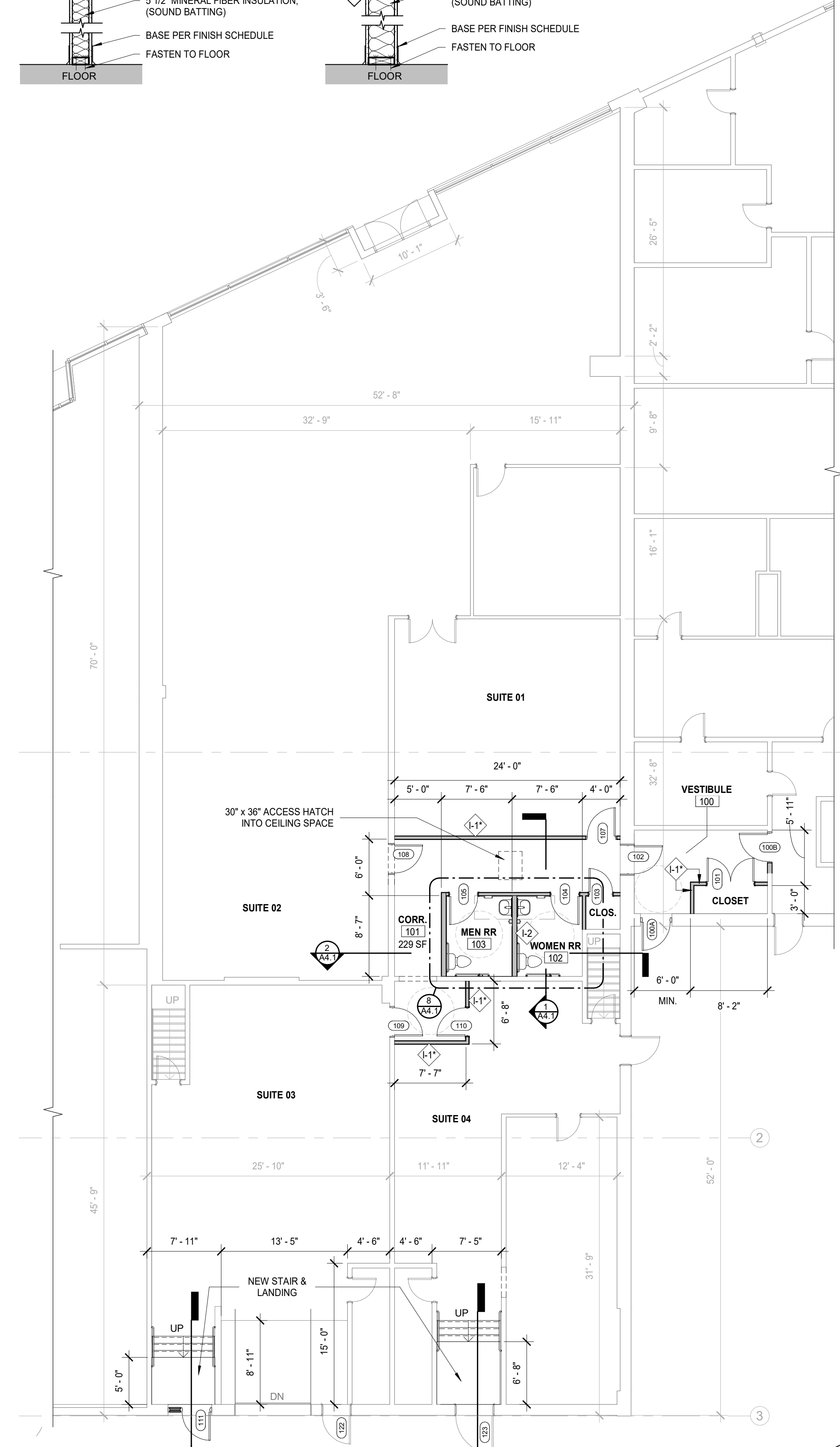
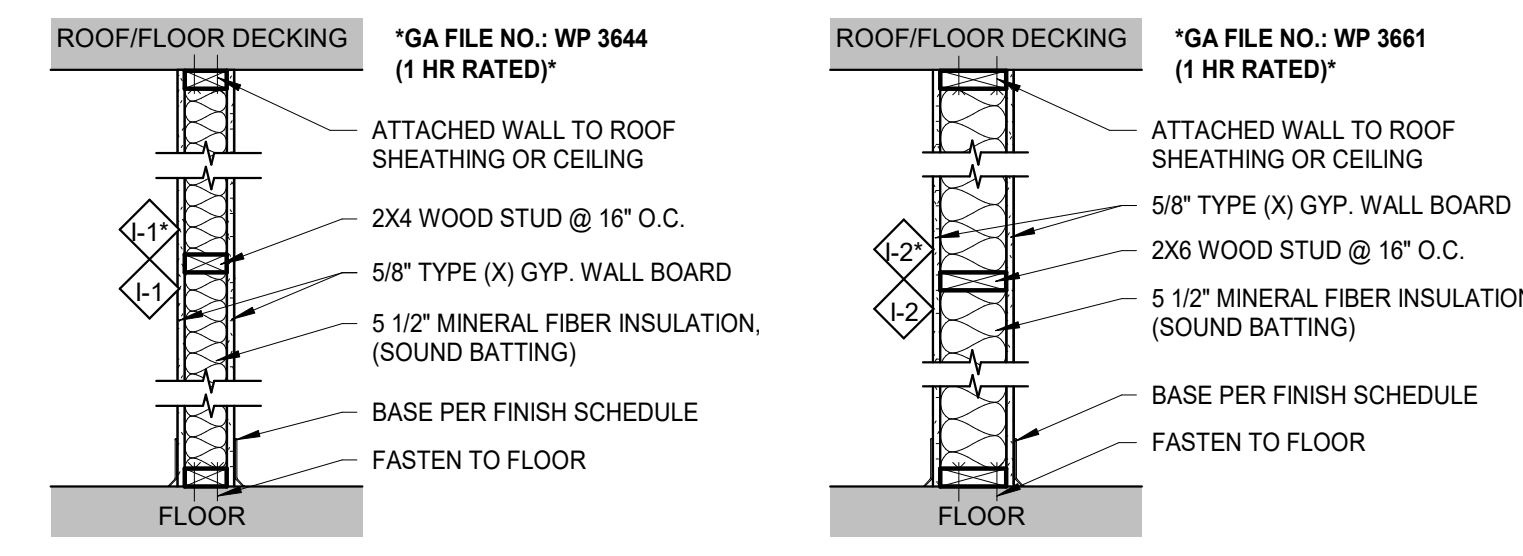
ARM 24.301.905(f) - Vehicle parking space and access aisle slope to be level with surface slopes not exceeding 1:50 in all directions.

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Printed On: 2/13/2023 10:30:30 AM



1 DEMO PLAN - CORRIDOR & RESTROOMS
1/8" = 1'-0"



2 FLOOR PLAN - CORRIDOR & RESTROOMS
1/8" = 1'-0"

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GENERAL DEMOLITION NOTES

1. ALL EQUIPMENT, FURNITURE, ETC. LEFT IN AREAS WHERE DEMOLITION IS TO COMMENCE IS TO BE COORDINATED WITH OWNER, PRIOR TO REMOVING FROM THE PREMISES.
2. PROTECT ALL ITEMS/ELEMENTS NOT SPECIFIED AS BEING DEMO'D, AND PATCH AND REPAIR ALL DAMAGED ITEMS/ELEMENTS TO REMAIN.
3. PATCH AND INFILL ALL MECHANICAL, ELECTRICAL & PLUMBING WORK THAT ARE OUTLINED IN THEIR SHEETS, EVEN IF NOT CALLED OUT IN THE ARCHITECTURAL SHEETS.
4. THE CONTRACTOR SHALL PROVIDE ALL DEMOLITION INCIDENTAL TO OR REQUIRED FOR NEW AND RENOVATION CONSTRUCTION WHETHER OR NOT IT IS SPECIFICALLY NOTED, INCLUDING, BUT NOT LIMITED TO, ALL OTHER WORK THAT MIGHT REASONABLY BE REQUIRED TO BE REMOVED IN PREPARATION FOR SPECIFIED FINISHES. DEMOLITION SHALL BE PERFORMED IN A MANNER THAT WILL NOT DAMAGE ANY ITEMS OR SURFACES INDICATED TO REMAIN. ITEMS OR SURFACES SHALL BE PATCHED IF NECESSARY TO PROVIDE A SUITABLE SUB-STRATA FOR NEW FINISHES.
5. PRIOR TO BIDDING, THE CONTRACTOR SHALL VISIT THE FACILITY AND THOROUGHLY FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS.
6. THE CONTRACTOR SHALL MAINTAIN AND ADHERE TO ALL CURRENT LIFE-SAFETY AND INTERIM LIFE-SAFETY RULES AND REGULATIONS THROUGHOUT THE CONSTRUCTION OF THIS PROJECT.

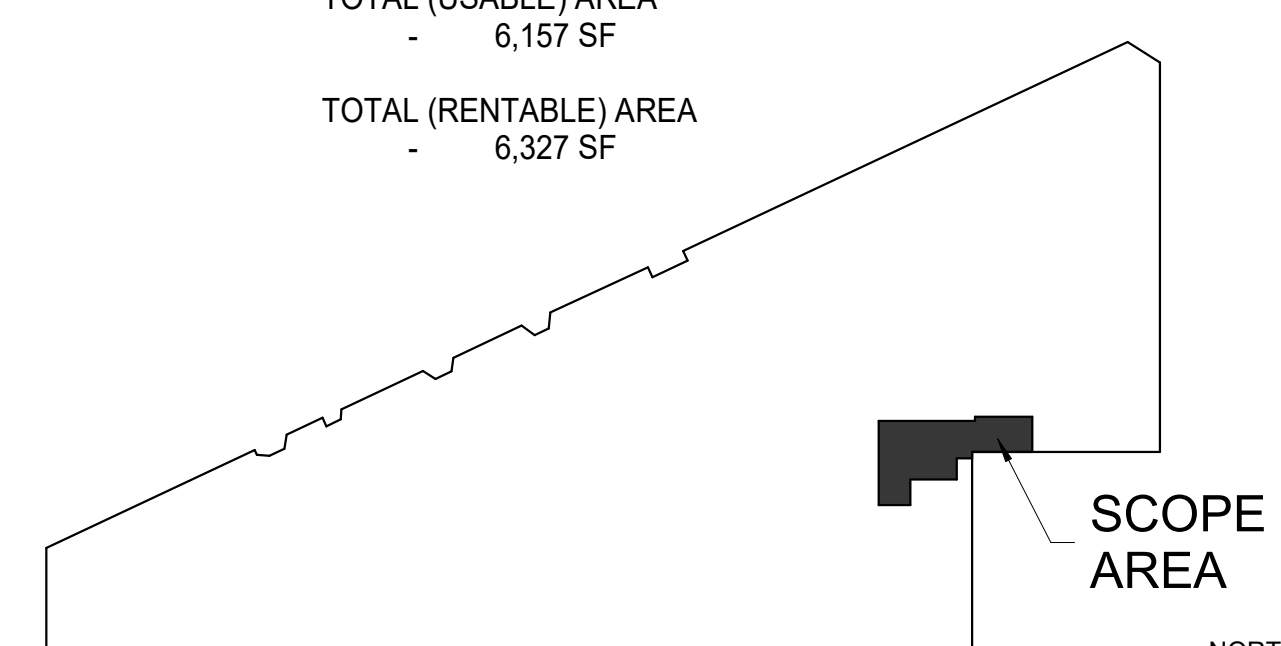
SYMBOL LEGEND

- EXISTING CEILING/FLOOR IS TO BE DEMOLISHED, FIELD VERIFY TYPES AND CONDITIONS
- EXISTING WALL/ITEM/ELEMENT TO BE DEMOLISHED, FIELD VERIFY TYPES AND CONDITIONS
- EXISTING WALL/ITEM/ELEMENT TO REMAIN AND BE PROTECTED, FIELD VERIFY TYPES AND CONDITIONS

DEMOLITION KEYNOTE LEGEND

NO.	DESCRIPTION
D02	REMOVE DOOR, FRAME AND HARDWARE. SALVAGE FOR OWNER RE-USE.
D04	DEMO FLOORING AS NEEDED.
D08	DEMO OPENING FOR NEW DOOR. SEE DOOR SCHEDULE FOR ROUGH OPENING SIZE.

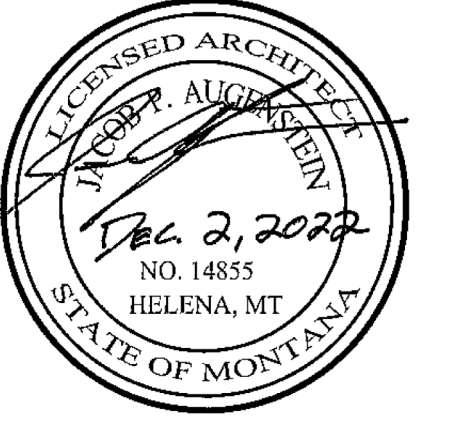
TOTAL (USABLE) AREA
- 6,157 SF
TOTAL (RENTABLE) AREA
- 6,327 SF



KEY PLAN
1" = 50'-0"



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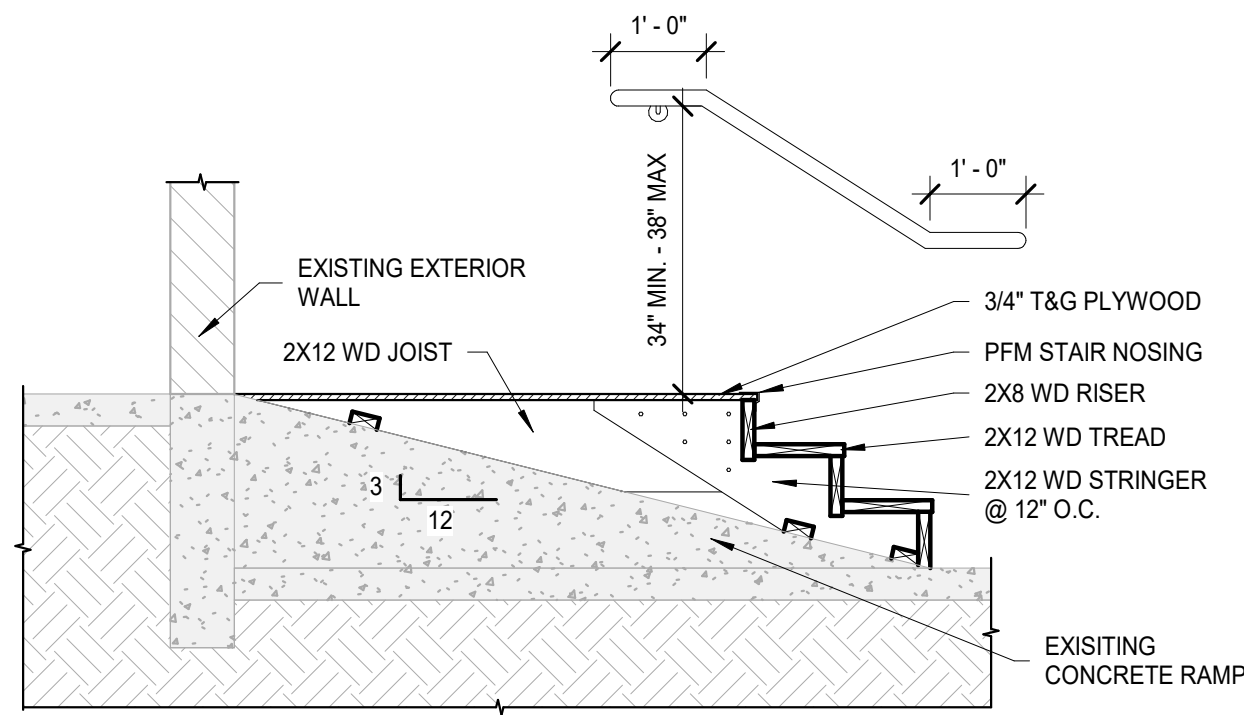
Project No. | 2022015
Issue Date | 12/02/2022

FLOOR & DEMO
PLAN - CORR. &
RESTROOMS

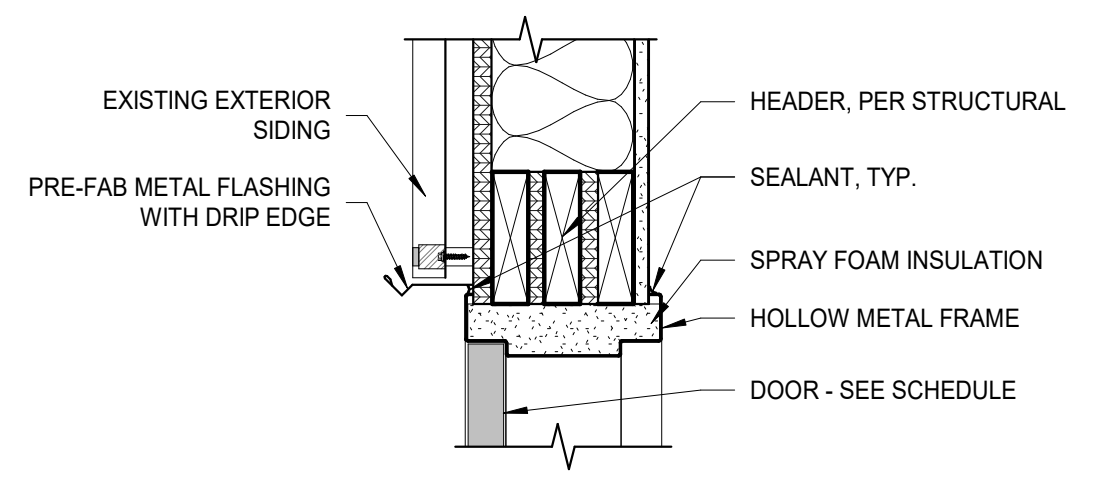
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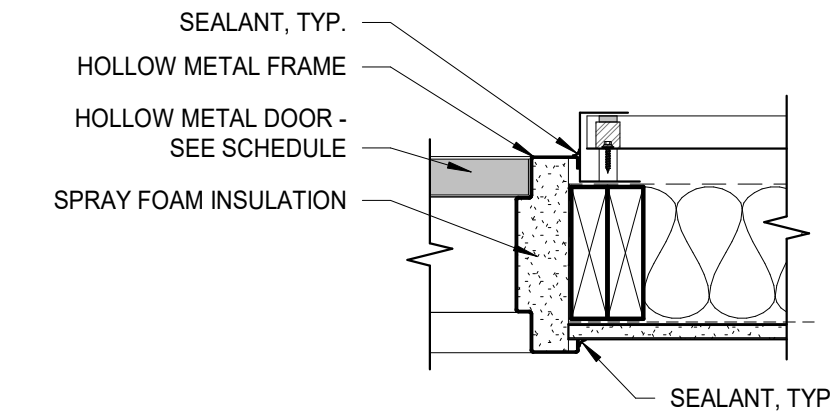
A3.3



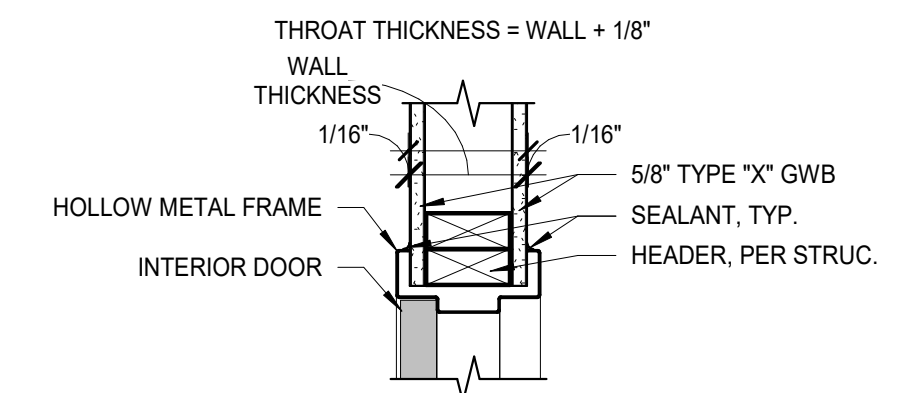
7 WOOD STAIR @ EXISTING RAMP
1/2" = 1'-0"



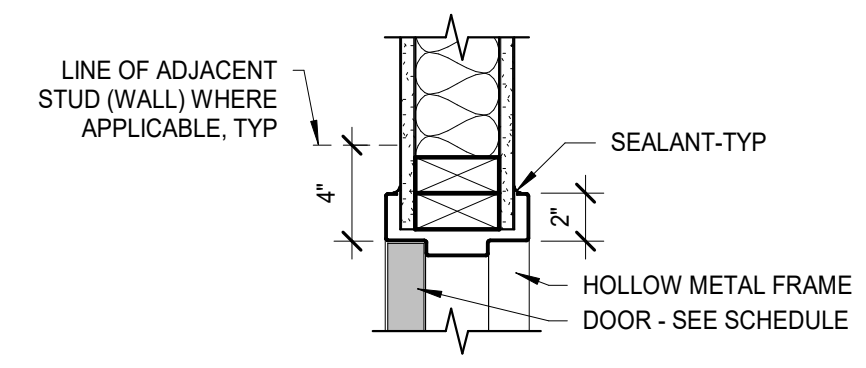
3 EXTERIOR HM DOOR DETAIL - HEAD
1 1/2" = 1'-0"



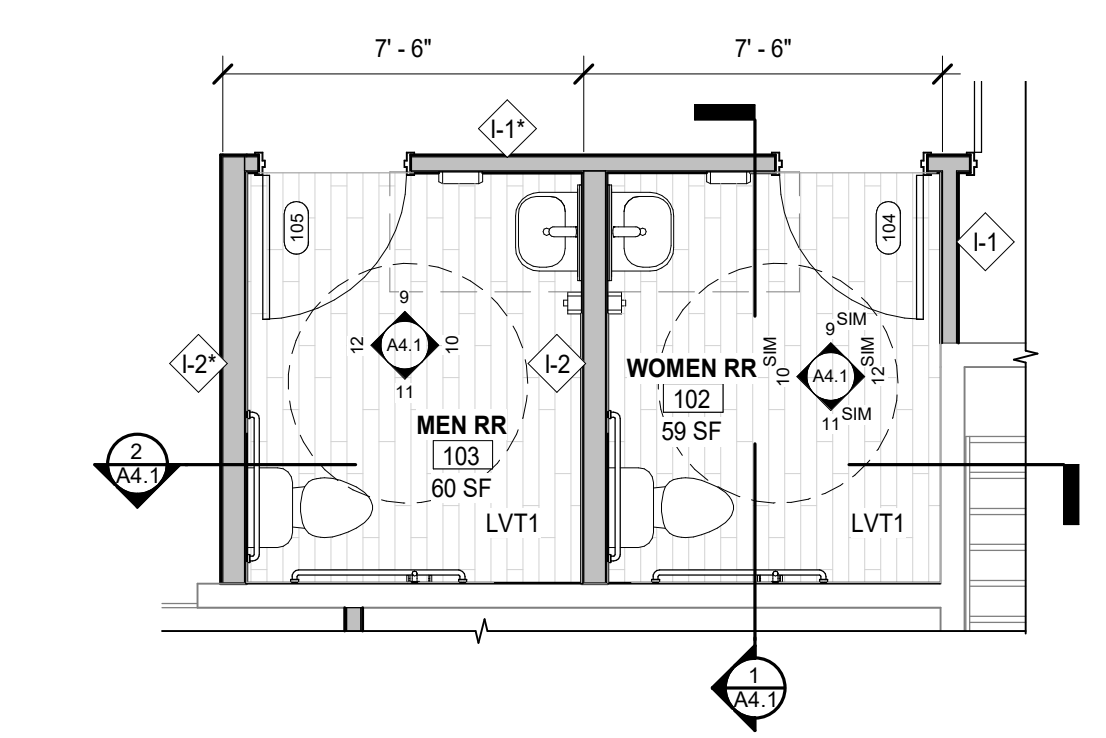
4 EXTERIOR HM DOOR DETAIL - JAMB
1 1/2" = 1'-0"



5 FRAME THROAT DETAIL
1 1/2" = 1'-0"

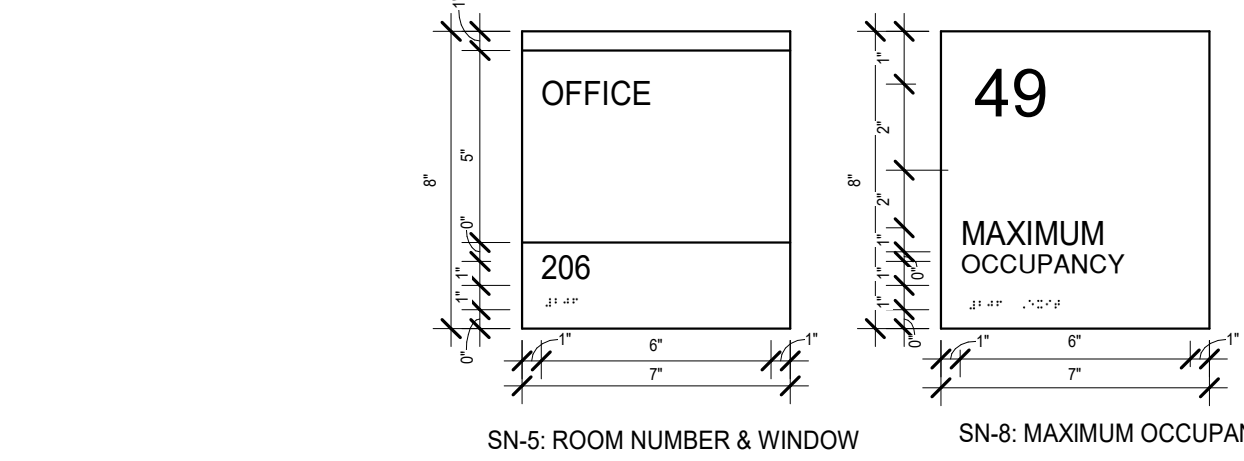
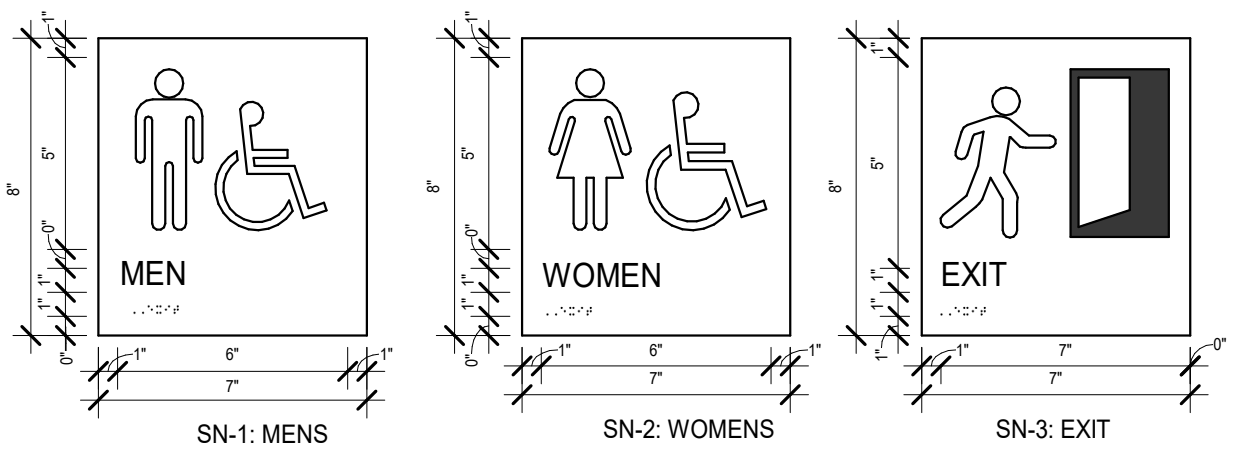


