



- Meetings may be viewed on the [City of Anacortes website](#), on the City of Anacortes [YouTube](#) Channel, or on TV [Channel 10](#).
- The public may also watch or listen to the meeting live by visiting <https://us02web.zoom.us/j/84685300609>.
- Listen to the meeting by phone (if one number does not work, please try the other number): 1-253-215-8782 and enter Meeting ID 846 8530 0609 or 872-240-3412, Access Code: 261-991-485
- The public is encouraged to comment via email to pced@cityofanacortes.org, via written comment addressed to PCED, P.O. Box 547, Anacortes, WA 98221, or via e-comment (<https://www.anacorteswa.gov/700/Watch-Meetings> - click on meeting you wish to provide comment and in upper right corner is an option to include Public Comment). Public comments received prior to 3:00 p.m. the day of the meeting will become part of the record for the meeting, just as if presented in person.
- Complete guidelines for virtual participation in Anacortes Planning Commission meetings are available [here](#) (page 2). View the quick video example for connecting to the meeting [here](#).

ANACORTES PLANNING COMMISSION

July 13, 2022

**Municipal Building Council Chambers
6th Street and "Q" Avenue**

AGENDA

6:00 PM

[VIEW PACKET MATERIALS HERE](#)

- A. Roll Call**
- B. Minutes**
 - 1) Draft Minutes of 6/22/2022
- C. Correspondence**
- D. New Business**
 - 1) Public Hearing: CUP-2022-0003 Anacortes Readiness Center CUP
 - 2) Critical Areas Regulation Amendments to address Riparian (Stream) Corridors and Riparian Management Zones(Buffers)
- E. Old Business**

The City of Anacortes encourages people with disabilities to participate in public meetings. For assistance with special needs, please contact the City Clerk at 360-299-1960 in advance of the meeting.



Planning Commission Public Hearing Minutes for June 22, 2022

This is not a verbatim transcript of the meeting and is written to capture the general spirit of the discussion based upon notes and video observation by the author. To view the video recording of this meeting, click [here](https://www.anacorteswa.gov/700/Watch-Meetings), or go to <https://www.anacorteswa.gov/700/Watch-Meetings>.

Commission Chair MacKenzie called the Public Meeting of June 22, 2022, to order at 6 pm.

Roll Call:

Members Present: Commissioners Gary Molyneaux, Frank Jeretzky, Ward MacKenzie, Jack Curtis, Jeff Graf, and Sarah Ruether

Members Absent: Linda Martin

Staff Present: Don Measamer, Dave Oicles, Libby Grage

Minutes: The minutes from May 25, 2022, were approved as presented.

Correspondence: None

Old Business: None

New Business: **Daycare II in the R4 Use Zone as a Permitted Use**

Don Measamer, PCED Director, gave a presentation on making Daycare II facilities in the R4 Use Zone as a permitted use. Measamer stated it can be costly for applicants wanting to open a Daycare II facility under the current code and presented new "draft" code language that would allow Daycare II facilities in R4 as a permitted use with certain criteria that would need to be met for approval. Measamer also presented current WA State requirements that are in the RCW and WAC codes. This proposal language will still be worked on with input from Commissioners over the next 2 months with the plan to have something to propose to City Council thereafter. Commissioners asked questions and provided input into the proposal with other follow up action and research.

With no further discussion, Chair MacKenzie concluded the meeting at 6:31pm.



Planning Commission Agenda Bill

Meeting Date: July 13, 2022

Agenda Item: D.1.

Subject: Public Hearing: CUP-2022-0003 Anacortes Readiness Center CUP

Staff Contact: NATHAN GOLDSCHMIDT

Approved for Submittal to Commission by

LIBBY GRAGE

NATHAN GOLDSCHMIDT

DON MEASAMER

Action Type

Public Hearing

Summary Statement: The agent on behalf of the property owner has requested a Conditional Use Permit for the construction of an addition to the existing Anacortes Readiness Center. Work includes a 3,600 sq. ft. building addition with new classrooms, fitness room and corridor. The work will also include alterations to portions of the existing building including new toilet/shower rooms, kitchen, conference room, mother's room, multipurpose room, and a new ADA lift.

Background: A public hearing is required prior to Planning Commission deliberation and recommendation to City Council. For more background information, see the staff report.

Previous Action: N/A

Competing Viewpoints Considered: Public comment is being sought through the holding of this public hearing.

Recommended Motion: I move to recommend approval of CUP-2022-0003, subject to the staff recommended conditions of approval as proposed in the staff report of record.

Alternative Actions: Recommend approval with modified conditions or denial.

Attachments (listed in order presented):

1. Exhibit 1 - Staff Report
2. Exhibit 2 - Application Materials
3. Exhibit 3 - Project Site Plan
4. Exhibit 4 - Noticing
5. Exhibit 5 - Comments
6. DRAFT PC-Recommendation



Anacortes Planning, Community & Economic Development Department

904 6TH Street / P.O. Box 547, Anacortes, WA 98221

360.299-1984 - Office Hours: Mon-Fri 8:00 AM – 5:00 PM

STAFF REPORT

A. PROJECT SUMMARY DATA

PROJECT INFORMATION:

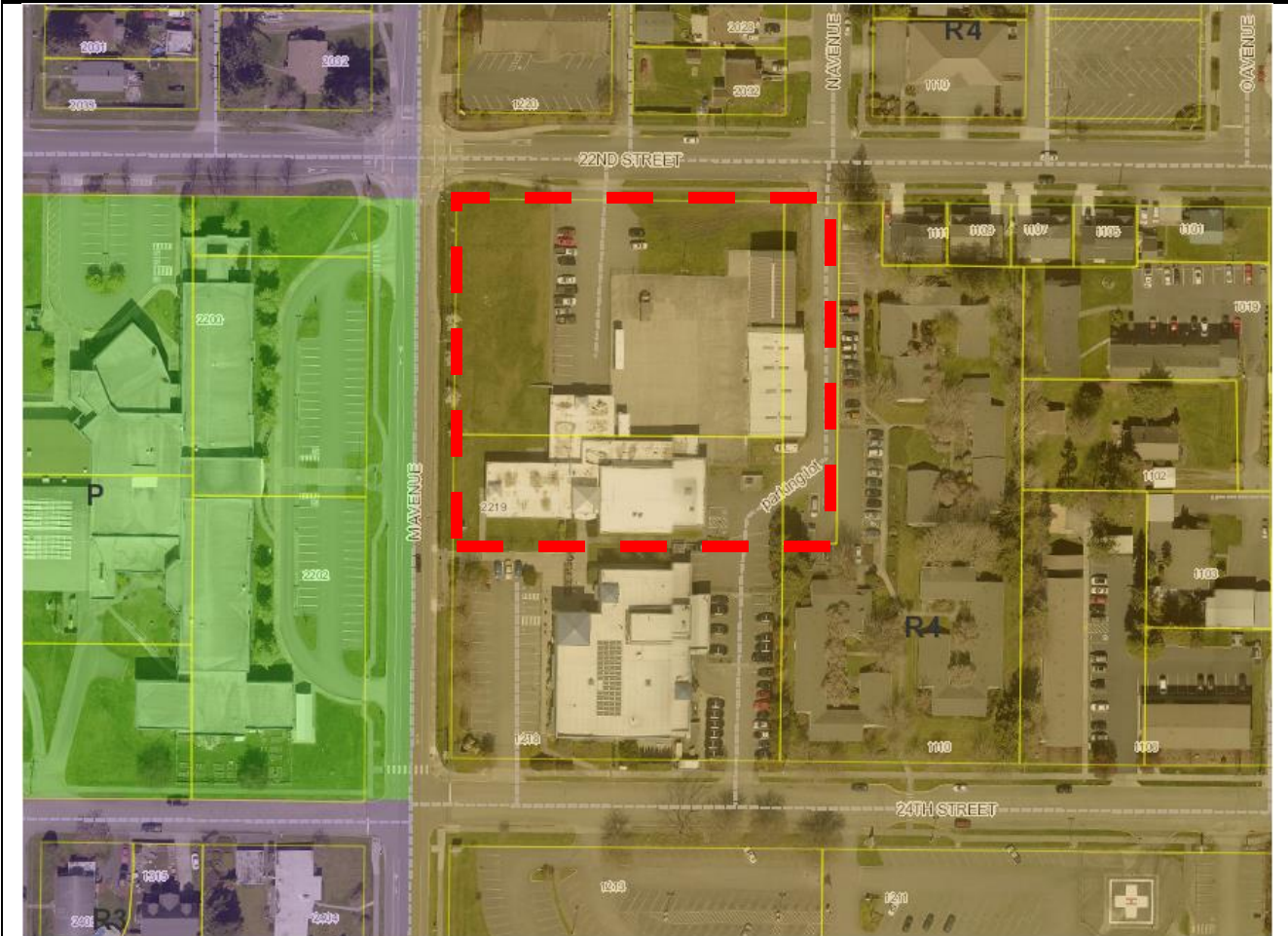
File Number	CUP-2022-0003	Date of Report	July 1, 2022
Project Title	Anacortes Readiness Center Addition and Alteration		
Project Address	2219 M Avenue	APN(s)	P31914, P31915, P31921
Request	The agent on behalf of the property owner has requested a Conditional Use Permit for the construction of an addition to the existing Anacortes Readiness Center. Work includes a 3,600 sq. ft. building addition with new classrooms, fitness room and corridor. The work will also include alterations to portions of the existing building including new toilet/shower rooms, kitchen, conference room, mother's room, multipurpose room, and a new ADA lift.		
Property Owner /Applicant	Washington Military Department Attn: Sachin Saladnah 36 Quartermaster Road Tacoma, WA 98430		
Agent	Clint Treat, AIA, wja design collaborative 617 Western Ave. Seattle, WA 98104		
Application Date	May 3, 2022	Complete Application Date	May 9, 2022
PC Public Hearing Date	July 13, 2022	CC Closed Record Decision Hearing Date	July 25, 2022
Comprehensive Plan Designation	Residential High Density	Zoning	R4
Water Supply	City	Sewer Supply	City

STAFF RECOMMENDATION: Approve, with conditions

CITY STAFF CONTACTS:

Name:	Title:	Phone:	E-mail:
Libby Grage	Planning Manager	360-299-1986	libbyb@cityofanacortes.org

PROJECT LOCATION & SURROUNDING AREA



SITE & SURROUNDING USES:

	Comprehensive Plan	Zoning	Land Use
North	Residential High Density	R4	Businesses and SFRs
East	Residential High Density	R4	Apartments and SFRs
South	Residential High Density & Medical Overlay	R4 / Med-O	Island Hospital
West	Public	P	Anacortes Middle School

B. PROCEDURAL

- Type of Review.** The proposed use would be considered a “Public Safety Facility” per AMC 19.44.020(E) and would be permitted with a conditional use permit (CUP) per AMC Table 19.41.040.

The application for a CUP is a Type 4 review process, requiring a preapplication meeting with city staff, a preapplication neighborhood meeting, a 21-day public comment period, a public hearing before Planning Commission, and a closed record decision hearing before City Council.

2. **Project history.** The mandatory preapplication meeting was held on April 26, 2022, with the mandatory neighborhood meeting being held on May 31, 2022. The application for a conditional use permit was submitted on May 3, 2022 and determined to be complete of May 9, 2022.
3. **Public notice and reviewing departments/agencies.** A notice of application with a 21-day public comment period was published in the Anacortes American and mailed to adjacent property owners within 300' on June 8, 2022, and posted on the City website/City Hall/City Library, posted on the subject site, on June 7, 2022.

The project application was routed for review to applicable agencies and City departments.

REVIEWING DEPARTMENTS & AGENCIES			
City of Anacortes	Local Agencies	State & Federal	Other
• Building • Fire • PW – Operations • PW – Sanitation • PW – Streets • PW – Engineering • PW – Water • Fiber • Police	• Anacortes School District		

4. **Consideration of written comments and applicant responses.** The joint notice of application and public hearing outlined the public comment period, ending July 29, 2022. In making its recommendation, the Department considered timely received written comments and the applicant's responses, if any, as required in AMC 19.20.130(C).
 - 4.1 Comments relaying no issue or concern were received from the City's Sanitation, Water Distribution, Police, Fire, Engineering and Building Departments.
 - 4.2 One public comment was received from Matt & Jill Wallis concerning noise for construction. The commenters requested that allowable work hours per city code be enforced.
5. **Environmental review.** The proposed development is subject to SEPA. The Washington Military Department acted as SEPA lead agency for the proposal.
6. **Public Hearing.** A pre-decision open record public hearing before the Planning Commission is scheduled for July 13, at 6:00 PM with a City Council Closed Record Decision Hearing scheduled for July 25, at 6:00 PM.

C. DEPARTMENT REVIEW – Findings of Fact

1. The project proposes the construction of a 3,600 sq. ft. building addition with new classrooms, fitness room and corridor. The addition is for the purpose of increasing program areas of uses already occurring within the building. Alterations to portions of the existing building include new toilet/shower rooms, kitchen, conference room, mother's room, multipurpose room, and a new ADA lift. New mechanical, fire protection, mass notification and electrical service to be incorporated. The building will also receive a complete structural seismic upgrade and reroof.

- 1.1. With development, on-site stormwater treatment will be improved by constructing a bioretention facility to treat the approximately 4,425 sq. ft. of replaced impervious surface area.
2. The existing use is considered a “Public Safety Facility” per AMC 19.44.020. “Public Safety Facility” is defined as “a facility for the provision of fire and rescue, medical, police, and emergency response services by a governmental entity”.
3. The project site is zoned Residential High Density (R4).
 - 3.1. Per AMC Table 19.41.040, a “Public Safety Facility” is permitted in the R4 zone with a conditional use permit (CUP).
4. The project site is currently developed with an approximately 15,000 sq. ft. armory, originally opened in 1963, along with parking area, and 2 storage buildings.
 - 4.1. The existing building/facility was constructed prior to a change in the code in 2019, which now requires a conditional use permit for public safety facilities in the R4 zone. Therefore, the proposed addition triggers the requirement for a CUP.
5. Based on the plans submitted, the proposal will be in conformance with the form and intensity standards for the R4 zone:
 - Maximum lot coverage: 50% - **Proposed:** 33% ((29,914 sq. ft. existing + 3,650 sq. ft. new = 32,564 sq. ft. total building coverage) / 90,605 sq. ft. site area)
 - Minimum landscaped area: 20% - **Proposed:** Unchanged
 - Maximum height: 40 feet – **Proposed:** 28 feet
 - Minimum setbacks: Street/Rear – 10 feet; Side: 5 feet 1st floor; 7.5 feet upper floors – **Proposed:** 175 feet from north property line; 126 feet from east property line
6. The site as 19 existing marked parking stalls. The proposed addition, which includes a fitness room and classrooms, is not anticipated to increase the occupancy of the building and will only serve existing programs occurring on the site. Therefore, no additional parking spaces are proposed.
7. **AMC 19.36.040 - CONDITIONAL USE PERMIT REVIEW CRITERIA.**
 Anacortes Municipal Code Chapter 19.36 provides certain criteria for approval of a Conditional Use Permit. Below are the criteria, along with staff comments:
 - 7.1. ***The use would comply with any specific requirements for the conditional use specified elsewhere in this code;***
Staff Comments: The code does not include any requirements specific to a public safety facility.
 - 7.2. ***Access to the site is appropriate considering the anticipated volume of traffic resulting from the use;***
Staff Comments: The project does not propose to change site’s existing access via 22nd Street, and it is not anticipated that the addition will result in an increase of occupant loads or the volume of traffic.
 - 7.3. ***Off-street parking and loading facilities are adequate in terms of location, amount, and design to service the use;***

Staff Comments: The site contains existing off-street parking and will remain unchanged with exception to the secured/fenced military vehicle parking area that will have a reduction in area to accommodate the proposed building addition. The current user has verified this is acceptable and will not impact their use of the site.

- 7.4. ***The amount and location of open space and the provision of screening is such that buffering of incompatible uses is achieved;***

Staff Comments: The existing use has been in operation for 60 years and there are no known compatibility issues that have arisen with surrounding uses within the more recent past. The addition is located on the northeast side of the building and will be approximately 175 feet from the north property line and screened from adjacent residential uses by an existing 5,000 sq. ft. warehouse building.

- 7.5. ***The location and intensity of outdoor lighting is such that it does not cast light on adjacent, adjoining, or neighboring properties;***

Staff Comments: New building mounted exterior lighting will be provided at new entries to the building. Applicant states that new entry lighting will be designed to operate by the same means and time schedule as existing exterior lighting. Lighting is designed for life safety exits only. As conditioned, lighting will conform to city standards.

- 7.6. ***Hours and manner of operation of the proposed use, including anticipated noise generation, are not inconsistent with the adjacent or nearby uses;***

Staff Comments: The hours of operation are not proposed to change. The contractor will be required to comply with city established hours of work and noise standards during construction activities.

- 7.7. ***Public facilities and utilities are capable of adequately serving the proposed use;***

Staff Comments: Review by applicable city departments has determined that public facilities and utilities are capable of adequately servicing the development or could be pending the approval and completion of the required improvements. Additionally, payment by the applicant of applicable impact fees and general facilities charges will mitigate the proposal's impact on public facilities and utilities.

- 7.8. ***The physical conditions of the site, including size, shape, topography, and drainage, are suitable for the proposed development;***

Staff Comments: The proposal's conformance to form and intensity regulations help to ensure that the proposal is suitable to the physical conditions of the site.

- 7.9. ***Any other factors deemed relevant to the decision-maker.***

Staff Comments: No other relevant factors have been identified.

D. CONCLUSIONS

1. The proposed development was processed consistent with AMC Table 19.20.030-1 for Type 4, City Council review.

2. The proposed development has been reviewed for consistency with the criteria outlined in AMC 19.36 Conditional Use Permits.
3. As conditioned, the proposed development is consistent with the Anacortes Municipal Code.
4. In making its recommendation, the Department considered timely received written comments and the applicant's responses, if any, as required in AMC 19.20.130(C).

E. RECOMMENDATION

Based upon the application, Findings of Fact, and Conclusions of the staff report, staff recommends that the Planning Commission recommend approval of the site plan and conditional use permit with the following conditions of approval:

1. The site plan stamped "PLANNING APPROVED" on July 1, 2022, shall be the approved site layout or as amended and approved during building permit review.
2. Pursuant to AMC 19.69.040, exterior lighting shall be installed to ensure light is directed downward on to the subject site and must be shielded to direct light away from sky and adjacent residential uses.
3. All site utilities must be placed underground.
4. Noise levels are not to exceed those as established by AMC 19.69.020.
5. Applicant must obtain all applicable local, state, and federal permits and authorizations prior to start of site work.

Staff reserves the right to supplement the record of the case to respond to matters and information raised after the writing of this report.



PLANNING, COMMUNITY, & ECONOMIC DEVELOPMENT DEPARTMENT

Mailing Address: P.O. Box 547, Anacortes, WA 98221

Office Location: 904 6th Street, Anacortes WA 98221

Phone: (360) 299-1984

MASTER LAND USE PERMIT APPLICATION

TYPE OF APPLICATION (check all that apply):		
☐ Binding Site Plan (Preliminary)** ☐ Boundary Line Adjustment (BLA)** ☐ BLA: Lot Consolidation** ☒ Conditional Use Permit (CUP) ** ☐ Critical Areas Exemption** ☐ Critical Areas Permitted Alteration** ☐ Critical Areas Reasonable Use Exception/Variance** ☐ Cottage Housing Development**	☐ Eligible Facility Request** ☐ Essential Public Facility ☐ Home Occupation Permit** ☐ Long Subdivision (Preliminary)** ☐ Plat Amendment /Modification ☐ SEPA Environmental Review** ☐ Shoreline Conditional Use Permit** ☐ Shoreline Exemption** ☐ Shoreline Substantial Development Permit**	☐ Shoreline Variance** ☐ Short Plat (Preliminary)** ☐ Site Plan Review ** ☐ Site-Specific Rezone Authorized by the Comprehensive Plan ☐ Stormwater Management Manual Adjustments & Exceptions ☐ Variance ** ☐ Wireless Conditional Use Permit (WCUP)** ☐ Wireless Service Facility (WSF) Permit**
**Permit type has supplemental checklist that must be submitted with Master Land Use Permit Application		
PROJECT & SITE INFORMATION:		
SITE ADDRESS: 2219 M Avenue		PROJECT NAME: Anacortes Readiness Center Renovation and Addition
PARCEL NUMBER(S): 31914, 31915, 31921		SECTION, TOWNSHIP, & RANGE SECTION 24, TOWNSHIP 35 NORTH, RANGE 1
LOT SQUARE FOOTAGE & ACREAGE: 98605		PROJECT VALUATION: 2,364,362.23
LEGAL DESCRIPTION: TAX 300AAA BAT E1/4 C SECTION 24, TOWNSHIP 35 NORTH, RANGE 1 EAST, W.M., TH S 0-59-30 E ALG E LI OF SEC 1183.99FT TO INT WI C/L 24TH ST EXT W THE TPB TH 592.21FT TO INT WI C/L 26TH ST EXT W TH W ALG C/L SD ST 804.87FT TO INT WI C/L M AVE EXT S TH N 0-01 W ALG C/L M AVE EXT 576.12FT TAP S OF C/L 24TH ST EXT W TH E ALG LI PLT & 16FT S OF C/L 24TH ST EXT 379.84FT TO INT WI C/L N ST EXT S TH N 0-01 W ALG C/L N ST EXT 16FT TH E ALG C/L 24TH ST EXT W 414.96FT TPB LESS TAX 300B 300BB		PRESENT ZONING: R4
PRESENT USE OF PROPERTY: Public Safety Facility		CUT & FILL (CY) PROPOSED: 80 cubic yards of cut
PRE-APPLICATION CONFERENCE HELD?: ☒ Yes, the City file # is _____ ☐ No		WATER SOURCE: ☒ City of Anacortes ☐ Private Well ☐ Community Well



Planning, Community, & Economic Development Department
904 6th St. / P.O. Box 947, Anacortes, WA 98221
360-293-1984

AGENT AUTHORIZATION FORM

Use this form to authorize someone other than the property owner to apply for permits for the subject property.

Project Name: Anacortes Readiness Center Renovation and Addition
Property Address: 2219 M Avenue
City, State, Zip: Anacortes, WA, 98221

AUTHORIZATION STATEMENT

I / we, as the owners of the property identified above, authorize the below listed individual to act as our agent to submit applications, receive correspondence regarding the above-listed application, and sign and to receive notices on my/our behalf.

DESIGNATED AGENT

Agent Name: Clint Treat, AIA
Agent Address: 617 Western Ave.
Agent City, State, Zip: Seattle, WA, 98104

PROPERTY OWNER SIGNATURE(S)**

Signature: <u>Adam M. Iwaszuk</u>	Signature: _____
Printed Name: <u>Adam M. Iwaszuk</u>	Printed Name: _____
Title: <u>Director, Construction Facility Mgmt Office</u>	Title: _____
Company: <u>Washington Military Department</u>	Company: _____
Date: <u>13 MAY 2022</u>	Date: _____

**Each property owner listed must have their signature notarized.

STATE OF WASHINGTON

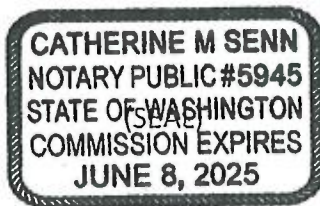
)

) ss.

COUNTY OF PIERCE

I certify that I know or have satisfactory evidence that Adam M. Iwaszuk is the person who appeared before me, and said person acknowledged that he/she signed this instrument, and acknowledged it as a free and voluntary act for the uses and purposes mentioned in this instrument.

Given under my hand and official seal this 13th day of May, 20 22



Catherine M. Senn

Notary Public

Residing at TACOMA WA

My appointment expires 8 June 2025

STATE OF WASHINGTON

)

) ss.

COUNTY OF SKAGIT

I certify that I know or have satisfactory evidence that _____ is the person who appeared before me, and said person acknowledged that he/she signed this instrument, and acknowledged it as a free and voluntary act for the uses and purposes mentioned in this instrument.

Given under my hand and official seal this _____ day of _____, 20 _____

(SEAL)

Notary Public

Residing at _____

My appointment expires _____



PLANNING, COMMUNITY, & ECONOMIC DEVELOPMENT DEPARTMENT

Mailing Address: P.O. Box 547, Anacortes, WA 98221

Office Location: 904 6th Street, Anacortes WA 98821

Phone: (360) 299-1984

CONDITIONAL USE PERMIT

Applicant Checklist	Conditional Use Permit Submittal Checklist	Office Use Only
	See pages 2-3 of this handout for information about each submittal item listed below. See AMC 19.36 for Conditional Use Permit review and approval criteria.	
☒	Master Land Use Permit Application	
☒	Agent Authorization Form	
☐	Critical Areas Identification Form, if applicable	
☐	Project Narrative	
☐	Responses to Conditional Use Permit criteria	
☐	Stormwater Site plan	
☒	Site Plan & Landscape Plan	
☐	Clearing & Grading Plans	
☐	Building Elevation Drawings	
☐	Environmental Checklist (SEPA)	
☐	Transportation Concurrency Review Form	
☐	Subdivision Guarantee	
☐	Recorded Property Boundary Survey	
☐	Technical Reports	
☐	Critical Area Report	
☐	Parking Study	
☐	Cultural Resource Survey	
Submit Application Please send applications in PDF format to pced@cityofanacortes.org . An email with a link to a file share site is also acceptable. Paper copies may be requested after initial review.		Application Fee See the Land Use Permit Fee Schedule Fees will be invoiced to you after receipt of your application.

SUBMITTAL REQUIREMENT DETAILS

Additional details on certain submittals is provided below to ensure Applicants are fully aware what City staff will be looking for when an application is submitted to the City.

- a. **MASTER PERMIT APPLICATION:** Form attached. Use this form to indicate all requested land use permits and other key information about your proposed project.
- b. **AGENT AUTHORIZATION FORM.** Use this form to authorize someone other than the property owner to apply for permits.
- c. **CRITICAL AREAS IDENTIFICATION FORM.** Use this form to determine and/or identify if critical areas or critical area buffers are located on or within 300 ft. of the development area. If critical areas are determined to be present, a Critical Area Permit may be required.
- d. **PROJECT NARRATIVE:** Form attached. This document contains a list of elements to be included in your project narrative to help provide a clear and concise description of your proposal for those reviewing it.
- e. **RESPONSES TO CONDITIONAL USE PERMIT CRITERIA:** In order for the decision-maker to grant a conditional use permit, there must be a finding that the use would be consistent with the criteria in AMC 19.36.040. As the applicant, it is your responsibility to clearly demonstrate how each criteria is met.
- f. **STORMWATER SITE PLAN:** The Stormwater Site Plan is the comprehensive report containing all of the technical information and analysis necessary for regulatory agencies to evaluate your project for compliance with stormwater requirements. The level of stormwater review and contents of the Stormwater Site Plan will vary with the type and size of the project, and individual site characteristics. Use Form CG-3 to determine the level of stormwater review and then complete the applicable Stormwater Minimum Requirements Form on the Public Works - [Engineering Department Forms website](#) and provide required submittal items/plans.
- g. **SITE & LANDSCAPE PLANS:** These plans are needed so that your proposal can be reviewed for conformance with the applicable zoning and land use, community design, and project design provisions of the development regulations contained in AMC Title 19 Unified Development Code. (Use the site plan checklist for Single Family Residential Building Permits or Multi-Family and Non-Residential Site Plan review, as applicable (see [application checklists](#) and forms)
- h. **CLEARING & GRADING PLANS:** Checklist is located in the [Clearing/Grading Permit application packet](#). These plans are needed so that your proposal can be reviewed for conformance with [AMC 19.78 Clearing and Grading](#).
- i. **BUILDING ELEVATION DRAWINGS:** Checklist attached. These plans are needed so that your proposal can be reviewed for conformance with the applicable project and building design provisions in AMC Title 19 Unified Development Code. (Use the building elevations checklist for Single Family Residential Building Permits or Multi-Family and Non-Residential Site Plan review, as applicable (see [application checklists](#) and forms).
- j. **SEPA CHECKLIST:** Unless a project is categorically exempt, an environmental checklist is required to be completed and submitted.

- k. **TRANSPORTATION CONCURRENCY REVIEW FORM:** This form is used to collect information for the City's travel demand model, which is used to determine a project's impacts on the transportation system. Under GMA, the City must prohibit development approval if the development would cause the level of service on a locally owned transportation facility to decline below the standards adopted in the transportation element of the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made concurrent with the development. [AMC 19.22 Concurrency](#) contains the review criteria.
- l. **SUBDIVISION GUARANTEE:** A document prepared by a title insurance company documenting the ownership and title of all interested parties in the development and that lists all encumbrances. This document is needed to verify property ownership and to identify any encumbrances that are recorded to the property's title. Copies of all the encumbrances listed within the certificate or report must be provided. The certificate or report must be dated within 30 days prior to the submittal of a permit to the City.
- m. **RECORDED PROPERTY BOUNDARY SURVEY:** A recorded survey is required to define the limits of the property subject to the application. All property corners must be staked/marked and visible.
- n. **DIGITAL COPY OF ALL APPLICATION DOCUMENTS:** PDF format files for all submittal items, named as they appear on the submittal checklist, must be provided on a flash drive or emailed to pced@CityofAnacortes.org.

TECHNICAL REPORTS

Following is a list of technical reports that may be required to be submitted to the City depending on project and site-specific factors. The general triggers for each of the listed technical reports is provided below:

- A. **CRITICAL AREAS REPORTS:** In general, Critical Area reports are required when wetlands, streams, habitat conservation areas, geologically hazardous areas, shorelines, or aquifer recharge areas are located on or near a site. Critical area mitigation plans may also be required, depending on the project proposal. See Anacortes Municipal Code Ch. 19.70 for additional information.
- B. **PARKING STUDY:** A parking study may be required to determine the parking requirements for a specific use, adjusting minimum and maximum quantitative parking requirements, determining times of peak demand, and determining impacts to on-street parking in the vicinity of a proposed development. See AMC 19.64.020 for more info.
- C. **CULTURAL RESOURCES REPORT:** For more information on cultural resource surveys contact the Washington Department of Archaeology and Historic Preservation (<http://www.dahp.wa.gov>)
- D. **OTHER TECHNICAL REPORTS MAY BE REQUIRED TO DETERMINE /ENSURE CONFORMANCE WITH CUP CRITERIA.**

PROJECT NARRATIVE REQUIREMENTS

GENERAL INFORMATION
This form is intended to assist applicants in creating complete project narrative for site plan and building design review. Please fill in each space with the requested information.
PROJECT DESCRIPTION – Required for all project types
A. If a neighborhood meeting was held, provide the date held, general items of discussion at the meeting, and how the project proposal has been modified since the meeting, if applicable.
Neighborhood meeting not held yet.
B. Proposed use of the Site per AMC Table 19.41.040 or 19.41.050 and any special use provisions that apply. (see AMC 19.43 – 19.48)
Public Safety Facility (CONDITIONAL USE PERMIT REQUIRED)
C. Current use of the Site. Date of construction for any existing structures on site, and whether they are to be removed or retained.
Public Safety Facility, 1962 Main building, 2000 Storage building, 2016 Storage building. All to be retained
D. Description of the site's physical characteristics, including special site features (such as wetlands, water bodies, steep slopes, or other critical areas).
Property is a gently sloping site with some berms and changes in height to accommodate building differing elevations. Developed site has two storage buildings
E. Current uses and special site features of surrounding properties.
Site and existing buildings are located on 3 parcels, one of which is shared with the Anacortes police department. Building resides in an R4 zone
F. Description of general design techniques you considered to implement low impact development (see AMC 19.76.050(A) and (B)) in the design of your project site and proposed stormwater facilities necessary for compliance with AMC 19.76 Stormwater.
Proposed building addition and site improvements were designed to mitigate storm water impacts. Proposed building addition is located on existing impervious area. Site
G. Description of the proposed form and intensity of the proposed development (height, setbacks, lot coverage, etc.). (See AMC 19.42.)
Building addition will not encroach beyond current setbacks and is located within a secured/fenced yard and forms to the building's reentrant corner. Building will not
H. Identification of the site's block frontage designation(s) and description of project conformance. (see AMC 19.61)
Existing facility has address and monument sign that will remain unchanged. Proposed design does not impact this.
I. Description of the proposed building design, including a description of conformance with building massing and articulation, building details, building materials, and blank wall treatment requirements. (See AMC 19.63). Note: If you are proposing any departures, you must attach the applicable form.
Proposed building addition is within the northeastern corner of the existing facility and is located within an existing fenced/secured military vehicle and storage area. The

J. Description of proposed parking for vehicles and bicycles, including provisions for guests, shared parking. (see AMC 19.65)
Existing parking is not impacted by the addition as the occupant load usage will remain unchanged
K. Describe existing and proposed site access from public streets and any proposed street and/or pedestrian improvements.
Primary parking area is accessed from 22nd St. and will remain unchanged. Additional parking is accessed from 24th St. and is shared with the police department facility
L. Estimated quantities and type of materials involved if any fill or excavation is proposed.
80 cubic yards of excavation will be required for the proposed storm water bioretention cell within the northeast open lawn area of the site
M. Number, type, and size of trees to be removed.
No trees are to be removed.
N. Description of existing site utilities and proposed utilities, including extensions, upgrades, relocations, etc. (see AMC 19.52 Underground Utilities).
Building will propose a new fire protection system throughout with a new dedicated fire service line connection from 'M' Ave. Building will remove existing gas service line and
O. Explanation of any land to be dedicated to the City.
N/A

CONDITIONAL USE PERMIT CRITERIA

GENERAL INFORMATION	
The following section is intended to help you provide information about your project's compliance with the CUP criteria. Please fill in each space with responses that demonstrate how your proposal complies with all each criteria found in AMC 19.36.040.	
P.	How will the proposed conditional use comply with any specific requirements for the use found elsewhere in Title 19 Development Regulations?
A Public Safety Facility is allow in an R4 Zone if accepted as a conditional use. The proposed design will not change with currently use but will increase the existing facility's footprint without encroachments onto any setbacks.	
Q.	Describe how access to the site is appropriate considering the anticipated volume of traffic resulting from the use.
The access to the site and assigned personnel to the facility will remain unchanged. Occupant loads will not increase and building will continue with its routine operations.	
R.	Describe how off-street parking and loading facilities are adequate in terms of location, amount, and design to service the use.
Existing parking is to remain unchanged with exception to the secured/fenced military vehicle parking area that will have a reduction in area to accommodate the proposed building addition. The current user has verified this is acceptable and that this will not impact their use of the site.	
S.	Describe the location and intensity of outdoor lighting and how casting of light on adjacent, adjoining, or neighboring properties will be avoided.
No changes or renovations to the existing exterior lighting is anticipated. New building mounted exterior lighting will be provided at new entries to the building. New entry lighting will be selected to match the style and characteristics of existing exterior lighting as closely as possible. New exterior lighting will be designed to operate by the	
T.	Describe the hours and manner of operation of the proposed use, including anticipated noise generation, and how these will not be inconsistent with adjacent or nearby uses.
Hours of 7:00am to 5:00pm will not change. No increase to noise or light will occur.	

U. Describe existing or proposed public facilities that will serve the use and whether they are adequate to serve the proposed use.
The existing facility limits the functional and efficient use needed by the Washington National Guard due to inadequate storage and training areas. The proposed building addition will resolve these deficiencies and will provide improved structural stability during seismic events.
V. Describe the physical conditions of the site, including size, shape, topography, and drainage and their suitability for the proposed development.
The site gently slopes from the southwest to the northeast. One (1) larger main building with office components is located on the site with three (3) storage buildings supporting the mission of the Washington National Guard. The site will remain relatively unchanged in physical appearance and characteristics.
W. Describe any other factors deemed relevant to the decision-maker.
Please see attached memo titled "20220427_Anacortes - Planning Department Memo CFT"

April 27, 2022

To:	City of Anacortes Building Planning, Community, and Economic Development
Cc:	Nathan Goldschmidt
From:	WJA Design Collaborative (Clint Treat, AIA)
Subject:	Anacortes Readiness Center Renovation and Alteration (2219 M Avenue)

To the Director of Planning, Don Measamer and your team:

Following yesterday's Pre-Application conference call/meeting, the Designer of Record and Owner's group (including the Washington Military Department) wanted to be as transparent as possible regarding the design for the Anacortes Readiness Center Renovation and Alteration in hopes that your team has all the appropriate information regarding the proposed building addition, renovation work, and site improvements.

The proposed building addition is limited to a square footage increase of a gross 3,629 SF in footprint. The addition is only to increase program areas of uses already occurring within the building. The addition includes classroom, fitness/exercise room, and corridor expansions. The physical structure will be built of CMU and covered with metal panels matching the finishes on the existing building.

We have listed a series of items that would be typically considered critical to the City of Anacortes' interest that this design has mitigated by providing no impact. These include:

- No change of use
- No change in occupant loads (current user count of the facility is not increasing)
- No change in building height
- No change in parking
- No change in lot setbacks
- No change or impacts to existing traffic levels
- No increase to plumbing fixture count, yet the project maintains current code minimum fixture counts
- No change to main entries
- No Increase of stormwater runoff
- No change in building frontage
- No greenspace impacts

Additionally, we would like to make known the improvements this facility will accrue after the project completion, which will benefit the public that interact with the structure bettering the welfare this facility brings. These improvements include:

- Complete ADA upgrades at toilet rooms and interior lifts
- Full seismic upgrade for entire building
- Abatement of interior hazardous materials
- Increased leasable classroom spaces



- Improved security
- New fire protection throughout
- Improved stormwater treatment
- Improved energy performance

This facility, as well as its service members, have been a part of the local Anacortes community for over 50 years and plans to continue this presence well into the future. The planning for building addition and renovation improvements such as this takes the Washington Military Department a decade or more to appropriate funds and design efforts. It is hoped that the City of Anacortes can be amendable and equitable to these efforts to improve this building's function and use, and its users while maintaining this community connection. The design efforts have gone to great lengths to be as mindful to the surrounding neighborhood as possible to provide minimal to no impact within this zone.

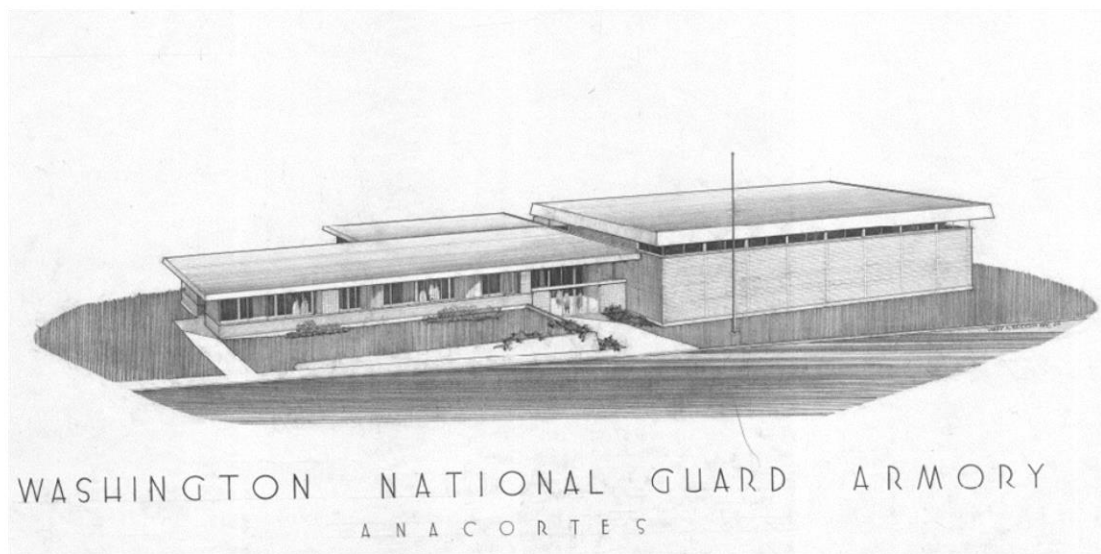
Our hope is that this memo helps inform you of the importance and contributions this facility brings to the City of Anacortes. Thank you.

Signed: Clint Treat, AIA

Drainage Memorandum

Building Permit Set

Anacortes Readiness Center Renovations and Addition
Department of Enterprise Services



April 2022



SCJ ALLIANCE
CONSULTING SERVICES

Drainage Memorandum

Project Information

Project: **Anacortes Readiness Center Renovations and Addition**
Prepared for: **Department of Enterprise Services**

Reviewing Agency

Jurisdiction: City of Anacortes

Project Representative

Prepared by: **SCJ Alliance**
1201 Third Avenue, Suite 550
Seattle, WA 98101
206.739.5454
scjalliance.com

Contact: Corey Jurcak, PE

Project Reference: **SCJ #21-00635**
Path: \\ad.scj.io\Global\Projects\1906 WJA Design Collaborative\21-000635
Anacortes Readiness Center Renovations and Addition\Phase 03 - Construction
Documents\Building Permit Submittal\Drainage Memo\21-000635 ARC
Drainage Memo Permit Set_2022-0429.docx

PROJECT ENGINEER'S CERTIFICATION

I hereby certify that this Drainage Memorandum for the Anacortes Readiness Center Renovations and Addition project has been prepared by me or under my supervision and meets the minimum standards of the City of Anacortes and normal standards of engineering practice. I hereby acknowledge and agree that the jurisdiction does not and will not assume liability for the sufficiency, suitability, or performance of drainage facilities designed by me.



04/29/2022

Prepared By: Kristal Kozai, PE
kristal.kozai@scjalliance.com
206.739.5454

Date



04/29/2022

Approved By: Corey Jurcak, PE
corey.jurcak@scjalliance.com
206.739.5454

Date

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LIST OF APPENDICES

Appendix A – Vicinity Map

Appendix B – Determination of Minimum Requirements Worksheet

Appendix C – Storm Drain Plans, FIRM

DRAINAGE MEMORANDUM

The following report was prepared for the proposed Anacortes Readiness Center Renovations and Addition project in Anacortes, Washington. This report was prepared to comply with the minimum technical standards and requirements that are set forth in the Department of Ecology 2019 Stormwater Management Manual for Western Washington (SMMWW) and the City of Anacortes Municipal Code.

1. PROPOSED PROJECT DESCRIPTION

Project Proponent: City of Anacortes

Section, Township, Range: Section 24, Township 35N, Range 1E

The proposed project consists of building renovations and construction, security upgrades, and stormwater improvements. The improvements/construction activities for this project include the following:

- Site preparation erosion control activities
- Building renovations and construction
- Construction/installation of water quality and conveyance systems

A site vicinity map of the proposed project location is enclosed as Appendix A.

A worksheet for determining the number of Minimum Requirements for this project has been prepared and is enclosed as Appendix B. Minimum Requirements one through five are required for new and replaced hard surfaces and the land disturbed.

The improvements include a bioretention facility with an underdrain. Exhibits are enclosed as Appendix C.

1.1 SUMMARY OF COMPLIANCE ON SITE

The stormwater design complies with minimum requirements one through five as follows:

Minimum Requirement #1 – Preparation of Stormwater Site Plans – This Drainage Memorandum will meet all the requirements of the SMMWW and will be included as part of the Stormwater Site Plans.

Minimum Requirement #2 – Construction Stormwater Pollution Prevention Plan – The project will provide an erosion control plan for the Contractor to incorporate into the project's Stormwater Pollution Prevention Plan (SWPPP) that will include specific Best Management Practices (BMPs) specified as guidance to the Contractor during construction activities to protect the downstream drainage system and receiving waters.

Minimum Requirement #3 – Source Control of Pollution – BMPs listed below are the minimum required for the site; additional BMPs not listed here may need to be implemented to meet the minimum requirements discussed in the SMMWW.

- BMP C120: Temporary and Permanent Seeding
- BMP C121: Mulching

- BMP C125: Topsoiling/Composting
- BMP C140: Dust Control
- BMP C220: Inlet Protection
- BMP C233: Silt Fence

Minimum Requirement #4 – Preservation of Natural Drainage Systems and Outfalls – The existing storm drainage system on site will be retained to the greatest extents possible. Surface water runoff discharge from the project site will continue to occur at the same location as with existing conditions.

Minimum Requirement #5 – Onsite Stormwater Management – The Site Civil and Utility Plans are attached as Appendix C. Per Appendix 1 of Anacortes' Phase II Municipal Stormwater Permit, Section 3: Applicability of the Minimum Requirements, this project will use the following Low Impact Development (LID) BMPs from the List Approach for MR5 Compliance for each type of surface in List #1:

- BMP T5.13: Post-Construction Soil Quality and Depth
- BMP T7.30: Bioretention Cells, Swales, and Planter Boxes

2. EXISTING CONDITIONS DESCRIPTION

The existing project site contains the Anacortes Readiness Center building with concrete pavement hardstand for military vehicles to the northeast, privately owned vehicle (POV) parking to the north, and open lawn areas to the west and northwest of the facility. The property is bordered by M Avenue on the west, 22nd Street to the north, and an alley/residential access driveway on the east side of the site. The Readiness Center shares a public parking area to the south of the building with the Anacortes Police Department.

The site slopes gently downward from the southwest to the northeast. Roadside drainage ditches are located on east side of the site, between the military parking area's storage buildings and the alley/residential access driveway that borders the east side of the site. The open ditches discharge surface water and collected stormwater flows into an existing underground stormwater conveyance system that runs west to east below 22nd Street. The separated storm drainage system in 22nd Street eventually outfalls to Puget Sound at the east end of 22nd Street.

No offsite drainage is anticipated to drain onto the site.

3. INFILTRATION RATES/SOILS REPORTS

Geotest has conducted testing and analysis of the soils on site and states that stormwater infiltration is not feasible for this site due to the underlying soils.

4. WELLS AND SEPTIC SYSTEMS

There are no known wells or septic systems near the project.

5. FUEL TANKS

There are no known underground fuel tanks that will impact the stormwater facility.

6. SUBBASIN DESCRIPTION

Qualitative Upstream Analysis

There is no foreseen offsite run-on from the adjacent parcels that will be tributary to the proposed stormwater system.

Qualitative Downstream Analysis

All the stormwater generated by the improvements will be collected, treated, and released to an existing stormwater system. The existing stormwater system releases into Puget Sound.

A downstream analysis is not required because no new hard surface will be added to the project, and there will be net reduction in stormwater runoff rate from this site due to the proposed bioretention facility to be constructed on site.

Per discussion with the City of Anacortes Engineering Department, the existing stormwater conveyance downstream of the site is capacity-constrained and can experience surcharging during peak storm events. Our project will help reduce the rate of stormwater runoff during peak events by retaining water from the site before discharging to the stormwater conveyance system.

7. FLOODPLAIN ANALYSIS

The project is located in an area of minimal flood hazard, according to FEMA. A site-specific National Flood Insurance Map (FIRM) has been provided herein as Appendix C.

8. AESTHETIC CONSIDERATIONS FOR FACILITIES

The bioretention area will be landscaped, including low-growing grasses and shrub plantings within the bioretention cell limits which will not impede visibility from the Readiness Center to 22nd Street. The landscaping of the stormwater facility will improve the current aesthetics.

9. FACILITY SELECTION AND SIZING

The water quality treatment and flow control system consist of a bioretention facility that is designed to treat and manage all the replaced pollution generating impervious surfaces (PGIS).

The selected drainage Bioretention Cell BMP will be sized per the Western Washington Phase II Municipal Stormwater Permit, Appendix 1, footnote 1, Table 2:

List Approach for MR5 Compliance as having a minimum horizontal projected surface area below the overflow which is at least 5% of the replaced hard surface area flowing to it.

The replaced hard surface area for the project is 4,425 square feet. Therefore, the projected bottom area of the bioretention cell below the overflow structure will be 5% of 4,425 square feet, or approximately 221 square feet or more. Please refer to the stormwater/utilities site plan, which shows the location and size of the stormwater bioretention cell facility.

Performance Standards and Goals

Minimum requirements one through five are required for the replaced hard surfaces. See Appendix B for the Determination of Minimum Requirements Worksheets.

Flow Control System

Despite this project not adding any new hard surfaces, the replaced hard surface areas are required to be treated; per discussion with the City of Anacortes, the project is not categorized as flow control exempt. Flow control will be provided by the bioretention facility.

Water Quality System on Site

There is a total of 4,425 square feet of replaced impervious area that requires treatment. Treatment is being provided by one bioretention facility, located on the northern side of the site within the existing lawn area. The projected bottom area of the bioretention cell below the overflow structure will be 5% of the replaced hard surface area of 4,425 square feet, or approximately 221 square feet or more. The bioretention area is designed with 1.5 feet of amended soils and is 1.5 feet deep. The 1.5 feet includes six inches of ponding and one foot of freeboard. A stormwater overflow catch basin will be installed at the east end of the new bioretention area with a piped connection to the existing stormwater catch basin.

10. CONVEYANCE SYSTEM ANALYSIS AND DESIGN

Conveyance System calculations are not applicable; the site improvements will reduce the amount of runoff that is directed to the underground drainage system with the installation of the bioretention facility.

11. OFFSITE ANALYSIS AND MITIGATION

All stormwater will be managed and treated on site, reducing the stormwater runoff from the site. Therefore, neither an offsite analysis nor further mitigation are required.

12. UTILITIES

Utility crossings will be closely monitored and minimized through design to avoid utility conflicts and to maintain proper separation, per the City of Anacortes design requirements.

13. COVENANTS, DEDICATIONS, EASEMENTS, AGREEMENTS

City of Anacortes will be responsible for inspection, operation, and maintenance of storm drainage facilities and execution of pollution source control programs for all project improvements.

14. OTHER PERMITS OR CONDITIONS PLACED ON THE PROJECT

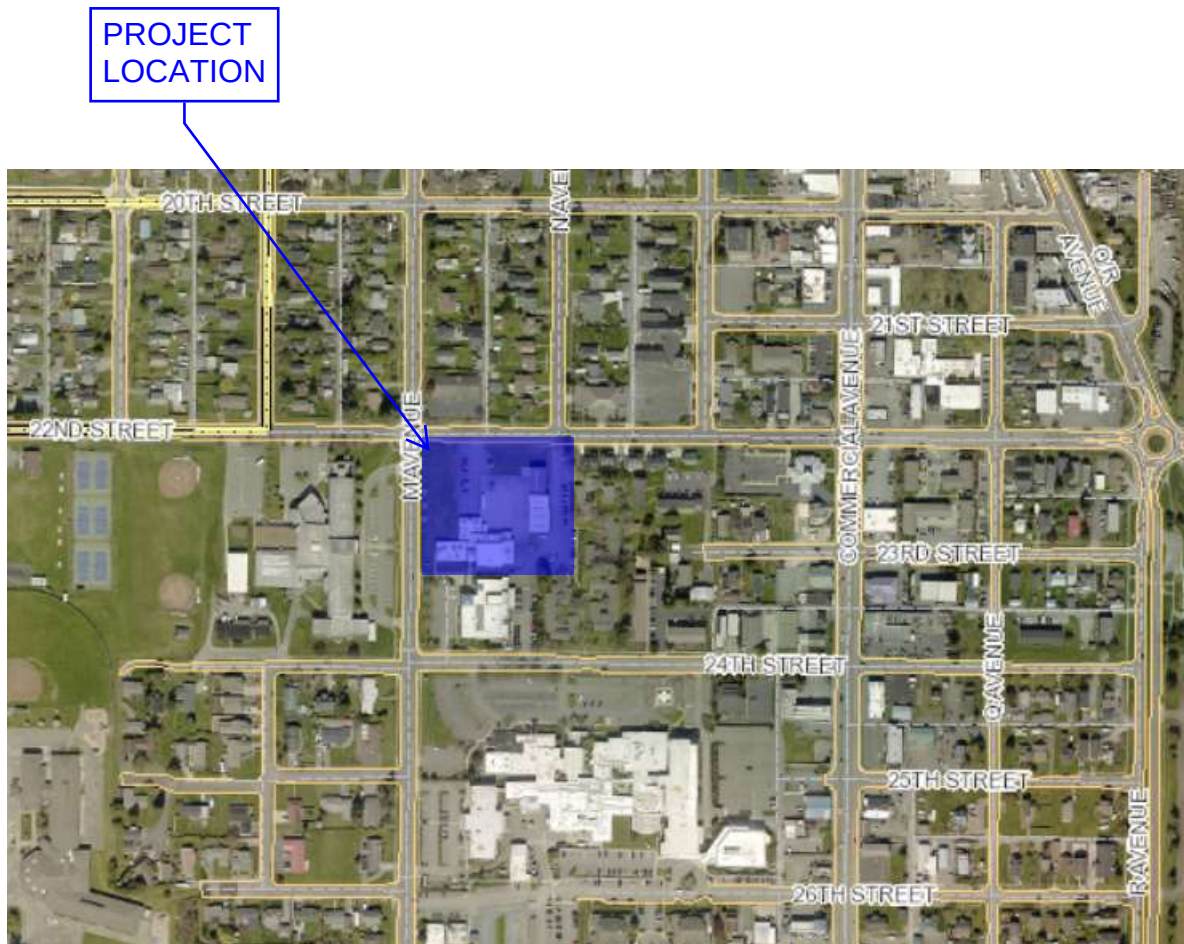
The Anacortes Readiness Center Project will follow the requirements of the Anacortes Municipal Stormwater Permit.

END OF DRAINAGE MEMORANDUM

APPENDIX A

VICINITY MAP

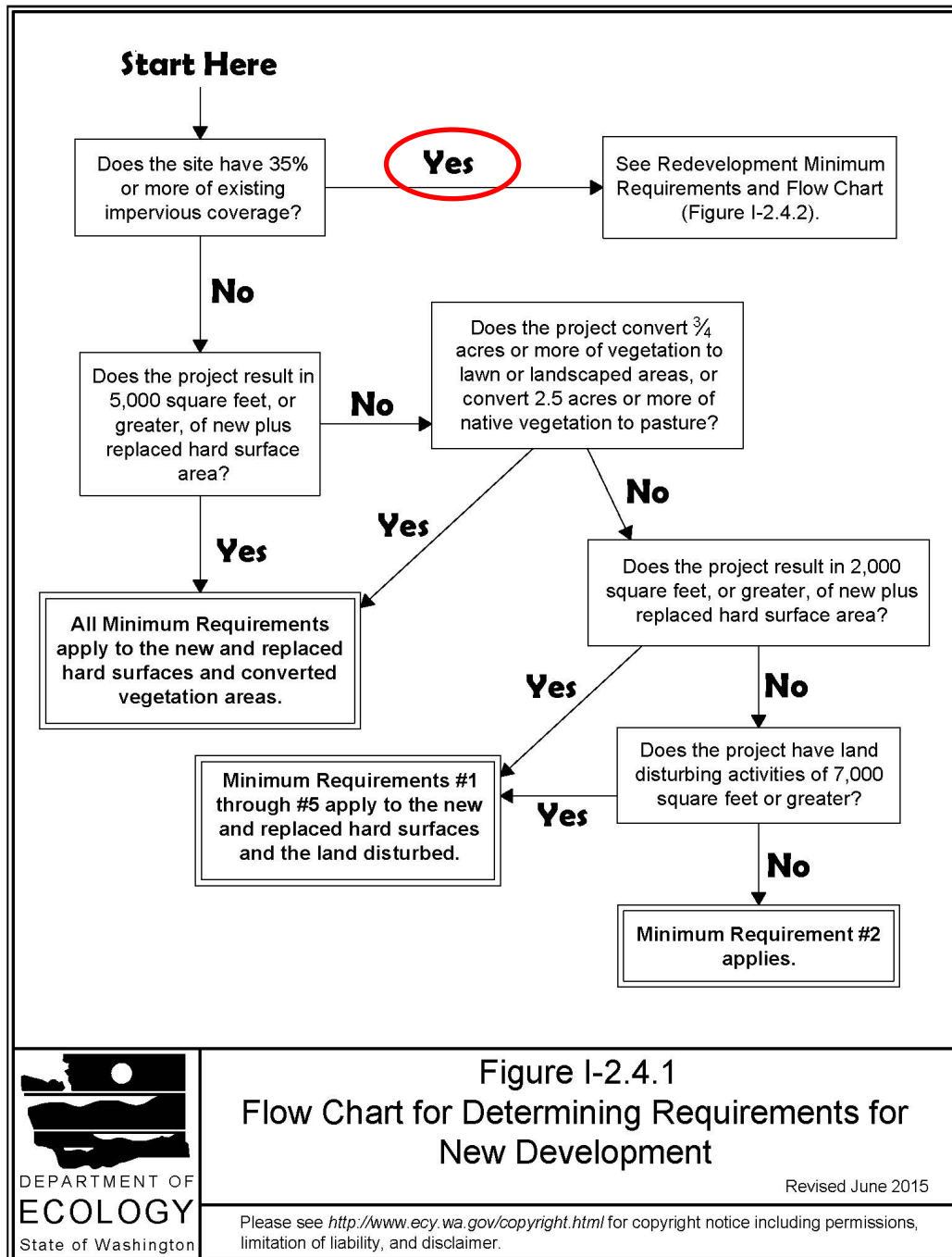
VICINITY MAP



APPENDIX B

DETERMINATION OF MINIMUM REQUIREMENTS WORKSHEET

FLOW CHART FOR DETERMINING REQUIREMENTS FOR NEW DEVELOPMENT



FLOW CHART FOR DETERMINING REQUIREMENTS FOR REDEVELOPMENT

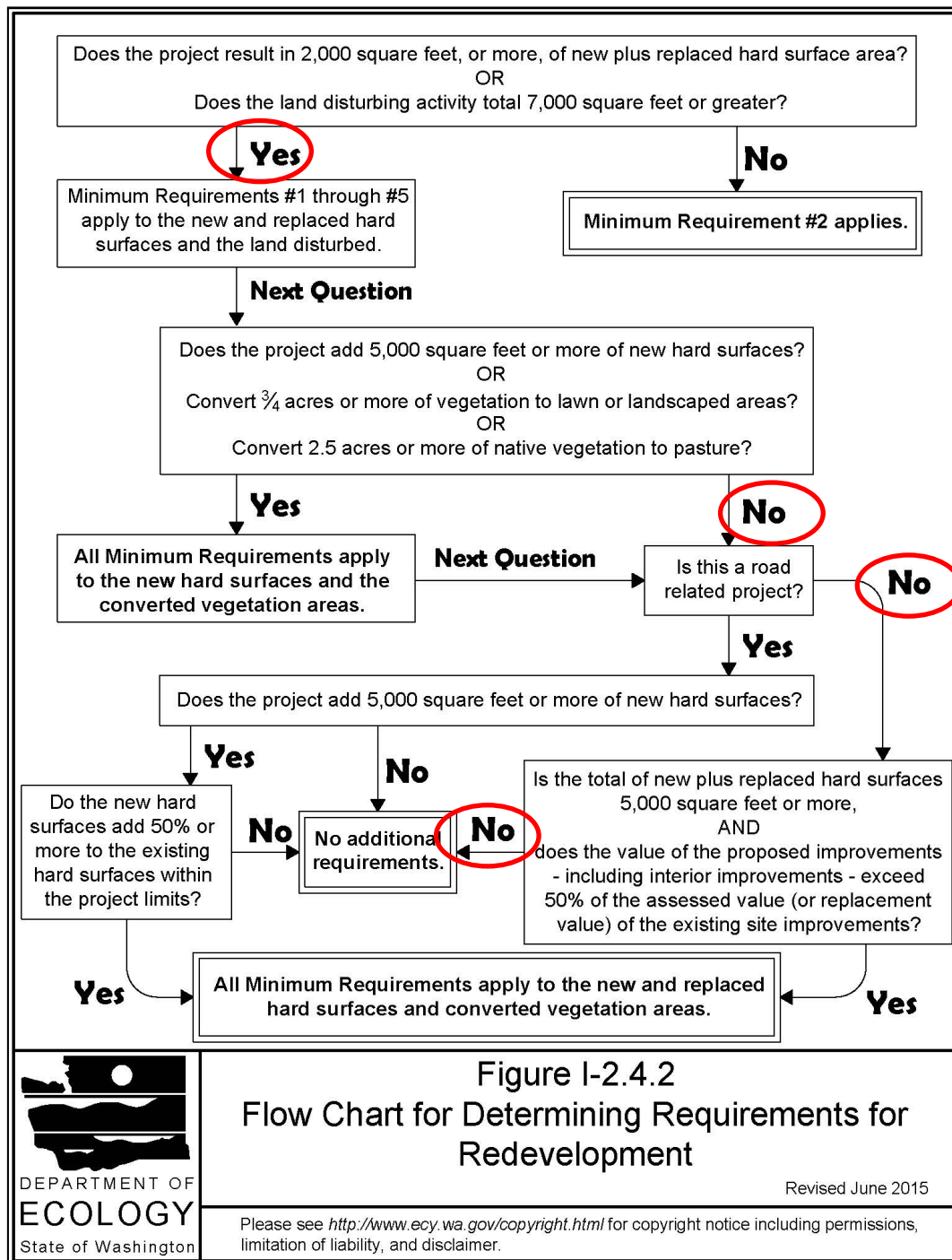


Figure I-2.4.2
Flow Chart for Determining Requirements for
Redevelopment

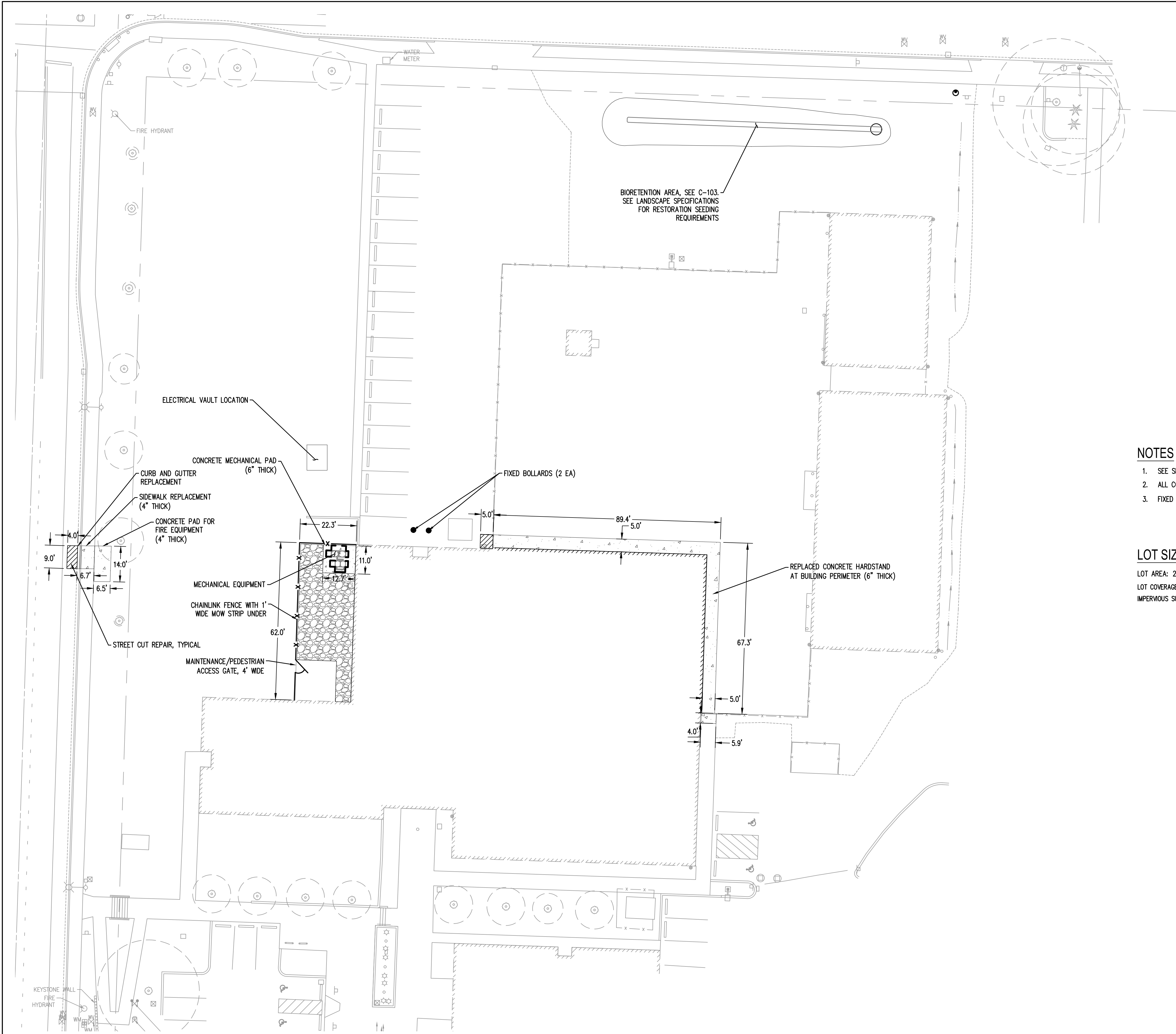
Revised June 2015

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APPENDIX C

SITE CIVIL AND UTILITY PLANS, FIRM

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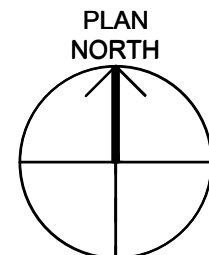
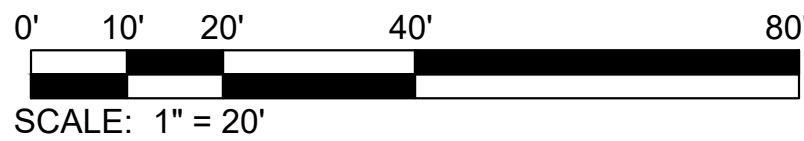
LEGEND	
	FIXED BOLLARD (SEE DETAIL 5, SHEET C-503)
	7" HIGH CHAIN LINK FENCE (UNPAINTED) WITH SINGLE 3-STRAND BARBED WIRE OUTRIGGER, (SEE DETAILS 1-4, SHEET C-503)
	CONCRETE PAVEMENT, 6" THICK (SEE DETAIL 2, SHEET C-501)
	CRUSHED ROCK, 4" THICK
	ASPHALT PAVEMENT, MATCH EXISTING STREET CUT REPAIR, SEE CITY OF ANACORTES STANDARD DETAIL, ST-01 (SEE DETAIL 1, SHEET C-502)
	CURB AND GUTTER REPLACEMENT, SEE CITY OF ANACORTES STANDARD DETAIL, ST-03 (SEE DETAIL 2, SHEET C-502)

NOTES

- SEE SHEET C-100 FOR SURVEY NOTES.
- ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3500 PSI.
- FIXED BOLLARDS MUST BE 4" MINIMUM IN DIAMETER, A316 STAINLESS STEEL.

LOT SIZE

LOT AREA: 2.26 ACRES (98,605 SF)
LOT COVERAGE: 61,372 SF
IMPERVIOUS SURFACE COVERAGE: 62%



design collaborative
617 Western Avenue
Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com

SCJ ALLIANCE
CONSULTING SERVICES
8730 TALLON LANE NE, SUITE 200,
LACEY, WA 98516
P: 360.352.1465 F: 360.352.1509
SCJALLIANCE.COM

Project No.: 21024	Designed By: KK	Drawn By: KK	Checked By: CJ
Mark	Description	Date	

WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA
CIVIL SITE PLAN

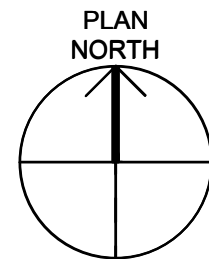
C-102

	EXISTING STORM LINE
	EXISTING SEWER LINE
	EXISTING WATER LINE
	EXISTING DITCH
	EXISTING MANHOLE
	EXISTING INLET
	EXISTING WATER METER
	EXISTING WATER VALVE
	SURFACE WATER RUNOFF FLOW DIRECTION
	BUILDING DOWNSPOUT
	THRUST BLOCK
	STORM LINE
	WATER LINE
	FIRE SERVICE LINE
	POST INDICATOR VALVE
	FIRE HYDRANT
	FIRE DEPARTMENT CONNECTION (FDC)
	CLEANOUT (TWO-WAY)
	CAP

1. REFER TO ARCHITECTURAL PLANS FOR DOWNSPOUT LOCATIONS AND DETAILS. FERNO STYLE FLEXIBLE CONNECTOR BETWEEN DOWNSPOUT AND DRAIN PIPE.
2. STORM RETENTION BASIN AREA SHAPE MAY BE ADJUSTED AS NEEDED, PROVIDE MIN BOTTOM AREA SPECIFIED.
3. DURING EXCAVATION FOR STORM RETENTION BASIN AREA, DO NOT ALLOW HEAVY CONSTRUCTION EQUIPMENT TO TRAVEL ACROSS AREA AFTER NATIVE SUBGRADE IS SCARIFIED.
4. ALL DRAIN LINES TO BE PVC SCH40. ALL DOWNSPOUT CONNECTION DRAIN LINES SHALL BE 6" MINIMUM PIPE DIAMETER.

1. ALL AREAS WITHIN 10' OF THE PROPOSED BUILDING SHALL SLOPE AWAY FROM THE BUILDING AT A MINIMUM SLOPE OF 2% FOR PAVED SURFACES AND 5% FOR NON-PAVED SURFACES, EXCEPT FOR WHERE OTHERWISE NOTED.
2. FINISHED GROUND AT THE BUILDING PERIMETER SHALL BE 6" BELOW THE FINISHED FLOOR ELEVATION UNLESS OTHERWISE NOTED.

1. ALL WATER LINES BETWEEN 4 AND 12-INCHES TO BE PVC C900 CLASS 165 AND DR18.
2. ALL FITTINGS TO BE MxMJ UNLESS OTHERWISE NOTED.
3. ALL UNDERGROUND WATER PIPING SHALL HAVE TRACER WIRE.
4. MINIMUM COVER FOR WATER PIPE AND FIRE SERVICE IS 3 FEET.
5. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
6. INSTALL FIRE HYDRANT AND PIV PER NFPA STANDARDS.
7. SEE ELECTRICAL SITE PLAN AND TELECOMMUNICATIONS SITE PLAN FOR CONSTRUCTION REQUIREMENTS AND DETAIL FOR THE SITE ELECTRICAL AND SITE TELECOMMUNICATION PROJECT WORK.



NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevation (BFE)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data referenced in the FIS should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevation (CBFE) shown on this map apply only landward of 0.0' National Geodetic Vertical Datum (NGVD). Users of this FIRM should be aware that coastal flood elevations may also be provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this community. Elevations shown in the Summary of Stillwater Elevations table should be used for construction, and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" or the Flood Insurance Study report for information on flood control structures in this jurisdiction.

The **projection** used in the preparation of this map is Universal Transverse Mercator (UTM) zone 10. The **horizontal datum** is NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

Flood elevations on this map are referenced to the National Geodetic Vertical Datum of 1929. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

Spatial Reference System Division
National Geodetic Survey, NOAA
Silver Spring Metro Center
1315 East-West Highway
Silver Spring, Maryland 20910
(301) 713-3191

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (800) 715-3242, or visit their website at www.ngs.noaa.gov.

Base map information shown on this FIRM was provided in digital format by the City of Anacortes, Washington.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limits locations.

Please refer to the separately printed **Map Index** for an overview map showing the layout of map panels for this jurisdiction.

An accompanying Flood Insurance Study report, Letters of Map Revision or Letters of Map Amendment revising portions of this panel, and digital versions of this PANEL may be available. Contact the **FEMA Map Service Center** at the following phone numbers and Internet address for information on all related products available from FEMA:

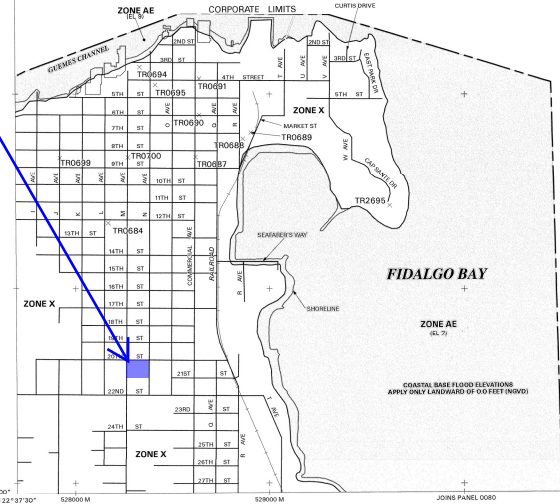
Phone: 800-358-9616
FAX: 800-358-9620
www.fema.gov/ltrac

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA-MAP (1-877-338-2627) or visit the FEMA website at www.fema.gov.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report may reflect stream channel distances that differ from what is shown on this map.

All Special Flood Hazard Areas shown within the City of Anacortes were previously published by the Unincorporated Areas of Skagit County, Washington. Dates shown below are from the Effective FIRM for Skagit County: Initial Identification - October 25, 1974; Flood Hazard Boundary Map Revision - September 13, 1977 & April 1, 1985; Flood Insurance Rate Map Effective - January 3, 1985

PROJECT LOCATION



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD EVENT

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equal or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

ZONE A No base flood elevations determined.

ZONE AE Base flood elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually shear flow on sloping terrain); average depths determined; no areas of elevated sea flooding, velocities, or wave damage.

ZONE AR Area of special flood hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently identified. Zone AR indicates that flood or former flood control system is being restored to provide protection from the 1% annual chance or greater flood event.

ZONE A99 Area to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no base flood elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no base flood elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or cross drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

UNFLOODABLE PROTECTED AREAS (UPAs)

CBRS areas and UPAs are normally located within or adjacent to Special Flood Hazard Areas.

Floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or velocities

Base Flood Elevation line and value; elevation in feet

Base Flood Elevation value where uniform within zone; elevation in feet

Cross Section Line

Transit Line

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)

1000-meter Universal Transverse Mercator grid values, zone 10

5000-foot grid ticks

Bench mark (see explanation in Notes to Users section of this FIRM panel)

River Mile

MAP REPOSITORY

City of Anacortes City Hall 604 6th Street Anacortes, WA 98221 (Maps available for reference only, not for distribution.)

FLOOD HAZARD BOUNDARY MAP REVISIONS

FLOOD INSURANCE RATE MAP EFFECTIVE

FLOOD INSURANCE RATE MAP REVISIONS

See Notes to Users Area

See Notes to Users Area

See Notes to Users Area

See Notes to Users Area

See Notes to Users Area

See Notes to Users Area

See Notes to Users Area

See Notes to Users Area

See Notes to Users Area

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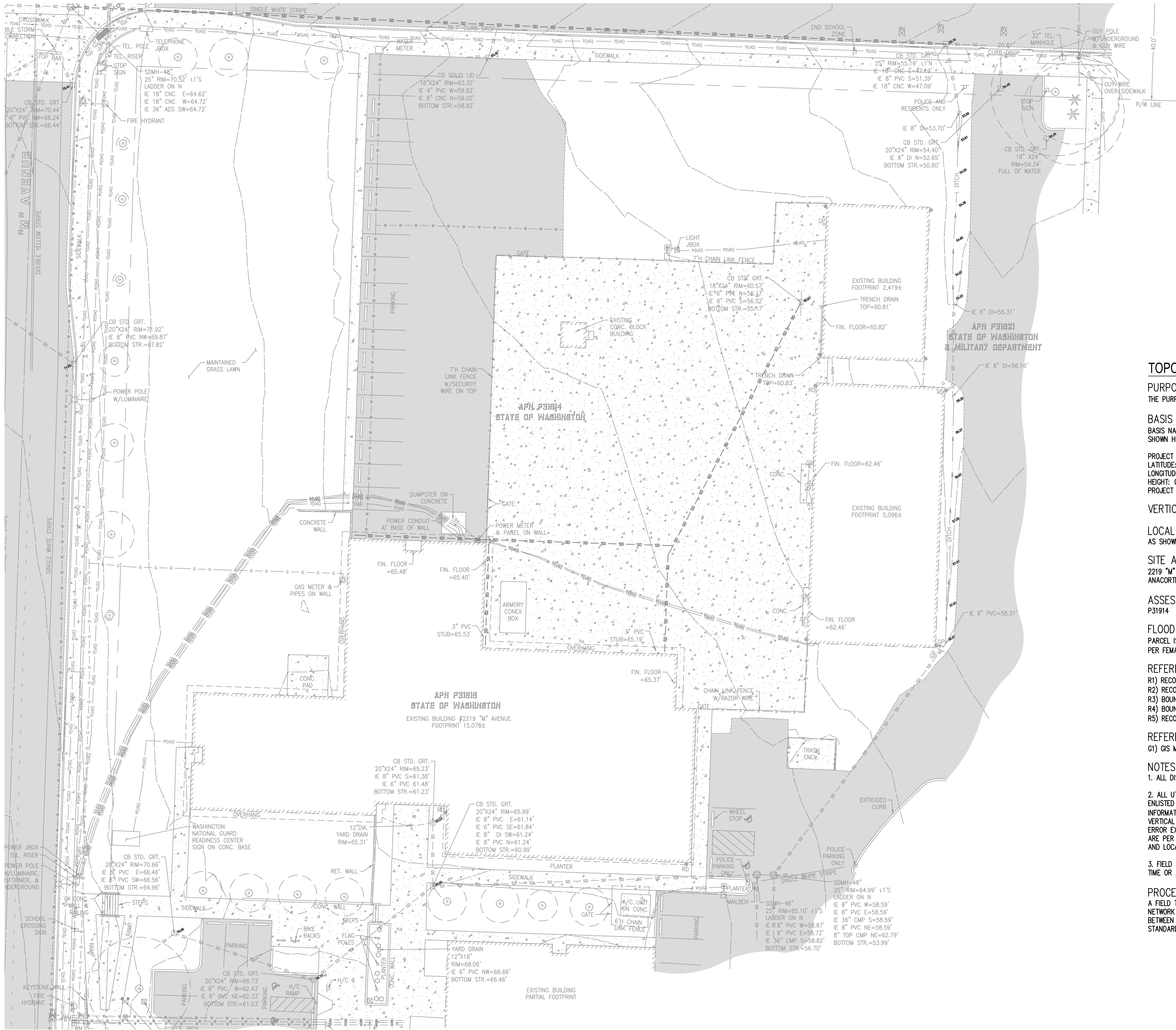
See Notes to Users Area

See Notes to Users Area

See Notes to Users Area

See Notes to Users Area

See Notes to Users Area



EXISTING LEGEND

(NOTE: NOT ALL SYMBOLS MAY APPEAR ON THE MAP)

- SURVEY MONUMENT (AS NOTED)
- LUMINAIRE (LUM.)
- YARD LIGHT
- POWER METER (PM)
- POWER POLE (PP)
- JUNCTION BOX (AS NOTED)
- TELEPHONE MANHOLE (TM)
- TELEPHONE RISER (TR)
- CATCH BASIN (CB)
- STORM MANHOLE (SDMH)
- STORM CLEANOUT (SDCO)
- ROOF DRAIN (RD)
- SANITARY SEWER MANHOLE (SSMH)
- SANITARY CLEANOUT (SSCO)
- GAS METER (GM)
- WATER VALVE (WV)
- FIRE HYDRANT(FH) / CONNECTION(FDC)
- POST INDICATOR VALVE (PIV)
- WATER MANHOLE
- WATER METER (WM)
- SIGN
- IRRIGATION VALVE (IV)
- DIRECTIONAL ARROW
- HANDICAP
- MAILBOX (MB)
- BICYCLE LANE
- PLANTER LIGHTS

- CHAIN LINK FENCE
- WATER LINE
- GAS LINE
- TELEPHONE LINE (OH) OR (UG)
- POWER LINE (OH) OR (UG)
- STORM LINE
- SEWER LINE
- KEYSTONE WALL
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE DRIPLINE
- CONCRETE
- ASPHALT
- BUILDING LINE

TOPOGRAPHIC SURVEY

PURPOSE OF THIS SURVEY

THE PURPOSE OF THIS SURVEY IS TO SHOW EXISTING DEVELOPMENT AND/OR DESIGN

BASIS NAD83(2011) DATUM PER WASHINGTON STATE REFERENCE NETWORK(WSRN)
BASIS NAD83(2011) DATUM WAS ESTABLISHED BY HOLDING WSRN OBSERVATIONS ON MONUMENTS, SAID DIMENSIONS AS SHOWN HEREON.

PROJECT BASE POINT
LATITUDE: N48.504462070
LONGITUDE: W122.616812101
HEIGHT: 0.000000
PROJECT COMBINED SCALE: 1.0000350011

VERTICAL DATUM IS NAVD88 PER WSRN TIED TO GEOID18

LOCAL SITE/PROJECT BENCHMARKS
AS SHOWN ON THIS SURVEY

SITE ADDRESS
2219 "M" AVENUE
ANACORTES, WA 98221

ASSESSOR'S PARCEL NUMBER
P31914

FLOOD INFORMATION

PARCEL IS LOCATED IN ZONE "X" - AREA OF MINIMAL FLOOD HAZARD.
PER FEMA PANEL NUMBER 5303170040A, DATED 09/17/2003.

REFERENCE SURVEYS

- R1) RECORD OF SURVEY, AFN 20130090067
- R2) RECORD OF SURVEY, AFN 200402170205
- R3) BOUNDARY LINE ADJUSTMENT, AFN 201509250039
- R4) BOUNDARY LINE ADJUSTMENT, AFN 201902140052
- R5) RECORD OF SURVEY, AFN 201112190135

REFERENCE GIS DATA

- G1) GIS MAP DATA PROVIDED OR DOWNLOADED ON 11/12/2021 FROM PUGET SOUND ENERGY.

NOTES

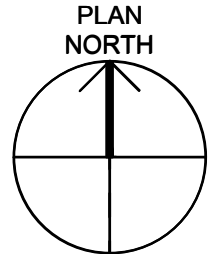
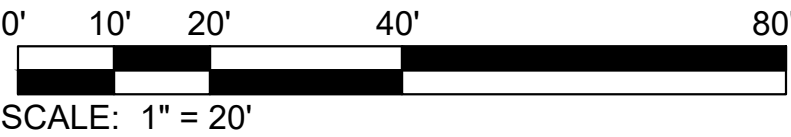
- 1. ALL DISTANCES SHOWN ON THIS SURVEY ARE IN US SURVEY FOOT.

2. ALL UTILITIES ARE SHOWN PER SURFACE OBSERVATIONS, UTILITY PAINT MARKINGS PER PRIVATE UTILITY LOCATOR ENLISTED AS PART OF THIS SURVEY AND PERFORMED BY APPLIED PROFESSIONAL SERVICES INC. AND OTHER REFERENCE INFORMATION. QUOTED ACCURACY OF UTILITIES SHOWN PER UTILITY LOCATOR PAINT MARKINGS ARE 1.5'± HORIZONTALLY. VERTICAL UTILITY INFORMATION IS SHOWN TO THE SIGNIFICANT FIGURE AT WHICH THEY WERE MEASURED, BUT INHERENT ERROR EXISTS IN RESTRICTION OF ACCESS TO UNDERGROUND UTILITIES. UTILITIES SHOWN PER REFERENCE INFORMATION ARE PER BEST FIT AND INTERPOLATION AND SHOULD BE VERIFIED PRIOR TO CONSTRUCTION. FOR EXACT UTILITY DEPTH AND LOCATION INFORMATION, IT IS RECOMMENDED THAT POTHOLING BE PERFORMED.