6 DOOR DETAIL - HM JAMB - INTERIOR
1 1/2" = 1'-0"



8 ENLARGED FLOOR PLAN - RESTROOMS
1/4" = 1'-0"

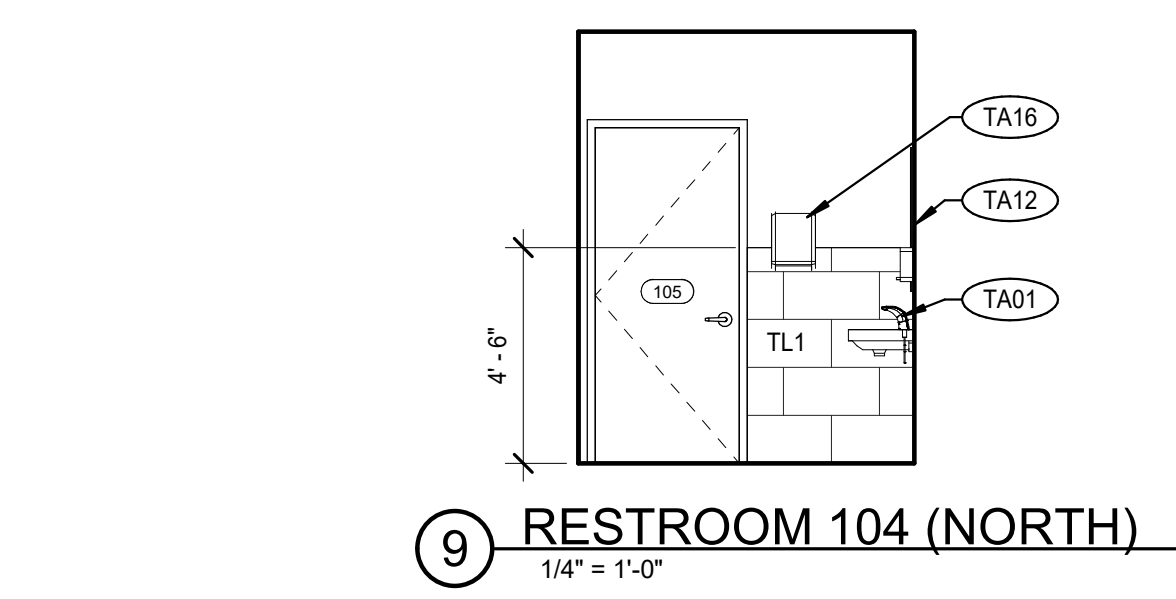
SIGNAGE SCHEDULE						
DOOR NO.	ROOM NO.	ROOM NAME	TYPE	SIGN TEXT	BRILLE	SIGN COMMENTS
100A	100	VESTIBULE	SN3	EXIT	Yes	
102	101	CORR.	SN3, SN5	EXIT, CORR.	Yes	
104	102	WOMEN RR	SN2	WOMEN'S	Yes	
105	103	MEN RR	SN1	MEN'S	Yes	
107	01	SUITE 01	SN3, SN5	EXIT, SUITE 01	Yes	
108	02	SUITE 02	SN3, SN5, SN8	EXIT, SUITE 02, TBD	Yes	
109	03	SUITE 03	SN3, SN5	EXIT, SUITE 03	Yes	
110	04	SUITE 04	SN3, SN6	EXIT, SUITE 04	Yes	
111	03	SUITE 03	SN3	EXIT	Yes	
122	03	SUITE 03	SN3	EXIT	Yes	EXISTING DOOR
123	04	SUITE 04	SN3	EXIT	Yes	EXISTING DOOR



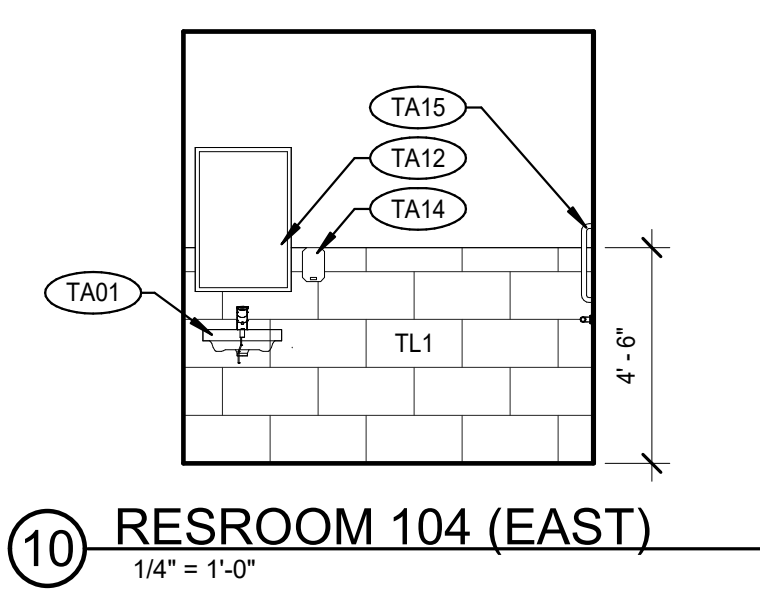
SIGN TYPES
1:5

ROOM FINISH SCHEDULE										
ROOM NUMBER	ROOM NAME	FLOOR FINISH	BASE	NORTH	EAST	SOUTH	WEST	CEILING FINISH	COMMENTS	
100	VESTIBULE	LVT	VYL	PNT	PNT	PNT	PNT	PNT		
100A	CLOSET	LVT	-	PNT	PNT	PNT	PNT	PNT		
101	CORR.	LVT	VYL	PNT	PNT	PNT	PNT	PNT		
102	WOMEN RR	TL	-	PNT, TL	PNT, TL	PNT, TL	PNT	PNT		
103	MEN RR	TL	-	PNT, TL	PNT, TL	PNT, TL	PNT	PNT		

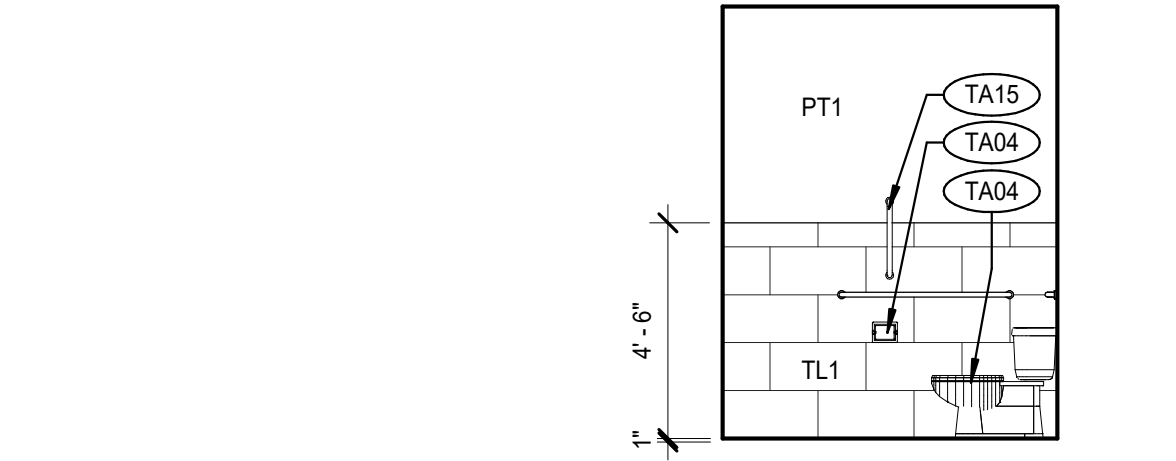
NEW CONSTRUCTION KEYNOTE LEGEND	
NO.	DESCRIPTION
TA01	LAVATORY. SEE MEP. INSTALL PER ANSI AND ADA REQUIREMENTS.
TA04	TOILET. SEE MEP. INSTALL PER ANSI AND ADA REQUIREMENTS.
TA12	24"x36" MIRROR. INSTALL PER ANSI AND ADA REQUIREMENTS.
TA14	OF01. SOAP DISPENSER. INSTALL PER ANSI AND ADA REQUIREMENTS.
TA15	GRAB BARS. 42" SIDE, 36" REAR WALL AND 18" VERTICAL. INSTALL PER ANSI AND ADA REQUIREMENTS.
TA16	TOILET PAPER DISPENSER. INSTALL PER ANSI AND ADA REQUIREMENTS.



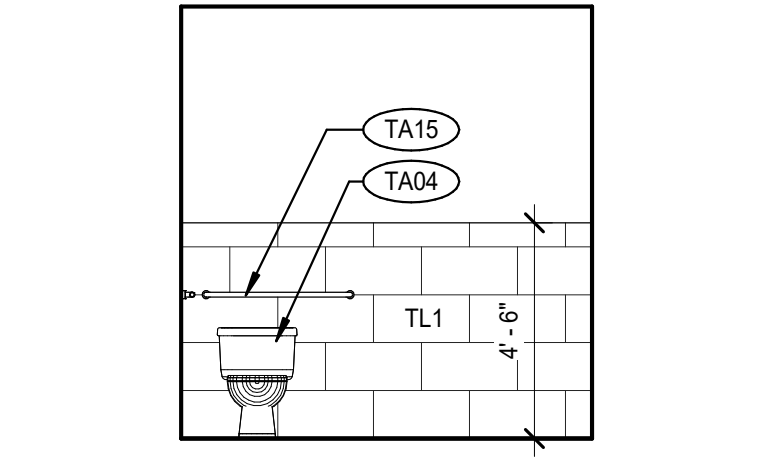
9 RESTROOM 104 (NORTH)
1/4" = 1'-0"



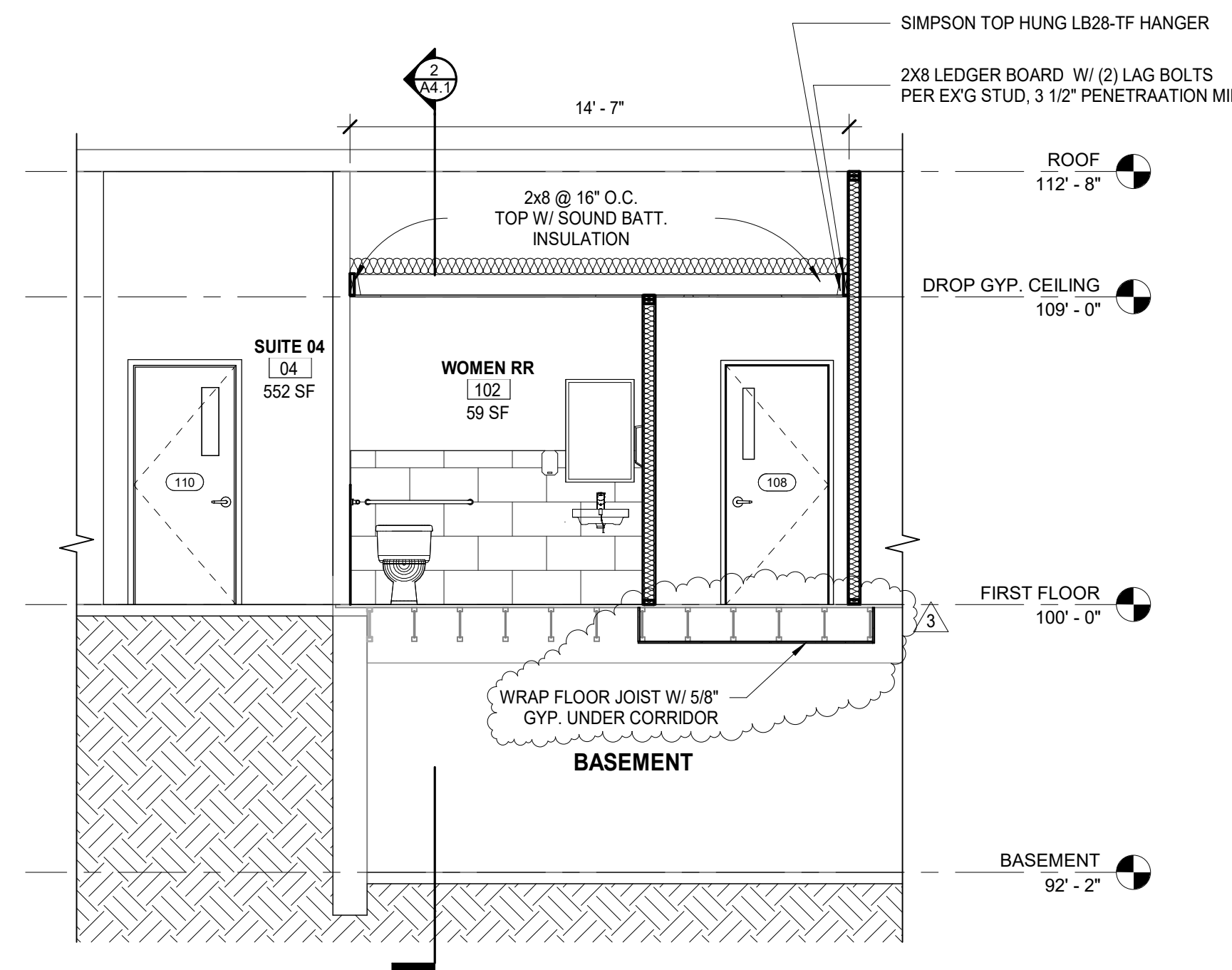
10 RESROOM 104 (EAST)
1/4" = 1'-0"



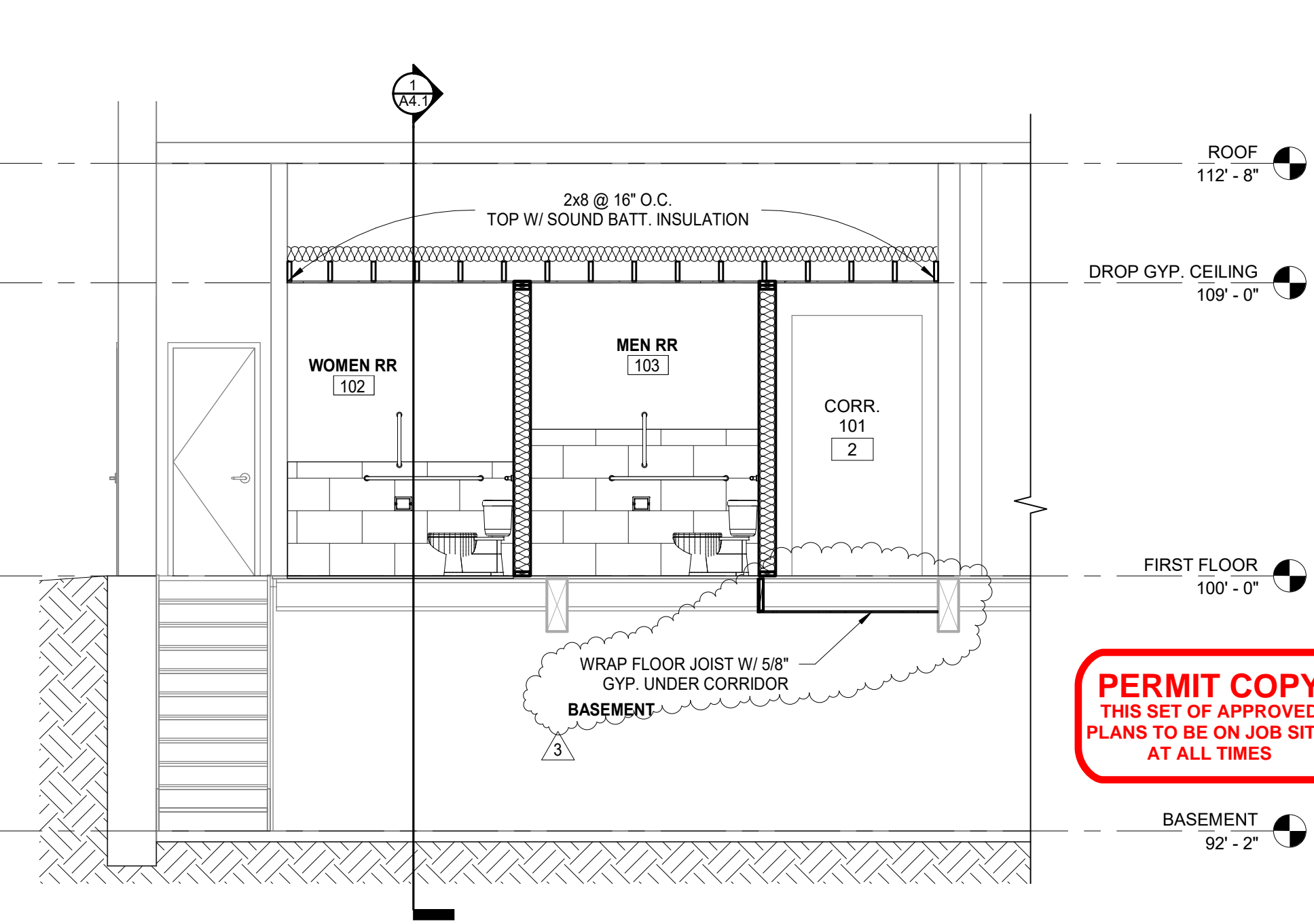
11 RESTROOM 104 (SOUTH)
1/4" = 1'-0"



12 RESTROOM 104 (WEST)
1/4" = 1'-0"

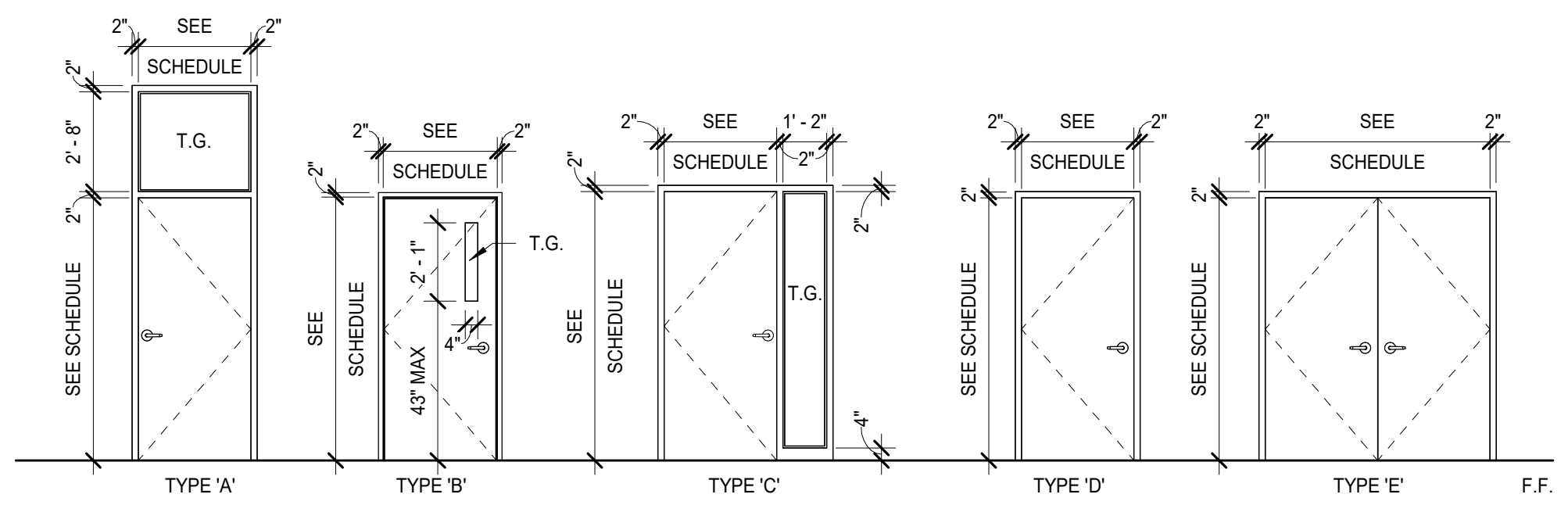


1 NS SECTION 01
1/4" = 1'-0"



2 EW SECTION
1/4" = 1'-0"

DOOR SCHEDULE												
DOOR NO.	TYPE	THICKNESS	WIDTH	HEIGHT	MATERIAL	FINISH	FRAME MATERIAL	FRAME FINISH	GLAZING TYPE	FIRE RATING	HARDWARE	DETAILS
100A	A	1 3/4"	3'-0"	7'-0"	HM	PAINT	HM	PAINT	T.G.	20 MIN	H1	3 4
100B	B	1 3/4"	3'-0"	7'-0"	HM	PAINT	HM	PAINT	-	20 MIN	H2	5 6
101	E	1 3/4"	5'-0"	7'-0"	WD	STAIN	HM	PAINT	-	-	H3	5 6
102	B	1 3/4"	3'-0"	7'-0"	HM	PAINT	HM	PAINT	D-H-W-180	1.5 HR	H3	5 6
103	D	1 3/4"	2'-6"	7'-0"	WD	STAIN	HM	PAINT	-	-	H4	5 6
104	D	1 3/4"	3'-0"	7'-0"	WD	STAIN	HM	PAINT	-	-	H5	5 6
105	D	1 3/4"	3'-0"	7'-0"	WD	STAIN	HM	PAINT	-	-	H5	5 6
107	B	1 3/4"	3'-0"	7'-0"	WD	STAIN	HM	PAINT	-	-	H6	5 6
108	B	1 3/4"	3'-0"	7'-0"	WD	STAIN	HM	PAINT	T.G.	20 MIN	H6	5 6
109	B	1 3/4"	3'-0"	7'-0"	WD	STAIN	HM	PAINT	T.G.	20 MIN	H6	5 6
110	B	1 3/4"	3'-0"	7'-0"	WD	STAIN	HM	PAINT	T.G.	20 MIN	H6	5 6
111	A	1 3/4"	3'-0"	7'-0"	HM	PAINT	HM	PAINT	T.G.	-	H1	3 4



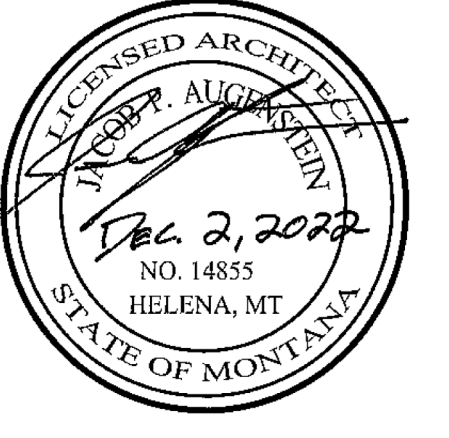
DOOR & FRAME ELEVATION
1/4" = 1'-0"

IBC 1010.1.9 DOOR OPERATIONS
EXCEPT AS SPECIFICALLY PERMITTED BY THIS SECTION, EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

IBC 1010.1.9.1 HARDWARE
DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES ON DOORS REQUIRED TO BE ACCESSIBLE BY CHAPTER 11 SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE.

HARDWARE SCHEDULE	
SET "H1" - EXTERIOR ENTRANCE DOOR	<ul style="list-style-type: none"> - 1 1/2 PAIR HINGES - 1 CLOSER - EXTRA HEAVY DUTY ARM W/ HOLD OPEN - 1 EXIT RIM DEVICES (CONCEALED) - LEVER LOCKSET - ENTRY FUNCTION - 1 THRESHOLD - 1 SET WEATHER STRIPPING
SET "H2" - DOUBLE DOOR STORAGE	<ul style="list-style-type: none"> - 3 PAIR HINGES - 1 CLOSER - EXTRA HEAVY DUTY ARM W/ HOLD OPEN - 1 CYLINDRICAL LEVER SET - STORAGE FUNCTION - 1 MANUAL FLUSH BOLT - INACTIVE LEAF, T&B - 2 BRUSH STYLE ASTRAGALS - 1 WALL STOP - 2 SET SILENCERS
SET "H3" - FIRE-RATED DOOR	<ul style="list-style-type: none"> - 1 1/2 PAIR HINGES - 1 CLOSER - EXTRA HEAVY DUTY ARM - 1 CYLINDRICAL LEVER SET - STORAGE FUNCTION - 1 WALL STOP - 1 SET SMOKE SEALS
SET "H4" - STORAGE	<ul style="list-style-type: none"> - 1 1/2 PAIR HINGES - 1 CYLINDRICAL LEVER SET - STORAGE FUNCTION - 1 WALL STOP - 1 SET SILENCERS
SET "H5" - RESTROOM	<ul style="list-style-type: none"> - 1 1/2 PAIR HINGES - 1 CLOSER - EXTRA HEAVY DUTY ARM - 1 CYLINDRICAL LEVER SET - PRIVACY FUNCTION - W INDICATOR WINDOW - 1 WALL STOP - 1 SET SILENCERS
SET "H6" - HALLWAY ENTRY	<ul style="list-style-type: none"> - 1 1/2 PAIR HINGES - 1 CLOSER - EXTRA HEAVY DUTY ARM W/ HOLD OPEN - 1 PANIC HARDWARE - LEVER LOCKSET - ENTRY FUNCTION - 1 SET SILENCERS

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100% CONSTRUCTION DOCUMENTS

REVISIONS		
2	02/10/2023	City Review
3	02/21/2023	City Review

IVERSON BLOCK, HELENA AVE. RENTAL
JOHN IVERSON
1429 HELENA AVE.
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Project No. | 2022015
Issue Date | 12/02/2022

BUILDING SECTIONS, DOOR SCHEDULE & ELEVATIONS

MECHANICAL ABBREVIATION KEY	
ABBR:	DESCRIPTION:
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BT	BATHTUB
C	COMMON
CB	CATCH BASIN
CD-E	CEILING DIFFUSER - EXISTING
CFSD	CONTROL/FIRE/SMOKE DAMPER
CI	CAST IRON
CO	CLEANOUT
CS	CLINICAL SINK
DB	DIALYSIS BOX
DF	DRINKING FOUNTAIN
DI	DUCTILE IRON
DPG (0-2")	DIFFERENTIAL PRESSURE GAUGE (RANGE)
DPS	DIFFERENTIAL PRESSURE SWITCH
E	EXISTING
EA	EXHAUST/RELIEF AIR
ECFSD	EXISTING CONTROL FIRE SMOKE DAMPER
EE	EMERGENCY EYEWASH
EFD	EXISTING FIRE DAMPER
EFS	EXISTING FIRE SMOKE DAMPER
EP	ELECTRICAL TO PNEUMATIC VALVE
ES	EMERGENCY SHOWER
ESD	EXISTING SMOKE DAMPER
ESE	EMERGENCY SHOWER/EYEWASH
EWC	ELECTRIC WATER COOLER
FCO	FLOOR CLEANOUT
FD	FIRE DAMPER
FM	FLOW METER
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FS	FLOOR SINK
FSD	FIRE/SMOKE DAMPER
GD	GARBAGE DISPOSER
GI	GREASE INTERCEPTOR
HB	HOSE BIBB
I.E.	INVERT ELEVATION (FOR REFERENCE ONLY)
LAV	LAVATORY
MA	MIXED AIR
MB	MOP BASIN
MH	MANHOLE
MV	MIXING VALVE
NC	NEW CONNECTION
N.C.	NORMALLY CLOSED
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
NT	NEUTRALIZATION TANK
OA	OUTSIDE AIR
OS	OIL SEPARATOR
PS	PRESSURE SWITCH
RA	RETURN AIR
RD	ROOF DRAIN
SA	SUPPLY AIR
SD	SMOKE DAMPER
SH	SHOWER
SK	SINK
SS	SERVICE SINK
TAB	TERMINAL AIR BOX
TD	TRANSFER DUCT
TP	TRAP PRIMER
TYP	TYPICAL
UB	UTILITY BOX
UC-1	DOOR UNDERCUT BY OTHERS (1" TYPICAL)
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
VTR	VENT THROUGH ROOF
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WH	WATER HEATER
WMF	WASHING MACHINE FIXTURE
WM	WATER METER
WS	WATER SOFTENER
YCO	YARD CLEANOUT

MECHANICAL SYMBOL LIST	
NOT ALL SYMBOLS MAY APPLY.	
SYMBOL:	DESCRIPTION:
	COLD WATER - POTABLE
	DRAIN - PLUMBING
	FIRE PROTECTION
	NATURAL GAS
	HOT WATER - POTABLE
	SANITARY DRAINAGE
	STORM DRAINAGE (ROOF SQUARE FOOTAGE)
	STORM DRAINAGE (SECONDARY)
	VENT
	PIPE CAP
	PIPE DOWN
	PIPE UP OR UP/DOWN
	PIPE SERVING FIXTURE ON FLOOR ABOVE (EXAMPLE: FD = FLOOR DRAIN)
	DIRECTION OF FLOW IN PIPE
	ROUTE TO DRAIN
	ROOF DRAIN PROPERTIES SYMBOL SIZE (ROOF SQ. FT.)
	NEW CONNECTION
	DIELECTRIC CONNECTION
	UNION/FLANGE
	SHUTOFF VALVE NORMALLY OPEN
	SHUTOFF VALVE NORMALLY CLOSED
	THROTTLING VALVE
	PUMP
	VACUUM BREAKER
	"WYE" - STRAINER
	"WYE" - STRAINER W/SHUTOFF VALVE AND HOSE CONNECTION WITH CAP
	AUTOMATIC DRAIN VALVE
	AIR PRESSURE MAINTENANCE DEVICE
	AIR SUPERVISORY SWITCH
	ANGLE VALVE
	BUTTERFLY VALVE WITH MONITOR SWITCH
	INSPECTOR TEST AND DRAIN VALVE
	OS&Y GATE VALVE
	OS&Y GATE VALVE WITH MONITOR SWITCH
	CHECK VALVE
	SAFETY/RELIEF VALVE
	PRESSURE REDUCING VALVE (LIQUID/GAS)
	BASKET STRAINER
	FLEXIBLE CONNECTION
	PRESSURE/TEMPERATURE TEST PLUG
	REDUCER - REFERENCE SPECIFICATION FOR CONCENTRIC/ECCENTRIC AND FOT/FOB
	AUTOMATIC AIR VENT
	MANUAL AIR VENT
	DRAIN VALVE WITH HOSE CONNECTION AND CAP
	ALIGNMENT GUIDE
	PIPE ANCHOR

MECHANICAL SYMBOL LIST	
NOT ALL SYMBOLS MAY APPLY.	
SYMBOL:	DESCRIPTION:
	DIRECTION OF AIR FLOW
	FLEXIBLE DUCT
	MANUAL VOLUME DAMPER
	RISE IN DIRECTION OF AIR FLOW
	DROP IN DIRECTION OF AIR FLOW
	DUCT CAP
	DUCT DOWN
	DUCT UP
	SUPPLY/OUTSIDE AIR DUCT SECTION
	RETURN AIR DUCT SECTION
	EXHAUST/RELIEF AIR DUCT SECTION
	4-WAY DIFFUSER WITH BLANKOFF IN ONE DIRECTION
	AIR TERMINAL PROPERTIES SYMBOL NECK SIZE/CFM
	AIRFLOW MEASUREMENT SYMBOL XX - AHU SYMBOL Y - SEQUENTIAL NUMBER

VIEW KEY

NAME 10' - 0" HEIGHT ABOVE PROJECT 0' - 0"

INDICATES DIRECTION OF TRUE NORTH

PLAN OR DETAIL NUMBER

PLAN OR DETAIL NAME

VIEW NAME

1/8" = 1'-0"

PLAN OR DETAIL SCALE

INDICATES SIMILAR DETAIL REFERENCED IN MULTIPLE LOCATIONS

DETAIL REFERRED TO BY SECTION CUT

SHEET DETAIL IS LOCATED ON

INDICATES SIMILAR DETAIL REFERENCED IN MULTIPLE LOCATIONS

DETAIL REFERRED TO BY ELEVATION

SHEET DETAIL IS LOCATED ON

LINE TYPE KEY:

- NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)
- NEW WORK UNDERFLOOR OR UNDERGROUND BY THIS CONTRACTOR (DARK LONG DASHED LINE)
- NEW WORK BY OTHERS AND/OR EXISTING TO REMAIN (LIGHT SOLID LINE)
- EXISTING TO BE REMOVED BY THIS CONTRACTOR (DARK SHORT DASHED LINE)

MECHANICAL GENERAL NOTES:

- THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO PLUMBING, VENTILATION, AND HVAC.
- DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC. AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
 - DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
 - COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS.
 - REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS.
 - ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
 - EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
 - REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL AND OTHER MECHANICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES, OTHER THAN SPRINKLERS.
 - EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
 - IN AREAS WITH DRYWALL CEILINGS COORDINATE LOCATIONS OF ACCESS PANELS WITH THE GC FOR ACCESS TO VALVES, DUCTWORK ACCESSORIES, DAMPERS, ETC. COORDINATE PANEL TYPE AND COLOR WITH ARCHITECT. NOTIFY THE GC OF THE REQUIRED ACCESS PANELS PRIOR TO BIDDING.
 - SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE CONDUITS, PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE.
 - CALK ALL PIPE AND DUCT PENETRATIONS OF FULL HEIGHT NON-FIRE RATED WALL, PARTITION, FLOOR, AND ROOF ASSEMBLIES. THIS IS ESSENTIAL TO PREVENT NOISE TRANSMISSION FROM ONE ROOM TO ANOTHER AND TO PROVIDE THE DESIRED NC LEVELS WITHIN ROOMS.
 - WHERE PIPES AND DUCTS ARE SHOWN TO PENETRATE FLOORS, PROVIDE SLEEVED OPENINGS WITH THE TOP EDGE RADIUS IN ACCORDANCE WITH ALL RELEVANT SPEC SECTIONS. SEAL SLEEVE PERIMETER TO BE WATERTIGHT.
 - EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY AMONG DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
 - DO NOT BLOCK TUBE PULL OR EQUIPMENT SERVICE CLEARANCES.
 - MAINTAIN MINIMUM 3'-6" CLEARANCE IN FRONT OF ALL ELECTRICAL PANELS, MOTOR STARTERS, SWITCHES, AND DISCONNECTS.
 - PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
 - DO NOT SUPPORT EQUIPMENT, PIPING, OR DUCTWORK FROM METAL DECKING OR OTHER NON-STRUCTURAL BUILDING ELEMENTS. ANCHORS EMBEDDED IN CONCRETE SHALL BE CRACKED CONCRETE APPROVED IN ACCORDANCE WITH SPECIFICATIONS.

PLUMBING GENERAL NOTES:

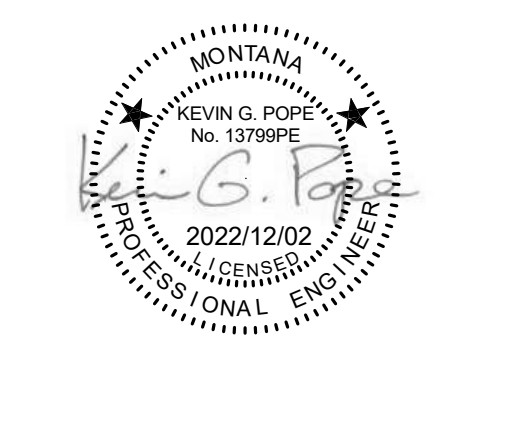
- THE SYMBOLS AND THE MATERIAL LIST ARE FOR THE CONVENIENCE OF THE CONTRACTOR. CONTRACTOR SHALL VERIFY QUANTITIES AND FURNISH ALL MATERIALS REQUIRED FOR FULLY OPERATIONAL SYSTEMS, WHETHER SPECIFIED OR NOT.
- CATALOG NUMBERS SHALL NOT BE CONSIDERED COMPLETE, BUT ARE GIVEN AS AN AID TO THE CONTRACTOR AND TO INDICATE THE QUALITY REQUIRED. CONTRACTOR IS RESPONSIBLE FOR A COMPLETE DESCRIPTION OF MATERIAL ON THESE DRAWINGS AND IN THE SPECIFICATIONS BEFORE ORDERING. THE DESCRIPTION OF THE MATERIAL TAKES PRECEDENCE OVER THE CATALOG NUMBER. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.
- CONTRACTOR SHALL VERIFY THAT FIXTURES SUPPLIED ARE APPROVED PER ALL APPLICABLE STATE, LOCAL AND GOVERNING AUTHORITIES.
- ALL FIXTURES SHALL CONFORM TO FEDERAL ACT 3-3874.
- VERIFY ALL INVERT ELEVATIONS BEFORE BEGINNING WORK.
- VERIFY UNDERGROUND PIPE SIZES, INVERT ELEVATIONS, AND LOCATIONS PRIOR TO BEGINNING ANY WORK.
- REFER TO THE PLUMBING ROUGH-IN SCHEDULE FOR THE SIZES OF BRANCH PIPES TO PLUMBING FIXTURES.
- FOR CLARITY, NOT ALL VALVES HAVE BEEN SHOWN. PROVIDE SHUTOFF VALVES IN DOMESTIC WATER PIPING SERVING EACH ROOM WITH FIXTURES. ANGLE STOPS SHALL NOT BE CONSIDERED SHUTOFF VALVES.
- EXISTING CONDITIONS ON DEMOLITION PLANS ARE PROVIDED TO INDICATE THE GENERAL SCOPE OF ITEMS TO BE REMOVED.
- P.C. SHALL CUT AND PATCH EXISTING AS REQUIRED FOR NEW OR DEMOLITION WORK UNLESS NOTED OTHERWISE.

MECHANICAL RENOVATION NOTES:

- THESE NOTES APPLY TO ALL MECHANICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO PLUMBING, AND VENTILATION.
- EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
 - NOT ALL EXISTING DUCTWORK AND PIPING IS SHOWN. VERIFY EXISTING CONDITIONS BEFORE STARTING WORK. NOTIFY ENGINEER OF ANY CONFLICTS WITH NEW WORK.
 - FIELD VERIFY THE AVAILABLE CLEARANCES FOR DUCTWORK AND PIPING BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
 - EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF THEIR WORK AND SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO THEIR AREA OF WORK.
 - THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CUTTING, REMOVAL AND PATCHING OF ROOFS, WALLS, AND FLOORS ASSOCIATED WITH WORK BY ALL CONTRACTORS. CONTRACTORS SHALL NOTIFY THE GC OF AFFECTED AREAS PRIOR TO BIDDING.
 - THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS, CEILING TILES, AND CEILING GRIDS ASSOCIATED WITH AREAS OF WORK BY ALL CONTRACTORS. NOTIFY THE GENERAL CONTRACTOR OF AFFECTED AREAS PRIOR TO BIDDING.
 - WHERE EXISTING MECHANICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, PIPING, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING MECHANICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK. OBTAIN PERMISSION FROM OWNER BEFORE SHUTTING DOWN ANY SYSTEM FOR ANY REASON. MAINTAIN SERVICE TO ALL COMPONENTS THAT ARE TO REMAIN UNTIL NEW SYSTEMS ARE INSTALLED.
 - MAINTAIN EXISTING SYSTEM IN SERVICE UNTIL NEW SYSTEM IS COMPLETE AND READY FOR TIE IN AND SWITCHOVER. DRAIN SYSTEM ONLY TO MAKE SWITCHOVERS AND CONNECTIONS. OBTAIN PERMISSION FROM OWNER BEFORE PARTIALLY OR COMPLETELY DRAINING SYSTEM. MAKE CHANGEOVER TO NEW SYSTEMS WITH MINIMUM OUTAGE.

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Project No. | 2022015
Issue Date | 12/02/2022

MECHANICAL, AND
PLUMBING COVER
SHEET

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PLANS TO BE ON JOB SITE
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Sheet No. M0.0

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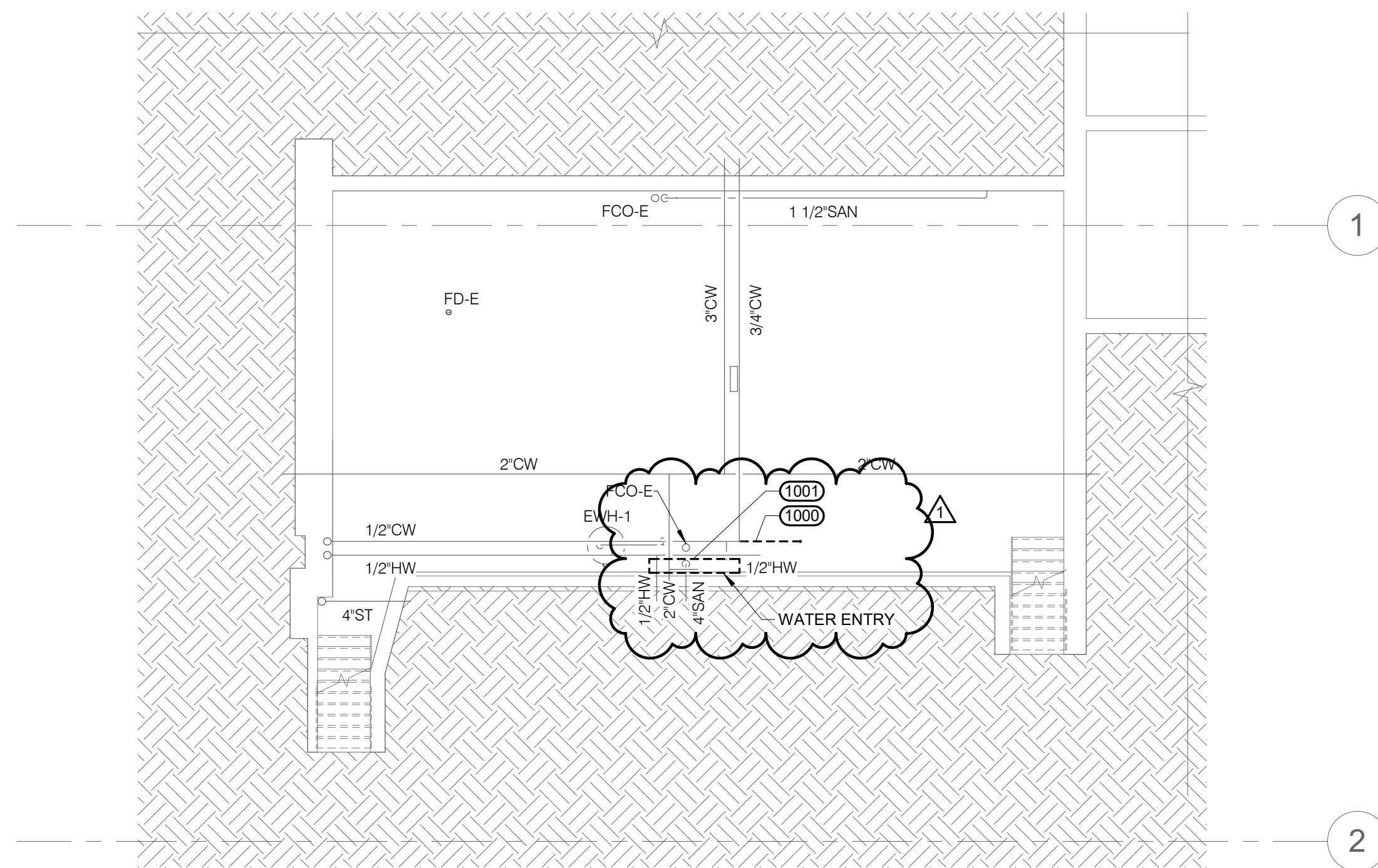
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GENERAL DEMO NOTES(MECHANICAL)

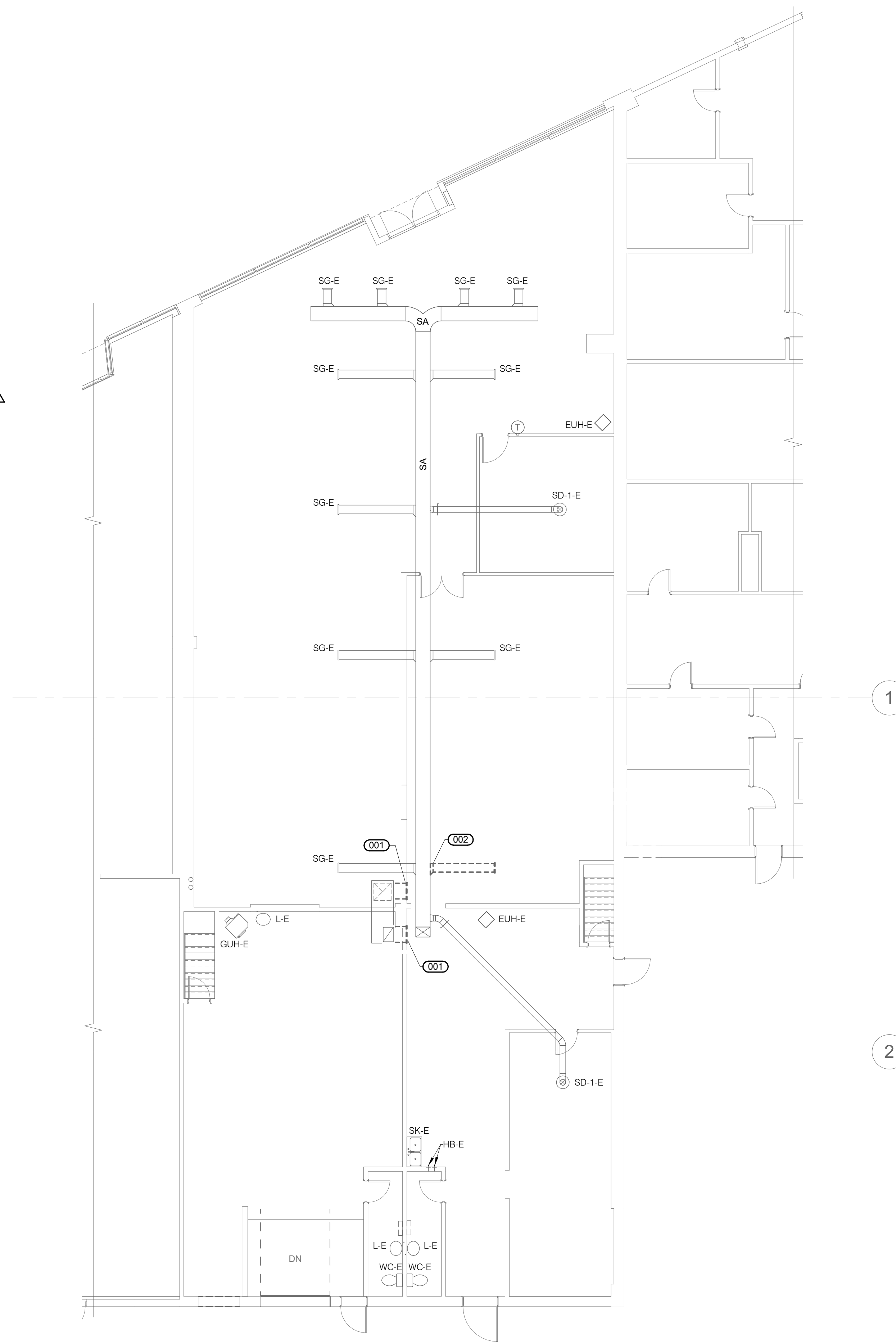
1. ALL SYSTEMS SHOWN DASHED SHALL BE REMOVED AND NOT REUSED UNLESS OTHERWISE NOTED.
2. DRAWINGS ARE BASED ON BEST AVAILABLE INFORMATION. THESE PLANS DO NOT REPRESENT A FINAL AS-BUILT CONDITION OF THE EXISTING SYSTEM. CONTRACTORS SHALL REPORT ANY MAJOR DISCREPANCIES TO THE DESIGN TEAM FOR FIELD COORDINATION.
3. THE CONTRACTOR SHALL BE COGNIZANT THAT THIS IS A REMODEL PROJECT AS SUCH CERTAIN ITEMS CANNOT BE FULLY ILLUSTRATED NOR EXPLAINED WITHOUT FIELD OBSERVATION. THEREFORE, BEFORE SUBMITTING A PROPOSAL THE CONTRACTOR SHALL VISIT AND EXAMINE THE PROJECT IN EVERY DETAIL AS PERTAINS TO THIS PROJECT AND MAKE ALLOWANCES IN THEIR PROPOSAL FOR ALL CONDITIONS THAT WILL AFFECT THE WORK INDICATED IN THE PROJECT MANUAL AND CONTRACT DOCUMENTS.
4. IT IS ABSOLUTELY NECESSARY THAT ALL TRADES COORDINATE WITH EACH OTHER AND VERIFY THAT THERE ARE NO CONFLICTS IN LOCATION OF DUCTS, CONDUITS, SPRINKLER HEADS, DIFFUSER, ELECTRICAL BOXES, EQUIPMENT AND OTHER ITEMS THROUGHOUT THIS PROJECT BEFORE FINAL PLACEMENT OF MATERIALS.
5. DEMOLISHED DUCTWORK SHALL BE BROUGHT BACK TO AN ACTIVE MAIN AND CAPPED OR PREPARED FOR CONNECTION TO NEW AS REQUIRED.
6. EXISTING SYSTEMS NOT SHOWN ARE TO REMAIN.
7. REMOVE FROM THE SITE AND LEGALLY DISPOSE OF ALL ITEMS DEMOLISHED AS PART OF THIS PROJECT OR ALL ITEMS GENERATED AS CONSTRUCTION DEBRIS AS A RESULT OF NEW WORK OR DEMOLITION.
8. EXISTING SYSTEMS/EQUIPMENT NOT SHOWN DASHED IS TO REMAIN.

KEYNOTES

- 001 DEMO EXISTING RETURN GRILLE AND BRANCH DUCTWORK BACK TO RETURN MAIN AND CAP. RETAIN RETURN GRILLE FOR REUSE. SEE NEW MECHANICAL PLANS FOR MORE INFORMATION.
- 002 DEMO EXISTING SUPPLY AIR GRILLE AND BRANCH DUCTWORK BACK TO DUCT MAIN AND CAP.
- 1000 DEMO EXISTING 1/2" PSW PIPE BACK TO TEE AND PREPARE PIPING FOR RECONNECTION OF NEW DOW LINE.
- 1001 DEMOLISH EXISTING WATER ENTRY, INCLUDING WATER METER AND PRV. DEMOLISH EXISTING WATER PIPING AS REQUIRED TO INSTALL NEW WATER ENTRY COMPONENTS AS INDICATED ON SHEET M2.2.



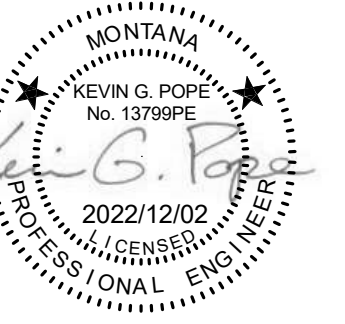
1 BASEMENT DEMOLITION PLAN - MECHANICAL
1/8" = 1'-0"



2 FIRST FLOOR DEMOLITION PLAN - MECHANICAL
1/8" = 1'-0"



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1	01/30/2023	City Review Comments

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Project No. | 2022015
Issue Date | 12/02/2022

**BASEMENT AND
FIRST FLOOR
DEMOLITION
PLANS -
MECHANICAL**

Sheet No.