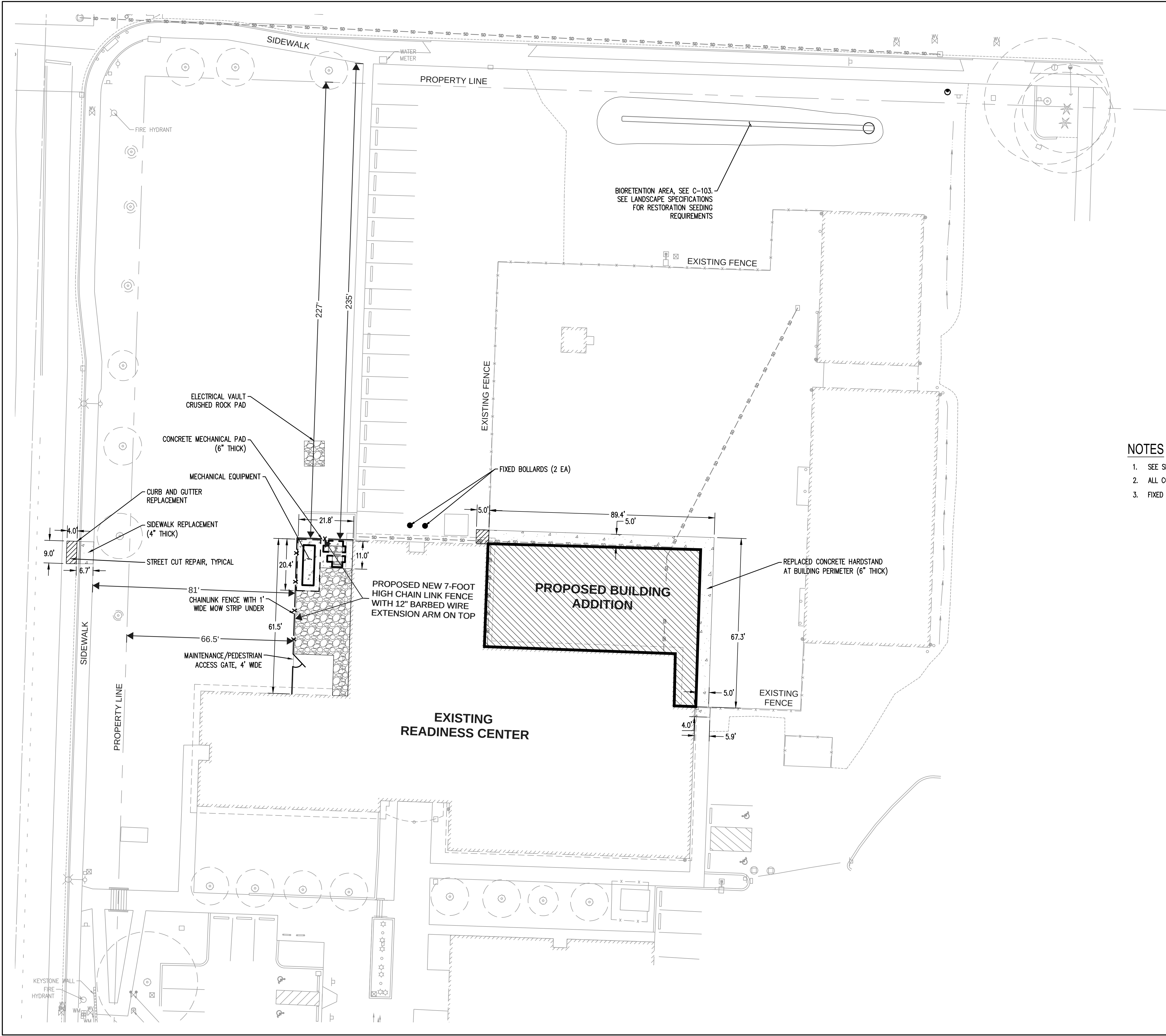
- 3. FIELD SURVEY WAS COMPLETED IN NOVEMBER 2021 AND ALL MONUMENTS SHOWN AS FOUND WERE VISITED AT THIS TIME OR AS NOTED.

PROCEDURE / NARRATIVE:

A FIELD TRAVERSE USING A TRIMBLE SX10 TOTAL STATION SUPPLEMENTED WITH FIELD NOTES AND TRIMBLE R10-2 NETWORK RTK GPS ROVER, WAS PERFORMED, ESTABLISHING THE ANGULAR, DISTANCE, AND VERTICAL RELATIONSHIPS BETWEEN THE MONUMENTS, PROPERTY LINES AND IMPROVEMENTS. THE RESULTING DATA MEETS OR EXCEEDS THE STANDARDS FOR LAND BOUNDARY SURVEYS AS SET FORTH IN WAC 332-130-090.



Project No.:	21024
Designed By:	KK
Drawn By:	KK
Checked By:	CL

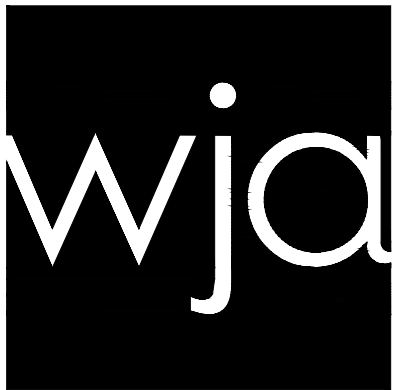
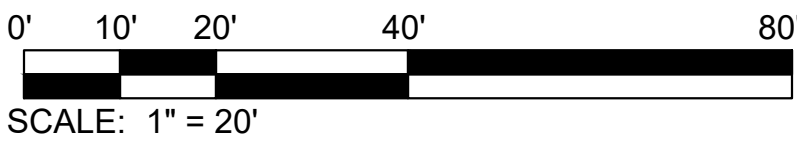


LEGEND

- FIXED BOLLARD (SEE DETAIL 5, SHEET C-503)
- 7" HIGH CHAIN LINK FENCE (UNPAINTED) WITH SINGLE 3-STRAND BARBED WIRE OUTRIGGER, (SEE DETAILS 1-4, SHEET C-503)
- CONCRETE PAVEMENT, 6" THICK (SEE DETAIL 2, SHEET C-501)
- CRUSHED ROCK, 4" THICK
- ASPHALT PAVEMENT, MATCH EXISTING STREET CUT REPAIR, SEE CITY OF ANACORTES STANDARD DETAIL, ST-01 (SEE DETAIL 1, SHEET C-502)
- CURB AND GUTTER REPLACEMENT, SEE CITY OF ANACORTES STANDARD DETAIL, ST-03 (SEE DETAIL 2, SHEET C-502)

NOTES

- SEE SHEET C-100 FOR SURVEY NOTES.
- ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3500 PSI.
- FIXED BOLLARDS MUST BE 4" MINIMUM IN DIAMETER, A316 STAINLESS STEEL.



617 Western Avenue
Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com

SCJ ALLIANCE
CONSULTING SERVICES
8730 TALLON LANE NE, SUITE 200,
LACEY, WA 98516
P: 360.352.1465 F: 360.352.1509
SCJALLIANCE.COM

Project No.: 21024	Designed By: KK	Drawn By: KK	Checked By: CJ
Mark	Description	Date	

WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA
CIVIL SITE PLAN

C-102

ANACORTES READINESS CENTER - RENOVATION AND ADDITION



2219 M AVENUE
ANACORTES, WA 98221

PROJECT DESCRIPTION: RENOVATION AND ADDITION OF THE EXISTING ANACORTES READINESS CENTER. WORK INCLUDES 3,600 SF BUILDING ADDITION WITH NEW CLASSROOMS, FITNESS ROOM AND CORRIDOR. ALTERATIONS TO PORTIONS OF THE EXISTING INCLUDE NEW TOILET/SHOWER ROOMS, KITCHEN, CONFERENCE, MOTHER’S ROOM, MULTIPURPOSE ROOM, AND A NEW ADA LIFT. NEW MECHANICAL, FIRE PROTECTION, MASS NOTIFICATION AND ELECTRICAL SERVICE TO BE INCORPORATED. BUILDING TO RECEIVE A COMPLETE STRUCTURAL SEISMIC UPGRADE AND REROOF. MINOR REPAIR AND FINISHES TO BE PROVIDED IN AREAS AFFECTED.

PARCEL NO.: 3 SEPARATE PARCELS, 31914, 31915 AND 31921.

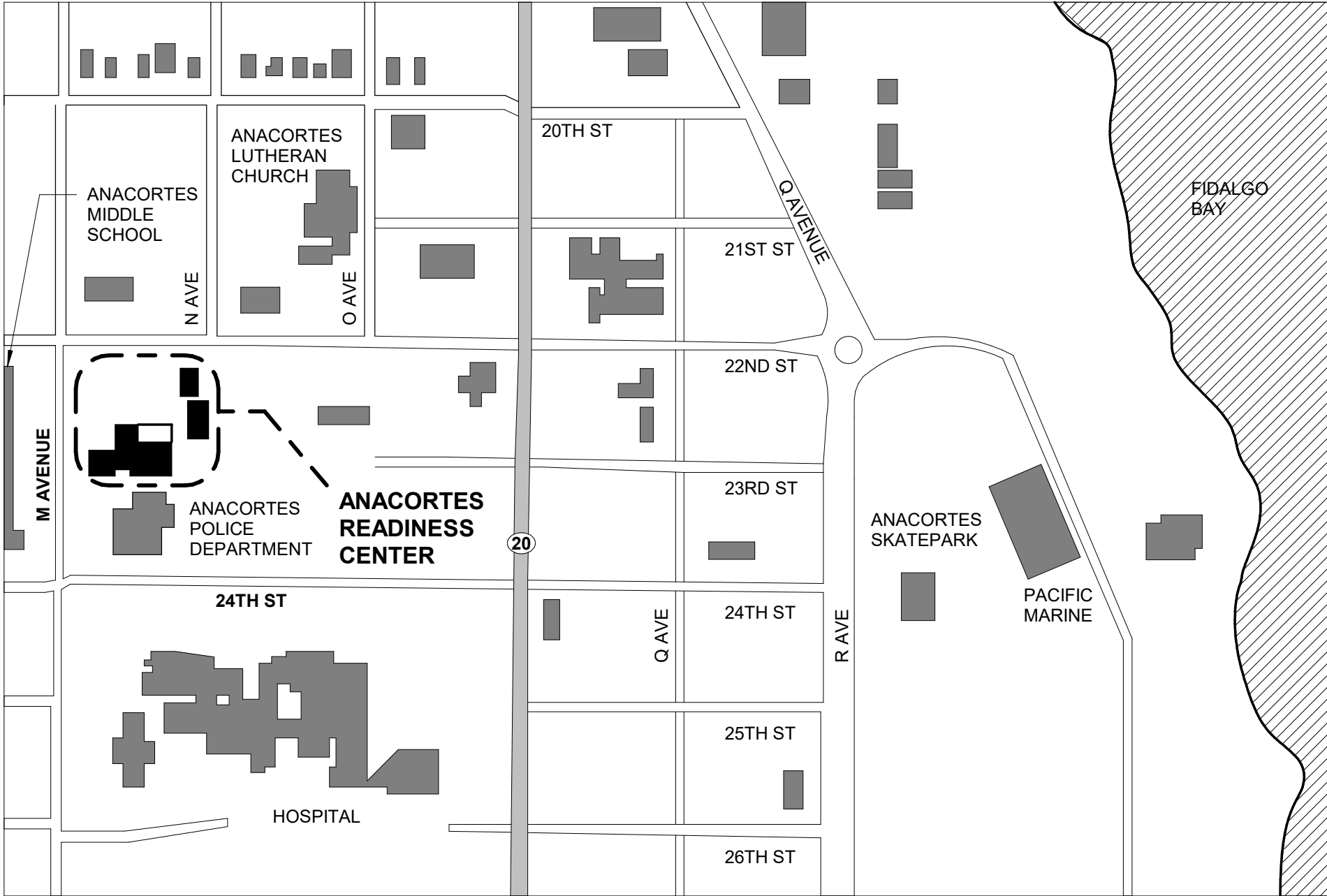
LEGAL DESCRIPTION: 31914 - (1.5100 ac) TAX 300AAA BAT E1/4 C SECTION 24, TOWNSHIP 35 NORTH, RANGE 1 EAST, W.M., TH S 0-59-30 E ALG E LI OF SEC 1183.99FT TO INT WI C/L 24TH ST EXT W THE TPB TH 592.21FT TO INT WI C/L 26TH ST EXT W TH W ALG C/L SD ST 804.87FT TO INT WI C/L M AVE EXT S TH N 0-01 W ALG C/L M AVE EXT 576.12FT TAP S OF C/L 24TH ST EXT W TH E ALG LI PLT & 16FT S OF C/L 24TH ST EXT 379.84FT TO INT WI C/L N ST EXT S TH N 0-01 W ALG C/L N ST EXT 16FT TH E ALG C/L 24TH ST EXT W 414.96FT TPB LESS TAX 300B 300BB.

31915 - (2.0700 ac) TAX 300B PTN NE1/4 SE1/4, SECTION 24, TOWNSHIP 35 NORTH, RANGE 1 EAST, W.M., DES BAAP ON E LI OF M AVE EXT S 216FT S OF S LI 22ND ST TH E PLT S LI SD ST 300FT M/L TO W LI N AVE EXT 296FT M/L TO N LI 24TH ST EXT W TH W ALG SD N LI TO E LI M AVE EXT TH N ALG E LI M AVE 296FT TPB.

31921 - (0.3500 ac) TAX 303 PTN NE1/4 SE1/4, SECTION 24, TOWNSHIP 35 NORTH, RANGE 1 EAST, W.M., DESC BAT INT OF S LI 22ND ST EXT WI W LI N AVE EXT TH S ALG W LI N AVE EXT SAME BEING W LI OF TR CONV TO ST OF WASH AF#601490 312FT M/L TAP 200FT N OF N LI 24TH ST TH E PLT S LI 22ND ST 50FT TH N PLT W LI N AVE 312 FT M/L TO S LI 22ND ST TH W ALG S LI SD ST 50FT M/L TPB.

ZONING: R4 (RESIDENTIAL HIGH DENSITY 4)
DATE OF ORIGINAL CONSTRUCTION: 1962
OCCUPANCY: PRIMARY GROUP B [CURRENT AND PROPOSED OCCUPANCY TYPES INCLUDE ASSEMBLY (A-3), BUSINESS (B), AND STORAGE (S-1)]
CONSTRUCTION TYPE: VB
STRUCTURAL CATAGORY: IV, ESSENTIAL FACILITIES
LOT AREA: 4.56 ACRES
FLOOR AREA: EXISTING 15,053 SF, NEW BUILDING 3,629 SF, TOTAL 18,682 SF (EXISTING + NEW)
CODE: 2018 INTERNATIONAL BUILDING CODE (2018 IBC)

PROJECT TEAM:
WJA DESIGN COLLABORATIVE - PROJECT MANAGEMENT, ARCHITECTURE, LANDSCAPE, STRUCTURAL, INTERIOR DESIGN
SCJ ALLIANCE - CIVIL ENGINEERING
FSI ENGINEERS - MECHANICAL, FIRE PROTECTION
BCE - ELECTRICAL, COMMUNICATIONS
ROEN & ASSOCIATES - COST ESTIMATING



VICINITY MAP

NTS



design collaborative

617 Western Avenue
Seattle, WA 98104
Tel: 206.946.9746
www.wja-dc.com



Project No.: 21024	Designed By: C/JN	Drawn By: C/FT	Checked By: P/MM
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Mark	Description	Date

WASHINGTON MILITARY DEPARTMENT

ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA

COVER SHEET

G-001

SHEET LIST	
SHEET NO.	SHEET NAME
GENERAL	
G-001	COVER SHEET
G-002	SHEET INDEX
SURVEY	
SRV1	LAND SURVEY
SRV2	LAND SURVEY
CIVIL	
C-001	CIVIL NOTES, LEGENDS, AND ABBREVIATIONS
C-100	EXISTING CONDITIONS
C-101	EROSION CONTROL AND DEMOLITION PLAN
C-102	CIVIL SITE PLAN
C-103	UTILITY AND STORMWATER PLAN
C-501	CIVIL DETAILS
C-502	CIVIL DETAILS
C-503	CIVIL DETAILS
STRUCTURAL	
S-001	STRUCTURAL GENERAL NOTES
S-002	STRUCTURAL GENERAL NOTES
S-003	STRUCTURAL GENERAL NOTES
S-004	ABBREVIATIONS AND SYMBOLS
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S-121	ROOF FRAMING PLAN
S-201	FRAMING ELEVATION KEYPLAN
S-202	WALL FRAMING ELEVATION
S-203	WALL FRAMING ELEVATION
S-204	WALL FRAMING ELEVATION
S-205	WALL FRAMING ELEVATION
S-206	WALL FRAMING ELEVATION
S-301	WALL FRAMING SECTIONS
S-302	WALL FRAMING SECTIONS
S-303	WALL FRAMING SECTIONS
S-304	WALL FRAMING SECTIONS
S-305	WALL FRAMING SECTIONS
S-306	WALL FRAMING SECTIONS
S-307	WALL FRAMING SECTIONS
S-308	WALL FRAMING SECTIONS
S-401	SLAB ON GRADE DIAGRAM
S-402	VAULT CEILING FRAMING PLAN
S-403	PARTIAL ROOF FRAMING PLAN
S-501	TYPICAL FOUNDATION DETAILS
S-502	TYPICAL FOUNDATION DETAILS
S-511	FOUNDATION DETAILS
S-521	CONCRETE WALL DETAILS
S-531	CMU WALL DETAILS
S-532	CMU WALL DETAILS
S-533	CMU WALL DETAILS
S-541	WOOD FRAMING DETAILS
S-552	ROOF FRAMING DETAILS
S-553	ROOF FRAMING DETAILS
S-554	ROOF FRAMING DETAILS
S-555	ROOF FRAMING DETAILS
S-556	ROOF FRAMING DETAILS
S-561	ROOF FRAMING DETAILS
S-601	STRUCTURAL CFS FRAMING DETAILS
S-611	NON-STRUCTURAL CFS FRAMING DETAILS
S-612	NON-STRUCTURAL CFS FRAMING DETAILS
S-613	NON-STRUCTURAL CFS FRAMING DETAILS
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A-004	CODE PLAN
A-005	EXISTING FLOOR PLAN
A-006	IMAGES - EXISTING CONDITIONS
A-007	IMAGES - EXISTING CONDITIONS
A-008	IMAGES - EXISTING CONDITIONS
AD101	DEMOLITION PLAN
AD111	DEMOLITION REFLECTED CEILING PLAN
AD121	ROOF DEMOLITION PLAN
A-101	FLOOR PLAN
A-111	REFLECTED CEILING PLAN
A-121	ROOF PLAN
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A-301	BUILDING SECTIONS
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A-402	ENLARGED PLANS & ELEVATIONS
A-403	ENLARGED PLANS & ELEVATIONS
A-421	TYPICAL WALL ELEVATIONS & MOUNTING HEIGHTS
A-501	EXTERIOR DETAILS
A-502	ROOF DETAILS
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SHEET LIST	
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A-512	INTERIOR DETAILS
A-513	INTERIOR DETAILS
A-601	WALL TYPES LEGEND
A-602	FLOOR, CEILING, SOFFIT AND ROOF TYPES LEGEND
A-603	DOOR & WINDOWS SCHEDULE AND LEGEND
A-801	AIR BARRIER DIAGRAM AND REQUIREMENTS
A-802	ROOF R-VALUE ENERGY CALCULATIONS
A-803	ROOF DRAINAGE CALCULATIONS
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FIRE ALARM	
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FA-101	FIRST FLOOR FIRE ALARM PLAN
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P-501	PLUMBING DETAILS
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M-103	ROOF HVAC PLAN
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M-402	HVAC SECTIONS
M-501	HVAC DETAILS
M-601	HVAC SCHEDULES
M-602	HVAC SCHEDULES
M-603	HVAC SCHEDULES
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M-702	CONTROL POINTS LIST
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E0.02	ELECTRICAL NOTES AND SCHEDULES
E0.03	MECHANICAL ELECTRICAL CONNECTION SCHEDULE
E1.01	ELECTRICAL SITE PLAN
ED2.0	ELECTRICAL LIGHTING DEMO PLAN
ED3.0	ELECTRICAL POWER & SYSTEMS DEMO PLAN
E2.01	ELECTRICAL LIGHTING PLAN
E3.01	ELECTRICAL POWER & SYSTEMS PLAN
E5.01	ELECTRICAL ENLARGED PLANS
E6.00	ELECTRICAL ONE-LINE DIAGRAMS
E6.01	ELECTRICAL ONE-LINE DIAGRAMS
E6.11	PANEL SCHEDULES
E6.12	PANEL SCHEDULES
E6.13	PANEL SCHEDULES
E7.00	ELECTRICAL DETAILS



617 Western Avenue
Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com



Project No.: 21024
Designed By: C/LN
Drawn By: C/FT
Checked By: P/MM

Mark	Description	Date

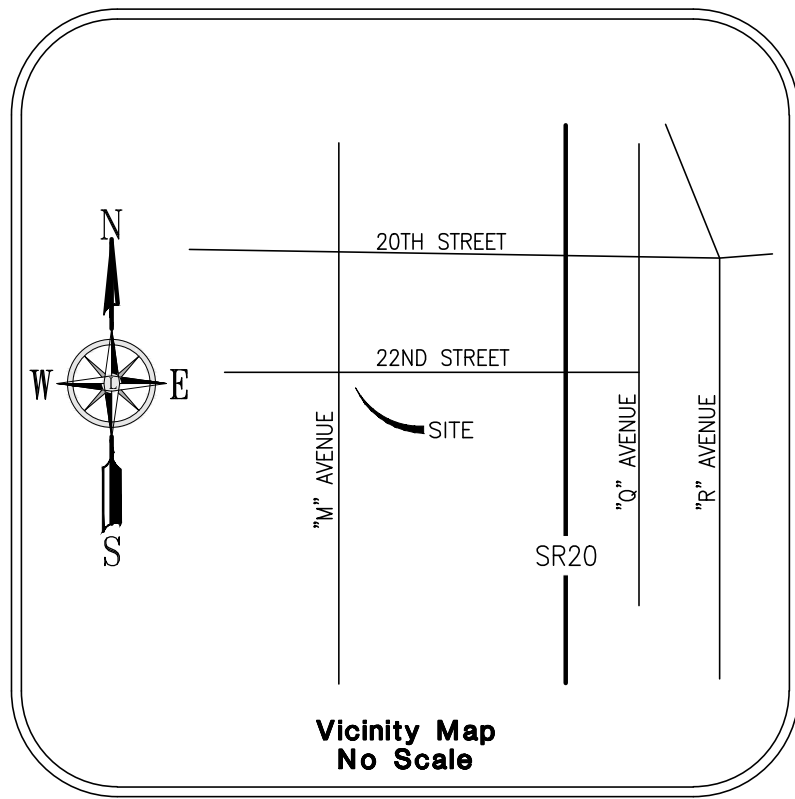
WASHINGTON MILITARY DEPARTMENT

ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA

SHEET INDEX

G-002

TOPOGRAPHIC SURVEY



PURPOSE OF THIS SURVEY
THE PURPOSE OF THIS SURVEY IS TO SHOW EXISTING CONDITIONS FOR DEVELOPMENT AND/OR DESIGN

BASIS NAD83(2011) DATUM PER WASHINGTON STATE REFERENCE NETWORK (WSRN)
BASIS NAD83(2011) DATUM WAS ESTABLISHED BY HOLDING WSRN OBSERVATIONS ON MONUMENTS, SAID DIMENSIONS AS SHOWN HEREON.

PROJECT BASE POINT
LATITUDE: N48.504462070
LONGITUDE: W122.616812101
HEIGHT: 0.000000
PROJECT COMBINED SCALE: 1.0000350011

VERTICAL DATUM IS NAVD88 PER WSRN TIED TO GEOID18

LOCAL SITE/PROJECT BENCHMARKS
AS SHOWN ON THIS SURVEY

SITE ADDRESS
2219 "M" AVENUE
ANACORTES, WA 98221

ASSESSOR'S PARCEL NUMBER
P31914

FLOOD INFORMATION
PARCEL IS LOCATED IN ZONE "X" - AREA OF MINIMAL FLOOD HAZARD.
PER FEMA PANEL NUMBER 5303170040A, DATED 09/17/2003.

REFERENCE SURVEYS
R1) RECORD OF SURVEY, APN 20130090067
R2) RECORD OF SURVEY, APN 200402170205
R3) BOUNDARY LINE ADJUSTMENT, APN 201509250039
R4) BOUNDARY LINE ADJUSTMENT, APN 201902140052
R5) RECORD OF SURVEY, APN 201112190135

REFERENCE GIS DATA
G1) GIS MAP PROVIDED OR DOWNLOADED ON 11/12/2021 FROM PUGET SOUND ENERGY.

NOTES
1. ALL DISTANCES SHOWN ON THIS SURVEY ARE IN US SURVEY FOOT.
2. UTILITIES ARE SHOWN PER SURFACE OBSERVATIONS, UTILITY PAINT MARKINGS PER PRIVATE UTILITY LOCATOR ENLISTED AS PART OF THIS SURVEY AND PERFORMED BY APPLIED PROFESSIONAL SERVICES INC. AND OTHER REFERENCE INFORMATION. QUOTED ACCURACY OF UTILITIES SHOWN PER UTILITY LOCATE PAINT MARKINGS ARE 1.5'± HORIZONTALLY. VERTICAL UTILITY INFORMATION IS SHOWN TO THE SIGNIFICANT FIGURE AT WHICH THEY WERE MEASURED, BUT INHERENT ERROR EXISTS IN RESTRICTION OF ACCESS TO UNDERGROUND UTILITIES. UTILITIES SHOWN PER REFERENCE INFORMATION ARE PER BEST FIT AND INTERPOLATION AND SHOULD BE VERIFIED PRIOR TO CONSTRUCTION. FOR EXACT UTILITY DEPTH AND LOCATION INFORMATION, IT IS RECOMMENDED THAT POT-HOLING BE PERFORMED.
3. FIELD SURVEY WAS COMPLETED IN NOVEMBER 2021 AND ALL MONUMENTS SHOWN AS FOUND WERE VISITED AT THIS TIME OR AS NOTED.

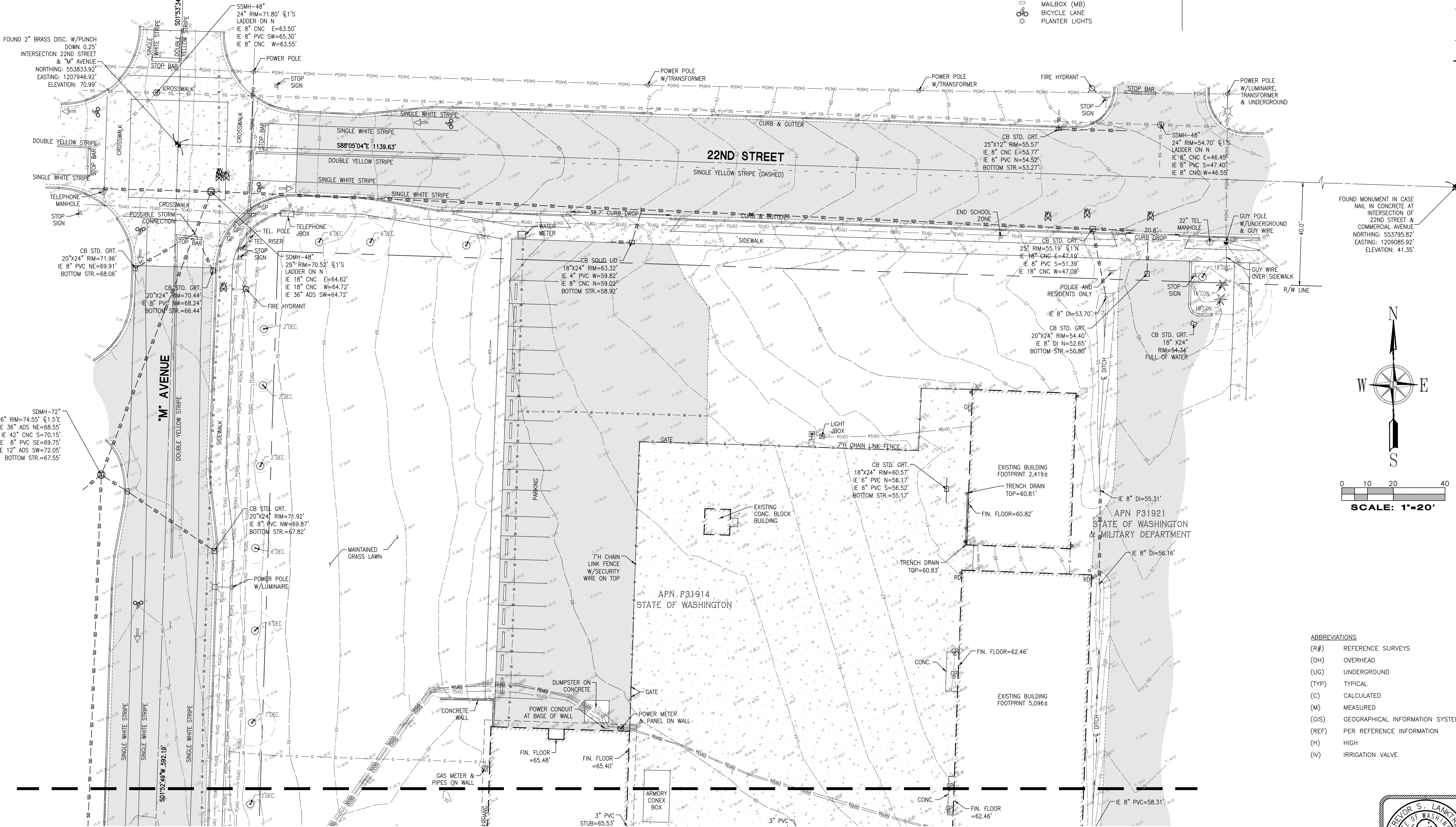
PROCEDURE / NARRATIVE:
A FIELD TRAVERSE USING A TRIMBLE SX10 TOTAL STATION SUPPLEMENTED WITH FIELD NOTES AND TRIMBLE R10-2 NETWORK RTK GPS ROVER, WAS PERFORMED, ESTABLISHING THE ANGULAR, DISTANCE, AND VERTICAL RELATIONSHIPS BETWEEN THE MONUMENTS, PROPERTY LINES AND IMPROVEMENTS. THE RESULTING DATA MEETS OR EXCEEDS THE STANDARDS FOR LAND BOUNDARY SURVEYS AS SET FORTH IN WAC 332-130-090.

LEGEND

(NOTE: NOT ALL SYMBOLS MAY APPEAR ON THE MAP)

- SURVEY MONUMENT (AS NOTED)
- LUMINAIRE (LUM.)
- YARD LIGHT
- POWER METER (PM)
- POWER POLE (PP)
- JUNCTION BOX (AS NOTED)
- TELEPHONE MANHOLE (TM)
- TELEPHONE RISER (TR)
- CATCH BASIN (CB)
- STORM MANHOLE (SDMH)
- STORM CLEANOUT (SDCO)
- ROOF DRAIN (RD)
- SANITARY SEWER MANHOLE (SSMH)
- SANITARY CLEANOUT (SSCO)
- GAS METER (GM)
- WATER VALVE (WV)
- FIRE HYDRANT (FH) / CONNECTION (FDC)
- POST INDICATOR VALVE (PIV)
- WATER MANHOLE
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- SIGN
- IRRIGATION VALVE (IV)
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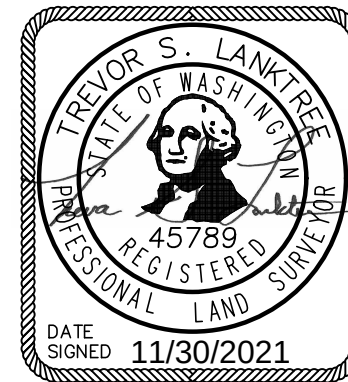
SEE MATCHLINE SHEET 2 OF 2

SURVEYOR'S CERTIFICATE:
THIS IS TO CERTIFY THAT THE MAP OR PLAT AND THE SURVEY UPON WHICH IT IS BASED WERE MADE BY ME OR UNDER MY DIRECTION AND CORRECTLY REFLECTS THE CONDITIONS OF THIS SITE AS OF THE DATE OF THE FIELD SURVEY.

TREYOR S. LANKTREE, P.L.S.
WASHINGTON REGISTRATION NO. 45789

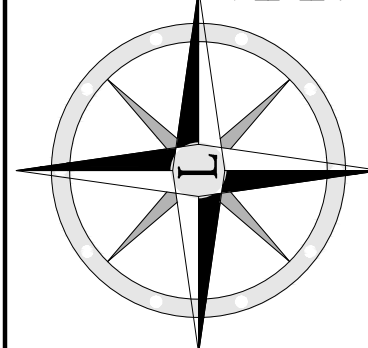
11/30/2021
DATE

ABBREVIATIONS
(R#) REFERENCE SURVEYS
(OH) OVERHEAD
(UG) UNDERGROUND
(TYP) TYPICAL
(C) CALCULATED
(M) MEASURED
(GIS) GEOGRAPHICAL INFORMATION SYSTEMS
(REF) PER REFERENCE INFORMATION
(H) HIGH
(IV) IRRIGATION VALVE



LANKTREE LAND SURVEYING, INC.

25510 74TH AVENUE SOUTH KENT, WA 98032
PHONE: (253) 653-6423
FAX: (253) 793-1616
WWW.LANKTREELANDSURVEYING.COM



Job Number
6080
Sheet
1 of 2

For:

WJA DESIGN COLLABORATIVE
119 SOUTH MAIN STREET, SUITE 400
SEATTLE, WA 98104

Scale:

Horizontal
Vertical

Designed: JKL
Drawn: BKL
Checked: JKL/TSL
Approved: JKL
Date: 11/30/21

Title:

TOPOGRAPHIC SURVEY
PTN OF THE NE1/4, OF THE SE1/4 OF SEC. 24,
TWP. 35 N., RGE 1 EAST, W. M.
CITY OF ANACORTES
SKAGIT COUNTY STATE OF WASHINGTON

Revision

No.

Date

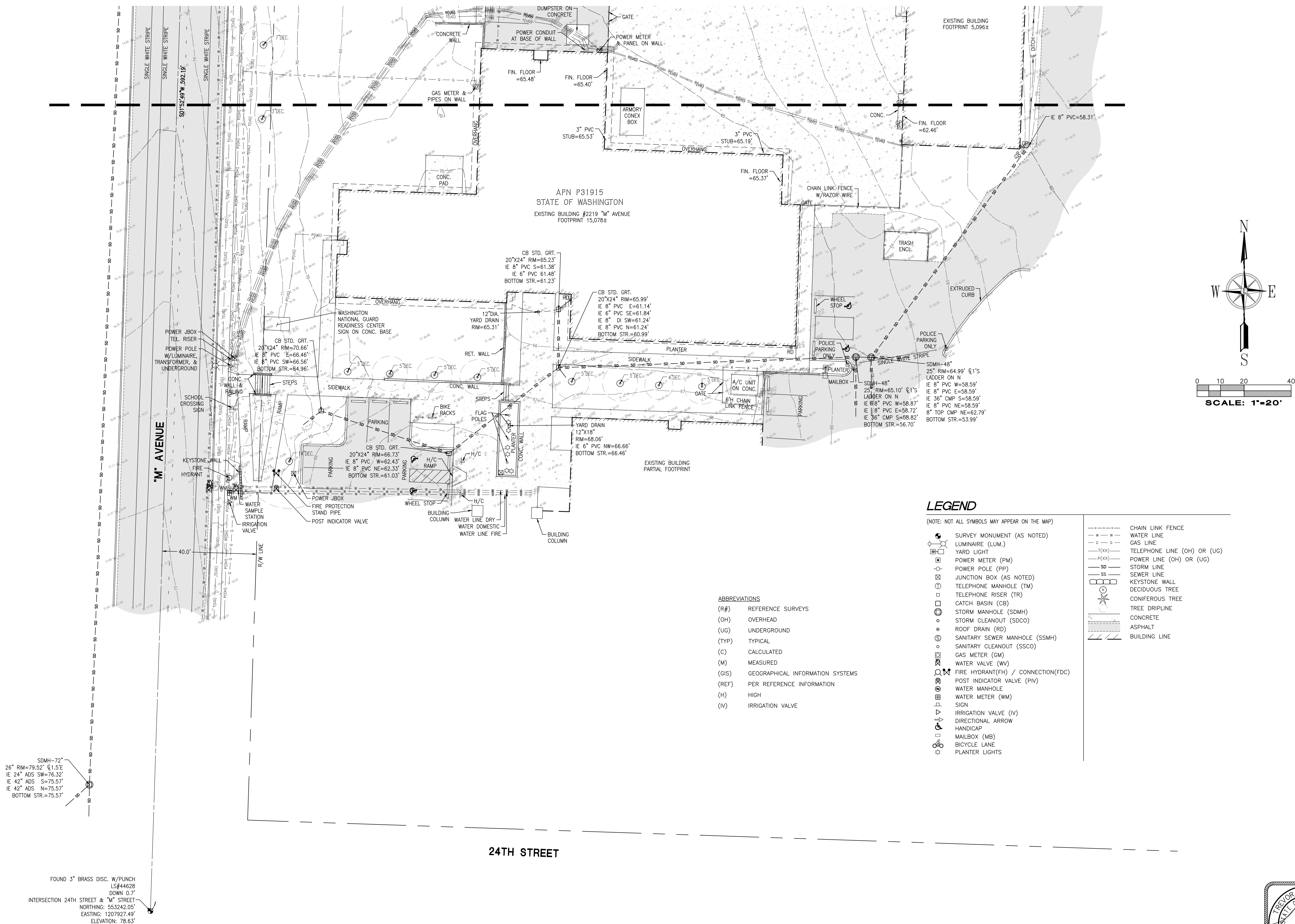
By

Ckd.

Appr.

TOPOGRAPHIC SURVEY

SEE MATCHLINE SHEET 1 OF 2



Job Number 6080		Sheet 2 of 2	
Title TOPOGRAPHIC SURVEY		Revision No. Date By Cld. Appr.	
For: WJA DESIGN COLLABORATIVE 119 SOUTH MAIN STREET, SUITE 400 SEATTLE, WA 98104		Title: PTN OF THE NE1/4, OF THE SE1/4 OF SEC. 24, TWP. 35 N., RGE 1 EAST, W. M. CITY OF ANACORTES SKAGIT COUNTY STATE OF WASHINGTON	
Scale: Horizontal Vertical		Scale: Horizontal Vertical	
Designed Drawn Checked Approved Date		Designed Drawn Checked Approved Date	
LANKTREE LAND SURVEYING, INC. 25510 74TH AVENUE SOUTH KENT, WA 98032 PHONE: (253) 653-6423 FAX: (253) 793-1616 WWW.LANKTREELANDSURVEYING.COM		LANKTREE LAND SURVEYING, INC. 25510 74TH AVENUE SOUTH KENT, WA 98032 PHONE: (253) 653-6423 FAX: (253) 793-1616 WWW.LANKTREELANDSURVEYING.COM	

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CONSTRUCTION NOTES

GENERAL

1. OBTAIN ALL REQUIRED PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.
2. PROTECT FROM DAMAGE EXISTING OR NEWLY CONSTRUCTED STRUCTURES, UTILITIES, LANDSCAPING, OR OTHER WORK TO REMAIN. ANY DAMAGE OCCURRING AS A RESULT OF CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IN A TIMELY MANNER BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
3. PROVIDE AND MAINTAIN TEMPORARY FENCING AND/OR BARRICADES AS NECESSARY TO LIMIT ACCESS TO AREAS UNDER CONSTRUCTION. NECESSARY FENCING AND/OR BARRICADES SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE OWNER'S REPRESENTATIVE.

SURVEY

1. PROVIDE SURVEY CONTROL SUCH THAT THE LOCATION AND GRADE OF CONSTRUCTION CAN BE VERIFIED AT ALL TIMES.

TRAFFIC

1. ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; INCLUSIVE OF ANY AMENDMENTS BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND CITY OF ANACORTES.

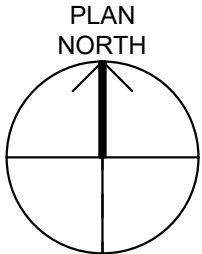
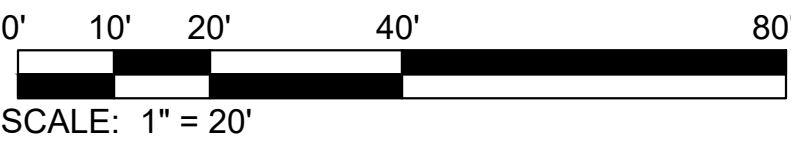
ABBREVIATIONS

BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICE
CI	CAST IRON
CONC	CONCRETE
DIA	DIAMETER
E	EAST, EASTING
EL	ELEVATION
FT, '	FOOT, FEET
IE	INVERT ELEVATION
IN, "	INCH
MIN	MINIMUM
N	NORTH, NORTHING
NFPA	NATIONAL FIRE PROTECTION AGENCY
NTS	NOT TO SCALE
PIV	POST INVERT ELEVATION
PSI	POUNDS SQUARE INCH
PVC	POLYVNYL CHLORIDE
S	SOUTH
SF	SQUARE FOOT
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
TYP	TYPICAL
W	WEST



LOCATION MAP

NTS



WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA

CIVIL NOTES, LEGENDS, AND
ABBREVIATIONS

C-001



design collaborative

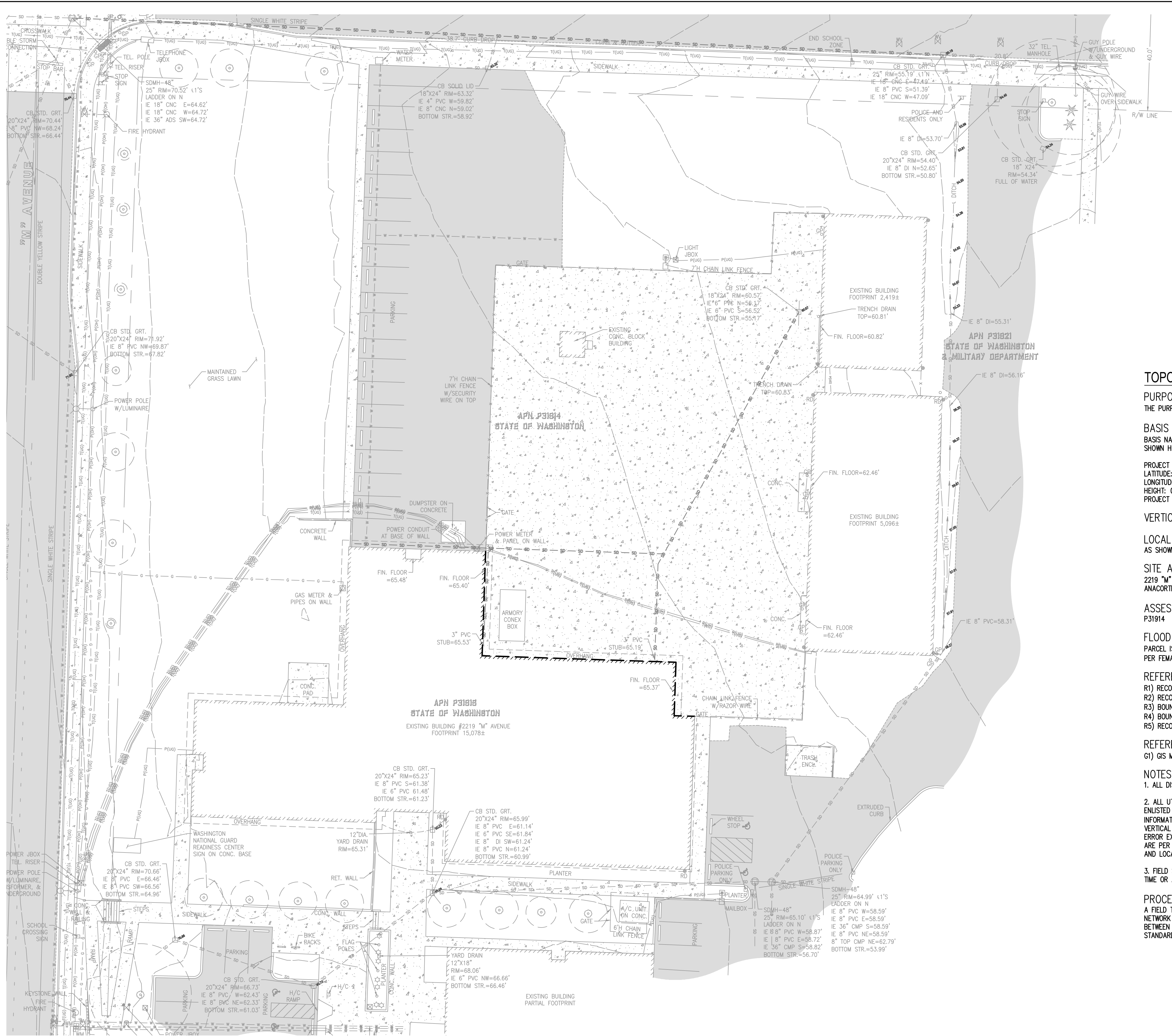
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Tel. 206.946.9746
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LACEY, WA 98516
P: 360.352.1465 F: 360.352.1509
SCJALLIANCE.COM

Project No.: 21024	Designed By: KK	Drawn By: KK	Checked By: CJ
--------------------	-----------------	--------------	----------------

Mark	Description	Date



EXISTING LEGEND

- (NOTE: NOT ALL SYMBOLS MAY APPEAR ON THE MAP)
- | | | | |
|--|------------------------------------|--|-----------------------------|
| | SURVEY MONUMENT (AS NOTED) | | CHAIN LINK FENCE |
| | LUMINAIRE (LUM.) | | WATER LINE |
| | YARD LIGHT | | GAS LINE |
| | POWER METER (PM) | | TELEPHONE LINE (OH) OR (UG) |
| | POWER POLE (PP) | | POWER LINE (OH) OR (UG) |
| | JUNCTION BOX (AS NOTED) | | STORM LINE |
| | TELEPHONE MANHOLE (TM) | | SEWER LINE |
| | TELEPHONE RISER (TR) | | KEYSTONE WALL |
| | CATCH BASIN (CB) | | DECIDUOUS TREE |
| | STORM MANHOLE (SDMH) | | CONIFEROUS TREE |
| | STORM CLEANOUT (SDCO) | | TREE DRILINE |
| | ROOF DRAIN (RD) | | CONCRETE |
| | SANITARY SEWER MANHOLE (SSMH) | | ASPHALT |
| | SANITARY CLEANOUT (SSCO) | | BUILDING LINE |
| | GAS METER (GM) | | |
| | WATER VALVE (WV) | | |
| | FIRE HYDRANT(FH) / CONNECTION(FDC) | | |
| | POST INDICATOR VALVE (PIV) | | |
| | WATER MANHOLE | | |
| | WATER METER (WM) | | |
| | SIGN | | |
| | IRRIGATION VALVE (IV) | | |
| | DIRECTIONAL ARROW | | |
| | HANDICAP | | |
| | MAILBOX (MB) | | |
| | BICYCLE LANE | | |
| | PLANTER LIGHTS | | |

TOPOGRAPHIC SURVEY

PURPOSE OF THIS SURVEY
THE PURPOSE OF THIS SURVEY IS TO SHOW EXISTING DEVELOPMENT AND/OR DESIGN

BASIS NAD83(2011) DATUM PER WASHINGTON STATE REFERENCE NETWORK(WSRN)
BASIS NAD83(2011) DATUM WAS ESTABLISHED BY HOLDING WSRN OBSERVATIONS ON MONUMENTS, SAID DIMENSIONS AS SHOWN HEREON.

PROJECT BASE POINT
LATITUDE: N48.504462070
LONGITUDE: W122.616812101
HEIGHT: 0.000000
PROJECT COMBINED SCALE: 1.0000350011

VERTICAL DATUM IS NAVD88 PER WSRN TIED TO GEOID18

LOCAL SITE/PROJECT BENCHMARKS
AS SHOWN ON THIS SURVEY

SITE ADDRESS
2219 "M" AVENUE
ANACORTES, WA 98221

ASSESSOR'S PARCEL NUMBER
P31914

FLOOD INFORMATION
PARCEL IS LOCATED IN ZONE "X" - AREA OF MINIMAL FLOOD HAZARD.
PER FEMA PANEL NUMBER 5303170040A, DATED 09/17/2003.

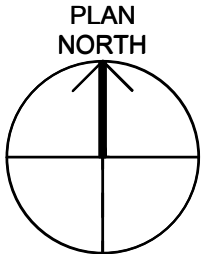
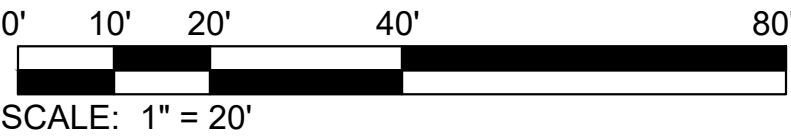
REFERENCE SURVEYS
R1) RECORD OF SURVEY, AFN 20130090067
R2) RECORD OF SURVEY, AFN 200402170205
R3) BOUNDARY LINE ADJUSTMENT, AFN 201509250039
R4) BOUNDARY LINE ADJUSTMENT, AFN 201902140052
R5) RECORD OF SURVEY, AFN 201112190135

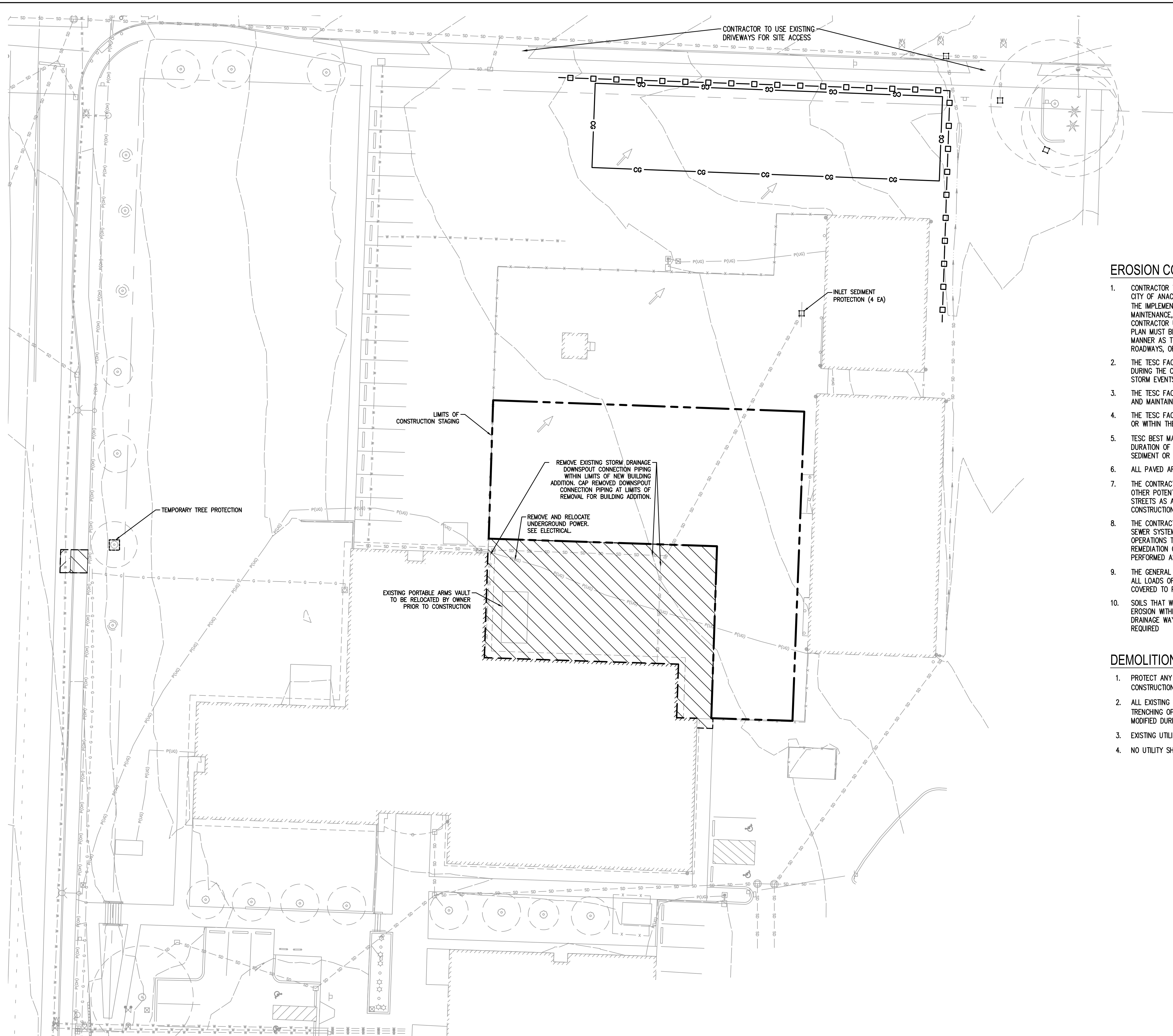
REFERENCE GIS DATA
G1) GIS MAP DATA PROVIDED OR DOWNLOADED ON 11/12/2021 FROM PUGET SOUND ENERGY.

NOTES

- ALL DISTANCES SHOWN ON THIS SURVEY ARE IN US SURVEY FOOT.
- ALL UTILITIES ARE SHOWN PER SURFACE OBSERVATIONS, UTILITY PAINT MARKINGS PER PRIVATE UTILITY LOCATOR ENLISTED AS PART OF THIS SURVEY AND PERFORMED BY APPLIED PROFESSIONAL SERVICES INC. AND OTHER REFERENCE INFORMATION. QUOTED ACCURACY OF UTILITIES SHOWN PER UTILITY LOCATOR PAINT MARKINGS ARE 1.5'± HORIZONTALLY. VERTICAL UTILITY INFORMATION IS SHOWN TO THE SIGNIFICANT FIGURES AT WHICH THEY WERE MEASURED, BUT INHERENT ERROR EXISTS IN RESTRICTION OF ACCESS TO UNDERGROUND UTILITIES. UTILITIES SHOWN PER REFERENCE INFORMATION ARE PER BEST FIT AND INTERPOLATION AND SHOULD BE VERIFIED PRIOR TO CONSTRUCTION. FOR EXACT UTILITY DEPTH AND LOCATION INFORMATION, IT IS RECOMMENDED THAT POTHOLING BE PERFORMED.
- FIELD SURVEY WAS COMPLETED IN NOVEMBER 2021 AND ALL MONUMENTS SHOWN AS FOUND WERE VISITED AT THIS TIME OR AS NOTED.

PROCEDURE / NARRATIVE:
A FIELD TRAVERSE USING A TRIMBLE SX10 TOTAL STATION SUPPLEMENTED WITH FIELD NOTES AND TRIMBLE R10-2 NETWORK RTK GPS ROVER, WAS PERFORMED, ESTABLISHING THE ANGULAR, DISTANCE, AND VERTICAL RELATIONSHIPS BETWEEN THE MONUMENTS, PROPERTY LINES AND IMPROVEMENTS. THE RESULTING DATA MEETS OR EXCEEDS THE STANDARDS FOR LAND BOUNDARY SURVEYS AS SET FORTH IN WAC 332-130-090.





LEGEND

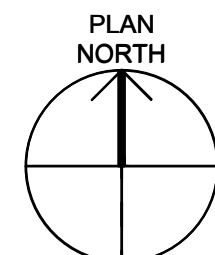
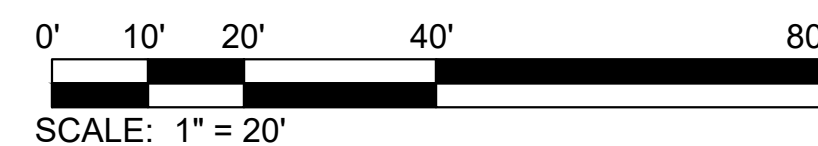
- | | |
|---|--|
|  | INLET SEDIMENT PROTECTION |
|  | SILT FENCE |
|  | CLEARING AND GRADING LIMITS |
|  | SAWCUT |
|  | EXISTING CONCRETE TO BE REMOVED |
|  | EXISTING ASPHALT TO BE REMOVED |
|  | EXISTING SURFACE DRAINAGE FLOW DIRECTION |
|  | CONSTRUCTION STAGING LIMITS |

EROSION CONTROL NOTES

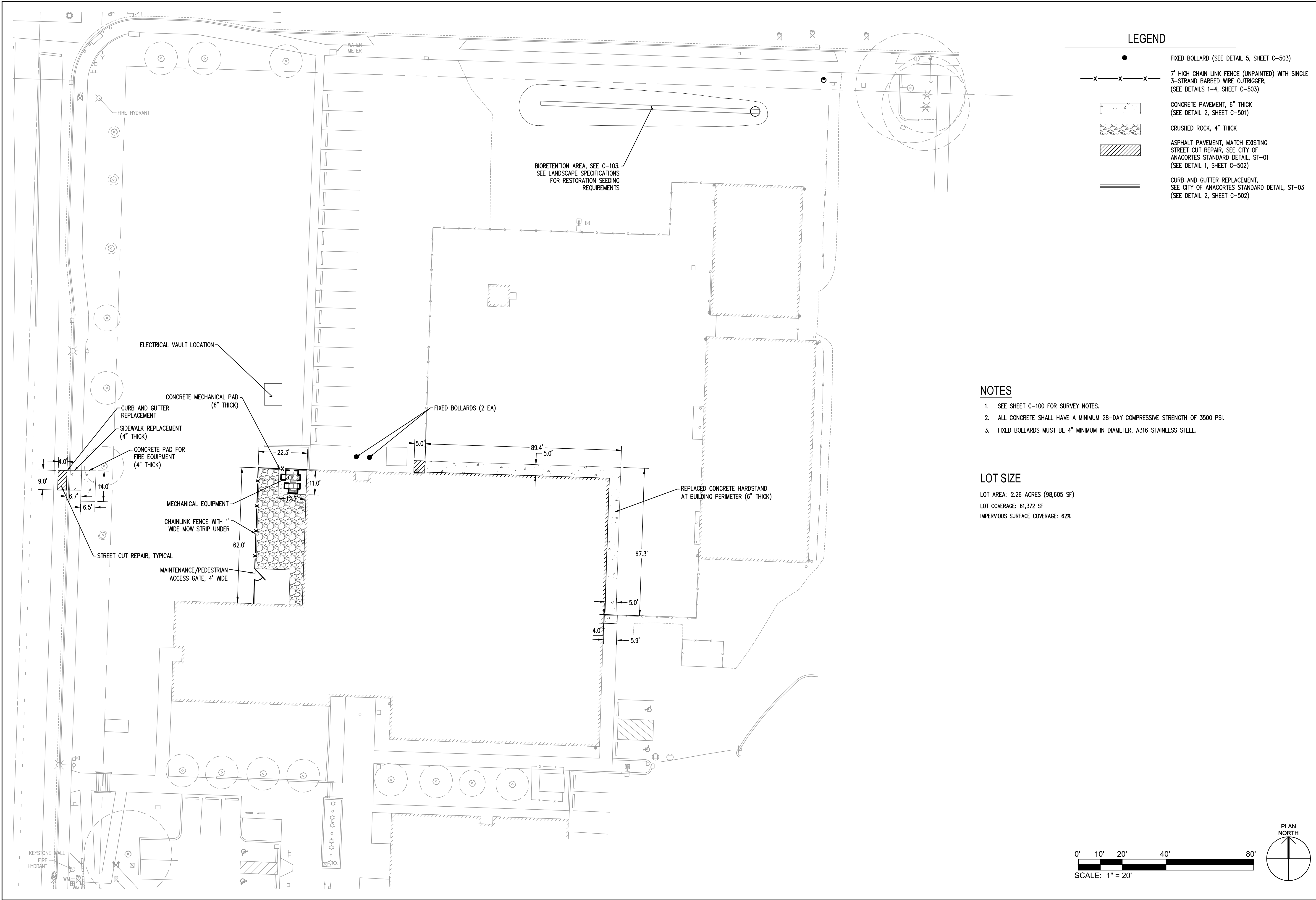
1. THE CONTRACTOR TO PREPARE AND OBTAIN APPROVAL FOR A STORMWATER POLLUTION PROTECTION PLAN FROM THE CITY OF ANACORTES. CONTRACTOR SHALL ALSO COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY. THE IMPLEMENTATION OF THIS TEMPORARY EROSION SEDIMENT CONTROL (TESC) PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE TESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED. THE TESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
2. THE TESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS, AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
3. THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR DURING LAND DISTURBANCE ACTIVITIES AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
4. THE TESC FACILITIES ON INACTIVE AREAS SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT.
5. TESC BEST MANAGEMENT PRACTICES (BMPs) SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED FROM A BMP WHEN THE SEDIMENT OR DEBRIS ADVERSELY IMPACTS THE FUNCTIONING OF THE BMP.
6. ALL PAVED AREAS SHALL BE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
7. THE CONTRACTOR AND/OR AUTHORIZED AGENTS SHALL REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO OR ACCUMULATED IN THE FLOW LINES OF STREETS AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SAID REMOVAL SHALL BE CONDUCTED IN A TIMELY MANNER.
8. THE CONTRACTOR SHALL PREVENT SEDIMENT, DEBRIS AND ALL OTHER POLLUTANTS FROM ENTERING THE STORM SEWER SYSTEM DURING ALL DEMOLITION, EXCAVATION, TRENCHING, BORING, GRADING OR OTHER CONSTRUCTION OPERATIONS THAT ARE PART OF THIS PROJECT. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REMEDIATION OF ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS, ETC., RESULTING FROM WORK PERFORMED AS PART OF THIS PROJECT.
9. THE GENERAL CONTRACTOR, GRADING CONTRACTOR AND/OR THEIR AUTHORIZED AGENTS SHALL ENSURE THAT ALL LOADS OF CUT AND FILL MATERIAL IMPORTED TO OR EXPORTED FROM THIS SITE SHALL BE PROPERLY COVERED TO PREVENT LOSS OF THE MATERIAL DURING TRANSPORT ON PUBLIC RIGHTS OF WAY.
10. SOILS THAT WILL BE STOCKPILED FOR MORE THAN 30 DAYS SHALL BE PROTECTED FROM WIND AND WATER EROSION WITHIN 14 DAYS OF STOCKPILE CONSTRUCTION. IF STOCKPILES ARE LOCATED WITHIN 100 FEET OF A DRAINAGE WAY, ADDITIONAL SEDIMENT CONTROLS SUCH AS TEMPORARY DIKES OR SILT FENCING SHALL BE REQUIRED.

DEMOLITION NOTES

1. PROTECT ANY PAVING, CURBS, AND SIDEWALKS TO REMAIN. PAVING, CURBS, OR SIDEWALKS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED/REPAIRED IN KIND.
2. ALL EXISTING CONCRETE AND ASPHALT SURFACES REQUIRED TO BE REMOVED (INCLUDING PAVEMENT INVOLVED IN TRENCHING OPERATIONS) SHALL BE SAWCUT. ALL EXISTING SURFACE IMPROVEMENTS AND STRUCTURES DAMAGED OR MODIFIED DURING THIS WORK SHALL BE REPAIRED TO MATCH ADJACENT AREA AND THEIR ORIGINAL CONDITION.
3. EXISTING UTILITIES WITHIN PROPOSED BUILDING FOOTPRINT TO BE REMOVED/RELOCATED.
4. NO UTILITY SHALL BE REMOVED AND RELOCATED PRIOR TO RECEIVING APPROVAL FROM THE OWNER'S REPRESENTATIVE.



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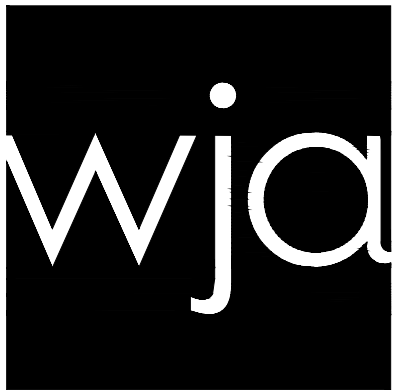
- FIXED BOLLARD (SEE DETAIL 5, SHEET C-503)
- x—x—x— 7" HIGH CHAIN LINK FENCE (UNPAINTED) WITH SINGLE 3-STRAND BARBED WIRE OUTRIGGER, (SEE DETAILS 1-4, SHEET C-503)
- CONCRETE PAVEMENT, 6" THICK (SEE DETAIL 2, SHEET C-501)
- CRUSHED ROCK, 4" THICK
- ASPHALT PAVEMENT, MATCH EXISTING STREET CUT REPAIR, SEE CITY OF ANACORTES STANDARD DETAIL, ST-01 (SEE DETAIL 1, SHEET C-502)
- CURB AND GUTTER REPLACEMENT, SEE CITY OF ANACORTES STANDARD DETAIL, ST-03 (SEE DETAIL 2, SHEET C-502)

NOTES

- SEE SHEET C-100 FOR SURVEY NOTES.
- ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3500 PSI.
- FIXED BOLLARDS MUST BE 4" MINIMUM IN DIAMETER, A316 STAINLESS STEEL.

LOT SIZE

LOT AREA: 2.26 ACRES (98,605 SF)
LOT COVERAGE: 61,372 SF
IMPERVIOUS SURFACE COVERAGE: 62%



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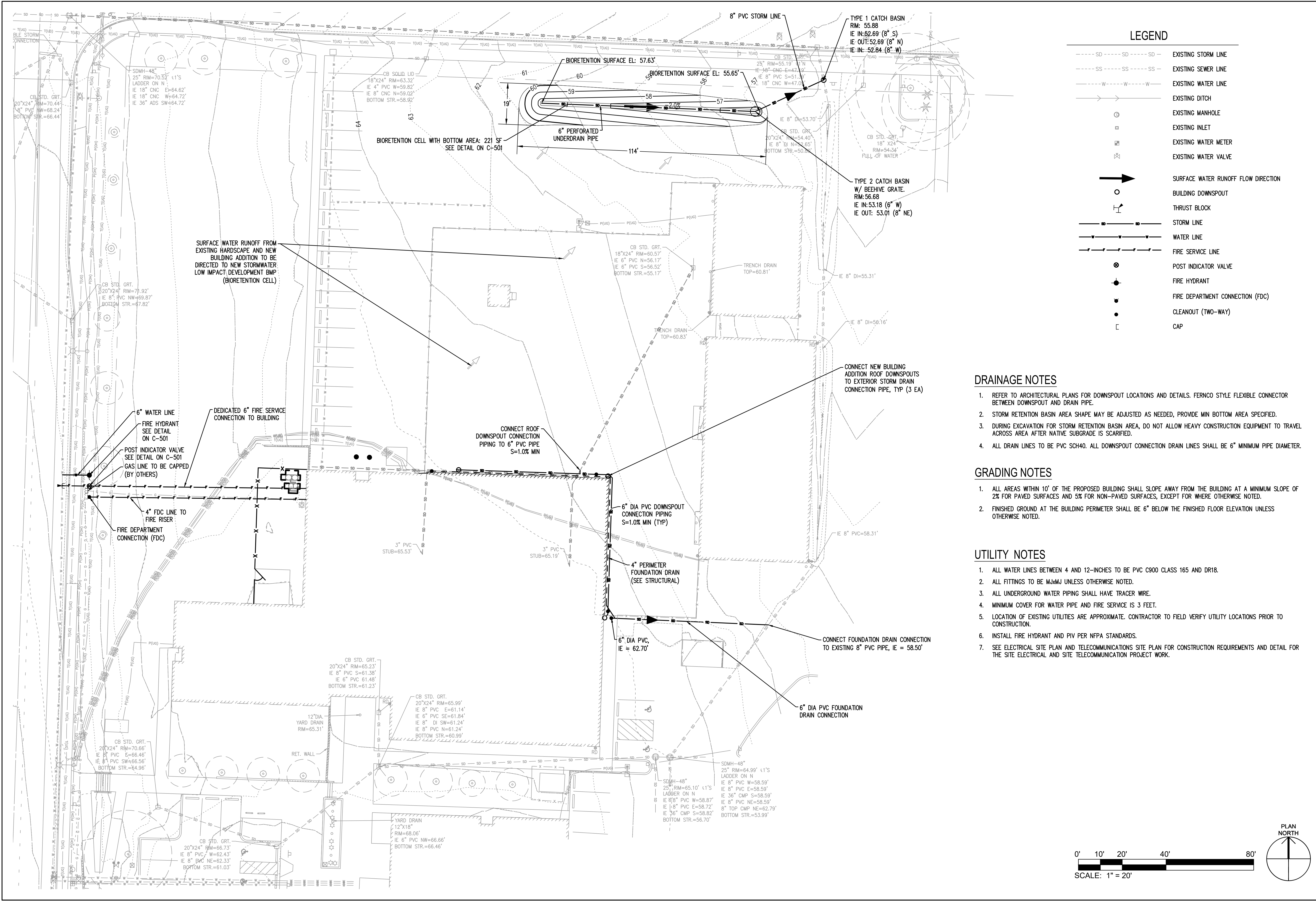
Project No.: 21024	Designed By: KK	Drawn By: KK	Checked By: CJ
Mark	Description	Date	

WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA

CIVIL SITE PLAN

C-102

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LEGEND

SD

SD

SD

EXISTING STORM LINE

SS

SS

SS

EXISTING SEWER LINE

W

W

W

EXISTING WATER LINE

EXISTING DITCH

○

○

○

EXISTING MANHOLE

□

□

□

EXISTING INLET

⊠

⊠

⊠

EXISTING WATER METER

⊠

⊠

⊠

EXISTING WATER VALVE

→

→

→

SURFACE WATER RUNOFF FLOW DIRECTION

○

○

○

BUILDING DOWNSPOUT

⊠

⊠

⊠

THRUST BLOCK

STORM LINE

WATER LINE

FIRE SERVICE LINE

⊠

⊠

⊠

POST INDICATOR VALVE

●

●

●

FIRE HYDRANT

●

●

●

FIRE DEPARTMENT CONNECTION (FDC)

●

●

●

CLEANOUT (TWO-WAY)

⊠

⊠

⊠

CAP

DRAINAGE NOTES

- REFER TO ARCHITECTURAL PLANS FOR DOWNSPOUT LOCATIONS AND DETAILS. FERNCO STYLE FLEXIBLE CONNECTOR BETWEEN DOWNSPOUT AND DRAIN PIPE.
- STORM RETENTION BASIN AREA SHAPE MAY BE ADJUSTED AS NEEDED, PROVIDE MIN BOTTOM AREA SPECIFIED.
- DURING EXCAVATION FOR STORM RETENTION BASIN AREA, DO NOT ALLOW HEAVY CONSTRUCTION EQUIPMENT TO TRAVEL ACROSS AREA AFTER NATIVE SUBGRADE IS SCARIFIED.
- ALL DRAIN LINES TO BE PVC SCH40. ALL DOWNSPOUT CONNECTION DRAIN LINES SHALL BE 6" MINIMUM PIPE DIAMETER.

GRADING NOTES

- ALL AREAS WITHIN 10' OF THE PROPOSED BUILDING SHALL SLOPE AWAY FROM THE BUILDING AT A MINIMUM SLOPE OF 2% FOR PAVED SURFACES AND 5% FOR NON-PAVED SURFACES, EXCEPT FOR WHERE OTHERWISE NOTED.
- FINISHED GROUND AT THE BUILDING PERIMETER SHALL BE 6" BELOW THE FINISHED FLOOR ELEVATION UNLESS OTHERWISE NOTED.

UTILITY NOTES

- ALL WATER LINES BETWEEN 4 AND 12-INCHES TO BE PVC C900 CLASS 165 AND DR18.
- ALL FITTINGS TO BE MJ&MJ UNLESS OTHERWISE NOTED.
- ALL UNDERGROUND WATER PIPING SHALL HAVE TRACER WIRE.
- MINIMUM COVER FOR WATER PIPE AND FIRE SERVICE IS 3 FEET.
- LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
- INSTALL FIRE HYDRANT AND PIV PER NFPA STANDARDS.
- SEE ELECTRICAL SITE PLAN AND TELECOMMUNICATIONS SITE PLAN FOR CONSTRUCTION REQUIREMENTS AND DETAIL FOR THE SITE ELECTRICAL AND SITE TELECOMMUNICATION PROJECT WORK.

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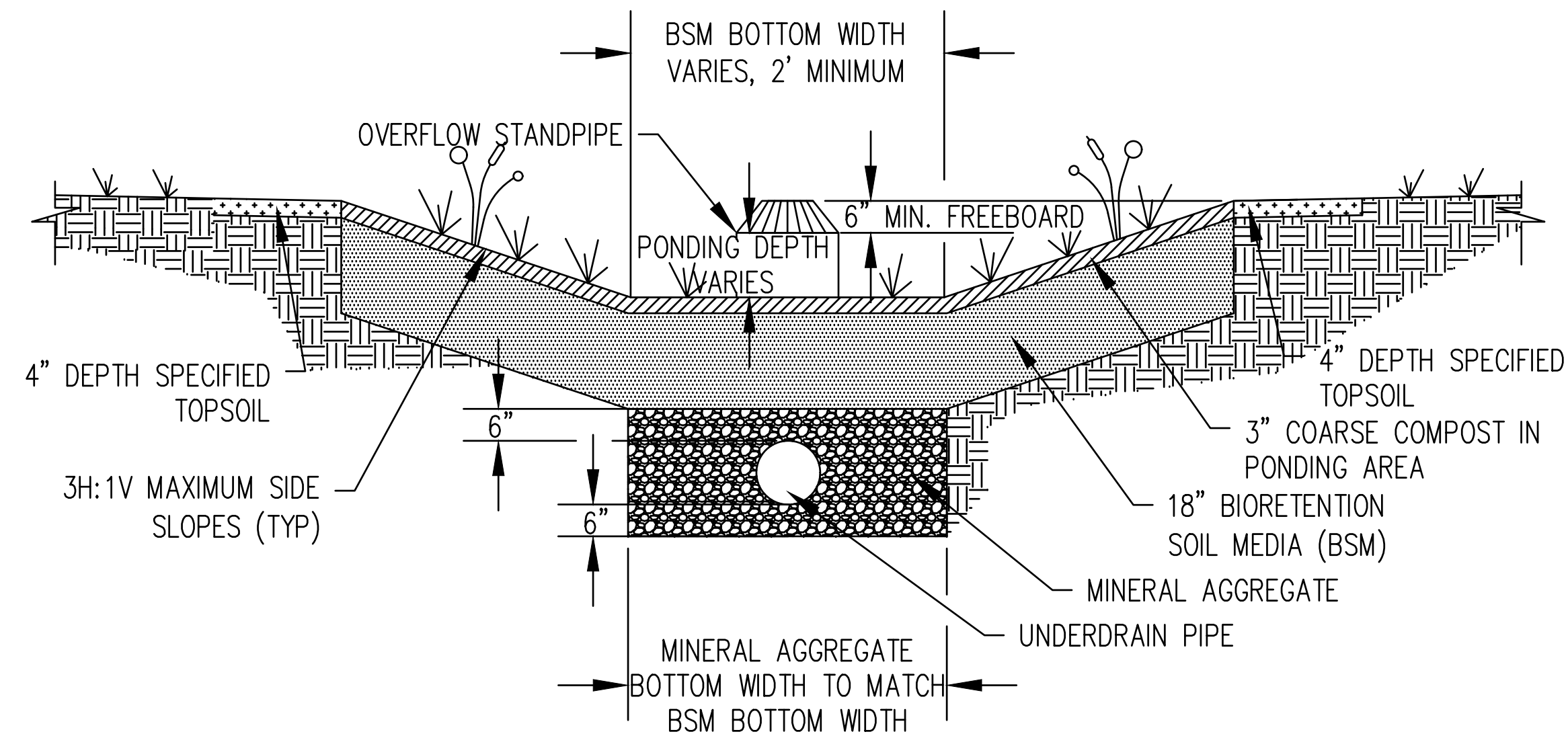
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Project No.: 21024	Designed By: KK	Drawn By: KK	Checked By: CJ
Date			
Description			
Mark			

WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA
UTILITY AND STORMWATER PLAN

C-103

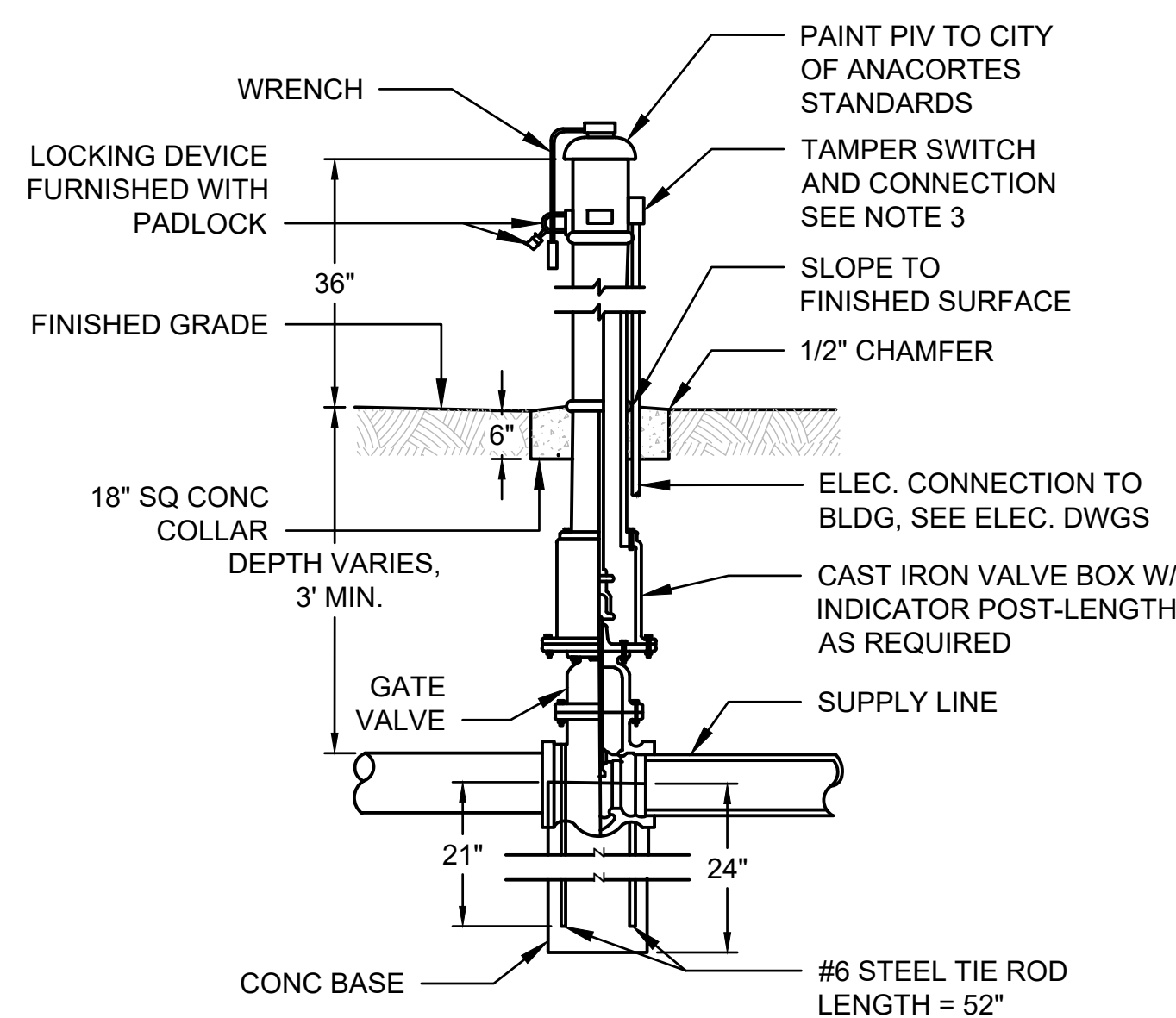
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Page 51 of 351



NOTES:

1. SCARIFY SUBGRADE 3" MIN BEFORE BIORETENTION SOIL INSTALLATION
2. COMPACT BSM TO 85% PER ASTM 1577

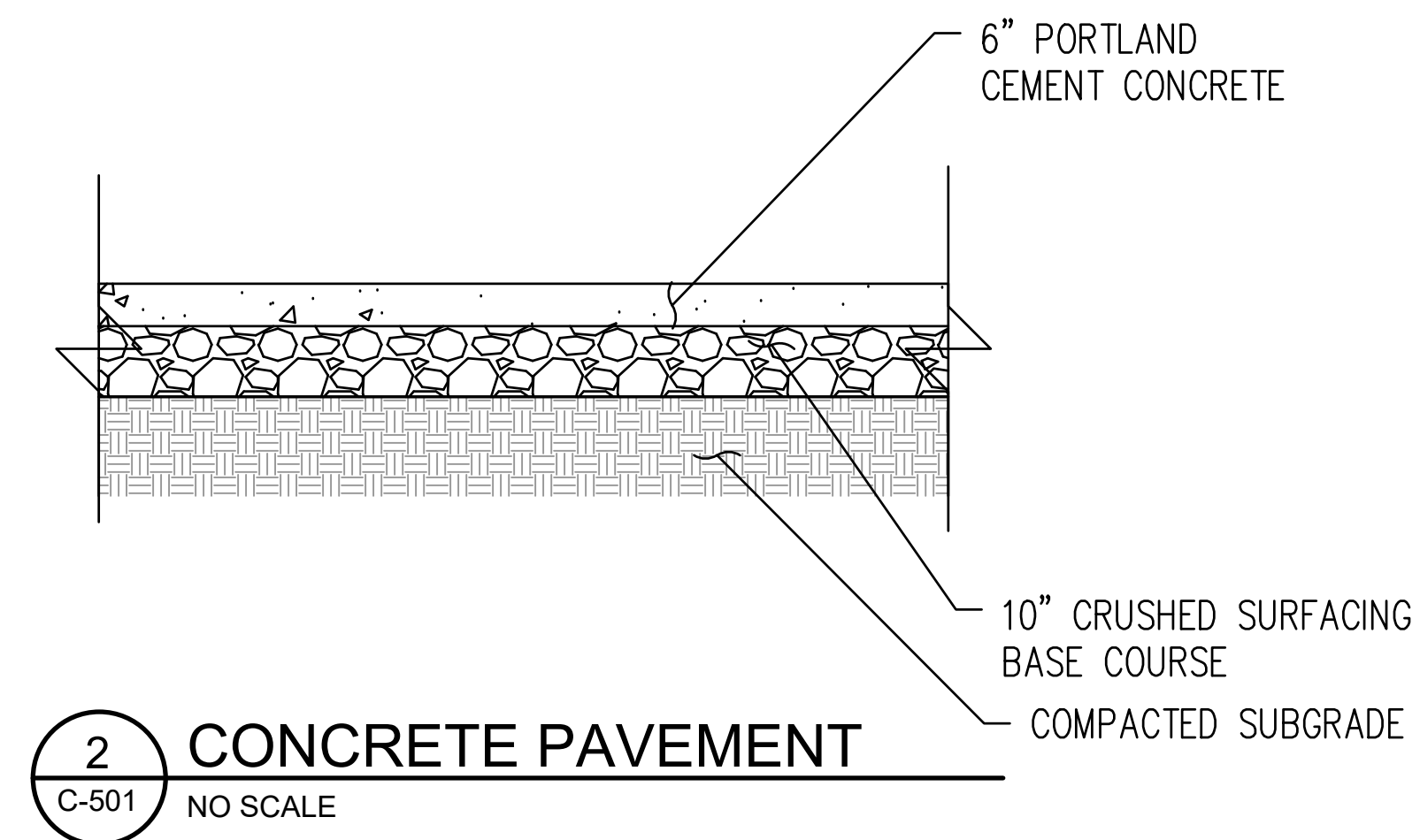
1 BIORETENTION W/ UNDERDRAIN
C-501 NO SCALE



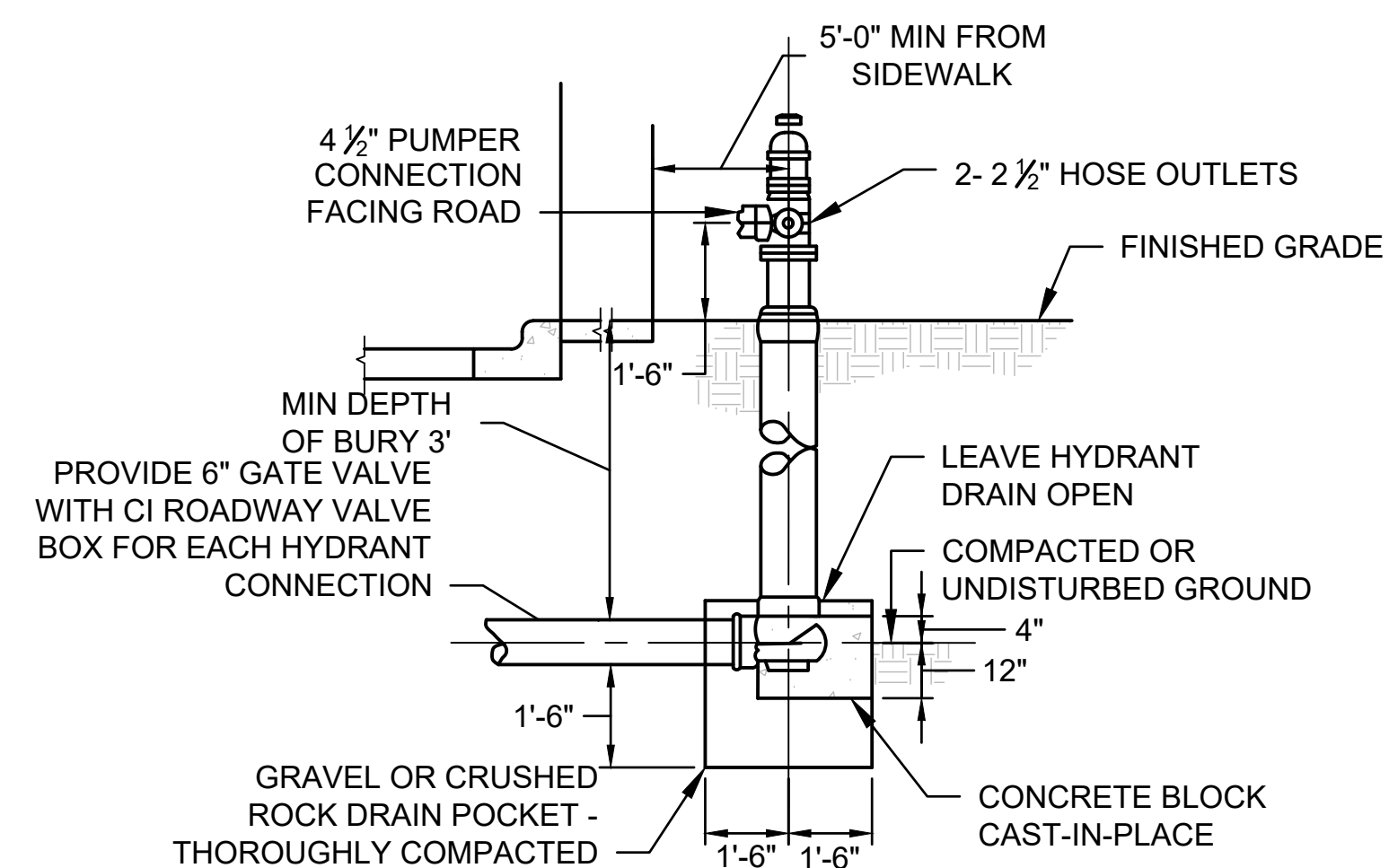
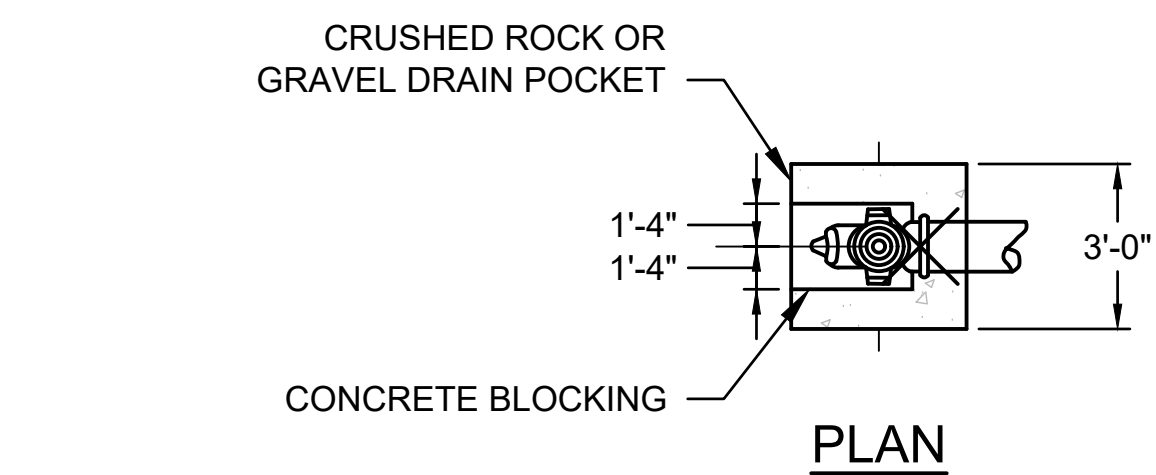
NOTES:

1. PIV SHALL BE LABELED USING 2" WHITE REFLECTIVE NUMBERS AND LETTERS, VERTICALLY ON PIV. LABEL SHALL INCLUDE "BLDG" WITH THE ASSIGNED BUILDING NUMBERS FOLLOWING.
2. PIV TO READ "OPEN" OR "CLOSED".
3. INSTALL TAMPER SWITCH ON PIV PER NFPA 24 STANDARDS.

3 POST INDICATOR VALVE
C-501 NO SCALE

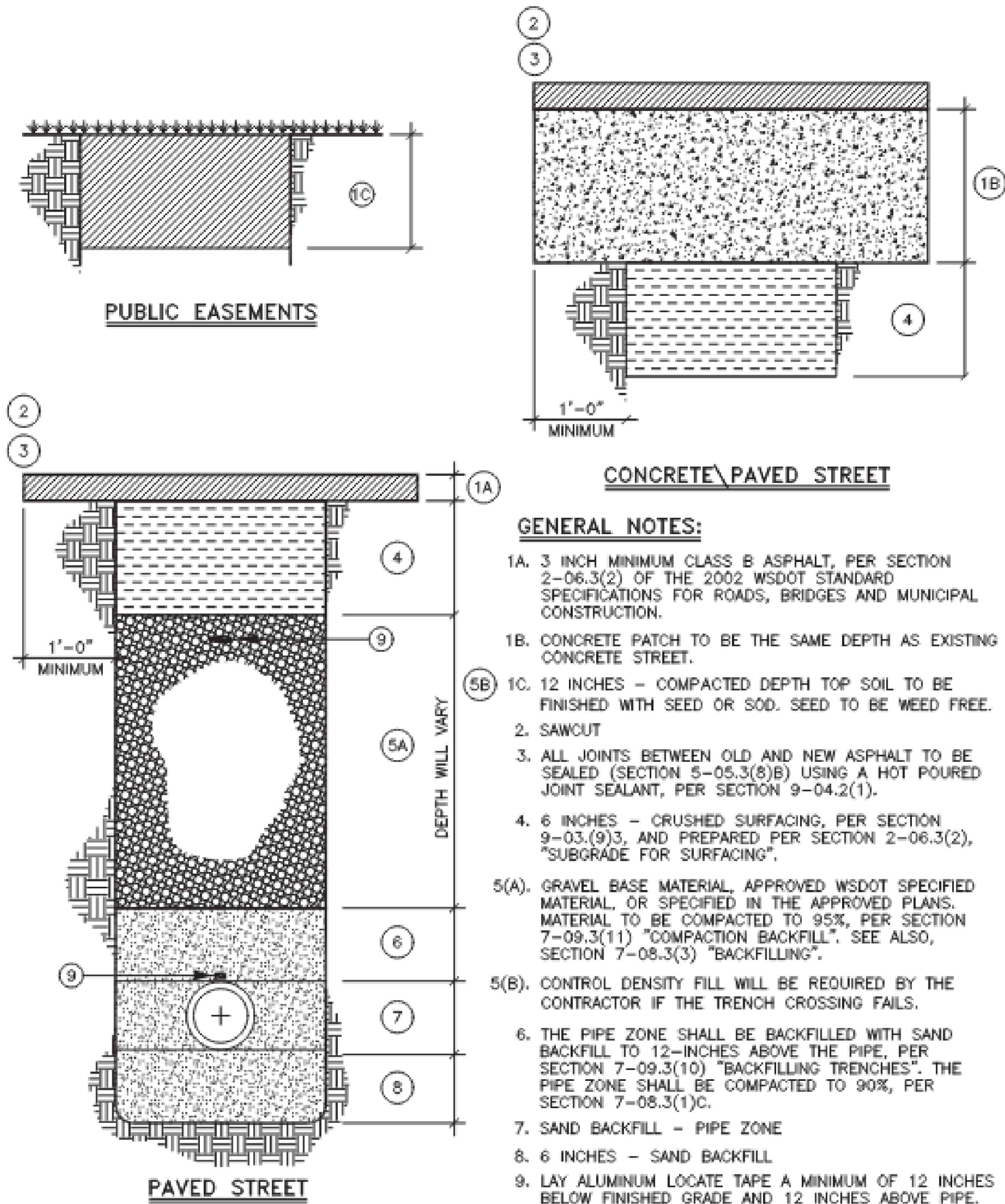


2 CONCRETE PAVEMENT



4 FIRE HYDRANT - WET TYPE
C-501 NO SCALE

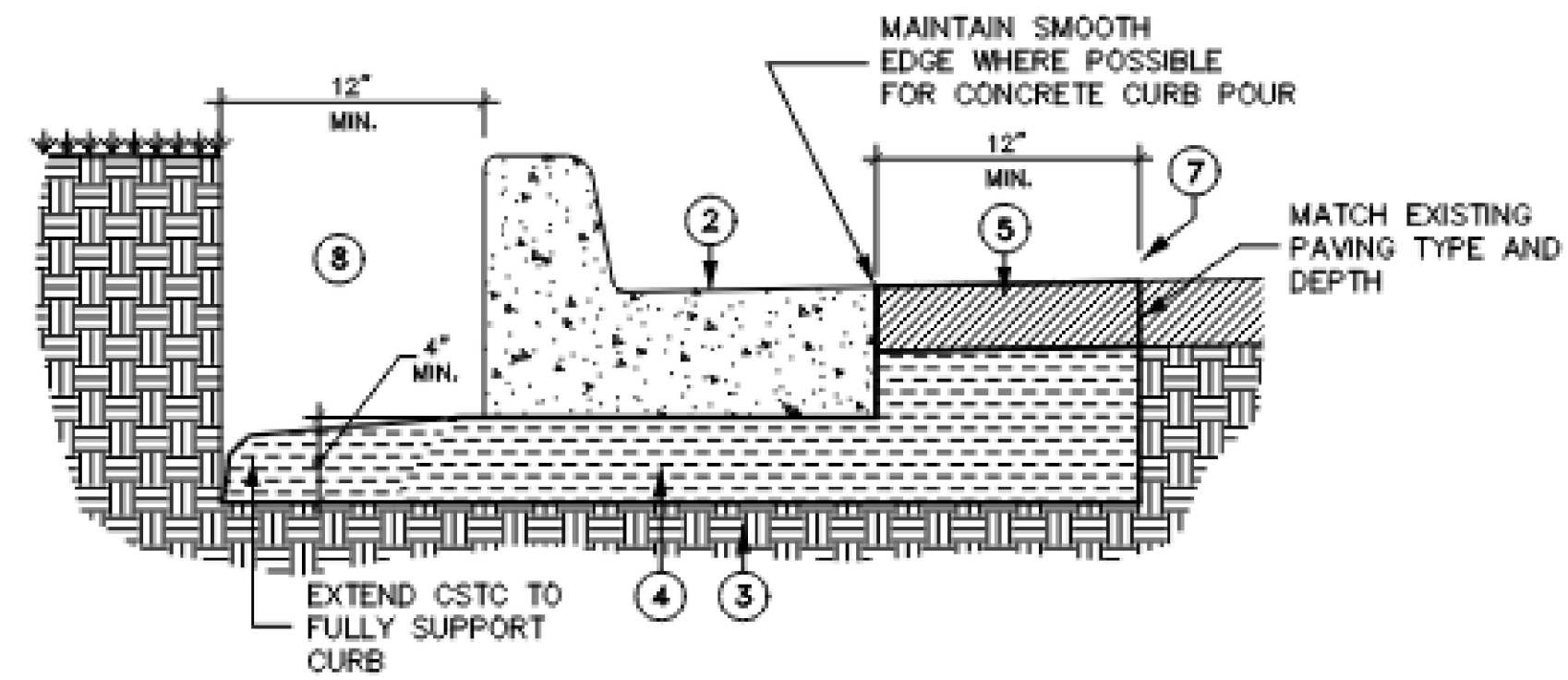
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1 STREET CUT REPAIR TYPICAL
C-502 NO SCALE

GENERAL NOTES:

- 1A. 3 INCH MINIMUM CLASS B ASPHALT, PER SECTION 2-06.3(2) OF THE 2002 WSDOT STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND MUNICIPAL CONSTRUCTION.
- 1B. CONCRETE PATCH TO BE THE SAME DEPTH AS EXISTING CONCRETE STREET.
- 1C. 12 INCHES - COMPACTED DEPTH TOP SOIL TO BE FINISHED WITH SEED OR SOD. SEED TO BE WEED FREE.
2. SAWCUT
3. ALL JOINTS BETWEEN OLD AND NEW ASPHALT TO BE SEALED (SECTION 5-05.3(8)B) USING A HOT POURED JOINT SEALANT, PER SECTION 9-04.2(1).
4. 6 INCHES - CRUSHED SURFACING, PER SECTION 9-03.(9)3, AND PREPARED PER SECTION 2-06.3(2), "SUBGRADE FOR SURFACING".
- 5(A). GRAVEL BASE MATERIAL, APPROVED WSDOT SPECIFIED MATERIAL, OR SPECIFIED IN THE APPROVED PLANS. MATERIAL TO BE COMPACTED TO 95%, PER SECTION 7-09.3(11) "COMPACTION BACKFILL". SEE ALSO, SECTION 7-08.3(3) "BACKFILLING".
- 5(B). CONTROL DENSITY FILL WILL BE REQUIRED BY THE CONTRACTOR IF THE TRENCH CROSSING FAILS.
6. THE PIPE ZONE SHALL BE BACKFILLED WITH SAND BACKFILL TO 12-INCHES ABOVE THE PIPE, PER SECTION 7-09.3(10) "BACKFILLING TRENCHES". THE PIPE ZONE SHALL BE COMPACTED TO 90%, PER SECTION 7-08.3(1)C.
7. SAND BACKFILL - PIPE ZONE
8. 6 INCHES - SAND BACKFILL
9. LAY ALUMINUM LOCATE TAPE A MINIMUM OF 12 INCHES BELOW FINISHED GRADE AND 12 INCHES ABOVE PIPE.



IMPORTANT INFORMATION:

PRIOR TO ANY CURB REMOVAL, CALL CITY INSPECTOR TO VERIFY THE CURB REMOVAL. THE CONTRACTOR SHALL REMOVE AND REPLACE ANY AND ALL SUNKEN, TIPPED, CRACKED OR BROKEN CURB WITHIN THE PROJECT LIMITS. INSPECTOR TO DETERMINE THE EDGE CONDITION AFTER CURB REMOVAL.

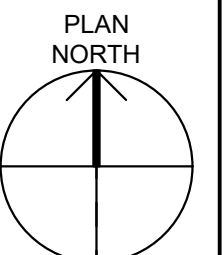
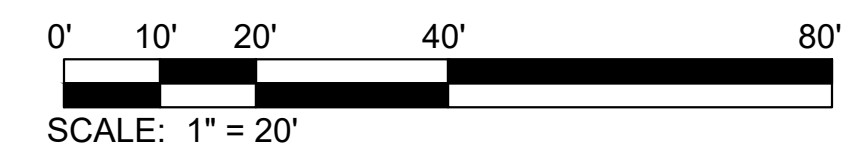
NOTES IF INSPECTOR REQUIRES SAWCUT:

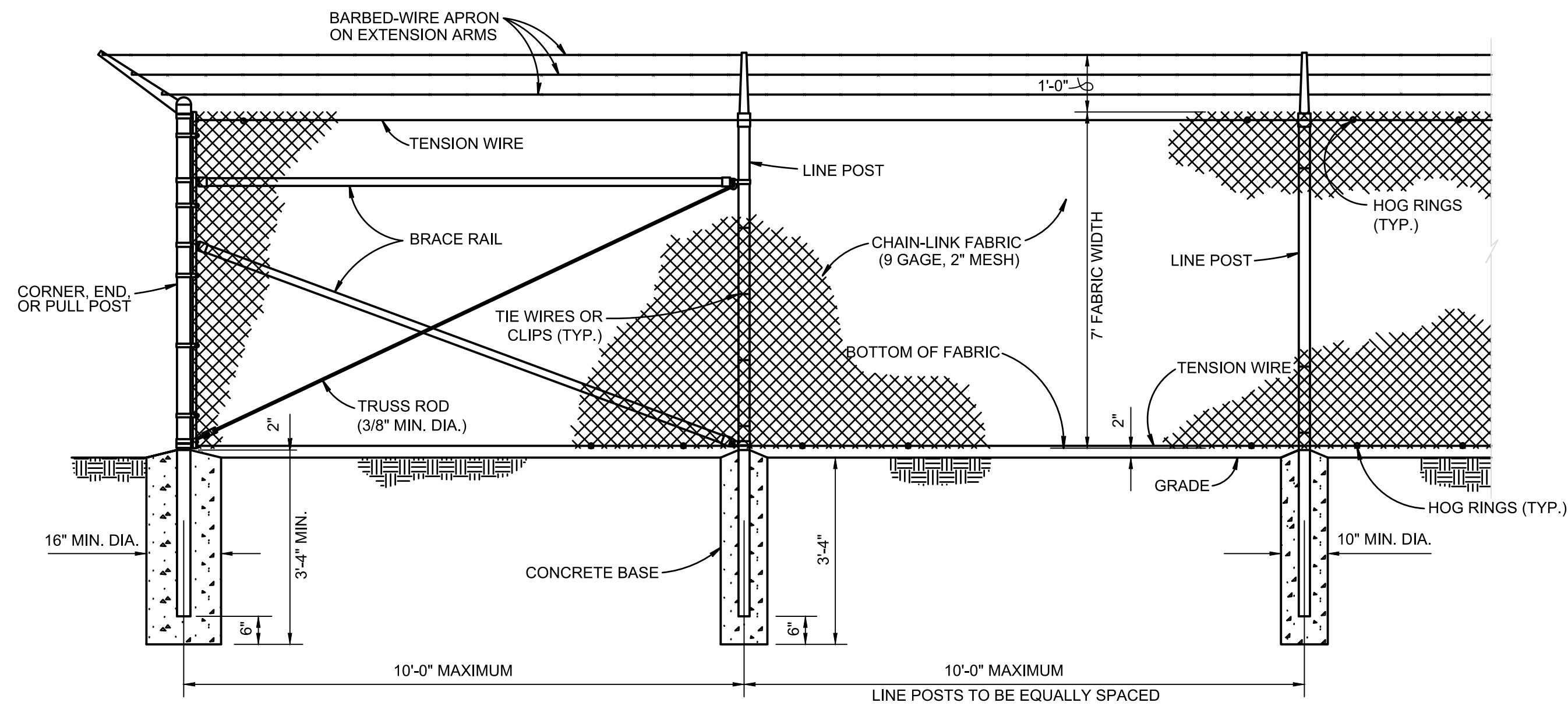
1. SCHEDULE CURB REPLACEMENTS AROUND THE PAVING SCHEDULE.
2. FOR CURB AND SIDEWALK INFORMATION, REFER TO SECTION 8-04 AND 8-14 OF THE CURRENT WSDOT STANDARD SPECIFICATIONS.
3. PREPARED SUBGRADE (CURRENT WSDOT STANDARD SPECIFICATIONS 2-06)
4. 4" INCH MINIMUM OF 5/8 CRUSHED SURFACING TOP COURSE (CURRENT WSDOT SECTION 4-04) COMPACTED TO 95% OF MAX DENSITY.
5. INSTALL 3 INCH MINIMUM CLASS B ASPHALT PATCH TO BE COMPACTED TO 92% MAX RICE DENSITY (2002 WSDOT SECTION 5-04.3(10)B).
6. CROSS-SLOPE OF NEW ASPHALT SECTION SHALL BE LESS THAN OR EQUAL TO THE EXISTING CROSS-SLOPE AND SHALL NOT BE LESS THAN 1% WITHOUT APPROVAL OF THE CITY ENGINEER.
7. ALL JOINTS BETWEEN OLD AND NEW ASPHALT TO BE SEALED (2002 WSDOT SECTION 5-05.3(8)B) USING A HOTE POURED JOINT SEALANT (2002 WSDOT SECTION 9-04.2(1)).
8. REMOVE 12 INCHES MINIMUM OF MATERIAL BEHIND CURB. ONCE NEW CURB IS INSTALLED TO EXISTING GRADE, REPLACE WITH COMPACTED DEPTH TOP SOIL (CURRENT WSDOT SECTION 9-14.1).

NOTES FOR SMOOTH EDGE:

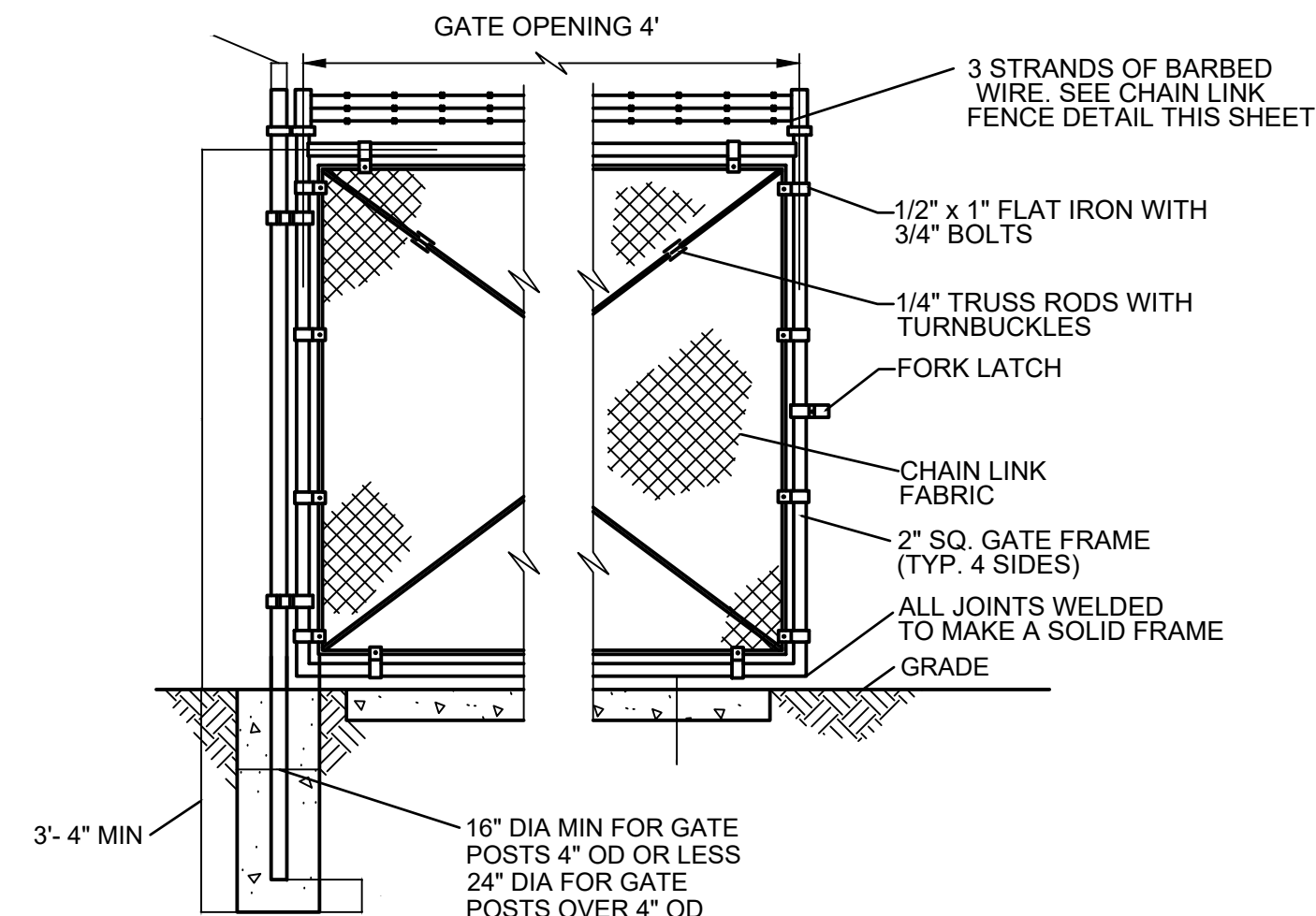
2. FOR CURB AND SIDEWALK INFORMATION, REFER TO SECTION 8-04 AND 8-14 OF THE CURRENT STANDARD SPECIFICATIONS.
3. PREPARED SUBGRADE (CURRENT WSDOT 2-06)
4. 4" INCH MINIMUM OF 5/8 CRUSHED SURFACING TOP COURSE (CURRENT WSDOT SECTION 4-04) COMPACTED TO 95% OF MAX DENSITY.
8. REMOVE 12 INCHES MINIMUM OF MATERIAL BEHIND CURB. ONCE NEW CURB IS INSTALLED TO EXISTING GRADE, REPLACE WITH COMPACTED DEPTH TOP SOIL (CURRENT WSDOT SECTION 9-14.1).

2 CURB AND GUTTER REPLACEMENT
C-502 NO SCALE

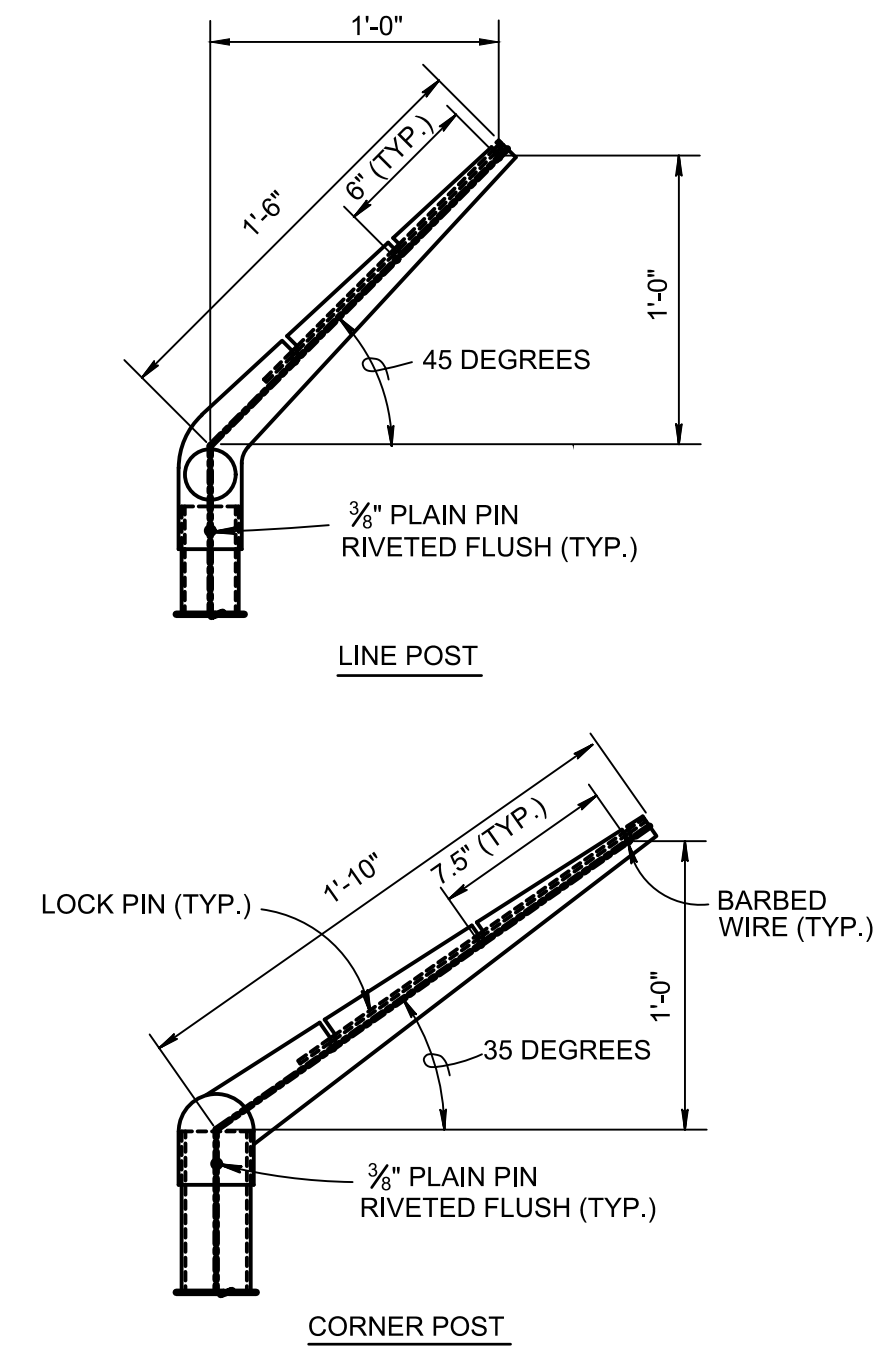




1 CHAIN LINK SECURITY FENCE DETAIL

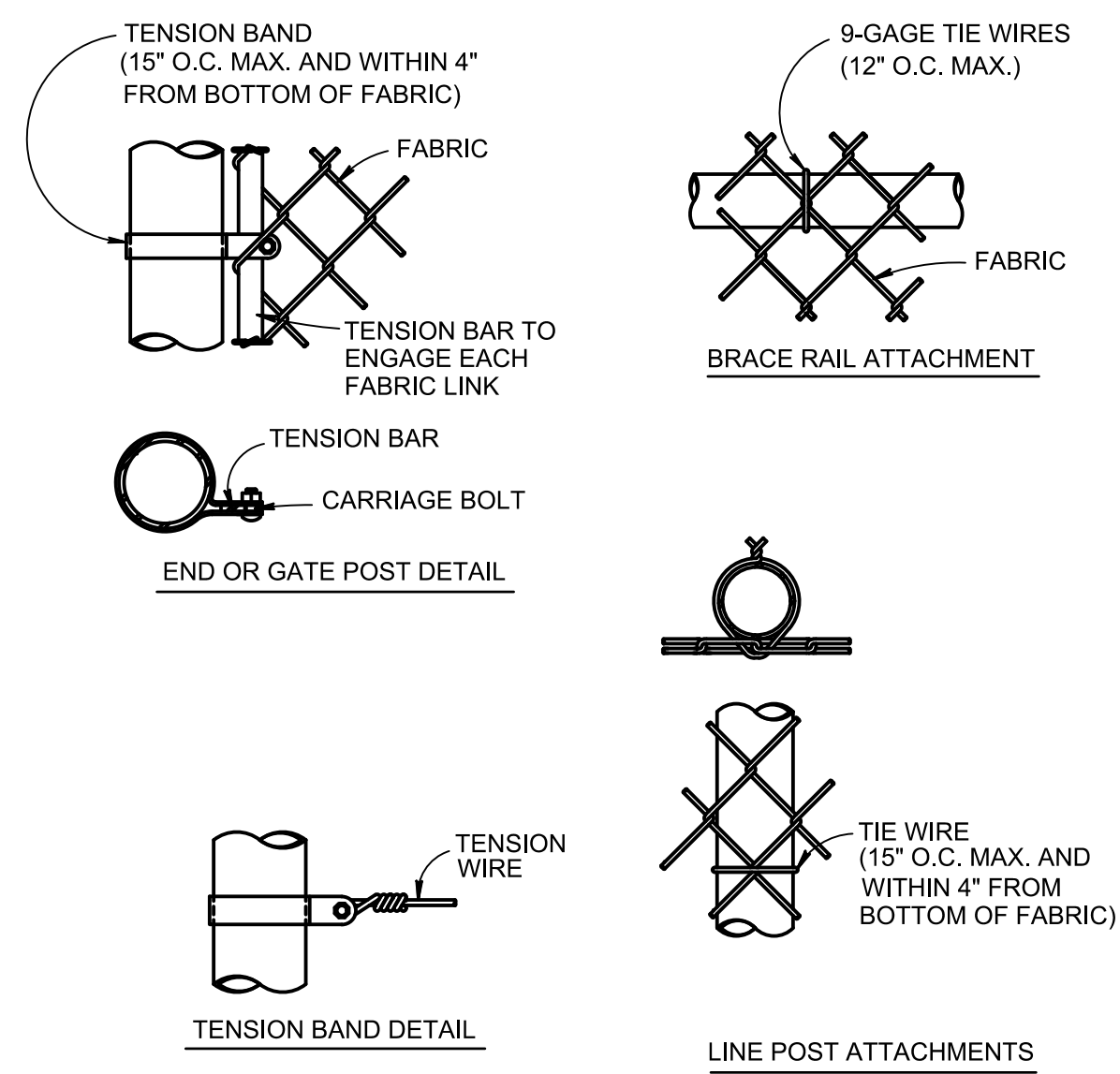


2 PERSONNEL MANUAL SWING GATE
C-503 NO SCALE

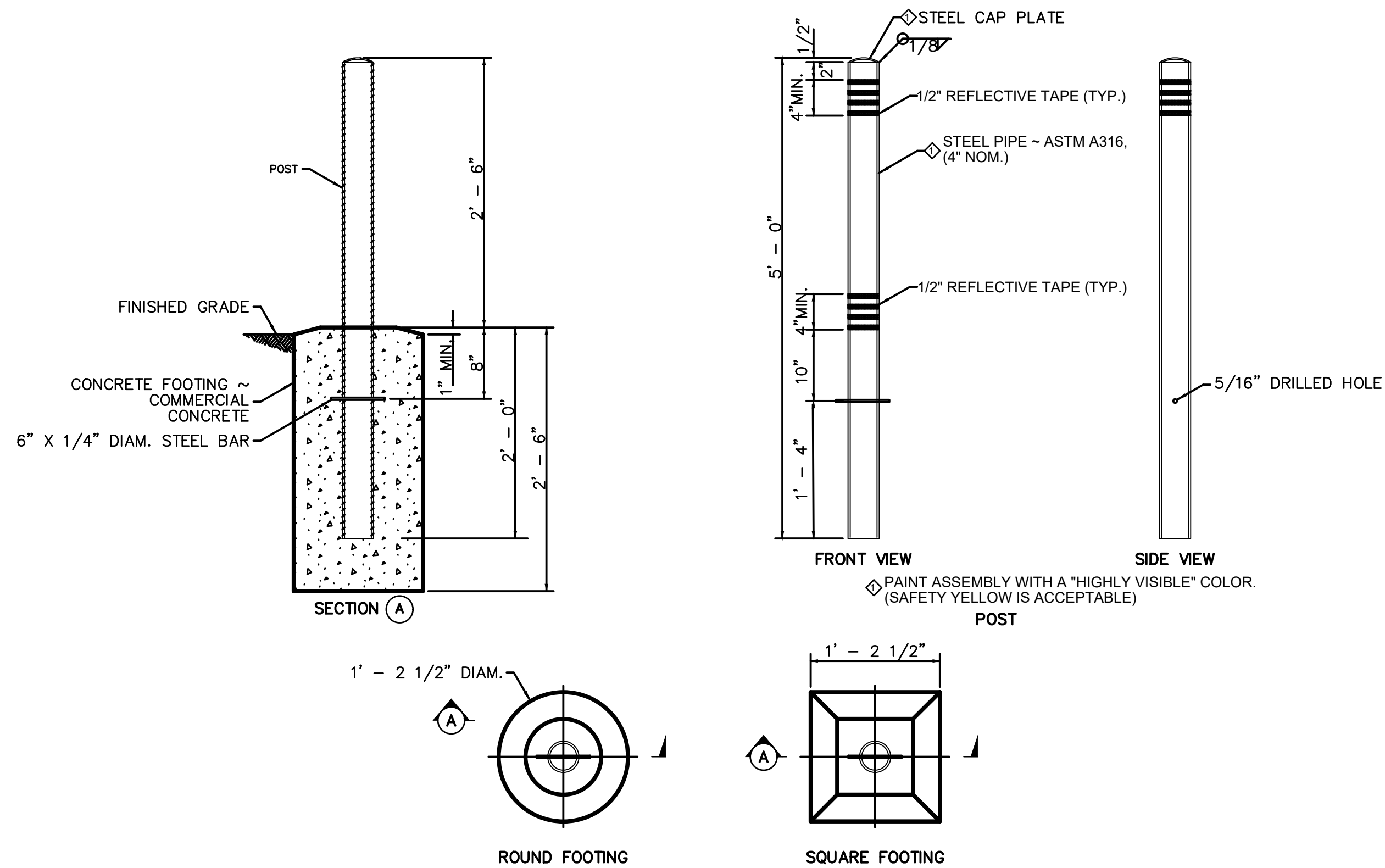


3 BARBED WIRE EXTENSION ARMS

C-503 NO SCALE



4 CHAIN LINK FENCE FASTENING



5 FIXED BOLLARD
C-503 NO SCALE

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GENERAL:	DESIGN CRITERIA:	DESIGN LOADS AND CRITERIA (NEW ADDITION):	SEISMIC CRITERIA (NEW STRUCTURES):
THE STRUCTURAL GENERAL NOTES SHALL BE USED AS A SUPPLEMENT TO THE PROJECT SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. WHERE DIFFERENCES BETWEEN CONTRACT DRAWINGS, SPECIFICATIONS, OR EXISTING CONDITIONS OCCUR, THE CONTRACTOR SHALL REQUEST CLARIFICATION FROM THE CONTRACTING OFFICER REPRESENTATIVE IMMEDIATELY UPON DISCOVERY AND BEFORE PROCEEDING.	CODES AND STANDARDS:	BUILDING RISK CATEGORY = III BUILDING LOCATION = LATITUDE 48.504, LONGITUDE -122.617 SNOW LOADS: SITE ELEVATION = 67.4 FEET ABOVE SEA LEVEL (NAVD 88) GROUND SNOW LOAD = 17 PSF SNOW EXPOSURE FACTOR Ce = 1.0 SNOW LOAD IMPORTANCE FACTOR Is = 1.10 ROOF THERMAL FACTOR Ct = 1.0 FLAT ROOF SNOW LOAD Pf = 13.1 PSF RAIN ON SNOW SURCHARGE = 5 PSF TOTAL CALCULATED FLAT SNOW LOAD = 18.1 PSF MINIMUM DESIGN SNOW LOAD = 25 PSF	CODE AND STANDARD = IBC/ASCE 7 BUILDING RISK CATEGORY = III ANALYSIS METHOD = EQUIVALENT LATERAL FORCE (ELF) SITE CLASS = D (ASSUME) BSE-2N (MCE _R LEVEL SEISMIC EVENT) Ss = 1.131g (.2 SEC MCE SPECTRAL ACCEL) S1 = 0.402g (1.0 SEC MCE SPECTRAL ACCEL) SEISMIC IMPORTANCE FACTOR Ie = 1.25 SITE COEFFICIENT Fa = 1.20 SITE COEFFICIENT Fv = 1.9 Sds = 0.905 Sd1 = 0.509 SEISMIC DESIGN CATEGORY = D
THE STRUCTURE HAS BEEN DESIGNED TO RESIST CODE REQUIRED VERTICAL AND LATERAL FORCES AFTER ALL BUILDING ELEMENTS ARE INSTALLED. THE STRUCTURE HAS NOT BEEN INTENTIONALLY DESIGNED TO REMAIN STABLE DURING CONSTRUCTION. THE GENERAL CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE FOR PROTECTING AND STABILIZING THE STRUCTURE DURING CONSTRUCTION. THIS RESPONSIBILITY INCLUDES, BUT IS NOT LIMITED TO JOB SITE SAFETY, TEMPORARY SHORING, ERECTION MEANS AND METHODS, ERECTION SEQUENCING, FORMWORK, TEMPORARY BRACING, USE OF CONSTRUCTION EQUIPMENT, AND TEMPORARY FALL PROTECTION. AS A MINIMUM, THE CONTRACTOR SHALL SHORE AND/OR BRACE THE STRUCTURE TO RESIST TEMPORARY CONSTRUCTION LOADS DEFINED BY ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION."	IEBC 2018 AS AMENDED AND ADOPTED BY THE CITY OF ANACORTES (FOR EXISTING BLDG) "INTERNATIONAL EXISTING BUILDING CODE"		CLASSROOM ADDITION: LATERAL FRAME SYSTEM: BEARING WALL, SPECIAL REINFORCED MASONRY SHEAR WALL R = 5 OVERSTRENGTH FACTOR = 2.5 DEFL AMPLIFICATION FACTOR Cd = 3.5
TYPICAL DETAILS MAY NOT BE NECESSARILY SHOWN ON THE PLANS, BUT APPLY AS REFERENCED IN THE STRUCTURAL DRAWINGS AND DETAILS UNLESS NOTED OTHERWISE. WHERE NO DETAIL IS INDICATED, THE CONTRACTOR SHALL REQUEST CLARIFICATION FROM THE ENGINEER PRIOR TO SHOP DRAWING PRODUCTION, FABRICATION, AND CONSTRUCTION.	DEPARTMENT OF DEFENSE STANDARDS:		ARMS VAULT ADDITION: LATERAL FRAME SYSTEM: BEARING WALL, SPECIAL REINFORCED CONCRETE SHEAR WALL R = 5 OVERSTRENGTH FACTOR = 2.5 DEFL AMPLIFICATION FACTOR Cd = 5.0 REDUNDANCY FACTOR = 1.0
THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES OR UNSOUND CONDITIONS SHALL BE REPORTED TO THE CONTRACTING OFFICER REPRESENTATIVE FOR RESOLUTION.	AR 190-11, 17 JANUARY 2019 "PHYSICAL SECURITY OF ARMS, AMMUNITION, AND EXPLOSIVES"		
THE CONTRACTOR SHALL ESTABLISH, COORDINATE, AND VERIFY ALL OPENINGS AND INSERTS REQUIRED FOR ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, SECURITY, AND OTHER TRADES PRIOR TO CONSTRUCTION. NO PENETRATIONS THROUGH STRUCTURAL MEMBERS ARE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER IN WRITING	UFC 4-010-01, 12 DEC 2018 WITH CHANGE 1, 19 AUG 2020 "MINIMUM ANTITERRORISM STANDARDS FOR BUILDINGS"		
CONSTRUCTION OBSERVATION BY THE STRUCTURAL ENGINEER IS FOR VERIFICATION OF DESIGN ASPECTS ONLY, AND IS NOT INTENDED IN ANY WAY TO REVIEW THE CONTRACTOR'S CONSTRUCTION PROCEDURES.	STANDARDS:		
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SPECIFIED BUILDING CODE AND STANDARDS. IN THE CASE OF CONFLICTING CODES AND STANDARDS, THE BUILDING CODE SHALL GOVERN.	ACI 318, 2014 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"		
ENGINEERED COMPONENT SYSTEMS SHALL BE ENGINEERED BY A QUALIFIED PROFESSIONAL ENGINEER WHO IS RETAINED BY THE PRODUCT MANUFACTURER. ALL ENGINEERED COMPONENT DESIGN DRAWINGS AND CALCULATIONS SHALL BEAR THE STAMP OF A LICENSED PROFESSIONAL ENGINEER, AND SHALL BE SUBMITTED TO THE CONTRACTING OFFICER REPRESENTATIVE FOR REVIEW PRIOR TO FABRICATION.	TMS 402/ACI 530/ASCE 5, 2016 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES"		
THE CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE FOR SELECTING PRODUCTS THAT MEET THE "BUY AMERICAN ACT" WHEN REQUIRED BY THE CONTRACT.	TMS 602/ACI 530.1/ASCE 6, 2016 "SPECIFICATION FOR MASONRY STRUCTURES"		
CONSTRUCTION SEQUENCING AND STABILITY DURING ERECTION:	ANSI/AWC NDS "NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION", 2018	NOTES: 1. DEAD LOAD "SELF" WEIGHT INCLUDES STRUCTURAL FRAMING, SLABS, AND/OR DECKS 2. "TYPE A" DEAD LOAD IS DEFINED AS DESIGN LOADS THAT ARE DEDICATED TO SUPPORT THE WEIGHT OF PARTITIONS, CEILINGS, AND ROOFING WHICH IS ADDED AFTER THE STRUCTURE ATTAINS FULL DESIGN STRENGTH. 3. "TYPE B" DEAD LOAD IS DEFINED AS DESIGN LOADS THAT ARE DEDICATED FOR MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE-SPRINKLER EQUIPMENT THAT IS SUPPORTED BY THE STRUCTURE AFTER THE STRUCTURE ATTAINS FULL DESIGN STRENGTH. 4. "LIVE LOADS" ARE DEFINED AS LOADS PRODUCED BY THE USE AND OCCUPANCY OF THE BUILDING OR OTHER STRUCTURE THAT DO NOT INCLUDE CONSTRUCTION OR ENVIRONMENTAL LOADS 5. "LIVE LOADS", EXCEPT UNIFORM ROOF LIVE LOADS AND OTHER UNIFORM LOADS WHICH EXCEED 100 PSF, MAY BE REDUCED IN ACCORDANCE WITH IBC 6. SEE LOAD DIAGRAMS AND/OR FRAMING PLANS FOR LOCATIONS OF ADDITIONAL SPECIAL LOADS 7. UNIFORM AND CONCENTRATED LIVE LOADS ARE NOT REQUIRED TO BE APPLIED SIMULTANEOUSLY 8. THE OWNER SHALL NOT PERMIT THE STRUCTURE TO BE LOADED BEYOND THE INDICATED VALUES	SEISMIC CRITERIA (EXISTING BUILDING): CODE AND STANDARD = IEBC/ASCE 41 BUILDING RISK CATEGORY = III BASIC PERFORMANCE OBJECTIVE: DAMAGE CONTROL STRUCTURAL PERFORMANCE (BSE-1E) (NOT EVALUATED PER ASCE 41) POSITION RETENTION NONSTRUCTURAL PERFORMANCE (BSE-1E) LIMITED SAFETY STRUCTURAL PERFORMANCE (BSE-2E) HAZARDS REDUCED NONSTRUCTURAL PERFORMANCE (BSE-2E) SITE CLASS = D (ASSUMED) BSE-1E (20% PROBABILITY OF EXCEEDANCE IN 50 YR) SPECTRAL RESPONSE ACCELERATION (SRA) Ss = 0.405g (.2 SECOND MCE SRA) S1 = 0.129g (1.0 SECOND MCE SRA) SITE COEFFICIENT Fa = 1.476 SITE COEFFICIENT Fv = 2.342 SEISMIC DESIGN CATEGORY = D Sxs = Ss X Fa = 0.598 Sx1 = S1 X Fv = 0.303 BSE-2E (5% PROBABILITY OF EXCEEDANCE IN 50 YR) SPECTRAL RESPONSE ACCELERATION PARAMETERS Ss = 0.849g (.2 SECOND MCE SPECTRAL ACCELERATION) S1 = 0.299g (1.0 SECOND MCE SPECTRAL ACCELERATION) SITE COEFFICIENT Fa = 1.2 SITE COEFFICIENT Fv = 2.003 SEISMIC DESIGN CATEGORY = D Sxs = Ss X Fa = 1.019 Sx1 = S1 X Fv = 0.598 LEVEL OF SEISMICITY = HIGH BUILDING TYPE = RM1 (REINF MASONRY SHEAR WALLS W/FLEX DIAPHRAGMS) ANALYSIS METHOD: = LINEAR STATIC SCOPE OF ASSESSMENT = TIER 1 AND TIER 2 V = C1 C2 Cm Sa W (PSEUDO-LATERAL FORCE)
THE COMPLETED STRUCTURE IS DESIGNED TO RESIST CODE REQUIRED GRAVITY AND LATERAL FORCES AFTER ALL PERMANENT STRUCTURAL ELEMENTS, BRACING, AND SHEATHING ARE INSTALLED. THE STRUCTURE MAY NOT BE STABLE UNTIL ALL STRUCTURAL ELEMENTS AND SHEATHING ARE INSTALLED. THE CONTRACTOR SHALL BE ENTIRELY RESPONSIBLE FOR DESIGNING AND PROVIDING ALL TEMPORARY SHORING, TEMPORARY BRACING, CONSTRUCTION SAFETY SYSTEMS, CONSTRUCTION SEQUENCING AND/OR ALL OTHER MEANS AS NECESSARY TO PROVIDE STABILITY AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT AN ERECTION PLAN TO INDICATE CONSTRUCTION SEQUENCING AND TEMPORARY SHORING FOR REVIEW BY THE CONTRACTING OFFICER REPRESENTATIVE PRIOR TO ERECTION.	AISC 303 "CODE OF STANDARD PRACTICE FOR BUILDINGS AND BRIDGES", 2016	WIND DESIGN CRITERIA: BASIC WIND SPEED: 105 MPH EXPOSURE: C ENCLOSURE CLASSIFICATION: ENCLOSED GUST EFFECT FACTOR (G): 0.85 WIND DIRECTIONALITY FACTOR Kd: 0.85 WIND-BORNE DEBRIS REGION: NO	SPREAD FOOTINGS: EXCAVATIONS FOR FOOTINGS SHALL BE TO THE WIDTH AND DEPTH AS INDICATED ON THE STRUCTURAL DRAWINGS SPREAD FOOTINGS SHALL BEAR ONTO COMPETENT SATISFACTORY MATERIAL WITH BOTTOM OF FOOTINGS LEVEL AND THOROUGHLY CLEANED OF ALL LOOSE MATERIAL. SIDES OF SPREAD FOOTINGS MAY BE FORMED OR CAST AGAINST EARTH AT THE CONTRACTOR'S OPTION. A QUALIFIED LICENSED GEOTECHNICAL ENGINEER SHALL FIELD VERIFY THAT ALL FOOTING EXCAVATIONS ARE SUITABLE COMPACTED BEARING MATERIAL PRIOR TO PLACING REINFORCING STEEL. THE CONTRACTOR SHALL SCHEDULE ADEQUATE TIME TO FACILITATE THE FOUNDATION OBSERVATIONS.
PRODUCT SUBSTITUTIONS:	AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", 2016	LATERAL FORCE RESISTING SYSTEM: THE PRIMARY LATERAL FORCE RESISTING SYSTEM FOR THE EXISTING BUILDING CONSISTS OF FLEXIBLE WOOD ROOF DIAPHRAGMS WHICH TRANSFER LATERAL FORCES INTO THE PRIMARY FRAME. THE PRIMARY STRUCTURAL FRAME IS CLASSIFIED AS RM1 REINFORCED MASONRY SHEAR WALLS WITH FLEXIBLE DIAPHRAGMS PER ASCE 41. THE PRIMARY LATERAL FORCE RESISTING SYSTEM FOR THE NEW CLASSROOM BUILDING ADDITION CONSISTS OF FLEXIBLE STEEL DECK ROOF DIAPHRAGMS WHICH TRANSFER LATERAL FORCES INTO THE PRIMARY FRAME. THE PRIMARY STRUCTURAL FRAME IS CLASSIFIED AS SPECIAL CMU BEARING WALL SYSTEM PER IBC. THE PRIMARY LATERAL FORCE RESISTING SYSTEM FOR THE NEW ARMS VAULT ADDITION CONSISTS OF A RIGID CONCRETE CEILING DIAPHRAGM, WHICH TRANSFERS LATERAL FORCES INTO A SPECIAL CONCRETE SHEAR WALL BEARING WALL SYSTEM.	THE FOLLOWING DESIGN PARAMETERS ARE ASSUMED FOR DESIGN IN ACCORDANCE WITH THE GEOTECHNICAL REPORT: ALLOWABLE BEARING PRESSURE = 2000 PSF ACTIVE PRESSURE (NON-RESTRAINED) = 35 PCF + 35% OF ANY GRAVITY SURCHARGE AT-REST PRESSURE (RESTRAINED) = 55 PCF + 50% OF ANY GRAVITY SURCHARGE SEISMIC WALL SURCHARGE = 8H PSF (H=WALL HT) PASSIVE PRESSURE = 300 PCF INCLUDING F.S. 1.5 SUBGRADE MODULUS = 200 PCI COEFFICIENT OF FRICTION (NO F.S.) = .35 INCLUDING F.S. 1.5 A 1/3 STRESS INCREASE IS PERMITTED FOR ALLOWABLE BEARING PRESSURE AND PASSIVE PRESSURE WHEN SUBJECTED TO WIND OR SEISMIC LOAD COMBINATIONS IF THE ALTERNATE SERVICE LEVEL LOAD COMBINATIONS OF IBC SECTION 1605.3.2 ARE USED.
PRODUCT SUBSTITUTIONS MAY BE PERMITTED ONLY IF ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS ARE SATISFIED, COMPLETE ENGINEERING DATA IS SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AT LEAST TWO WEEKS PRIOR TO CONSTRUCTION, AND WRITTEN APPROVAL IS OBTAINED FROM THE CONTRACTING OFFICER REPRESENTATIVE. ENGINEERING DATA SHALL INCLUDE AS A MINIMUM THE ASSUMED BUILDING CODE, ALLOWABLE STRESSES INCLUDING ASSUMED STRESS INCREASES (IF ANY), ACTUAL MEMBER STRESSES, CONNECTION STRENGTHS, TOTAL DEFLECTION, AND LIVE LOAD DEFLECTION. ALL INCREASED DESIGN AND CONSTRUCTION COSTS WHICH RESULT FROM CONSIDERATION AND/OR CONSTRUCTION OF ANY PRODUCT SUBSTITUTION, INCLUDING BUT NOT LIMITED TO MECHANICAL/ELECTRICAL/STRUCTURAL/ARCHITECTURAL COORDINATION, SHALL BE COMPENSATED BY THE GENERAL CONTRACTOR.	AISI S-100 "NORTH AMERICAN SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS", 2016		
	AISI S202 "CODE OF STANDARD PRACTICE FOR COLD-FORMED STEEL FRAMING", 2015		
	AISI S220 "NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING-NONSTRUCTURAL MEMBERS", 2015		
	ASCE 7 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES", 2016		
	ASCE 41 "SEISMIC EVALUATION AND RETROFIT OF EXISTING BUILDINGS", 2017		
	AWS D1.1 "STRUCTURAL WELDING CODE-STEEL", 2015		
	PS-1 "STRUCTURAL PLYWOOD", 2019		
	PS-2 "PERFORMANCE STANDARD FOR WOOD STRUCTURAL PANELS", 2018		
	PS-20 "AMERICAN SOFTWOOD LUMBER STANDARD", REV 1, OCTOBER 2021		
	RCSC "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS", 2014		
	SDI ANSI RD "STANDARD FOR STEEL ROOF DECK", 2017		
	SJI K-1.1 "STANDARD SPECIFICATION FOR OPEN WEB STEEL JOISTS, K-SERIES", 2003		



617 Western Avenue
Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com



Project No.: 21024
Designed By: CTS
Drawn By: DJH
Checked By: ABC

Mark	Description	Date

WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA
STRUCTURAL GENERAL NOTES

S-001

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CONCRETE:

CONCRETE SHALL CONFORM TO ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" EXCEPT AS MODIFIED BY THE SUPPLEMENTAL REQUIREMENTS NOTED IN THE CONTRACT DOCUMENTS

COLD WEATHER AND HOT WEATHER CONCRETE SHALL BE IN ACCORDANCE WITH ACI 306 AND ACI 305, RESPECTIVELY

CONCRETE FLOORS SHALL BE IN ACCORDANCE WITH ACI 302.1R

CONCRETE CONSTRUCTION TOLERANCES SHALL BE IN ACCORDANCE WITH ACI 117 UNLESS NOTED OTHERWISE

UNLESS NOTED OTHERWISE, ALL CONCRETE WALLS SHALL HAVE THE FOLLOWING MINIMUM REINFORCING: #4 VERT @ 1'-4" ON CENTER, AND #4 HOR @ 1'-4" ON CENTER

ALL CAST-IN-PLACE STRUCTURAL CONCRETE SHALL HAVE AIR-ENTRAINING ADMIXTURE, EXCEPT FOR INTERIOR SLABS AND INTERIOR WALLS

CONCRETE SHALL CONFORM TO SPECIFICATION 033000

CONCRETE MIX DESIGN:

LOCATION	f _c (1) MIN (PSI)	f _t (1) MIN (PSI)	MAX (2) W/C RATIO	MAXIMUM AGGREGATE SIZE	% TOTAL(3) AIR CONTENT	MAXIMUM SLUMP (4)
FOOTINGS	4000	-	.45	3/4"	6	5
INTERIOR CONCRETE WALLS	4000	-	.45	3/4"	-	5
EXTERIOR CONCRETE WALLS	4000	-	.45	3/4"	6	5
INTERIOR SLABS ON GRADE	4000	-	.45	3/4"	-	5
EXTERIOR SLABS ON GRADE	4000	-	.45	3/4"	6	5
INTERIOR ELEVATED SLAB	4000	-	.45	3/8"	-	5
ALL OTHER BLDG CONCRETE	4000	-	.45	3/4"	-	5

NOTES:

1. DESIGN STRENGTH SHALL BE ASSUMED AS THE MINIMUM 28 DAY STRENGTH

2. SLAG, FLY ASH OR OTHER POZZOLONS CONFORMING TO ASTM C 618 SHALL CONSTITUTE NO MORE THAN 35 PERCENT OF THE TOTAL CEMENTITIOUS CONTENT MEASURED BY WEIGHT.

3. THE TOTAL AIR CONTENT SHALL BE +/- 1 1/2% OF THE INDICATED VALUES. AIR CONTENT SHALL BE MEASURED AT THE DISCHARGE END OF HOSE WHEN USING A CONCRETE PUMP, OR AT THE TRUCK DISCHARGE WHEN THE CONCRETE IS NOT PLACED USING A PUMP. IF THE MAXIMUM AGGREGATE SIZE IS LESS THAN THE MAXIMUM AGGREGATE SIZE STATED, THEN THE TOTAL AIR CONTENT SHALL BE ADJUSTED PER ACI 318 TABLE 4.4.1.

4. THE MAXIMUM SLUMP REQUIREMENT INCREASED TO A MORE FLOWABLE LEVEL ONLY WHEN WATER REDUCING ADMIXTURES AND/OR SUPER-PLASTICIZER ADMIXTURES ARE UTILIZED. ANY SUCH REQUEST FOR VARIANCE SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO BIDDING.

CONCRETE DURABILITY EXPOSURE CATEGORY:

LOCATION	F: FREEZING /THAWING	S: SULFATE	W: PERMEABILITY	C: CORROSION PROTECTION
FOOTINGS	F2	S1	W0	C1
INTERIOR CONCRETE WALLS	F0	S1	W0	C1
EXTERIOR CONCRETE WALLS	F2	S1	W0	C1
INTERIOR SLABS ON GRADE	F0	S0	W0	C1
EXTERIOR SLABS ON GRADE	F3	S0	W0	C2
INTERIOR ELEVATED SLAB	F0	S0	W0	C0
ALL OTHER BLDG CONCRETE	F2	S0	W0	C1

NOTES:

1. EXPOSURE CATEGORIES ARE SELECTED BY THE STRUCTURAL ENGINEER BASED ON EXPOSURE DEFINITIONS IN ACI 318 CHAPTER 4 DURABILITY REQUIREMENTS.

CONCRETE PLACING:

CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 304 "GUIDE FOR MIXING, TRANSPORTING, AND PLACING CONCRETE." ALL REINFORCED CONCRETE SHALL BE MECHANICALLY VIBRATED.

FORMWORK AND SHORING:

FORMWORK AND SHORING OF FORMWORK SHALL BE DESIGNED BY THE CONTRACTOR. FORMWORK SHALL CONFORM TO ACI 301. RESHORING, WHEN REQUIRED, SHALL BE IN ACCORDANCE WITH ACI 301. SUBMIT PROPOSED RESHORING PLANS TO THE CONTRACTING OFFICER REPRESENTATIVE FOR INFORMATION ONLY.

FORMWORK SHALL CONFORM TO SPECIFICATION 031000

CONCRETE CONSTRUCTION JOINTS:

CONSTRUCTION JOINTS IN CONCRETE SHALL BE PREPARED TO ENHANCE BONDING BY USING MECHANICAL KEYS, OR BY INTENTIONALLY ROUGHENING THE SURFACE OF THE EXISTING CONCRETE. MECHANICAL-KEYED SURFACES, WHERE USED, SHALL BE THE SIZE AND TYPE INDICATED ON THE CONTRACT DRAWINGS. IN LOCATIONS WHERE MECHANICAL KEYS ARE NOT SPECIFIED, THE EXISTING CONCRETE SURFACE SHALL BE MECHANICALLY ROUGHENED TO EXPOSE THE EXISTING AGGREGATE TO A 3/8" AMPLITUDE. INTENTIONALLY ROUGHENED SURFACES SHALL BE THOROUGHLY CLEANED TO REMOVE ALL LAITANCE AND OTHER LOOSE DEBRIS. THE CONTRACTOR SHALL APPLY WATER TO ALL EXISTING CONCRETE SURFACES, AND SHALL REMOVE ALL STANDING WATER IMMEDIATELY PRIOR TO PLACING NEW CONCRETE. CONSTRUCTION JOINTS FOR CONCRETE WALL SHALL BE LIMITED TO A MAXIMUM SPACING OF 20' VERTICALLY, OR LESS AS LIMITED BY CONCRETE FORM STRENGTH. CONSTRUCTION JOINTS FOR SLABS ON GRADE, AND ELEVATED CONCRETE SLABS, SHALL BE IN ACCORDANCE WITH THE DETAILS ON THE CONTRACT DRAWINGS.

SLEEVES AND ELECTRICAL CONDUIT ENCASED IN CONCRETE:

EXCEPT AS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR OTHERWISE APPROVED BY THE STRUCTURAL ENGINEER, CONCRETE BEAMS, GIRDERS, AND COLUMNS SHALL NOT BE SLEEVED NOR PENETRATED TO PASS THROUGH PIPING OR DUCTS. PIPE AND CONDUIT OPENINGS THAT HAVE WIDTH GREATER THAN THE SLAB THICKNESS SHALL BE FORMED WITH EMBEDDED, OVERSIZED,SCHEDULE 40 STEEL PIPE SLEEVES, AND SHALL BE REINFORCED PER THE DETAILS ON THE STRUCTURAL DRAWINGS. SLEEVES SHALL BE LOCATED AWAY FROM PRE-STRESSING TENDONS TO MAINTAIN A CLEAR DISTANCE OF AT LEAST THE SLAB THICKNESS. ALUMINUM CONDUIT SHALL NOT BE ENCASED INTO CONCRETE. STEEL ELECTRICAL CONDUIT MAY BE ENCASED WITHIN CONCRETE SLABS ONLY WHEN THE CONDUIT IS SIZED, SPACED, POSITIONED, AND REINFORCED IN ACCORDANCE WITH THE DETAILS ON THE STRUCTURAL DRAWINGS.

CUTTING AND DRILLING EXISTING CONCRETE:

THE CONTRACTOR SHALL NOT CUT OR DRILL THROUGH ANY HARDENED CONCRETE WITHOUT FIRST IDENTIFYING SPECIFIC STRUCTURAL REINFORCEMENT LOCATIONS DETERMINED BY NON-DESTRUCTIVE TESTING. WHEN DRILLED HOLES OR PENETRATIONS ARE REQUIRED IN HARDENED CONCRETE, THE CONTRACTOR SHALL SUBMIT DETAILED INFORMATION INCLUDING PENETRATION SIZE, SPECIFIC LOCATIONS MEASURED TO GRID-LINES AND ELEVATIONS, AND REINFORCING LOCATIONS INCLUDING BAR LENGTHS TO THE STRUCTURAL ENGINEER FOR REVIEW AND EVALUATION PRIOR TO PERFORMING THE WORK.

NON-SHRINK GROUT:

GROUT SHALL BE A CEMENTITIOUS, NON-SHRINK, NATURAL AGGREGATE FORMULATION THAT CONFORMS TO CORPS OF ENGINEERS CRD-621 AND ASTM C-1107, GRADE A, B, OR C. GROUT SHALL BE DELIVERED TO THE JOB-SITE IN DRY, PRE-MIXED FACTORY PACKAGING THAT REQUIRES ONLY THE ADDITION OF WATER. GROUT SHALL BE CAREFULLY MIXED AND INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. SURFACES WHICH RECEIVE GROUT SHALL BE FREE OF DIRT, OIL, GREASE, OR OTHER DELETERIOUS SUBSTANCES WHICH MAY INHIBIT BOND. CONCRETE SURFACES SHALL BE ROUGH AND SATURATED (PONDED) WITH CLEAN WATER FOR 4 HOURS MINIMUM JUST PRIOR TO GROUTING. REMOVE ALL FREE WATER PRIOR TO GROUTING. PLACE GROUT IN A MANNER TO RESULT IN FULL CONTACT BETWEEN THE BEARING SURFACES. AFTER PLACING, THE CONTRACTOR SHALL CURE EXPOSED EDGES OF GROUT USING CLEAN, WET RAGS OR CLEAN SAND SATURATED WITH WATER FOR AT LEAST 8 HOURS. AFTER REMOVING THE WET RAGS OR SAND. GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF f_c = 7000 PSI AT 28 DAYS.

EPOXY GROUT (DOWEL TYPE):

EPOXY GROUT SHALL BE A TWO-COMPONENT, 100% SOLIDS EPOXY, THAT IS MANUFACTURED FOR THE PURPOSE OF ANCHORING DOWELS INTO HARDENED CONCRETE. EPOXY SHALL BE MIXED AND DISPENSED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. EPOXY SHALL MEET THE MINIMUM REQUIREMENTS OF ASTM C-881 SPECIFICATION FOR TYPE I, II, IV, AND V, GRADE 3 (NON-SAGGING), CLASS "A" WHEN THE SURFACE OF THE HARDENED CONCRETE TEMPERATURE IS LESS THAN 40 DEGREES FAHRENHEIT, CLASS "B" WHEN THE HARDENED CONCRETE TEMPERATURE 40<T<60 DEGREES F, AND CLASS "C" WHEN THE HARDENED CONCRETE TEMPERATURE EXCEEDS 60 DEGREE F. THE EPOXY MUST DEVELOP A MINIMUM BOND STRENGTH OF 1500 PSI AFTER A 14-DAY CURE (ASTM C-882), A MINIMUM COMPRESSIVE YIELD STRENGTH OF 10,000 PSI AFTER A 7-DAY CURE (ASTM D-695), A MINIMUM COMPRESSIVE MODULUS OF 200 KSI AFTER A 7-DAY CURE (ASTM D-695), AND A MINIMUM TENSILE STRENGTH OF 6310 PSI AFTER A 7-DAY CURE (ASTM D-638). EPOXY SHALL HAVE A HEAT DEFLECTION TEMPERATURE OF 120 DEGREES FAHRENHEIT MINIMUM AFTER A 7-DAY CURE (ASTM D-648).

REINFORCING STEEL:

REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH "MANUAL OF STANDARD PRACTICE FOR DETAILING OF REINFORCED CONCRETE STRUCTURES."

THE CONTRACTOR SHALL COORDINATE REINFORCING STEEL PLACING DETAILS AND SHALL PROVIDE TEMPLATES FOR PLACING STEEL IN CONGESTED AREAS AS NECESSARY. THE CONTRACTOR SHALL PROVIDE LAP SPLICES, DOWELS, AND COUPLERS AS REQUIRED TO ALLOW FOR PROPER PLACEMENT OF REINFORCING. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO INDICATE PLACING PLANS AND ELEVATIONS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.

ANY REINFORCING STEEL THAT REQUIRES WELDING SHALL CONFORM TO ASTM A706 GRADE 60

ALL REINFORCING STEEL SHALL BE SPLICED USING CONTACT LAP SPLICES UNLESS OTHERWISE REQUIRED, PROVIDE 48 BAR DIAMETER MINIMUM LAP SPlice UNLESS NOTED OTHERWISE.

REINFORCING STEEL SHALL CONFORM TO SPECIFICATION 032000

POST-INSTALLED CONCRETE ANCHORS:

POST-INSTALLED ANCHORS INTO HARDENED CONCRETE SHALL BE THE TYPE, DIAMETER, AND MINIMUM EMBED DEPTH INDICATED ON THE CONTRACT DRAWINGS. THE MINIMUM EMBEDMENT DEPTH SHALL BE 4 1/2 DIAMETERS UNLESS INDICATED OTHERWISE.

DRILLED ANCHOR HOLES SHALL BE PREPARED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND AS INDICATED ON THE CONTRACT DOCUMENTS. DO NOT DRILL HOLES LARGER THAN SPECIFIED BY THE MANUFACTURER.

ANCHORS SHALL SATISFY THE REQUIREMENTS OF ACI 318 APPENDIX D AS MODIFIED BY IBC. ANCHORS SHALL BE SUITABLE FOR INSTALLATION INTO UNCRACKED AND CRACKED CONCRETE FOR THE SEISMIC DESIGN CATEGORY INDICATED ON THE STRUCTURAL GENERAL NOTES, AND SHALL BE DOCUMENTED AS SUITABLE FOR USE BY ICC ENGINEERING REPORT. THE CONTRACTOR SHALL SUBMIT PROPOSED ANCHORS TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO INSTALLATION. ANCHORS SHALL BE STAINLESS STEEL AISI 303, 304, OR 316 EXCEPT AT DRY, INTERIOR LOCATIONS WHERE ANCHORS SHALL BE EITHER STAINLESS STEEL OR ZINC PLATED CARBON STEEL. THE CONTRACTOR SHALL SUBSTANTIATE BY ICC REPORT THAT THE POST-INSTALLED CONCRETE ANCHORS HAVE THE FOLLOWING MINIMUM BASIC STRUCTURAL ALLOWABLE LOAD PROPERTIES THAT ARE ASSUMED FOR DESIGN:

EXPANSION ANCHORS:

EXPANSION ANCHORS SHALL BE A THREADED STUD WITH AN INTEGRAL CONE EXPANDER AND A SINGLE PIECE EXPANSION CLIP. THE STUD SHALL HAVE 70 KSI MINIMUM TENSILE STRENGTH. EXPANSION ANCHORS SHALL BE "KWIK BOLT TZ" MANUFACTURED BY HILTI, "HDA UNDERCUT ANCHOR" MANUFACTURED BY HILTI, "STRONG-BOLT" MANUFACTURED BY SIMPSON STRONG-TIE, "TRU-BOLT +" MANUFACTURED BY ITW RAMSET REDHEAD, OR APPROVED EQUAL. EXPANSION ANCHORS SHALL HAVE MINIMUM (ASD) ALLOWABLE LOADS IN CRACKED CONCRETE SPECIFIED IN SECTION "DRILLED- IN CONCRETE ANCHORS"

CONCRETE SCREW ANCHORS:

CONCRETE SCREW ANCHORS SHALL BE "TITEN-HD" MANUFACTURED BY SIMPSON STRONG-TIE, "HUS-H SCREW ANCHOR" MANUFACTURED BY HILTI, "TAPCON" MANUFACTURED BY ITW-REDHEAD OR APPROVED EQUAL. EXPANSION ANCHORS SHALL HAVE MINIMUM (ASD) ALLOWABLE LOADS IN CRACKED CONCRETE SPECIFIED IN SECTION "DRILLED-IN CONCRETE ANCHORS"

DRILLED AND GROUTED ANCHORS:

EPOXY GROUT SHALL BE USED FOR ALL DRILLED AND GROUTED REINFORCING BARS OR BOLTS UNLESS NOTED OTHERWISE. CEMENTITIOUS NON-SHRINK GROUT SHALL BE USED FOR ALL OVERHEAD APPLICATIONS, AND WITHIN FIRE-RATED CONCRETE ELEMENTS

REINFORCING STEEL SHALL NOT BE CUT DURING INSTALLATIOIN OF ANCHORS. THE CONTRACTOR SHALL COORDINATE ANCHOR PLACEMENT WITH REINFORCEMENT IN THE CONCRETE STRUCTURE TO AVOID INTERFERENCE CONDITIONS. THE CONTRACTOR SHALL ADJUST REINFORCEMENT POSITIONS WHERE THE REINFORCING INTERFERES WITH DRILLED IN ANCHORS. ALL DEFECTIVE ANCHOR HOLES WHICH CANNOT BE FULLY DRILLED SHALL BE FULLY-GROUTED WITH EPOXY ADHESIVE. A NEW HOLE SHALL BE DRILLED A MINIMUM OF 3 BOLT DIAMETERS FROM THE ORIGINAL HOLE

REINFORCING BARS AND BOLTS SHALL BE FULLY GROUTED INTO THE EXISTING CONCRETE. HOLES THAT ARE DRILLED BY ROTARY PERCUSSION DRILLS SHALL BE BLOWN WITH COMPRESSED, OIL-FREE AIR TO REMOVE DUST AND OTHER DELETERIOUS SUBSTANCES THAT INHIBIT BOND FROM THE BONDING SURFACES. HOLES THAT ARE DRILLED BY CORE-DRILLING SHALL BE FLUSHED WITH PRESSURIZED POTABLE WATER TO REMOVE DUST AND OTHER SUBSTANCES THAT INHIBIT BOND. THE CONTRACTOR SHALL UTILIZE NON-DESTRUCTIVE SCANNING TECHNIQUES TO LOCATE REINFORCING STEEL PRIOR TO DRILLING HOLES. THE CONTRACTOR SHALL CONTROL TEMPERATURE AND MOISTURE CONDITIONS ON THE HOLE BONDING SURFACES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

ANCHORS THAT ARE EMBEDDED LESS THAN 24" SHALL HAVE A MEASURED QUANTITY OF GROUT INSTALLED INTO THE HOLES USING AN EXTENSION NOZZLE PRIOR TO INSERTING THE ANCHOR. INSERT THE ANCHOR TO DISPLACE THE FRESH GROUT, AND POSITION THE ANCHOR AS REQUIRED BY THE CONTRACT DOCUMENTS. REMOVE EXCESS GROUT WHICH DISPLACES ABOVE THE HOLE PRIOR TO HARDENING.

ANCHORS THAT ARE EMBEDDED 24" OR MORE SHALL HAVE GROUT INJECTED INTO HOLES USING A PRE-APPROVED PRESSURE-GROUTING SYSTEM AND A MEASURED QUANTITY OF GROUT. THE ANCHORS SHALL BE INSERTED INTO THE HOLES PRIOR TO PRESSURE GROUTING.

CONCRETE PROTECTION FOR REINFORCING STEEL:

THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR ALL REINFORCING STEEL PLACED WITHIN NON-PRESTRESSED CAST-IN-PLACE CONCRETE UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH

CONCRETE EXPOSED TO EARTH OR WEATHER

2" FOR #6 AND LARGER

1 1/2" FOR #5 AND SMALLER

CONCRETE NOT EXPOSED TO EARTH, WEATHER, OR GROUND

3/4" FOR SLABS, WALLS, JOISTS WITH #11 BAR AND SMALLER

1 1/2" FOR SLABS, WALLS, JOISTS WITH #14 BAR AND LARGER

CONCRETE BEAM AND COLUMN PRIMARY REINFORCING, TIES, STIRRUPS, SPIRALS

1 1/2"

REINFORCING STEEL LAP-SPLICE REQUIREMENTS IN CONCRETE:

LAP SPLICES AND BAR DEVELOPMENT IN CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318 AND THE FOLLOWING TABLE:

GRADE 60 REBAR DEVELOPMENT TABLE FOR NORMAL WT CONCRETE									
BAR SIZE	f _c = 4000				f _c = ALL				L _{dh}
	L _d	L _t	L _{sb}	L _{sbt}	L _{dc}	L _c	L _{cs}	L _d	
3	14	18	18	24	8	12	12	8	
4	19	25	25	32	11	15	12	11	
5	24	31	31	40	14	19	14	14	

DEFINITIONS:

db = NOMINAL BAR DIAMETER

f_c = CONCRETE DESIGN COMPRESSIVE STRENGTH (PSI)

L_d = BASIC TENSION DEVELOPMENT LENGTH FOR BARS OTHER THAN TOP BARS (IN)

L_t = TENSION DEVELOPMENT LENGTH FOR TOP BARS:
L_t = 1.3 X L_d (IN)

L_{sb} = TENSION LAP SPlice LENGTH FOR BARS OTHER THAN TOP BARS:

L_{sb} = 1.3 X L_d (IN)

L_{sbt} = TENSION LAP SPlice LENGTH FOR TOP BARS:
L_{sbt} = 1.69 X L_d (IN)

L_{dc} = COMPRESSION DEVELOPMENT LENGTH FOR BARS AND DOWELS:

L_c = COMPRESSION LAP SPlice FOR TIED COLUMNS:
L_c = 30 X db (IN)

L_{cs} = COMPRESSION LAP SPlice FOR SPIRAL TIED COLUMNS:
L_{cs} = 22.5 X db (IN)

L_{dh} = DEVELOPMENT LENGTH FOR A BAR WITH AN ACI STANDARD HOOK

TOPBAR = HORIZONTAL BAR WITH MORE THAN 12" OF CONCRETE CAST BELOW

C = CONCRETE COVER (IN)

NOTES:

- L_d, L_t, L_{sb}, AND L_{sbt} TABLE VALUES ASSUME THE FOLLOWING: THE CLEAR DISTANCE BETWEEN BARS BEING DEVELOPED OR SPLICED IS NOT LESS THAN db, C IS NOT LESS THAN db, AND STIRRUPS OR TIES THROUGHOUT L_d ARE NOT LESS THAN THE CODE MINIMUM OR
- FOR CONDITIONS WHERE NOTE 1 IS NOT SATISFIED, THEN THE TABLE VALUES FOR L_d, L_t, L_{sb}, AND L_{sbt} SHALL BE INCREASED BY 1.5 TIMES THE INDICATED VALUES
- LAP SPlice AND DEVELOPMENT VALUES ASSUME NO EPOXY BAR COATING



design collaborative

617 Western Avenue
Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com



Project No.: 21024
Designed By: CTS
Drawn By: DJH
Checked By: ABC

Mark	Description	Date

WASHINGTON MILITARY DEPARTMENT

ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA

STRUCTURAL GENERAL NOTES

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STRUCTURAL STEEL:

FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE CURRENT AISC AND AWS SPECIFICATIONS AND STANDARDS AS ADOPTED AND AMENDED BY THE BUILDING CODE.

W SHAPES	ASTM A992	Fy = 50 KSI, Fu = 65 KSI
CHANNELS, ANGLES	ASTM A36	Fy = 36 KSI, Fu = 58 KSI
OR	ASTM A992	Fy = 50 KSI, Fu = 65 KSI
	ASTM A992	Fy = 50 KSI, Fu = 65 KSI
WT SHAPES	ASTM A500 GR C	Fy = 50 KSI, Fu = 62 KSI
RECTANGULAR HSS	ASTM A53 GR B	Fy = 35 KSI, Fu = 60 KSI
STEEL PIPE	ASTM A36	Fy = 36 KSI, Fu = 58 KSI
STEEL PLATE	ASTM A36	Fy = 36 KSI, Fu = 58 KSI
HANGER RODS	ASTM A36	Fy = 36 KSI, Fu = 58 KSI
ANCHOR RODS (ANCHOR BOLTS)	ASTM F1554	Fy = 36 KSI OR Fy =55 S1

THE FABRICATOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION. REVIEW OF SHOP DRAWINGS BY THE STRUCTURAL ENGINEER DOES NOT INCLUDE REVIEW OF ERECTION AIDS, SAFETY SYSTEMS, OR OTHER CONTRACTOR MEANS AND METHODS.

UNLESS OTHERWISE SHOWN, STEEL BEAMS SHALL BE EQUALLY SPACED BETWEEN INDICATED DIMENSION POINTS.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL ERECTION AIDES, ERECTION ANGLES, ERECTION LIFT HOLES, OTHER ERECTION DEVICES, WELDING PROCEDURES, JOINT PREPARATIONS, GROOVE ANGLE SELECTION, FILLER METAL SELECTION, BACKING BARS, COPEs, AND TAPERS OF UNEQUAL PARTS. THE CONTRACTOR SHALL COORDINATE REMOVAL OF ALL ERECTION AIDS AFTER ERECTION UNLESS OTHERWISE SPECIFICALLY APPROVED OTHERWISE BY THE CONTRACTING OFFICER REPRESENTATIVE.