M1.1

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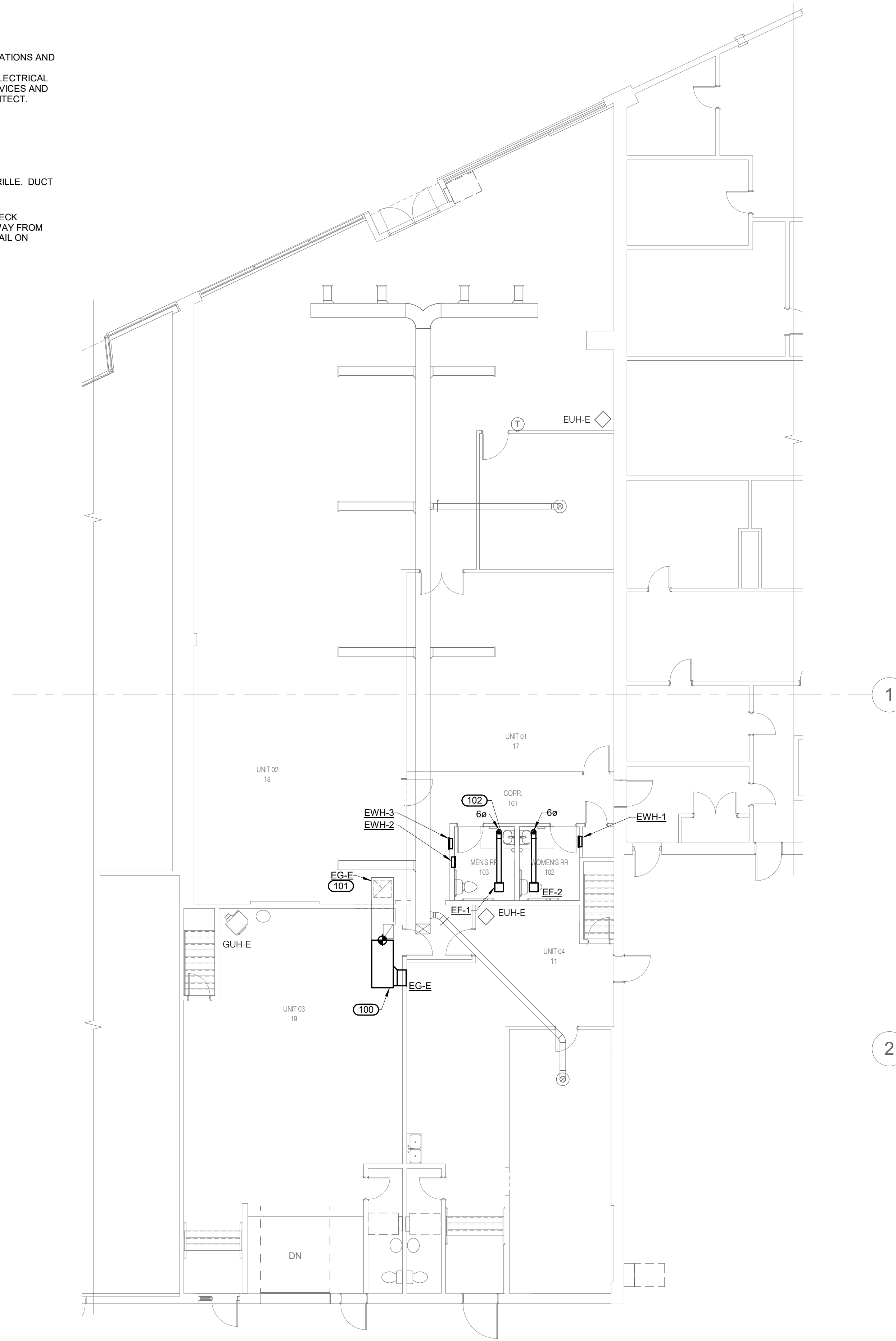
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MECHANICAL GENERAL NOTES:

1. XX-# REFERS TO EQUIPMENT DESIGNATION. SEE CORRESPONDING SPECIFICATIONS AND EQUIPMENT SCHEDULE FOR FURTHER INFORMATION.
2. COORDINATE SYSTEMS IN CEILING SPACES WITH OTHER MECHANICAL AND ELECTRICAL DISCIPLINES. PROVIDE ADDITIONAL OFFSETS AS NECESSARY TO ALLOW SERVICES AND SYSTEMS TO BE INSTALLED AT THE CEILING HEIGHT INDICATED BY THE ARCHITECT.
3. SEE EQUIPMENT SCHEDULES ON THE M6 SERIES OF DRAWINGS.

KEYNOTES

- 100 EXTEND RETURN DUCTWORK AS NEEDED TO RELOCATE EXISTING RETURN GRILLE. DUCT SIZES TO MATCH EXISTING SIZES.
- 101 RELOCATE EXISTING RETURN GRILLE AND INSTALL IN SIDE OF RETURN DUCT.
- 102 ROUTE EXHAUST DUCT UP THROUGH ROOF AND TERMINATE WITH A GOOSENECK FITTING. EXHAUST TERMINATIONS ARE TO BE INSTALLED A MINIMUM OF 10' AWAY FROM THE EXISTING RTU AIR INTAKE, TYPICAL. SEE GOOSENECK TERMINATION DETAIL ON SHEET M3.1.



FIRST FLOOR PLAN - MECHANICAL
 1/8" = 1'-0"

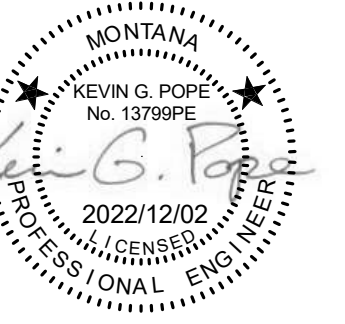
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 Issue Date | 12/02/2022

FIRST FLOOR PLAN
 - MECHANICAL

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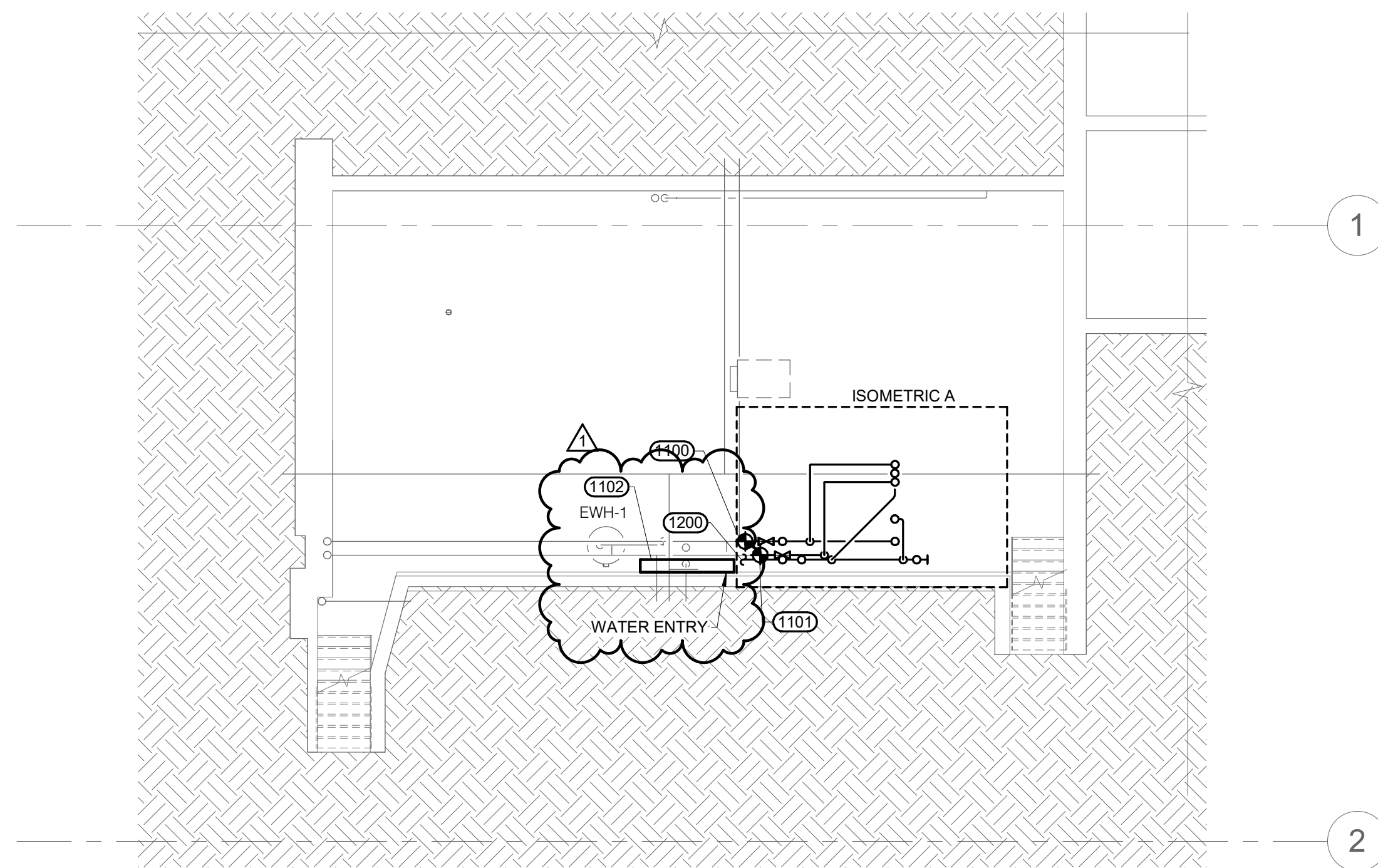
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PLUMBING GENERAL NOTES:

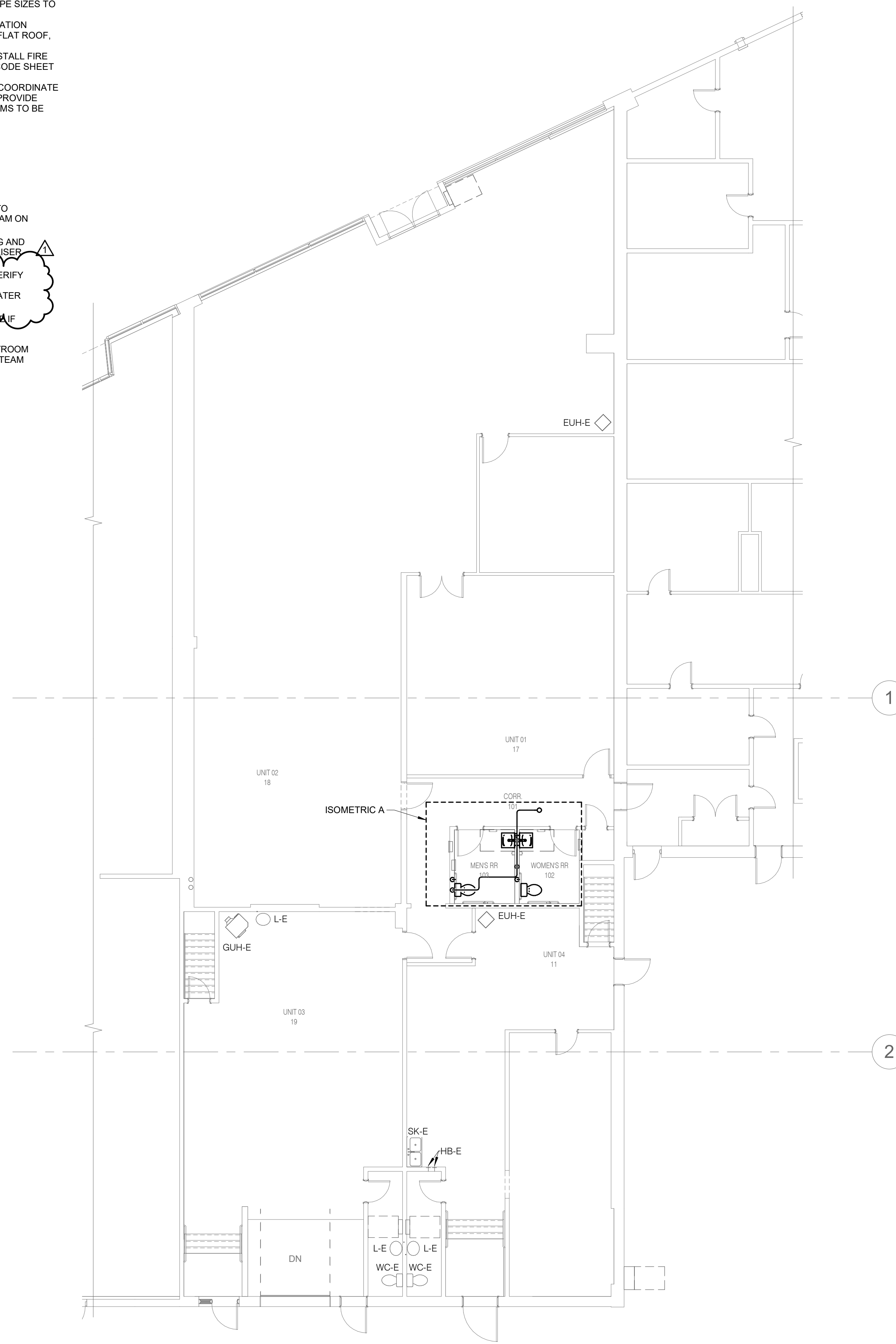
1. XX# REFERS TO EQUIPMENT DESIGNATION. SEE CORRESPONDING SPECIFICATIONS AND EQUIPMENT SCHEDULE FOR FURTHER INFORMATION.
2. ALL WASTE PIPING SHALL HAVE A SLOPE OF 1/8 INCH PER FOOT.
3. SEE PLUMBING ROUGH IN SCHEDULE FOR INFORMATION ABOUT BRANCH PIPE SIZES TO FIXTURES NOT SHOWN ON PLANS.
4. INSTALL ALL VENTS THROUGH ROOF PER ROOF MANUFACTURER'S INSTALLATION INSTRUCTIONS. FOR SLOPED ROOF TERMINATE MIN 12" ABOVE ROOF. ON FLAT ROOF, TERMINATE VENT EVEN WITH THE TOP OF THE PARAPET WALL.
5. SEAL ALL PENETRATIONS THROUGH RATED WALL WITH FIRE STOPPING. INSTALL FIRE STOPPING PER MANUFACTURER'S RECOMMENDATIONS. REFER TO ARCH CODE SHEET FOR RATED WALLS.
6. ROUTE PIPING IN JOIST SPACE AND TIGHT TO DECKING WHERE POSSIBLE. COORDINATE PIPING SYSTEM WITH OTHER MECHANICAL AND ELECTRICAL DISCIPLINES. PROVIDE ADDITIONAL OFFSETS AS NECESSARY TO ALLOW ALL SERVICES AND SYSTEMS TO BE INSTALLED.

KEYNOTES

- 1100 CONNECT NEW 3/4" DOW PIPING TO EXISTING PIPING TEE AND ROUTE TO NEW PLUMBING FIXTURES AS INDICATED. SEE DOMESTIC RISER DIAGRAM ON SHEET M4.1.
- 1101 CONNECT NEW 1/2" DHW PIPING TO EXISTING OPEN ENDED DHW PIPING AND ROUTE TO NEW PLUMBING FIXTURES AS INDICATED. SEE DOMESTIC RISER DIAGRAM ON SHEET M4.1.
- 1102 PROVIDE NEW WATER ENTRY IN BASEMENT. CONTRACTOR TO FIELD VERIFY EXISTING WATER ENTRY PIPE SIZE REQUIRED. ROUTE BACKFLOW PREVENTER DRAINS TO EXISTING FLOOR DRAIN IN BASEMENT. SEE WATER ENTRY DETAIL ON SHEET M3.1 FOR MORE INFORMATION.
- 1200 CONTRACTOR TO SCOPE EXISTING SANITARY MAINS AND DETERMINE IF THE 4" MAINS EXPOSED IN THE BASEMENT ARE FOR SANITARY, STORM DRAIN, OR BOTH. IF 4" PIPING MAINS ENTERING THE BASEMENT ARE SANITARY MAINS, CONNECT NEW 4" SANITARY PIPING FROM NEW RESTROOM GROUP TO EXISTING EXPOSED PIPING. IF NOT, CONTACT THE DESIGN TEAM FOR FURTHER DESIGN EVALUATION.



1 BASEMENT PLAN - PLUMBING
1/8" = 1'-0"



2 FIRST FLOOR PLAN - PLUMBING
1/8" = 1'-0"



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**BASEMENT AND
FIRST FLOOR
PLANS - PLUMBING**

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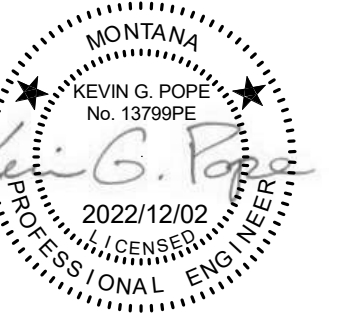
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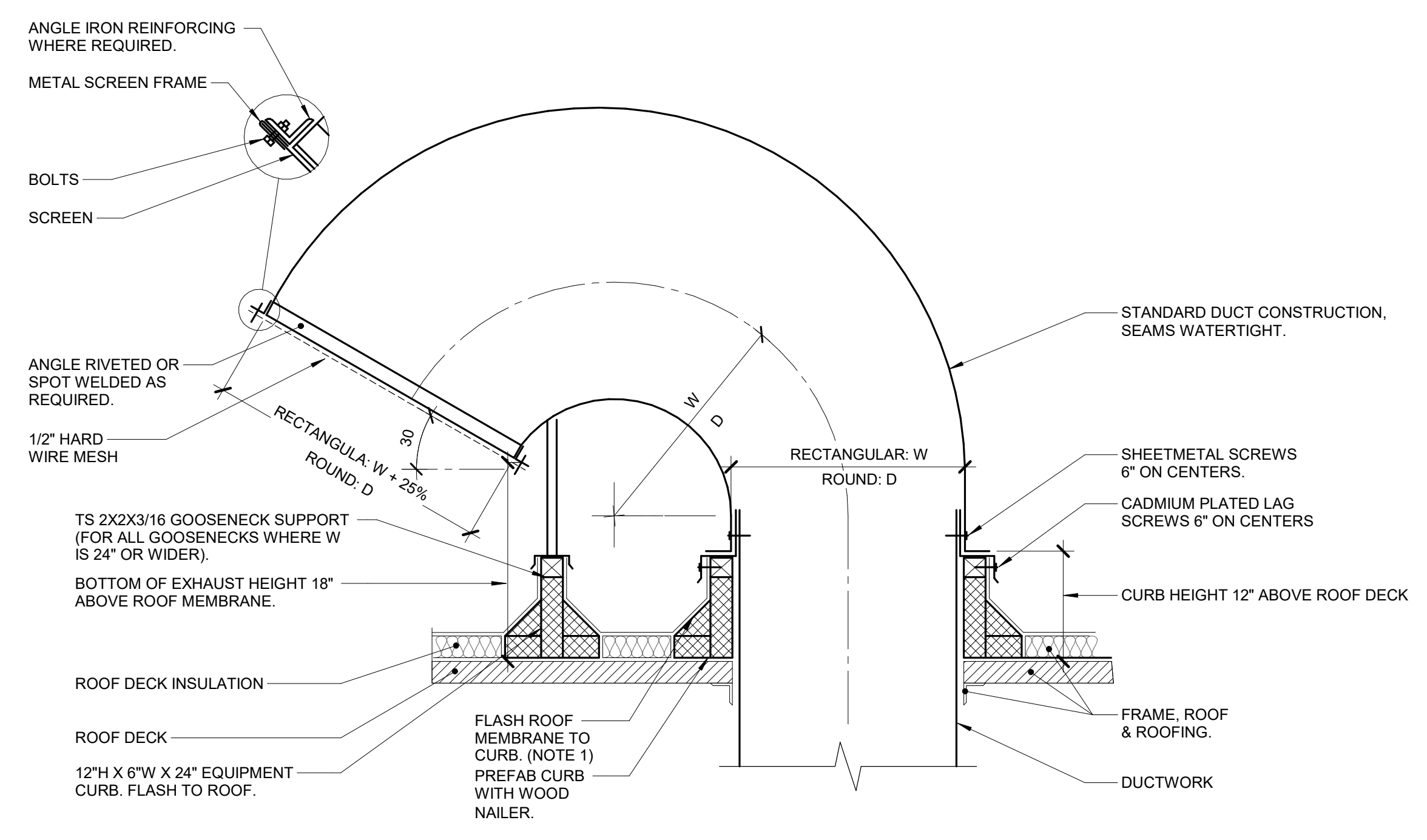
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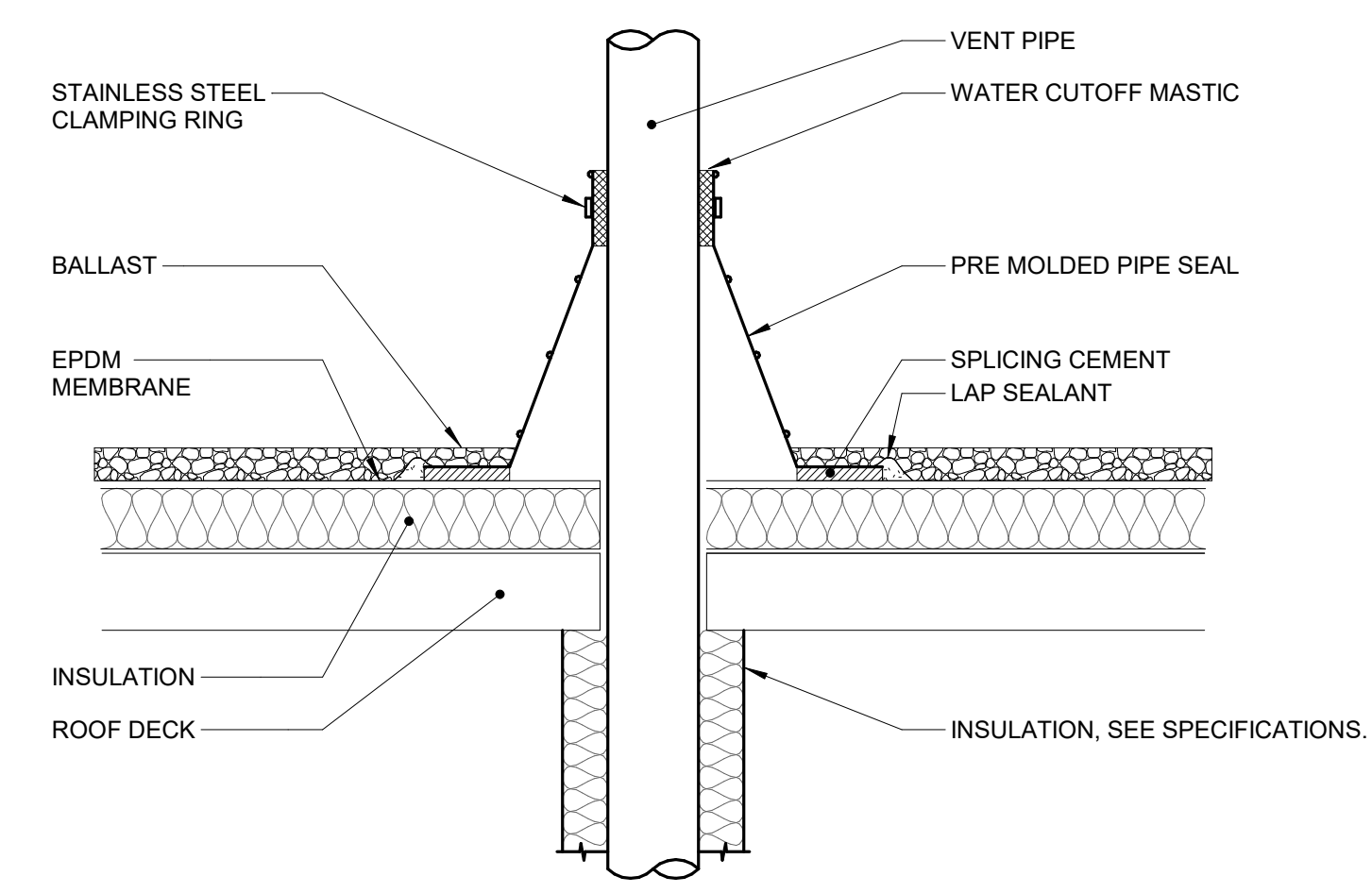
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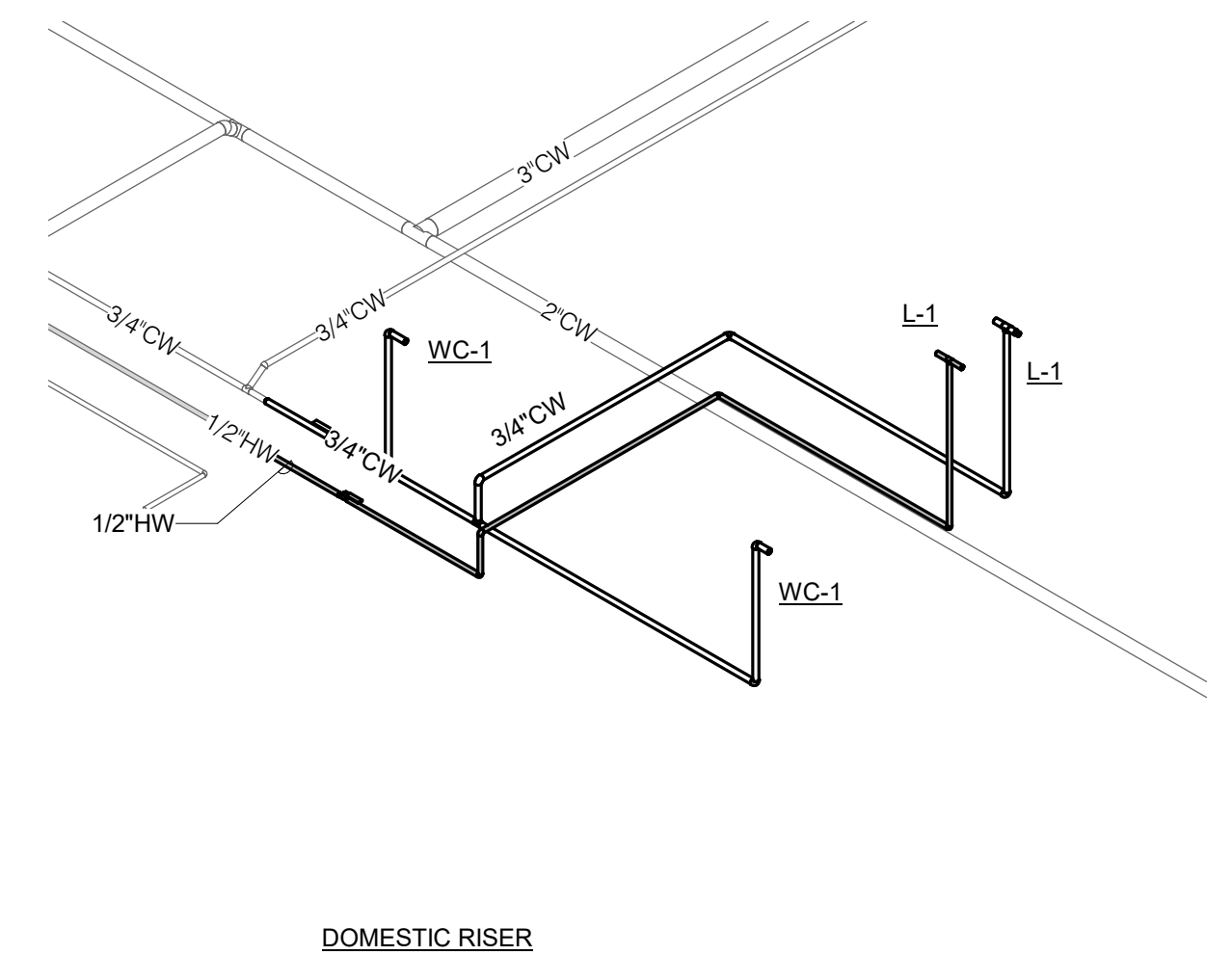
NOTES:
1. ALL ROOF FLASHING SHALL BE PER ROOF MANUFACTURER'S RECOMMENDATIONS.