STRUCTURAL STEEL SHALL CONFORM TO SPECIFICATION 051200

STEEL BAR-JOISTS:

STEEL BAR-JOISTS SHALL BE DESIGNED AS AN ENGINEERED COMPONENT BY A QUALIFIED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON WHO IS RETAINED BY THE JOIST MANUFACTURER.

JOISTS SHALL BE DESIGNED FOR THE MINIMUM DESIGN LOADS INDICATED ON THE CONTRACT STRUCTURAL DRAWINGS. DESIGN LOADS SHALL INCLUDE ANY SPECIAL CONCENTRATED LOADS THAT ARE INDICATED ON THE FRAMING PLANS AND DETAILS.

THE ROOF JOIST SYSTEM SHALL INCLUDE BRACING TO RESIST NET UPLIFT FORCES INDICATED.

ROOF DEFLECTIONS SHALL BE LIMITED TO SPAN/180 WHEN SUBJECTED TO DEAD PLUS LIVE LOADS, AND SPAN/240 WHEN SUBJECTED TO LIVE LOADS.

STEEL BAR-JOISTS SHALL BE ENGINEERED, MANUFACTURED, AND CONSTRUCTED IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE SPECIFICATIONS. CALCULATIONS SHALL BEAR THE STAMP OF THE JOIST COMPONENT PROFESSIONAL ENGINEER TO DEMONSTRATE FULL COMPLIANCE WITH THE SJI SPECIFICATION WHEN SUBJECTED TO THE SPECIFIED LOADS.

STEEL JOISTS SHALL CONFORM TO SPECIFICATION 052100

STEEL DECK (GENERAL):

STEEL DECK SHALL CONFORM TO ASTM A653 GRADE 33 MINIMUM, WITH Fy MIN = 38 KSI UNLESS NOTED OTHERWISE. GALVANIZED COATING SHALL CONFORM TO ASTM A924, G-60. STEEL DECK SHALL HAVE MINIMUM STRUCTURAL PROPERTIES INDICATED ON THE STRUCTURAL DRAWINGS.

THE MINIMUM DECK GAGES INDICATED ARE BASED UPON 3-SPAN, UNSHORED CONDITIONS EXCEPT WHERE OTHERWISE INDICATED ON THE PLAN. HEAVIER DECK GAGES MAY BE REQUIRED FOR CONDITIONS OTHER THAN ASSUMED, DEPENDING UPON THE MANUFACTURER'S AND CONTRACTOR'S DECK LAYOUT. THE DECK SUPPLIER SHALL VERIFY DECK GAGES AND CAPACITIES BASED UPON THE ACTUAL DECK LAYOUT AND SPAN CONDITIONS.

COORDINATE DECK MECHANICAL FASTENING PIN TYPE WITH THE ACTUAL ROOF FRAMING SUBSTRATE THICKNESS IN ACCORDANCE WITH THE PIN MANUFACTURER RECOMMENDATIONS. UTILIZE A PROPRIETARY HIGH-SHEAR SIDE-SEAM FASTENING SYSTEM AS SPECIFIED ON THE ROOF DECK DETAIL.

THE CONTRACTOR SHALL PROVIDE CLOSURE PLATES, FLASHING, AND ALL MISCELLANEOUS LIGHT GAGE METAL SHAPES NECESSARY TO COMPLETE THE WORK. MINIMUM DECK BEARING SHALL BE 2" UNLESS INDICATED OTHERWISE.

STEEL DECK SHALL CONFORM TO SPECIFICATION 053100

STEEL ROOF DECK:

STEEL ROOF DECK SHALL BE 22 GAGE, TYPE 'B', GALVANIZED G-60 TYPE, WITH PROPRIETARY HIGH-SHEAR SIDE-SEAM FASTENERS AT DECK SIDE-SEAMS. MINIMUM DECK STRUCTURAL PROPERTIES ARE INDICATED ON DETAIL /1 S-551. ROOF DECK FASTENING SHALL BE AS INDICATED ON THE STRUCTURAL DRAWINGS.

LIGHT FIXTURES, PIPES, DUCTS, MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT, AND OTHER UTILITIES SHALL NOT BE SUSPENDED DIRECTLY FROM THE ROOF DECK WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD

STRUCTURAL STEEL WELDING:

ALL STRUCTURAL STEEL WELDING SHALL BE PERFORMED BY AWS AND WABO CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1.1.

ALL WELDS SHALL BE MADE USING LOW-HYDROGEN ELECTRODES WITH MINIMUM TENSILE STRENGTH EQUAL TO 70 KSI, AND IN ACCORDANCE WITH AWS D1.1. ALL ELECTRODE FILLER METALS SHALL HAVE CVN TOUGHNESS OF 20 FT LBS AT ZERO DEGREES F UNLESS NOTED OTHERWISE. LOW-HYDROGEN SMAW ELECTRODES SHALL BE USED WITHIN FOUR HOURS OF OPENING THE ORIGINAL SEALED CONTAINERS, OR SHALL BE REDRIED IN ACCORDANCE WITH AWS D1.1. ELECTRODES SHALL NOT BE REDRIED MORE THAN ONE TIME. WET ELECTRODES SHALL BE IMMEDIATELY DISCARDED AND NOT USED.

ALL WELDS SHALL BE PRE-QUALIFIED, AND SHALL BE PERFORMED IN STRICT CONFORMANCE WITH AN APPROVED WRITTEN WELD PROCEDURE SPECIFICATION (WPS) PER AWS D1.1. ALL WELD PARAMETERS SHALL BE IN STRICT ACCORDANCE WITH THE AWS D1.1 AND THE ELECTRODE MANUFACTURER'S RECOMMENDATIONS. COPIES OF ALL APPROVED WPS SHALL BE ON-SITE AND READILY AVAILABLE TO ALL WELDERS AND TO THE SPECIAL INSPECTOR.

WELDING PROCEDURES SHALL BE SUBMITTED TO THE SPECIAL INSPECTOR AND STRUCTURAL ENGINEER OF RECORD FOR REVIEW BEFORE STARTING FABRICATION OR ERECTION.

ALL WELDS SHALL BE VISUALLY INSPECTED BY THE SPECIAL INSPECTOR. WELDS PERFORMED IN AN AISC CERTIFIED FABRICATION SHOP, HOWEVER, MAY BE PERIODICALLY INSPECTED. ALL COMPLETE PENETRATION WELDS SHALL BE NDE UT TESTED UPON COMPLETION OF THE CONNECTION. EXCEPTIONS ARE PLATES 1/4" OR LESS IN THICKNESS WHICH SHALL BE INSPECTED USING MAGNETIC PARTICLE TESTING.

THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING THE WELD PROCESS, JOINT PREPARATIONS, ROOT OPENINGS, ROOT DIMENSIONS, GROOVE ANGLES, BACKING BARS, COPEs, SURFACE ROUGHNESS, AND TAPERS OF UNEQUAL PARTS WITH THE APPROVED WELDING PROCEDURE SPECIFICATION.

STRUCTURAL STEEL WELDING SHALL CONFORM WITH SPECIFICATION 051200

GALVANIZED STRUCTURAL STEEL:

FABRICATE STRUCTURAL STEEL FOR ZINC COATING IN ACCORDANCE WITH ASTM A385. STEEL SHOP DRAWINGS SHALL CLEARLY INDICATE CROPPED CORNERS AND VENT/DRAIN HOLE LOCATIONS TO BE PROVIDED. THE SURFACE OF THE STEEL CAN HAVE NO PAINT, LACQUER, OR OTHER DELETERIOUS SUBSTANCE THAT WILL INHIBIT THE GALVANIZING PROCESS. BLAST CLEAN STEEL PRIOR TO GALVANIZING PER SSPC SP 6/NACE NO. 3.

HOT DIPPED ZINC COATING ON STRUCTURAL STEEL SHALL CONFORM TO ASTM A123. HOT DIPPED ZINC COATING ON BOLTS AND HARDWARE SHALL CONFORM TO ASTM A153.

PREPARE GALVANIZED STEEL FOR PAINTING IN ACCORDANCE WITH ASTM D6386. REMOVE GALVANIZED COATINGS NEAR FIELD WELD REGIONS. REPAIR ALL DAMAGED OR UNCOATED AREAS OF GALVANIZED STEEL SURFACES USING A REPAIR PRODUCT CONFORMING TO ASTM A780. REPAIR COATING THICKNESSES SHALL MEET OR EXCEED THE ADJACENT COATING THICKNESS.

WOOD FRAMING (GENERAL):

THE CONTRACTOR SHALL PROVIDE MINIMUM NAILING BETWEEN WOOD MEMBERS IN ACCORDANCE WITH IBC TABLE 2304.10.1 UNLESS MORE CONNECTORS ARE INDICATED ON THE STRUCTURAL DRAWINGS. DO NOT NOTCH OR DRILL STRUCTURAL MEMBERS UNLESS PERMITTED BY DETAILS ON THE STRUCTURAL DRAWINGS, OR ALLOWED BY IBC.

ALL LUMBER IN CONTACT WITH CONCRETE AND MASONRY SHALL BE PRESERVATIVE TREATED LUMBER. LUMBER IN CONTACT WITH ANY CEMENTICIOUS FLOOR TOPPING OVER A WOOD FRAME FLOOR, HOWEVER, DOES NOT REQUIRE PRESERVATIVE TREATMENT.

STAGGER ALL NAILING TO AVOID LUMBER SPLITTING.

BOLT HOLES IN WOOD MEMBERS SHALL BE 1/32" TO 1/16" LARGER THAN THE BOLT DIAMETERS. PROVIDE STANDARD WASHERS ADJACENT TO BOLT, NUT, AND LAG SCREW HEADS THAT ARE IN CONTACT WITH WOOD FRAMING.

ALL CONNECTORS IN CONTACT WITH PRESERVATIVE TREATED LUMBER, OR PERMANENTLY EXPOSED TO EXTERIOR CONDITIONS, SHALL BE HOT DIPPED GALVANIZED. ALL SILL PLATE ANCHOR BOLTS SHALL BE HOT-DIPPED GALVANIZED. AT DESIGNATED SHEAR WALLS ONLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL A GALVANIZED PLATE WASHER 3/16" X 3" X 3" AT EACH ANCHOR BOLT OVER THE SILL PLATE IN ACCORDANCE WITH IBC.

WOOD FRAMING CONNECTORS:

WOOD FRAMING CONNECTORS SHALL BE ICC APPROVED, SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE, OR APPROVED EQUAL, AND SHALL BE THE TYPE INDICATED ON THE STRUCTURAL CONTRACT DRAWINGS. PROVIDE THE MAXIMUM SIZE AND QUANTITY OF NAILS, BOLTS, OR FASTENERS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, UNLESS A SPECIFIC QUANTITY OF FASTENERS IS INDICATED ON THE CONTRACT STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL PRE-DRILL LEAD HOLES WHERE NECESSARY TO PREVENT LUMBER SPLITTING.

ROUGH CARPENTRY:

DIMENSIONAL LUMBER SHALL BE GRADED IN ACCORDANCE WITH THE AMERICAN LUMBER STANDARD COMMITTEE (ALSC) GRADING RULES. ALL LUMBER SHALL BEAR THE GRADE TRADEMARK OF THE WESTERN WOODS PRODUCTS ASSOCIATION (WWPA), THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB), OR OTHER AGENCY ACCREDITED BY THE ALSC.

ALL FRAMING LUMBER SHALL BE OF THE FOLLOWING MINIMUM GRADE AND SHALL HAVE THE FOLLOWING MINIMUM BASIC STRUCTURAL PROPERTIES:

- A. ALL STRUCTURAL FRAMING UNO: DOUGLAS FIR LARCH (DF) NO. 2 (Fb = 900 PSI, Fc perp = 625 PSI, Fc = 1350 PSI, E=1,600,000 PSI) OR DF NO. 1
- B. STRUCTURAL PRESERVATIVE TREATED (PT) LUMBER : HF NO. 2 (Fb = 850 PSI, Fc perp = 405 PSI, Fc = 1300 PSI, E = 1,300,000 PSI) OR HF NO. 1
- C. 2X AND 3X DECKING: DF COMMERCIAL (Fb = 1650 PSI, E = 1,700,000 PSI)
- D. STANDARD AND UTILITY GRADES SHALL NOT BE USED FOR STRUCTURAL ROUGH CARPENTRY

PRESERVATIVE TREATED LUMBER:

LUMBER IN CONTACT WITH CONCRETE, MASONRY, AND IDENTIFIED AS "PT" ON THE DRAWINGS SHALL CONTAIN CHEMICAL PRESERVATIVE TREATMENT IN ACCORDANCE WITH IBC. TREAT LUMBER AND TIMBER WITH PRESERVATIVE IN ACCORDANCE WITH AWPA C1 AND AWPA C2 WHERE REQUIRED. TREAT PLYWOOD WITH PRESERVATIVE IN ACCORDANCE WITH AWPA C1 AND AWPA C9 WHERE REQUIRED. TREAT GLULAM BEAMS WITH PRESERVATIVE IN ACCORDANCE WITH AWPA C1 AND AWPA C28 WHERE REQUIRED.

STEEL IN CONTACT WITH PRESERVATIVE TREATED LUMBER SHALL BE GALVANIZED.

THE CONTRACTOR SHALL SELECT PRESERVATIVE TREATMENT METHODS THAT ARE COMPATIBLE WITH ENVIRONMENTAL FEDERAL, STATE, AND LOCAL LAWS.

PRESERVATIVE TREATED LUMBER SHALL CONFORM WITH SPECIFICATION 061000

GLUED-LAMINATED TIMBER (GLULAM):

GLUED-LAMINATED WOOD FRAMING MEMBERS SHALL CONFORM TO ANSI/AITC A190.1. FRAMING SHALL BE AITC COMBINATION 24F-V4 DF (Fc = 1650 PSI, Ft = 1100 PSI, Fbx = 2400 PSI, E = 1,800,000 PSI). ALL MEMBERS SHALL HAVE LAMINATIONS ADHERED WITH EXTERIOR GLUE. MEMBERS THAT ARE EXPOSED TO VIEW SHALL HAVE PREMIUM APPEARANCE GRADE; MEMBERS THAT ARE NOT EXPOSED TO VIEW SHALL HAVE INDUSTRIAL GRADE. ALL MEMBERS SHALL BEAR THE STAMP OF AITC OR EPA-EWS, AND SHALL HAVE GRADE IDENTIFIED. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.

GLUED LAMINATED TIMBER SHALL CONFORM TO SPECIFICATION 061000. STRUCTURAL WOOD SHEATHING:

ALL PLYWOOD (PW) SHALL BE APA RATED SHEATHING, STRUCTURAL 1, C-D GRADE, EXPOSURE 1 DURABILITY CONFORMING TO PS-1, AND WITH MINIMUM SPAN RATING INDICATED FOR THE INTENDED APPLICATION.

ALL ORIENTED STRAND BOARD (OSB) SHALL BE APA RATED SHEATHING, STRUCTURAL 1, WITH DURABILITY EQUIVALENT TO EXPOSURE 1, CONFORMING WITH APA E445S, AND WITH MINIMUM SPAN-RATING INDICATED FOR THE INTENDED APPLICATION.

WALL SHEATHING: SHALL BE EITHER OSB OR PW. WALL SHEATHING WILL MEET THE MINIMUM REQUIREMENTS OF DETAIL 4/ S-541

ROOF SHEATHING: SHALL BE EITHER OSB OR PLYWOOD. ROOF SHEATHING WILL MEET THE MINIMUM REQUIREMENTS OF DETAIL 1/ S-541

STRUCTURAL WOOD SHEATHING SHALL CONFORM TO SPECIFICATION 061600

NAILS AND STAPLES:

NAILS WILL BE GALVANIZED "COMMON" TYPE CONFORMING TO ASTM F1667, INCLUDING SUPPLEMENT 1, UNLESS SPECIFICALLY SPECIFIED OTHERWISE BY THE STRUCTURAL ENGINEER. "BOX" NAILS, "COOLER" NAILS, WIRE-FEED NAILS, AND STAPLES ARE NOT EQUIVALENT TO "COMMON" NAILS, AND WILL ONLY BE ALLOWED IF THE CONTRACTOR REQUESTS A FORMAL SUBSTITUTION REQUEST, AND THE NAIL SPACING IS ADJUSTED ACCORDINGLY.

COMMON NAILS WILL BE THE FOLLOWING SIZE:
6d: .113" DIA X 2" LONG
8d: .131" DIA X 2 1/2" LONG
10d: .148" DIA X 3" LONG
16d: .162" DIA X 3 1/2" LONG

NAILS WILL HAVE MINIMUM BENDING YIELD STRENGTH:
0.177" < SHANK DIA <= 0.254", Fy = 80 KSI
0.142" <SHANK DIA <=0.177", Fy = 90 KSI
0.099" <SHANK DIA <=0.142", Fy = 100 KSI

DRIVE ALL NAILS AND STAPLES WITH HEAD FLUSH TO SHEATHING. DO NOT OVERDRIVE NAILS OR STAPLES. NAILS SHALL BE DRIVEN TO 12 X NAIL DIAMETER MINIMUM PENETRATION INTO THE FRAMING MEMBERS UNO. STAPLES WILL BE DRIVEN 5/8" MIN INTO EXISTING 1X DECKING UNO

STAPLES WILL BE GALVANIZED, CONFORM TO ASTM F1667, HAVE 7/16" WIDE MINIMUM CROWN WIDTH, AND INSTALLED WITH CROWNS PARALLEL TO THE LONG DIMENSION OF THE FRAMING MEMBER UNLESS NOTED OTHERWISE. STAPLES WILL HAVE THE FOLLOWING MINIMUM AVERAGE BENDING STRENGTH:
16 GA STAPLE, M = 3.6 IN LB
15 GA STAPLE, M = 4.0 IN LB
14 GA STAPLE, M = 4.3 IN LB

CONCRETE MASONRY UNITS:

THE CONCRETE MASONRY SYSTEM IS DESIGNED ASSUMING fm = 2000 PSI COMPRESSIVE STRENGTH MINIMUM @ 28 DAYS. THE MASONRY SYSTEM STRENGTH SHALL BE VERIFIED USING THE "UNIT STRENGTH METHOD" TO MINIMIZE FIELD COMPRESSIVE TESTS ON MORTAR, GROUT, AND MASONRY PRISMS.

CONCRETE MASONRY UNITS (CMU) BLOCKS SHALL CONFORM TO ASTM C-90, MEDIUM WEIGHT, AND SHALL HAVE MINIMUM COMPRESSIVE STRENGTH TESTED DURING MANUFACTURE fm = 2000 PSI AT 28 DAYS. CMU BLOCKS SHALL HAVE MAXIMUM DRYING SHRINKAGE OF .00045 IN/IN WHEN TESTED IN ACCORDANCE WITH ASTM C 426.

MORTAR SHALL CONFORM TO ASTM C-270, TYPE "S", AND SHALL BE BATCHED USING THE PROPORTION SPECIFICATION METHOD IN ASTM C-270 TABLE 1. PROPORTIONS SHALL BE SUBMITTED FOR APPROVAL AND FIELD VERIFIED DURING CONSTRUCTION.

GROUT SHALL BE FINE OR COURSE TYPE, SHALL BE BATCHED TO A FLUID CONSISTENCY WITH SLUMP BETWEEN 8 AND 11 INCHES, AND SHALL CONFORM TO THE FOLLOWING OPTIONS:

- A. ASTM C-476, BATCHED USING PROPORTION SPECIFICATION METHOD IN TABLE 1. GROUT PROPORTIONS SHALL BE APPROVED PRIOR TO CONSTRUCTION AND FIELD VERIFIED DURING CONSTRUCTION.
- B. GROUT WITH MINIMUM COMPRESSIVE STRENGTH fc = 2000 PSI @ 28 DAYS WHEN FIELD TESTED IN ACCORDANCE WITH ASTM C1019.

ALL MASONRY SHALL BE LAID IN RUNNING BOND UNLESS NOTED OTHERWISE. SOLID GROUT ALL NEW STRUCTURAL HOLLOW UNIT MASONRY UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL LIMIT GROUT PLACEMENT TO 5' LIFTS MAXIMUM. GROUT POURS SHALL BE STOPPED 1/2" BELOW THE TOP BLOCK COURSE TO FORM AN INTERLOCKING KEY WITH THE SUBSEQUENT GROUT POUR. GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION BEFORE LOSS OF PLASTICITY IN A MANNER TO FILL THE GROUT SPACE. GROUT POURS LESS THAN 12" IN HEIGHT SHALL BE MECHANICALLY VIBRATED OR PUDDLED.

VERTICAL REINFORCING STEEL SHALL BE TIED AT EACH LAP, AND POSITIONED AT THE CENTER OF THE WALL UNLESS INDICATED OTHERWISE.

ALL NEW CMU WALLS SHALL CONTAIN THE FOLLOWING MINIMUM REINFORCING UNLESS NOTED OTHERWISE:
8" CMU WALL: #5 VERT @ 32" OC AT CENTER OF WALL, (2) #4 HOR @ 4'-0" OC, (2) #5 HOR @ TOP OF WALL CONTINUOUS THROUGH MASONRY CONTROL JOINTS

PROVIDE ADDITIONAL REINFORCING WHERE INDICATED ON WALL ELEVATIONS OR DETAILS.

LAP ALL REINFORCING STEEL AS INDICATED ON "CMU REINFORCING STEEL LAP-SPLICE REQUIREMENTS"

ALL SINGLE-WYTHE, EXTERIOR MASONRY CMU WALL BLOCKS AND MORTAR SHALL CONTAIN A WATER-REPELLANT ADMIXTURE COMPOUND IN ACCORDANCE WITH THE SPECIFICATIONS

CONCRETE MASONRY UNITS SHALL CONFORM TO SPECIFICATION 042200

CMU REINFORCING STEEL LAP-SPLICE REQUIREMENTS:

LAP SPLICES AND BAR DEVELOPMENT IN CONCRETE MASONRY UNITS SHALL BE IN ACCORDANCE WITH IBC AND THE FOLLOWING TABLE:

GRADE 60 REBAR DEVELOPMENT TABLE FOR ALL fm		
BAR SIZE	Ld (IN)	Ldh (IN)
3	18	5
4	25	7
5	39	8

DEFINITIONS:

- db = NOMINAL BAR DIAMETER (IN)
- fm = SPECIFIED 28-DAY COMPRESSIVE STRENGTH OF MASONRY (PSI)
- Ld = REQUIRED DEVELOPMENT LENGTH OR LAP LENGTH OF REINFORCEMENT IN TENSION OR COMPRESSION (IN)
- Ldh = DEVELOPMENT LENGTH FOR A BAR WITH AN ACI STANDARD HOOK (IN)

NOTES:

- 1. Ld VALUES ASSUME A MINIMUM MASONRY CLEAR COVER OF 2 IN.
- 2. FOR CONDITIONS WHERE NOTE 1 IS NOT SATISFIED, THEN TABLE VALUES MUST BE MODIFIED USING APPLICABLE CODE EQUATIONS.
- 3. BARS SPLICED BY NON-CONTACT LAP SPLICES SHALL NOT BE SPACED FARTHER APART THAN ONE-FIFTH THE REQUIRED LAP LENGTH NOR MORE THAN 8 IN.



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617 Western Avenue
Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com



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Designed By: CTS
Drawn By: DJH
Checked By: ABC

Date	Description	Mark

WASHINGTON MILITARY DEPARTMENT

ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA

STRUCTURAL GENERAL NOTES

S-003

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ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS
AB	ANCHOR BOLT
AB	ABOVE
ACI	AMERICAN CONCRETE INSTITUTE
ADD	ADDITIONAL
ADJ	ADJACENT
AFF	ABOVE FINISH FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON & STEEL INSTITUTE
ANCH	ANCHOR
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ARCH	ARCHITECTURAL
ASTM	ASTM, INTERNATIONAL
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASD	ALLOWABLE STRENGTH DESIGN
AWS	AMERICAN WELDING SOCIETY

B/B.O.	BOTTOM OF
B/BM	BOTTOM OF BEAM
B/DK	BOTTOM OF DECK
B/FTG	BOTTOM OF FOOTING
B/STL	BOTTOM OF STEEL
B/SL	BOTTOM OF SLAB
BAL	BALANCE
BLDG	BUILDING
BLK	BLOCK
BM	BEAM
BOT/BOTT	BOTTOM
BPL/BP	BASE PLATE
BRG	BRIDGING
BTWN/BET	BETWEEN
BU	BUILT UP

C	CHANNEL
CANT	CANTILEVER
CFR	CODE OF FEDERAL REGULATION
CFS	COLD-FORMED STEEL
CG	CENTER OF GRAVITY
CIP	CAST IN PLACE
CJ	CONSTRUCTION JOINT
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR/CLEARANCE
COL	COLUMN
CMU	CONCRETE MASONRY UNIT(S)
COMB	COMBINATION
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS/CONTINUATION
CONTR	CONTRACTOR
CP	COMPLETE PENETRATION
CTR	CENTER

DBA	DEFORMED BAR ANCHOR
DEG	DEGREE
DEMO	DEMOLISH(ITION)
DEPR	DEPRESSED
DET/DTL	DETAIL
DEFL	DEFLECTION
DIA	DIAMETER
DIAG	DIAGONAL
DIAPH	DIAPHRAGM
DIM	DIMENSION
DISCONT	DISCONTINUOUS
DK	DECK
DL	DEAD LOAD
DN	DOWN
DO	DITTO
DOD	DEPARTMENT OF DEFENSE
DWG	DRAWING
DWL	DOWEL

E	EAST, EXIST
EA	EACH
EE	EACH END
EF	EACH FACE
EJ	EXPANSION JOINT
ELECT	ELECTRICAL
ELEV/EL	ELEVATION
EMBED	EMBEDMENT
EP	EMBED PLATE
ENGR	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
EST	ESTIMATE
ETC	ETCETERA
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR

F	SPREAD FOOTING
FB	FLAT BAR
FD	FLOOR DRAIN
FDN/FNDN	FOUNDATION
FF	FINISHED FLOOR
FIN	FINISH(ED)
FLG	FLANGE
FLR	FLOOR(ING)
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FRMG	FRAMING
FS	FAR SIDE
FT	FEET
FTG	FOOTING

GA	GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GC	GENERAL CONTRACTOR
GEOTECH	GEOTECHNICAL
GF/GI	GOVERNMENT FURNISHED/ GOVERNMENT INSTALLED
GL	GRIDLINE
GLB	GLUED LAMINATED TIMBER BEAM
GRT	GROUT
GSN	GENERAL STRUCTURAL NOTES
GWB	GYPSTUM WALL BOARD

HD	HAND
HDR	HEADER
HK	HOOK
HOR/HORIZ	HORIZONTAL
HSA	HEADED STUD ANCHOR
HSB	HIGH STRENGTH BOLT
HSS	HOLLOW STRUCTURAL SECTION(STEEL)
HT	HEIGHT
HVAC	HEATING/VENTILATING/AIR CONDITIONING

IBC	INTERNATIONAL BUILDING CODE
ICBO	INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS

ICC	INTERNATIONAL CODE COUNCIL
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IF	INSIDE FACE
IN	INCH
IJ	ISOLATION JOINT
ILD	INTERNAL LOCKING DEVICE
INFO	INFORMATION
INT	INTERIOR
INV	INVERT
IR	INTENTIONALLY ROUGHEN
ix	MOMENT OF INERTIA ABOUT MAJOR AXIS

JST	JOIST
JT	JOINT

K	KIP
---	-----

L	LENGTH
LB	POUND
LG	LONG
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LOC	LOCATION
LONG	LONGITUDINAL
LPS	LIGHTNING PROTECTION SYSTEM
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL

MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MCJ	MASONRY CONTROL JOINT
MCE	MAXIMUM CREDIBLE EARTHQUAKE
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL

N	NORTH OR NEW
N/A	NOT APPLICABLE
NA	NEUTRAL AXIS
NDT	NONDESTRUCTIVE TESTING
NO/#	NUMBER
NOM	NOMINAL
NON-BRG	NON-BEARING
NS	NEAR SIDE
NTS	NOT TO SCALE

O/C/OC	ON CENTER
OD	OUTSIDE DIAMETER OF OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
OS	OVERSIZED
OSB	ORIENTED STRAND BOARD
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

PAF	POWDER ACTUATED FASTENER
PARA	PARALLEL
PCAP	PILE CAP
PERP	PERPENDICULAR
PLF	POUNDS PER LINEAR FOOT
PL/P	PLATE
PME	PLUMBING, MECHANICAL, ELECTRICAL
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OR POST-TENSIONED
PVC	POLYVINYL CHLORIDE PIPE
PVMT	PAVEMENT

QTY	QUANTITY
-----	----------

R/RAD	RADIUS
REBAR	REINFORCING BAR
REF/RE	REFERENCE
REINF	REINFORCING
REQD	REQUIRED
RET	RETURN
REV	REVISE(D)(VISION)
RFP	REQUEST FOR PROPOSAL
RO	ROUGH OPENING

S	SOUTH
SC	SLIP CRITICAL
SCHED	SCHEDULE
SDI	STEEL DECK INSTITUTE
SEC/SECT	SECTION
SIM	SIMILAR
SJ	SHRINKAGE JOINT
SJI	STEEL JOIST INSTITUTE
SL	SNOW LOAD
SLV	SLEEVE
SMTH	SMOOTH
SOG	SLAB ON GRADE
SPC	SPACE/SPACING
SPECS	SPECIFICATIONS
SQ	SQUARE
SS	STAINLESS STEEL
STAG	STAGGERED
STD	STANDARD
STIFF	STIFFENER
STIR	STIRRUPS
STL	STEEL
STRUCT	STRUCTURAL
STS, SDS	SELF TAPPING SCREW
Sx	SECTION MODULUS ABOUT MAJOR AXIS
Sx-	SX FOR NEGATIVE BENDING
Sx+	SX FOR POSITIVE BENDING
SYM	SYMMETRICAL
SYS	SYSTEM

T/T.O.	TOP OF
T/BM	TOP OF BEAM
T/CONC	TOP OF CONCRETE
T/DK	TOP OF DECK
T/FTG	TOP OF FOOTING
T/GB	TOP OF GRADE BEAM
T/SL	TOP OF SLAB
T/STL	TOP OF STEEL
T&B	TOP AND BOTTOM
TEMP	TEMPERATURE
THK/t	THICKNESS
THRU	THROUGH
TJ	TOOLED JOINT
TL	TOTAL LOAD
TOL	TOLERANCE
TOS	TOP OF STEEL
TRANS	TRANSVERSE
TS	TUBE STEEL
TYP	TYPICAL

UFC	UNITED FACILITIES CRITERIA
UL	UNDERWRITER'S LABORATORY
UNO	UNLESS NOTED OTHERWISE
UT	ULTRASONIC TESTING

VAR	VARIES
VERT/V	VERTICAL
VSC	VERCO PROPRIETARY SIDELAP CONNECTION

W/	WITH
W/C	WATER/CEMENT
W/O	WITHOUT
WDB	WELDED DEFORMED BARS
WF	WIDE FLANGE
WHS	WELDED HEADED STUD
WP	WORK POINT
WPS	WELDING PROCEDURE SPECIFICATION
WT	WEIGHT
WWF	WELDED WIRE FABRIC

SYMBOLS

@	AT
<	ANGLE
Ø	DIAMETER
&	AND
¢	CENTERLINE
=	EQUALS
≥	GREATER THAN OR EQUAL TO
≤	LESS THAN OR EQUAL TO
*	MULTIPLIED BY
#	NUMBER
[	CHANNEL
JL JL	DOUBLE ANGLE
⊠	SQUARE
⌧	STIRRUP
⊙	SPOT OR LEVEL ELEVATION
— —	BREAK LINE
U	U-SHAPED REBAR
> <	JOIST BRIDGING
⊕	CONSTRUCTION GRIDLINE

→	SLOPE OF DRAIN
▧	STEP IN SLAB/ROOF
▧	BLOCKING
▧	CONT MEMBER
▧	OPENING
┌	DOWEL
//	PARALLEL
⊥	PERPENDICULAR
⊕	TYPE 'B' STEEL ROOF DECK SEE DETAIL 1/ S-551
XX	ROOF MOUNTED MECHANICAL EQUIPMENT WITH XX MAX WEIGHT
— —	STEPPED FOOTING
□	HSS SQUARE OR RECTANGULAR
○	HSS PIPE

CF-X <XX'-X">	CONTINUOUS FOOTING TYPE 'x' WITH TOP OF FOOTING AT ELEVATION XX'-X" BELOW ELEVATION X
F-X <XXX>	ISOLATED FOOTING TYPE 'x' WITH TOP OF FOOTING AT ELEVATION XX'-X" BELOW ELEVATION X
— —	WALL OR FOOTING BELOW
— —	CMU WALL
— —	CONCRETE WALL
L-X.X	LINTEL TYPE-X.X
●	WORK POINT
X	SLOPE

DEFERRED SUBMITTALS:

TABLE OF REQUIRED DEFERRED ENGINEERING SYSTEMS TO BE PERFORMED BY A SPECIALTY PROFESSIONAL ENGINEER		
ELEMENT	SPECIFICATION	NOTES
OPEN WEB STEEL JOIST SYSTEM	05 21 00	
SEISMIC DESIGN AND ANCHORAGE OF MECHANICAL SYSTEMS	23 05 48	
SEISMIC DESIGN AND ANCHORAGE OF ELECTRICAL SYSTEMS	26 00 00	
SEISMIC DESIGN AND ANCHORAGE OF FIRE PROTECTION SYSTEMS	21 13 00	
CONCRETE FORMWORK SYSTEM (ARMS VAULT)	03 10 00	
CONCRETE RESHORING SYSTEM (ARMS VAULT)	03 10 00	

NOTES:

- DEFERRED SUBMITTAL ELEMENTS LISTED IN THE TABLE ARE REQUIRED TO BE ENGINEERED BY A QUALIFIED SPECIALTY PROFESSIONAL ENGINEER WHO IS RETAINED BY THE PRODUCT MANUFACTURER, GENERAL CONTRACTOR, OR SUB-CONTRACTOR. ALL DESIGN DRAWINGS AND CALCULATIONS THAT ARE PART OF THE DEFERRED SUBMITTAL SHALL BEAR THE STAMP OF THE SPECIALTY PROFESSIONAL ENGINEER.
- DEFERRED ENGINEERED COMPONENTS SHALL INCORPORATE ALL GOVERNING BUILDING CODE, PROJECT DESIGN CRITERIA, AND PROJECT CONSTRAINTS AND LIMITATIONS AS INDICATED WITHIN THE DESIGNER OF RECORD DESIGN DOCUMENTS.
- ALL DEFERRED SUBMITTALS SHALL BE SUBMITTED AND REVIEWED BY THE DESIGNER OF RECORD REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. AFTER THE DESIGNER OF RECORD DETERMINES THAT THE SUBMITTAL IS IN GENERAL CONFORMANCE WITH THE DESIGN REQUIREMENTS, THE DEFERRED SUBMITTAL WILL BE FORWARDED TO THE BUILDING OFFICIAL FOR APPROVAL. THE DEFERRED SUBMITTAL ELEMENTS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.
- DEFERRED ELEMENT SIZES, QUANTITIES, MATERIALS, AND DETAILS INDICATED ON THE DESIGNER OF RECORD DESIGN DOCUMENTS RELATED TO DEFERRED ENGINEERING COMPONENTS ARE SOLELY FOR THE PURPOSE OF COORDINATION AND COMMUNICATION OF DESIGN INTENT. DEFERRED SUBMITTALS WITH MINOR VARIATION FROM THE DESIGNER OF RECORD DESIGN CONCEPT ARE GENERALLY ACCEPTABLE PENDING REVIEW AND ACCEPTANCE BY THE DESIGNER OF RECORD AND BUILDING OFFICIAL. DEFERRED SUBMITTALS WITH SUBSTANTIAL VARIATION FROM THE DESIGN CONCEPT, HOWEVER, REQUIRE APPROVAL AS A SUBSTITUTION BY THE DESIGNER OF RECORD PRIOR TO THE SPECIALTY PROFESSIONAL ENGINEER PROCEEDING WITH DESIGN OF THE DEFERRED DESIGN ELEMENT.



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617 Western Avenue
Seattle, WA 98104
Tel. 206.946.9746
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Designed By:	CTS
Drawn By:	DJH
Checked By:	ABC

Mark	Description	Date

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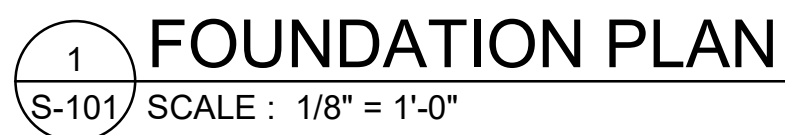
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ABBREVIATIONS AND SYMBOLS

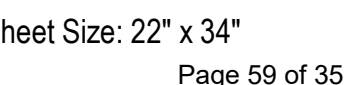
S-004

1. FOR STRUCTURAL GENERAL NOTES SEE S-001 THROUGH S-003
2. FOR ABBREVIATIONS AND SYMBOLS SEE S-004

1. FIELD VERIFY ALL EXISTING DIMENSIONS
2. THE FLOOR ELEVATION VARIES. THE REFERENCE MAIN FLOOR ELEVATION AT THE LOWER LEVEL IS 100'-0". SEE SLAB ON GRADE PLAN 1/ S-401 FOR SLAB ON GRADE ELEVATION AND CALLOUTS
3. FOR TYP FOUNDATION SUBGRADE SEE DETAIL 1/ S-501
4. FOR TYP CONTINUOUS FOOTING CONSTRUCTION JOINT SEE DETAIL 2/ S-501
5. FOR TYP STEPPED CONTINUOUS FOOTING SEE DETAIL 6/ S-501
6. FOR TYP FOUNDATION ADJACENT TO UTILITY OR EXCAVATION SEE DETAIL 3/ S-501
7. FOR TYP FOUNDATION CORNER REINFORCING SEE DETAIL 4/ S-501
8. CF-'x' INDICATES CONTINUOUS FOOTING TYPE 'x'. FOR CONTINUOUS FOOTING SCHEDULE SEE DETAIL 5/ S-501
9. FOR TYP CONCRETE WALL DETAILS SEE 1/ S-521
10. FOR TYP CMU WALL DETAILS SEE 1/ S-531
11. 'SB-x' INDICATES (N) COLD-FORMED-STEEL STRONGBACK WALL SYSTEM ANCHORED TO (E) CMU WALL. FOR STRONGBACK WALL DETAILS SEE DETAIL 1/ S-601



04/29/2022

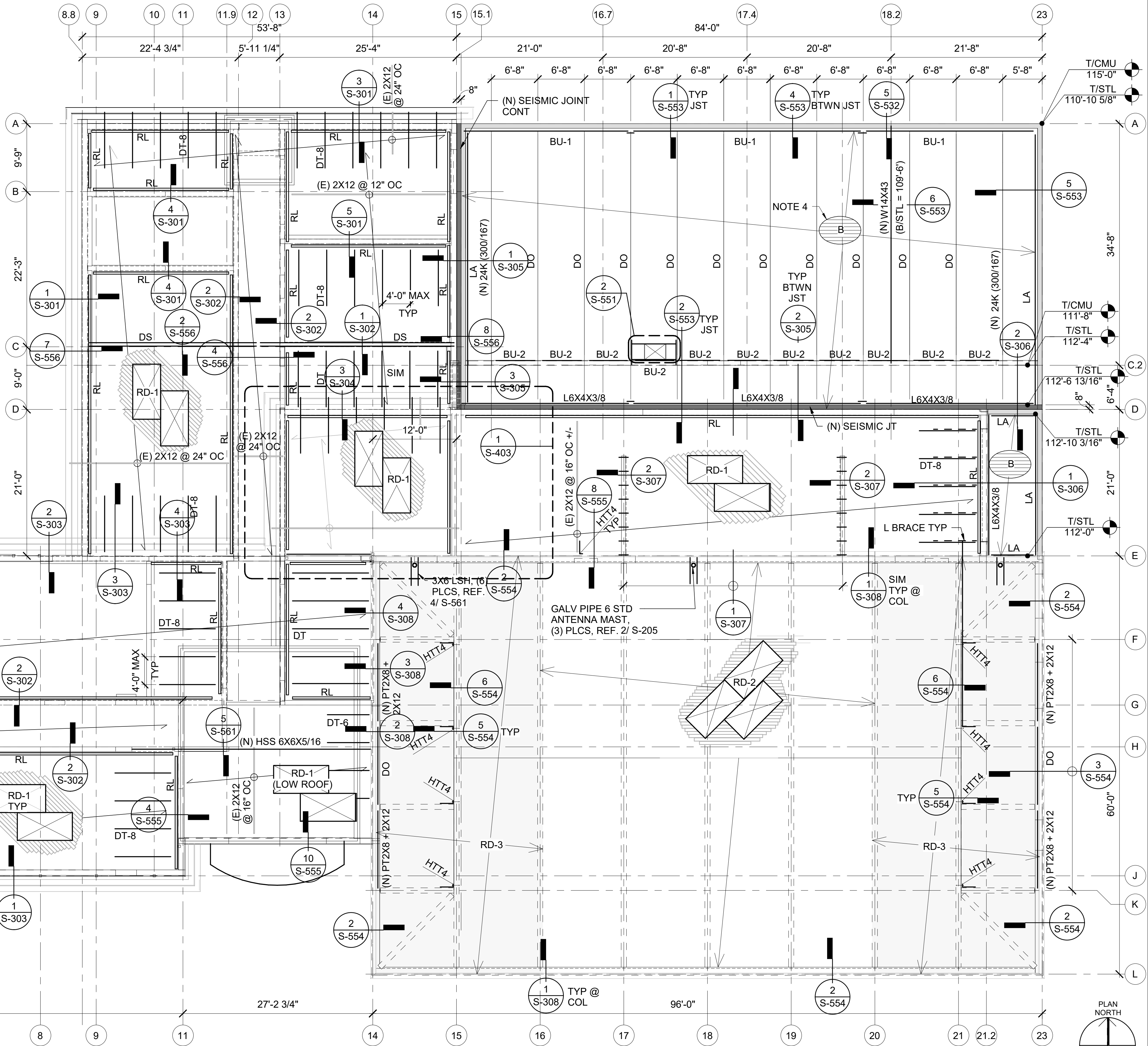


GENERAL NOTES

- 1. FOR STRUCTURAL GENERAL NOTES SEE S-001 THROUGH S-003
- 2. FOR ABBREVIATIONS AND SYMBOLS SEE S-004

PLAN NOTES

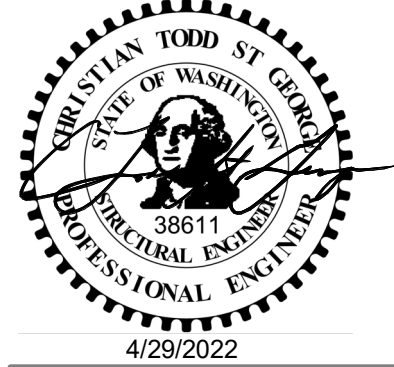
- 1. FIELD VERIFY ALL EXISTING DIMENSIONS
- 2. TOP OF STEEL ELEVATION VARIES-SEE PLAN FOR TOP OF STEEL ELEVATIONS.
- 3. TOP OF STEEL (T/STL) IS DEFINED AS THE BOTTOM OF STEEL DECK AT THE GRID LINE UNO.
- 4. (N) STEEL ROOF DECK IS 22 GAGE X 1 1/2" TYPE B G60 WITH PROPRIETARY SIDE SEAM CRIMP- FOR ADDITIONAL ROOF DECK CALLOUTS SEE DETAIL 1/ S-551
- 5. ONLY MAJOR ROOF PENETRATIONS ARE SHOWN ON THE STRUCTURAL PLANS. REFER TO DRAWINGS OF ALL DISCIPLINES FOR SIZE AND LOCATION OF OTHER MISCELLANEOUS DECK PENETRATIONS. PROVIDE REINFORCING AT STEEL ROOF DECK PENETRATIONS AS INDICATED ON DETAIL 2/ S-551
- 6. SPACE BEAMS AT EQUAL SPACING BETWEEN COLUMNS UNLESS INDICATED OTHERWISE.
- 7. BU-'x' INDICATES BENT-PLATE TYPE 'x'. FOR BENT-PLATE SEE DETAIL 4/ S-552
- 8. 'LA' INDICATES L 3 1/2 X 3 1/2 X 5/16 ANGLE
- 9. ROOF BRIDGING SYSTEM SHALL BE DESIGNED BY THE TRUSS COMPONENT ENGINEER IN ACCORDANCE WITH SJI & OSHA. FOR TYP BRIDGING CONNECTION TO CMU WALL SEE DETAIL 3/ S-552 . FOR TYP BRIDGING INTERRUPTED BY DUCTS, PIPES, OR MECH UNITS SEE DETAIL 2/ S-552
- 10. 24K(x/y) INDICATES 24" DEEP TYPE 'K' JOIST WITH 'x' PLF TOTAL GRAVITY LOAD (DL+LL) AND 'y' PLF LIVE LOAD (ASD). ENGINEER TOP CHORD TO CANTILEVER OVER CORRIDOR WALL
- 11. 'DS' INDICATES DRAG STRUT W/ (2) CONTINUOUS 3 1/8" X 12" GLB, SEE DETAIL 1/ S-556
- 12. 'RL' INDICATES RETOFIT LEDGER W/ L 4 X 4 X 1/4. SEE DETAIL 1/ S-555
- 13. 'DT-'x' INDICATES DIAPHRAGM TIE OF LENGTH 'x' IN FEET. WHERE TIE LENGTH IS NOT SPECIFIED, DIAPHRAGM TIE SHALL EXTEND BETWEEN WALLS AS SHOWN. SEE DETAIL 2/ S-555
- 14. PROVIDE DIAPHRAGM CHORD STRAPPING PER DETAIL 4/ S-554
- 15. 'RD-'x' INDICATES (N) ROOF SHEATHING DIAPHRAGM OVERLAY ASSEMBLY TYPE "x". FOR SCHEDULE SEE DETAIL 1/ S-541



1 ROOF FRAMING PLAN
S-121 SCALE : 1/8" = 1'-0"



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Project No.: 21024
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Drawn By: DJH
Checked By: ABC

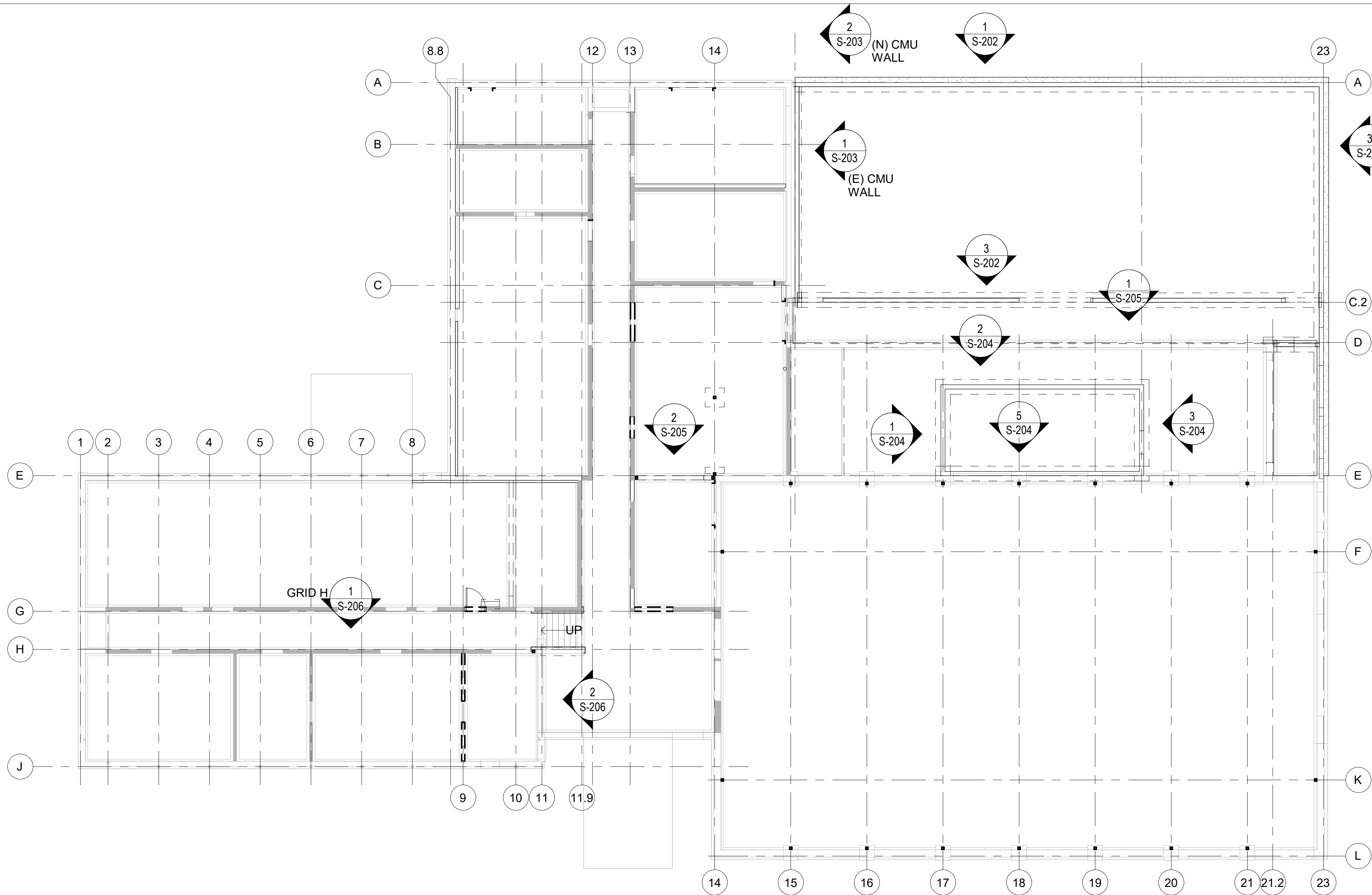
Date	Description	Mark

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ROOF FRAMING PLAN

S-121

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GENERAL NOTES

- FOR STRUCTURAL GENERAL NOTES SEE S-001 THROUGH S-003
- FOR ABBREVIATIONS AND SYMBOLS SEE S-004

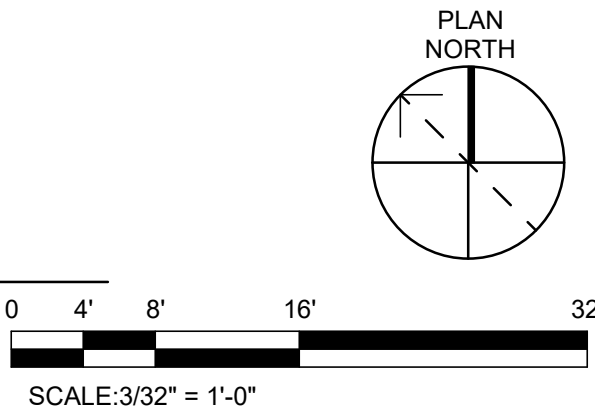
CONCRETE WALL ELEVATION NOTES

- A. CONCRETE WALLS SHALL HAVE THE FOLLOWING MINIMUM REINFORCING UNLESS NOTED OTHERWISE:
- | TYPE | VERTICAL REINFORCING | HORIZONTAL REINFORCING |
|----------------|--|------------------------|
| 8" CONC WALL | #4 VERT @ 16" OC | #4 HOR @ 16" OC |
| 8" VAULT WALLS | #4 VERT @ 9" OC EA FACE
(STAGGER VERT AND HOR REINF FOR 4 1/2" SECURITY GRID) | #4 HOR @ 9" OC EA FACE |
- B. VERTICAL DOWELS BETWEEN THE FOUNDATIONS AND WALLS SHALL MATCH THE SIZE AND SPACING OF THE MAIN WALL REINFORCING UNLESS NOTED OTHERWISE
- C. FOR SUPPLEMENTAL CONCRETE WALL REINFORCING AROUND WALL OPENINGS SEE DETAIL 1/ S-521
- D. FOR CONCRETE WALL CORNER, INTERSECTION, AND PIER REINFORCING SEE DETAIL 3/ S-521
- E. FOR TYPICAL CONCRETE WALL CONSTRUCTION JOINT SEE DETAIL 2/ S-521
- F. SEE PLANS FOR OTHER CONCRETE WALLS NOT SHOWN IN ELEVATION
- G. FOR SINGLE LAYER REINFORCED WALLS, LOCATE THE VERTICAL BARS AT THE CENTER OF THE WALL UNO

CMU WALL ELEVATION NOTES

- H. CMU WALLS SHALL HAVE THE FOLLOWING MINIMUM REINFORCING UNLESS NOTED OTHERWISE:
- | TYPE | VERTICAL REINFORCING | HORIZONTAL REINFORCING |
|-------------|----------------------|------------------------|
| 8" CMU WALL | #5 VERT @ 32" OC | (2) #4 HOR @ 48" OC |
- I. VERTICAL DOWELS BETWEEN THE FOUNDATIONS AND WALLS SHALL MATCH THE SIZE AND SPACING OF THE MAIN WALL REINFORCING UNLESS NOTED OTHERWISE
- J. FOR SUPPLEMENTAL CMU WALL REINFORCING AROUND WALL OPENINGS SEE DETAIL 10/ S-531
- K. FOR CMU WALL CORNER, INTERSECTION, AND PIER REINFORCING SEE DETAIL 1/ S-532
- L. SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR CMU WALLS NOT SHOWN IN ELEVATION
- M. FOR SINGLE LAYER REINFORCED WALLS, LOCATE THE VERTICAL WALL REINFORCING AT THE CENTER OF CMU UNO
- N. SOLID GROUT ALL NEW 8" CMU UNO

1
S-201
WALL FRAMING ELEVATION KEY PLAN
SCALE : 3/32" = 1'-0"



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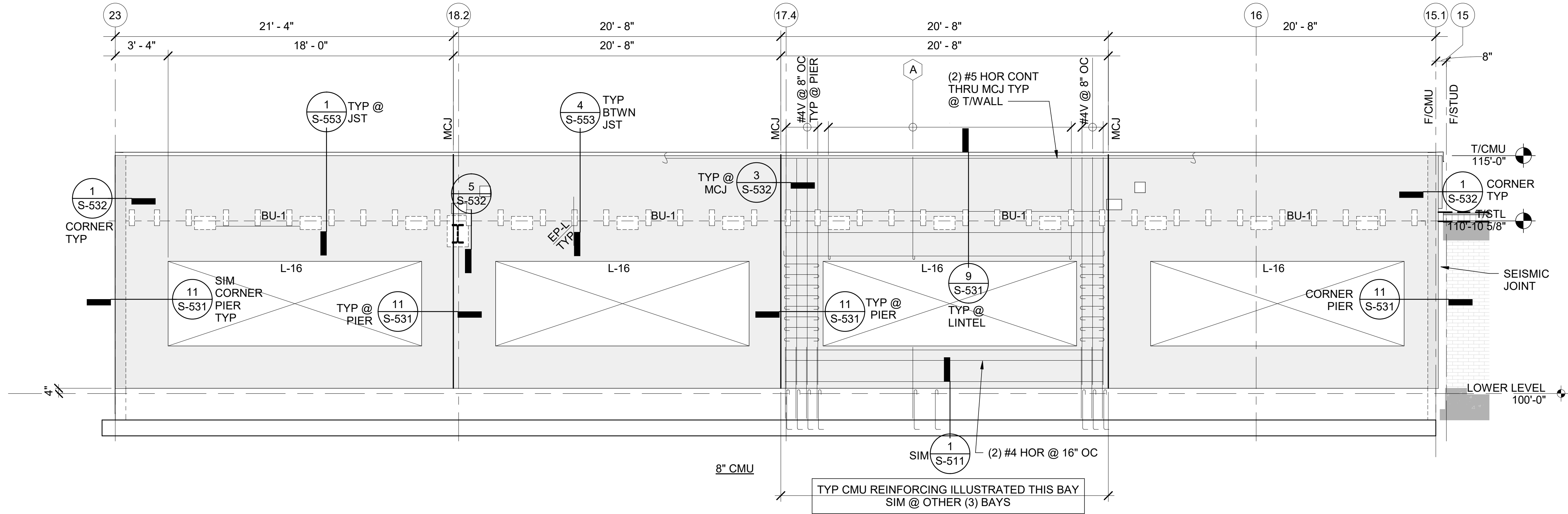
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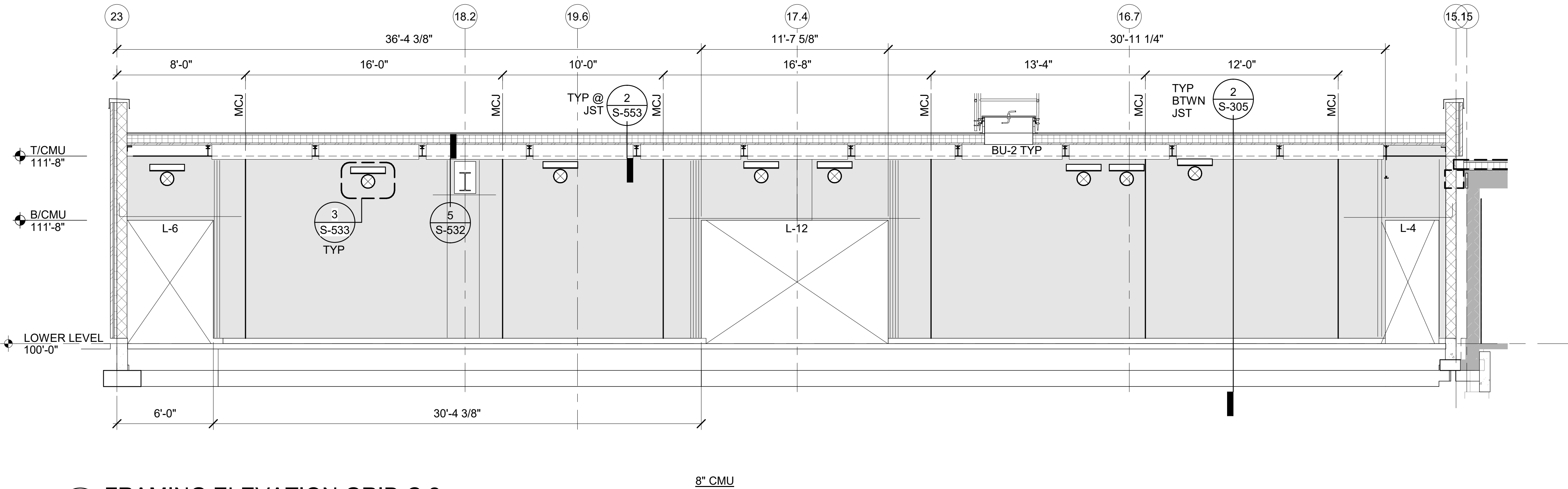
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FRAMING ELEVATION KEYPLAN

S-201

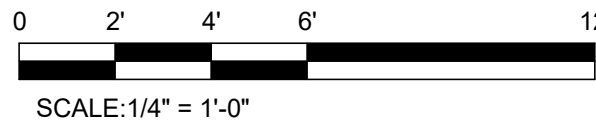
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1 NORTH FRAMING ELEVATION ON GRID A
S-202 SCALE : 1/4" = 1'-0"



3 FRAMING ELEVATION GRID C.2
S-202 SCALE : 1/4" = 1'-0"



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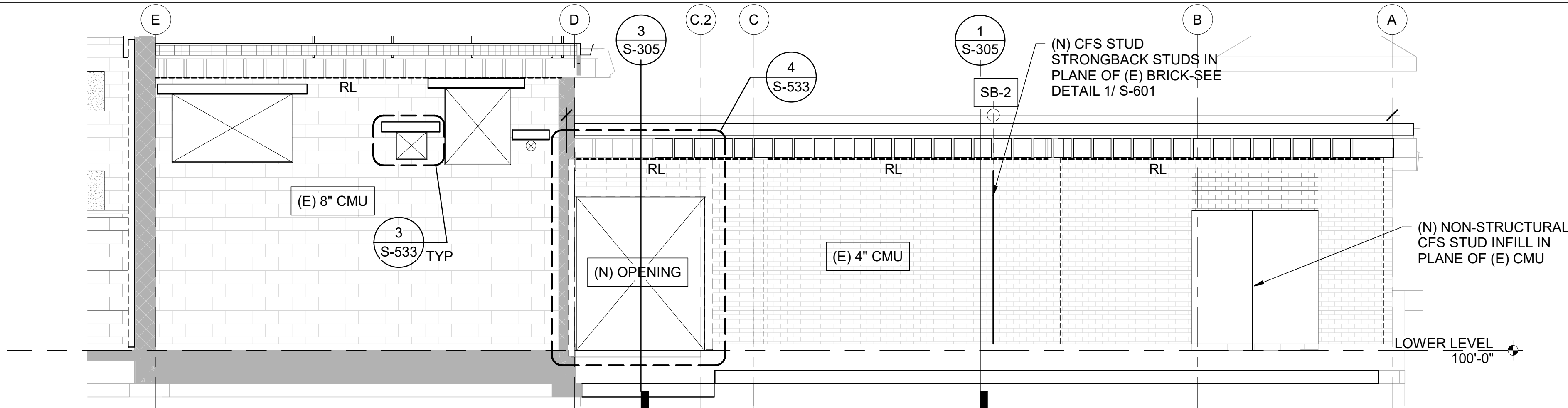
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WALL FRAMING ELEVATION

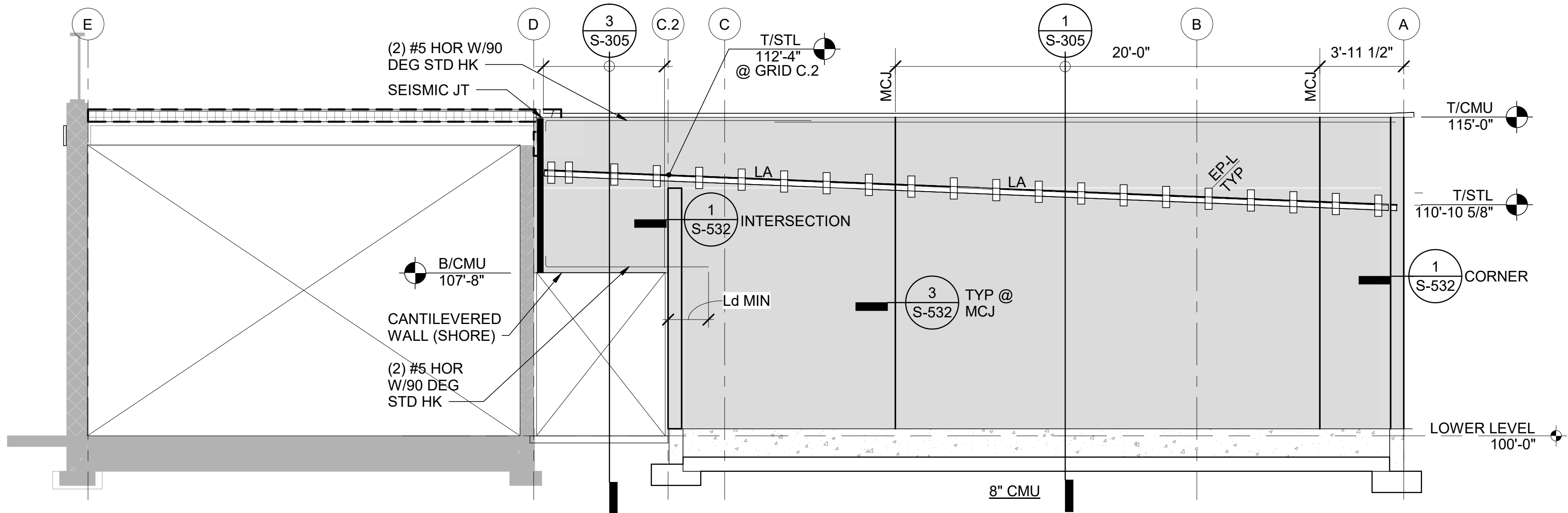
S-202

Sheet Size: 22" x 34"
Page 62 of 351

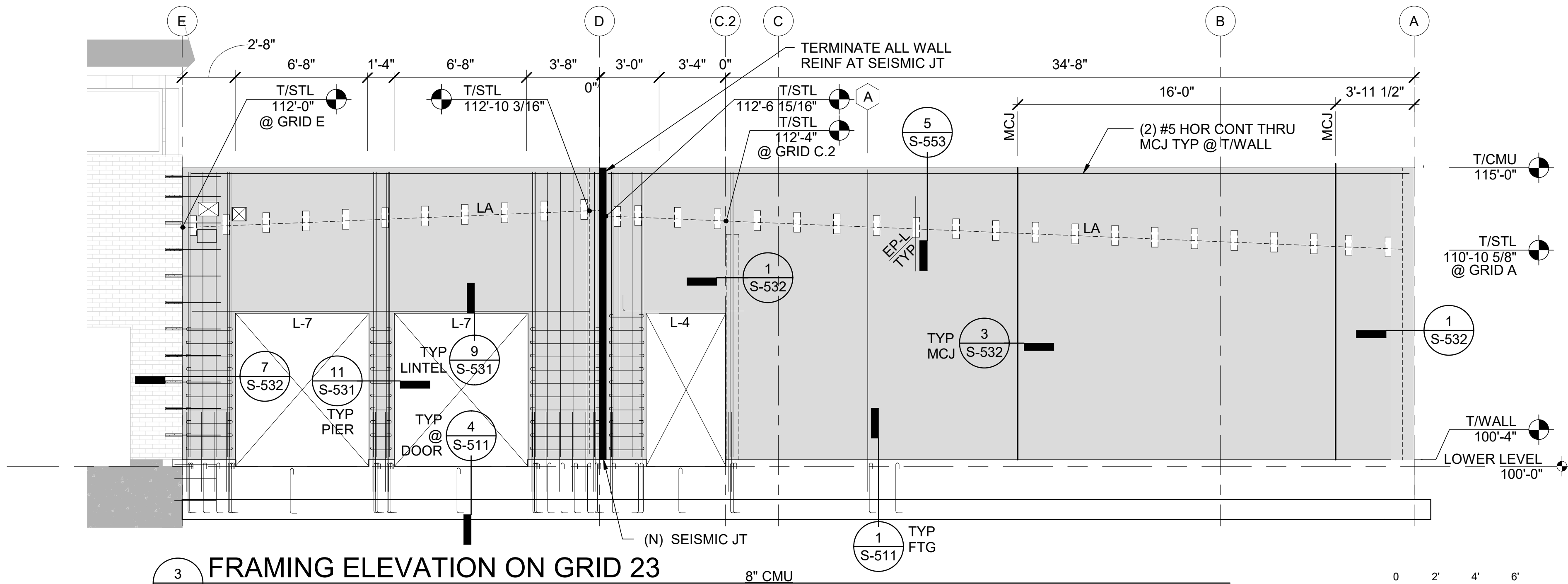
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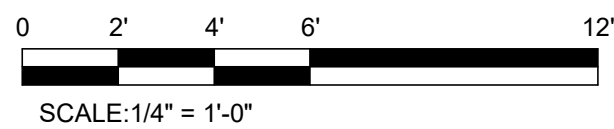
1
S-203
FRAMING ELEVATION ON GRID 15
SCALE : 1/4" = 1'-0"



2
S-203
FRAMING ELEVATION GRID 15.1
SCALE : 1/4" = 1'-0"



3
S-203
FRAMING ELEVATION ON GRID 23
SCALE : 1/4" = 1'-0"



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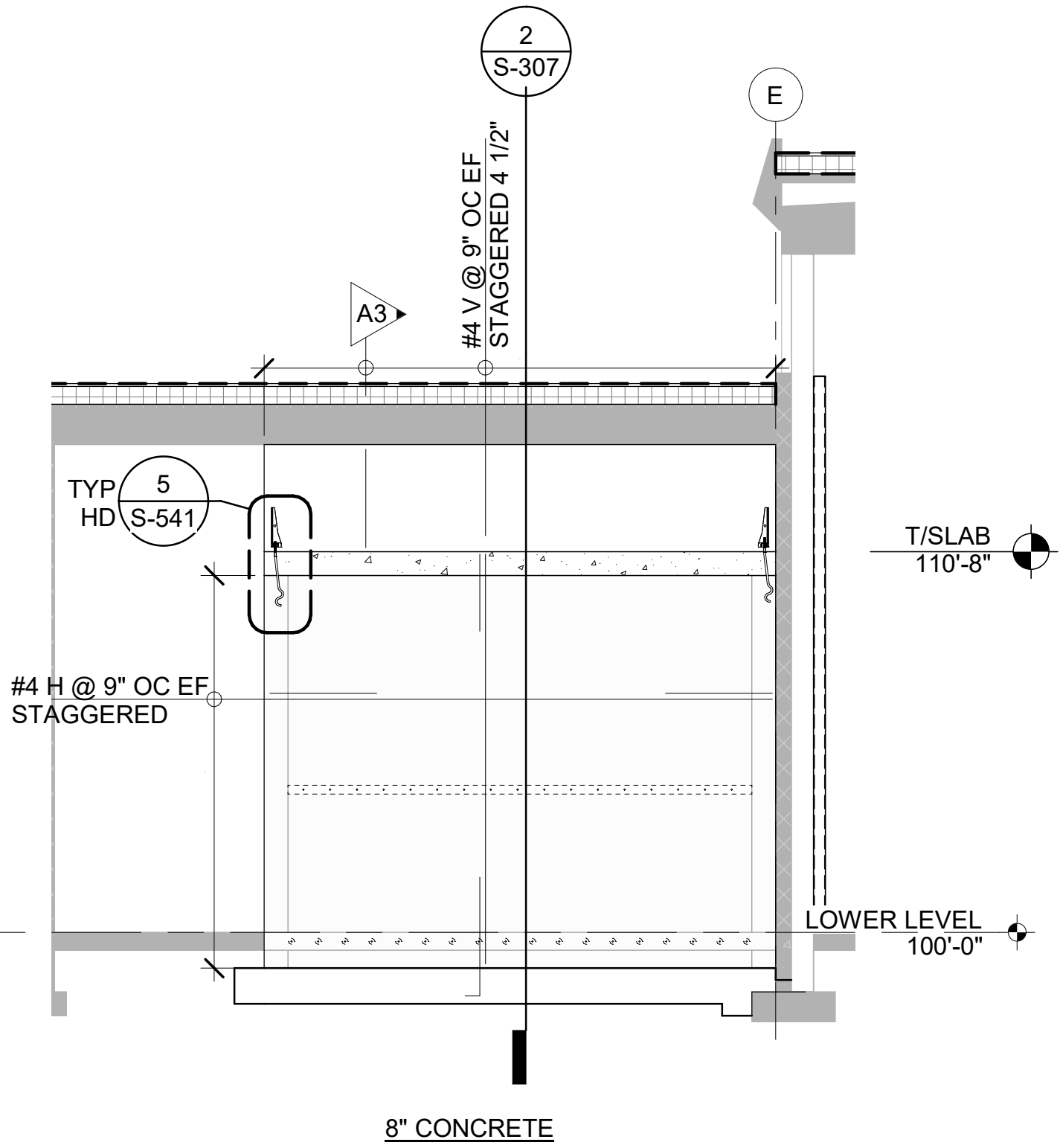
WALL FRAMING ELEVATION

S-203

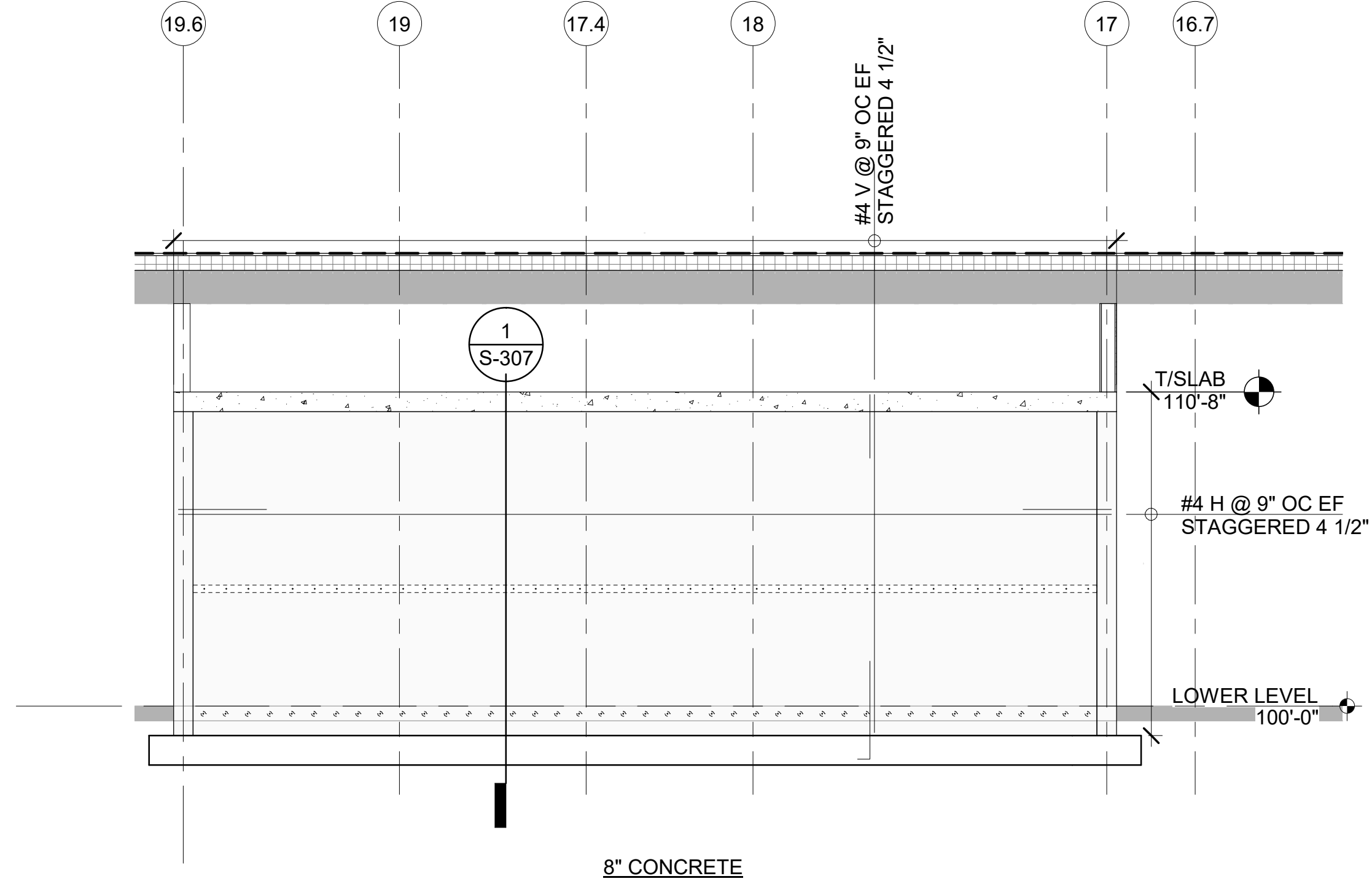
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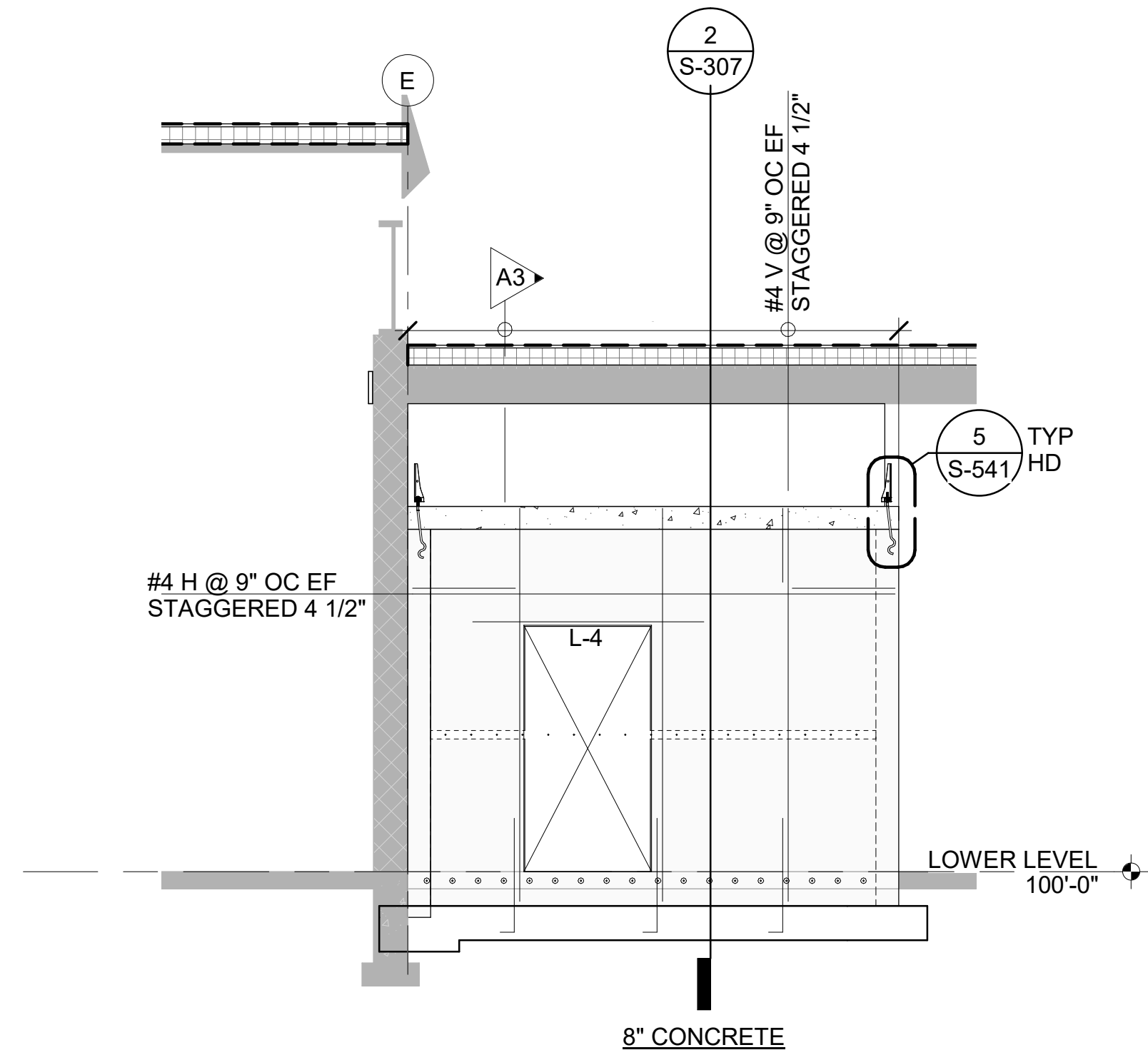
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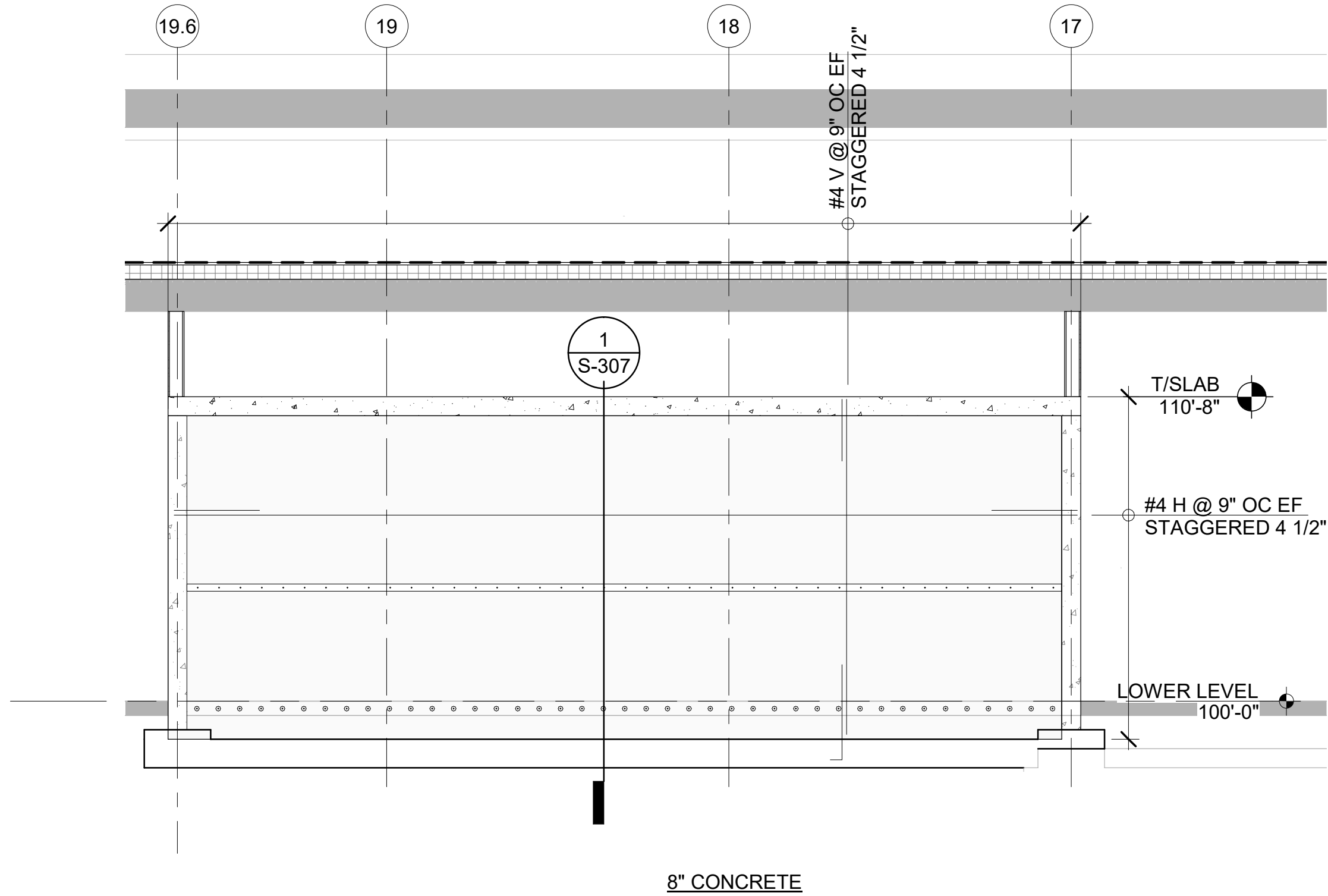
1 VAULT WEST WALL FRAMING ELEVATION
S-204 SCALE : 1/4" = 1'-0"



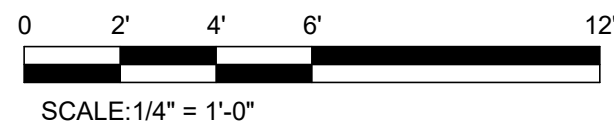
2 VAULT NORTH WALL FRAMING ELEVATION
S-204 SCALE : 1/4" = 1'-0"



3 VAULT EAST WALL FRAMING ELEVATION
S-204 SCALE : 1/4" = 1'-0"



5 VAULT SOUTH WALL FRAMING ELEVATION
S-204 SCALE : 1/4" = 1'-0"



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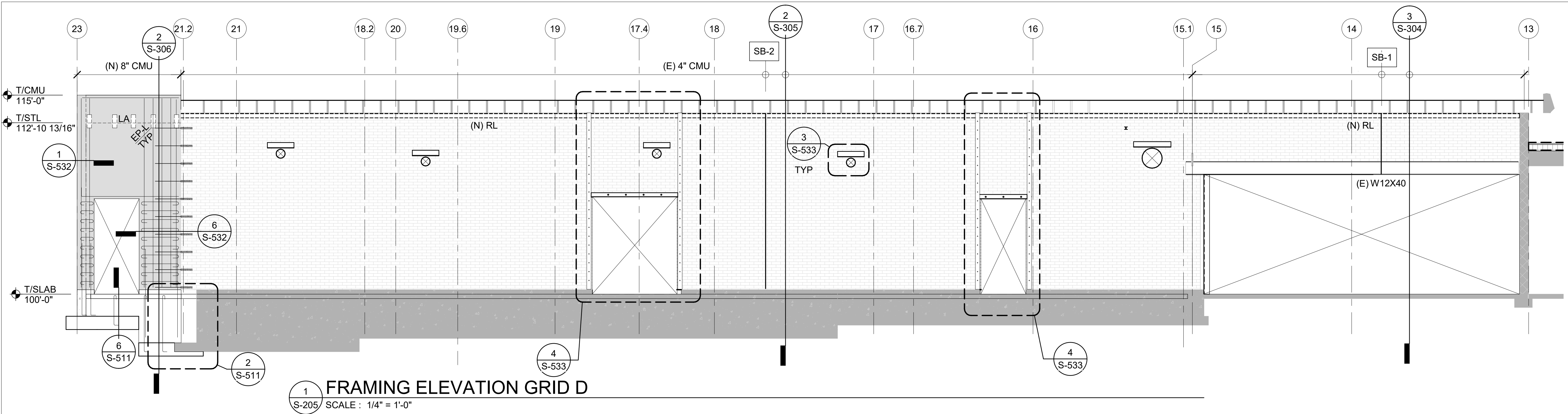
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WALL FRAMING ELEVATION

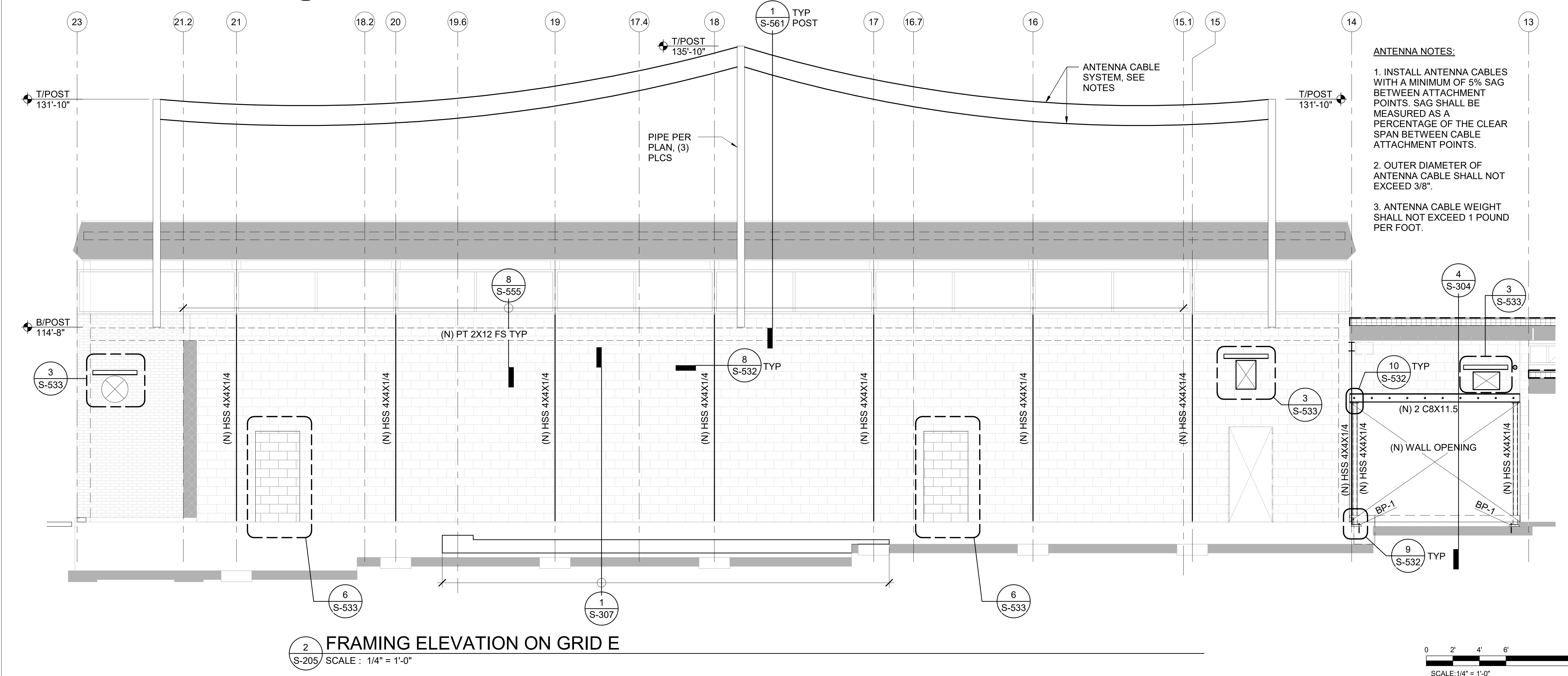
S-204

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1
S-205
FRAMING ELEVATION GRID D
SCALE : 1/4" = 1'-0"



2
S-205
FRAMING ELEVATION ON GRID E
SCALE : 1/4" = 1'-0"

ANTENNA NOTES:

1. INSTALL ANTENNA CABLES WITH A MINIMUM OF 5% SAG BETWEEN ATTACHMENT POINTS. SAG SHALL BE MEASURED AS A PERCENTAGE OF THE CLEAR SPAN BETWEEN CABLE ATTACHMENT POINTS.
2. OUTER DIAMETER OF ANTENNA CABLE SHALL NOT EXCEED 3/8".
3. ANTENNA CABLE WEIGHT SHALL NOT EXCEED 1 POUND PER FOOT.