1 GOOSENECK DETAIL
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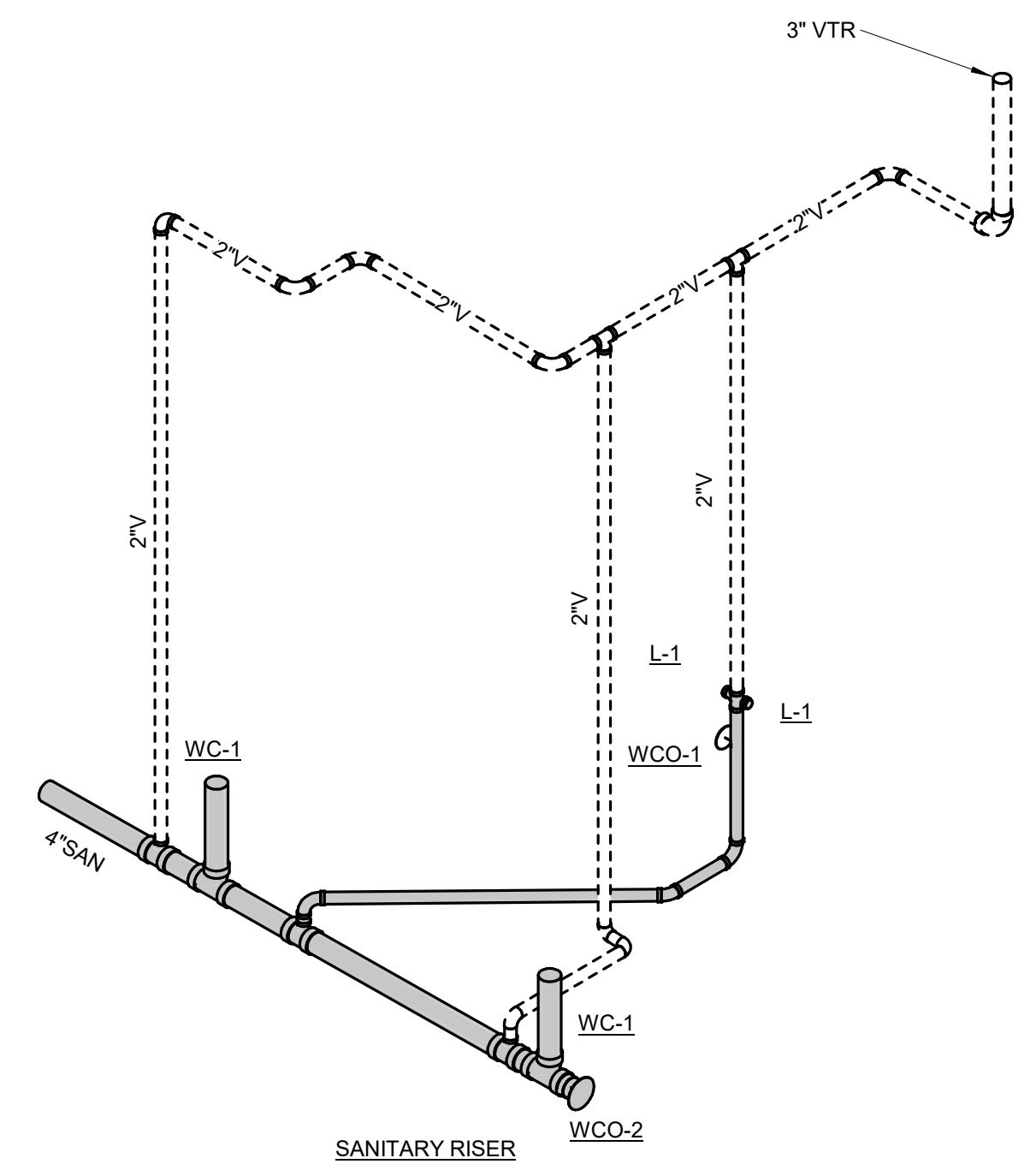


NOTES:
1. VENT PIPE SHALL BE A MINIMUM OF 3\"/>

2 VENT PIPE FLASHING
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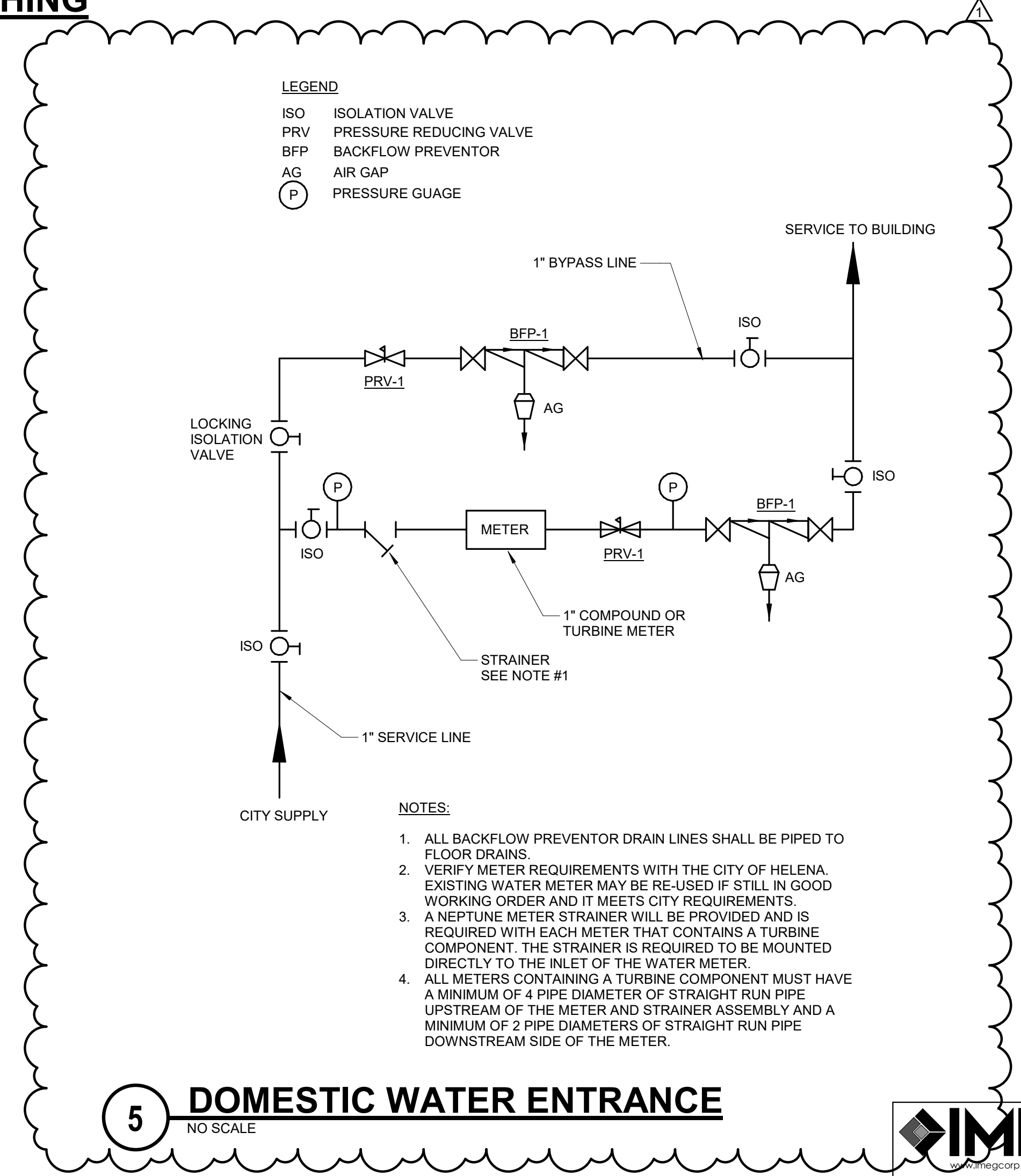


DOMESTIC RISER



SANITARY RISER

3 ISOMETRIC A
NO SCALE



NOTES:
1. ALL BACKFLOW PREVENTOR DRAIN LINES SHALL BE PIPED TO FLOOR DRAINS.
2. VERIFY METER REQUIREMENTS WITH THE CITY OF HELENA. EXISTING WATER METER MAY BE RE-USED IF STILL IN GOOD WORKING ORDER AND IT MEETS CITY REQUIREMENTS.
3. A NEPTUNE METER STRAINER WILL BE PROVIDED AND IS REQUIRED WITH EACH METER THAT CONTAINS A TURBINE COMPONENT. THE STRAINER IS REQUIRED TO BE MOUNTED DIRECTLY TO THE INLET OF THE WATER METER.
4. ALL METERS CONTAINING A TURBINE COMPONENT MUST HAVE A MINIMUM OF 4 PIPE DIAMETER OF STRAIGHT RUN PIPE UPSTREAM OF THE METER AND STRAINER ASSEMBLY AND A MINIMUM OF 2 PIPE DIAMETERS OF STRAIGHT RUN PIPE DOWNSTREAM SIDE OF THE METER.

5 DOMESTIC WATER ENTRANCE
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SCHEDULE GENERAL NOTES:

A. DISCONNECT AND CONTROLLER STARTER FURNISHED AND INSTALLED BY:
MFR = MANUFACTURER
EC = ELECTRICAL CONTRACTOR
MC = FURNISHED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR
MFR/EC = FURNISHED LOOSE BY MANUFACTURER INSTALLED BY ELECTRICAL CONTRACTOR...

B. DISCONNECT TYPE:
F = FUSED
NF = NON-FUSED

C. CONTROLLER STARTER TYPE:
FV = FULL VOLTAGE
WYE = WYE-DELTA
SS = SOLID STATE (SOFT START)
MS = MANUAL STARTER
VFD = VARIABLE FREQUENCY DRIVE
VFD/B = VARIABLE FREQUENCY DRIVE WITH BYPASS

D. FAN RPM SHALL NOT EXCEED 110% OF SCHEDULED VALUE, WITH THE SCHEDULED WHEEL TYPE. SUBSTITUTION OF BI OR BIA FANS FOR FC IS ACCEPTABLE IF EFFICIENCY IS NOT LOWER.

E. NO EQUIPMENT SHALL BE SELECTED ABOVE 90% OF MOTOR NAME PLATE RATING.
F. MUST BE WITHIN +/- 10% OF SCHEDULED RPM.

G. CURB TYPE:
MFR = STANDARD CURB BY MANUFACTURER
GC = BY GENERAL CONTRACTOR
SAC = SOUND ATTENUATOR CURB

FAN SCHEDULE

NOTES:
1. PROVIDE WITH VIBRATION ISOLATORS, CEILING MOUNTING KIT, FLEX CONNECTORS FOR DUCT CONNECTION, FAN SPEED CONTROLLER, BACKDRAFT DAMPER, AND INTEGRAL DISCONNECT.
2. EXHAUST FAN TO BE CONTROLLED BY LIGHTS. COORDINATE FAN CONTROL WITH THE E.C.

TAG NAME	AREA SERVED	CFM	S.P. IN. W.C.	FAN RPM (NOTE F)	DRIVE TYPE	MAX. AMCA SONES	ELECTRICAL (NOTE 1)				WEIGHT	MANUFACTURER	MODEL	NOTES			
							W	VOLTAGE	PHASES	DISCONNECT BY (NOTE A) TYPE (NOTE B)					CONTROLLER/STARTER BY (NOTE A) TYPE (NOTE C)		
EF-1	MEN'S RR 103	75	0.35	862	DIRECT	1.5	30.7	120	1	MFR	NF	MFR	FV	20	COOK	GC-148	1,2
EF-2	WOMEN'S RR 102	75	0.35	862	DIRECT	1.5	30.7	120	1	MFR	NF	MFR	FV	20	COOK	GC-148	1,2

UNIT HEATER SCHEDULE - ELECTRIC

NOTES:
1. COORDINATE FINAL COLOR SELECTION WITH ARCHITECT.
2. PROVIDE WITH MANUFACTURER'S INTEGRAL THERMOSTAT AND DISCONNECT SWITCH.

TAG NAME	AREA SERVED	CFM	EAT 'F	LAT 'F	HEATING ELEMENT			ELECTRICAL			WEIGHT	MANUFACTURER	MODEL	NOTES			
					NUMBER OF STAGES	QTY	KW	VOLTAGE	PHASES	A					DISCONNECT BY (NOTE A) TYPE (NOTE B)	CONTROLLER/STARTER BY (NOTE A)	
EW-H-1	WOMEN'S RR 102	100	60.0	115.0	1	1	1.5	120	1	12.5	MFR	NF	MFR	30	Marley Engineered Products	AWH4000 Series	1,2
EW-H-2	MEN'S RR 103	100	60.0	115.0	1	1	1.5	120	1	12.5	MFR	NF	MFR	30	Marley Engineered Products	AWH4000 Series	1,2
EW-H-3	COR. 101	100	60.0	115.0	1	1	1.5	120	1	12.5	MFR	NF	MFR	30	Marley Engineered Products	AWH4000 Series	1,2

PLUMBING MATERIAL LIST

TAG NAME	DESCRIPTION	MANUFACTURER AND MODEL
BFP-1	BACK FLOW PREVENTER - DOUBLE CHECK, LEAD FREE BRONZE CONSTRUCTION, SAME SIZE AS PIPE, NON-CORROSIVE INTERNAL PARTS, STAINLESS STEEL SPRINGS, SPRING-LOADED CHECK VALVES, BALL STYLE SHUT-OFF VALVES ON INLET AND OUTLET OF UNIT, TEST POINTS WITH SHUT-OFF VALVES, FACTORY TESTED, RATED FOR 175 PSI AT 33°F TO 140°F, 8 PSI (MAXIMUM) PRESSURE DROP AT 10 FPS, ALL PARTS TO BE SERVICEABLE WITHOUT REMOVING UNIT FROM LINE, APPROVED BY USC FCCC & HR. AWWA C510-92, ASSE 1015, IAPMO AND SBCCI LISTED. MOUNT WITHIN 60" OF FINISHED FLOOR. PROVIDE AND INSTALL BRONZE OR EPOXY COATED STRAINER UPSTREAM OF EACH UNIT AND ADDITIONAL VALVE UPSTREAM OF EACH STRAINER. FLOW PRESSURE DROP CURVES SHALL BE SUBMITTED.	WATTS (LF007), WILKINS (350XL), FEBCO (LF850), APOLLO (4ALF-100)
L-1	LAVATORY - ACCESSIBLE, WALL MOUNTED, WHITE VITREOUS CHINA, 20"x18", 4" HIGH, CONCEALED PIPING, SINGLE FAUCET, VOLUME CONTROL, CONCEALED ARM CARRIER. LAVATORY TRIM - LAVATORY TRIM - SINGLE HANDLE MIXING FAUCET, BRASS CONSTRUCTION, CHROME-PLATED FINISH, CONVENTIONAL SPOUT WITH LAMINAR FLOW OUTLET, WASH-RESISTANT PUSH-PULL LEVER HANDLE WITH SUPPLIES AT 4" CENTERS, CERAMIC DISC CARTRIDGE, PERFORATED GRID STRAINER WITH 1-1/4" 17 GAUGE TAILPIECE. MAXIMUM FLOW TO BE 0.5 GPM IN COMPLIANCE WITH ENERGY POLICY ACT OF 2005 AND ASME/ANSI STANDARD A112.18.1M. FAUCET SHALL COMPLY WITH FEDERAL ACT S.3874. PROVIDE RESTRICTIVE DEVICE AS REQUIRED. MIXING VALVE - POINT-OF-USE ANTI-SCALD THERMOSTATIC MIXING VALVE FOR TEMPERED WATER CONTROL, ALL BRONZE/BRASS CONSTRUCTION, ROUGH FINISH, THREADED INLETS, TAMPER RESISTANT SETPOINT, 3/8" COMPRESSION INLETS AND OUTLETS, COLD WATER BYPASS IF USED WITH MIXING FAUCET. 0.5 GPM OUTPUT. UNIT TO MIX 120 DEGREE F HOT WATER SUPPLY AND 40 DEGREE F COLD WATER SUPPLY FOR 110 DEGREE F OUTLET. UNIT SHALL BE ASSE 1070 LISTED AND APPROVED. VALVE SHALL COMPLY WITH FEDERAL ACT S.3874. INSULATION KIT - PRE-MANUFACTURED FOR P-TRAP, STOP VALVES AND SUPPLY LINES. ACCESSORIES - QUARTER-TURN 3/8" CHROME PLATED HEAVY BRASS ANGLE SUPPLY STOPS, CHROME PLATED SOFT COPPER SUPPLY LINES, DRAIN AND OFFSET TAILPIECE, 1-1/4" 17 GAUGE CAST BRASS P-TRAP, SUPPORT CARRIER. MOUNT LAVATORY WITH SUPPORT CARRIER BOLTED SECURELY TO FLOOR. TOP OF RIM SHALL BE AT 31" ABOVE FLOOR IN COMPLIANCE WITH LATEST ADA STANDARD. PROVIDE 2" MINIMUM CLEARANCE FROM FLOOR TO BOTTOM OF APPROVED COMPLIANCE WITH LATEST ADA STANDARD.	LAVATORY - AMERICAN STANDARD (0356-421), KOHLER (K-2007), SLOAN (SS-3103), TOTO (LT307), ZURN (Z5361) LAVATORY TRIM - DELTA STANDARD (6114.116.002), CHICAGO FAUCET (2200-E2805ABCP), MOEN (8417), ZURN (Z82200-XL) MIXING VALVE - WATTS (LFUSG-B), LEONARD (1700-LF), LAWLOR (TMM-1070T), ACORN CONTROLS (ST70), APOLLO (34DLF), POWERS (LFE480), SLOAN (MIX-135-A), SYMMONS (8210CK), WILKINS (ZW3870XL) INSULATION KIT - TRUEBRO (LAV-GUARD), BROCAR PRODUCTS (TRAP WRAP), MCGUIRE (PROWRAP), PLUMBEREX (PRO-EXTREME)
PRV-1	PRESSURE REGULATING VALVE - SELF CONTAINED TYPE UP TO 2" (61 MM) SIZE, DIAPHRAGM ACTUATED, LEAD FREE CAST COPPER-SILICON OR BRONZE BODY, STAINLESS STEEL SPRINGS, INTEGRAL REMOVABLE STAINLESS STEEL STRAINER SCREEN, STAINLESS STEEL TRIM AND SEATS FOR MAXIMUM OPERATING PRESSURE OF 300 PSIG (2070 KPA) GAUGE AND ADJUSTABLE FROM 25-75 PSIG (172-517 KPA). NPT THREADED INLET/OUTLET (SOLDERED INLET/OUTLET) ASSE 1003 LISTED. NEW VALVE INLET, OUTLET, GPM, AND SIZE TO MATCH EXISTING PRV VALVE.	PRESSURE REGULATING VALVE - FISHER TYPE 95H, CASH ACME SERIES B, MASON/ELAN 17 SERIES, TRERICE 921 OR 1002, WATTS LFUSB SERIES.
WC-1	WATER CLOSET - ACCESSIBLE, FLOOR MOUNTED, TANK TYPE, WHITE VITREOUS CHINA, CROSS-COUPLED, Siphon Jet, elongated bowl, bolt caps, 1" ROUGH-IN, FLOAT VALVE WITH VACUUM BREAKER, CHROME-PLATED TRIP LEVER, 1.6 GALLONS PER FLUSH (MAXIMUM) IN COMPLIANCE WITH ENERGY POLICY ACT OF 1992. SEAT - WHITE, EXTRA HEAVY, OPEN FRONT, INJECTION MOLDED SOLID ANTI-MICROBIAL PLASTIC, SELF-SUSTAINING HINGE, STAINLESS STEEL OR PLATED STEEL POSTS AND NUTS. ACCESSORIES - QUARTER-TURN 3/8" CHROME-PLATED HEAVY BRASS ANGLE SUPPLY WITH STOP, CHROME-PLATED SOFT COPPER SUPPLY LINE. TOP OF SEAT SHALL BE AT 16"-17" ABOVE FINISHED FLOOR. FLUSH HANDLE SHALL BE LOCATED ON THE WIDE SIDE OF THE TOILET STALL AND OPERATE WITH NO GREATER THAN 5 LB FORCE IN COMPLIANCE WITH LATEST ADA STANDARDS. VERIFY EQUIPMENT REQUIREMENTS AND ROUGH-IN LOCATIONS.	WATER CLOSET - ZURN (Z5500), ORANGE (3844), KOHLER (K-3979), ELJER (091-2175), GERBER (21-718), TOTO (CST744SL) SEAT - BEMIS (3155SSCT), CHURCH (1315C), BENEKE (533PC), OLSONITE (95), SAME AS WATER CLOSET MANUFACTURER
WCO-1	WALL CLEANOUT - TEE, CAST IRON ACCESS BODY, GAS AND WATERTIGHT THREADED PLUG, ROUND STAINLESS STEEL ACCESS COVER, EXTENDED MACHINE SCREW.	ZURN (Z-1446), SMITH (4530), WADE (8560), JOSAM (58910), WATTS (CO-460), MIFAB (C1460-RD)
WCO-2	WALL CLEANOUT - END CAP, CAST IRON ACCESS BODY, GAS AND WATERTIGHT BRONZE OR BRASS THREADED PLUG, ROUND STAINLESS STEEL ACCESS COVER, EXTENDED MACHINE SCREW.	ZURN (Z-1441), SMITH (4422), WADE (W-3460-R8550), JOSAM (58600-CO), WATTS (CO-380-RD), MIFAB (C1450-RD)

DUCTWORK INSULATION (WRAP & LINER) SCHEDULE

SYSTEM	LOCATION	SERVICE NOTE 1	EXPOSED		CONCEALED		MINIMUM R-VALUE	SPECIFIC NOTES
			RECTANGULAR	ROUND / OVAL	RECTANGULAR	ROUND / OVAL		
EXHAUST AIR	INDOOR	MAIN	---	---	---	---	---	1, 2, 3

GENERAL NOTES:
1) MINIMUM R-VALUE BASED ON 2021 IECC REQUIREMENTS.
2) DUCT SIZES SHOWN ARE INSIDE FREE AREA DIMENSIONS. LINER, WHERE USED, WILL NEED TO BE FACTORED INTO THE DUCT SIZE.
3) THE INSULATION THICKNESS GIVEN MEETS OR EXCEEDS THE REQUIRED R-VALUE FOR THE BASIS OF DESIGN (JOHNS MANVILLE). INSTALLED PRODUCT SHALL MEET OR EXCEED THE LISTED R-VALUE; INSULATION THICKNESS AND CORRESPONDING DUCT SIZE (FOR LINER) SHALL BE INCREASED FOR ALTERNATES THAT CANNOT MEET THIS THICKNESS TO PERFORMANCE CONDITION.
4) R-VALUES FOR WRAP SHALL BE SHOWN USING THEIR INSTALLED CONDITION RATING AS NOTED ON THE MANUFACTURER'S SPECIFICATION SHEET.
5) JACKET (PVC OR METAL) SHALL BE INSTALLED AS REQUIRED BY THE SPECIFICATIONS.
6) FLEXIBLE DUCT SHALL BE AS NOTED IN THE "AIR DUCT ACCESSORIES" SPECIFICATION.
7) DUCT WRAP IS ALLOWED TO BE BLANKET OR BOARD; CONTRACTOR OPTION.
8) MULTIPLE LAYERS OF WRAP OR LINER TO ACHIEVE TOTAL R-VALUE ARE ACCEPTABLE IF INSTALLED PER MANUFACTURER'S INSTRUCTIONS.

SPECIFIC NOTES:
1) INSULATION PROVIDED FOR ACOUSTICS OR OTHER PERFORMANCE CRITERIA, NO ENERGY CODE REQUIREMENT
2) EXHAUST SYSTEMS SHALL BE PROVIDED WITH 1" WRAP INSULATION BETWEEN SYSTEM BACKDRAFT DAMPER AND PENETRATION OF BUILDING EXTERIOR OR ALL DUCT WITHIN 20' OF BUILDING EXTERIOR PENETRATION WHICHEVER IS LESS TO PREVENT CONDENSATION.
3) WRAP USED EXTERIOR TO THE BUILDING SHALL BE PROTECTED USING FIELD APPLIED METAL JACKETS.

DEFINITIONS:
EXPOSED DUCT: DUCT THAT IS EXPOSED TO VIEW IN OCCUPIED OR UNOCCUPIED SPACES THAT ARE CONDITIONED.
CONCEALED DUCT: DUCT THAT IS CONCEALED IN CHASES, SHAFTS, CEILING PLENUMS OR OTHER ASSEMBLY WITHIN THE INSULATED BUILDING ENVELOPE.
MAIN DUCT: DUCT FROM THE AIR HANDLING UNIT TO FINAL TERMINAL TAKEOFF.
MAIN TO TERMINAL DUCT: THIS IS A BRANCH DUCT; TYPICALLY THE DUCT FROM THE MAIN TAKEOFF TO THE TERMINAL (VAV BOX OR EQUIVALENT).
TERMINAL TO GRD DUCT: THIS IS A BRANCH DUCT DOWNSTREAM OF THE TERMINAL (VAV BOX, HEAT PUMP, FAN COIL OR EQUIVALENT).
OUTSIDE AIR TEMPERED: TEMPERED OUTSIDE AIR IS AIR THAT IS HEATED OR COOLED TO WITHIN 10 DEG F OF THE SPACE/SURROUNDING TEMPERATURE.
INDOOR: DUCT LOCATIONS WITHIN THE INSULATED BUILDING ENVELOPE.
OUTDOOR: DUCT LOCATIONS OUTSIDE OF THE INSULATED BUILDING ENVELOPE (ON GRADE, ROOF, EXTERIOR SOFFIT, EXTERIOR CHASE, ATTIC, CRAWLSPACE, ETC.).

PLUMBING INSULATION SCHEDULE

SYSTEM	INSULATION TYPE	FLUID TEMPERATURE RANGE	PIPE SIZES					SPECIFIC NOTES
			<1"	1" to 1-1/4"	1-1/2" to 3"	4" to 6"	8" and Larger	
DOMESTIC COLD WATER	FLEXIBLE ELASTOMERIC OR GLASS FIBER PREFORMED PIPE INSULATION	---	1/2"	1/2"	1"	1"	1"	1
DOMESTIC HOT WATER AND DOMESTIC HOT WATER REIRC	GLASS FIBER OR MINERAL FIBER PREFORMED PIPE INSULATION	141 TO 200 DEG F < 140 DEG F	1-1/2"	1-1/2"	2"	2"	2"	
VENTS, STORM AND OVERFLOW	FLEXIBLE ELASTOMERIC OR GLASS FIBER PREFORMED PIPE INSULATION	---	1/2"	1/2"	1"	1"	1"	1

GENERAL NOTES:
1) FOR PIPING EXPOSED TO THE OUTSIDE AMBIENT CONDITIONS OR PIPING PROVIDED WITH HEAT TRACE, INCREASE THICKNESS OF INSULATION BY 1/2".
2) FOR PIPING EXPOSED TO THE OUTSIDE AMBIENT CONDITIONS PROVIDE PROTECTIVE JACKET (SEE SPECIFICATIONS).
3) ALL INSULATION EXPOSED TO UV CONDITIONS SHALL BE PROTECTED IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS.
4) MINIMUM THERMAL CONDUCTIVITY "K" VALUE FOR FLEXIBLE ELASTOMERIC SHALL BE 0.27 AT 75 DEG. F
5) MINIMUM THERMAL CONDUCTIVITY "K" VALUE FOR GLASS FIBER SHALL BE 0.23 AT 75 DEG. F

SPECIFIC NOTES:
1) PROVIDE PIPE INSULATION WICKING SYSTEM ON ALL EXISTING SYTEMS THAT ARE OPERATIONAL DURING INSTALLATION.

PLUMBING ROUGH-IN SCHEDULE

NOTES: (APPLIES TO ALL PLUMBING FIXTURES LISTED BELOW)
1) SIZES SHOWN ARE MINIMUMS. LARGER SIZES SHOWN ON THE DRAWING SHALL DICTATE THE ROUGH-IN SIZE. 2) SANITARY RISERS UP IN WALL TO FIXTURES SHALL BE A MINIMUM OF 2". 3) DOMESTIC WATER BRANCH PIPING OUTSIDE OF THE WALL/CHASE SHALL BE A MINIMUM OF 3/4" UNLESS NOTED OTHERWISE. ONLY THE FINAL RISE-DROP SHALL BE SMALLER. 4) FINAL SANITARY SIZE SHALL MATCH P-TRAP SIZE (REFER TO MATERIAL LIST).

TAG NAME	DESCRIPTION	COLD WATER	HOT WATER	SANITARY	VENT
L-1	LAVATORY (ACCESSIBLE)	1/2"	1/2"	1 1/2"	1 1/2"
WC-1	WATER CLOSET	3/4"	-	4"	2"

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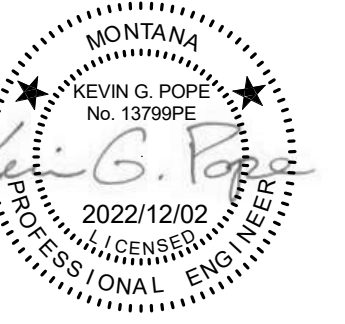
MECHANICAL SCHEDULES

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M5.2

2.4 DUCT LINER

A. Fibrous-Glass Duct Liner: Comply with ASTM C 1071, NFPA 90A, or NFPA 90B; and with NAIMA AH124, "Fibrous Glass Duct Liner Standard."

2.5 HANGERS AND SUPPORTS

A. Hanger Rods for Noncorrosive Environments: Cadmium-plated steel rods and nuts.
B. Strap and Rod Sizes: Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Table 5-1, "Rectangular Duct Hangers Minimum Size," and Table 5-2, "Minimum Hanger Sizes for Round Duct."

C. Steel Cables for Galvanized-Steel Ducts: Galvanized steel complying with ASTM A 603.

2.6 MANUAL VOLUME DAMPERS

A. Standard, Steel, Manual Volume Dampers as detailed or noted:

2.7 FLANGE CONNECTORS

A. Description: Add-on or roll-formed, factory-fabricated, slide-on transverse flange connectors, gaskets, and components.
B. Material: Galvanized steel.
C. Gage and Shape: Match connecting ductwork.

2.8 TURNING VANES

A. Manufactured Turning Vanes for Metal Ducts: Curved blades of galvanized sheet steel; support with bars perpendicular to blades set, set into vane runners suitable for duct mounting.

2.9 FLEXIBLE DUCTS

A. Flexible Duct Connectors:
1. Clamps: Stainless-steel band with cadmium-plated hex screw to tighten band with a worm-gear action in sizes 3 through 18 inches, to suit duct size.

PART 3 - EXECUTION

3.1 DUCT INSTALLATION

A. Drawing plans, schematics, and diagrams indicate general location and arrangement of duct system. Indicated duct locations, configurations, and arrangements were used to size ducts and calculate friction loss for air-handling equipment sizing and for other design considerations. Install duct systems as indicated unless deviations to layout are approved on Shop Drawings and Coordination Drawings.

B. Install ducts according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" unless otherwise indicated.

3.2 DUCT SEALING

A. Seal ducts for duct static-pressure, seal classes, and leakage classes specified in "Duct Schedule" Article contained within this specification according to SMACNA's "HVAC Duct Construction Standards - Metal and Flexible."

3.3 HANGER AND SUPPORT INSTALLATION

A. Comply with SMACNA's "HVAC Duct Construction Standards - Metal and Flexible," Chapter 5, "Hangers and Supports."

3.4 ACCESSORY INSTALLATION

A. Install duct accessories according to applicable details in SMACNA's "HVAC Duct Construction Standards - Metal and Flexible" for metal ducts and in NAIMA AH116, "Fibrous Glass Duct Construction Standards," for fibrous-glass ducts.

END OF SECTION 233000

SECTION 233400 - FANS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

PART 2 - PRODUCTS

2.1 FANS

A. Provide the fan indicated in the equipment schedule or an equal by:
1. Acme Engineering & Mfg. Corp.
2. Aerovent; a Twin City Fan Company
3. Breidert Air Products.
4. Greenheck.
5. Loren Cook Company.
6. NuTone Inc.
7. PenttBarry.

2.2 REFER TO SCHEDULE FOR CAPACITY AND CHARACTERISTICS

PART 3 - EXECUTION

3.1 INSTALLATION

3.2 CONNECTIONS

A. Duct installation and connection requirements are specified in other Division 23 Sections. Drawings indicate general arrangement of ducts and duct accessories. Make final duct connections with flexible connectors. Flexible connectors are specified in Division 23 Section "Air Duct Accessories."

3.3 ADJUSTING

A. Adjust damper linkages for proper damper operation.
B. Adjust belt tension.
C. Refer to Division 23 Section "Testing, Adjusting, and Balancing for HVAC" for testing, adjusting, and balancing procedures.
D. Replace fan and motor pulleys as required to achieve design airflow.
E. Lubricate bearings.

END OF SECTION 233400

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ELECTRICAL GENERAL NOTES:

- "NL" INDICATES LUMINAIRE IS UNSWITCHED FOR NIGHT LIGHT.
- SHADED LUMINAIRE OR DEVICE INDICATES LUMINAIRE OR DEVICE IS CONNECTED TO AN EMERGENCY CIRCUIT OR CONTAINS INTEGRAL EMERGENCY POWER SOURCE.
- REFER TO SHEET E6.1 FOR LUMINAIRE SCHEDULE.
- (L#/#) DENOTES THE LIGHTING SEQUENCE OF OPERATIONS FOR THIS SPACE. REFER TO SHEET E6.1.
- VACANCY/OCCUPANCY SENSOR LAYOUT: SENSORS ARE SHOWN ON THE PLANS FOR DESIGN INTENT AND MAY NOT REPRESENT EVERY DEVICE. PROVIDE MANUFACTURER SPECIFIC FLOOR PLAN LAYOUTS SHOWING LOCATION, ORIENTATION, AND COVERAGE AREA OF EACH CONTROL DEVICE, SENSOR, AND CONTROLLER/INTERFACE. AREAS REQUIRING MULTIPLE SENSOR DEVICES FOR APPROPRIATE COVERAGE, SUBMIT SPECIFIC MANUFACTURER-APPROVED SENSOR LAYOUT AS AN OVERLAY DIRECTLY ON THE PROJECT DRAWINGS, EITHER IN PRINT OR APPROVED ELECTRONIC FORM.

LUMINAIRE KEY:

- F1 = FIXTURE TAG
- T = CIRCUIT NUMBER
- a = SWITCH DESIGNATION
- NL = SUBSCRIPT (IF APPLICABLE)
- Z = ZONE DESIGNATION

*IF LABEL IS ORIENTED HORIZONTALLY A SLASH WILL SEPARATE THIS INFORMATION. EX: F1 / 1 / a / NL

DEVICE KEY:

- A = MOUNTING (IF APPLICABLE)
- 1 = CIRCUIT NUMBER

*IF LABEL IS ORIENTED HORIZONTALLY A SLASH WILL SEPARATE THIS INFORMATION. EX: A / 1

ELECTRICAL MOUNTING SUBSCRIPT KEY:

- A MOUNT AT +6" TO CENTERLINE ABOVE COUNTER OR BACKSPASH
- C MOUNT AT CEILING
- H MOUNT ORIENTED HORIZONTALLY
- EWC ELECTRIC WATER COOLER

ELECTRICAL RENOVATION NOTES:

THESE NOTES APPLY TO ALL ELECTRICAL SHEETS AND TRADES, INCLUDING BUT NOT LIMITED TO, LIGHTING, POWER, AND SYSTEMS.

- EXISTING CONDITIONS ARE SHOWN BASED ON INFORMATION OBTAINED FROM FIELD SURVEYS, EXISTING BUILDING DOCUMENTS, AND STAFF. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS BEFORE PROCEEDING.
- NOT ALL EXISTING EQUIPMENT, LUMINAIRES, AND CONDUIT ARE SHOWN. VERIFY EXISTING CONDITIONS AND REPORT ANY CONFLICTS WITH NEW WORK BEFORE STARTING WORK.
- FIELD VERIFY THE AVAILABLE CLEARANCES FOR CABLE TRAY, BUSWAY AND CONDUITS BEFORE FABRICATION. RISES AND DROPS MAY BE NECESSARY BECAUSE OF EXISTING FIELD CONDITIONS.
- EACH CONTRACTOR SHALL FIELD VERIFY ACCESSIBILITY TO THE AREA OF THEIR WORK AND SHALL NOTIFY THE GENERAL CONTRACTOR CONSTRUCTION MANAGER PRIOR TO BIDDING IF OTHER UTILITIES ARE REQUIRED TO BE REMOVED OR RELOCATED TO ALLOW ACCESS TO THEIR AREA OF WORK.
- WHERE EXISTING ELECTRICAL SYSTEMS ARE LOCATED IN AREAS THAT CONFLICT WITH NEW EQUIPMENT, PIPING, OR DUCTWORK TO BE INSTALLED, EACH CONTRACTOR SHALL EITHER ARRANGE NEW EQUIPMENT, CONDUIT, OR DUCTWORK IN SUCH A FASHION THAT IT DOES NOT CONFLICT WITH EXISTING SYSTEMS, OR REWORK EXISTING ELECTRICAL SYSTEMS TO ALLOW FOR INSTALLATION OF NEW EQUIPMENT, PIPING, OR DUCTWORK.

ELECTRICAL INSTALLATION NOTES:

- THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADA STANDARDS FOR ACCESSIBLE DESIGN.
- CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE WITH NUMBERING ON THE PANEL PROVIDED. COMMON NEUTRALS MAY NOT BE USED FOR BRANCH CIRCUITS. BALANCE THE LOAD ON PANEL AS EVENLY AS POSSIBLE BETWEEN EACH PHASE.
- FLUSH MOUNT ALL LIGHTING CONTROL DEVICES AT +42" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. DEVICES MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED.
- FLUSH MOUNT ALL DUPLEX RECEPTACLES AND TECHNOLOGY OUTLETS AT +18" FROM FLOOR (CENTERLINE DIMENSION), EXCEPT WHERE OTHERWISE NOTED. RECEPTACLES AND OUTLETS MAY BE SURFACE MOUNTED WHEN CONDUIT IS SPECIFIED EXPOSED. MOUNT EXTERIOR LOCATED RECEPTACLES WITH WHILE-IN-USE COVERS AT +20" FROM FINISHED GRADE (CENTER DIMENSIONS) TO MAINTAIN INSTALLATION ADA COMPLIANCE.
- ALL MATERIALS USED TO SEAL PENETRATIONS OF FIRE RATED WALLS AND FLOORS SHALL BE TESTED AND CERTIFIED AS A SYSTEM PER ASTM E814 STANDARDS FOR FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS. REFER TO 26 05 03 FOR ADDITIONAL INFORMATION AND REQUIREMENTS SPECIFIC TO FIRESTOPPING.
- CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL CEILING MOUNTED DEVICES AND EQUIPMENT WITH LUMINAIRES, SPRINKLER, AND CEILING DIFFUSERS. CENTER ALL DEVICES IN CEILING TILE PATTERN. SMOKE DETECTORS AND OCCUPANCY/VACANCY SENSORS SHALL BE LOCATED NO CLOSER THAN 3 FEET TO AN AIR SUPPLY DIFFUSER OR RETURN GRILLE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
- ALL WELDING SHALL BE ACCORDING TO AMERICAN WELDING SOCIETY STANDARDS. CONTRACTOR SHALL FURNISH TO THE ARCHITECT/ENGINEER CERTIFICATES QUALIFYING EACH WELDER, PRIOR TO START OF WORK. THE ARCHITECT/ENGINEER RESERVES THE RIGHT TO REQUIRE QUALIFYING DEMONSTRATION, AT THE CONTRACTOR'S EXPENSE, OF ANY WELDERS ASSIGNED TO THE JOB.
- EACH CONTRACTOR IS RESPONSIBLE FOR DAMAGE CAUSED BY THEIR ACTIONS TO THE WALLS, FLOORS, CEILINGS, AND ROOFS. THE CONTRACTOR WHOSE WORK CAUSES DAMAGE IS RESPONSIBLE FOR PATCHING TO MATCH ORIGINAL CONSTRUCTION, FIRE RATING, AND FINISH.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL AND OTHER ELECTRICAL PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED DEVICES.
- ELECTRICAL IDENTIFICATION. REFER TO SPECIFICATION SECTION 26 05 53 FOR COLOR/LABEL REQUIREMENTS FOR CONDUIT, BOX, CABLE/WIRE, AND EQUIPMENT.

VIEW KEY

NAME 10'-0" LEVEL NAME HEIGHT ABOVE PROJECT 0'-0"

INDICATES DIRECTION OF TRUE NORTH

PLAN OR DETAIL NUMBER

PLAN OR DETAIL NAME

1/8" = 1'-0"

PLAN OR DETAIL SCALE

INDICATES SIMILAR DETAIL REFERENCED IN MULTIPLE LOCATIONS

DETAIL REFERRED TO BY SECTION CUT

SHEET DETAIL IS LOCATED ON

LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)

NEW

EXISTING TO BE REMOVED (SHORT DASHED PATTERN)

NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)

EXISTING

EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN)

EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

*TAG-E TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

TAG UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
GB	GB	26 05 26	GROUND BUS
IBT	IBT	26 05 26	INTERSYSTEM BONDING TERMINATION
E	ECONN	26 05 33	ELECTRICAL CONNECTION
J	JB	26 05 33	JUNCTION BOX
FB	FB-# or PT-#	26 27 26	FLOOR BOX or POKE THROUGH
RI	RI-TECH	26 05 33	TECHNOLOGY OUTLET ROUGH-IN
RI	RI-TECH-C	26 05 33	TECHNOLOGY ROUGH-IN, CEILING
EPO	EPO	26 09 16 26 32 13	EMERGENCY STOP / POWER OFF (N.C. AND N.O. CONTACT)
PB	PB	26 09 16	MOMENTARY PUSHBUTTON OPERATOR
PANEL	PANEL-###	26 24 16	PANELBOARD - RECESS MOUNT
PANEL	PANEL-###	26 24 16	PANELBOARD - SURFACE MOUNT
MX-#MS-# CB-#CS-#	MX-#MS-# CB-#CS-#	26 24 19	MANUAL SWITCH / STARTER / COMBINATION STARTER/ CIRCUIT BREAKER.
ATF-#	ATF-#	26 22 00	AUTOMATIC TRANSFER SWITCH
CB-#	CB-#	26 28 16	CIRCUIT BREAKER - SURFACE MOUNTED.
DS-#FDS-#DSS-#	DS-#FDS-#DSS-#	26 28 16	DISCONNECT. REFER TO DISC/STA SCHEDULE
HD	HD	ARCH	HAND DRYER
PP	PP	ARCH	PUSH PAD

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
REC-DUP	REC-DUP	26 27 26	DUPLEX RECEPTACLE, 125V
REC-DUP-GFI	REC-DUP-GFI	26 27 26	DUPLEX GFI RECEPTACLE, 125V
REC-DUP-WP	REC-DUP-WP	26 27 26	DUPLEX GFI WEATHERPROOF RECEPTACLE 125V
REC-SIM-520R	REC-SIM-520R	26 27 26	SIMPLEX RECEPTACLE, 125V
REC-TAMP	REC-TAMP	26 27 26	DUPLEX RECEPTACLE, TAMPER RESISTANT, 125V
REC-TAMP-GFI	REC-TAMP-GFI	26 27 26	GFI DUPLEX RECEPTACLE, TAMPER RESISTANT, 125V
REC-TAMP-QUAD	REC-TAMP-QUAD	26 27 26	QUAD RECEPTACLE, TAMPER RESISTANT, 125V
REC-QUAD	REC-QUAD	26 27 26	QUAD RECEPTACLE, 125V
REC-QUAD-GFI	REC-QUAD-GFI	26 27 26	QUAD GFI RECEPTACLE, 125V
REC-QUAD-USB	REC-QUAD-USB	26 27 26	QUAD RECEPTACLE, USB 125V
REC-QUAD-WP	REC-QUAD-WP	26 27 26	QUAD GFI WEATHERPROOF RECEPTACLE, 125V

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
S ₃	SW-3W	26 09 33	SWITCH - THREE WAY
OC _D	SW-OC-D	26 09 33	OCCUPANCY SENSOR - DUAL TECHNOLOGY
S _O	SW-OC-P-O	26 09 33	SWITCH - OCCUPANCY SENSOR WALL SWITCH

SYMBOL:	TAG:	SPEC SECTION:	DESCRIPTION:
			LINEAR LUMINAIRES
			TROFFER
			WALL SCONCE LUMINAIRE
			DOWNLIGHT LUMINAIRE
			AIMABLE OR WALL WASH LUMINAIRE
			INDUSTRIAL LUMINAIRE
			WALL BRACKET LUMINAIRE
			POLE MOUNTED LUMINAIRE
			SINGLE FACE EXIT SIGN
			DOUBLE FACE EXIT SIGN
			WALL/CEILING EMERGENCY EXIT SIGN
			EMERGENCY UNIT



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ELECTRICAL
COVERSHEET

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**BASEMENT AND
FIRST FLOOR
DEMOLITION
PLANS -
ELECTRICAL**

Sheet No.

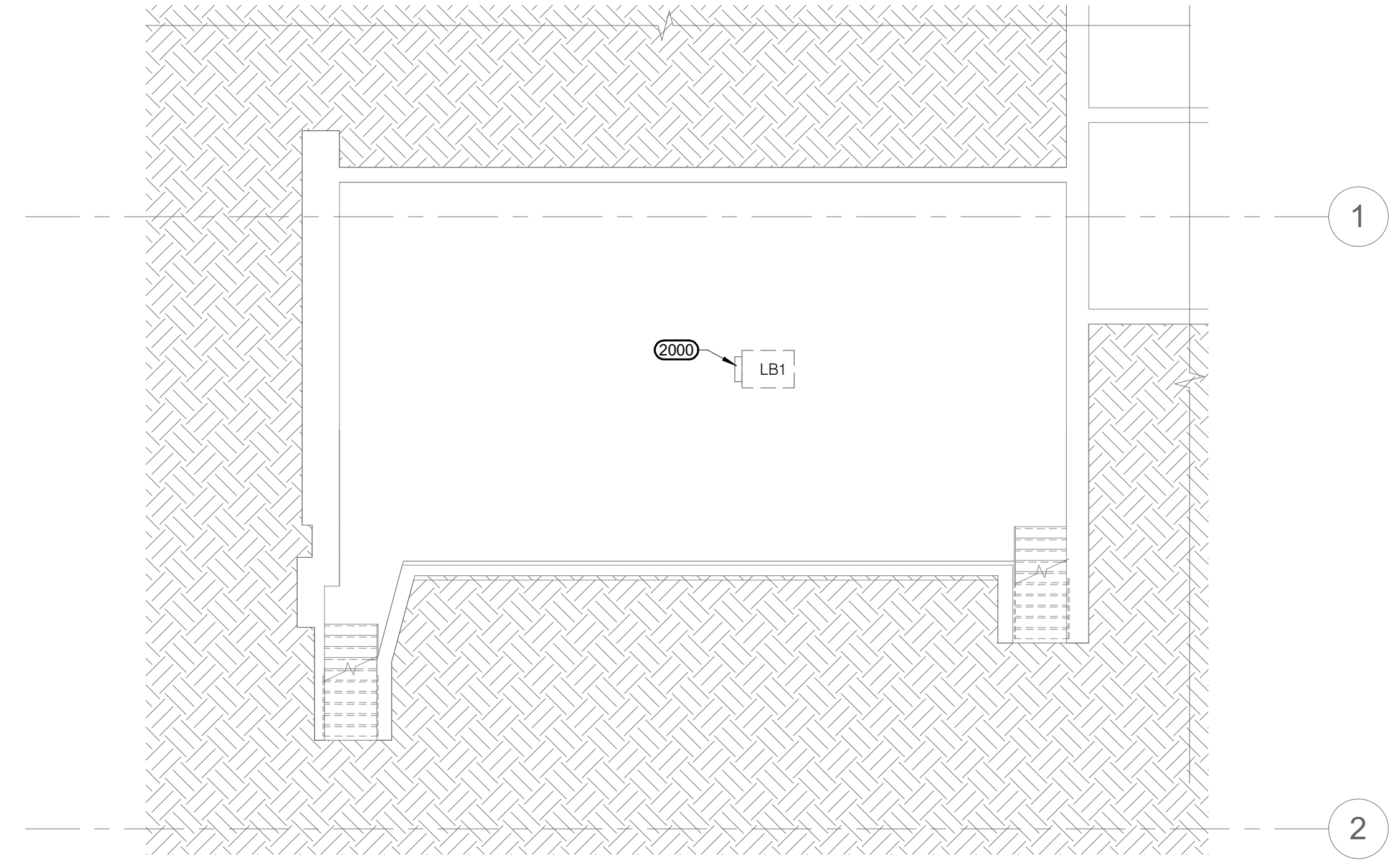
E1.1

GENERAL NOTES

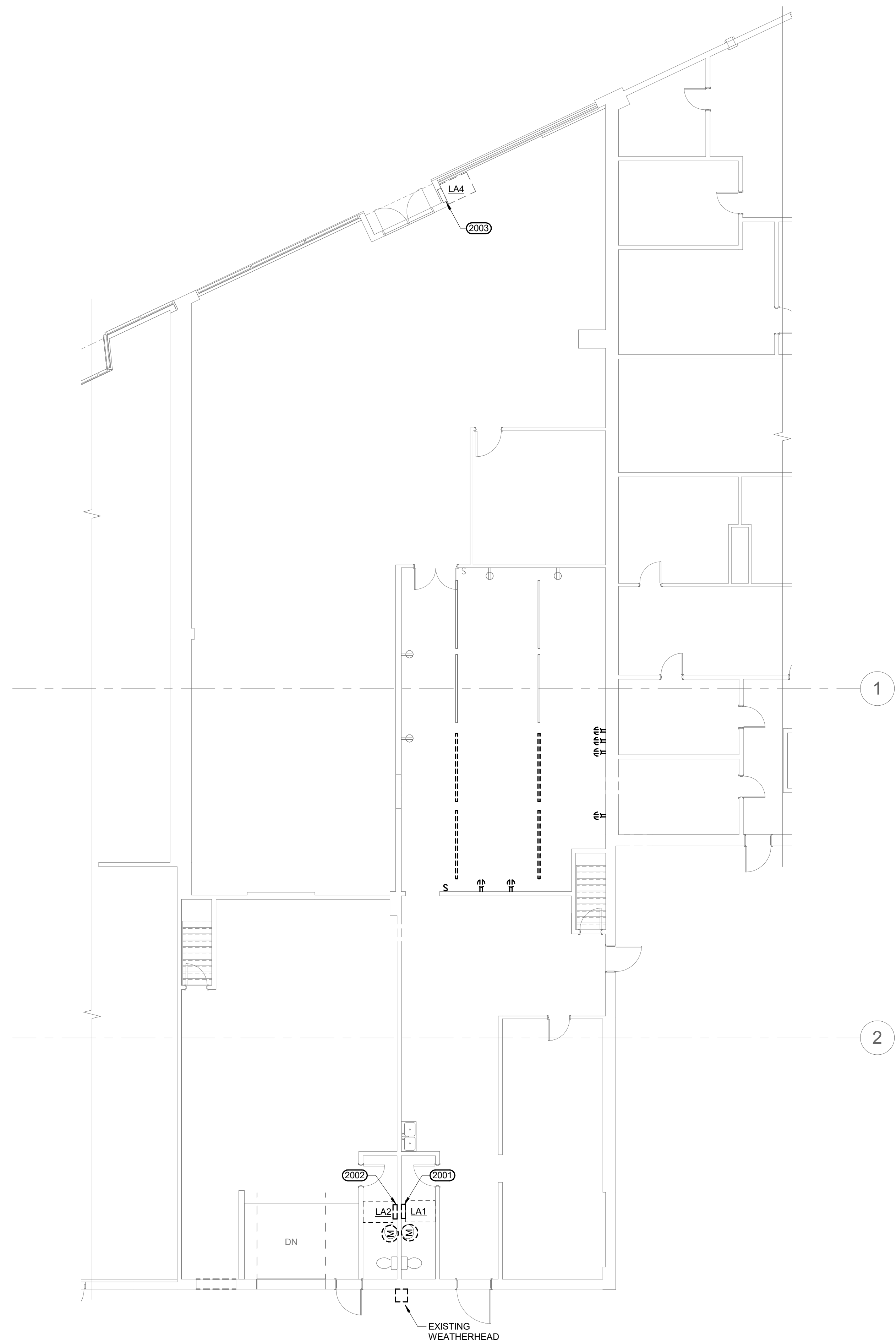
- SEE ONE LINE DIAGRAMS ON SHEET E3.1 FOR ADDITIONAL ELECTRICAL REQUIREMENTS AND INFORMATION.