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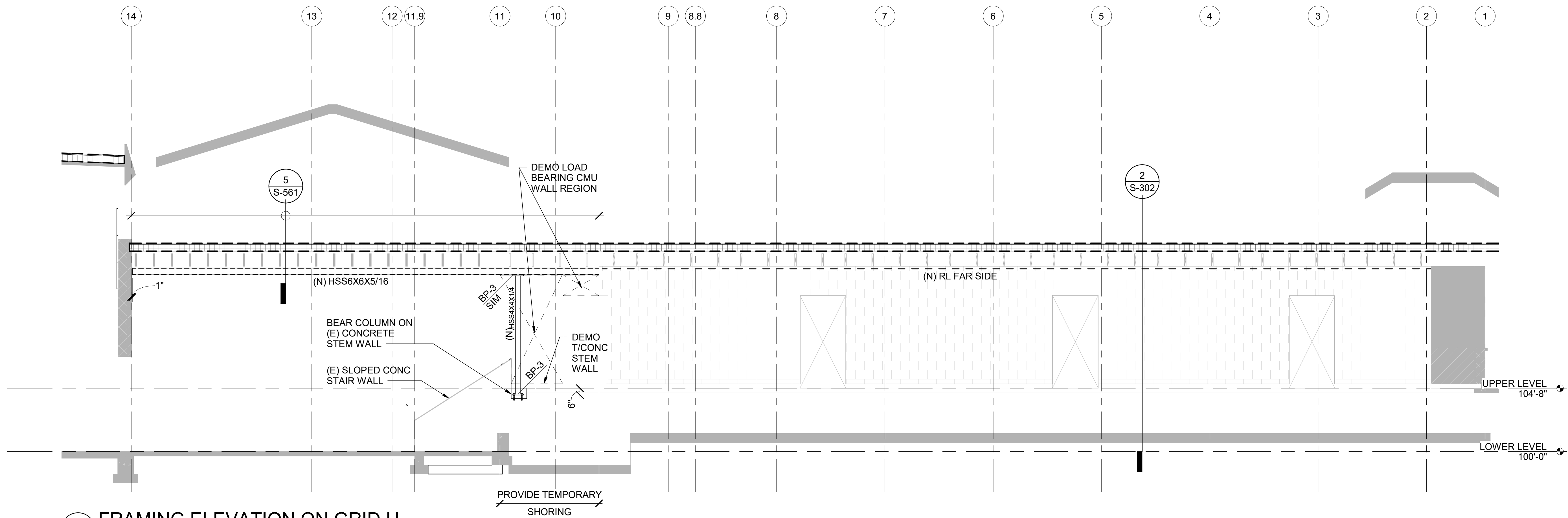
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Date			
Description			
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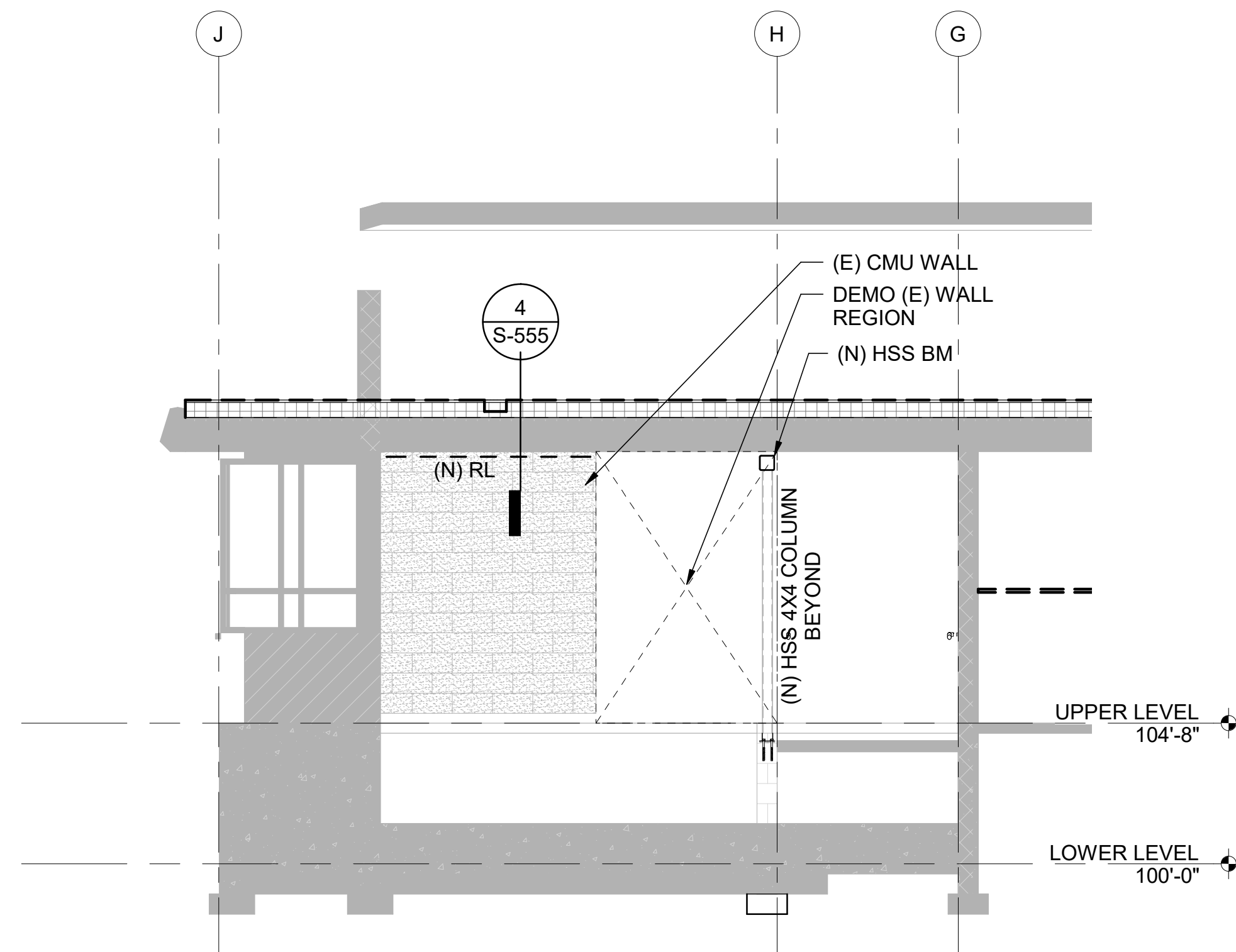
WALL FRAMING ELEVATION

S-205

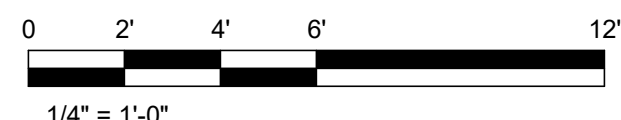
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1
S-206
FRAMING ELEVATION ON GRID H
SCALE : 1/4" = 1'-0"



2
S-206
FRAMING ELEVATION GRID 11
SCALE : 1/4" = 1'-0"



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WALL FRAMING ELEVATION

S-206

Sheet Size: 22" x 34"

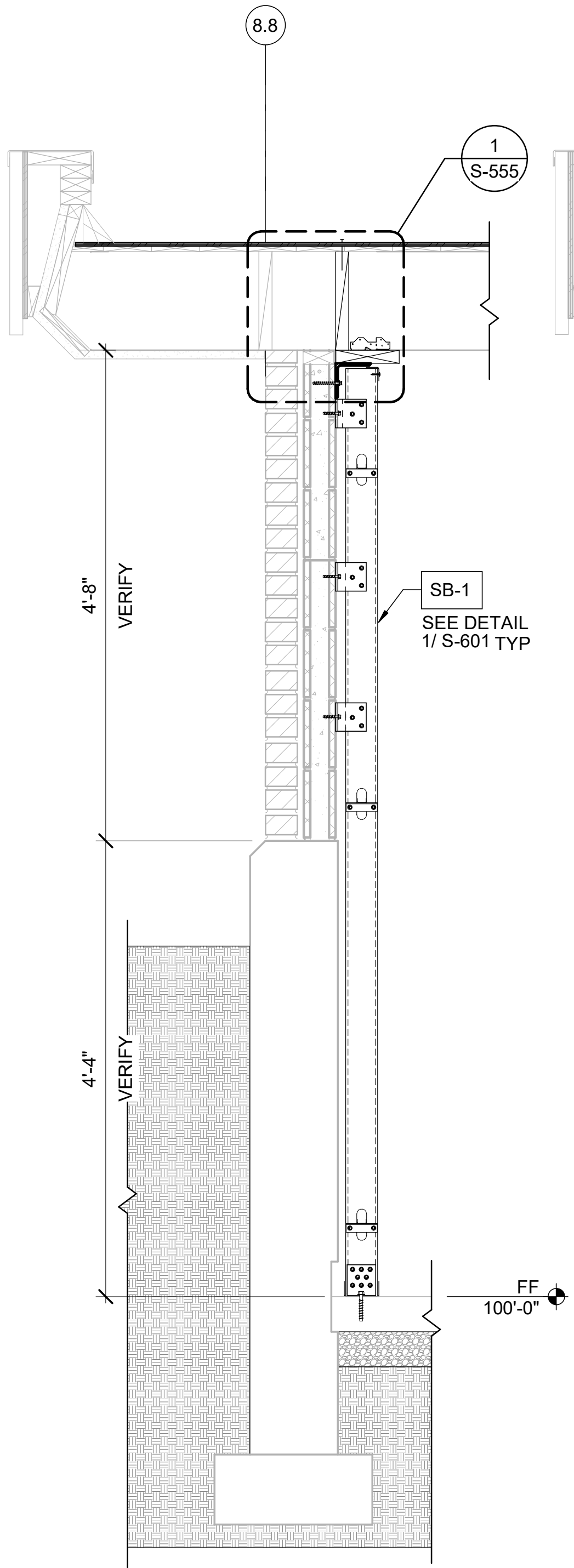
Page 66 of 351

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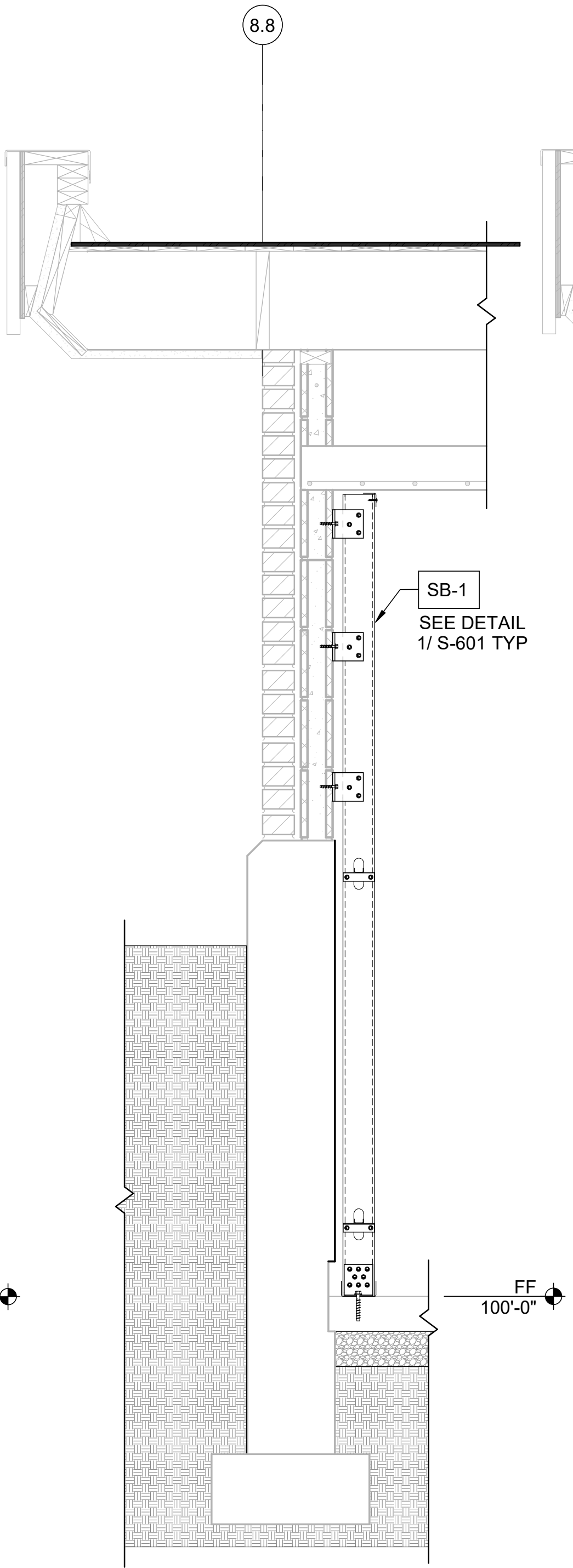
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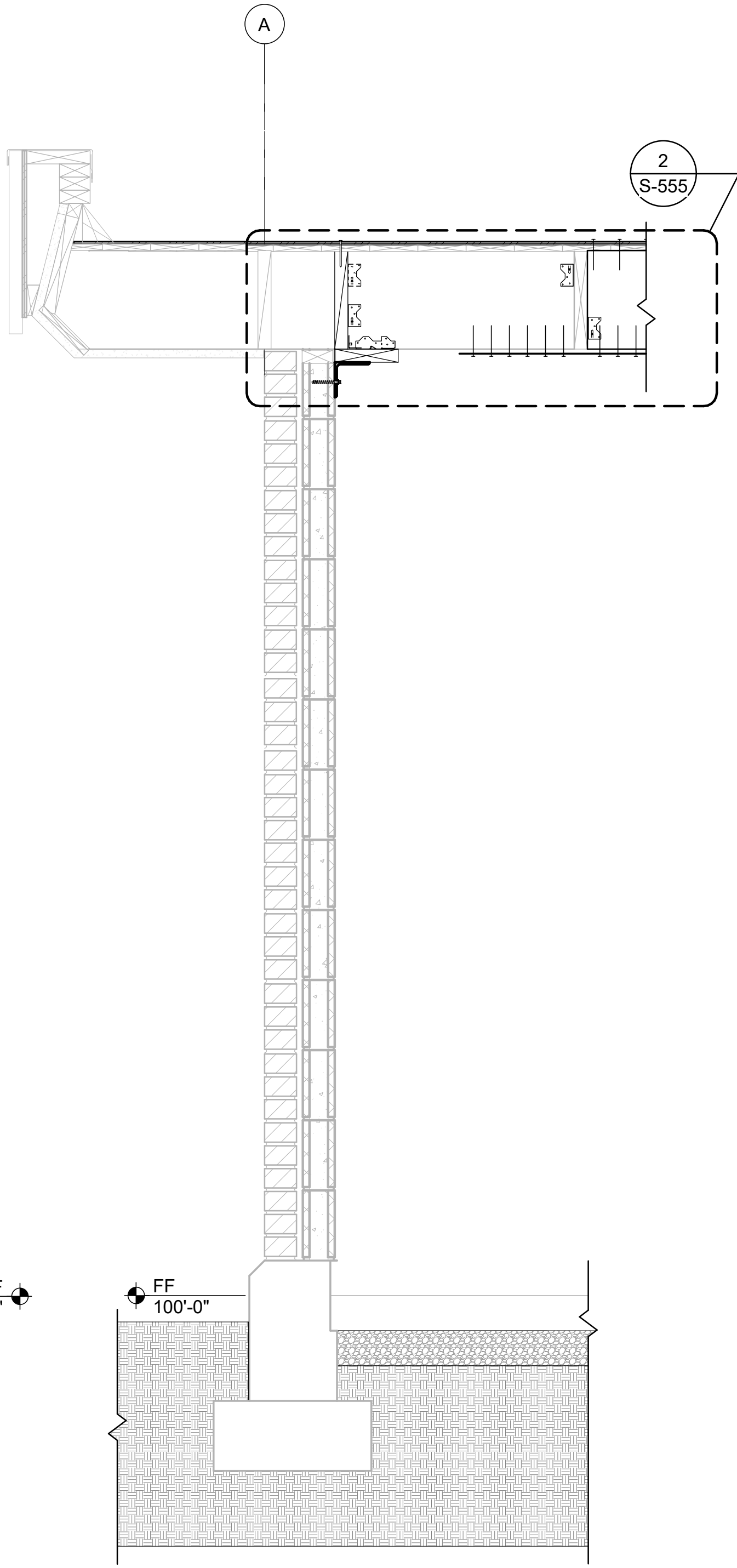
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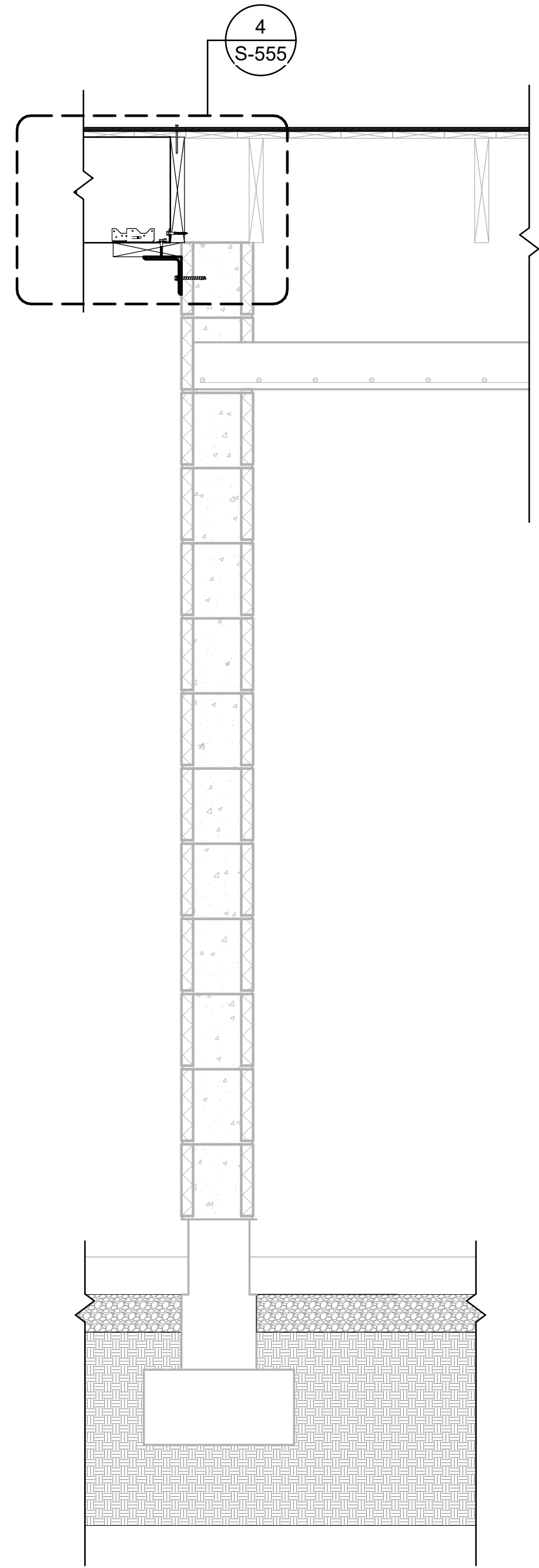
1 SECTION GRID 8.8
S-301 SCALE : 1" = 1'-0"



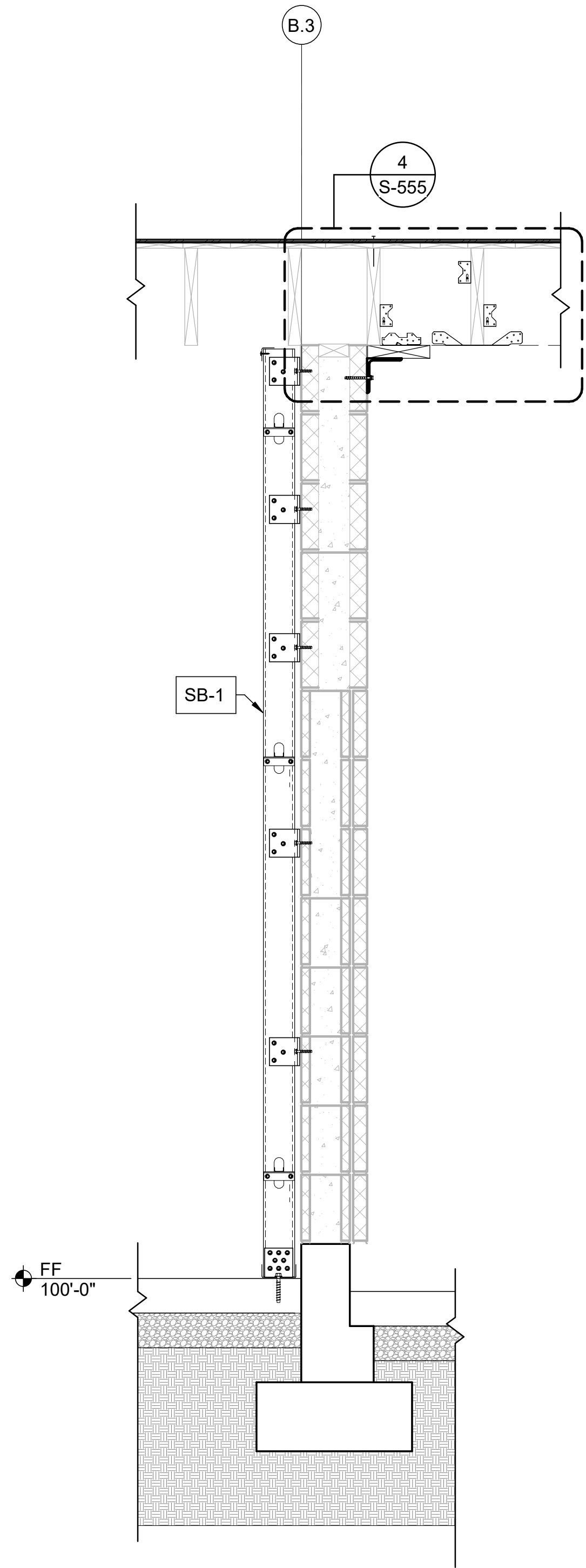
2 VAULT SECTION GRID 8.8
S-301 SCALE : 1" = 1'-0"



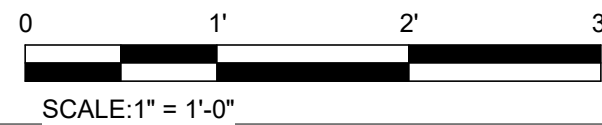
3 SECTION GRID A
S-301 SCALE : 1" = 1'-0"



4 SECTION AT (E) VAULT WALL
S-301 SCALE : 1" = 1'-0"



5 SECTION GRID B.3
S-301 SCALE : 1" = 1'-0"



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WALL FRAMING SECTIONS

S-301

Sheet Size: 22" x 34"

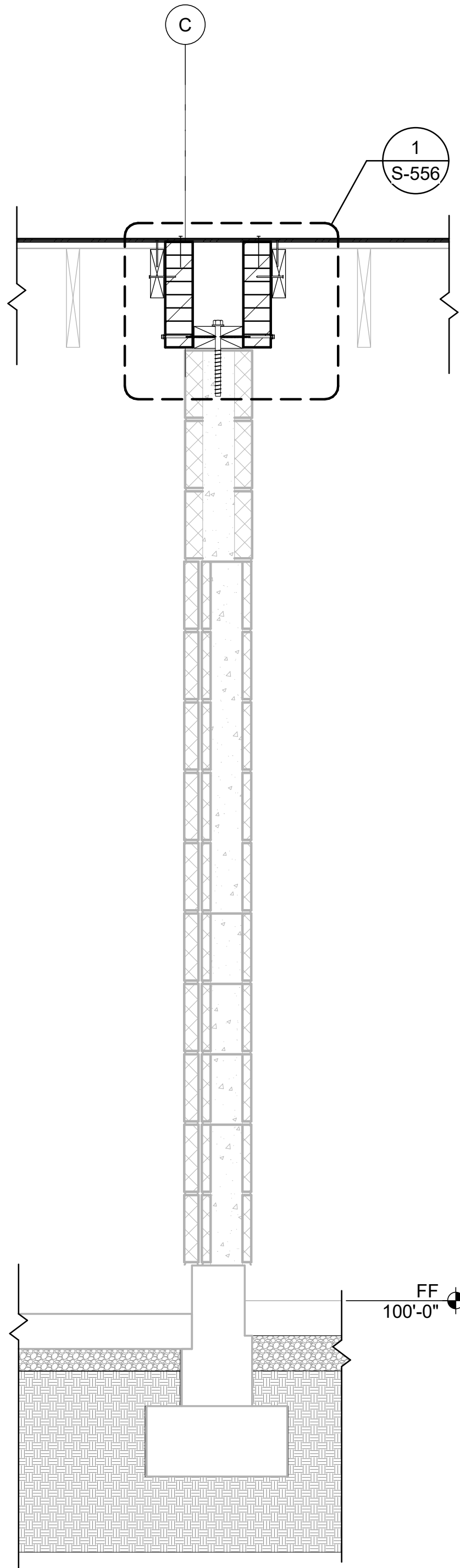
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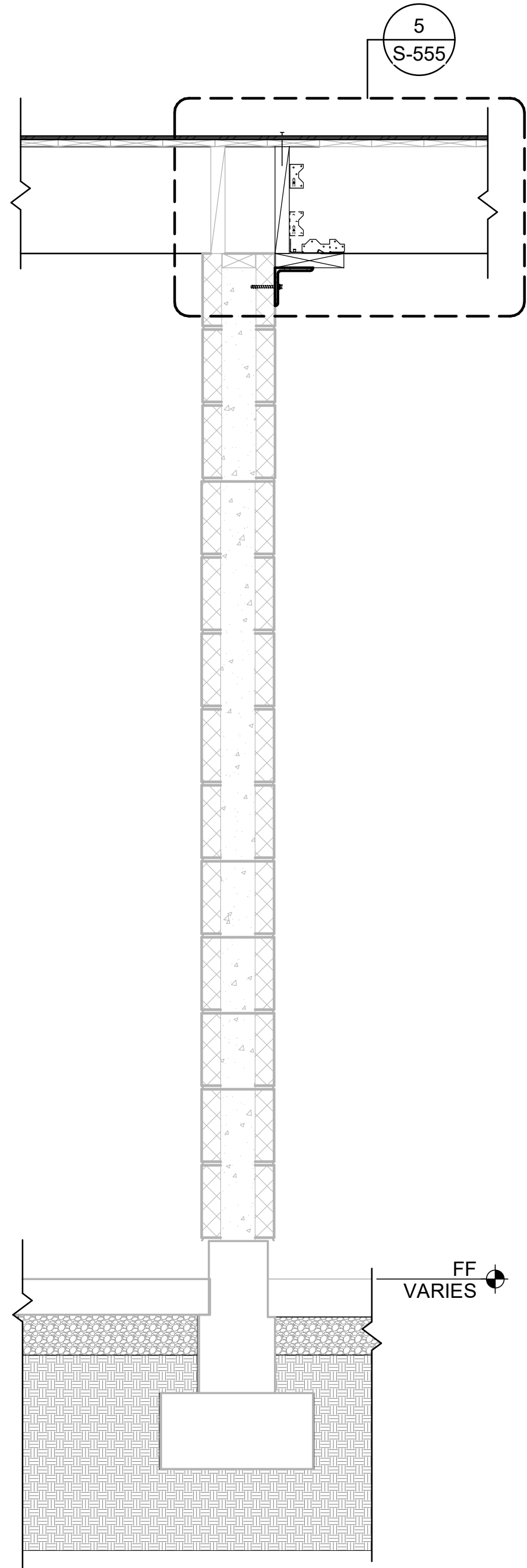
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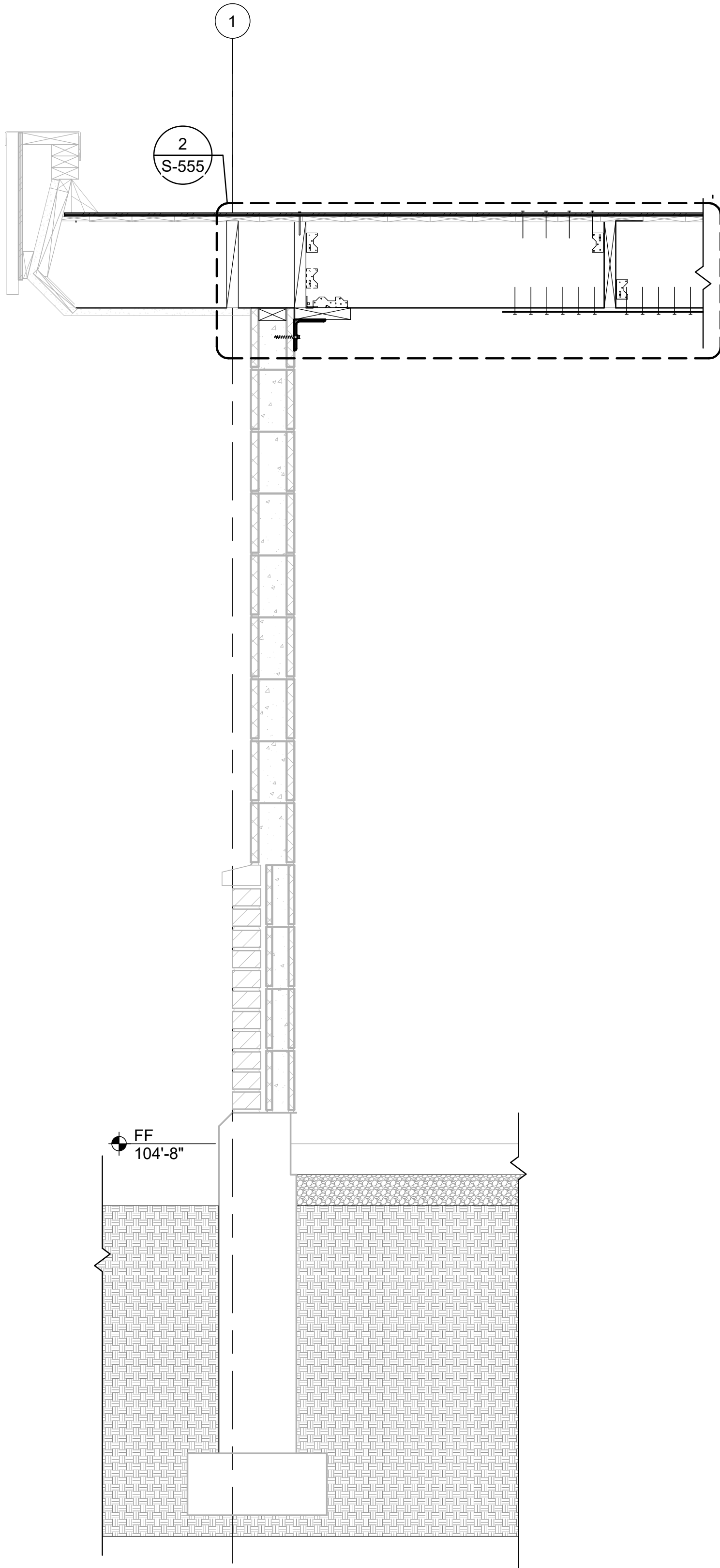
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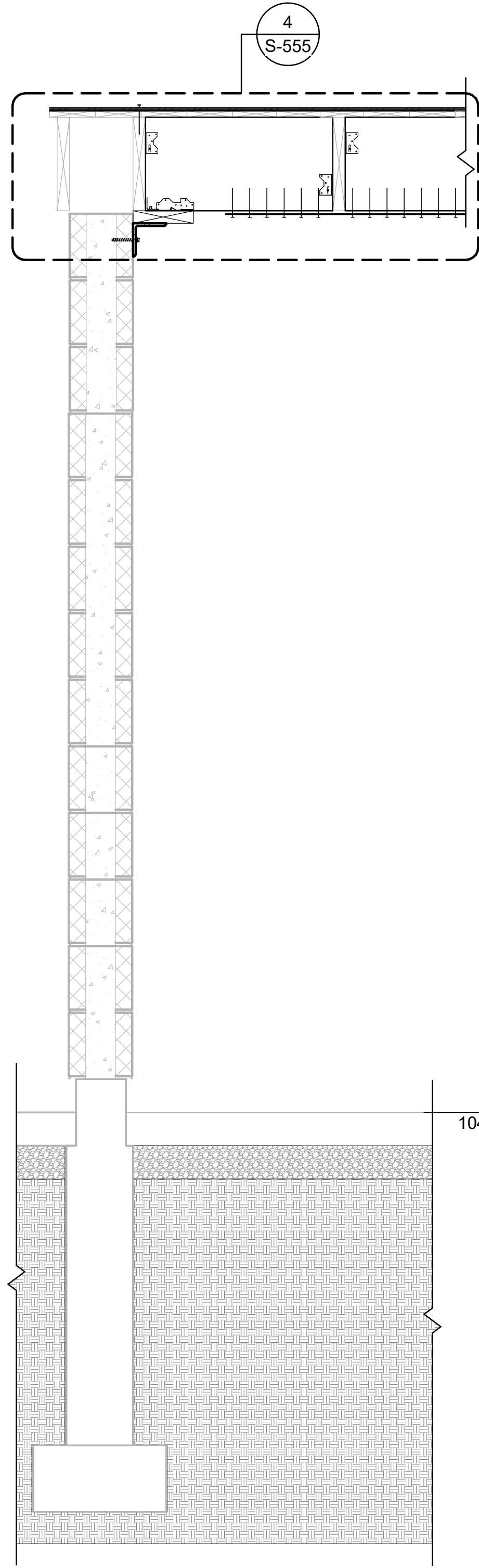
1 SECTION GRID C
S-302 SCALE : 1" = 1'-0"



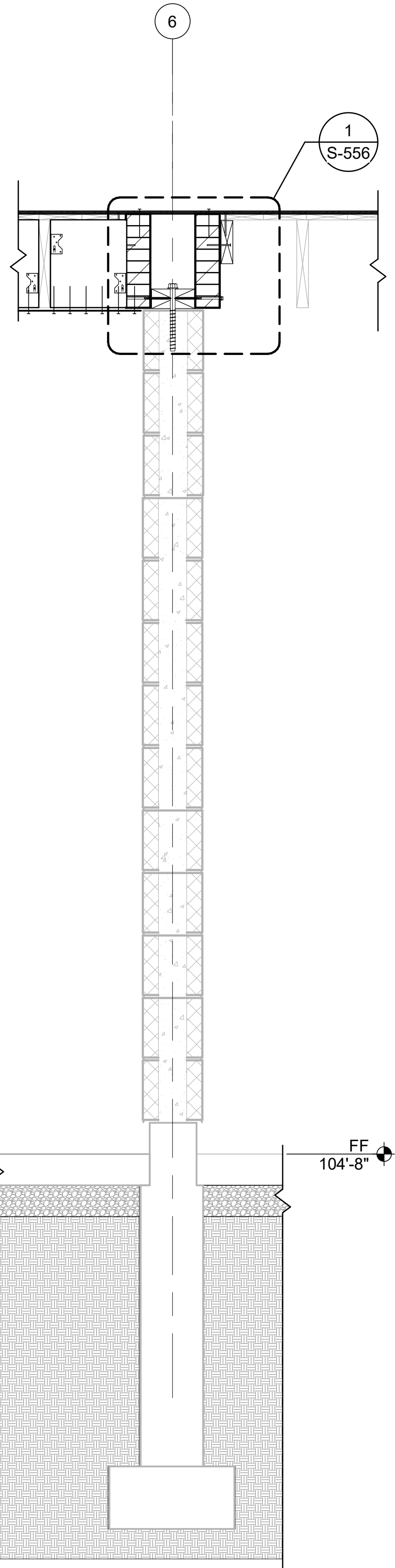
2 SECTION CORRIDOR WALL
S-302 SCALE : 1" = 1'-0"



3 SECTION GRID 1
S-302 SCALE : 1" = 1'-0"



4 SECTION GRID 4.5
S-302 SCALE : 1" = 1'-0"



5 SECTION GRID 6
S-302 SCALE : 1" = 1'-0"



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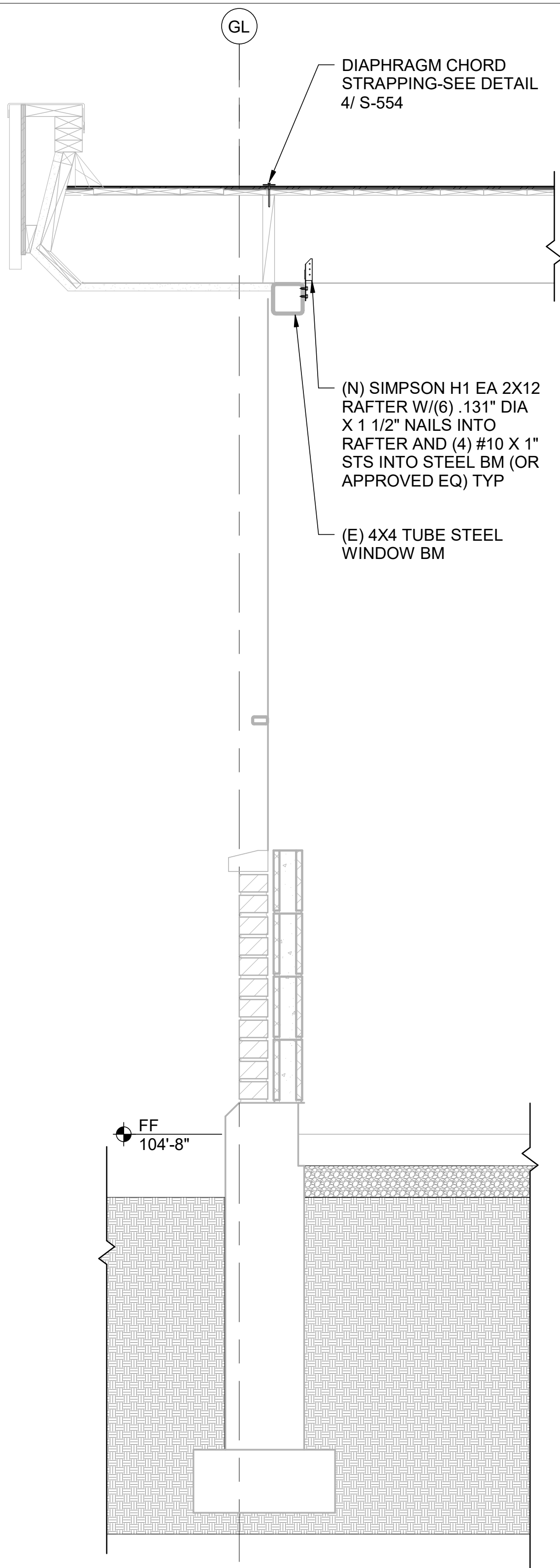
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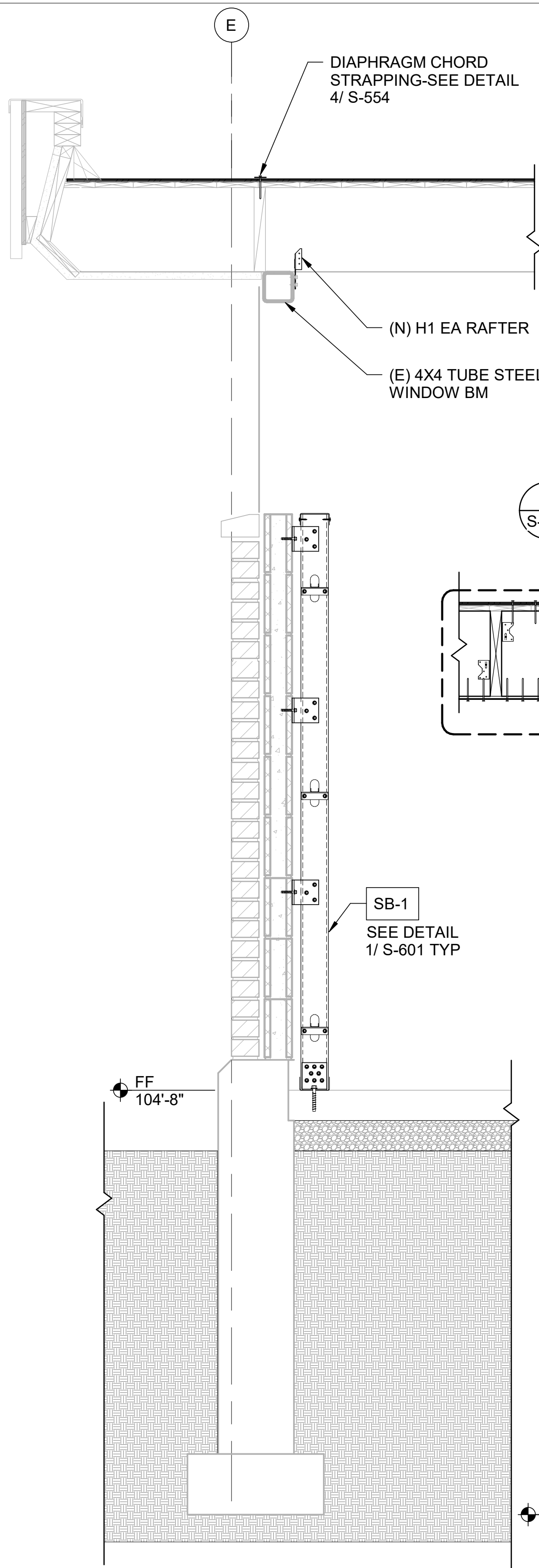
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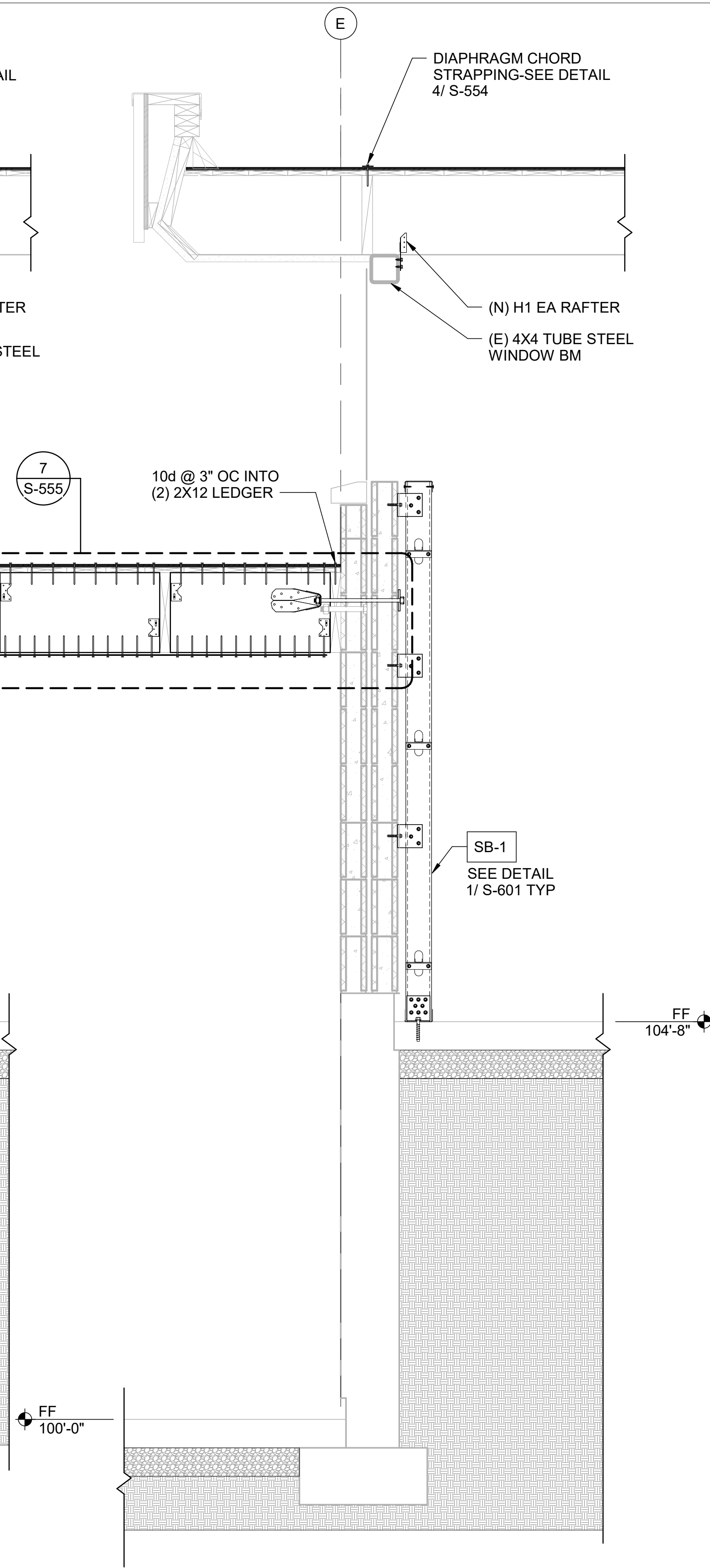
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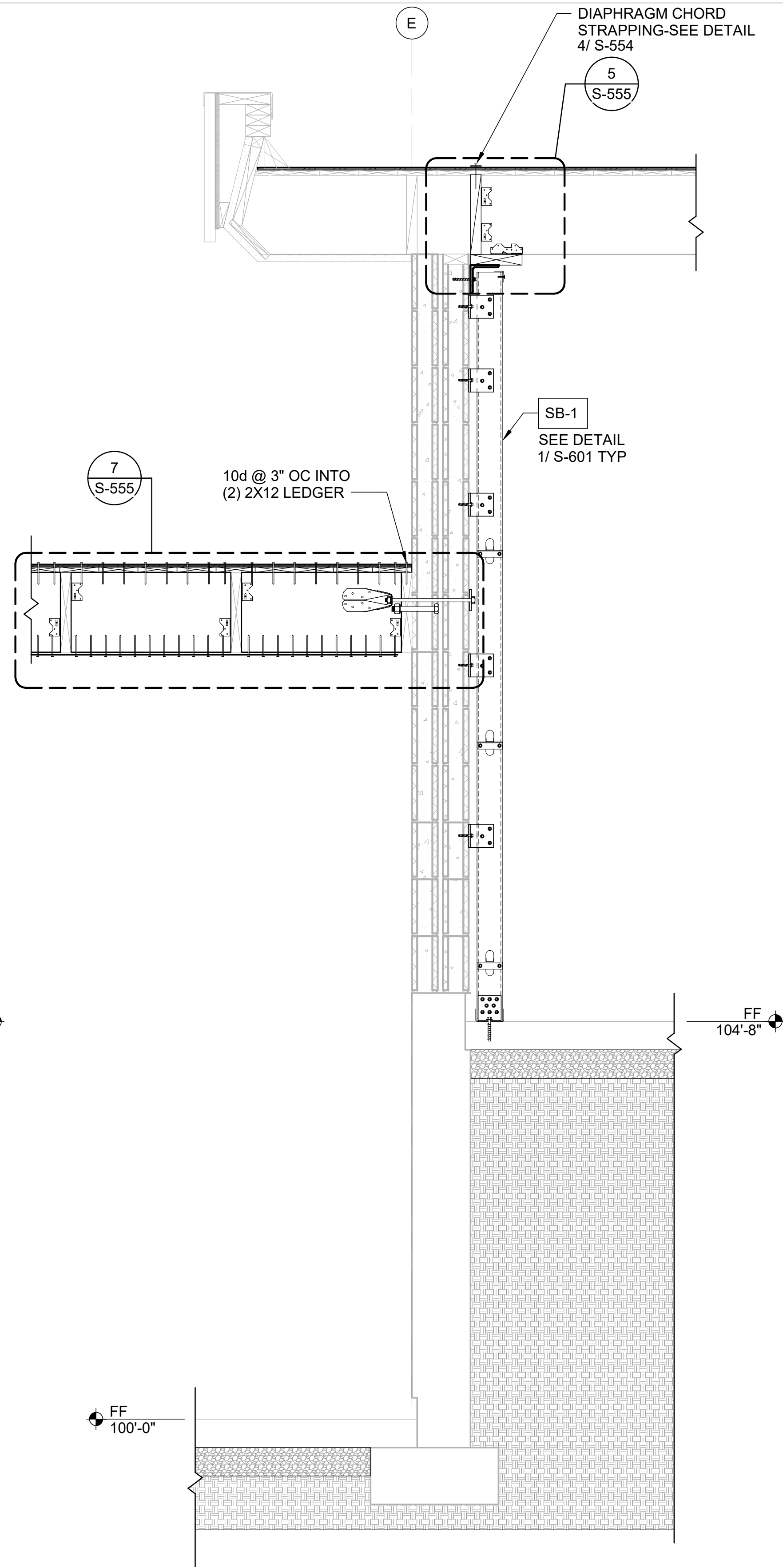
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S-303/ SECTION AT WINDOW SYSTEM
SCALE : 1" = 1'-0"



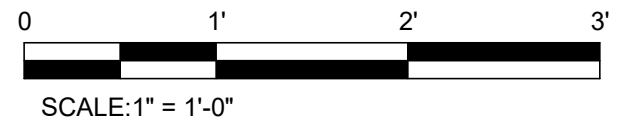
2
S-303/ SECTION GRID E
SCALE : 1" = 1'-0"



3
S-303/ SECTION GRID E CLERESTORY
SCALE : 1" = 1'-0"



4
S-303/ SECTION GRID E LOW ROOF
SCALE : 1" = 1'-0"



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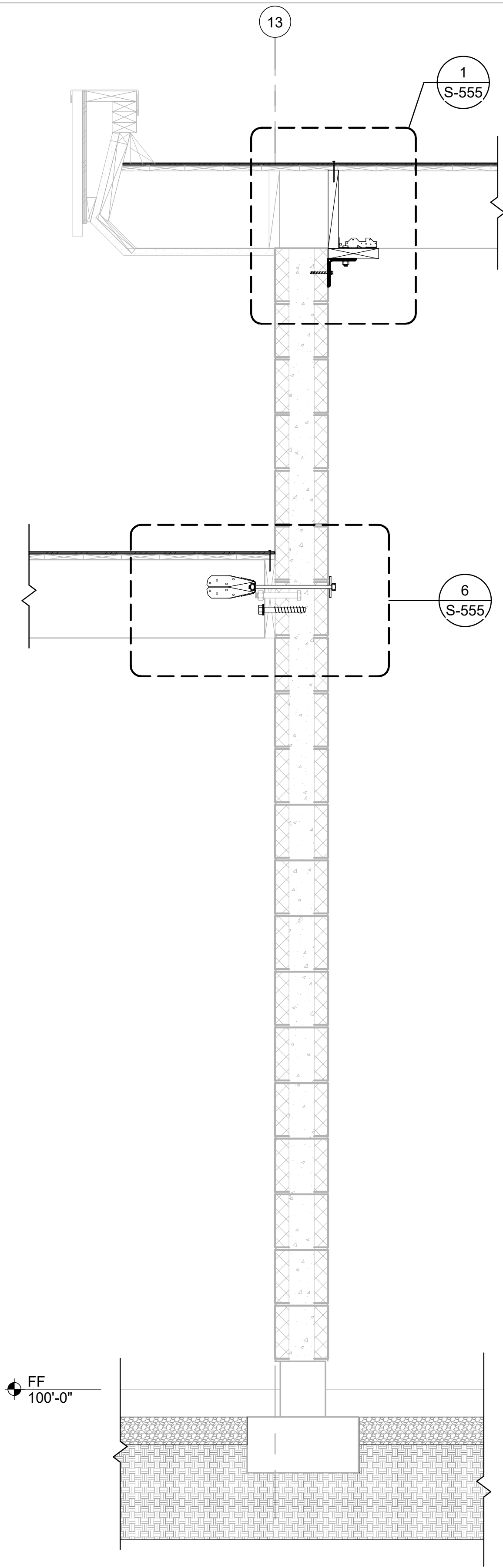
WALL FRAMING SECTIONS

S-303

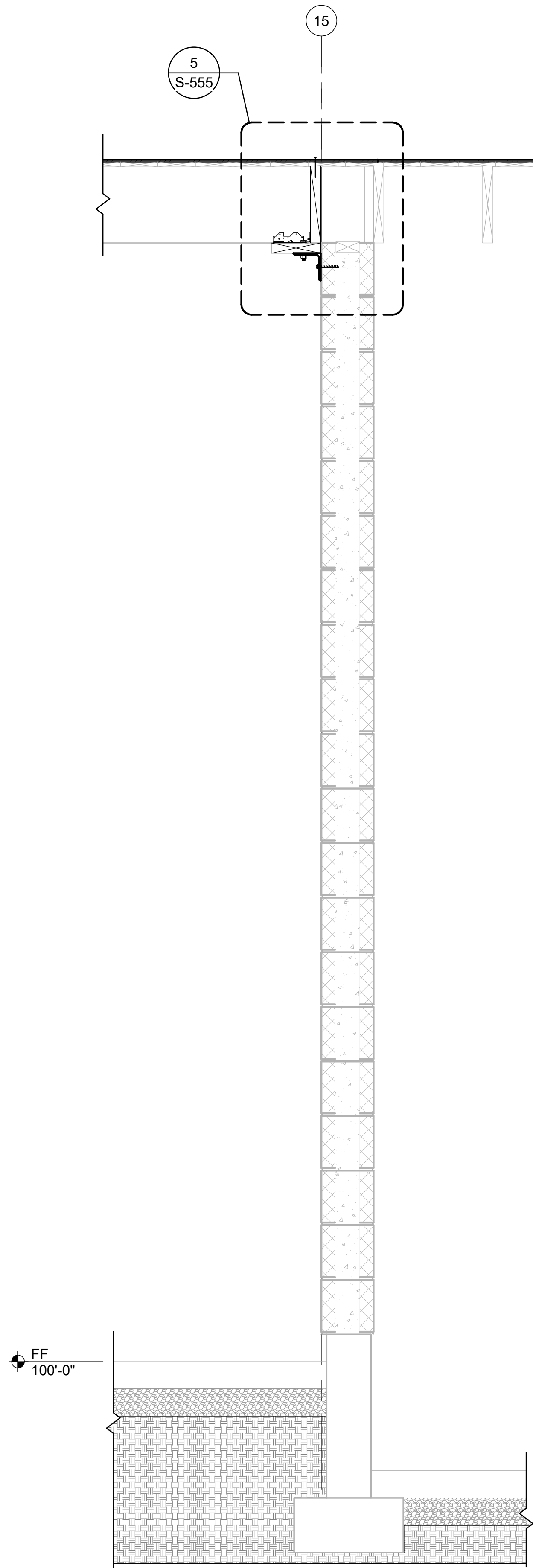
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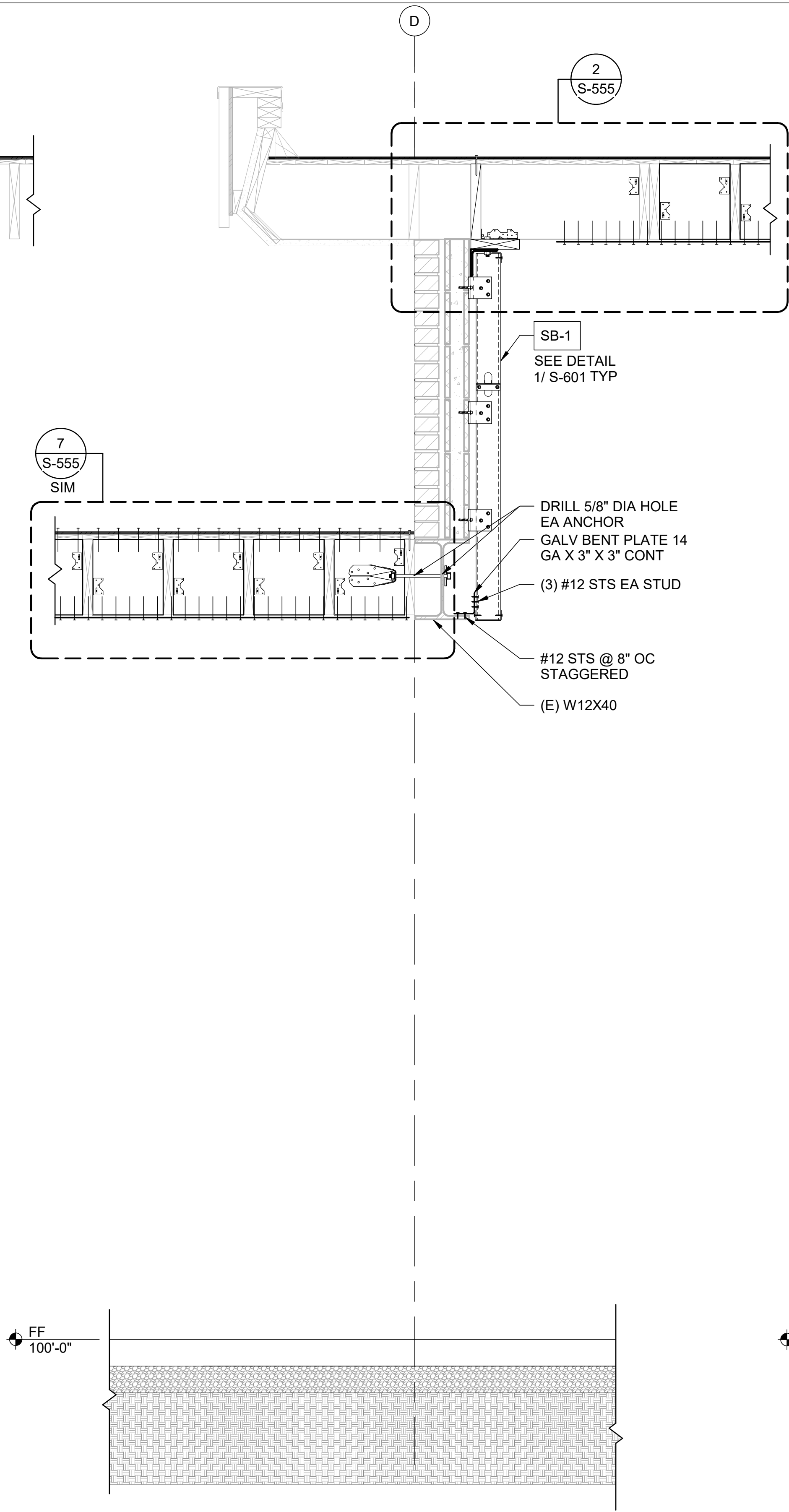
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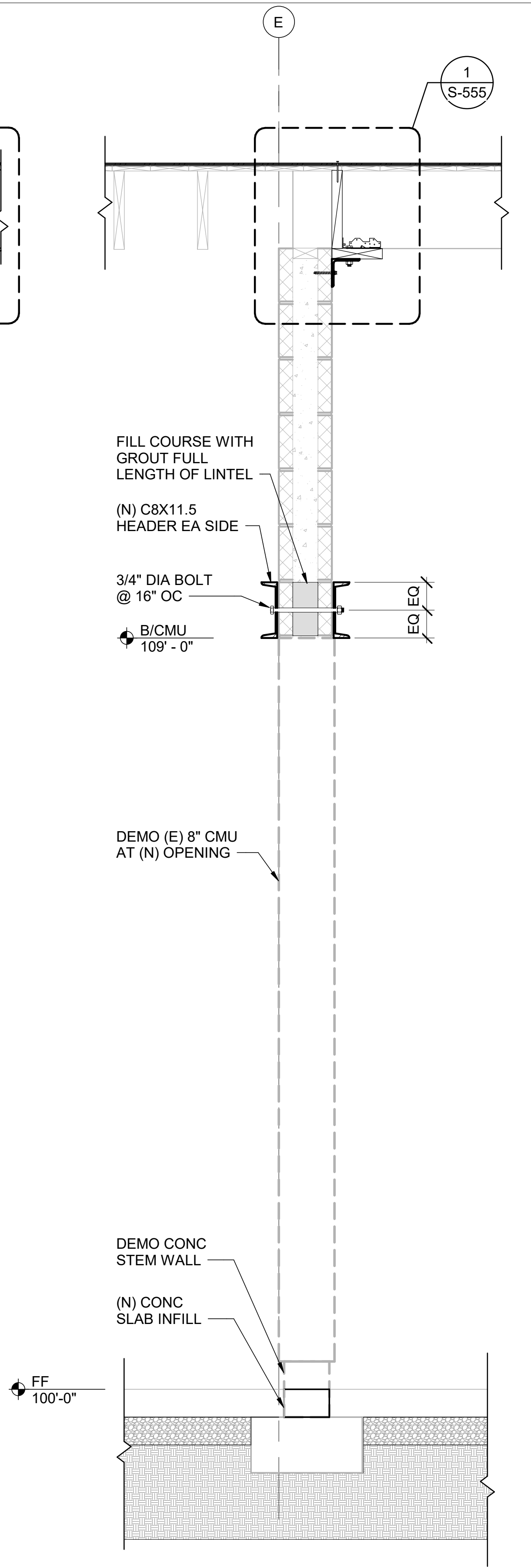
1 SECTION GRID 13 BTWN D AND E
S-304 SCALE : 1" = 1'-0"



2 SECTION GRID 15 BTWN D AND E
S-304 SCALE : 1" = 1'-0"



3 SECTION GRID D BTWN 13 AND 15
S-304 SCALE : 1" = 1'-0"



4 SECTION GRID E BTWN 13 AND 14
S-304 SCALE : 1" = 1'-0"



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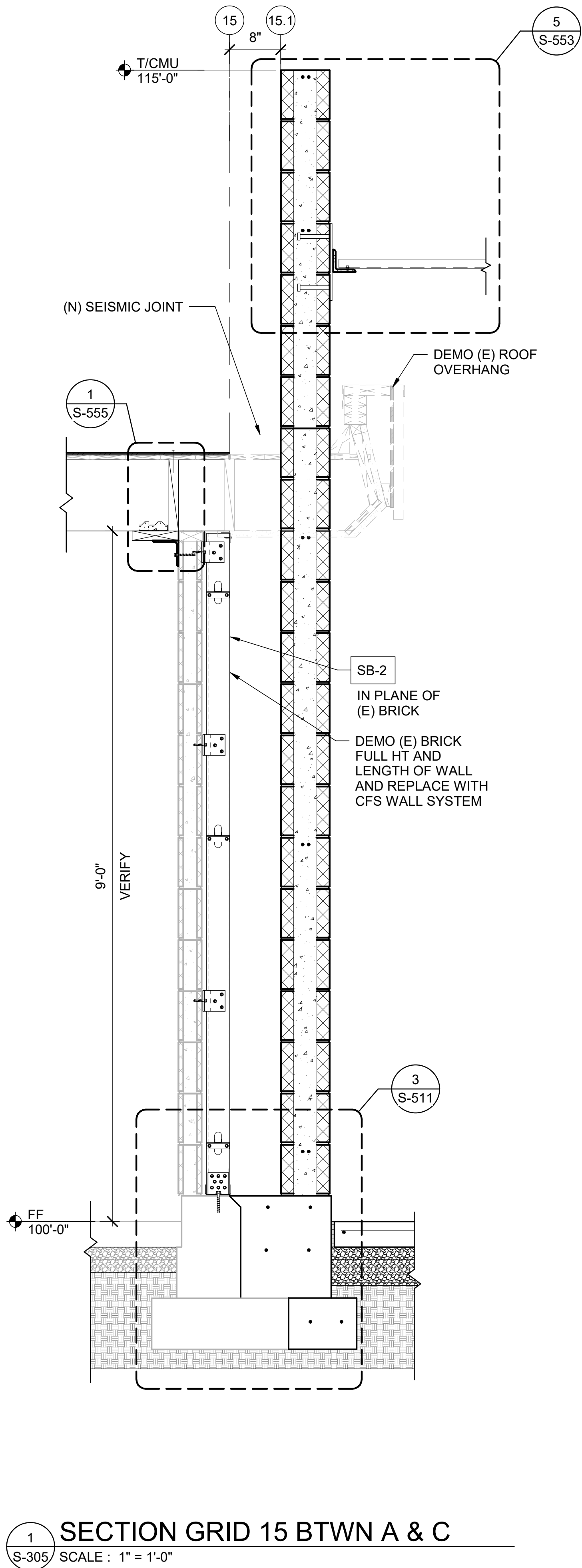
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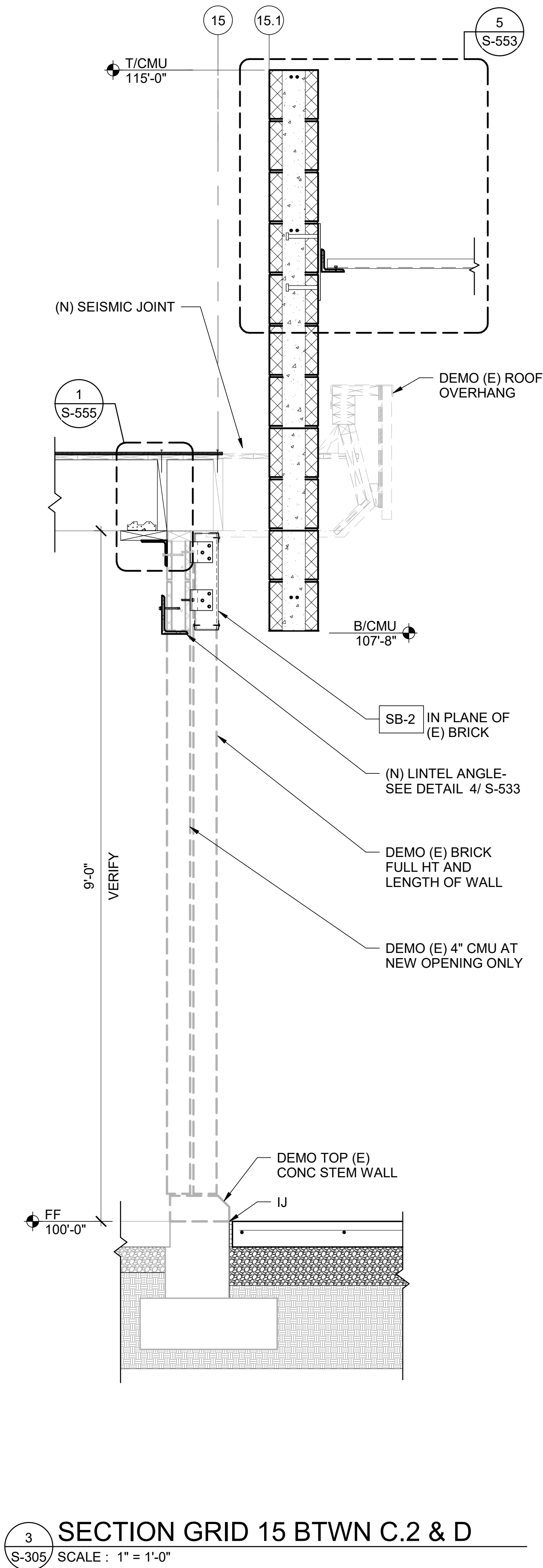
WALL FRAMING SECTIONS

S-304

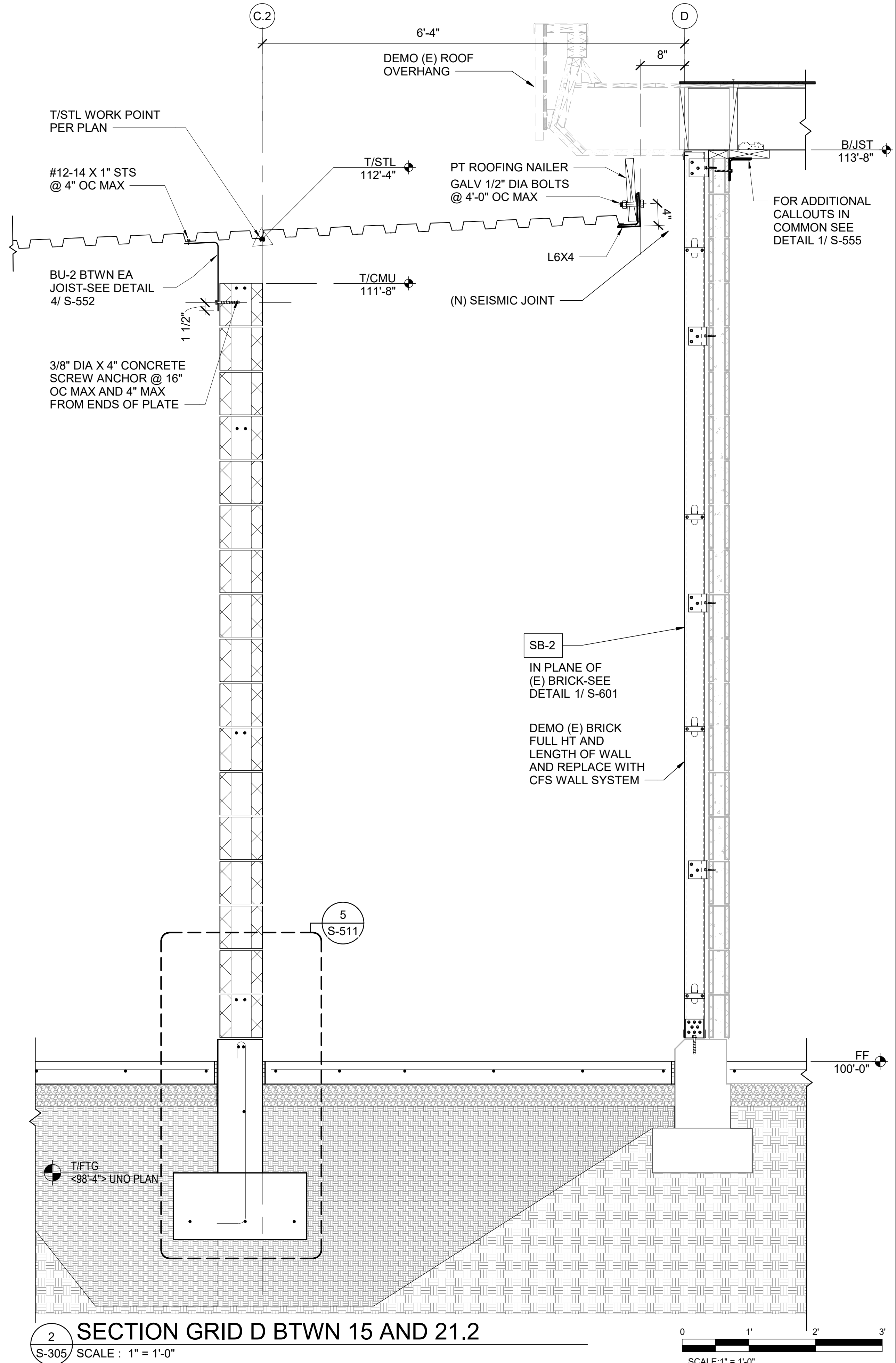
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1 SECTION GRID 15 BTWN A & C
S-305 SCALE : 1" = 1'-0"



3 SECTION GRID 15 BTWN C.2 & D
S-305 SCALE : 1" = 1'-0"



2 SECTION GRID D BTWN 15 AND 21.2
S-305 SCALE : 1" = 1'-0"



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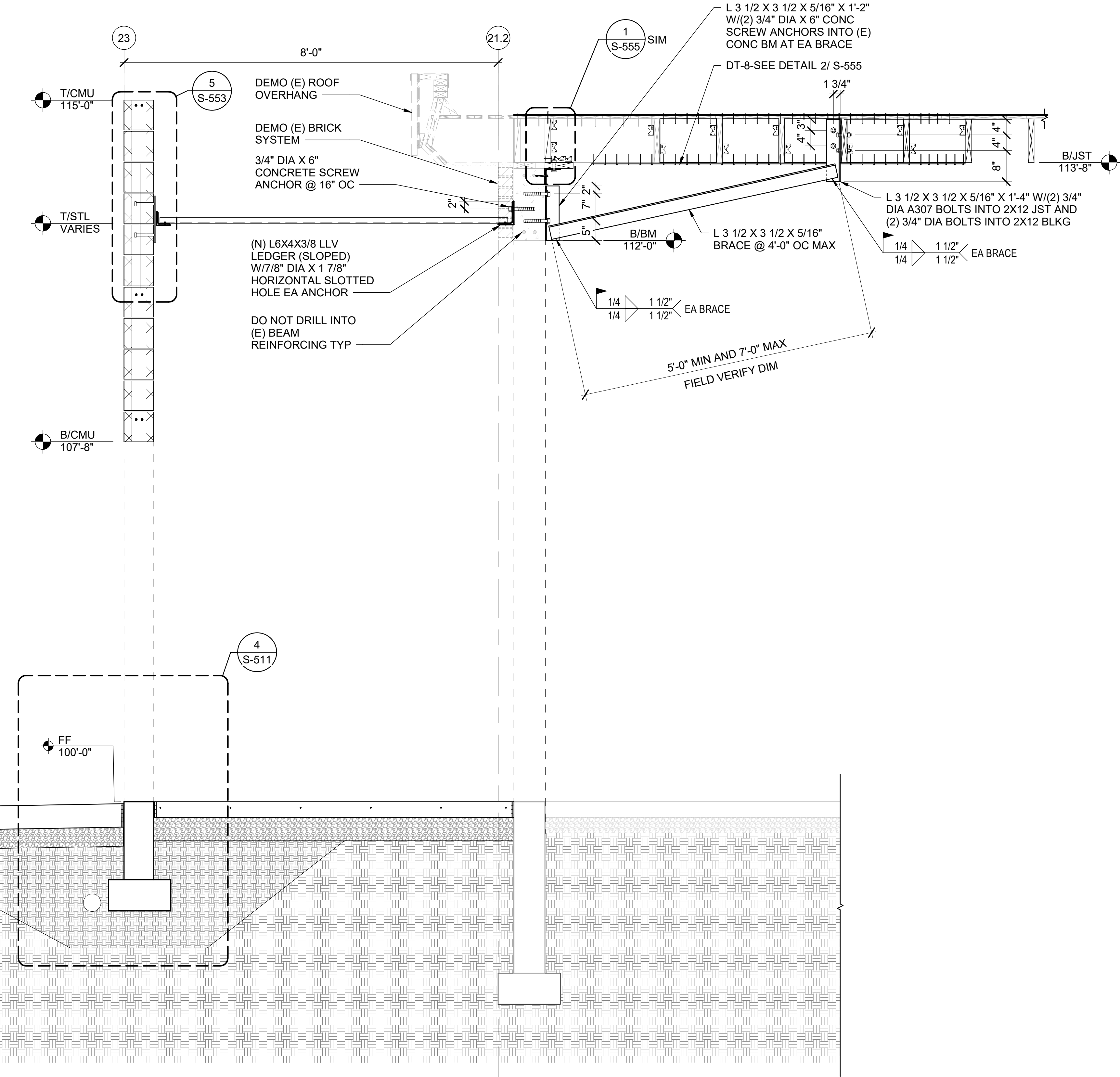
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S-305

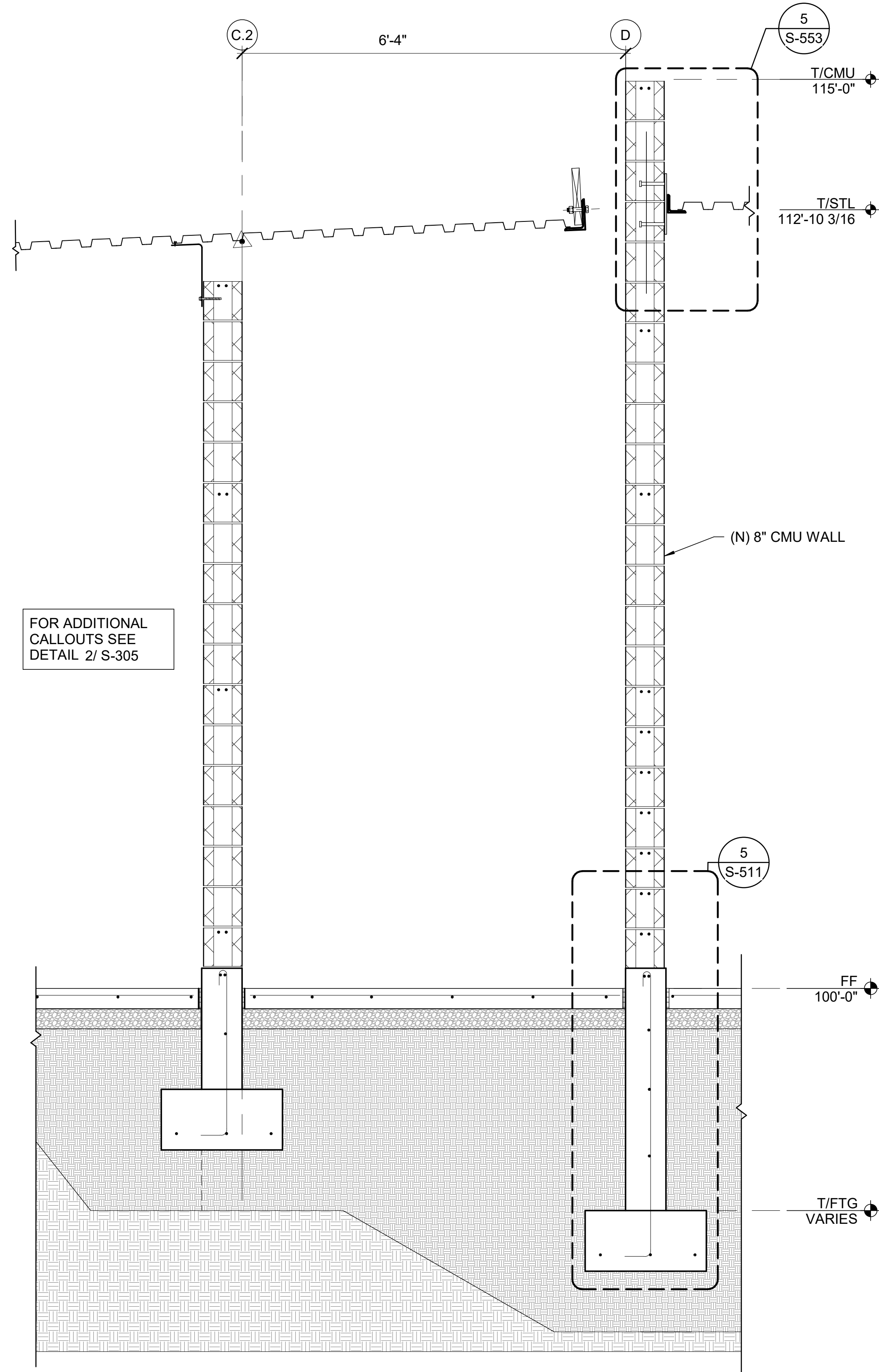
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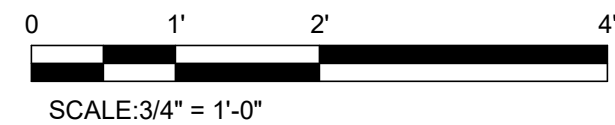
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1 SECTION ON GRID 21.2 BTWN D&E
S-306 SCALE : 3/4" = 1'-0"



2 SECTION GRID D BTWN 21.2 AND 23
S-306 SCALE : 3/4" = 1'-0"



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Project No.: 21024

Designed By: CTS

Drawn By: DJH

Checked By: ABC

Date

Description

Mark

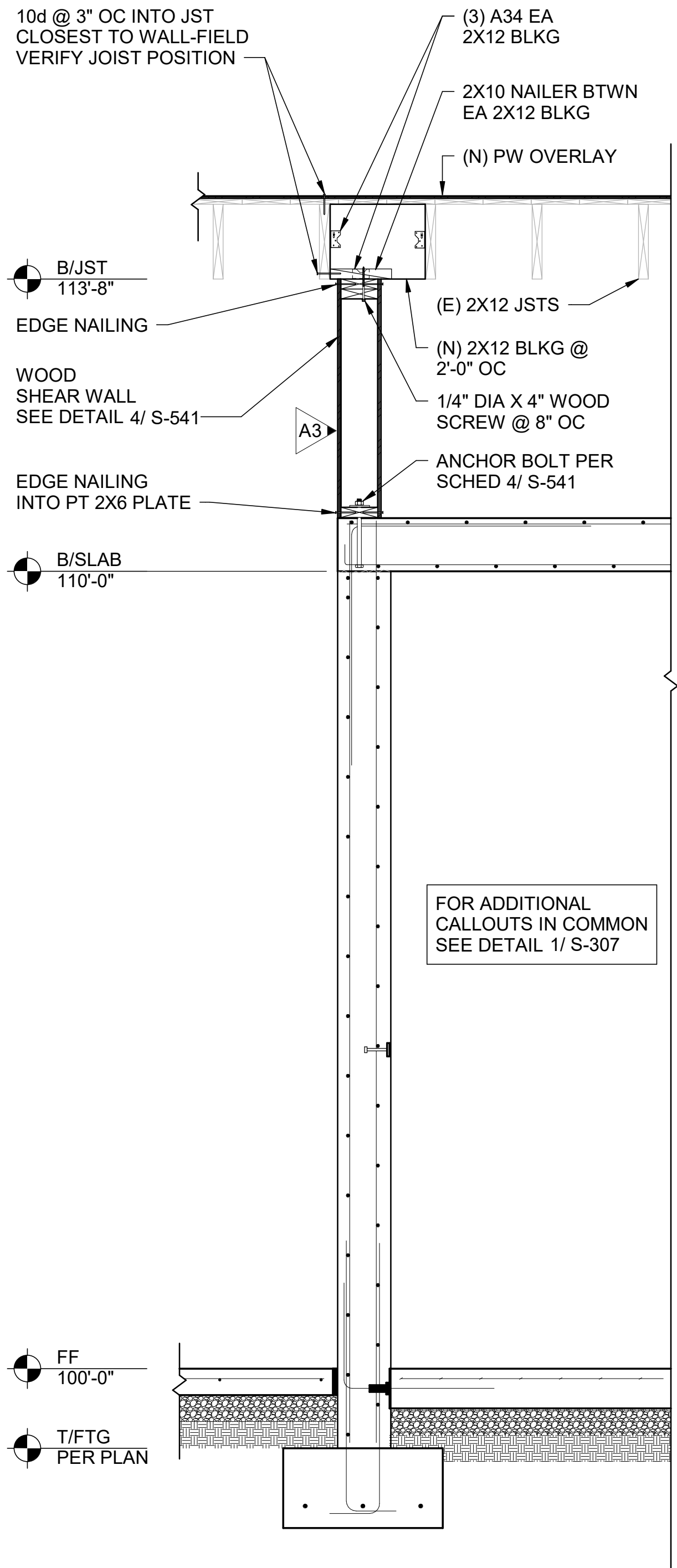
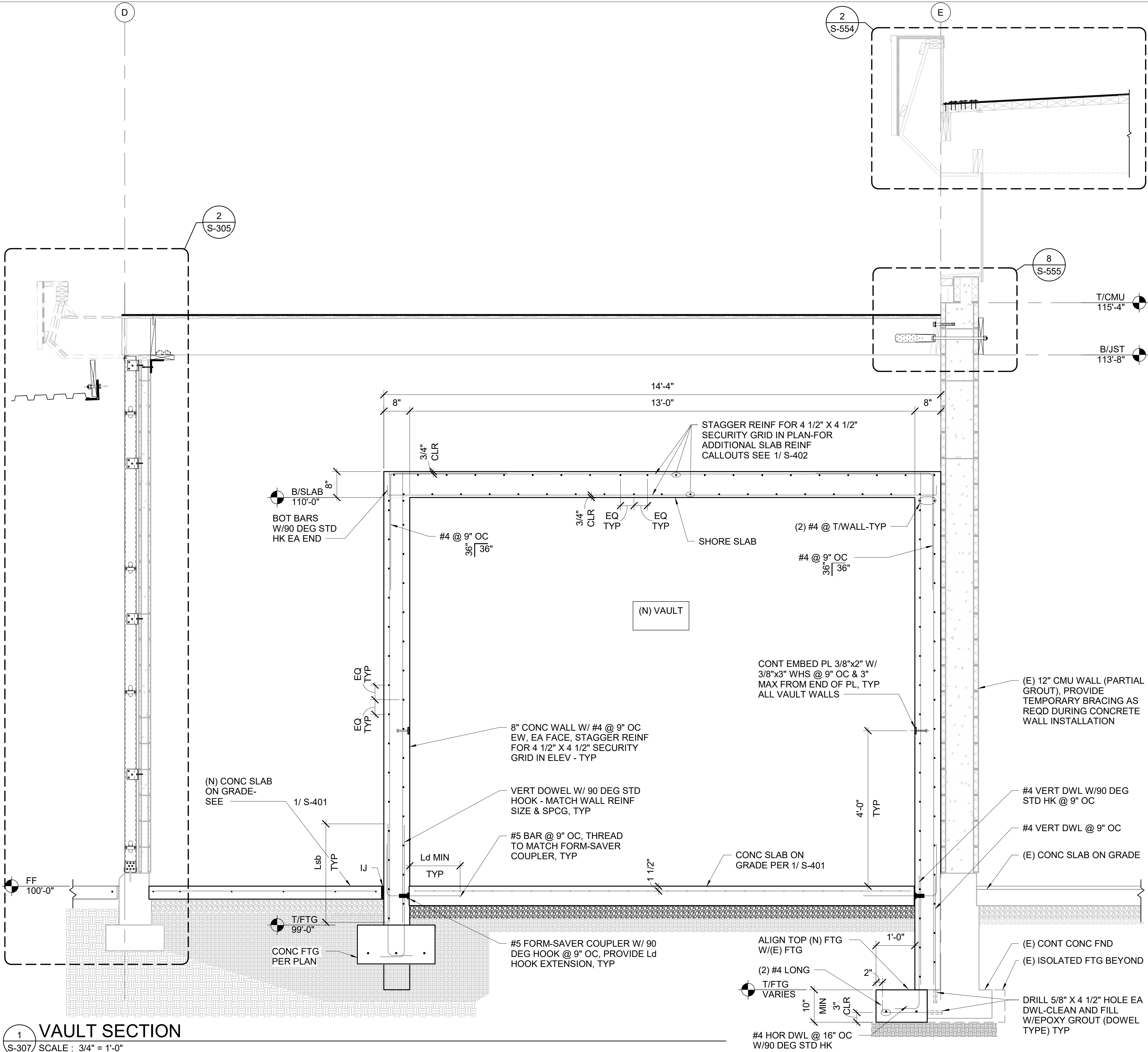
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WALL FRAMING SECTIONS

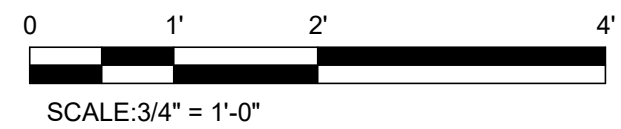
S-306

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1 VAULT SECTION
S-307 SCALE : 3/4" = 1'-0"

2 EAST/WEST VAULT WALL SECTION
S-307 SCALE : 3/4" = 1'-0"



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Description			
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WALL FRAMING SECTIONS

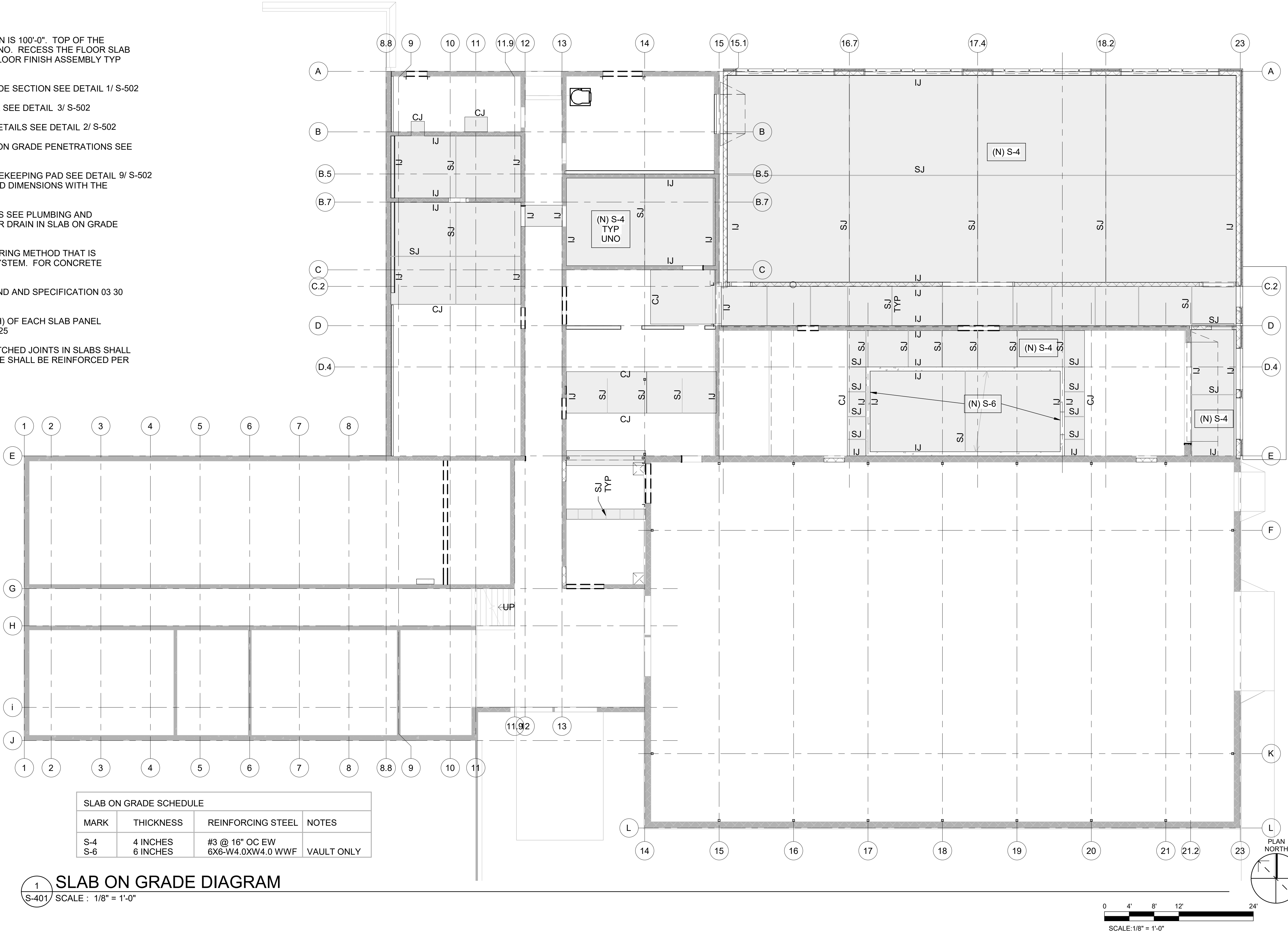
S-307

GENERAL NOTES

- 1. FOR STRUCTURAL GENERAL NOTES SEE S-001 THROUGH S-003
- 2. FOR ABBREVIATIONS AND SYMBOLS SEE S-004

PLAN NOTES

- 1. THE REFERENCE FLOOR ELEVATION IS 100'-0". TOP OF THE FINISH FLOOR IS AT ELEVATION 100'-0" UNO. RECESS THE FLOOR SLAB AS REQUIRED TO ACCOMMODATE THE FLOOR FINISH ASSEMBLY TYP UNO.
- 2. FOR TYPICAL INTERIOR SLAB ON GRADE SECTION SEE DETAIL 1/ S-502
- 3. FOR TYPICAL RECESSED SLAB DETAIL SEE DETAIL 3/ S-502
- 4. FOR TYPICAL INTERIOR SLAB JOINT DETAILS SEE DETAIL 2/ S-502
- 5. FOR TYPICAL REINFORCING AT SLAB ON GRADE PENETRATIONS SEE DETAIL 6/ S-502
- 6. FOR TYP INTERIOR EQUIPMENT HOUSEKEEPING PAD SEE DETAIL 9/ S-502 COORDINATE QUANTITY, LOCATIONS, AND DIMENSIONS WITH THE EQUIPMENT SUPPLIERS TYP
- 7. FOR FLOOR DRAINS AND SLAB SLOPES SEE PLUMBING AND ARCHITECTURAL DRAWINGS. FOR FLOOR DRAIN IN SLAB ON GRADE SEE DETAIL 9/ S-531
- 8. THE CONTRACTOR WILL SELECT A CURING METHOD THAT IS COMPATIBLE WITH THE FLOOR FINISH SYSTEM. FOR CONCRETE CURING SEE SPECIFICATION 03 30 00
- 9. FOR CONCRETE FINISHING SEE LEGEND AND SPECIFICATION 03 30 00
- 10. THE ASPECT RATION (LENGTH/WIDTH) OF EACH SLAB PANEL BETWEEN JOINTS SHALL NOT EXCEED 1.25
- 11. RE-ENTRANT CORNERS AND MIS-MATCHED JOINTS IN SLABS SHALL BE MINIMIZED, AND WHERE UNAVOIDABLE SHALL BE REINFORCED PER DETAIL 4/ S-502
- 12. CONTROL FLOOR FLATNESS PER SPECIFICATION 03 30 00
- 13. WHERE NO SLAB JOINT DIMENSION IS INDICATED, SPACE JOINTS AT EQUAL SPACING BETWEEN WALLS, SLAB CJ, AND/OR SLAB IJ LOCATIONS
- 14. "S-x" INDICATES (N) SLAB ON GRADE TYPE "x". FOR SLAB THICKNESS AND REINFORCING SEE SLAB ON GRADE SCHEDULE 1/S-401



SLAB ON GRADE SCHEDULE			
MARK	THICKNESS	REINFORCING STEEL	NOTES
S-4	4 INCHES	#3 @ 16" OC EW	
S-6	6 INCHES	6X6-W4.0XW4.0 WWF	VAULT ONLY

1 SLAB ON GRADE DIAGRAM
S-401 SCALE : 1/8" = 1'-0"



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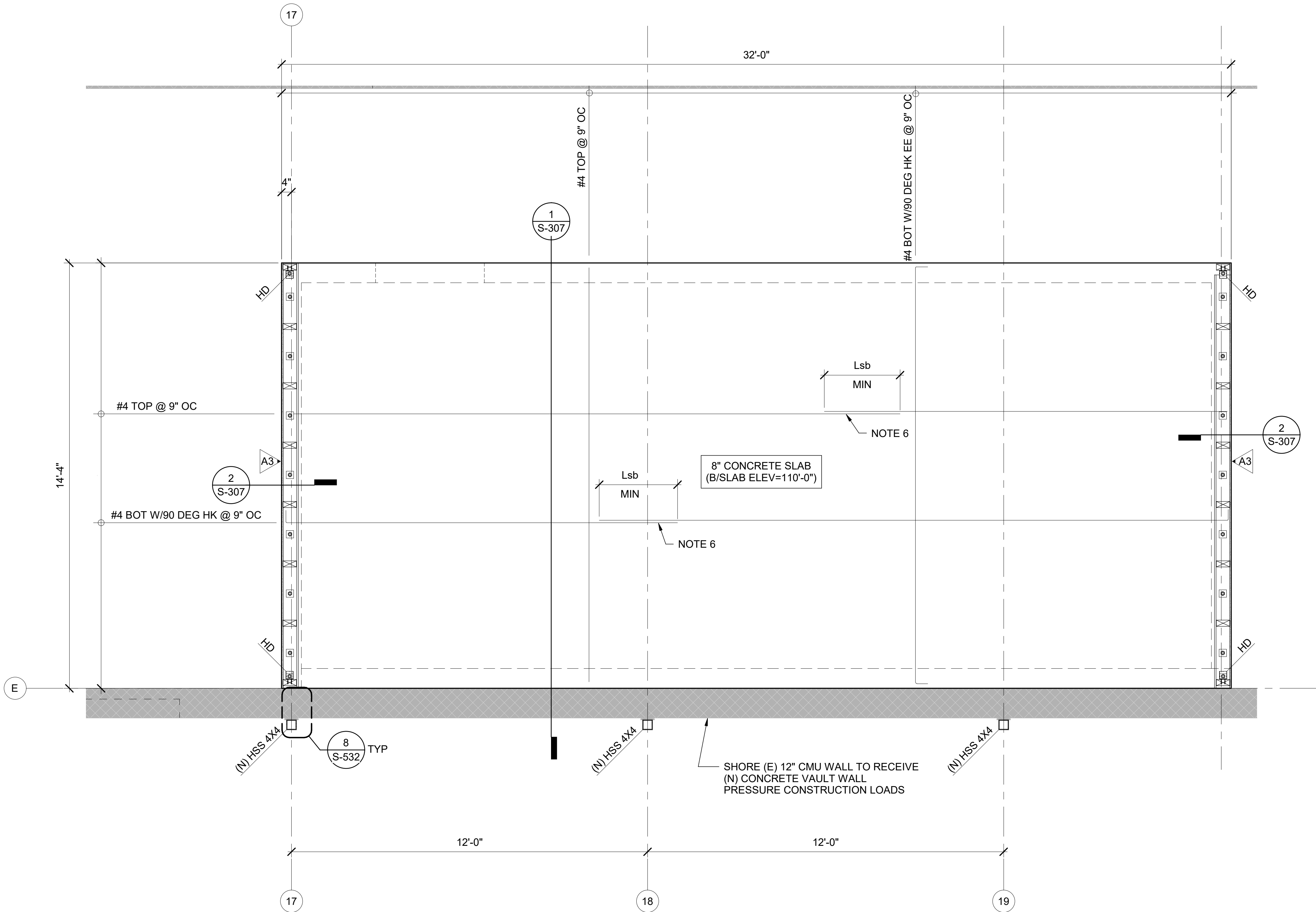
Project No.: 21024
Designed By: CTS
Drawn By: DJH
Checked By: ABC

Date
Description
Mark

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SLAB ON GRADE DIAGRAM

S-401

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1 VAULT CEILING FRAMING PLAN
S-402 SCALE : 1/2" = 1'-0"

GENERAL NOTES

- 1. FOR STRUCTURAL GENERAL NOTES SEE S-001 THROUGH S-003
- 2. FOR ABBREVIATIONS AND SYMBOLS SEE S-004

PLAN NOTES

- 1. BOT OF CONCRETE SLAB AT THE VAULT LID CEILING IS ELEVATION 110'-0".
- 2. WALL REINFORCING SHALL BE STAGGERED EACH FACE EACH WAY TO RESULT IN A 4 1/2" X 4 1/2" SECURITY GRID WHEN VIEWED IN ELEVATION
- 3. VAULT LID SLAB REINFORCING SHALL BE STAGGERED EACH WAY TO RESULT IN A 4 1/2" X 4 1/2" SECURITY GRID WHEN VIEWED IN PLAN
- 4. FORMWORK FOR THE VAULT CEILING SLAB CAN BE STRIPPED AFTER THE CONCRETE ATTAINS 2800 PSI MINIMUM COMPRESSIVE STRENGTH, AND 7 DAYS MINIMUM. RESHORES WILL BE IMMEDIATELY INSTALLED AFTER STRIPPING AND LEFT IN PLACE UNTIL THE CONCRETE SLAB ATTAINS 4000 PSI MINIMUM STRENGTH AND 28 DAYS MINIMUM.

ALTERNATIVELY, THE CONTRACTOR CAN LEAVE THE SLAB FORMING SYSTEM IN PLACE UNTIL THE CONCRETE SLAB ATTAINS 4000 PSI MINIMUM STRENGTH AND 28 DAYS MINIMUM, INSTEAD OF PROVIDING A RESHORE SYSTEM.
- 5. COORDINATE WALL RACK MOUNT HARDWARE AND LAYOUT WITH THE USER PRIOR TO CONSTRUCTING THE VAULT WALLS
- 6. STAGGER LAP SPLICES ON ALTERNATE BARS PER ACI 318
- 7. A3 INDICATES WOOD SHEAR WALL TYPE 'A3' ABOVE VAULT SLAB. FOR ADDITIONAL WOOD SHEAR WALL CALLOUTS SEE DETAIL 4/ S-541
- 8. 'HD' INDICATES SHEAR WALL HOLDOWN. 'HD' WILL BE SIMPSON HDU5-SDS2.5 W/(14) 1/4" DIA X 2 1/2" SDS SCREWS (OR APPROVED EQ) + 5/8" DIA SIMPSON SSTB28 ANCHOR BOLT (OR APPROVED EQ)

PLAN NORTH

01'2'3'6'

SCALE:1/2" = 1'-0"



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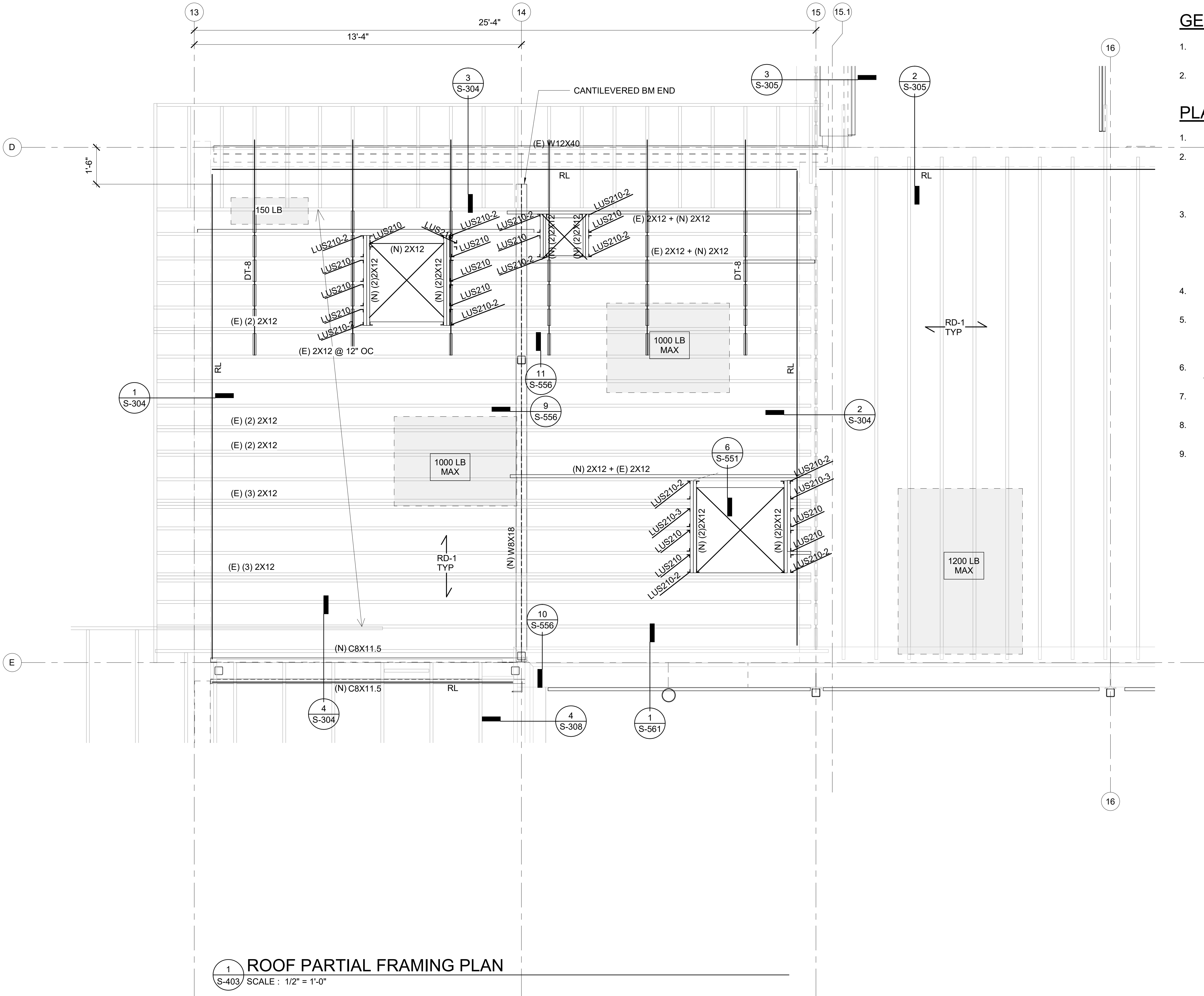
Project No. : 21024	Designed By: CTS	Drawn By: DJH	Checked By: AOC
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Mark	Description	Date

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2219 M AVENUE, ANACORTES, WA
VAULT CEILING FRAMING PLAN

S-402

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1
S-403

ROOF PARTIAL FRAMING PLAN

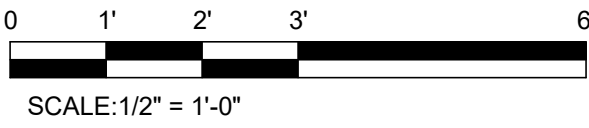
SCALE : 1/2" = 1'-0"

GENERAL NOTES

1. FOR STRUCTURAL GENERAL NOTES SEE S-001 THROUGH S-003
2. FOR ABBREVIATIONS AND SYMBOLS SEE S-004

PLAN NOTES

1. FIELD VERIFY ALL EXISTING DIMENSIONS.
2. EXISTING FRAMING INDICATED IS BASED UPON ORIGINAL AS-BUILT DRAWINGS AND HAS NOT BEEN FIELD VERIFIED. NOTIFY CONTRACTING OFFICER REPRESENTATIVE OF ANY FRAMING VARIANCES WHEN CEILING IS REMOVED
3. ONLY MAJOR ROOF PENETRATIONS ARE SHOWN ON THE STRUCTURAL PLANS. REFER TO DRAWINGS OF ALL DISCIPLINES FOR SIZE AND LOCATION OF OTHER MISCELLANEOUS PENETRATIONS. PROVIDE 2X12 FRAMING AROUND ROUGH OPENING WITH LUS210 HANGER EACH END UNLESS NOTED OTHERWISE
4. 'RL' INDICATES RETOFIT LEDGER W/ L 4 X 4 X 1/4. SEE DETAIL 1/ S-555
5. 'DT-X' INDICATES DIAPHRAGM TIE OF LENGTH 'X' IN FEET. WHERE TIE LENGTH IS NOT SPECIFIED, DIAPHRAGM TIE SHALL EXTEND BETWEEN WALLS AS SHOWN. SEE DETAIL 2/ S-555
6. PROVIDE DIAPHRAGM CHORD STRAPPING PER DETAIL 4/ S-554
7. "RD-x" INDICATES (N) ROOF DIAPHRAGM ASSEMBLY TYPE "x". FOR ROOF DIAPHRAGM CHEDULE SEE DETAIL 1/ S-541
8. FOR TYP ALLOWABLE (N) PENETRATIONS THROUGH (E) WOOD ROOF JOISTS SEE DETAIL 6/ S-541
9. FOR TYP MECH EQUIPMENT CURB FRAME AT ROOF DECK SEE DETAIL 6/ S-551



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Date

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PARTIAL ROOF FRAMING PLAN

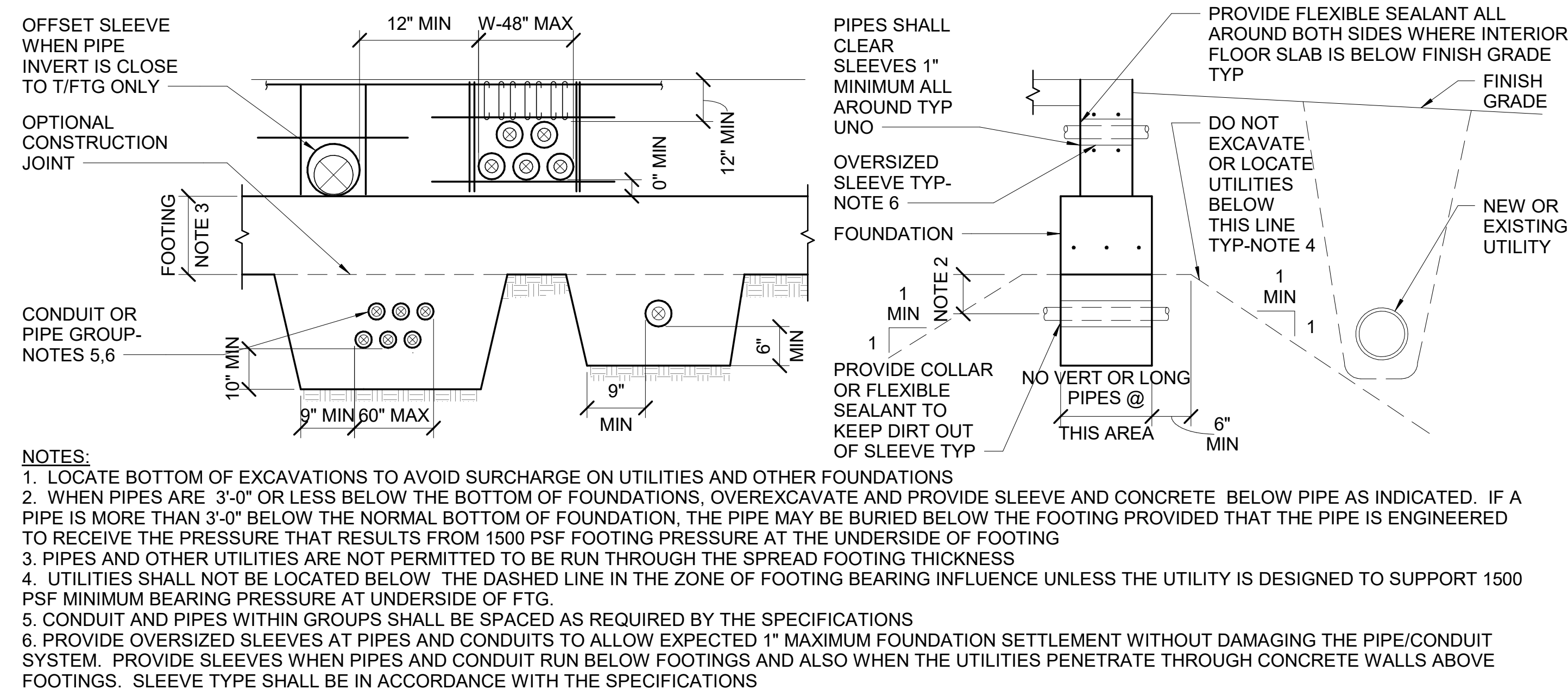
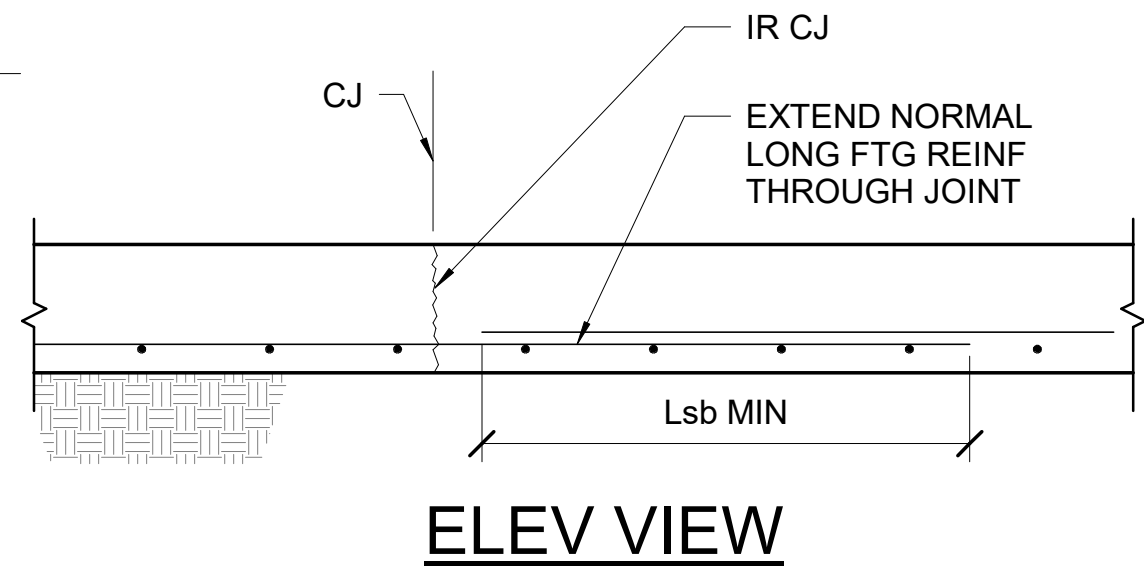
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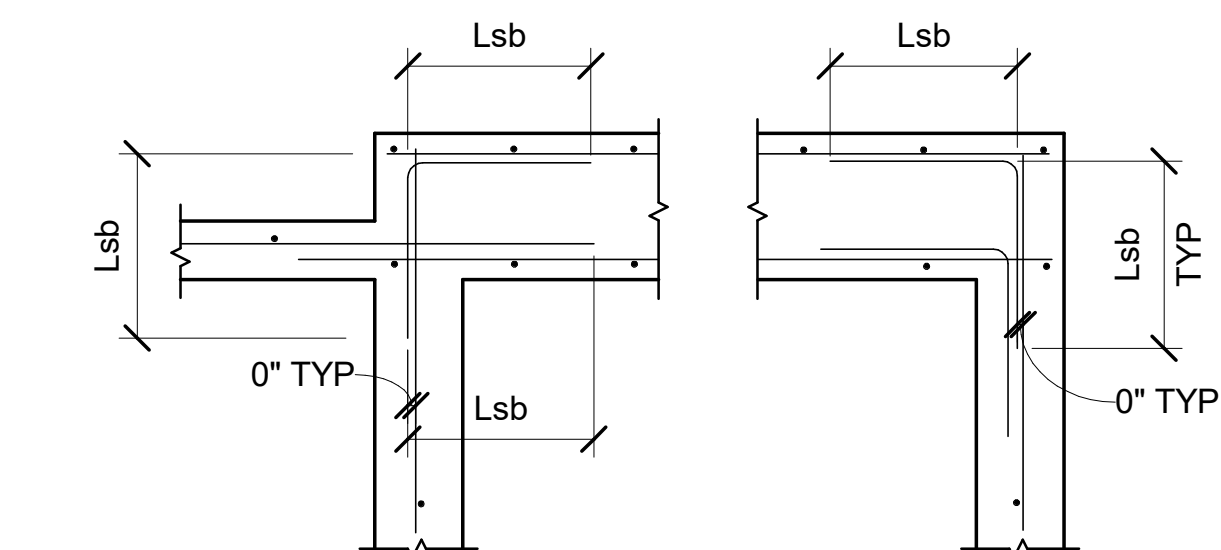
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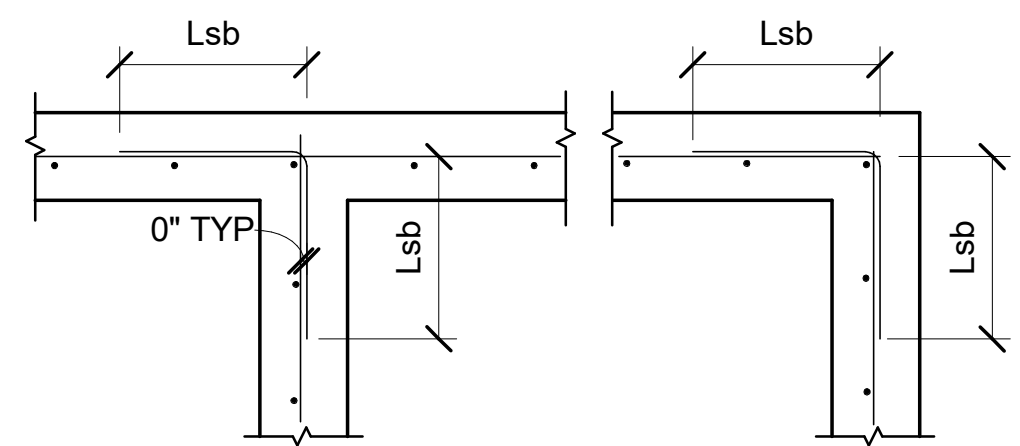
04/29/2022



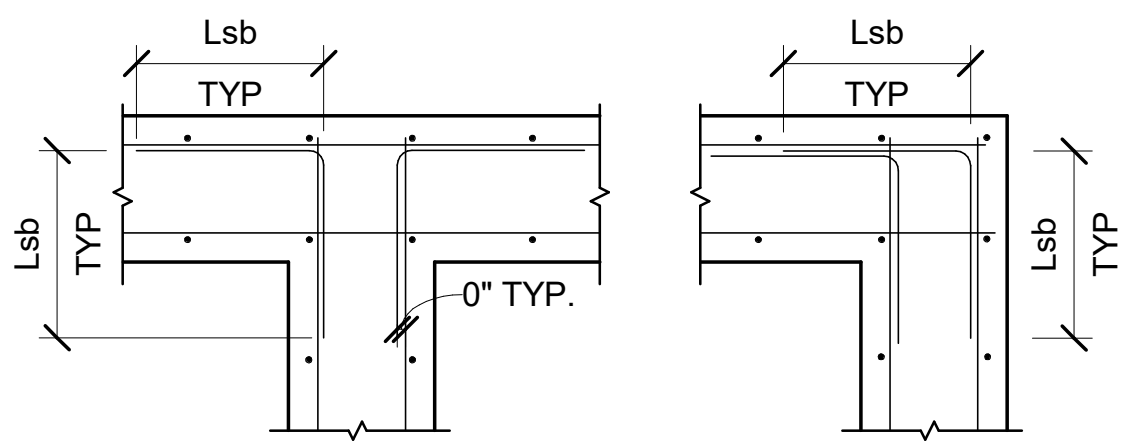
2 TYP CONT FTG CONSTRUCTION JT



SINGLE/DOUBLE CURTAIN INTERSECTION



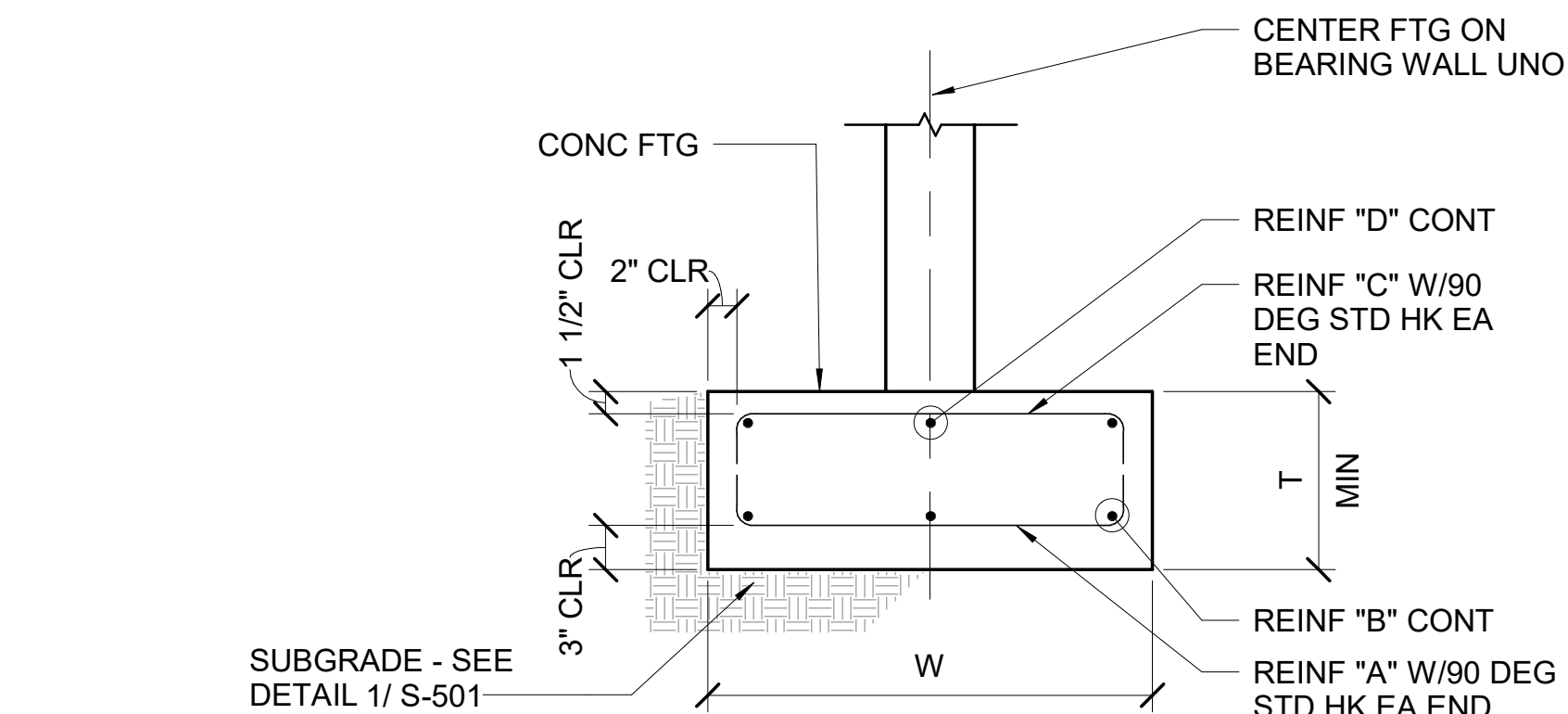
SINGLE CURTAIN INTERSECTION



DOUBLE CURTAIN INTERSECTION

NOTES:
1. CORNER BARS SHALL MATCH SIZE & LOCATION OF EACH HORIZ REINFORCEMENT.
2. PROVIDE CORNER BARS FOR ALL HORIZONTAL BARS AT CORNERS.
3. FOR 'Lsb' LAP SPLICE DISTANCE, SEE LAP SPLICE TABLE ON S-XXX STRUCTURAL GENERAL NOTES.

4 TYP FOUNDATION CORNER REINFORCING

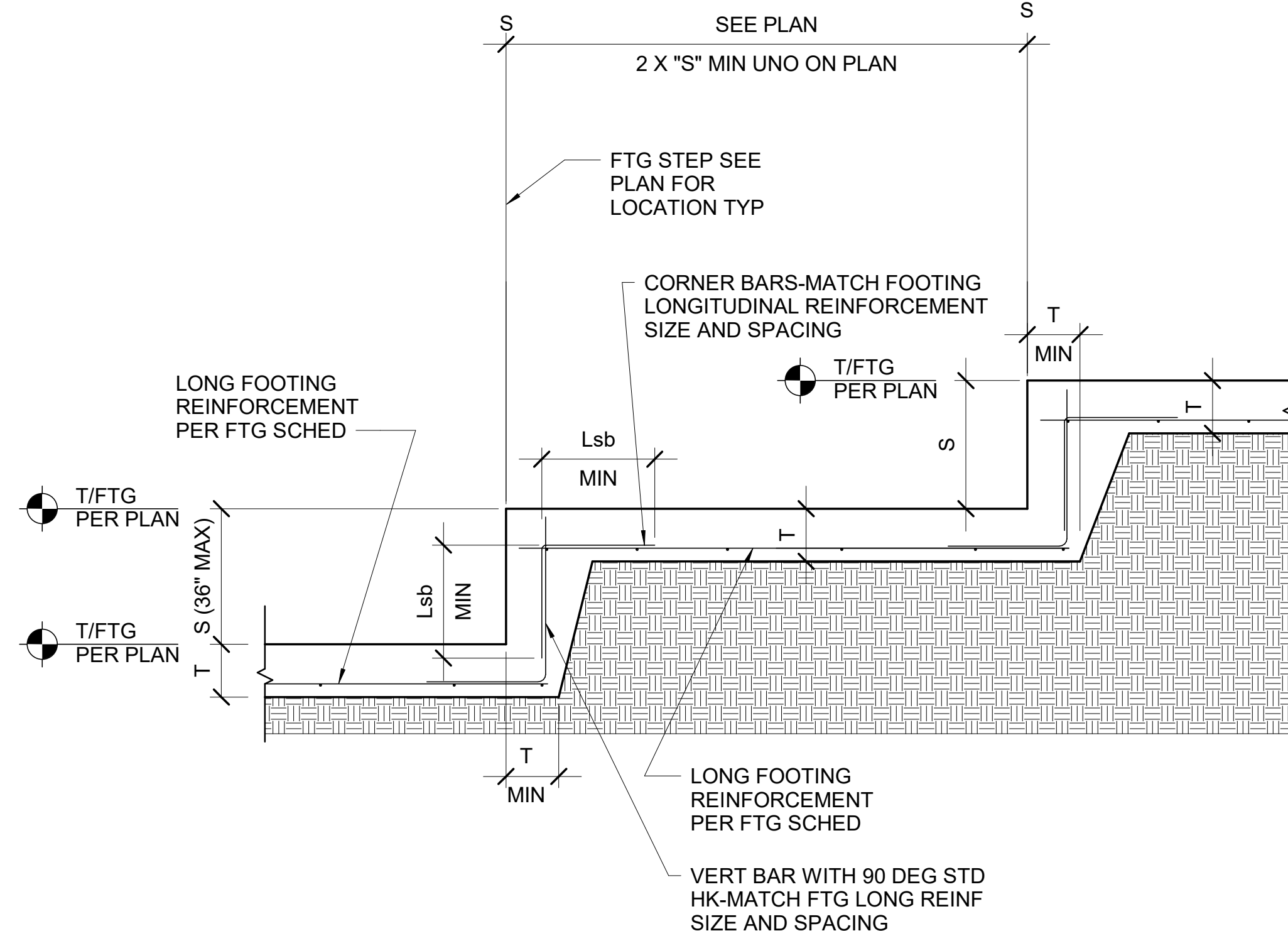


CONTINUOUS SPREAD FTG SCHEDULE:

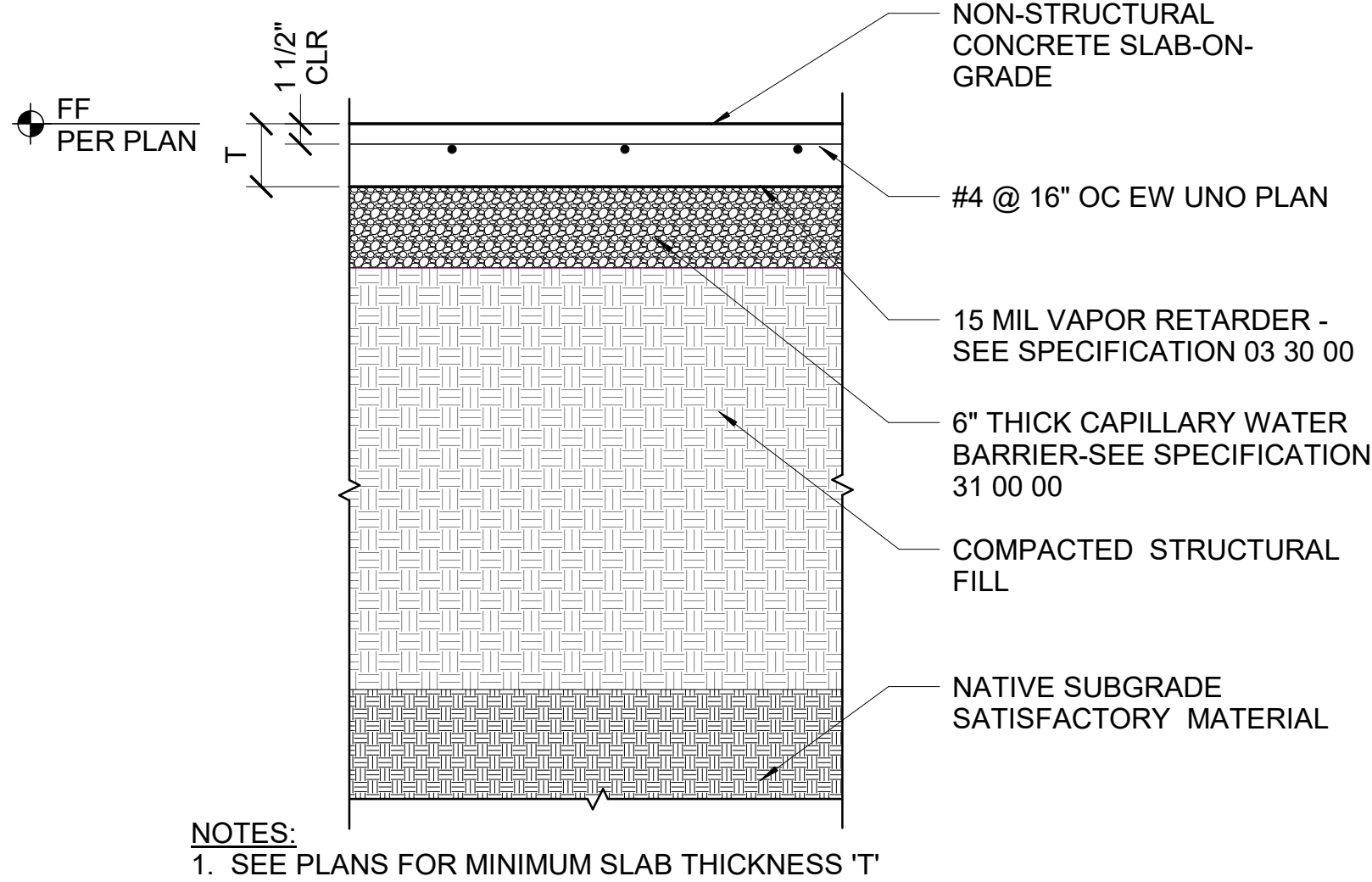
MARK	'W'	'T'	BOT REINF		TOP REINF		COMMENTS
			A	B	C	D	
CF-2.0	2'-0"	12"	-	(3) #4	-	-	

5 CONTINUOUS SPREAD FOOTING SCHEDULE

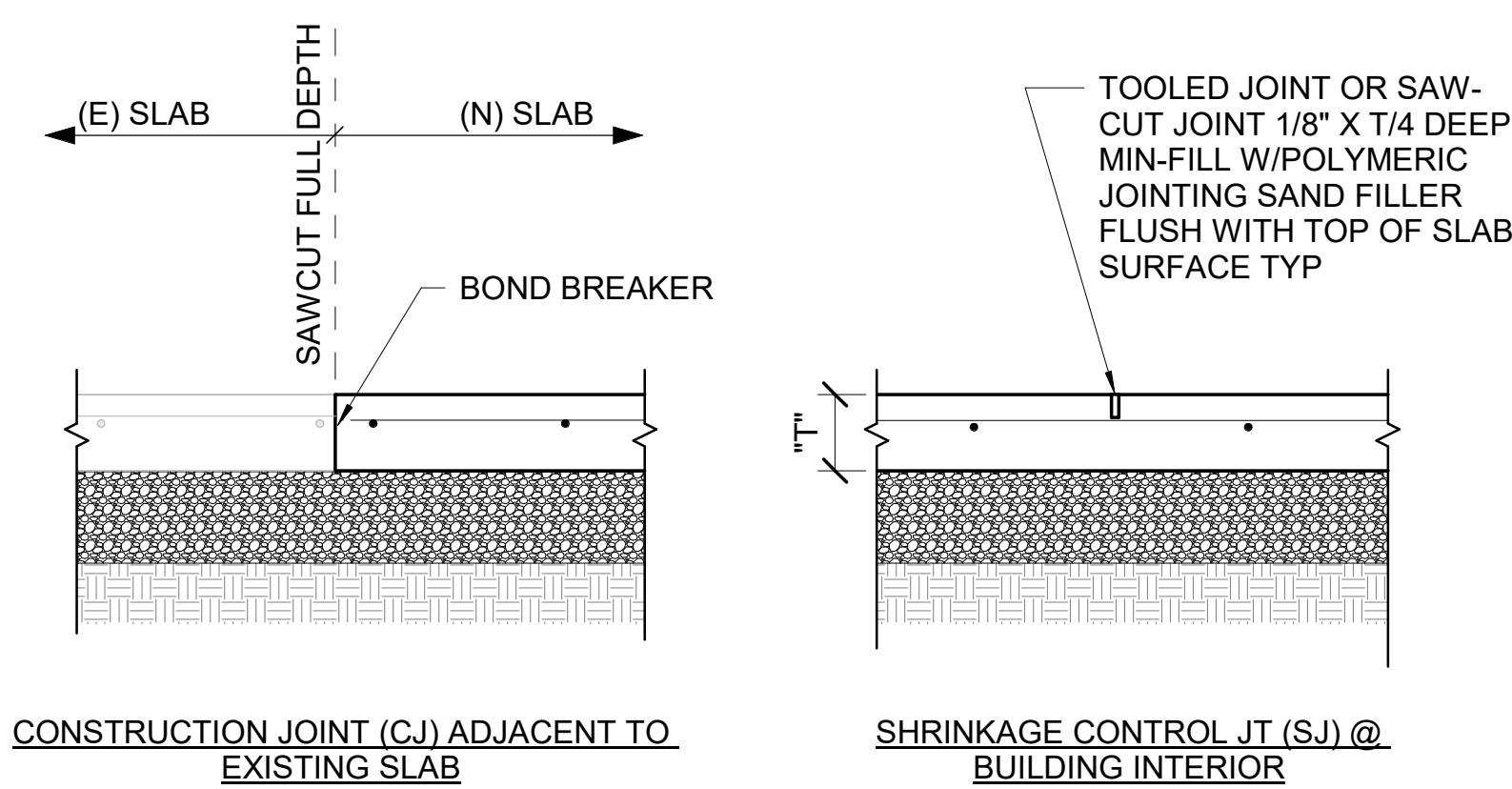
6 TYPICAL STEPPED FTG



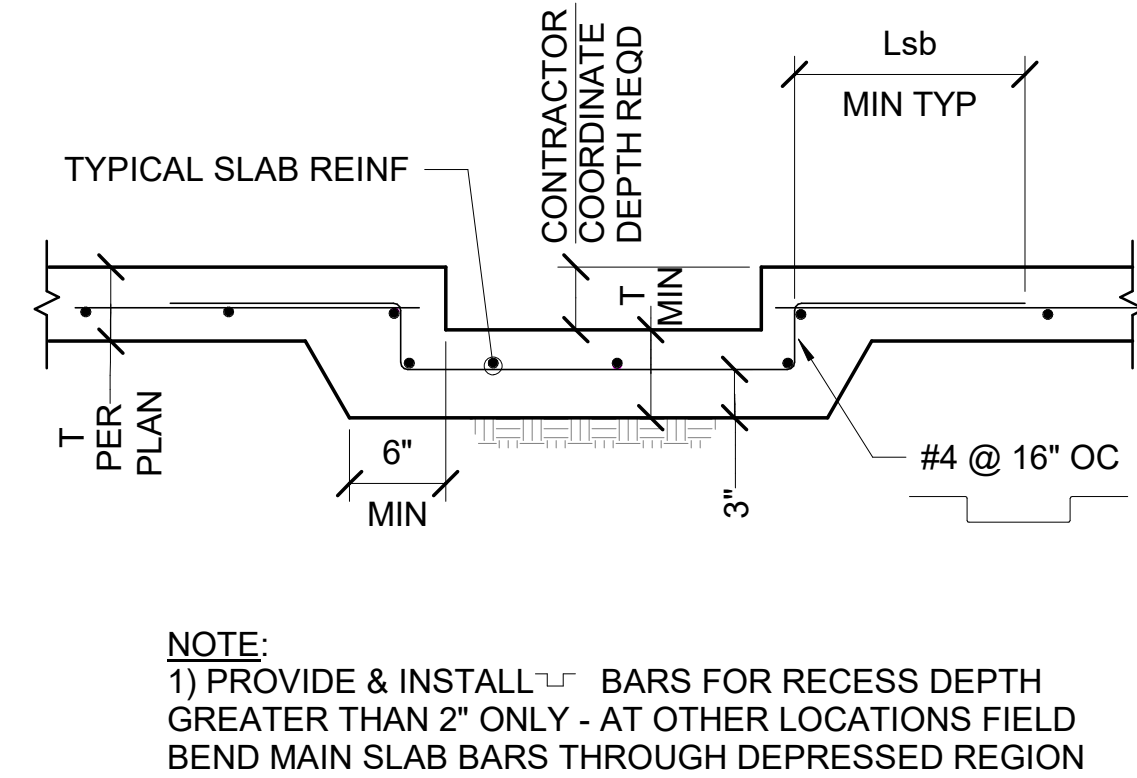
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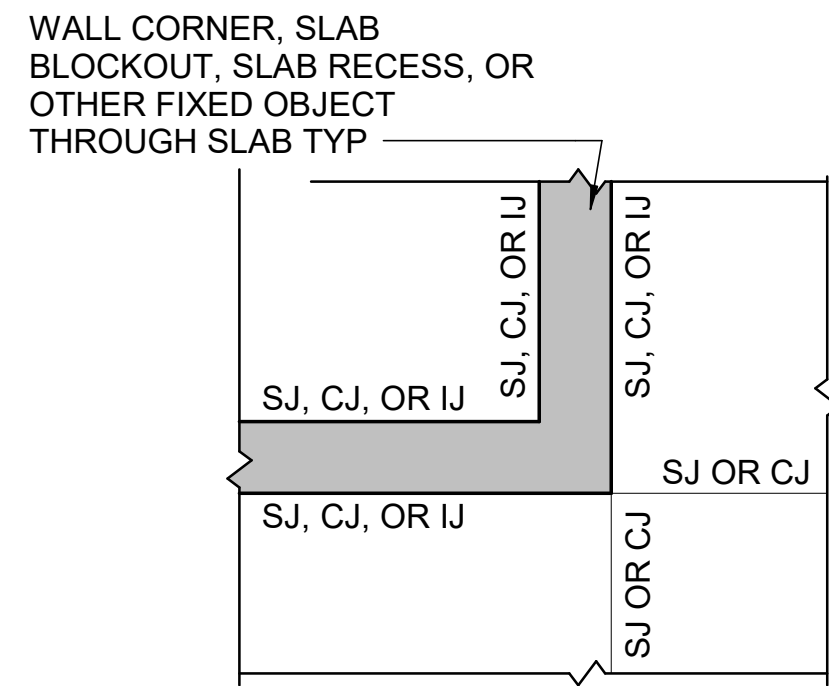
1 TYP INTERIOR SLAB ON GRADE
S-502 SCALE : 1" = 1'-0"



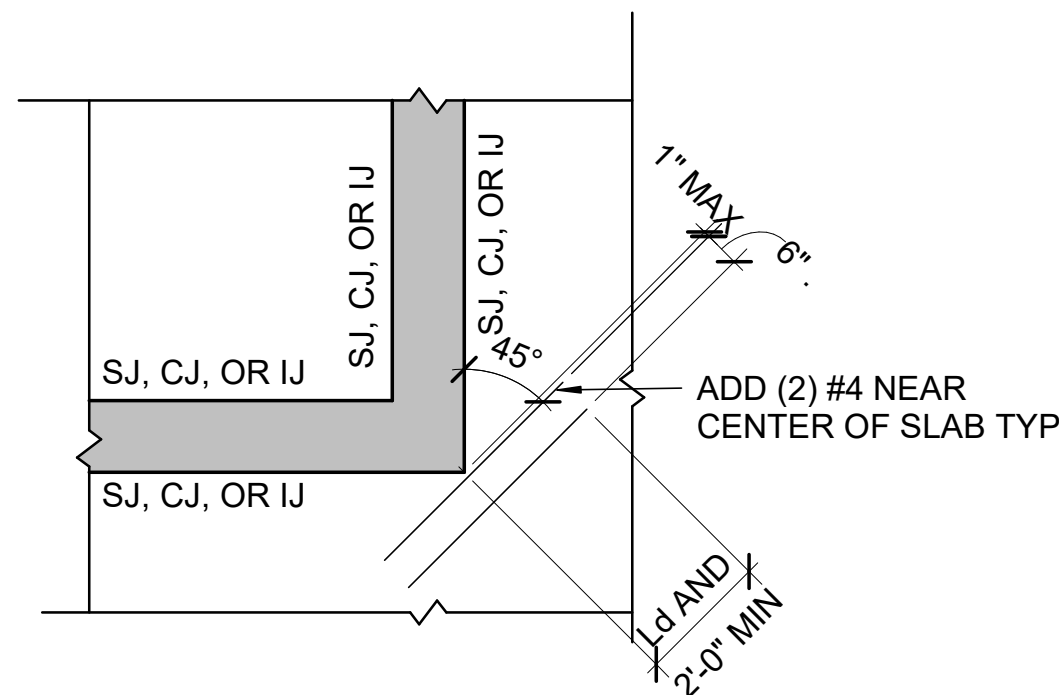
2 TYP INTERIOR SLAB JOINT DETAILS
S-502 SCALE : 1" = 1'-0"



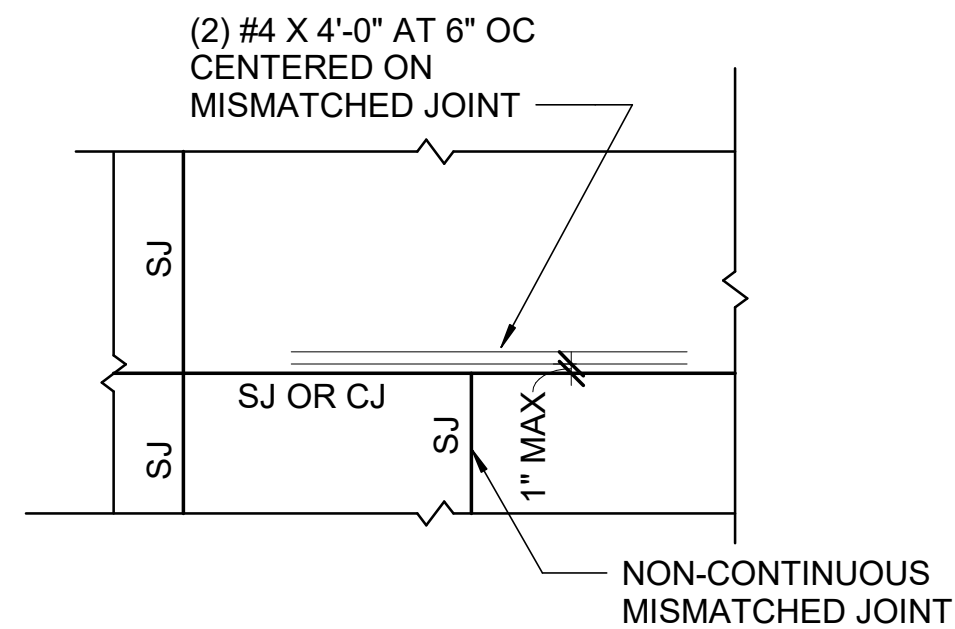
3 TYP RECESSED SLAB DETAIL
S-502 SCALE : 1" = 1'-0"



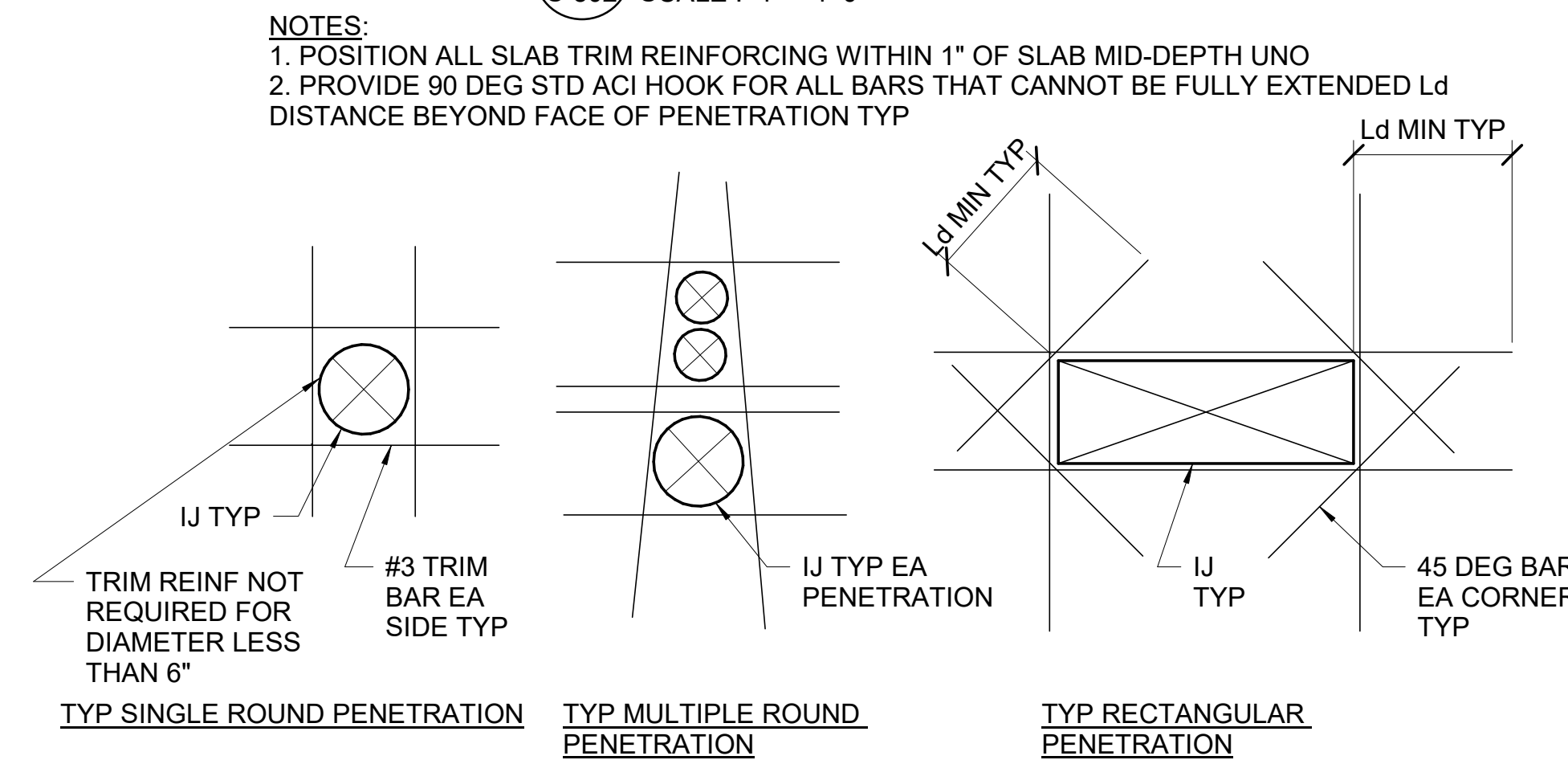
SLAB CORNER CONDITION AT FIXED OBJECT OR OPENING WITH SLAB JOINTS AT CORNER (PLAN VIEW)



SLAB CORNER CONDITION AT FIXED OBJECT OR OPENING WITH SLAB JOINTS NOT AT CORNER (PLAN VIEW)

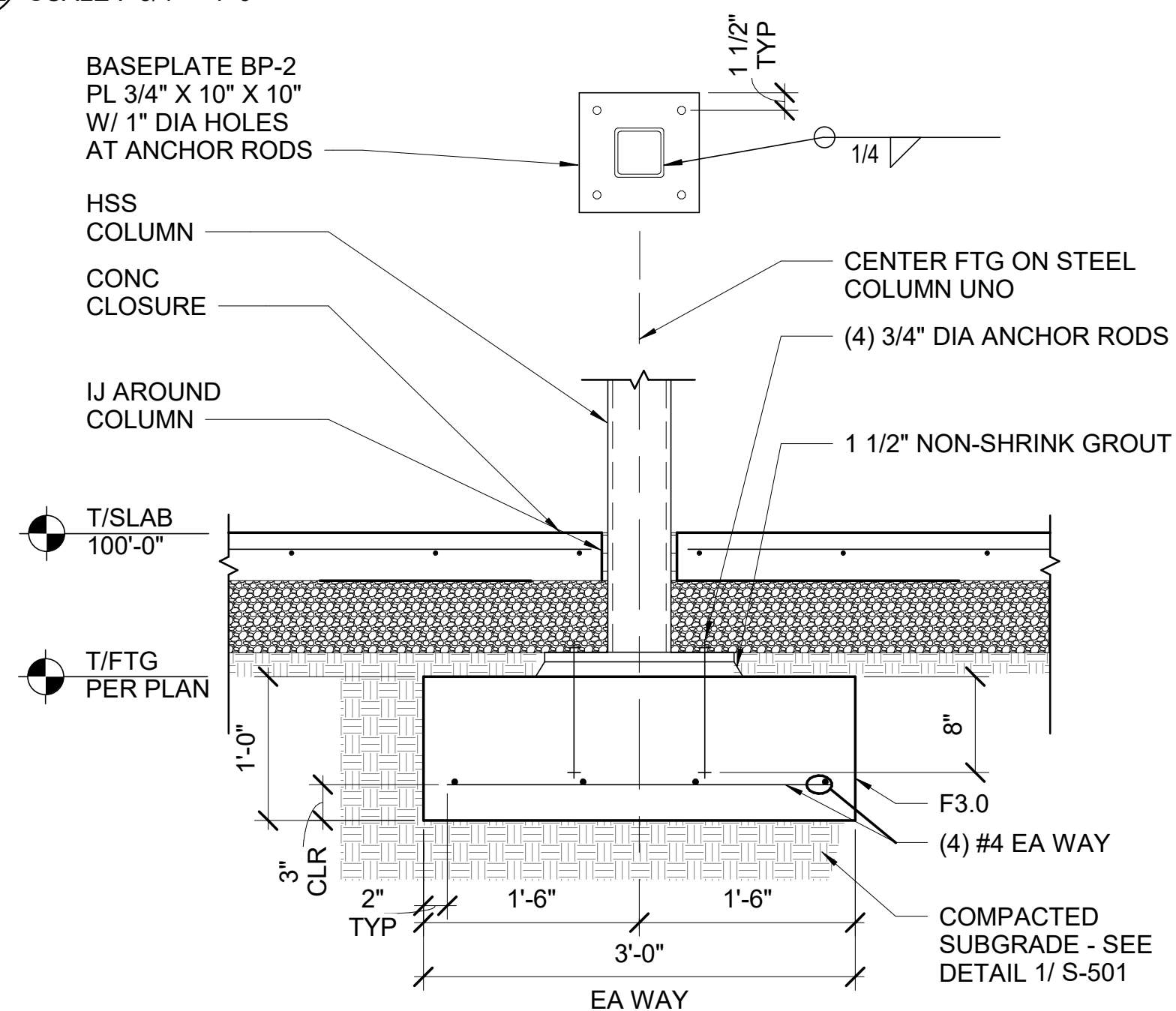


TYP SLAB REINFORCING AT MISMATCHED SLAB JOINTS

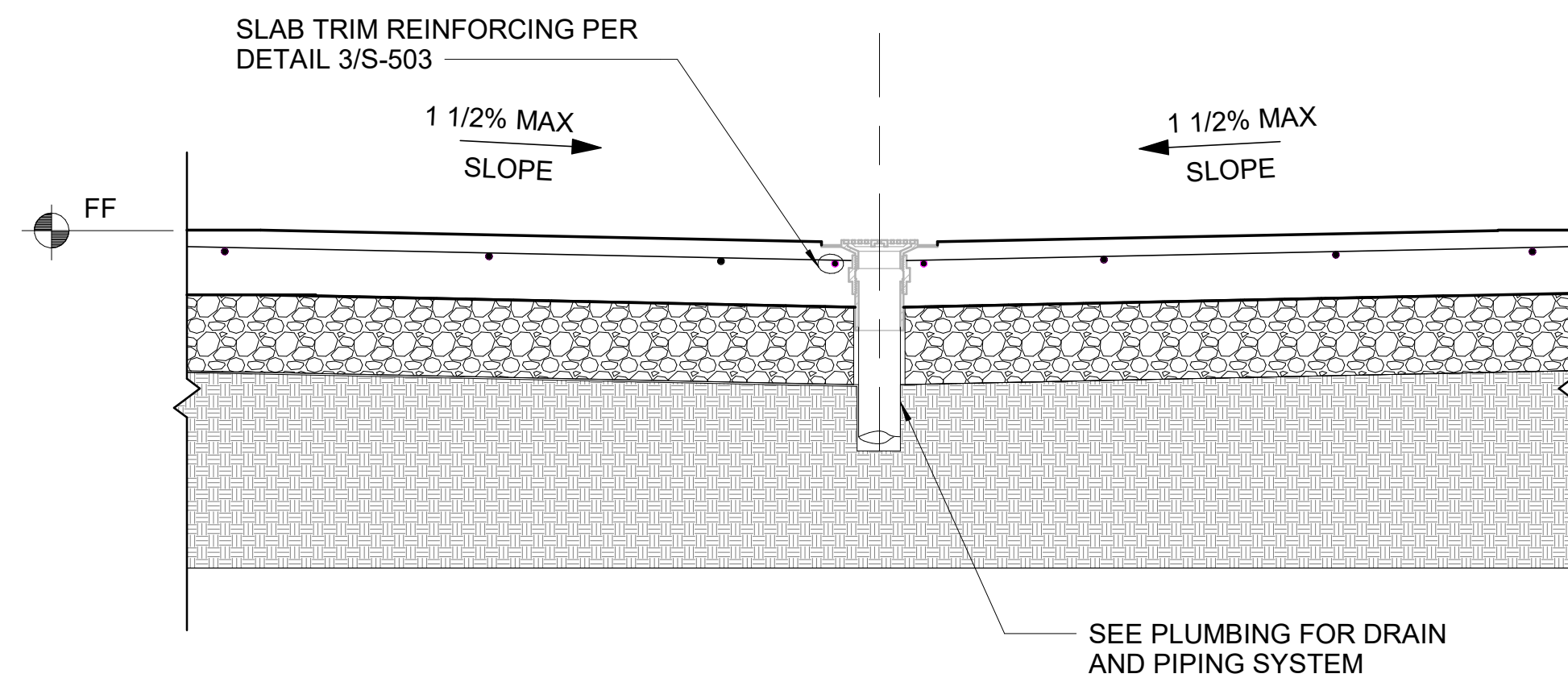


6 TYPICAL REINFORCING AT SLAB ON GRADE PENETRATIONS
S-502 SCALE : 1" = 1'-0"

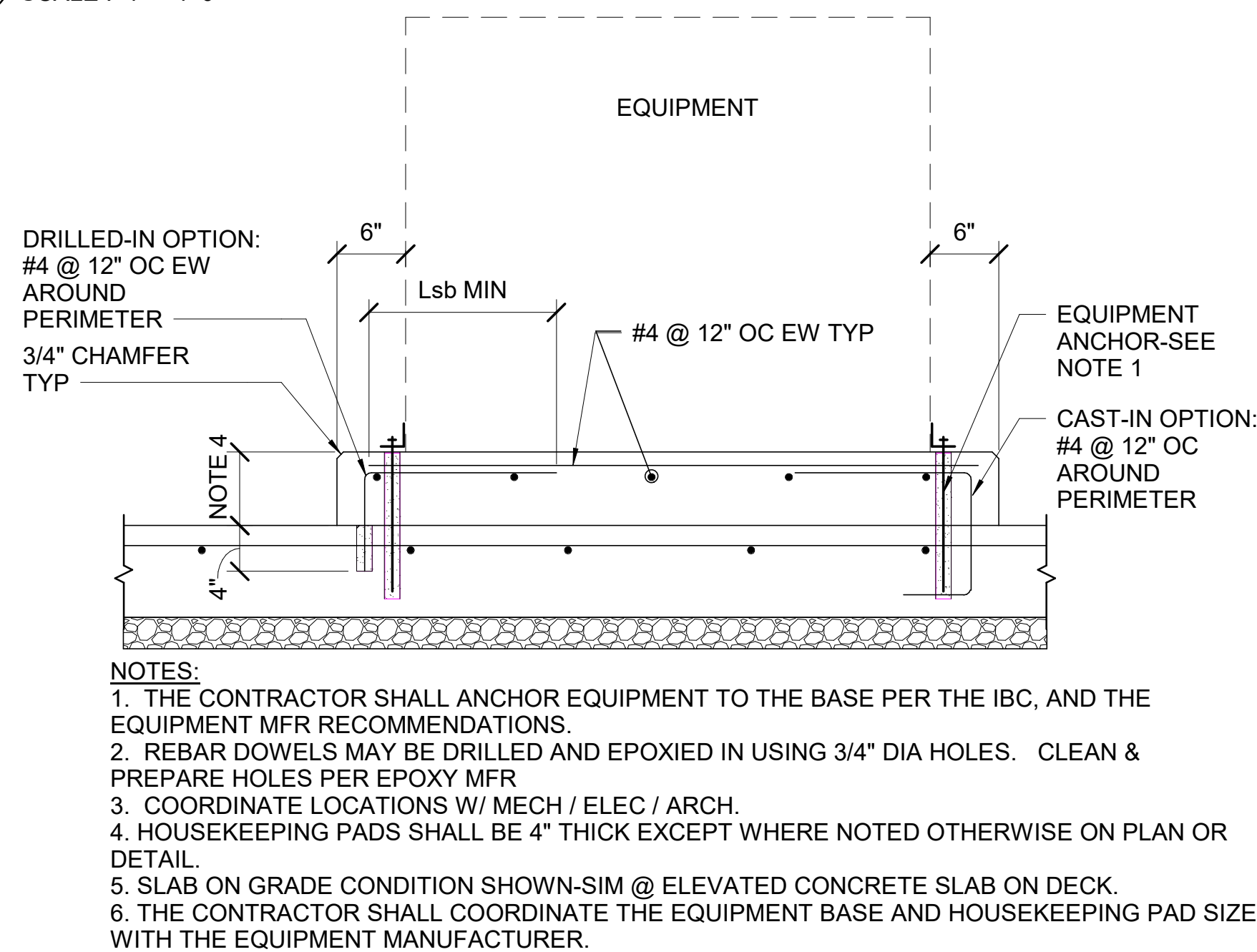
4 TYP REINF AT SLAB ON GRADE RE-ENTRANT CORNERS AND MIS-MATCHED SLAB JOINTS
S-502 SCALE : 3/4" = 1'-0"