KEYNOTES

- EXISTING PANEL TO REMAIN. NO PANEL LABEL EXISTS. LABEL SHOWN, "LB1" WILL BE PROVIDED IN THIS SCOPE OF WORK. EXACT ORIGIN AND AMPERAGE OF THIS PANEL IS UNKNOWN AND SHALL BE CIRCUIT TRACED BY EC TO IDENTIFY PANELBOARD AMPERAGE. WHERE IT IS PRESENTLY FED FROM, CIRCUIT BREAKER SIZE SERVING PANEL AND FEEDER SIZE. SUBMIT FINDINGS TO ENGINEER OF RECORD FOR REVIEW.
- EXISTING PANEL AND ASSOCIATED METER TO BE REMOVED. NO PANEL LABEL EXISTS. LABEL SHOWN, "LA1", WILL BE PROVIDED IN THIS SCOPE OF WORK. SAVE AND PROTECT EXISTING CIRCUITS REMAINING FOR RECONNECTION TO NEW PANELBOARD. ELECTRICAL CONTRACTOR SHALL CIRCUIT TRACE ALL CIRCUITS TO DETERMINE IF THEY ARE BEING USED AND ONLY RECONNECT THOSE CIRCUITS TO THE NEW PANEL. REMOVE ALL OLD WIRING FROM CIRCUITS NOT BEING USED. PROVIDE A PANEL DIRECTORY THAT MATCHES THE EXISTING CONDITIONS.
- EXISTING PANEL AND ASSOCIATED METER TO BE REMOVED. NO PANEL LABEL EXISTS. LABEL SHOWN, "LA2", WILL BE PROVIDED IN THIS SCOPE OF WORK. SAVE AND PROTECT EXISTING CIRCUITS REMAINING FOR RECONNECTION TO NEW PANELBOARD. ELECTRICAL CONTRACTOR SHALL CIRCUIT TRACE ALL CIRCUITS TO DETERMINE IF THEY ARE BEING USED AND ONLY RECONNECT THOSE CIRCUITS TO THE NEW PANEL AND REMOVE OLD WIRING FROM CIRCUITS NOT BEING USED. PROVIDE A PANEL DIRECTORY THAT MATCHES THE EXISTING CONDITIONS.
- EXISTING PANEL TO REMAIN. NO PANEL LABEL EXISTS. LABEL SHOWN, "LA4", IS TO BE PROVIDED IN THIS PROJECT. EXACT ORIGIN AND AMPERAGE OF THIS PANEL IS UNKNOWN AND SHALL BE CIRCUIT TRACED BY EC TO IDENTIFY PANELBOARD AMPERAGE. WHERE IT IS PRESENTLY FED FROM, CIRCUIT BREAKER SIZE SERVING PANEL AND FEEDER SIZE. SUBMIT FINDINGS TO ENGINEER OF RECORD FOR REVIEW.



1 **BASEMENT DEMOLITION PLAN - ELECTRICAL**
1/8" = 1'-0"
NORTH



2 **FIRST FLOOR DEMOLITION PLAN - ELECTRICAL**
1/8" = 1'-0"
NORTH

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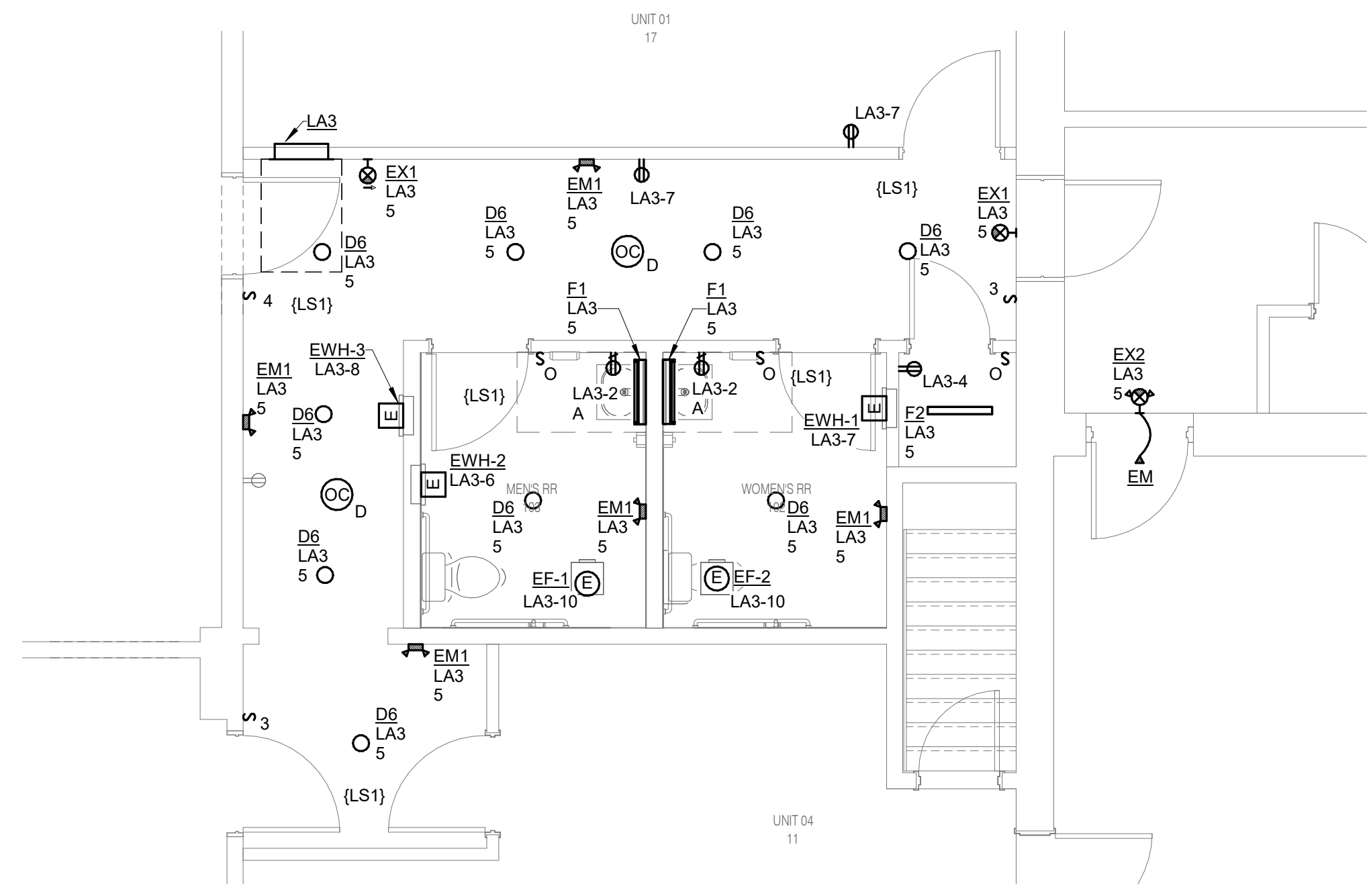
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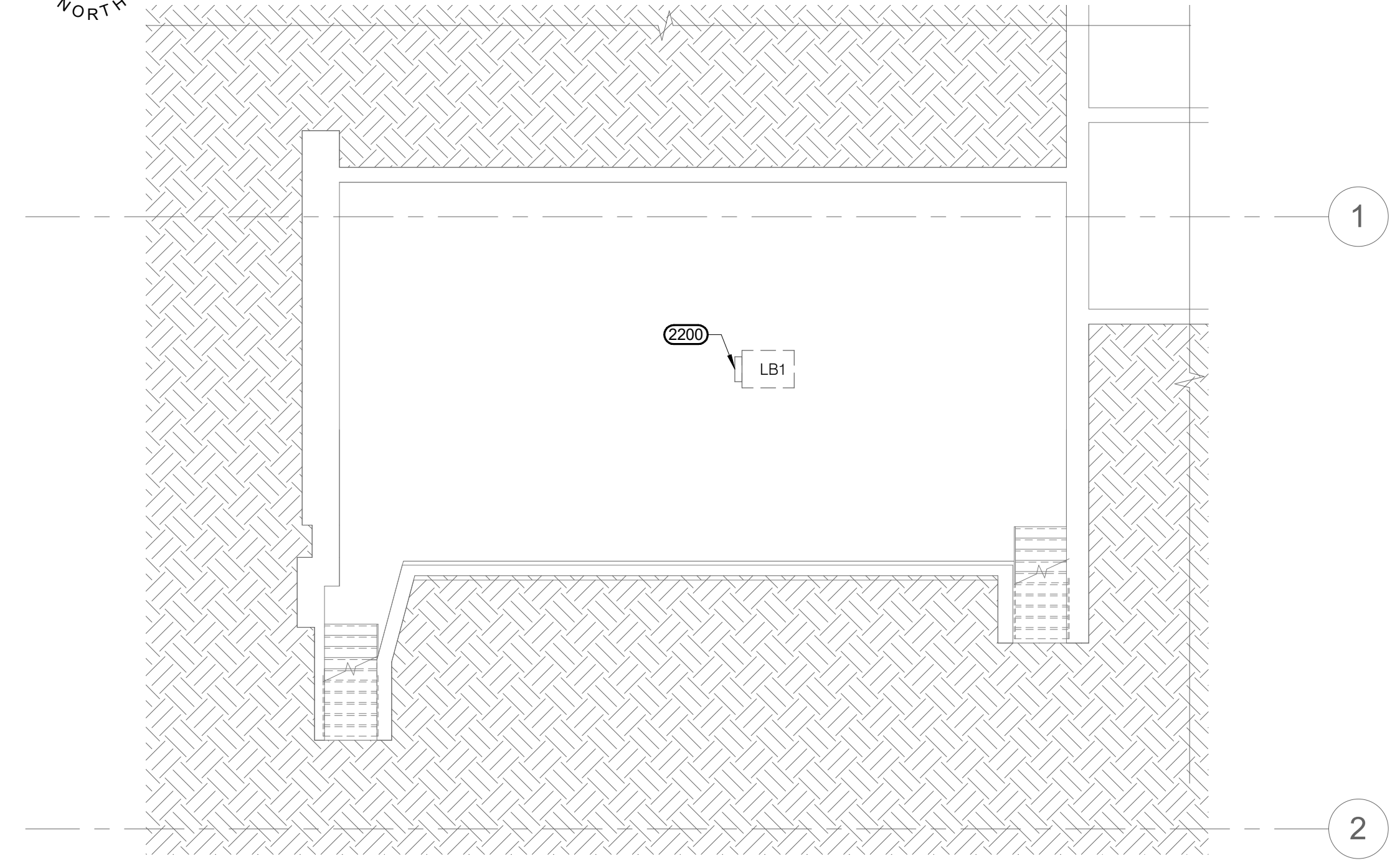
BASEMENT AND
FIRST FLOOR
PLANS -
ELECTRICAL

Sheet No.

E2.1



3 **FIRST FLOOR PLAN - ENLARGED RESTROOMS ELECTRICAL**
1/4" = 1'-0"



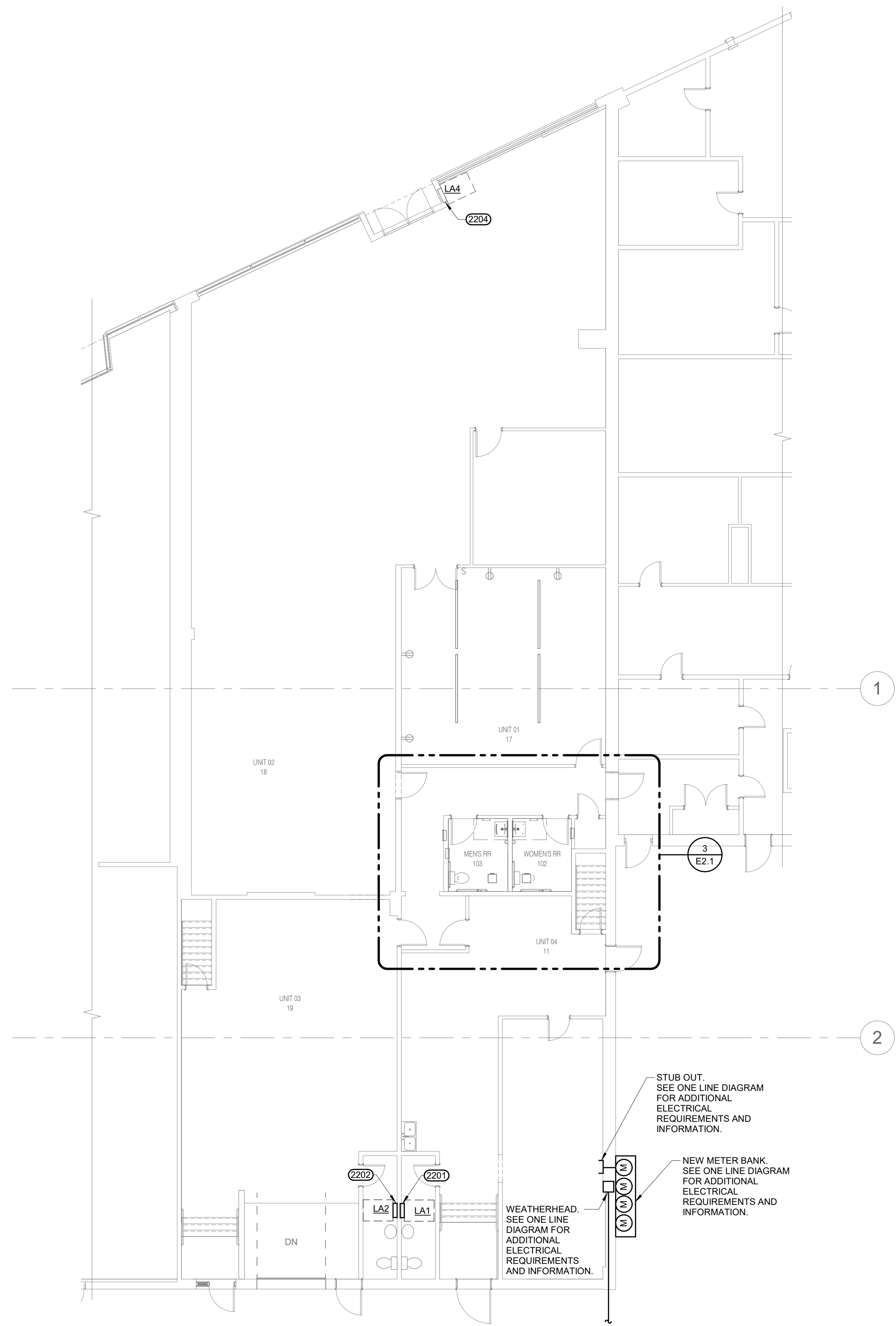
1 **BASEMENT PLAN - ELECTRICAL**
1/8" = 1'-0"

GENERAL NOTES

1. SEE ONE LINE DIAGRAMS ON SHEET E3.1 FOR ADDITIONAL ELECTRICAL REQUIREMENTS AND INFORMATION.
2. SEE DEMOLITION PLANS ON E1.1 FOR ADDITIONAL ELECTRICAL REQUIREMENTS AND INFORMATION.

KEYNOTES

- 2200 PROVIDE ENGRAVED NAME PLATE, LABELED "LB1", AND ATTACH WITH SCREWS OR RIVETS TO OUTSIDE OF PANEL DOOR. TWO SIDED TAPE NOT ALLOWED. PROVIDE NEW DIRECTORY BASED ON ACTUAL CONDITIONS.
- 2201 PROVIDE NEW PANEL AND RECONNECT EXISTING CIRCUITS TO REMAIN. PROVIDE ENGRAVED NAME PLATE, LABELED "LA1", AND ATTACH WITH SCREWS OR RIVETS TO OUTSIDE OF PANEL DOOR. TWO SIDED TAPE NOT ALLOWED. PROVIDE NEW DIRECTORY BASED ON ACTUAL CONDITIONS.
- 2202 PROVIDE NEW PANEL AND RECONNECT EXISTING CIRCUITS TO REMAIN. PROVIDE ENGRAVED NAME PLATE, LABELED "LA2", AND ATTACH WITH SCREWS OR RIVETS TO OUTSIDE OF PANEL DOOR. TWO SIDED TAPE NOT ALLOWED. PROVIDE NEW DIRECTORY BASED ON ACTUAL CONDITIONS.
- 2204 RECONNECT EXISTING PANEL "LA4" TO NEW PANEL "LA3". PROVIDE ENGRAVED NAME PLATE, LABELED "LA4", AND ATTACH WITH SCREWS OR RIVETS. TWO SIDED TAPE IS NOT ALLOWED.



2 **FIRST FLOOR PLAN - ELECTRICAL**
1/8" = 1'-0"

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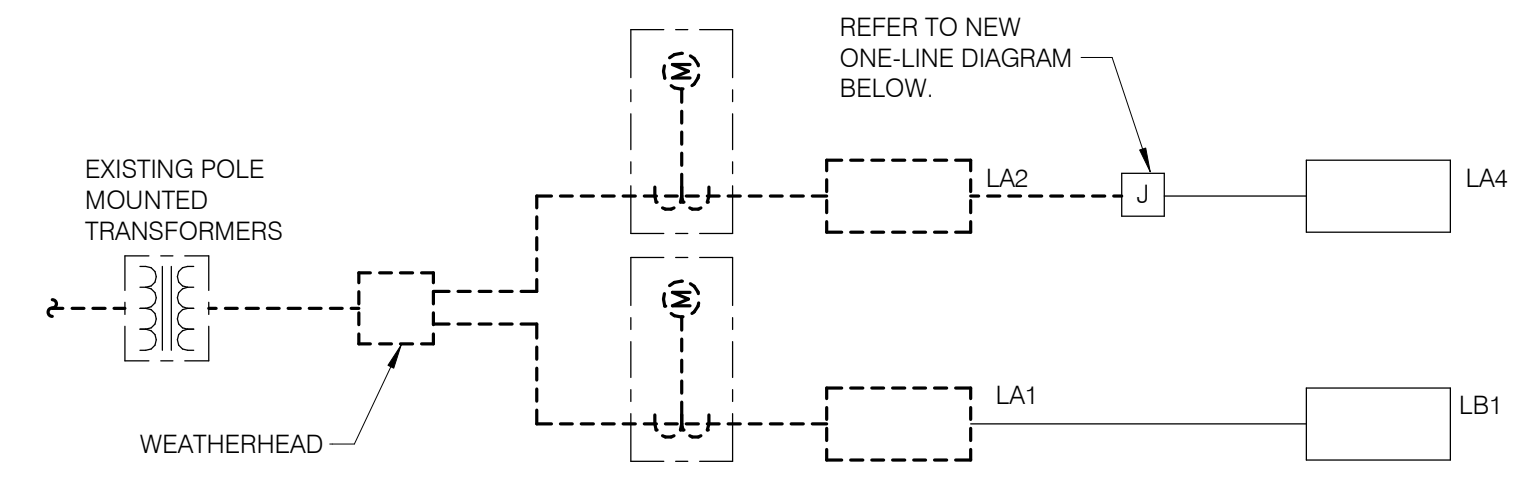
Project No. | 2022015
Issue Date | 12/02/2022

ELECTRICAL
ONE-LINE
DIAGRAMS

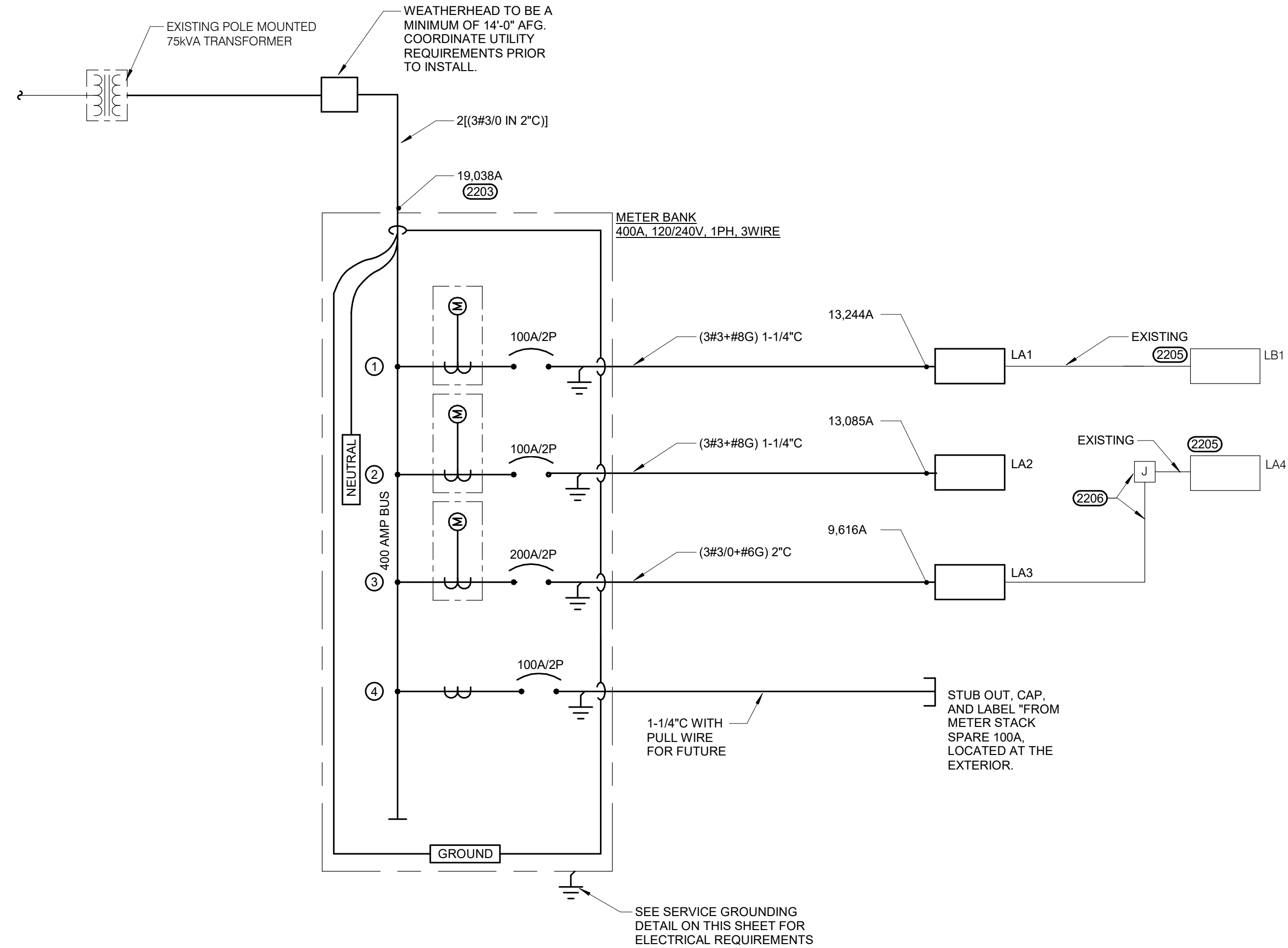
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Sheet No.

E3.1



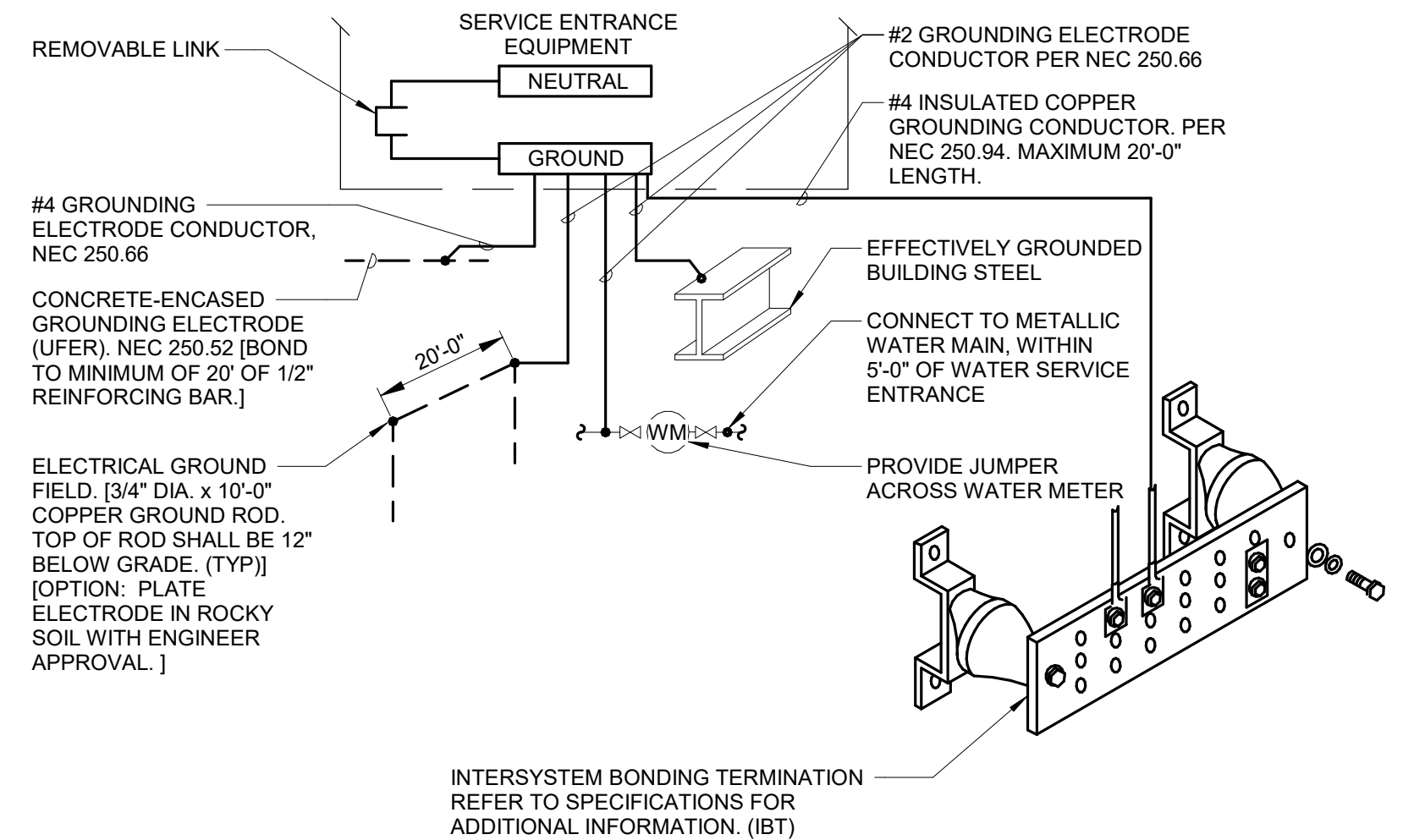
2 DEMOLITION ONE LINE DIAGRAM
NO SCALE



3 NEW ONE LINE DIAGRAM
NO SCALE

KEYNOTES

- 2203 22 200 AIC AT UTILITY TRANSFORMER SECONDARY HAS BEEN ESTIMATED FOR A 75KVA POLE MOUNTED TRANSFORMER WITH 1.4% IMPEDANCE. 50' FROM TRANSFORMER TO METER BANK ASSUMED. CONTRACTOR TO VERIFY EXACT AIC RATING WITH SERVING UTILITY COMPANY AND ADJUST THE SHORT CIRCUIT CALCULATIONS BASED ON THE SERVING UTILITY COMPANY INFORMATION.
- 2205 EXACT ORIGIN AND AMPERAGE OF THIS PANEL IS UNKNOWN AND SHALL BE CIRCUIT TRACED BY EC TO IDENTIFY PANELBOARD AMPERAGE, WHERE IT IS PRESENTLY FED FROM, CIRCUIT BREAKER SIZE SERVING PANEL AND FEEDER SIZE. SUBMIT FINDINGS TO ENGINEER OF RECORD FOR REVIEW.
- 2206 INTERCEPT EXISTING FEEDER AND EXTEND TO NEW PANEL "LA3". NEW FEEDER SHALL MATCH EXISTING FEEDER SIZE. SEE DEMOLITION PLANS FOR ADDITIONAL ELECTRICAL REQUIREMENTS.