7 HSS COLUMN @ ISOLATED SPREAD FOOTING
S-502 SCALE : 1" = 1'-0"



8 TYP SLAB ON GRADE AT FLOOR DRAIN
S-502 SCALE : 1" = 1'-0"



9 TYP CONCRETE HOUSEKEEPING PAD
S-502 SCALE : 1" = 1'-0"



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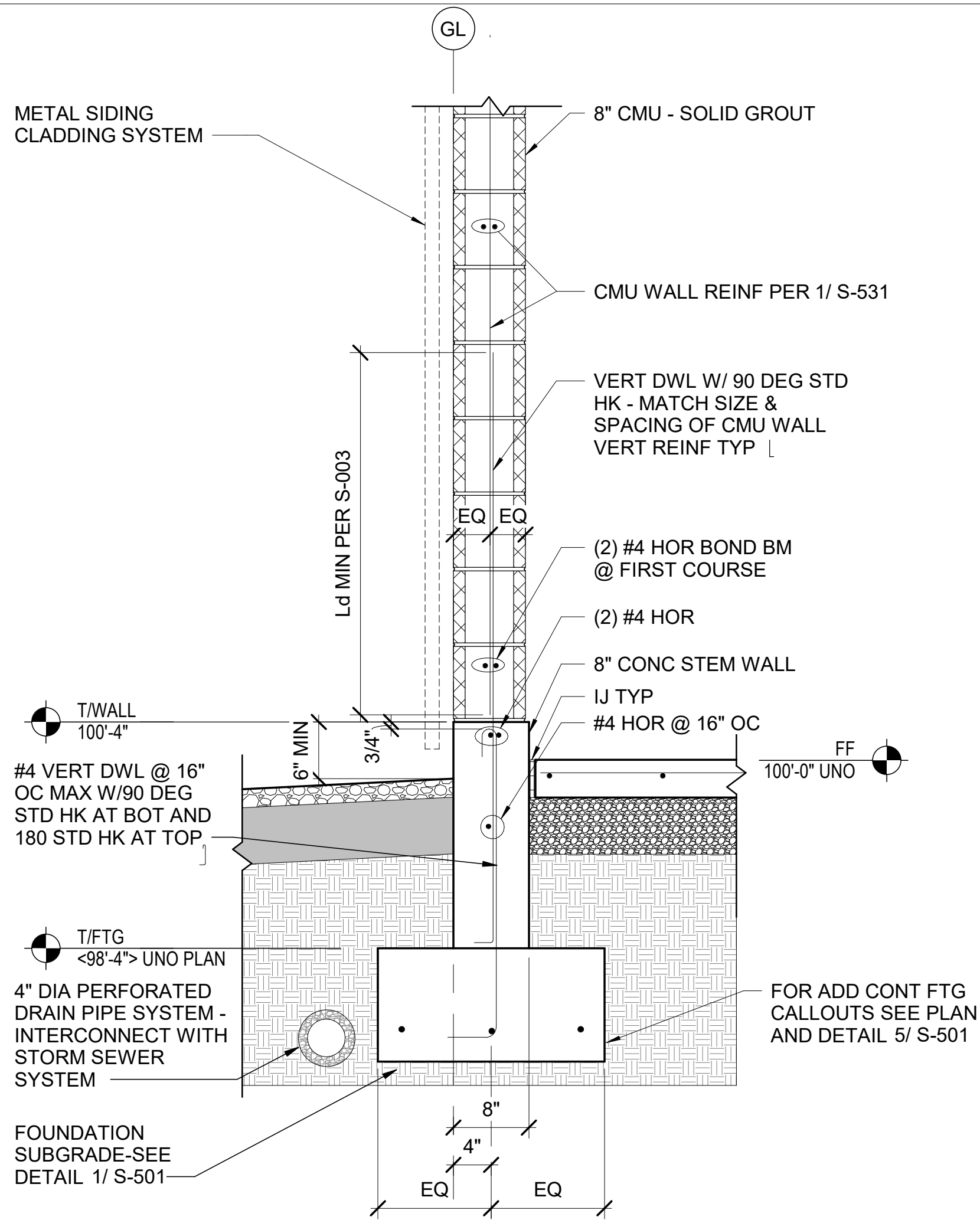
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Description	
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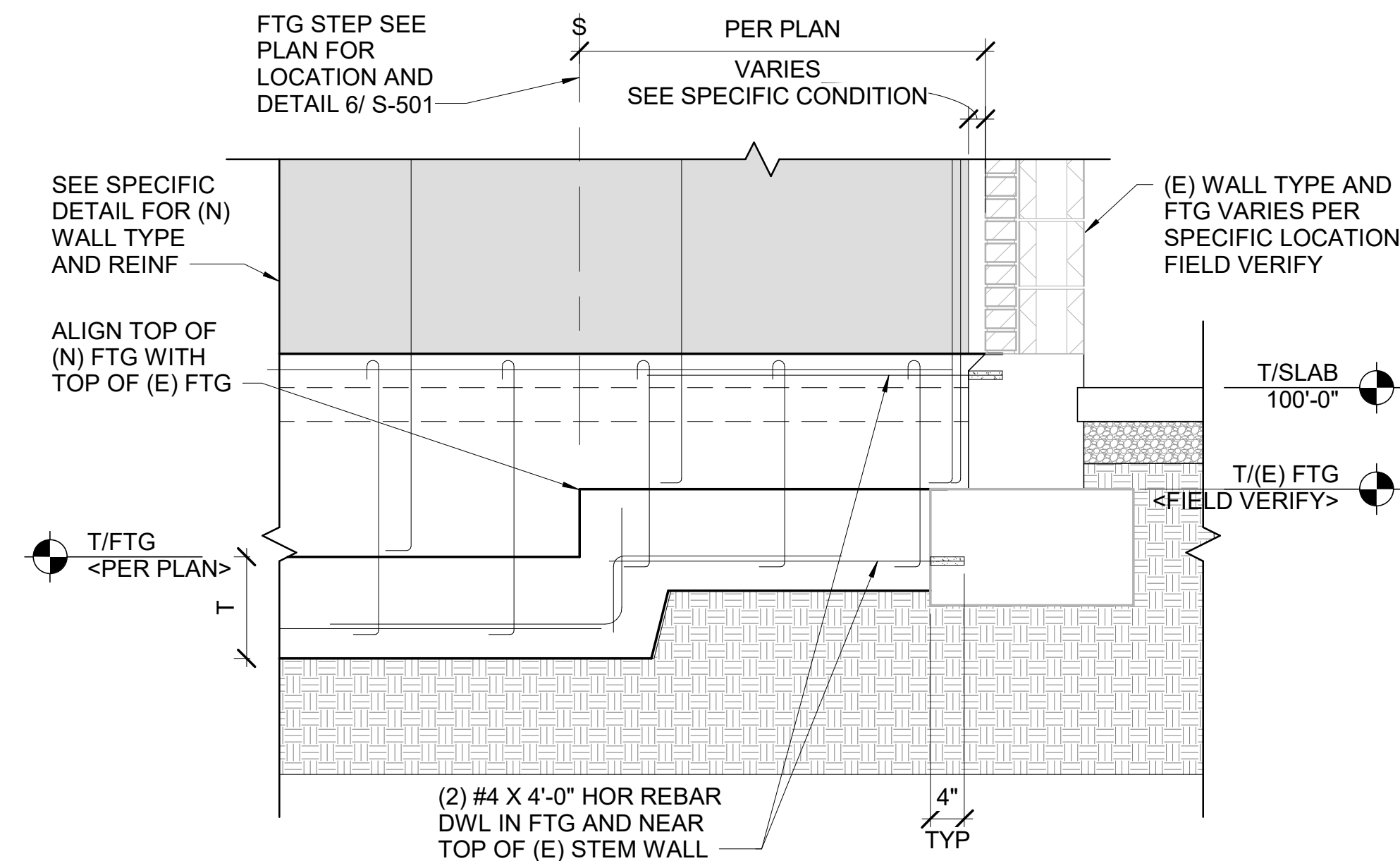
TYPICAL FOUNDATION DETAILS

S-502

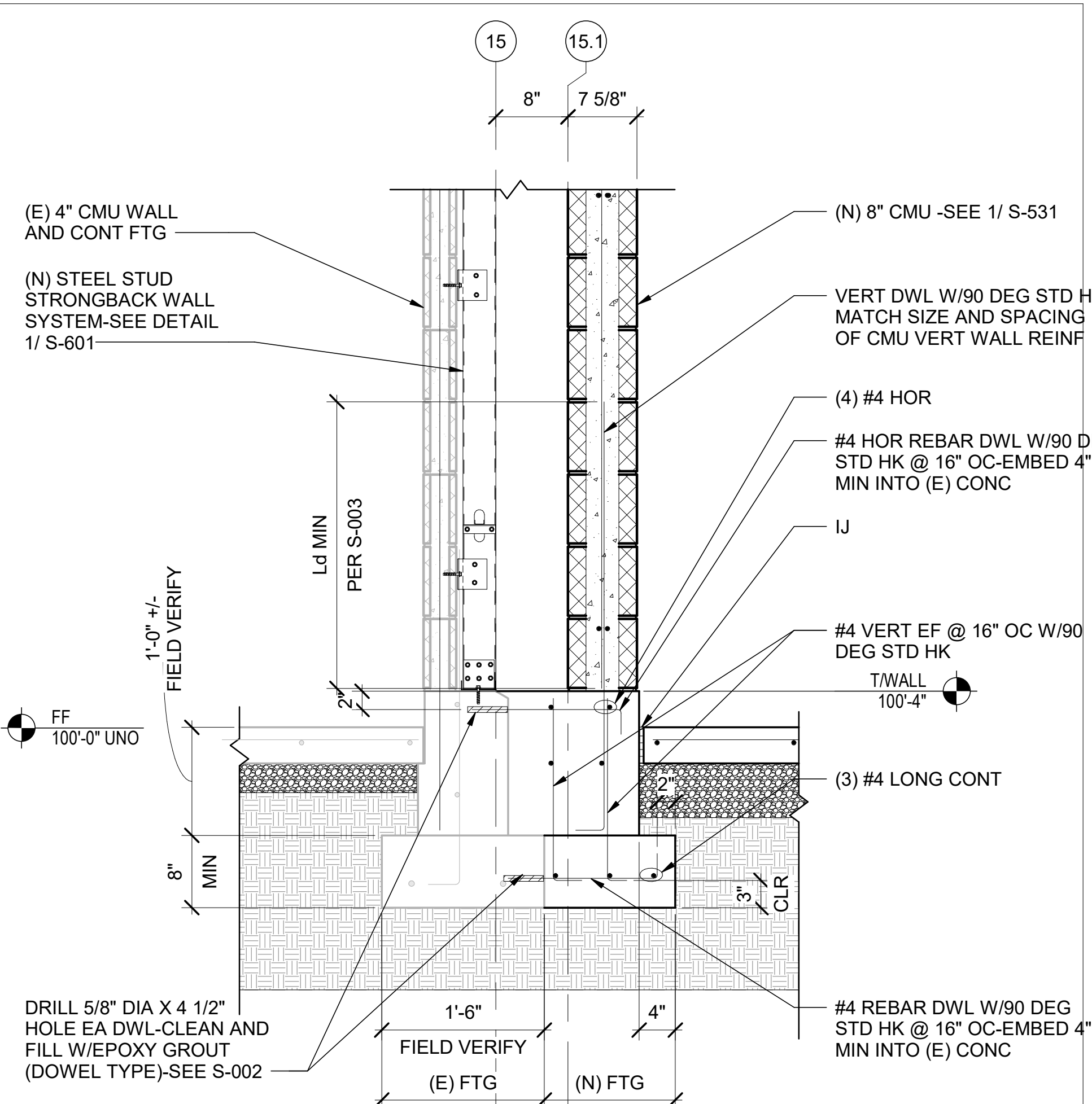
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Page 79 of 351



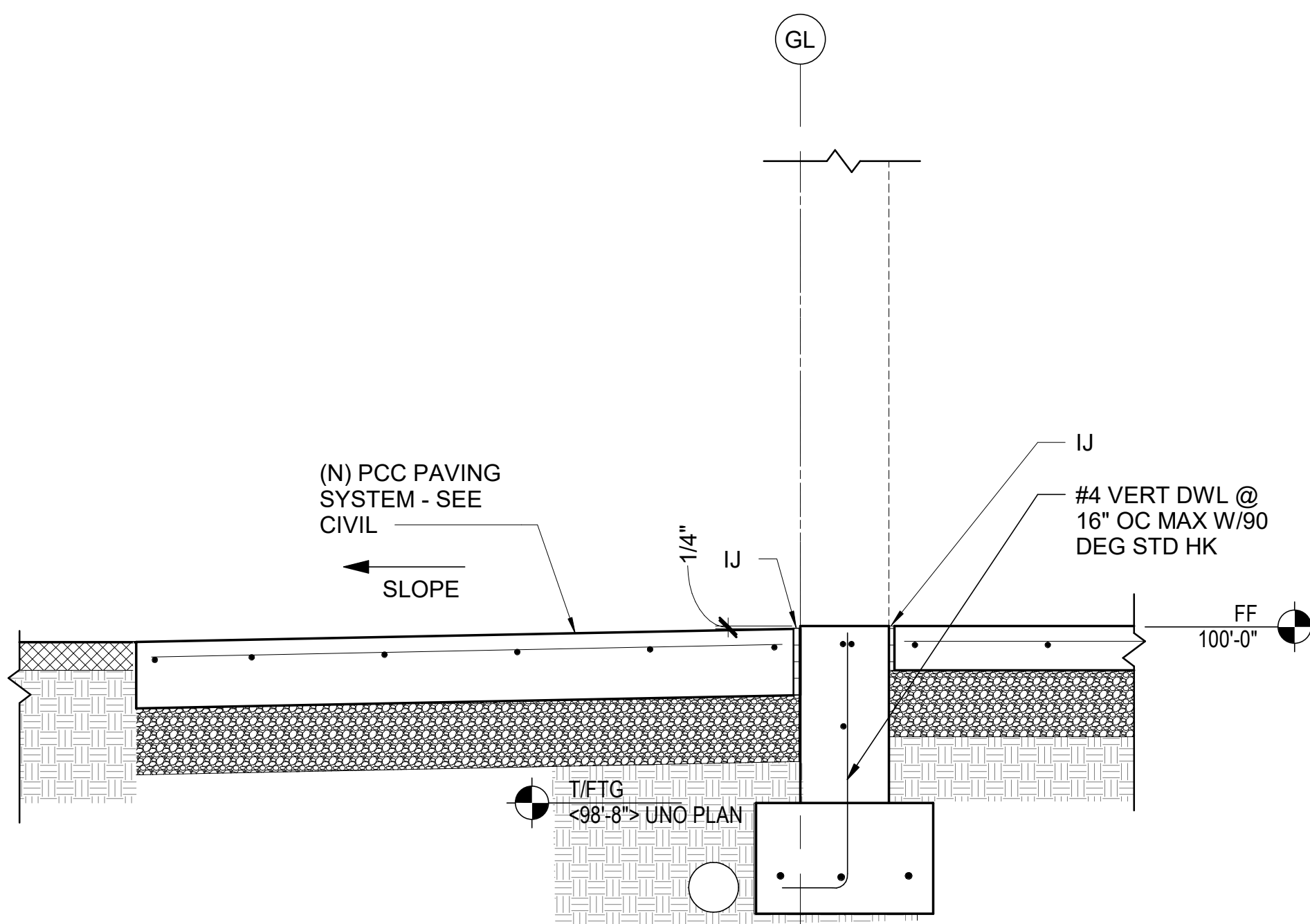
1 TYP EXTERIOR 8" CMU BEARING WALL FTG
S-511 SCALE : 1" = 1'-0"



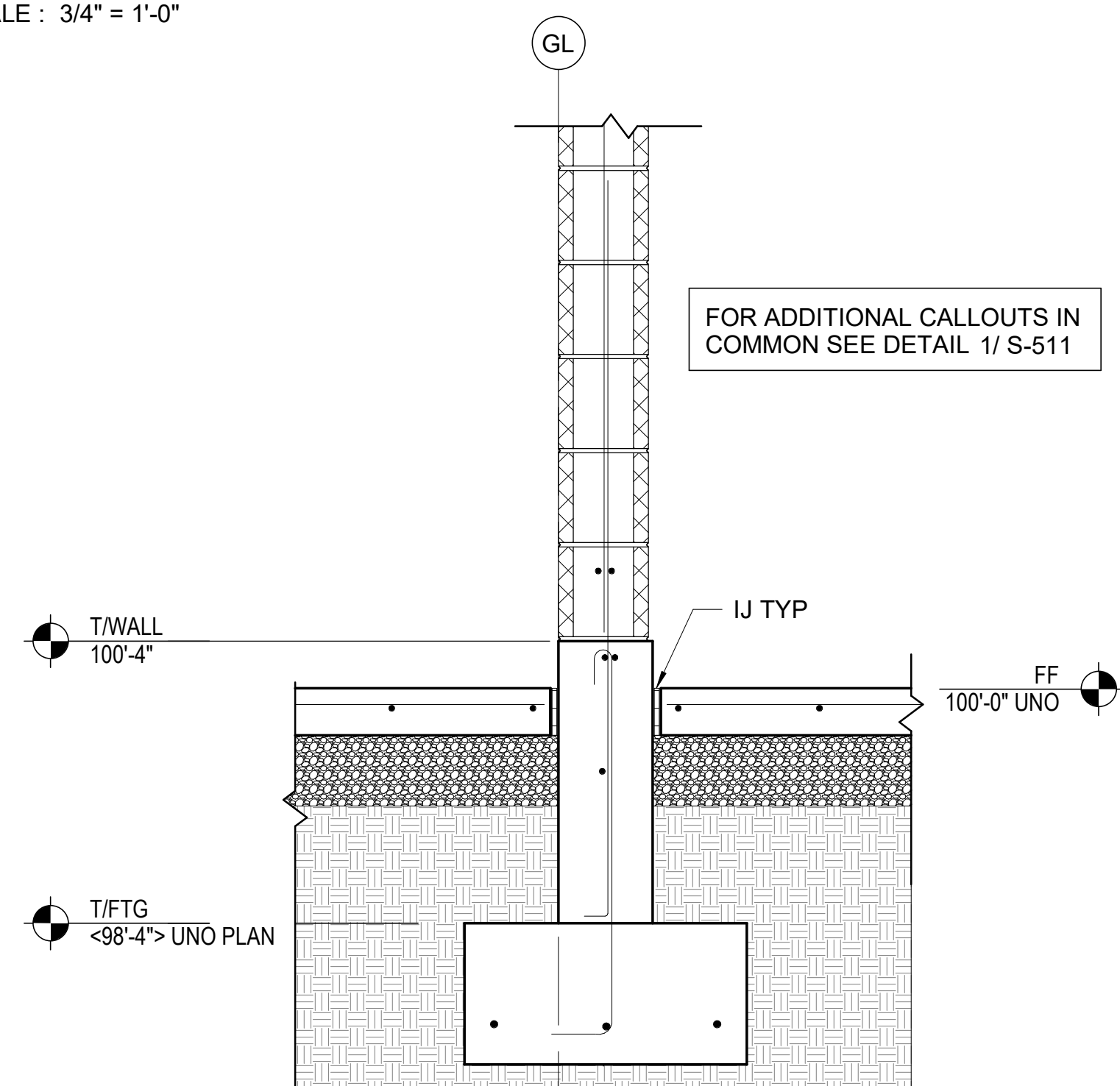
2 TYP (N) FND CONN TO (E) FND
S-511 SCALE : 3/4" = 1'-0"



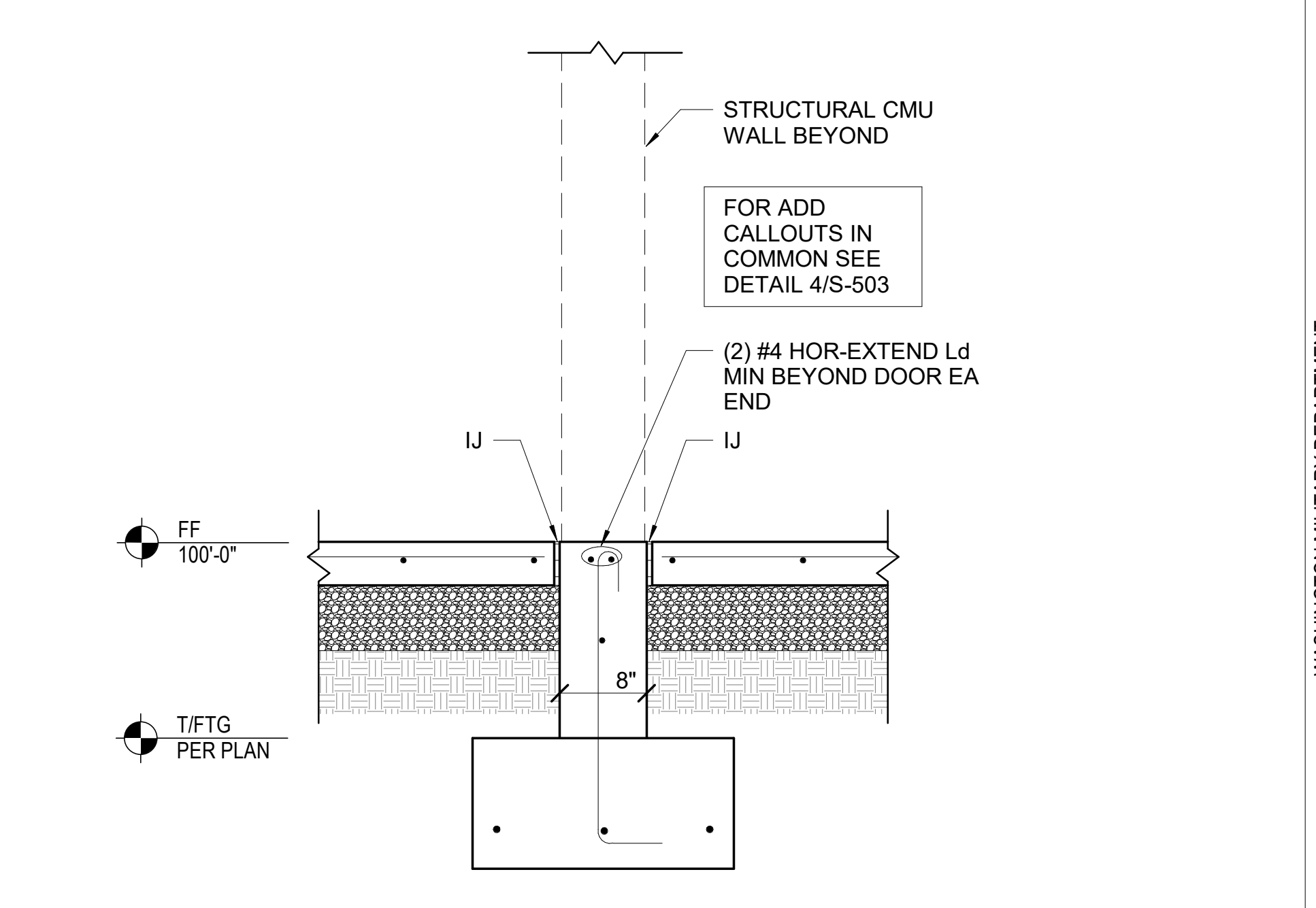
3 FOUNDATION AT SEISMIC JOINT
S-511 SCALE : 1" = 1'-0"



4 TYP STOOP AT EXTERIOR DOOR
S-511 SCALE : 1" = 1'-0"



5 TYP INTERIOR 8" CMU BEARING WALL FTG
S-511 SCALE : 1" = 1'-0"



6 TYP FND FOR INTERIOR CMU WALL @ DOOR
S-511 SCALE : 1" = 1'-0"



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FOUNDATION DETAILS

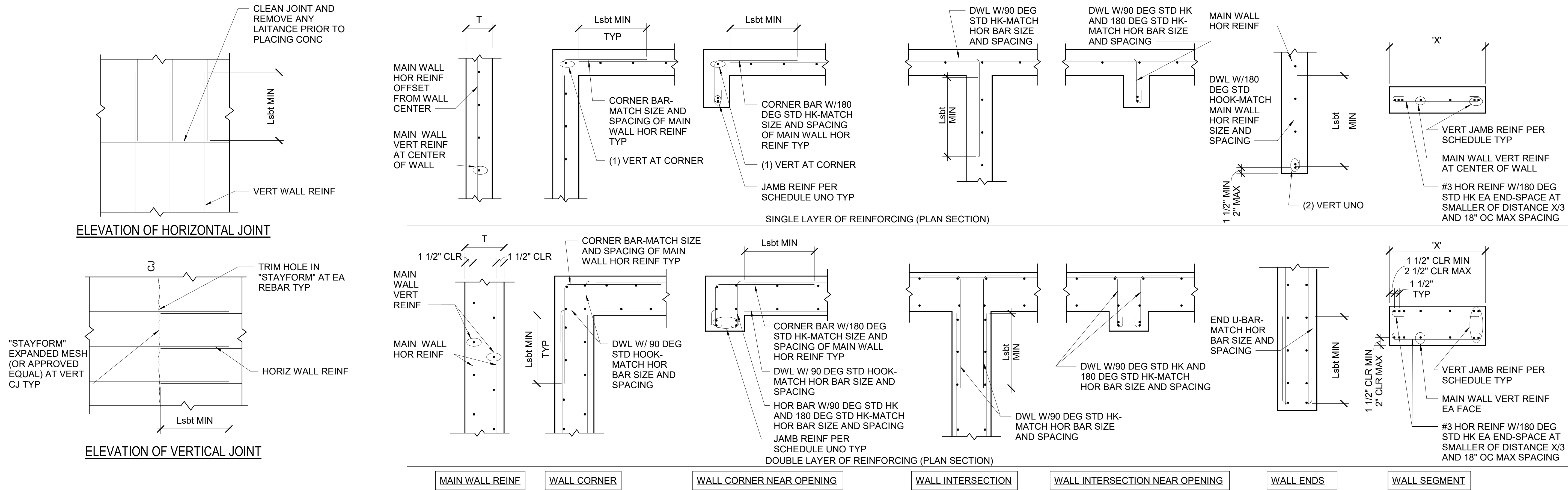
S-511

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1 TYP CONCRETE WALL REINFORCING

S-521 NTS



TYP CONCRETE WALL INTERSECTIONS AND DETAILS

2 TYP CONC WALL CONSTRUCTION JOINT

S-521 NTS

3 TYP CONC WALL CONSTRUCTION JOINT

S-521 NTS

CONCRETE WALL MAIN WALL REINFORCING SCHEDULE			
TYPE	THICKNESS	VERTICAL REINFORCING	HORIZONTAL REINFORCING
A	8"	#4 VERT @ 9" OC EF ⁸	#4 HOR @ 9" OC EF ⁸
B	8"	#4 VERT @ 16" OC	#4 HOR @ 16" OC

NOTES:

- THIS CONCRETE WALL ELEVATION IS AN EXAMPLE ONLY TO ILLUSTRATE TYPICAL CONCRETE WALL REINFORCING TO BE USED ON THE PROJECT UNO.
- SEE S-002 FOR REBAR LAP SPLICE DISTANCES
- PROVIDE FOUNDATION DWLS WITH DEVELOPMENT HOOKS AS SHOWN ON THE SPECIFIC DETAIL - MATCH SIZE AND SPACING OF MAIN WALL VERTICAL REINFORCING INCLUDING JAMB REINFORCING AND WALL PILASTER REINFORCING UNLESS APPROVED OTHERWISE BY THE STRUCTURAL ENGINEER
- PROVIDE 90 DEGREE OR 180 DEGREE ACI STD HK FOR ALL LINTEL BARS THAT CANNOT BE FULLY EXTENDED 'Ld' MIN BEYOND FACE OF OPENING TYP
- SEE WALL FRAMING ELEVATIONS FOR ADDITIONAL REINFORCING
- PROVIDE MAIN WALL REINFORCING TYPE A UNLESS INDICATED OTHERWISE ON PLAN OR WALL ELEVATION
- OPENING REINFORCING IS NOT REQ'D FOR SINGULAR RECTANGULAR OPENINGS SMALLER THAN 8"x8" AND SINGULAR ROUND OPENINGS SMALLER THAN 8" DIA WHERE THE OPENING IS LOCATED PER THE LIMITS SHOWN. FOR OTHER CONDITIONS, PROVIDE TRIM REINFORCING AROUND THE OPENING AS INDICATED
- STAGGER REINFORCING STEEL IN WALL TYPE A EA FACE TO RESULT IN 4 1/2" SECURITY GRID



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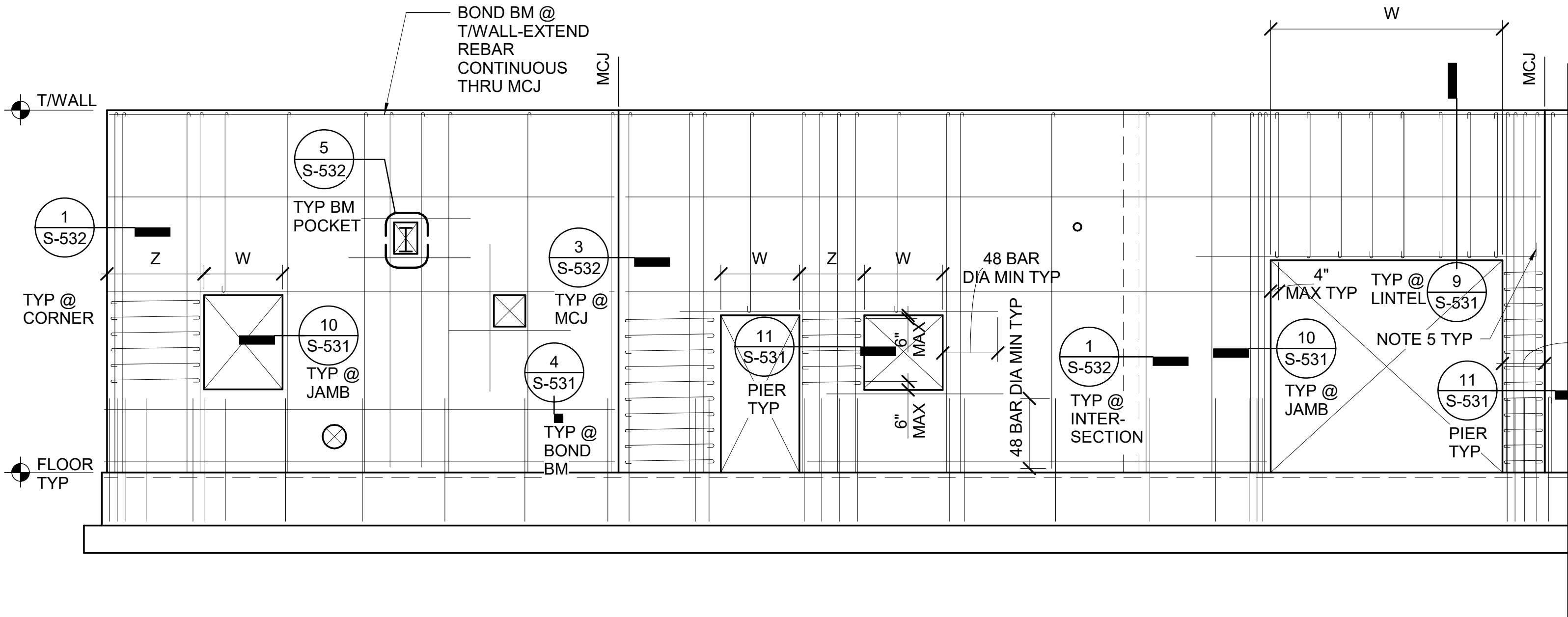
Mark	Description	Date

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CONCRETE WALL DETAILS

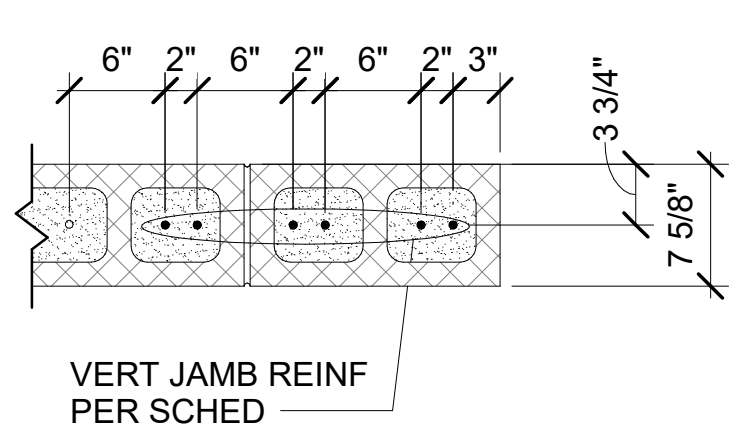
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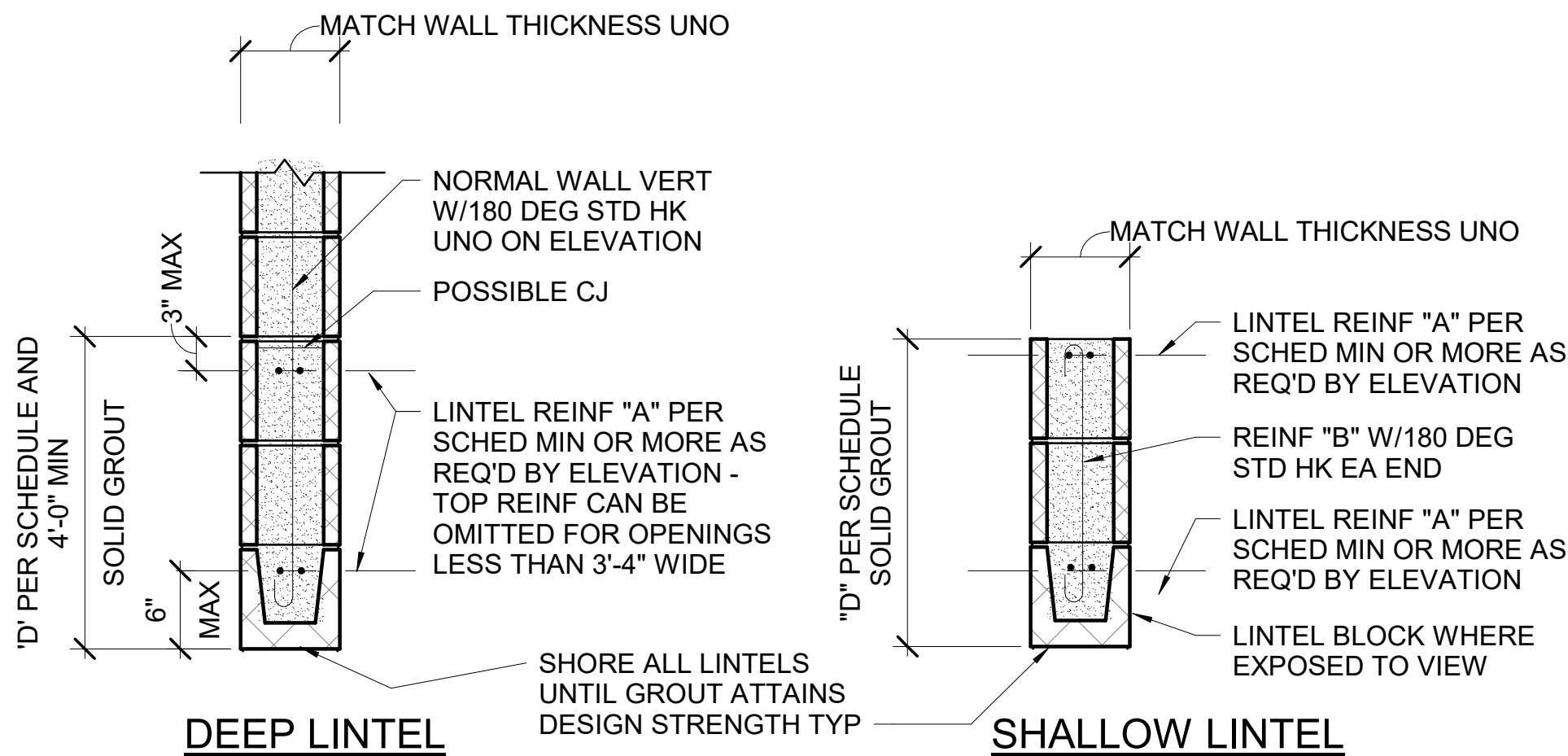
1 S-531 NTS
TYP CMU WALL REINFORCING ELEVATION-SINGLE STORY

LINTEL REINFORCING SCHEDULE				
MK	SPAN 'W' (MAX)	DEPTH 'D' (MIN)	REINF 'A'	REINF 'B'
L-4	4'-0"	4'-0"	(2) #5	#4 @ 16" OC
L-6	6'-0"	4'-0"	(2) #5	#4 @ 16" OC
L-7	7'-0"	4'-0"	(2) #5	#4 @ 16" OC
L-12	8'-0"	4'-0"	(2) #5	#4 @ 16" OC
L-16	16'-0"	6'-8"	(2) #5	#5 @ 32" OC



MINIMUM JAMB REINFORCING SCHEDULE	
8" CMU WALL	
W (MAX)	JAMB REINFORCING
4'-0"	(2) #5
6'-0"	(3) #5
7'-0"	(3) #5
12'-0"	(4) #5
16'-0"	(1) #4 (1 VERT BAR @ 8" OC THROUGHOUT PIER)

8" CMU JAMB



9 S-531 NTS
TYP CMU LINTEL SECTION

NOTES:

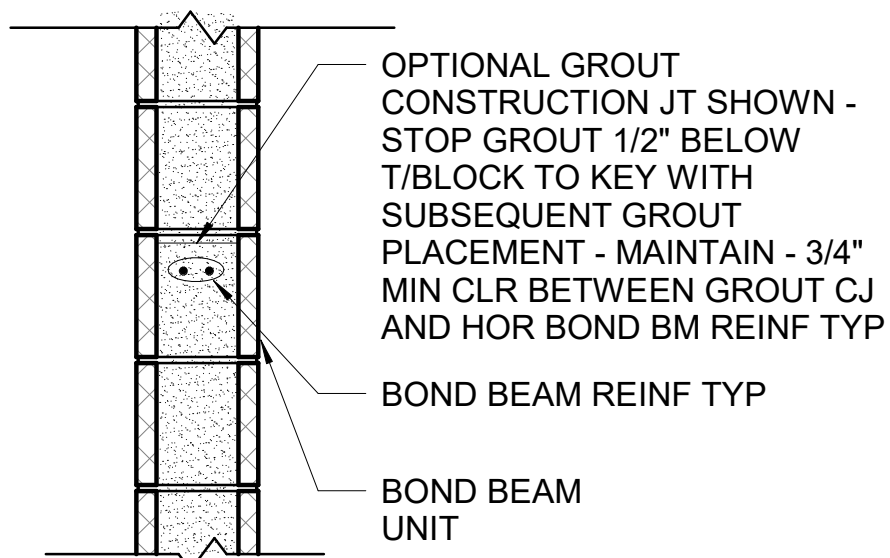
1. MINIMUM JAMB REINF SHOWN - PROVIDE MORE REINF WHERE INDICATED ON ELEV. COORDINATE BLOCK MODULE LAYOUT PRIOR TO PLACING FOUNDATION DOWELS
2. PROVIDE AND INSTALL BAR POSITIONERS AS NECESSARY TO SECURE AND CONTROL JAMB REINFORCING PRIOR TO PLACING GROUT.
3. 'W' INDICATES OPENING WIDTH - SEE 1/S-521
4. VERT JAMB REINF SHALL EXTEND FULL HT BTWN FLOOR/ROOF - LAP SPLICES ARE PERMITTED IN ACCORDANCE WITH THE BUILDING CODE
5. AT CONDITIONS WHERE MULTIPLE BARS ARE REQUIRED, INSTALL BARS NEAREST TO EDGE OF OPENING FIRST, AND THEN INSTALL BARS IN THE NEXT INTERIOR POSITION AT THE DIMENSIONS INDICATED UNTIL ALL BARS ARE INSTALLED

10 S-531 NTS
TYP CMU JAMB REINF ADJACENT TO OPENING

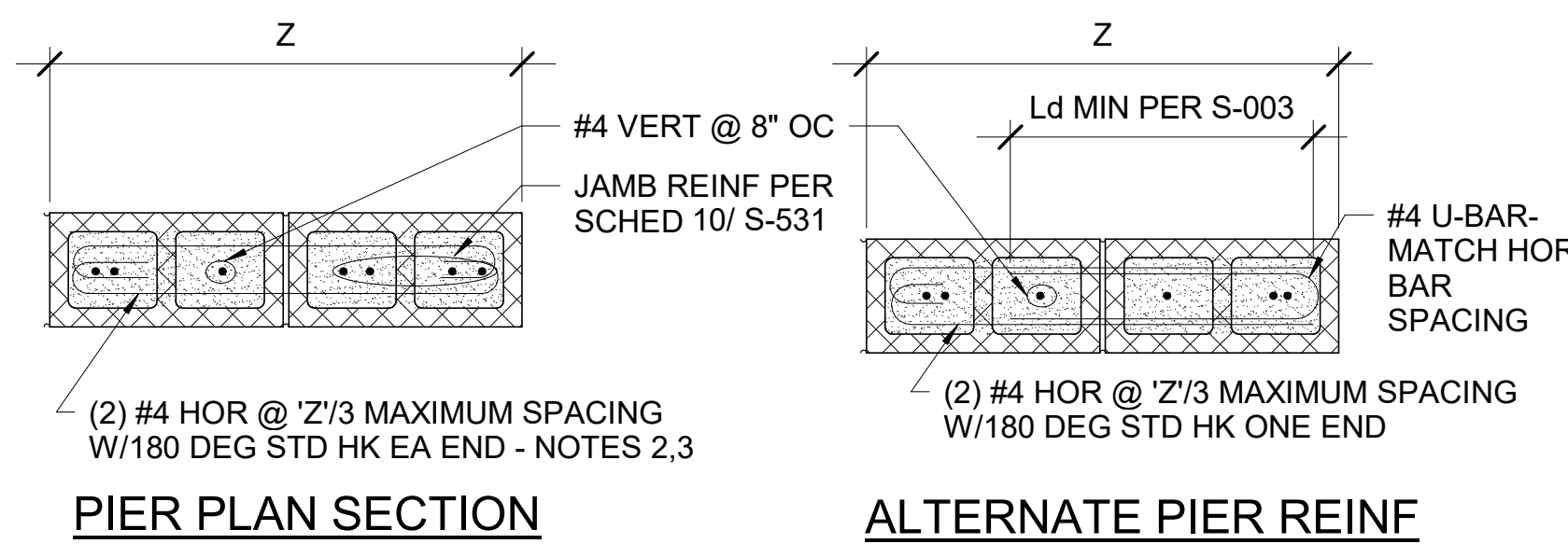
CMU MAIN WALL REINFORCING SCHEDULE			
TYPE	THICKNESS	VERTICAL REINFORCING	HORIZONTAL REINFORCING
A	8"	#5 VERT @ 32" OC	(2) #4 @ 48" OC

NOTES:

- 1) SEE STRUCTURAL GENERAL NOTES S-002 "CONCRETE MASONRY UNITS" AND S-201 FOR ADDITIONAL CALLOUTS
- 2) ALL CMU WALLS SHOWN ON THE STRUCTURAL DRAWINGS ARE STRUCTURAL CMU, EXCEPT BOTH STRUCTURAL AND NON-STRUCTURAL WALLS ARE SHOWN ON THE SLAB ON GRADE PLANS FOR REFERENCE. FOR NON-STRUCTURAL CMU EXTENT AND DIMENSIONS SEE ARCHITECTURAL DRAWINGS
- 3) SOLID GROUT ALL 8" CONCRETE MASONRY UNITS
- 4) PROVIDE FOUNDATION DWLS WITH DEVELOPMENT HOOKS AS SHOWN ON THE SPECIFIC DETAIL- MATCH SIZE AND SPACING OF MAIN WALL VERTICAL REINFORCING INCLUDING JAMB REINFORCING AND WALL PILASTER REINFORCING UNLESS APPROVED OTHERWISE BY THE STRUCTURAL ENGINEER
- 5) PROVIDE 90 DEGREE OR 180 DEGREE ACI STD HK FOR ALL LINTEL BARS THAT CANNOT BE FULLY EXTENDED BEYOND FACE OF OPENING TYP
- 6) TERMINATE ALL HORIZONTAL BOND BEAM REINFORCING AT MASONRY CONTROL JOINTS (MCJ), EXCEPT RUN TOP STORY BOND BEAM REINFORCING CONTINUOUS THROUGH MCJ AT ALL ELEVATED FLOOR AND ATTIC LEVELS
- 7) SEE FOUNDATION PLAN AND ELEVATIONS FOR ADDITIONAL VERTICAL REINF BARS FULL HT WHERE REQUIRED TYP
- 8) VERT DWL W/ FULL LAP SPLICE EACH END TYP UNO
- 9) COORDINATE REBAR LAP SPLICES WITH GROUT CONSTRUCTION JOINTS TYP. PROVIDE ADDITIONAL LAP SPLICES AS NECESSARY TO COORDINATE WITH GROUT CONSTRUCTION JOINTS IF HIGH-LIFT GROUTING IS NOT SELECTED BY THE CONTRACTOR.
- 10) USE WALL TYPE A UNLESS NOTED OTHERWISE ON PLAN OR WALL ELEVATION



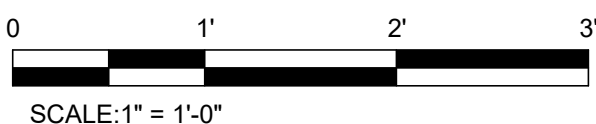
4 S-531 NTS
TYP CMU WALL BOND BEAM



NOTES:

- 1) LOCATE HORIZONTAL BAR 6" MAXIMUM VERTICALLY FROM ADJACENT HEAD/SILL OF OPENING TYP
- 2) THE CONTRACTOR CAN TERMINATE HORIZONTAL PIER REINFORCING WITH A 180 DEGREE STD HOOK, OR TERMINATE WITH A U-BAR SPLICED ONTO THE STRAIGHT BAR AS INDICATED
- 3) FOR PIERS LESS THAN 24" WIDE, THE SPACING BETWEEN HORIZONTAL REINFORCING DOES NOT NEED TO BE LESS THAN 8" ON CENTER.

11 S-531 NTS
TYP CMU PIER DETAIL



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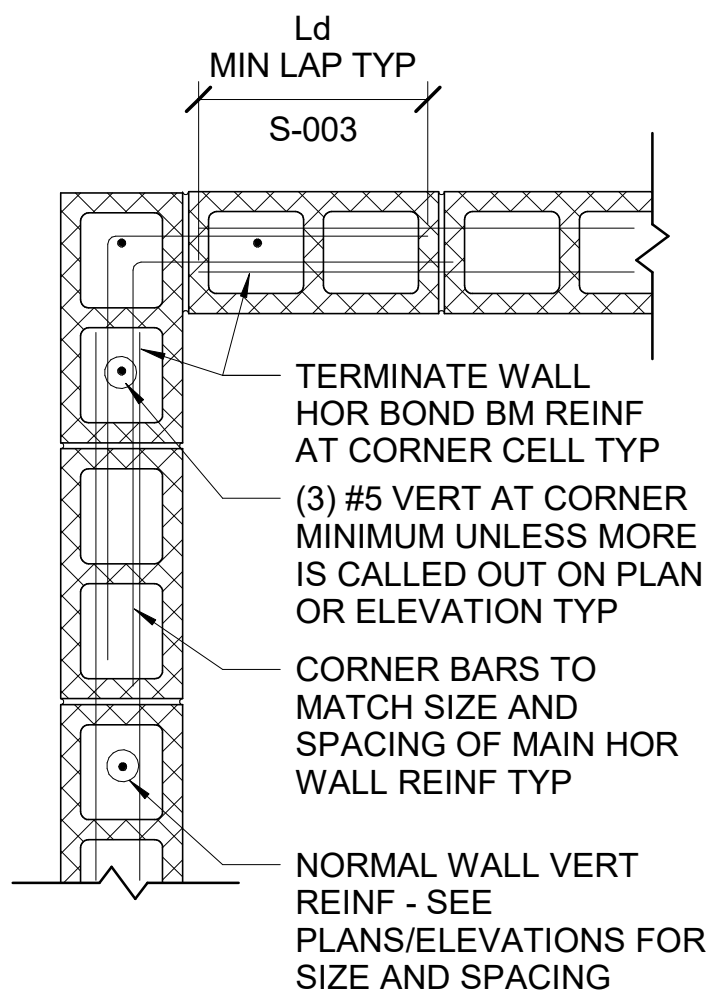
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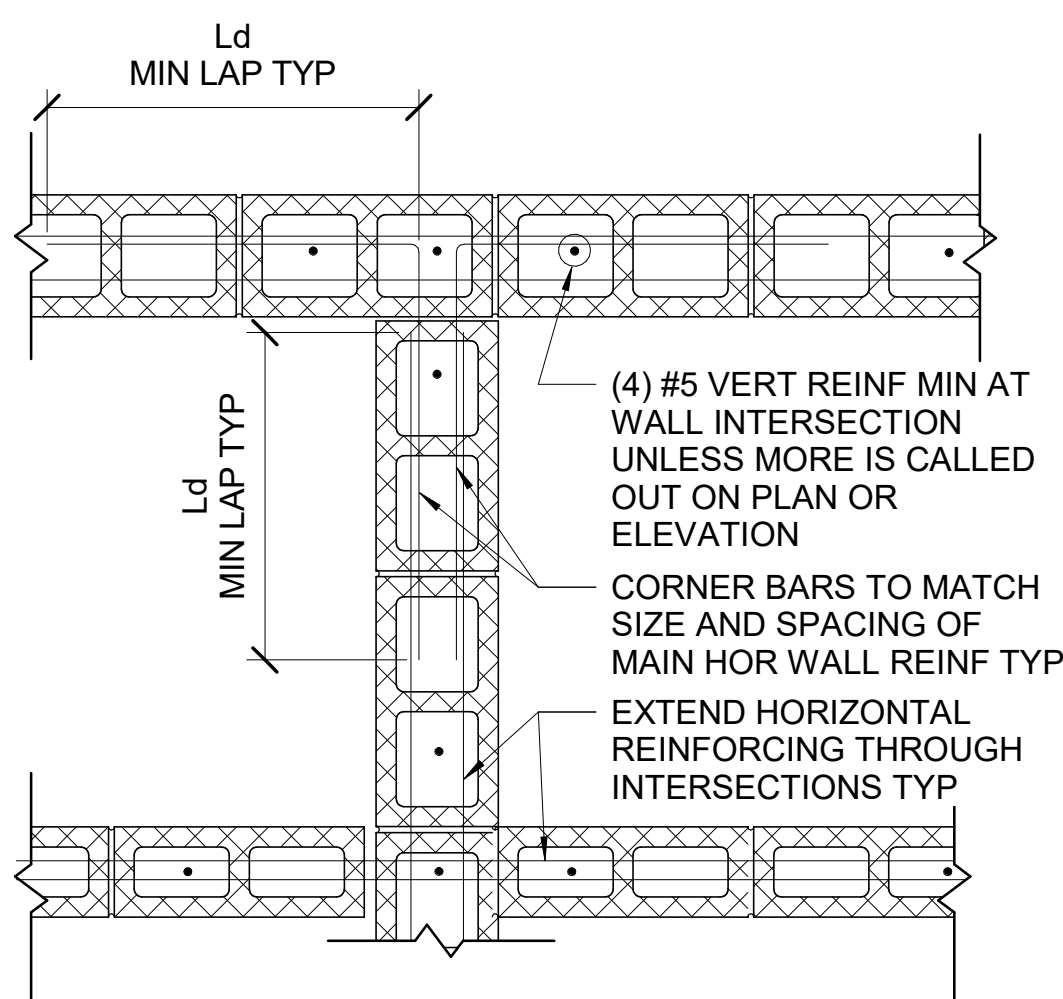
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CMU WALL DETAILS

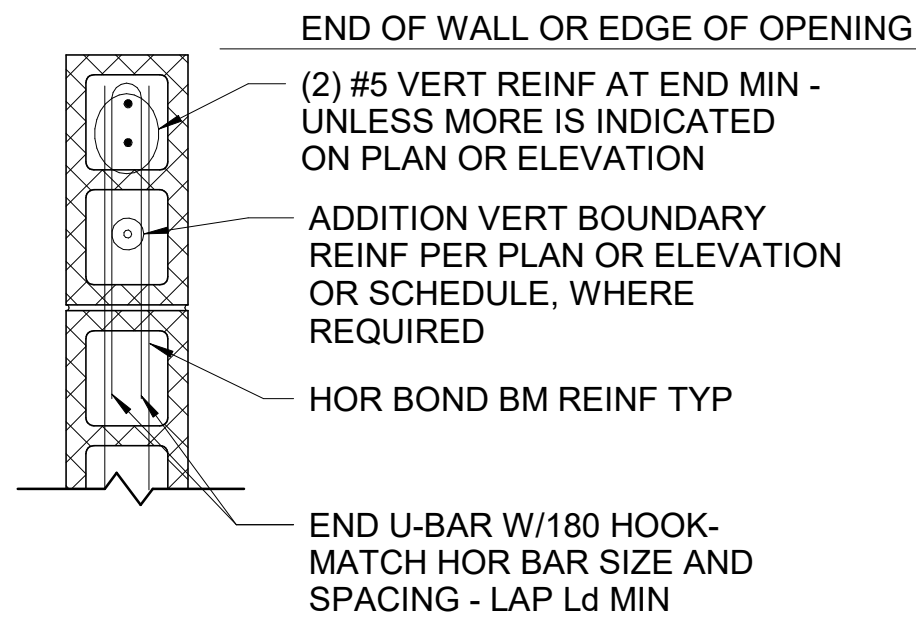
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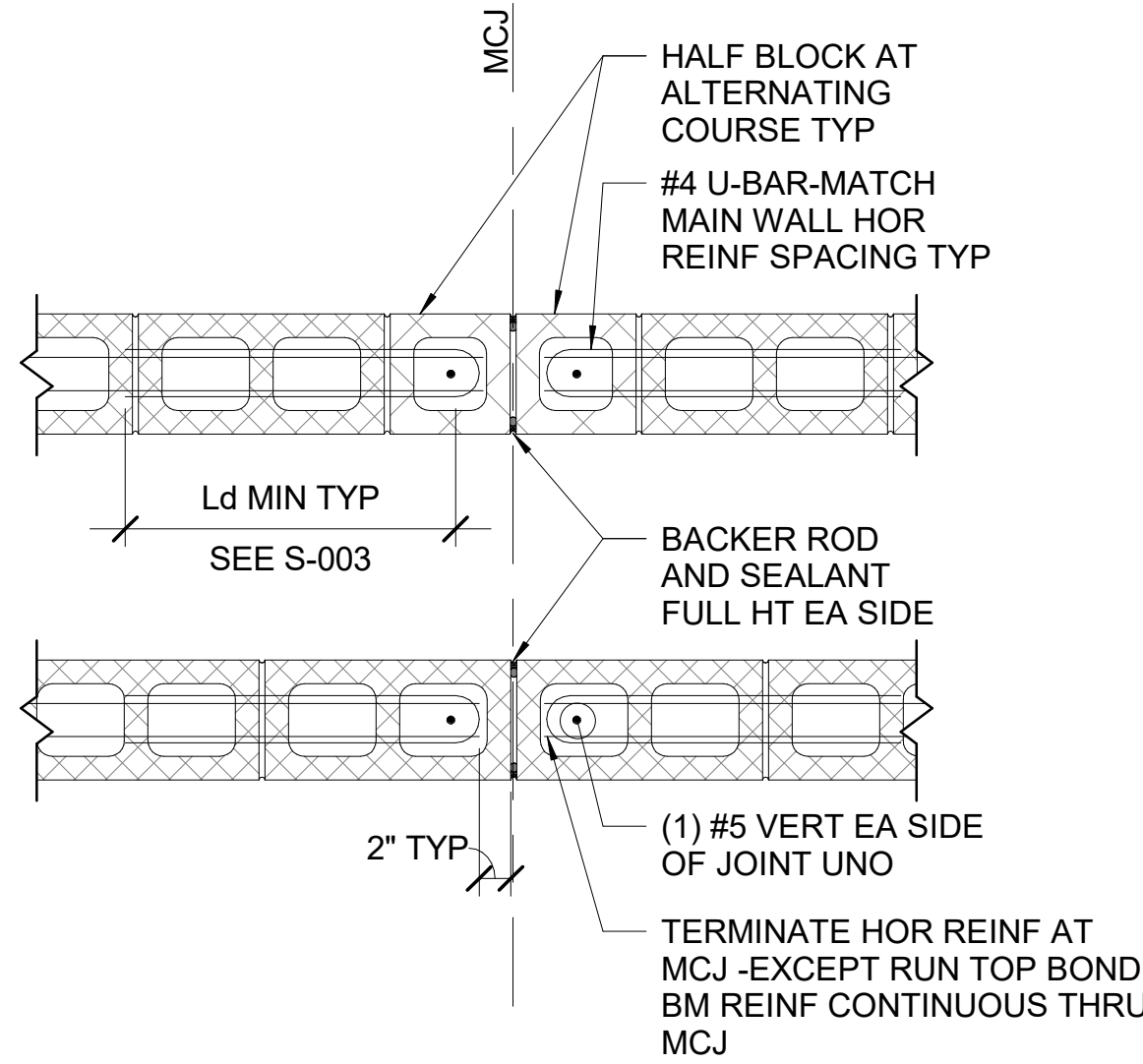
TYP WALL CORNER



TYP WALL INTERSECTION



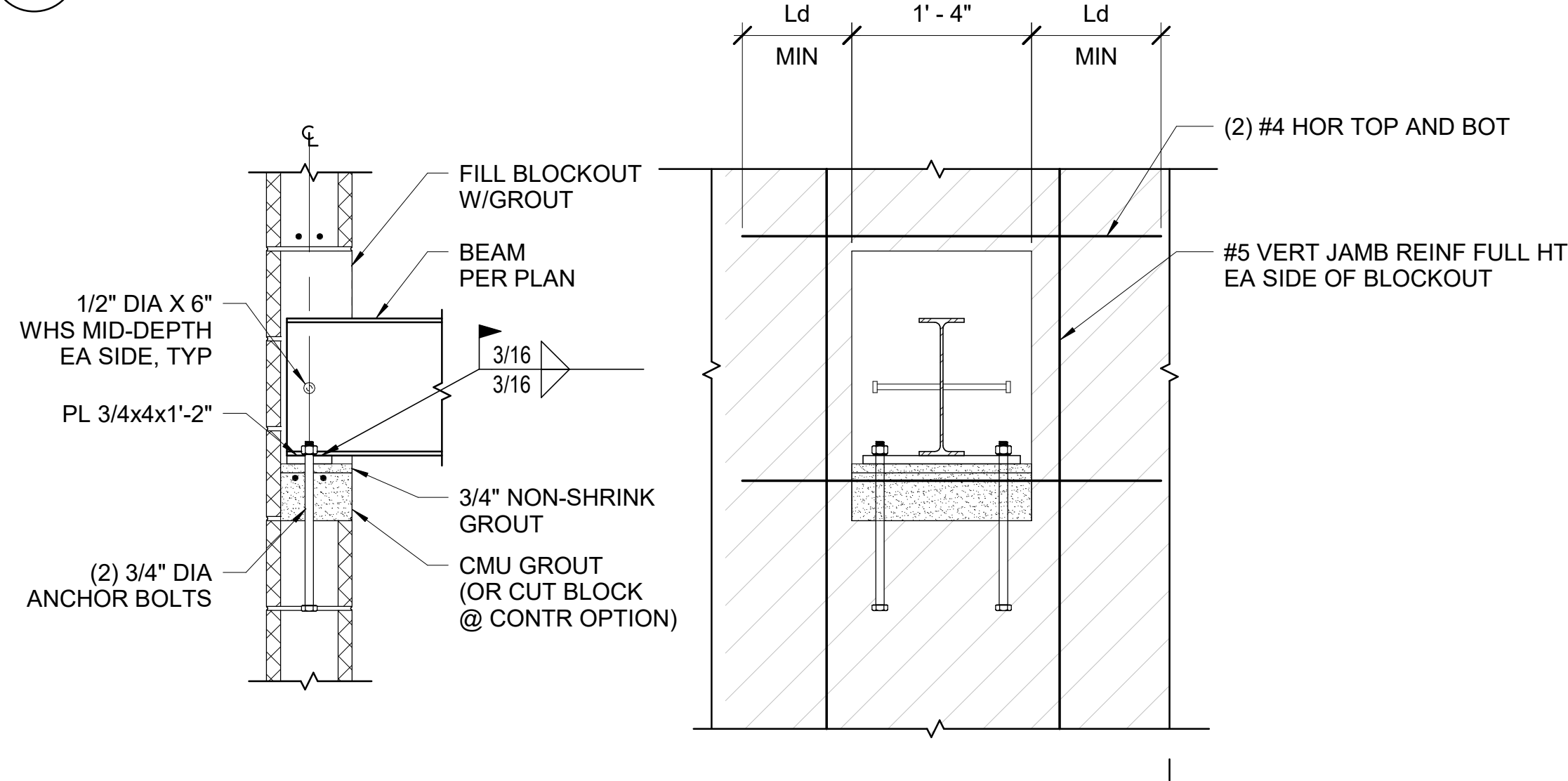
TYP END/EDGE OF WALL



MASONRY CONTROL JOINT (MCJ)

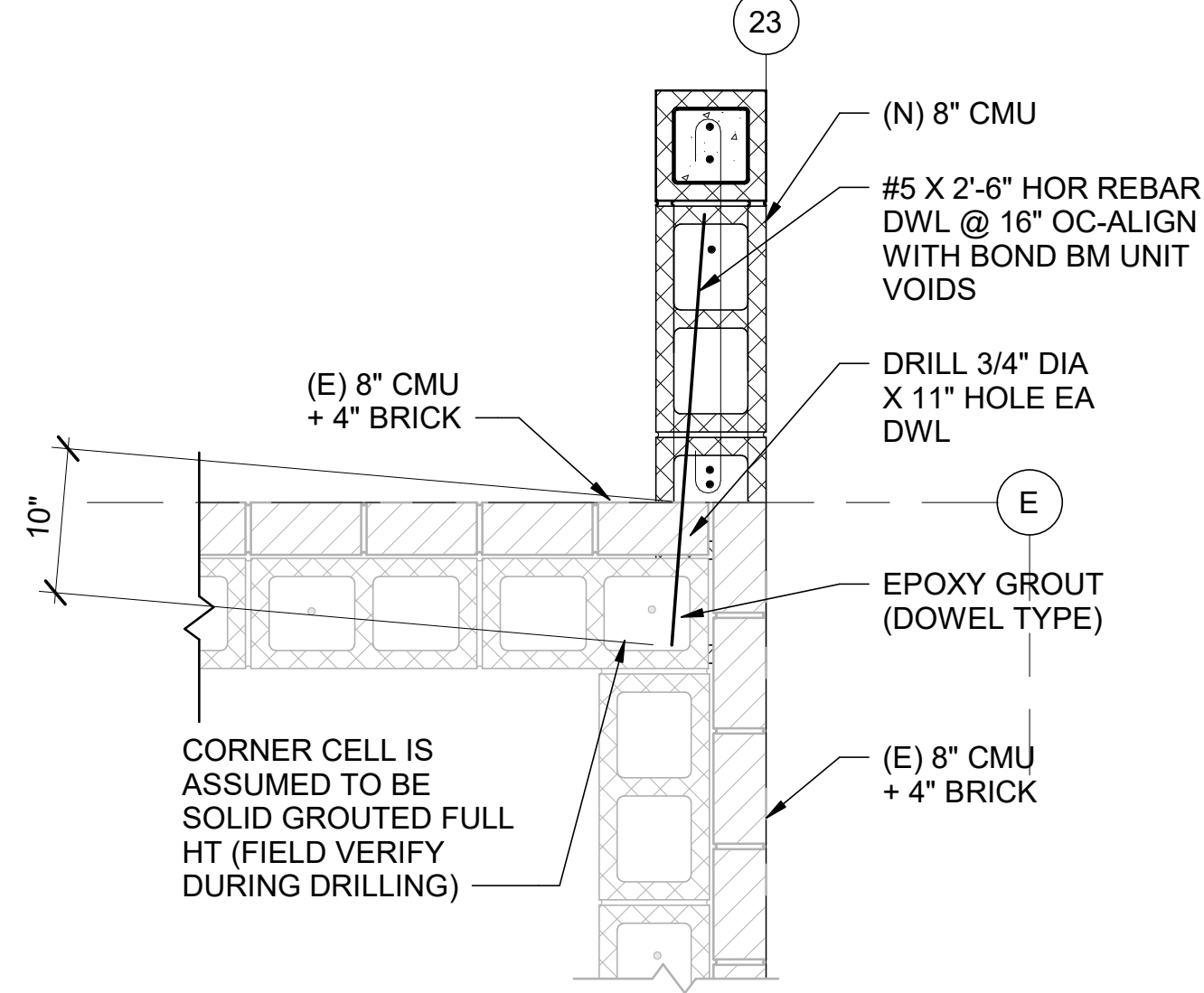
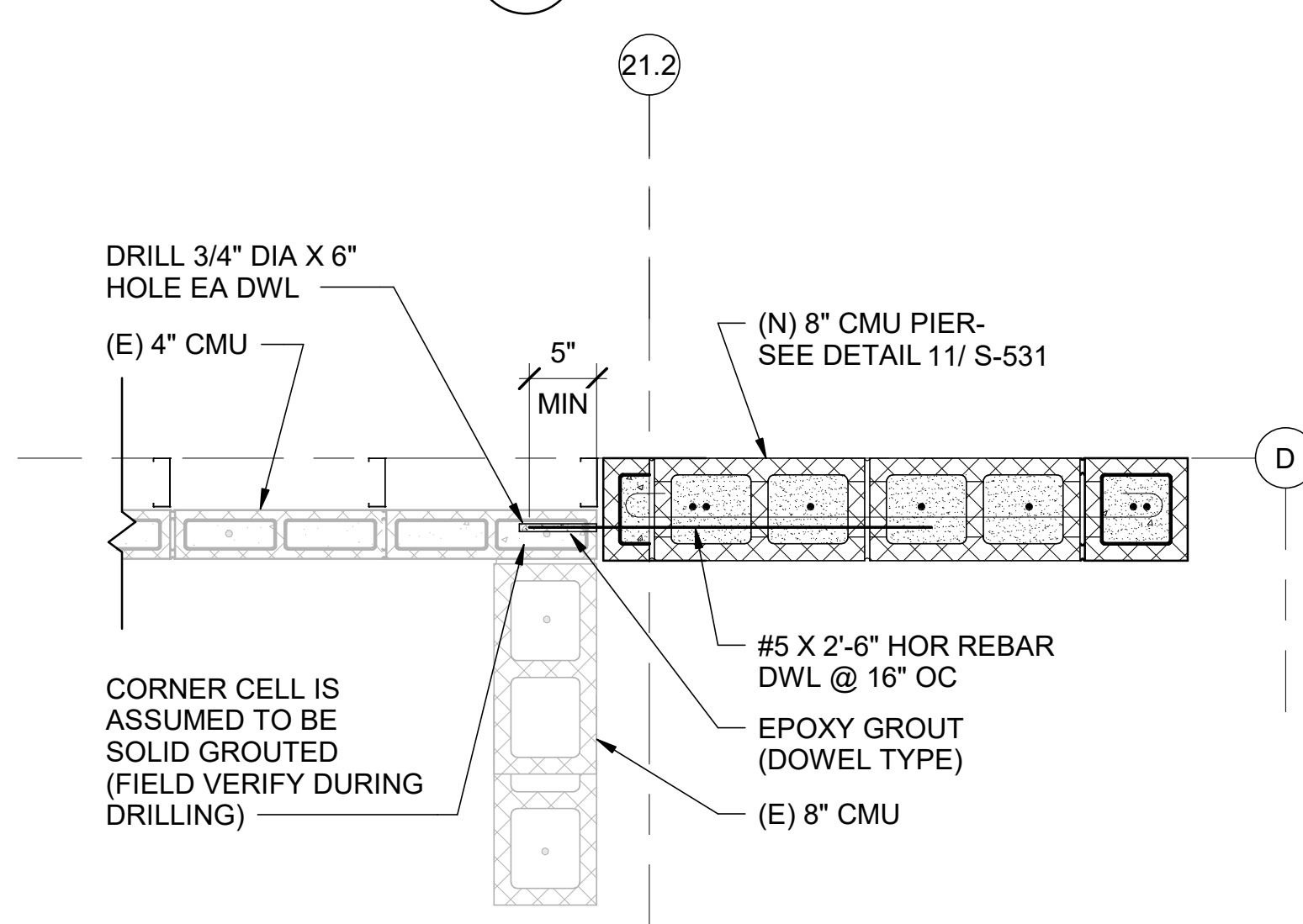
1 TYP (N) CMU WALL INTERSECTIONS

S-532 SCALE : 1" = 1'-0"



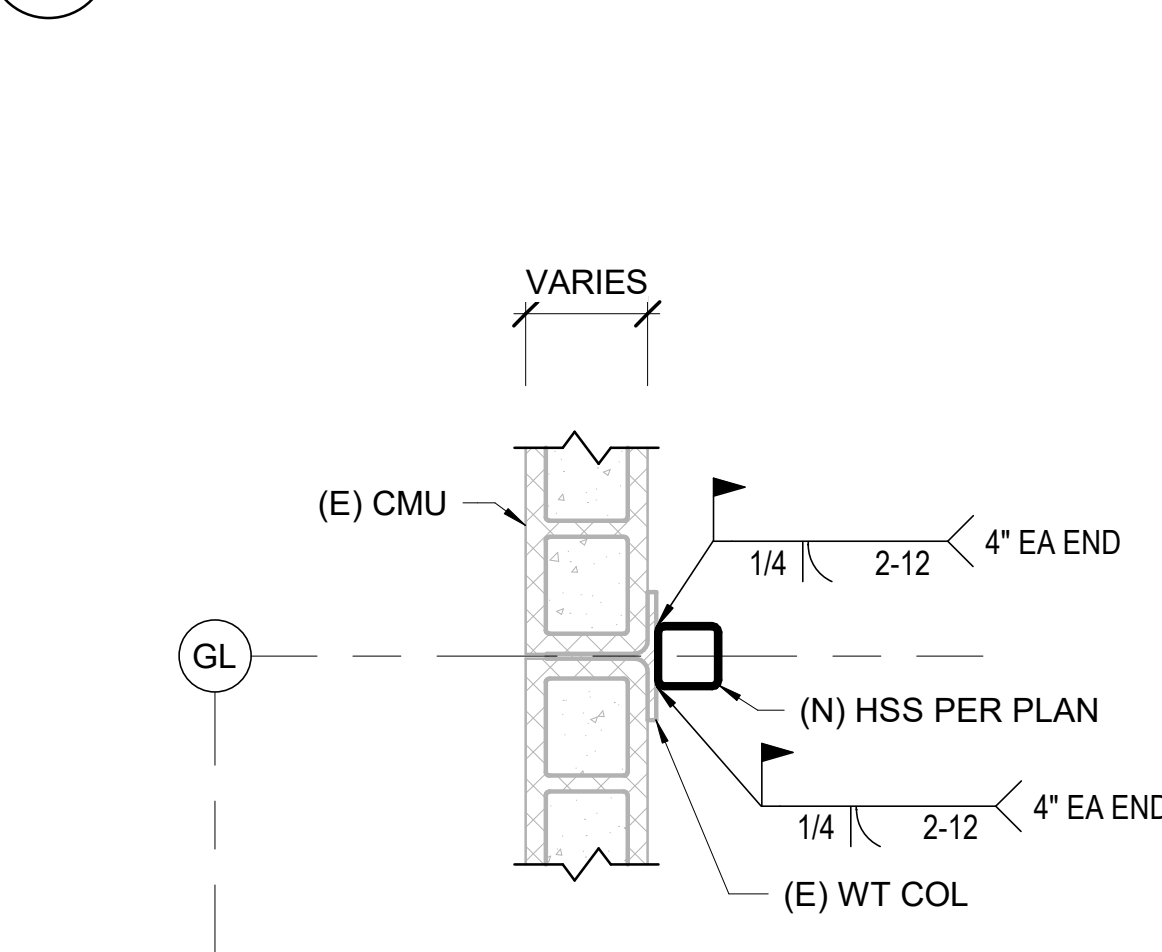
3 TYP CMU CONTROL JOINT (MCJ)

S-532 SCALE : 1" = 1'-0"



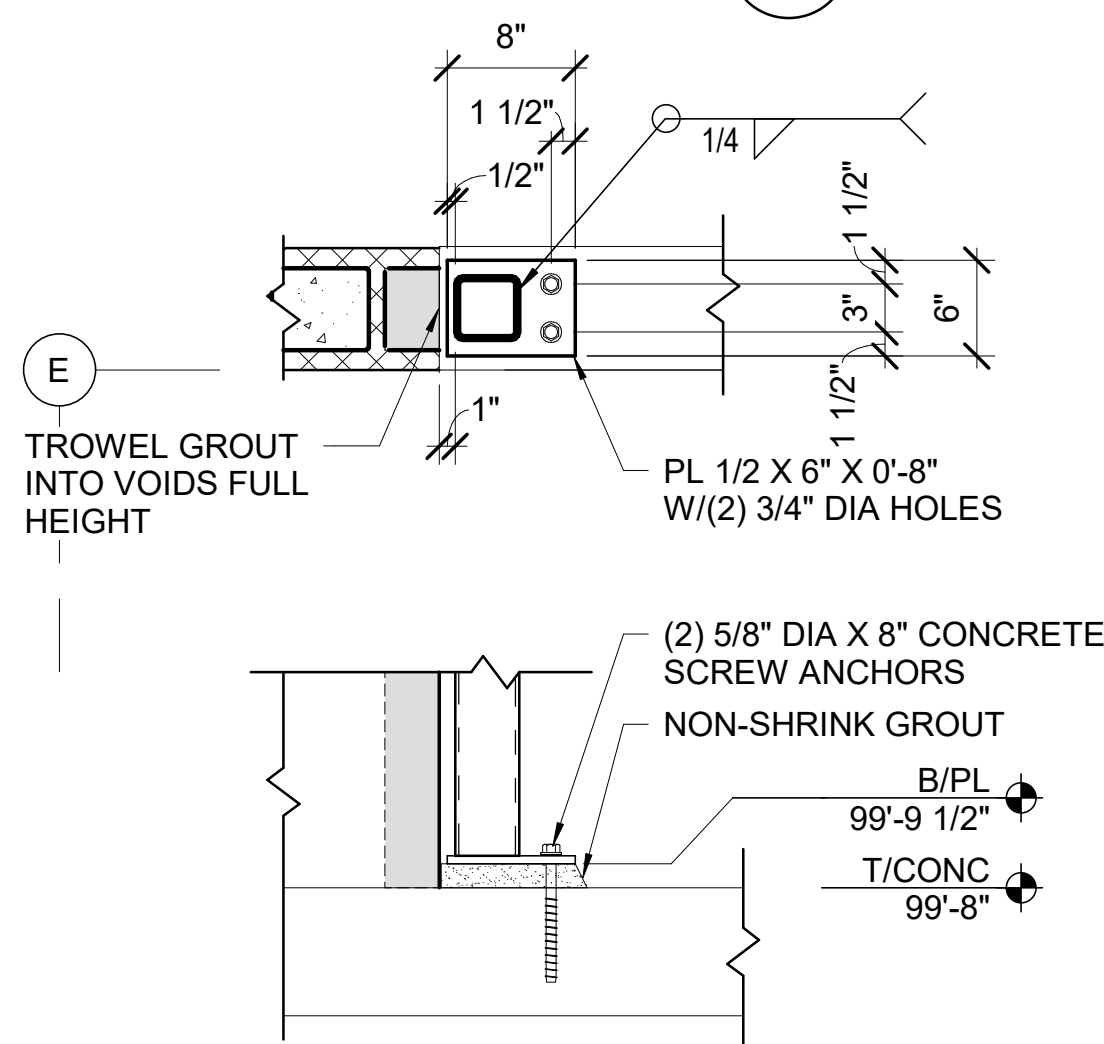
5 TYP CMU BEAM POCKET CONN

S-532 SCALE : 1" = 1'-0"



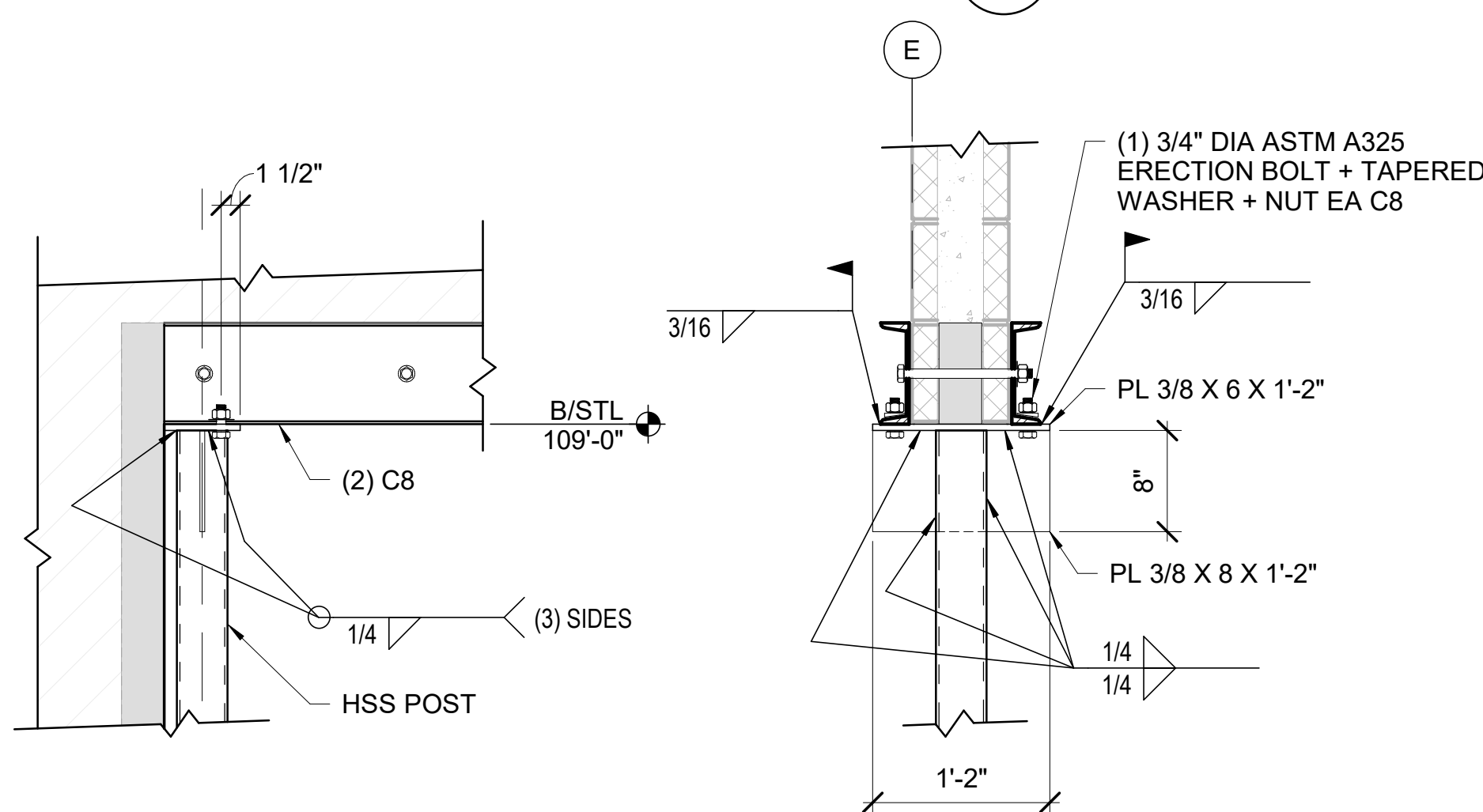
6 CMU CORNER DETAIL GRID D & 21.2

S-532 SCALE : 1" = 1'-0"



7 CMU CORNER DETAIL GRID E&23

S-532 SCALE : 1" = 1'-0"



8 TYP WT COLUMN REINF AT DRILL HALL

S-532 SCALE : 1" = 1'-0"

9 BASEPLATE BP-1

S-532 SCALE : 1" = 1'-0"

10 LINTEL CONN TO POST

S-532 SCALE : 1" = 1'-0"



SCALE: 1" = 1'-0"



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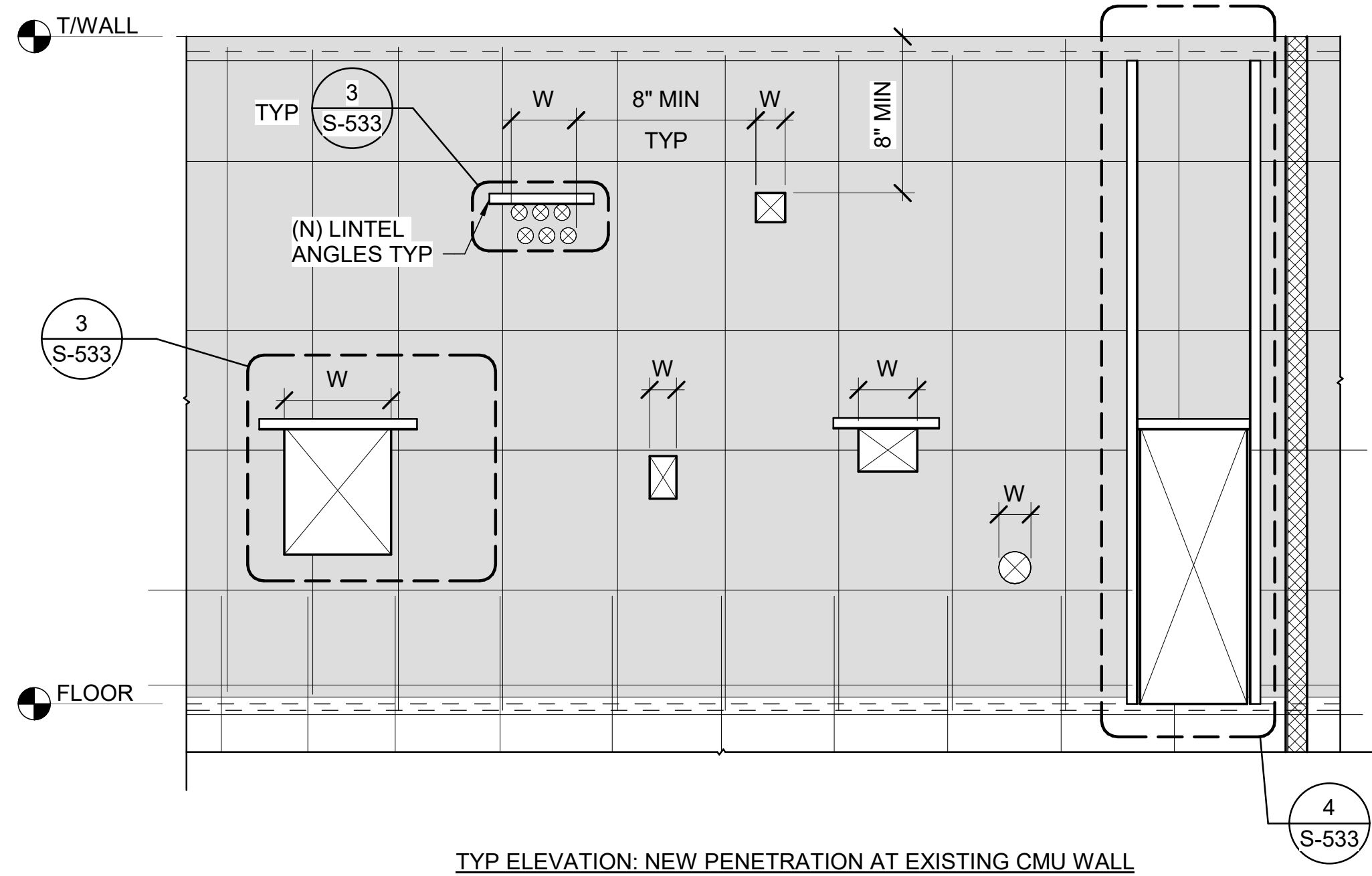
CMU WALL DETAILS