- NOTES.
1. REFER TO SPECIFICATION SECTION 26 05 26 GROUNDING AND BONDING

1 SERVICE ENTRANCE GROUNDING ELECTRODE SYSTEM DETAIL
NO SCALE

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PANEL LA3													
MOUNTING: RECESSED ENCLOSURE: NEMA PB 1 FED FROM: 100 A/2P @ METER BANK LOCATION: CORR. 101				SOLID NEUTRAL GROUND BUS				MAIN: 100 A MCB VOLTS: 120/240 Single PHASE: 1 WIRE: 3 SCCR: 10 kA ISC: 9.62 kA					
NOTES:													
K E Y	CKT NO.	LOAD DESCRIPTION	OC PD AMPS	P	WIRE SIZE H N G	A	B	WIRE SIZE G N H	OC PD AMPS	LOAD DESCRIPTION	CKT NO.	K E Y	
--	1	SPD [2]	20 A	2	-- -- --	0 0.36			1	20 A	R- RESTROOMS	2	--
--	3		20 A	1	-- -- --				1	20 A	EW-1	4	--
--	5	L - CORRIDOR AND RESTROOMS	20 A	1	-- -- --	0.25 1.5			1	20 A	EW-2	6	--
--	7	R - CORRIDOR	20 A	1	-- -- --		0.54	1.5	1	20 A	EW-3	8	--
--	9	(E) PANEL LA4 [1]	60 A	2	-- -- --	0 0.06			1	20 A	EF-1, EF-2, EF-3	10	--
--	11		20 A	1	-- -- --				1	20 A	SPARE	12	--
--	13	SPARE	20 A	1	-- -- --	0 0			1	20 A	SPARE	14	--
--	15	SPARE	20 A	1	-- -- --				1	20 A	SPARE	16	--
--	17	SPARE	20 A	1	-- -- --	0 0			1	20 A	SPARE	18	--
--	19	SPARE	20 A	1	-- -- --				1	20 A	SPARE	20	--
--	21	SPARE	20 A	1	-- -- --	0 0			1	20 A	SPARE	22	--
--	23	SPARE	20 A	1	-- -- --				1	20 A	SPARE	24	--
--	25	SPARE	20 A	1	-- -- --	0 0			1	20 A	SPARE	26	--
--	27	SPARE	20 A	1	-- -- --				1	20 A	SPARE	28	--
--	29	SPARE	20 A	1	-- -- --	0 0			1	20 A	SPARE	30	--
--	31	SPARE	20 A	1	-- -- --				1	20 A	SPARE	32	--
--	33	SPARE	20 A	1	-- -- --	0 0			1	20 A	SPARE	34	--
--	35	SPARE	20 A	1	-- -- --				1	20 A	SPARE	36	--
--	37	SPARE	20 A	1	-- -- --	0 0			1	20 A	SPARE	38	--
--	39	SPARE	20 A	1	-- -- --				1	20 A	SPARE	40	--
--	41	SPARE	20 A	1	-- -- --	0 0			1	20 A	SPARE	42	--
Total Load:						2.17 kVA	3.54 kVA						
Total Amps:						18.06	29.50						
LOAD SUMMARY													
LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	TOTALS*									
Lighting	0.246 kVA	100.00%	0.246 kVA										
Power	4.561 kVA	100.00%	4.561 kVA	TOTAL CONNECTED LOAD: 5.71 kVA									
Receptacles	0.9 kVA	100.00%	0.9 kVA	TOTAL ESTIMATED DEMAND LOAD: 5.707 kVA									
				TOTAL CONNECTED AMPS: 23.78 A									
				TOTAL ESTIMATED DEMAND AMPS: 23.8 A									
*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.													
CIRCUIT KEY NOTES: [1] RECONNECT EXISTING PANEL LA4. BREAKER SIZE SHOWN IS AN ESTIMATE, ACTUAL SIZE TO BE DETERMINED. SEE DEMOLITION AND ELECTRICAL PLANS [2] PROVIDE SURGE PROTECTION DEVICE.													

LED LUMINAIRE SCHEDULE																
(DESC) DOOR: FA - FLAT ALUMINUM FS - FLAT STEEL RA - REGRESSED ALUMINUM RS - REGRESSED STEEL FINISH: PAF - PAINT AFTER FABRICATION CFSA - COLOR-FINISH SELECTION BY ARCHITECT			DISTRIBUTION: II - ANSII/IES TYPE 2 DISTRIBUTION III - ANSII/IES TYPE 3 DISTRIBUTION IV - ANSII/IES TYPE 4 DISTRIBUTION V - ANSII/IES TYPE 5 DISTRIBUTION			BEAMWIDTH: NSP - VERY NARROW SPOT SP - SPOT MD - MEDIUM WD - WIDE VWD - VERY WIDE WW - WALL WASH			(L/L) LENS/LOUVER: A - .125" ACRYLIC B - BAFFLE/LOUVER C - CLEAR ALZAK F - FROSTED ACRYLIC G - TEMPERED GLASS K - KSH19 .125" ACRYLIC			K19 - KSH19 .156" ACRYLIC M - MATTE DIFFUSE CLEAR N - NONE P - POLYCARBONATE R - HIGH IMPACT DR ACRYLIC SS - SEMI-SPECULAR CLEAR O - OTHER (SEE DESCRIPTION) [DESIGN SPECIFIC BLANKS]				
(MTG) MOUNTING: CL - CEILING SURFACE CV - COVE FR - FLANGED RECESSED P - PERIMETER PL - POLE			RE - RECESSED SP - SUSPENDED SU - SURFACE UC - UNDER CABINET WL - WALL O - OTHER (SEE DESCRIPTION)			(WATT) PER: FIX - FIXTURE, FT - FOOT, LAMP (TYPE) LED LED - LIGHT EMITTING DIODE TLED - TUBULAR LED LAMP OLED - ORGANIC LED DLED - DYNAMIC TUNABLE LED			RGB - COLOR CHANGING LED RGBW - COLOR CHANGING + WHITE RGBA - COLOR CHANGING + AMBER RLED - RETROFIT LED WLED - WARM DIM LED							
(TYPE) DRIVER: 0-10V - 0-10V DIMMING DALI - DIGITAL ADDRESSABLE DMX - DIGITAL MULTIPLEX			EB - ELECTRONIC ELV - ELECTRONIC LOW VOLTAGE EM - EMERGENCY BATTERY			HL - HIGH/LOW (100%/50%) STEP DIM LINE - LINE VOLTAGE DIMMING ML - MULTI-LEVEL SWITCHING			MV - MULTI-VOLTAGE ELECTRONIC REM - REMOTE O - OTHER (SEE DESCRIPTION)							
CATALOG NUMBER SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. THE COMPLETE DESCRIPTION AND THE SPECIFICATION SHALL BE COORDINATED WITH THE CATALOG NUMBER TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE FIRST MANUFACTURER LISTED IS THE BASIS OF DESIGN.																
VERIFY AND COORDINATE ALL CEILING TYPES WITH LUMINAIRE MOUNTING AND TRIM REQUIREMENTS PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER. CONFIRM ALL COLORS AND FINISHES OF ALL LUMINAIRE COMPONENTS WITH ARCHITECT AND INTERIOR DESIGNER PRIOR TO THE RELEASE OF THE LUMINAIRE ORDER. UNLESS INDICATED ON LIGHTING PLANS OR BELOW, REFER TO ARCHITECTURAL AND INTERIOR DESIGN ELEVATIONS, SECTIONS AND DETAILS FOR ALL SUSPENDED AND WALL MOUNTED LUMINAIRE...																
REFER TO SPECIFICATION SECTIONS LED LIGHTING 26 51 19. INTERIOR CORRELATED COLOR TEMPERATURE 3500K, COLOR RENDERING INDEX (CRI) AT OR ABOVE 80 UNLESS NOTED OTHERWISE.																
ITEM	DESCRIPTION	L/L	MTG	L	W	H	DIA.	ANSI WATTS	PER	TYPE	QTY	DELIVERED LUMENS (MIN)	VOLTS	TYPE	MANUFACTURER AND MODEL	
D6	6" STANDARD DOWNLIGHT	N	RE				9 1/2"	6"	16 W	FIX	LED	1	1500	120 V	0-10V	HALO LCR
EM	EMERGENCY REMOTE HEAD, COMPATIBLE WITH 'EX2', WET LOCATION LISTED	O	WL	0"	0"	0"	4 1/2"	2 W	FIX	LED	1	L.E.D.	120 V	EM	SURE-LITES SRP	
EM1	EMERGENCY UNIT, TWO ADJUSTABLE 6 VOLT HEADS, WHITE THERMOPLASTIC HOUSING, SELF DIAGNOSTICS OF INVERTER AND LAMPS.	O	WL	5'-0"	6"	0"		2 W	FIX	LED	2	INCLUDED	120 V	EM	SURE-LITES APELMINI	
EX1	SINGLE FACE EXIT SIGN, WHITE THERMOPLASTIC BODY, RED LETTERS, EMERGENCY NICAD BATTERY INSIDE OF SIGN, UNIVERSAL ARROWS/MOUNTING, SELF TEST & DIAGNOSTICS OF INVERTER AND LAMPS.	O	WL	1'-1"	2"	9"		1 W	FIX	LED	1	L.E.D. LED	120 V	EM	SURE-LITES LPX	
EX2	SINGLE FACE EXIT SIGN WITH INTEGRAL EMERGENCY HEADS AND EXTERIOR REMOTE HEAD, WHITE THERMOPLASTIC BODY, RED LETTERS, EMERGENCY NICAD BATTERY INSIDE OF SIGN, UNIVERSAL ARROWS/MOUNTING, SELF TEST & DIAGNOSTICS OF INVERTER AND LAMPS.	O	WL	1'-1"	2"	9"		2 W	FIX	LED	1	L.E.D. LED	120 V	EM	SURE-LITES LPXC	
F1	2' VANITY FIXTURE	O	WL	2'-0"	2 3/4"	2 3/4"		23 W	FIX	LED	1	2100	120 V	0-10V	ASLVBOM	
F2	2' LED STRIP	F	CV	2'-0"	2 3/4"	2 3/4"		16 W	FIX	LED	1	1600	120 V	0-10V	COOPER SWLED	

LIGHTING SEQUENCE OF OPERATION	
NOTES: 1. (L#) DENOTES THE LIGHTING SEQUENCE OF OPERATIONS FOR THIS SPACE. 2. a = SWITCH DESIGNATION FOR LIGHTING CONTROL	
PLAN ID	LIGHTING SWITCHED
(LS1)	Sequence: Switched lights are controlled in this space. ON: The lights turn on by occupancy sensor. OFF: After the space has been vacant for 15 minutes, the lights will automatically turn off.

ELECTRICAL CONNECTION SCHEDULE							
TAG NAME	Description	VOLTAGE	APPARENT LOAD	WIRE AND RACEWAY	DISCONNECT BY	TYPE	COMMENTS
EF-1	EXHAUST FAN	120 V, 1Ø	0.03 kVA	2#12 & 1#12 EGC IN 3/4" C.	MFR	NF	CONNECT TO AUXILIARY DRY CONTACT ON OCCUPANCY SENSOR CONTROLLING LOCAL LIGHTING. PROVIDE A 20 MINUTE TIME DELAY OFF. MFR TO PROVIDE INTEGRAL DISCONNECT.
EF-2	EXHAUST FAN	120 V, 1Ø	0.03 kVA	2#12 & 1#12 EGC IN 3/4" C.	MFR	NF	CONNECT TO AUXILIARY DRY CONTACT ON OCCUPANCY SENSOR CONTROLLING LOCAL LIGHTING. PROVIDE A 20 MINUTE TIME DELAY OFF. MFR TO PROVIDE INTEGRAL DISCONNECT.
EW-1	ELECTRIC WALL HEATER	120 V, 1Ø	1.50 kVA	2#12 & 1#12 EGC IN 3/4" C.	MFR	NF	MFR TO PROVIDE INTEGRAL DISCONNECT AND THERMOSTAT.
EW-2	ELECTRIC WALL HEATER	120 V, 1Ø	1.50 kVA	2#12 & 1#12 EGC IN 3/4" C.	MFR	NF	MFR TO PROVIDE INTEGRAL DISCONNECT AND THERMOSTAT.
EW-3	ELECTRIC WALL HEATER	120 V, 1Ø	1.50 kVA	2#12 & 1#12 EGC IN 3/4" C.	MFR	NF	MFR TO PROVIDE INTEGRAL DISCONNECT AND THERMOSTAT.



100%
CONSTRUCTION
DOCUMENTS

REVISIONS

IVERSON BLOCK, HELENA AVE.

RENTAL
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Project No. | 2022015
Issue Date | 12/02/2022

ELECTRICAL
SCHEDULES

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AT ALL TIMES

Sheet No.

E4.1

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HELENA, MT 59601

Project No. | 2022015
Issue Date | 12/02/2022

ELECTRICAL
SCHEDULES



Sheet No.

E4.2

PANEL LA1

MOUNTING: SURFACE
ENCLOSURE: NEMA PB 1
FED FROM: 100 A/2P @ METER BANK
LOCATION:

SOLID NEUTRAL GROUND BUS

MAIN: 100 A MCB
VOLTS: 120/240 Single
PHASE: 1
WIRE: 3
SCCR: 18 kA
ISC: 13.24 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H N G	A	B	WIRE SIZE G N H	OCPD AMPS	LOAD DESCRIPTION	CKT NO.	KEY
--	1	SPD [3]	20 A	2	-- -- --	0 0		-- -- --	1 20 A	(E) LOAD [1]	2	--
--	3	--	--	--	-- -- --			-- -- --	1 20 A	(E) LOAD [1]	4	--
--	5	(E) LOAD [1]	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	(E) LOAD [1]	6	--
--	7	(E) LOAD [1]	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	(E) LOAD [1]	8	--
--	9	(E) LOAD [1]	20 A	1	-- -- --	0 0	0 0	-- -- --	2 30 A	(E) PANEL LB1 [2]	10	--
--	11	(E) LOAD [1]	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	12	--
--	13	(E) LOAD [1]	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	14	--
--	15	(E) LOAD [1]	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	16	--
--	17	SPARE	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	18	--
--	19	SPARE	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	20	--
--	21	SPARE	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	22	--
--	23	SPARE	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	24	--
--	25	SPARE	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	26	--
--	27	SPARE	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	28	--
--	29	SPARE	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	30	--
Total Load:			0.00 kVA		0.00 kVA							
Total Amps:			0.00		0.00							

LOAD SUMMARY			
LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
			TOTALS*
			TOTAL CONNECTED LOAD: 0.00 kVA
			TOTAL ESTIMATED DEMAND LOAD: 0 kVA
			TOTAL CONNECTED AMPS: 0.00 A
			TOTAL ESTIMATED DEMAND AMPS: 0 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES: [1] RECONNECT EXISTING LOAD. EC TO CIRCUIT TRACE AND ADD LOAD DESCRIPTION FOR EACH CIRCUIT.
[2] RECONNECT EXISTING PANEL LB1. BREAKER SIZE SHOWN IS ESTIMATED, ACTUAL SIZE TO BE DETERMINED. SEE DEMOLITION AND ELECTRICAL PLAN.
[3] PROVIDE SURGE PROTECTION DEVICE.

PANEL LA2

MOUNTING: SURFACE
ENCLOSURE: NEMA PB 1
FED FROM: 100 A/2P @ METER BANK
LOCATION:

SOLID NEUTRAL GROUND BUS

MAIN: 100 A MCB
VOLTS: 120/240 Single
PHASE: 1
WIRE: 3
SCCR: 18 kA
ISC: 13.09 kA

NOTES:

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H N G	A	B	WIRE SIZE G N H	OCPD AMPS	LOAD DESCRIPTION	CKT NO.	KEY
--	1	SPD [3]	20 A	2	-- -- --	0 0		-- -- --	1 20 A	(E) LOAD [1] [2]	2	--
--	3	--	--	--	-- -- --			-- -- --	1 20 A	(E) LOAD [1]	4	--
--	5	(E) LOAD [1] [2]	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	(E) LOAD [1]	6	--
--	7	(E) LOAD [1]	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	(E) LOAD [1]	8	--
--	9	(E) LOAD [1]	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	(E) LOAD [1]	10	--
--	11	(E) LOAD [1]	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	(E) LOAD [1] [2]	12	--
--	13	(E) LOAD [1]	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	(E) LOAD [1] [2]	14	--
--	15	(E) LOAD [1] [2]	20 A	2	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	16	--
--	17	--	--	--	-- -- --			-- -- --	1 20 A	SPARE	18	--
--	19	SPARE	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	20	--
--	21	SPARE	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	22	--
--	23	SPARE	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	24	--
--	25	SPARE	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	26	--
--	27	SPARE	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	28	--
--	29	SPARE	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	SPARE	30	--
Total Load:			0.00 kVA		0.00 kVA							
Total Amps:			0.00		0.00							

LOAD SUMMARY			
LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
			TOTALS*
			TOTAL CONNECTED LOAD: 0.00 kVA
			TOTAL ESTIMATED DEMAND LOAD: 0 kVA
			TOTAL CONNECTED AMPS: 0.00 A
			TOTAL ESTIMATED DEMAND AMPS: 0 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES: [1] RECONNECT EXISTING LOAD. EC TO CIRCUIT TRACE AND ADD LOAD DESCRIPTION FOR EACH CIRCUIT.
[2] EC TO FIELD VERIFY EXISTING BREAKER SIZE
[3] PROVIDE SURGE PROTECTION DEVICE.

PANEL LA4

MOUNTING: RECESSED
ENCLOSURE: NEMA PB 1
FED FROM: 60 A/2P @ LA3
LOCATION: UNIT 02 18

SOLID NEUTRAL GROUND BUS

MAIN: 100 A MCB
VOLTS: 120/240 Single
PHASE: 1
WIRE: 3
SCCR: EXISTING
ISC UNKNOWN: 0.00 kA

NOTES: EXISTING PANEL

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H N G	VD %	A	B	VD %	WIRE SIZE G N H	OCPD AMPS	LOAD DESCRIPTION	CKT NO.	KEY
--	1	SPACE	--	1	-- -- --	--	0		--	-- -- --	2 30 A	(E) LOAD [1]	2	--
--	3	(E) LOAD [1]	20 A	1	-- -- --			0 0	--	-- -- --	--	--	4	--
--	5	(E) LOAD [1]	20 A	1	-- -- --		0 0	0 0	--	-- -- --	1 20 A	(E) LOAD [1]	6	--
--	7	(E) LOAD [1]	20 A	1	-- -- --		0 0	0 0	--	-- -- --	2 30 A	(E) LOAD [1]	8	--
--	9	(E) LOAD [1]	20 A	1	-- -- --		0 0		--	-- -- --	--	--	10	--
--	11	(E) LOAD [1]	20 A	1	-- -- --			0 --	--	-- -- --	1 --	SPACE	12	--
Total Load:			0.00 kVA		0.00 kVA									
Total Amps:			0.00		0.00									

LOAD SUMMARY			
LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
			TOTALS*
			TOTAL CONNECTED LOAD: 0.00 kVA
			TOTAL ESTIMATED DEMAND LOAD: 0 kVA
			TOTAL CONNECTED AMPS: 0.00 A
			TOTAL ESTIMATED DEMAND AMPS: 0 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES: [1] RECONNECT EXISTING LOAD. EC TO CIRCUIT TRACE AND ADD LOAD DESCRIPTION FOR EACH CIRCUIT.

PANEL LB1

MOUNTING: SURFACE
ENCLOSURE: NEMA PB 1
FED FROM: 30 A/2P @ LA1
LOCATION:

SOLID NEUTRAL GROUND BUS

MAIN: 30 A MCB
VOLTS: 120/240 Single
PHASE: 1
WIRE: 3
SCCR: EXISTING
ISC UNKNOWN: 0.00 kA

NOTES: EXISTING PANEL

KEY	CKT NO.	LOAD DESCRIPTION	OCPD AMPS	P	WIRE SIZE H N G	A	B	WIRE SIZE G N H	OCPD AMPS	LOAD DESCRIPTION	CKT NO.	KEY
--	1	(E) LOAD [1]	20 A	1	-- -- --	0 0		-- -- --	1 20 A	(E) LOAD [1]	2	--
--	3	(E) LOAD [1]	20 A	1	-- -- --		0 0	-- -- --	1 20 A	(E) LOAD [1]	4	--
--	5	(E) LOAD [1]	20 A	1	-- -- --	0 0	0 0	-- -- --	1 20 A	(E) LOAD [1]	6	--
--	7	(E) LOAD [1]	20 A	1	-- -- --	0 0	0 0	-- -- --	2 20 A	(E) LOAD [1]	8	--
--	9	(E) LOAD [1]	30 A	2	-- -- --	0 0		-- -- --	--	--	10	--
--	11	--	--	--	-- -- --		0 0	-- -- --	1 20 A	(E) LOAD [1]	12	--
--	13	(E) LOAD GFCl [1]	20 A	1	-- -- --	0 0		-- -- --	1 20 A	(E) LOAD GFCl [1]	14	--
Total Load:			0.00 kVA		0.00 kVA							
Total Amps:			0.00		0.00							

LOAD SUMMARY			
LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
			TOTALS*
			TOTAL CONNECTED LOAD: 0.00 kVA
			TOTAL ESTIMATED DEMAND LOAD: 0 kVA
			TOTAL CONNECTED AMPS: 0.00 A
			TOTAL ESTIMATED DEMAND AMPS: 0 A

*TOTAL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL.

CIRCUIT KEY NOTES: [1] RECONNECT EXISTING LOAD. EC TO CIRCUIT TRACE AND ADD LOAD DESCRIPTION FOR EACH CIRCUIT.

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SECTION 265100 - INTERIOR & EXTERIOR LIGHTING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 1. Interior & exterior luminaires, lamps, and drivers.
 2. Emergency egress lighting units.
 3. Exit signs.

1.2 SUBMITTALS

- A. Provide a submittal for each type of luminaire, arranged in order of type designation. Include data on features, accessories, remote drivers, finishes, and the following:
 1. Physical description of lighting fixture including dimensions.
 2. Emergency lighting units including battery and charger.
 3. Remote drivers as designed.
 4. Input Wattage.
 5. Life (in hours) and energy-efficiency data of source.
 6. Photometric data, in IESNA format, based on laboratory tests of each lighting fixture type, outfitted with lamps, drivers, and accessories identical to those indicated for the luminaire as applied in this Project.
 7. Dimming type.

1.3 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: Include lighting equipment and luminaires in emergency operation, normal operation, and maintenance manuals.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements in Division 1, provide products by the manufacturers specified on the drawings or provide products from manufacturers with similar construction, installation, Wattage usage, dimming type, dimensions, certifications, finishes, CRI, CCT, and photometric characteristics. Contractor will be required to submit the total savings (anticipated savings) to the Owner.
- B. Illuminated exit signs shall conform to local code requirements.
- C. Interior emergency power supply units shall be self-contained, modular, battery-inverter unit factory-mounted within luminaire body and shall comply with UL 924.
- D. Lamps shall be as manufactured by Osram/Sylvania, Phillips, G.E., Cree, TCP, or Venture. Do not use lamps by EcoSmart.
- E. Color temperature for LEDs shall be as specified in the drawings.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set luminaires level, plumb, and square with ceiling and walls, and secure according to manufacturer's written instructions and approved submittal materials. Install lamps in each luminaire without integral lamping. Do not support luminaires to the work of other trades unless otherwise specified or noted. All luminaires shall be independently supported from structure. Provide all necessary supports and hangers to securely fasten and support all luminaires to structure.

3.2 FIELD QUALITY CONTROL

- A. Inspect each installed luminaire for damage. Replace damaged luminaires and components. Verify normal operation of each luminaire after installation. Interrupt the electrical supply to verify proper operation of the emergency lighting. If luminaires are malfunctioning, then repair or replace components and retest until luminaire operates properly.
- B. Properly protect luminaires from construction dust and debris until all other trades have completed their work. Clean luminaires internally and externally after installation per manufacturer's recommendations.
- C. Ensure all wiring, coords, and accessories have been properly trimmed or tucked away so as not to be seen through lenses.
- D. Replace any failed lamps in existing luminaires with matching lamp type and color.

END OF SECTION 265100



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100%
 CONSTRUCTION
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Project No. | 2022015
 Issue Date | 12/02/2022

ELECTRICAL
 SPECIFICATIONS

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 THIS SET OF APPROVED
 PLANS TO BE ON JOB SITE
 AT ALL TIMES

Sheet No.

E5.2

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