S-532

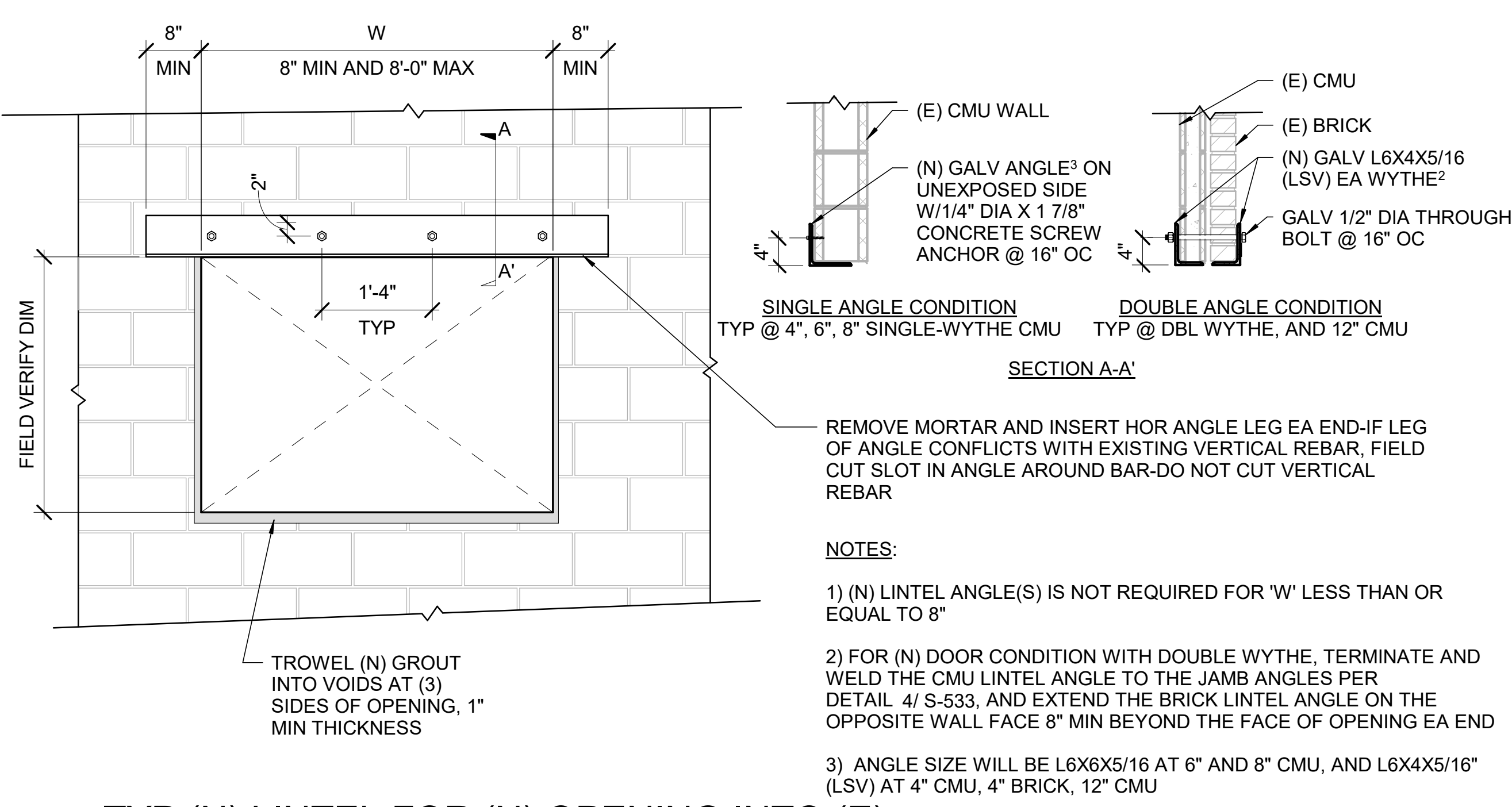
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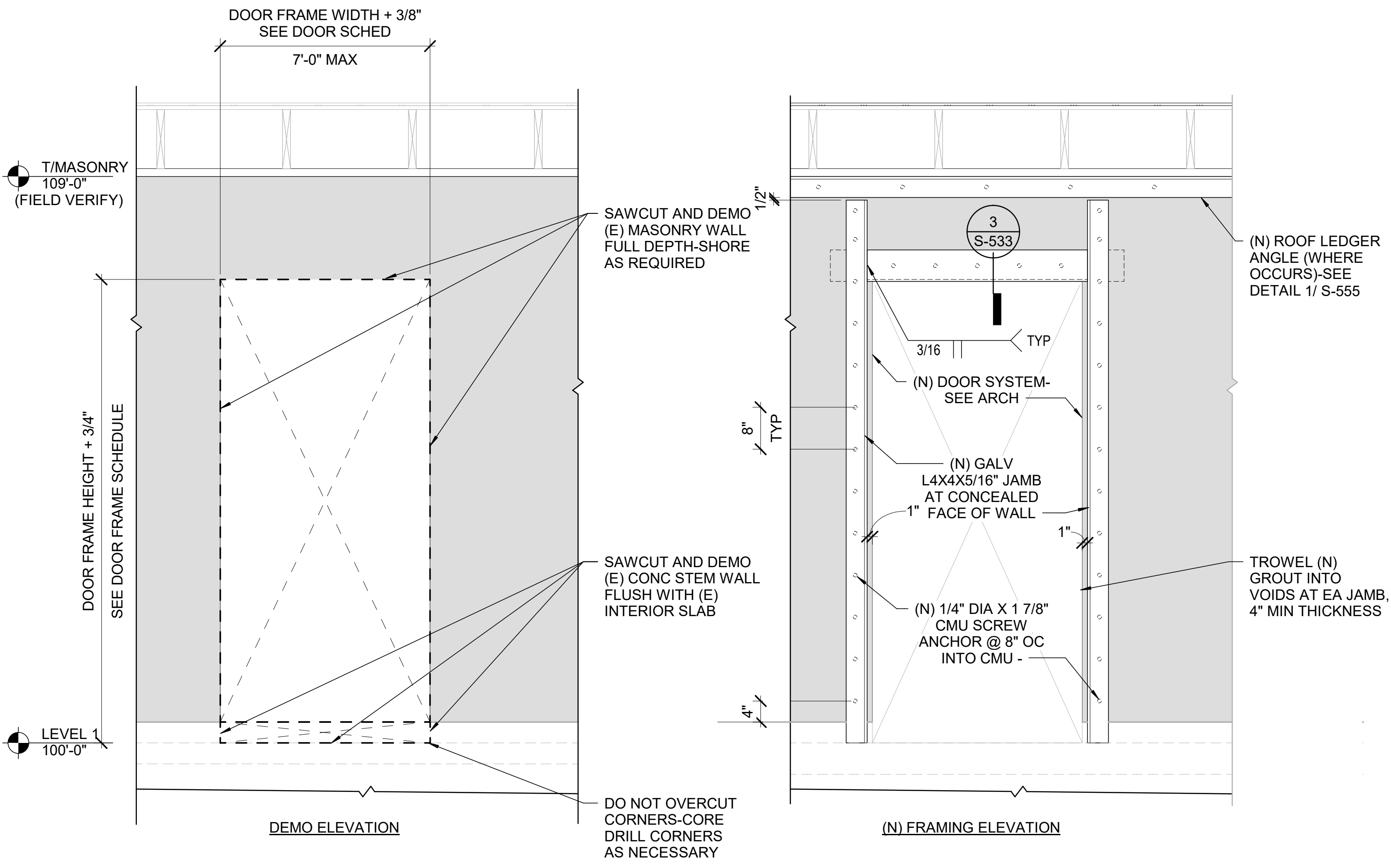


- NOTES:**
1. THIS IS A TYPICAL DETAIL AND IS NOT INTENDED TO EXACTLY REPLICATE ANY SPECIFIC LOCATION.
 2. DO NOT DRILL OR DEMOLISH ANY REGION OF A CONCRETE COLUMN OR CMU PILASTER. FIELD VERIFY LOCATIONS OF EXISTING COLUMNS PRIOR TO CUTTING ANY HOLE.
 3. PROVIDE NON-DESTRUCTIVE TEST (NDT) SCAN TO DETERMINE REBAR LOCATIONS PRIOR TO CUTTING ANY CMU WALL. TEMPORARILY MARK LOCATIONS OF EXISTING REINFORCING STEEL WITH MASKING TAPE. ADJUST PENETRATION LOCATIONS TO AVOID CUTTING THROUGH EXISTING REINFORCING STEEL WHEREVER POSSIBLE. IF THE PENETRATION CANNOT BE RELOCATED SUCH THAT IT IS NECESSARY TO CUT THROUGH EXISTING REINFORCING STEEL, SUBMIT RFI TO THE CONTRACTING OFFICER REPRESENTATIVE FOR EVALUATION. DO NOT CUT ANY VERTICAL REINFORCING STEEL WITHOUT AUTHORIZATION FROM THE CONTRACTING OFFICER REPRESENTATIVE
 4. "W" INDICATES THE NEW OPENING WIDTH. SEE SPECIFIC DETAIL FOR SUPPLEMENTAL REINFORCING
 5. SUPPLEMENTAL REINFORCING IS NOT REQUIRED AT NEW PENETRATION IF THE DISTANCE "W" IS LESS THAN 8", THE DISTANCE BETWEEN ADJACENT OPENINGS IS MORE THAN 8", AND THE EXISTING VERTICAL WALL REINFORCING IS NOT CUT
 6. FIELD MEASURE AND COORDINATE SUPPLEMENTAL REINFORCING DIMENSIONS

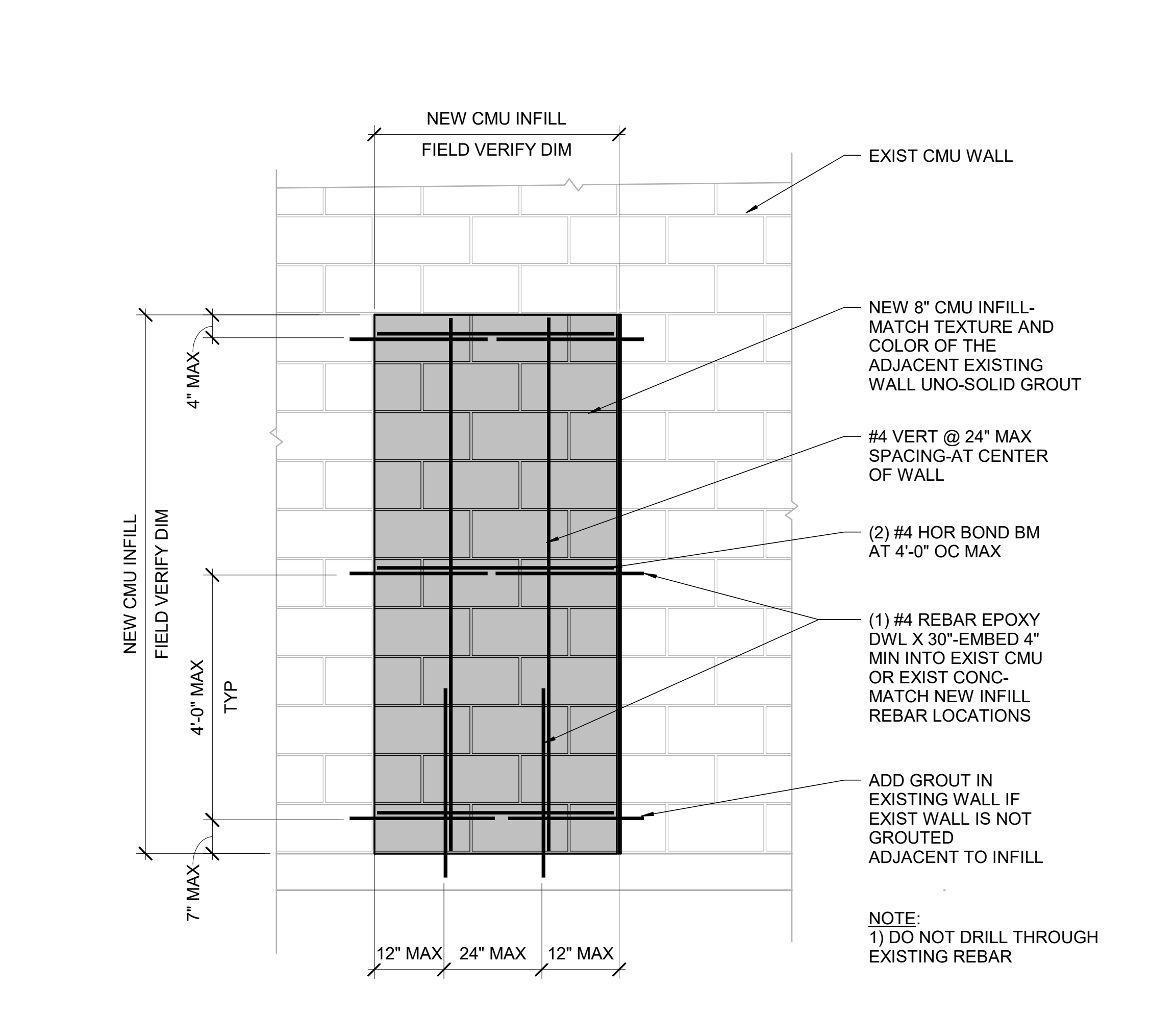


TYP REINF FOR (N) OPENING INTO (E) MASONRY WALL 1 S-533 NTS

TYP (N) LINTEL FOR (N) OPENING INTO (E) MASONRY 3 S-533 NTS



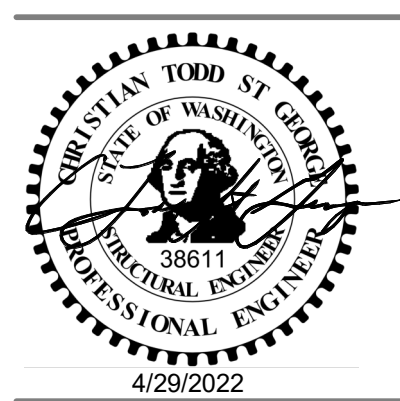
TYP (N) DOOR OPENING AT (E) MASONRY WALL 4 S-533 NTS



TYP (N) CMU INFILL AT (E) OPENING 6 S-533 NTS



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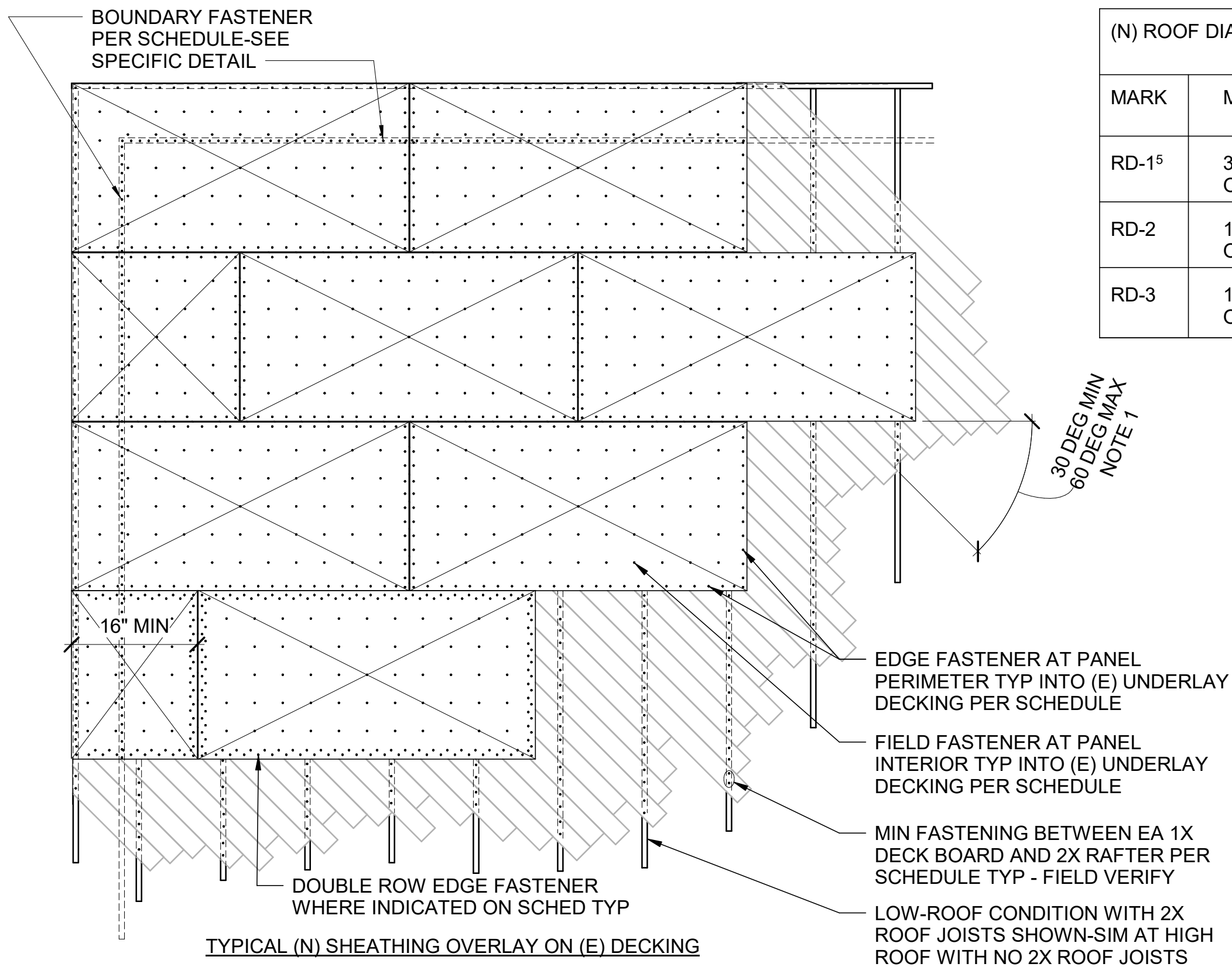
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Date	Description	Mark	

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CMU WALL DETAILS

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(N) ROOF DIAPHRAGM SHEATHING SCHEDULE							
MARK	MIN ROOF SHEATHING OVERLAY	MIN SPAN RATING	PANEL EDGE FASTENERS	FIELD FASTENERS	BOUNDARY FASTENERS	(E) UNDERLAY DECK BOARDS	MIN (E) UNDERLAY DECK FASTENING TO EA 2X12 JOIST ⁴
RD-1 ⁵	3/8" STRUCTURAL 1 PLYWOOD OR 3/8" STRUCTURAL 1 OSB	24/0	(2) ROWS 16 GA STAPLE ³ @ 3" OC STAGGERED 1 1/2"	16 GA STAPLE ³ @ 8" OC	10d @ 3" OC	1 X 6 DIAGONAL OR 1 X 8 DIAGONAL	(2) 8d NAILS @ 1X6 (3) 8d NAILS @ 1X8
RD-2	15/32" STRUCTURAL 1 PLYWOOD OR 15/32" STRUCTURAL 1 OSB	32/16	10d @ 6" OC	10d @ 12" OC	10d @ 4" OC	3 X 6 T&G STRAIGHT	N/A
RD-3	15/32" STRUCTURAL 1 PLYWOOD OR 15/32" STRUCTURAL 1 OSB	32/16	10d @ 3" OC	10d @ 12" OC	10d @ 2" OC	3 X 6 T&G STRAIGHT	N/A

NOTES:

- LAYOUT (N) STRUCTURAL SHEATHING PANELS AT APPROXIMATELY 45 DEGREE ANGLE RELATIVE TO (E) UNDERLYING DECKING JOINTS. STAGGER PANEL JOINTS AS INDICATED ON THE DIAGRAM
- PROVIDE 1/8" GAP AT PANEL EDGES BETWEEN ADJACENT STRUCTURAL PANELS
- STAPLES WILL BE 16 GA X 1" LEG X 7/16" MINIMUM CROWN WIDTH, WITH GALVANIZED ZINC COATED WIRE, AND WILL CONFORM WITH ASTM F1667
- AFTER REMOVING THE (E) ROOFING, INSPECT THE CONDITION OF ALL OF THE EXISTING UNDERLAY DECK BOARDS FOR DRY-ROT, AND FOR ANCHORAGE INTO THE (E) 2X12 ROOF JOISTS. IF DRY-ROT IS ENCOUNTERED, NOTIFY THE CONTRACTING OFFICER REPRESENTATIVE FOR SPECIFIC DIRECTION TO REPAIR THE DRYROT. IF THE (E) 1 X DIAGONAL ROOF DECK BOARDS DO NOT HAVE THE MINIMUM FASTENING INTO THE 2X12 ROOF JOISTS INDICATED IN THE SCHEDULE, THEN ADD NAILS TO SATISFY THE MINIMUM (E) UNDERLAY DECK FASTENING BEFORE INSTALLING THE (N) SHEATHING OVERLAY.
- PROVIDE RD-1 AT ALL (E) LOW AND (E) MID-ROOF REGIONS UNO, EXCLUDING THE FOLLOWING: (E) ENTRY CANOPY @ GRID J&13, (E) CUPOLA GRID G.5&2, (E) CUPOLA GRID A.5&12.5. RD-1 IS REQUIRED WITHIN THE (E) CUPOLA GRID H&12

1
S-541 NTS

TYP ROOF DIAPHRAGM SHEATHING LAYUP AND NAILING PATTERN

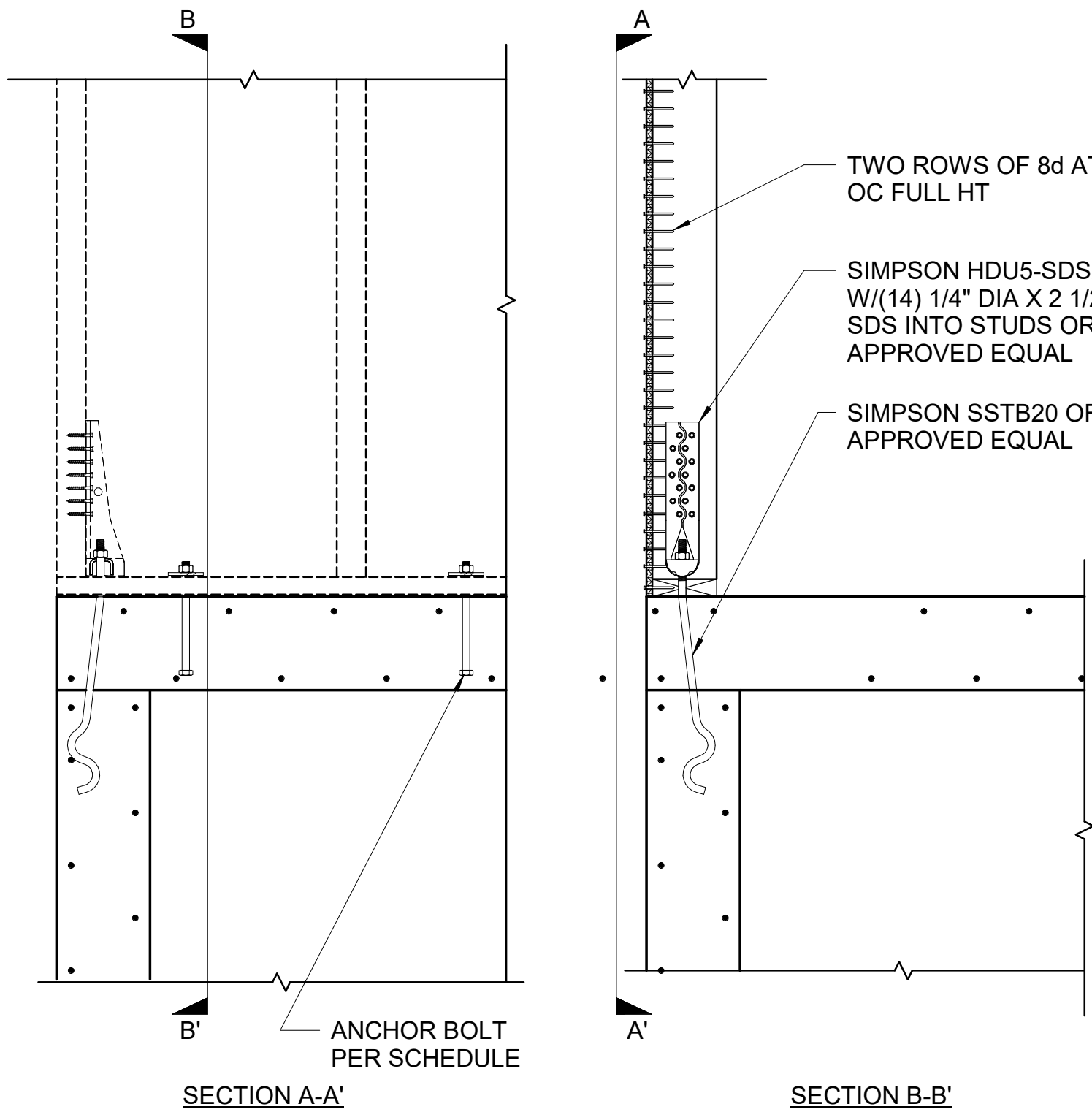
STRUCTURAL STUD WALL SCHEDULE						
TYPE ^{1,2}	STRUCTURAL WALL SHEATHING ³	MIN SPAN RATING	NAILING		ANCHOR BOLT ⁴	SILL PLATE SIZE @ FOUNDATION
			EDGE	FIELD		
3	15/32" STRUCTURAL 1 PW OR OSB - 2 SIDES	24/16	8d @ 3" OC	8d @ 12" OC	5/8" DIA @ 12" OC	PT 2X6

TYPE	STUD SIZE AND SPACING
A	3X6 @ 24" OC

- NOTES:
- INDICATES STRUCTURAL WALL WITH TYPE "B" STUDS AND TYPE "6" STRUCTURAL SHEATHING AND NAILING. INDICATES BEARING WALL TYPE "A" WITH NO STRUCTURAL SHEATHING. SEE PLAN FOR WALL TYPE CALLOUTS. NAIL AND SHEATH THE ENTIRE LENGTH OF THE WALL IF THE EXTENT IS NOT INDICATED ON THE PLAN.
 - FOR (N) STRUCTURAL WOOD WALLS OVER (N) ARMS VAULT USE WALL TYPE UNO.
 - BLOCK AND EDGE NAIL ALL UNSUPPORTED WALL STRUCTURAL SHEATHING PANEL EDGES TYP. SHEATHING PANELS MAY BE INSTALLED HORIZONTALLY OR VERTICALLY.
 - INSTALL ADDITIONAL ANCHOR BOLT OR EXPANSION BOLT 12" MAX FROM SILL PLATE ENDS TYP. PROVIDE TWO AB MIN PER SILL PLATE SECTION. PROVIDE GALVANIZED .229" MIN X 3" X 3" PLATE WASHER WITH STD HOLE AT EA ANCHOR BOLT. EMBED ANCHOR BOLTS 7" MINIMUM INTO THE CONCRETE.
 - ALIGN STUDS DIRECTLY BELOW FLOOR JOISTS.
 - NAIL SHEATHING TO STUDS THAT ARE ANCHORED TO HOLDDOWNS USING "EDGE NAILING" FULL STUD HEIGHT. SEE PLANS FOR HOLDDOWN LOCATIONS
 - ALL EXTERIOR WALLS ARE STRUCTURAL WALLS. SEE PLAN FOR OTHER STRUCTURAL WALL LOCATIONS.
 - THE WALL CALLOUT INDICATED ON THE PLAN APPLIES AT THE LEVEL INDICATED AND UP TO THE NEXT FRAMING LEVEL UNLESS NOTED OTHERWISE

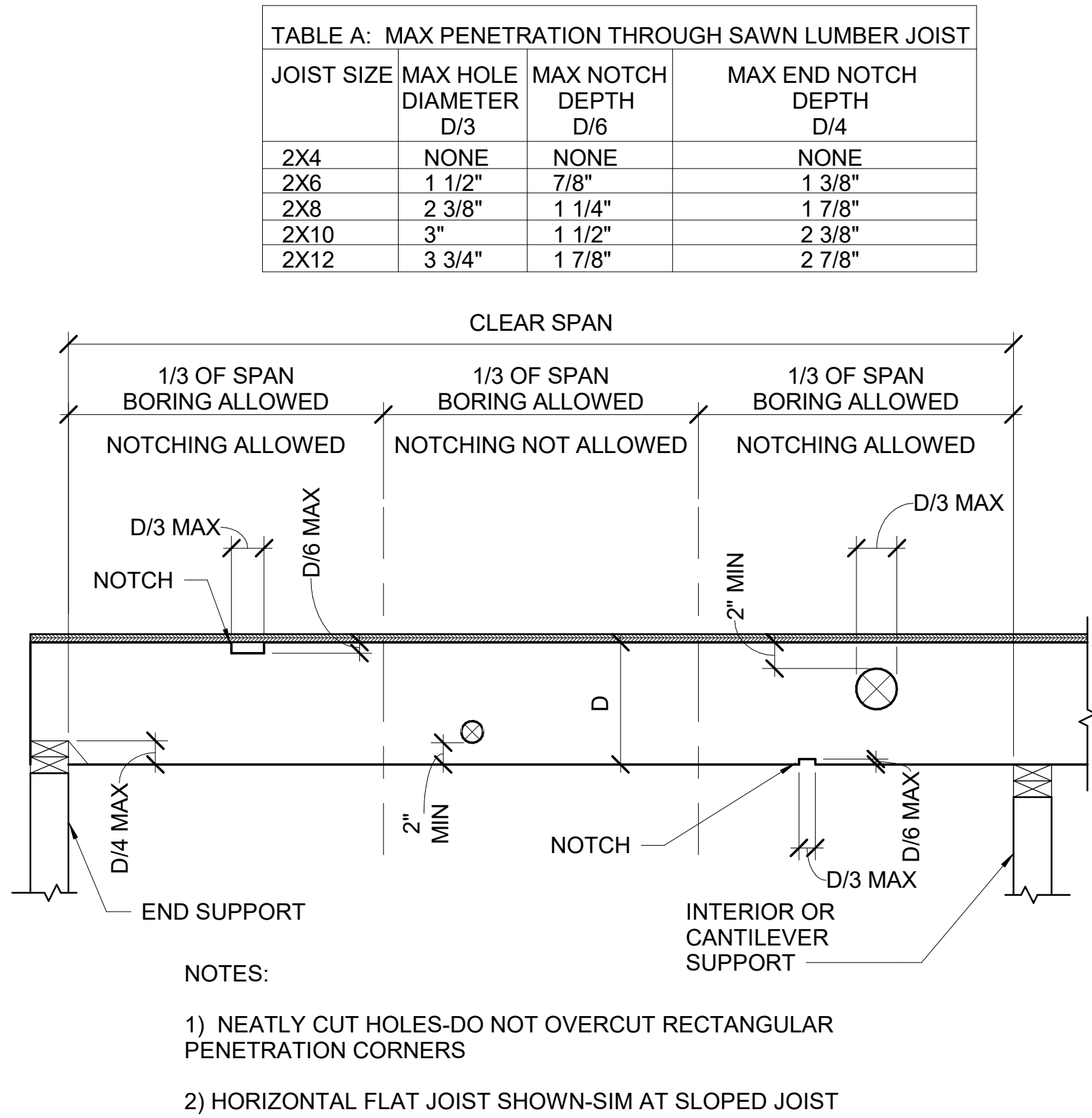
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S-541 NTS

STRUCTURAL STUD WALL SCHEDULE



5
S-541 NTS

TYP HOLDDOWN AT ARMS VAULT LID



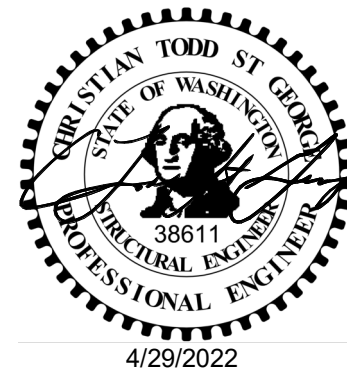
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TYP ALLOWABLE (N) PENETRATIONS THROUGH (E) SAWN WOOD JOIST



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Drawn By: DJH

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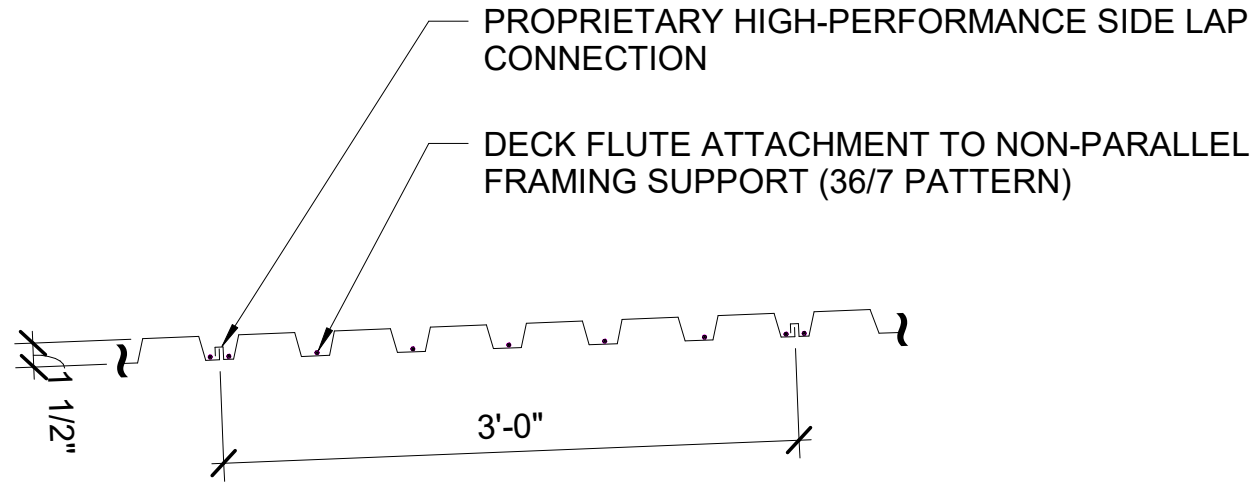
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WOOD FRAMING DETAILS

S-541

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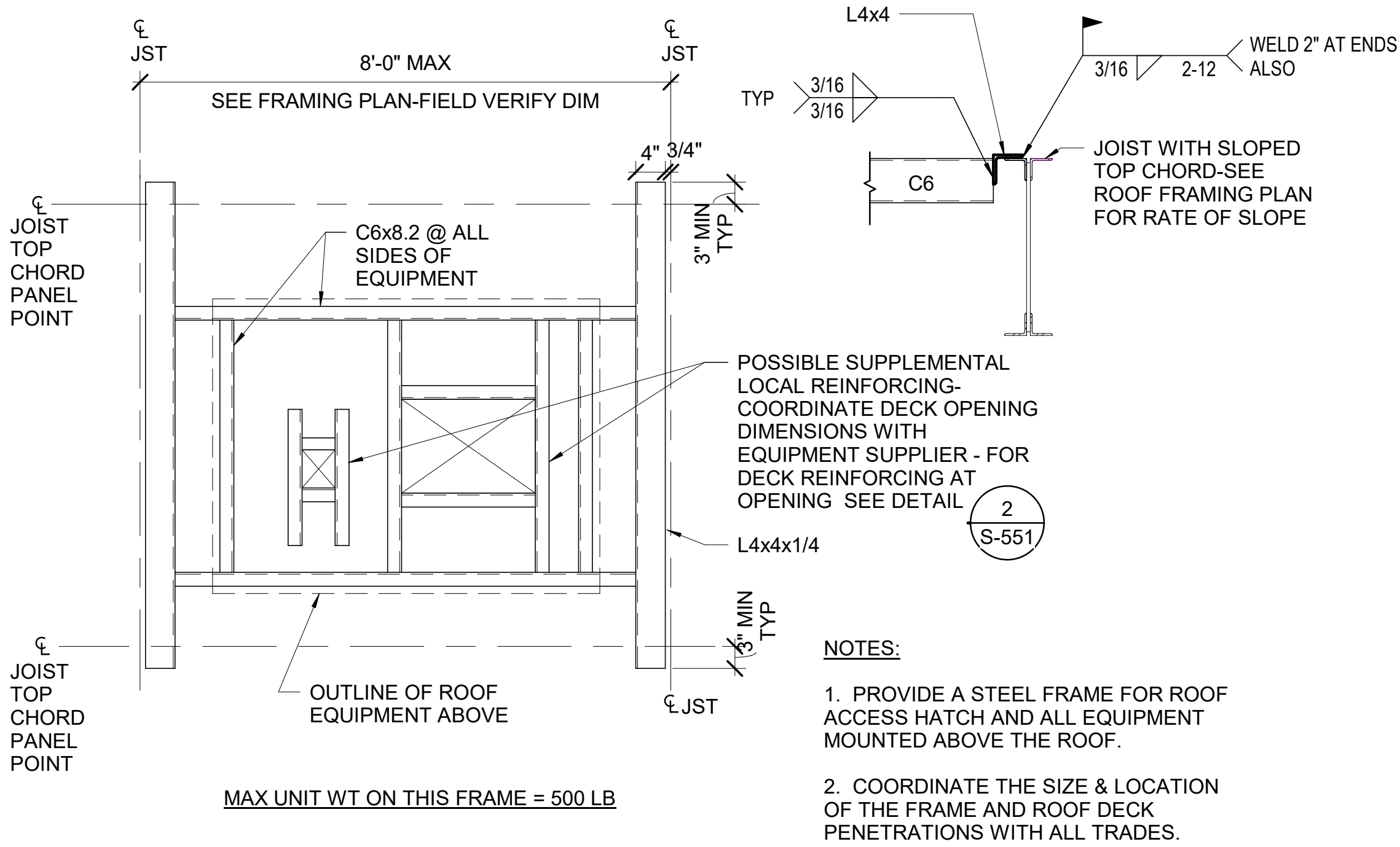


TYPE 'B' ROOF DECK OPTIONS AND MINIMUM SECTION PROPERTIES						
TYPE	GA	THICKNESS (IN)	I (IN ⁴ /FT)	S(+) (IN ³ /FT)	S(-) (IN ³ /FT)	Fy (KSI)
VERCO PLB-36	22	0.0299	0.192	0.176	0.188	50
ASC DGB-36	22	0.0299	0.200	0.175	0.187	50

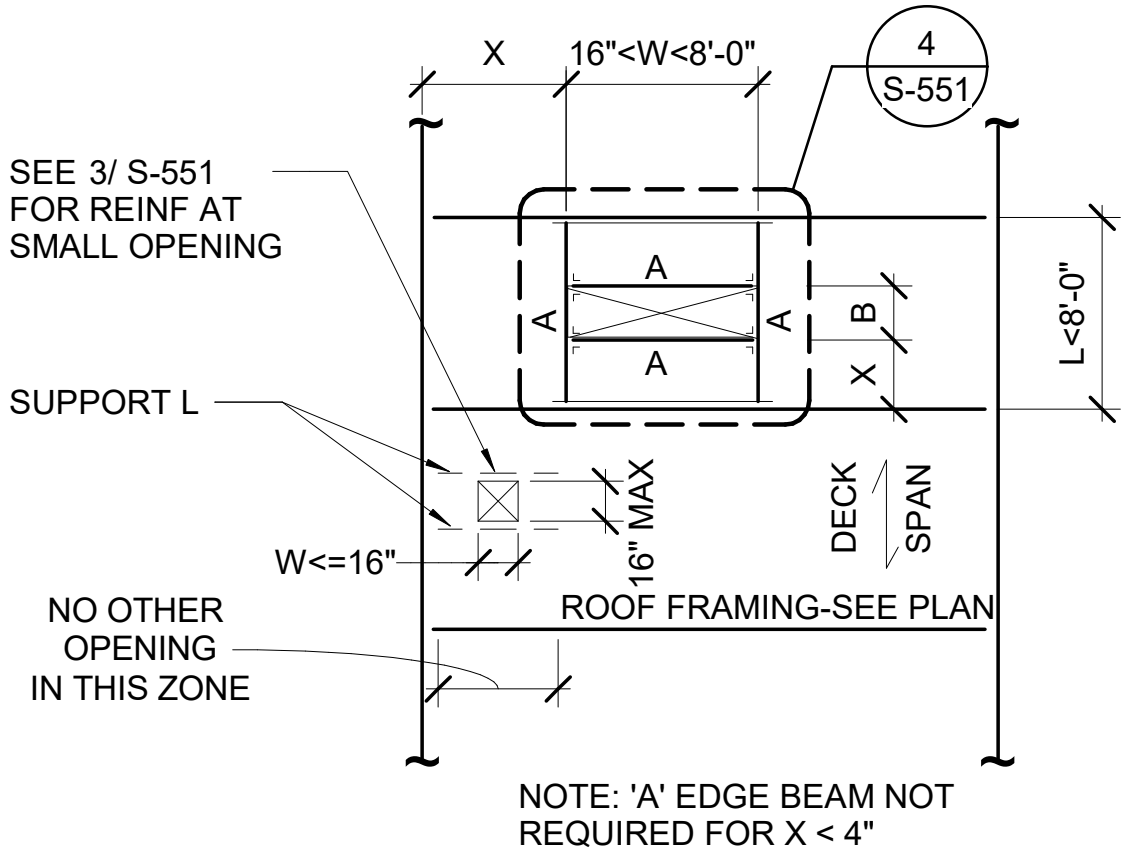
DECK ATTACHMENT SCHEDULE			
ROOF ZONE	DECK FLUTE TO NON-PARALLEL SUPPORT	DECK SIDELAP ATTACHMENT	DECK FLUTE TO PARALLEL FRAMING
ALL ROOF UNO	(1) FASTENER EA FLUTE TO SUPPORT MIN (36/7) PATTERN - NOTE ⁶	PROPRIETARY SIDE CRIMP @ 18" OC-NOTE ⁷	PIN FASTENER @ 12" OC-NOTE ⁶

- NOTES:
1. ROOF DECKING TYPE SHALL BE TYPE 'B' WHERE INDICATED ON THE FRAMING PLAN, AND AT ALL ROOF LOCATIONS UNLESS SHOWN OTHERWISE ON THE FRAMING PLAN.
 2. THE DECK SYSTEM SHALL COMPLY WITH ICC REPORT NO. ESR-1735P OR APPROVED EQUAL.
 3. THE ROOF DECK SHALL HAVE G60 GALVANIZED COATING TYP UNO.
 4. FABRICATE DECK SPLICES TO RESULT IN 3-SPAN MIN
 5. THE CONTRACTOR SHALL PROVIDE DECK SHORING AS NECESSARY TO SUPPORT CONSTRUCTION LOADS - COORDINATE WITH DECK MFR
 6. THE PIN FASTENER TYPE SHALL BE SUITABLE FOR THE SUPPORT BASE METAL THICKNESS, AND IN STRICT CONFORMANCE WITH THE DECK ICC REPORT. USE X-EDNK22 OR X-HSN 24 PINS FOR BASE METAL THICKNESS BETWEEN 1/8" AND 1/4". USE X-ENP19 FOR BASE METAL THICKNESS 1/4" AND THICKER, OR APPROVED EQUAL
 7. PROPRIETARY SIDE CRIMP SHALL BE "PUNCHLOCK VS2" BY VERCO OR "DELTA-GRIP" BY ASC, OR APPROVED EQUAL. BUTTON PUNCH AND TOP-SEAM WELD SIDE-LAP CONNECTIONS ARE NOT PERMITTED

1 TYPE 'B' STEEL ROOF DECK

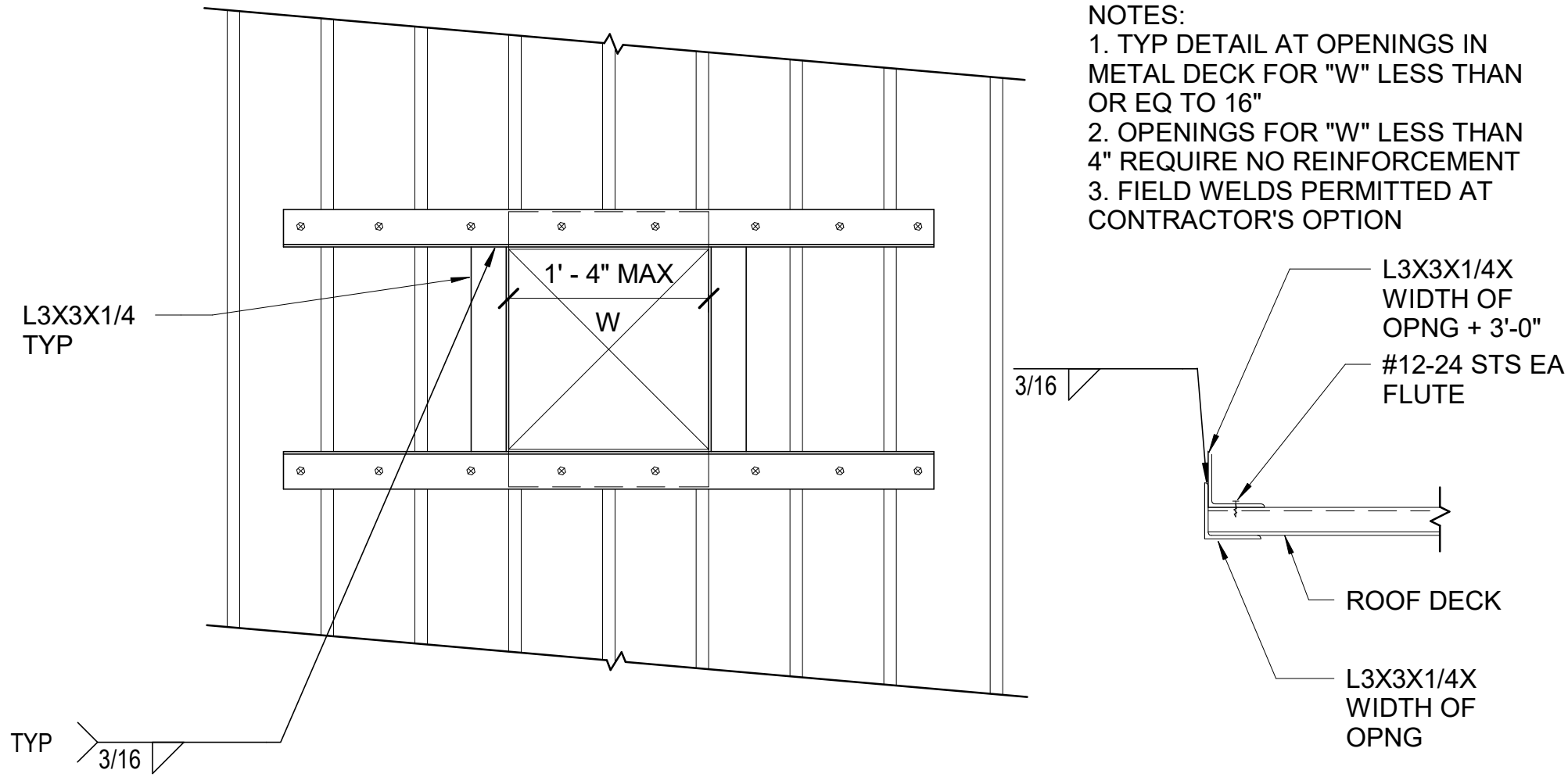


4 DK TYP EQUIPMENT SUPPORT FRAME AT STEEL ROOF

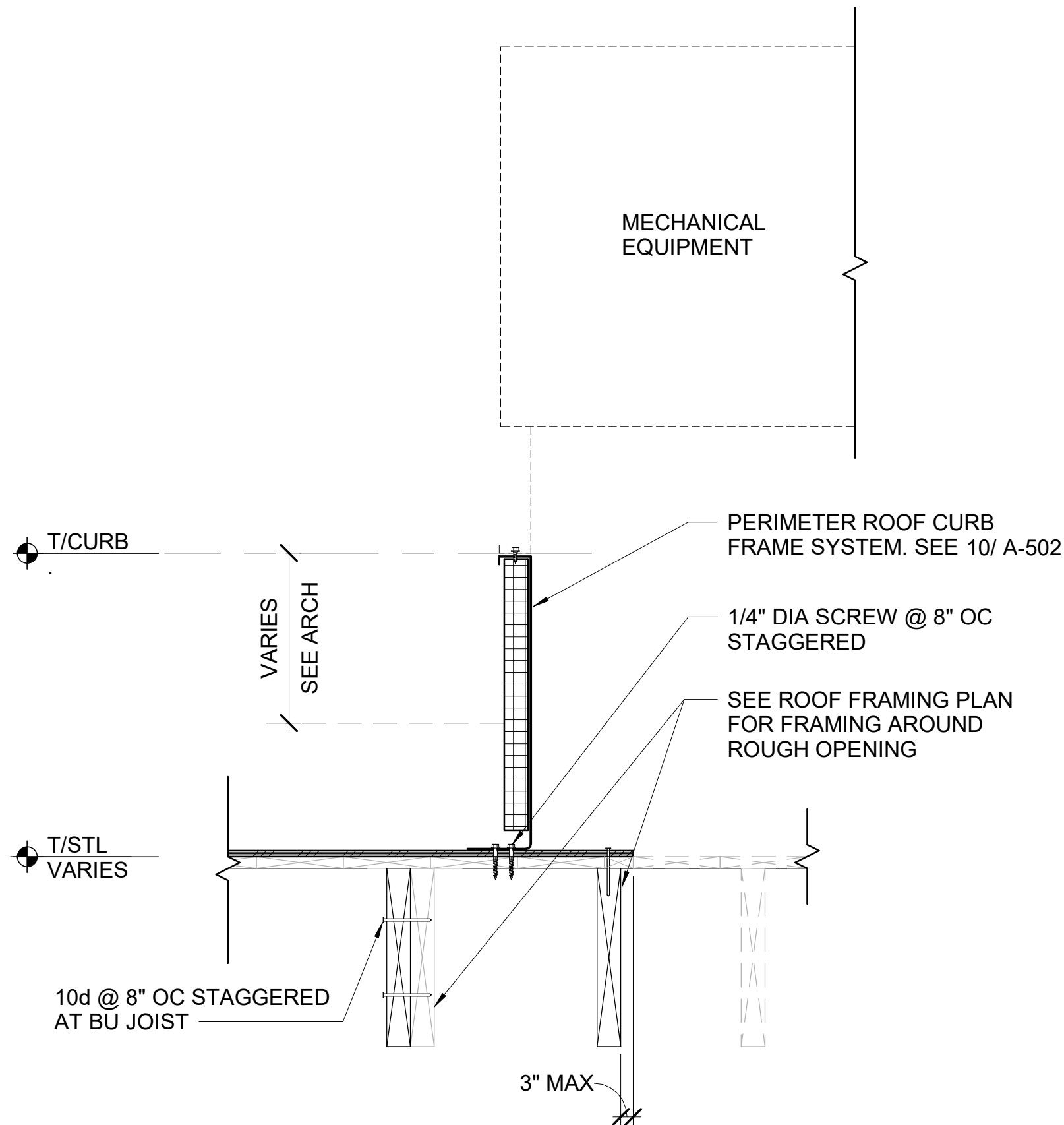


2 TYP REINF FOR OPENINGS IN STEEL ROOF DECK

- NOTES:
1. FRAMING MEMBER 'A' SHALL BE C6X8.2
 2. ALL ROOF PENETRATIONS ARE NOT INDICATED ON THE STRUCTURAL AND ARCHITECTURAL FLOOR PLANS. THE CONTRACTOR SHALL COORDINATE SIZES, LOCATIONS, AND QUANTITIES OF ALL ROOF DECK PENETRATIONS WITH ALL SUBCONTRACTORS, AND INCLUDE ALL REINFORCING COSTS IN THE BASE BID.
 3. NO REINFORCEMENT IS REQUIRED FOR DECK PENETRATIONS LESS THAN 4 INCHES IN WIDTH OR LENGTH WHEN SUCH PENETRATIONS ARE LOCATED BETWEEN DECK FLUTES.
 4. "B" MAX = 6'-0"



3 TYP STEEL ROOF DECK REINF AT SMALL OPENING



6 TYP MECH EQUIPMENT CURB FRAME AT (E) WOOD ROOF



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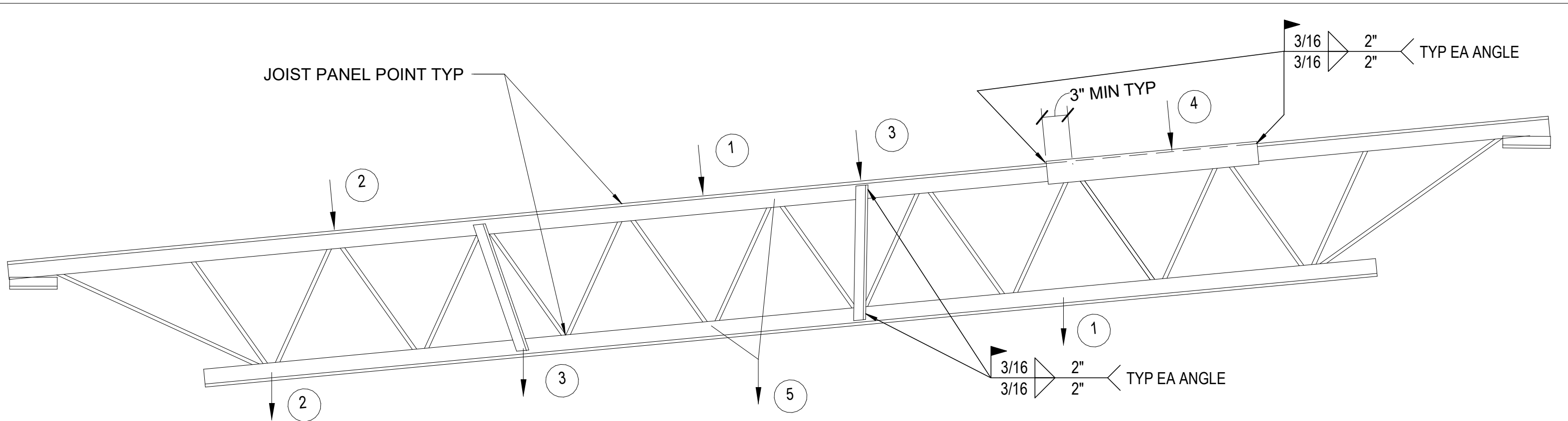
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ROOF FRAMING DETAILS

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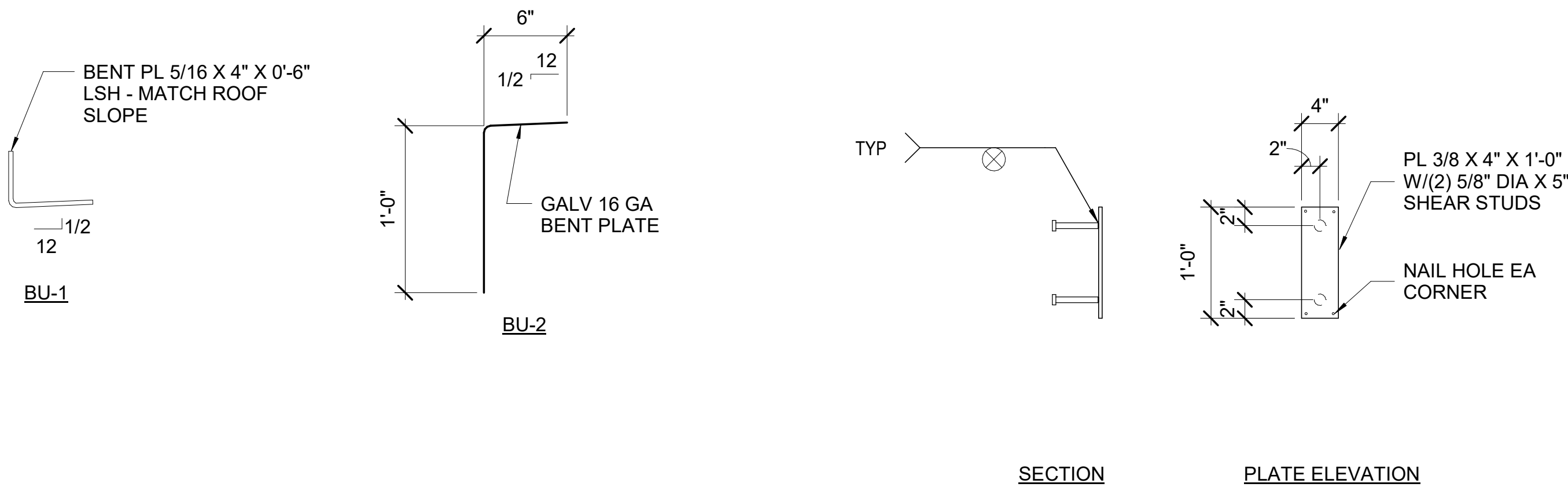


NOTES:

1. THE MAXIMUM ALLOWABLE POINT LOAD WHICH MAY BE ADDED ANYWHERE ALONG THE TRUSS TOP OR BOT CHORD WITHOUT ADDITION OF ANGLE REINFORCING IS 100 LB, EXCEPT WHEN POINT LOAD IS APPLIED DIRECTLY AT A JOIST PANEL POINT - SEE NOTE 2.
2. WHEREVER POSSIBLE APPLY POINT LOADS TO JOIST AT JOIST PANEL POINTS SO THAT ADDITIONAL JOIST REINFORCING IS NOT REQUIRED. SUSPEND LOAD 3" MAX FROM PANEL POINT FOR TYPE "K" JOISTS, AND 6" MAX FROM PANEL POINT AT TYPE "LH" JOISTS TO QUALIFY AS PANEL POINT SUPPORT. SEE NOTES 6 & 7 FOR MAXIMUM LOADS.
3. ADD REINFORCING ANGLE STRUT BETWEEN POINT LOAD AND PANEL POINT EA SIDE OF CHORD. THE ANGLE SIZE WILL BE L 3 1/2 X 3 1/2 X 1/4 EA SIDE.
4. ADD ANGLE TO STRENGTHEN THE JOIST TOP CHORD TO SPAN POINT LOAD BETWEEN TOP CHORD PANEL POINTS. CONTACT STRUCTURAL ENGINEER FOR ANGLE SIZE AND FIELD WELD REQUIREMENTS.
5. TRAPEZE BETWEEN ANY PANEL POINTS.
6. THE MAXIMUM ALLOWABLE TOTAL LOAD WHICH MAY BE ADDED TO ANY SINGLE JOIST IS 1170 LB .
7. THE MAXIMUM ALLOWABLE POINT LOAD WHICH MAY BE ADDED AT ANY SINGLE LOCATION ALONG THE JOIST IS 1170 LB
8. PARALLEL CHORD JOIST SHOWN-SIMILAR AT SLOPED OR SPECIAL SHAPED JOISTS.
9. DO NOT DRILL THROUGH, NOTCH, OR CUT ANY JOIST MEMBER.
10. THIS DETAIL PERTAINS TO SUSPENDING SPRINKLER PIPES, HVAC DUCTS, MECHANICAL EQUIPMENT, ETC. COSTS FOR REINFORCING JOISTS SHALL BE INCLUDED ENTIRELY INTO THE BASE BID-COORDINATE WITH GENERAL CONTRACTOR PRIOR TO BIDDING.
11. CONCENTRATED LOADS MUST BE APPLIED CONCENTRICALLY TO THE JOIST CHORDS

TYP ALLOWABLE METHODS FOR HANGING LOADS FROM STEEL BAR JOISTS

1
S-552
SCALE : 1 1/2" = 1'-0"



TYP BENT PLATE DETAILS

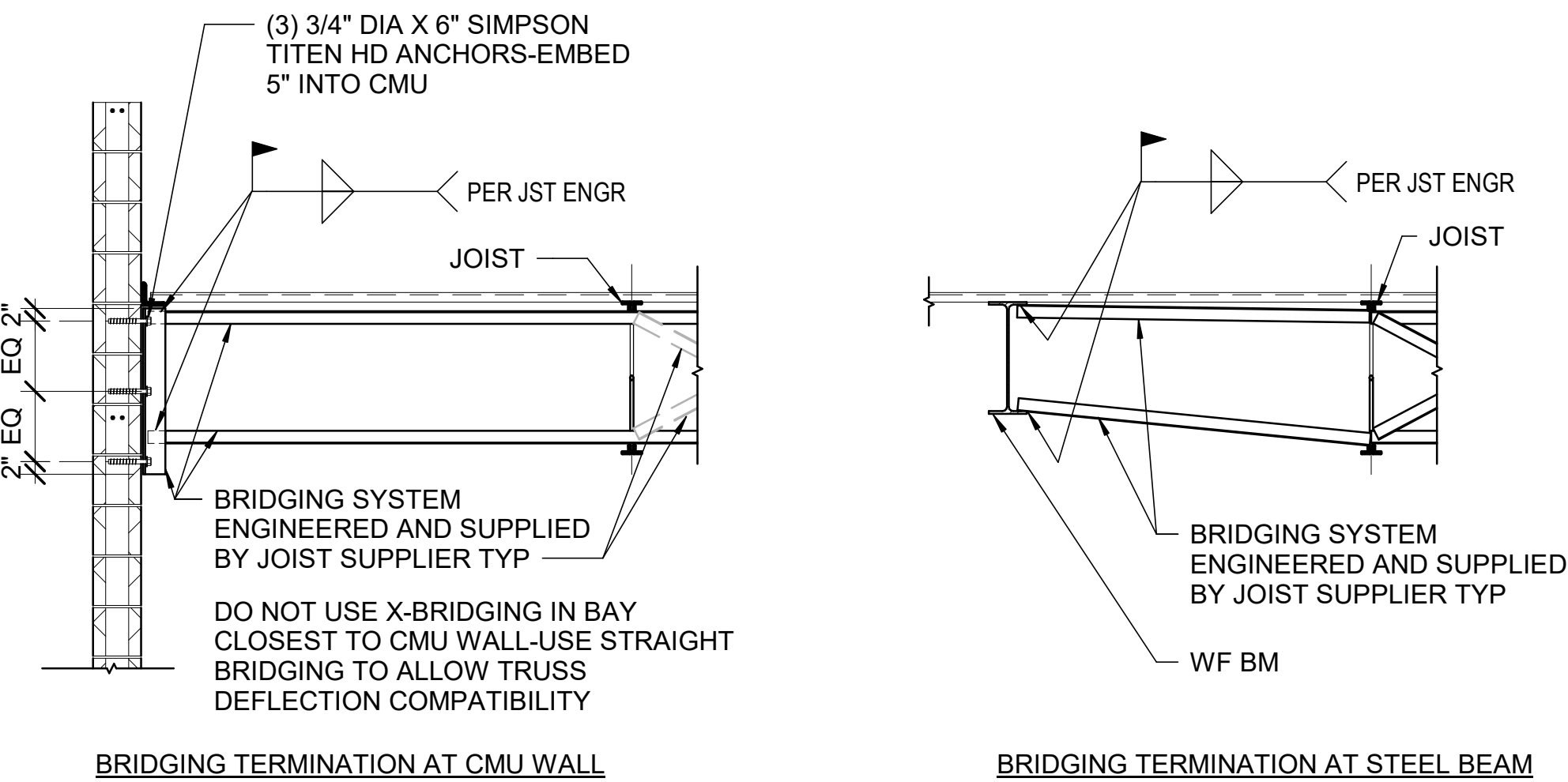
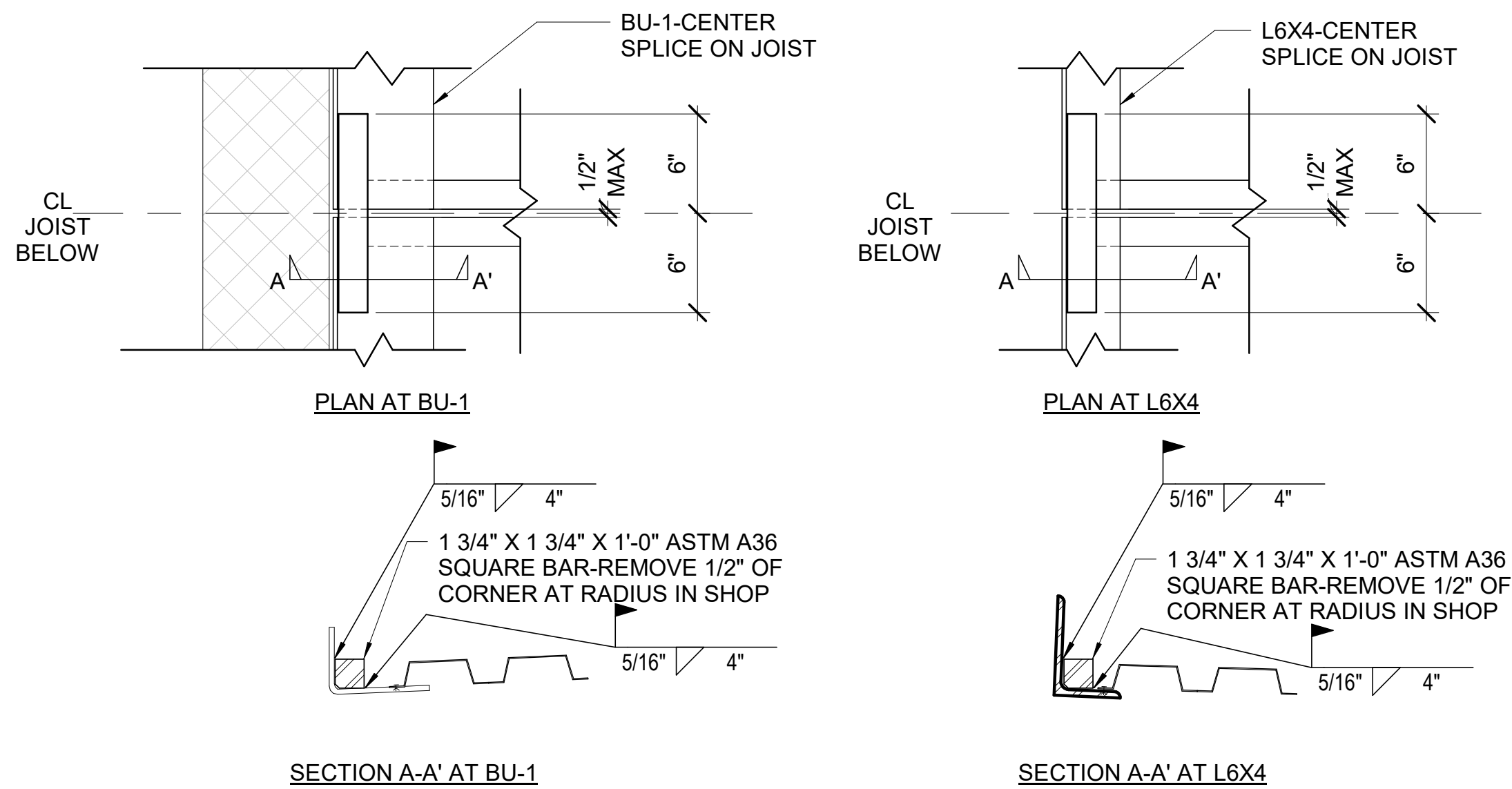
4
S-552
SCALE : 1 1/2" = 1'-0"

EMBED PL TYPE EP-L

5
S-552
SCALE : 1" = 1'-0"

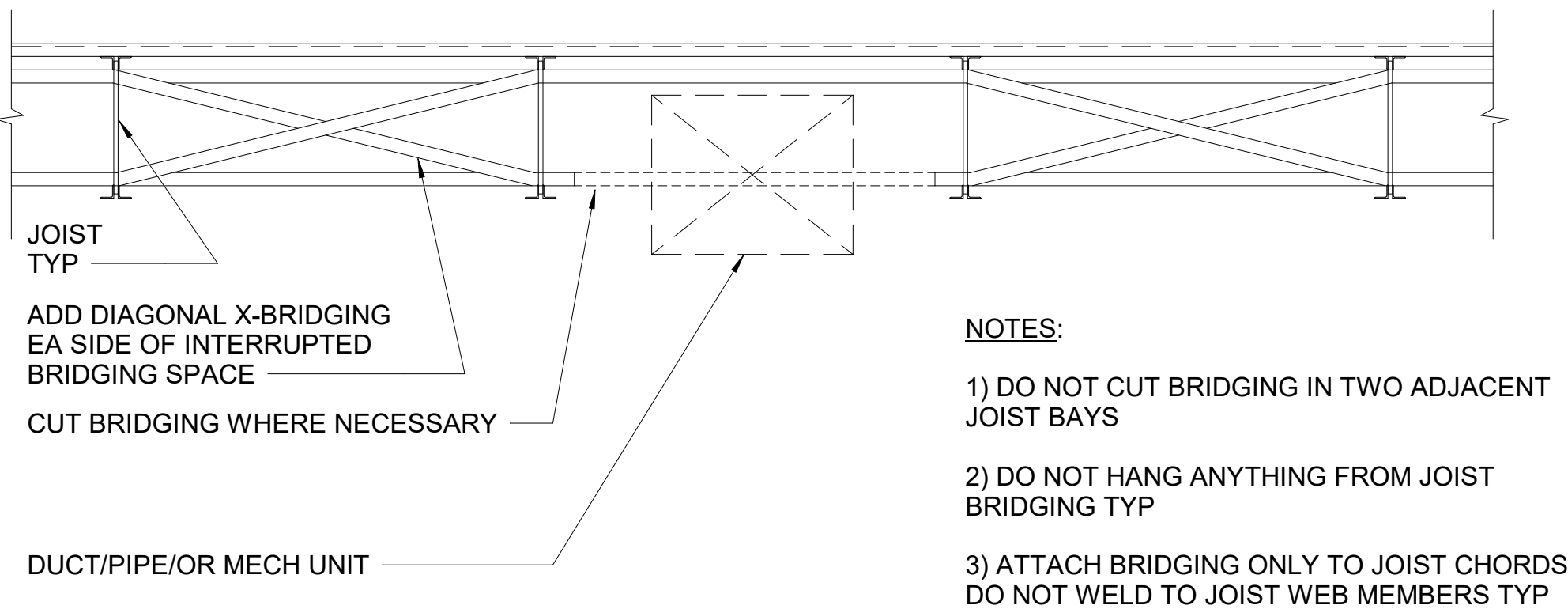
(N) STEEL ROOF DIAPHRAGM CHORD SPLICE

6
S-552
SCALE : 1 1/2" = 1'-0"



TYP JOIST BRIDGING CONNECTION TO STRUCTURE

3
S-552
SCALE : 1/2" = 1'-0"



NOTES:

- 1) DO NOT CUT BRIDGING IN TWO ADJACENT JOIST BAYS
- 2) DO NOT HANG ANYTHING FROM JOIST BRIDGING TYP
- 3) ATTACH BRIDGING ONLY TO JOIST CHORDS- DO NOT WELD TO JOIST WEB MEMBERS TYP



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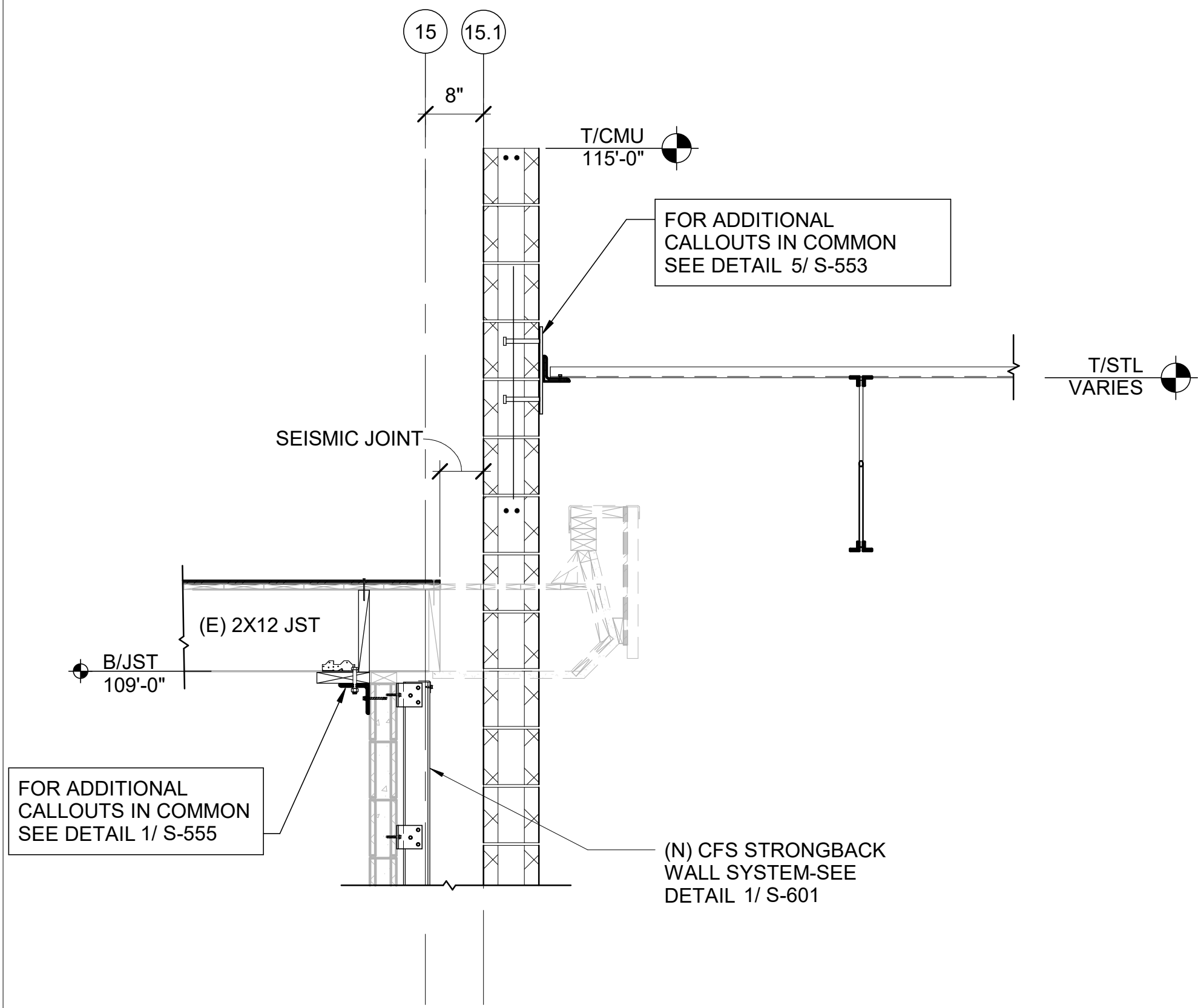
Project No. : 21024	Designed By: CTS	Drawn By: DJH	Checked By: ABC
Date			
Description			
Mark			

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ROOF FRAMING DETAILS

S-552

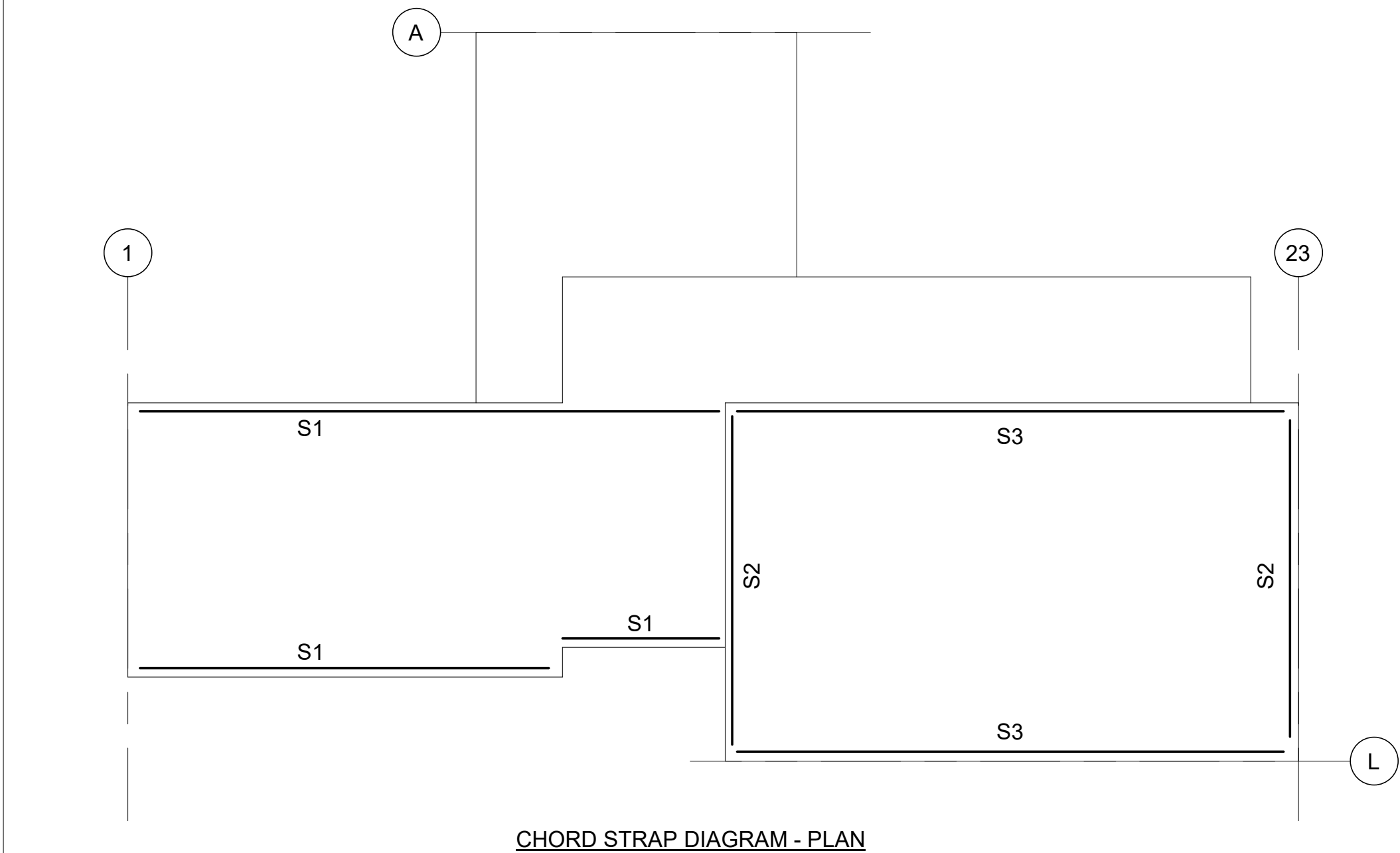
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1 ROOF FRAMING AT GRID 15 SEISMIC JOINT
S-554 SCALE : 3/4" = 1'-0"

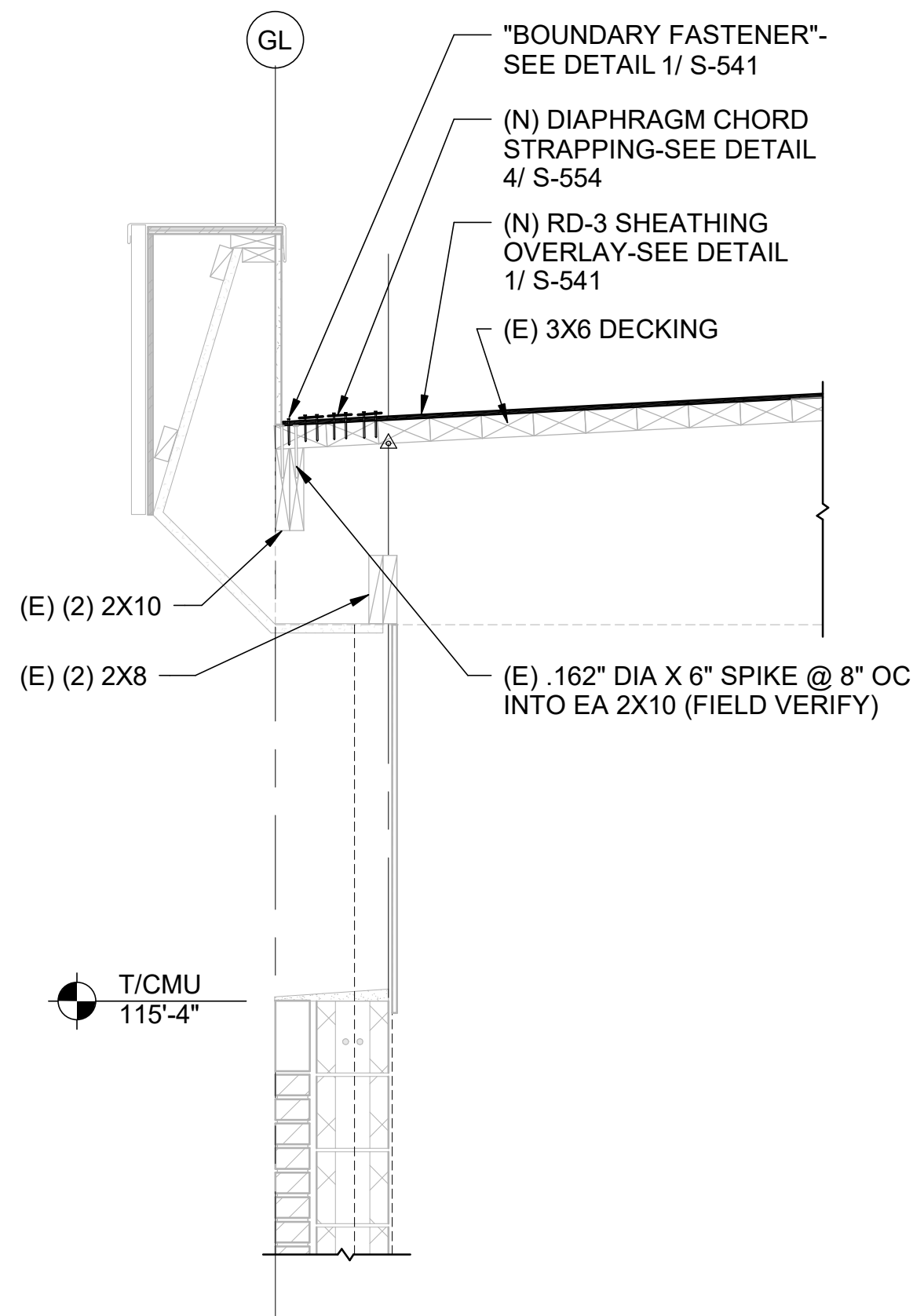
MARK	STRAP(1)	QTY	NAIL	END LENGTH(2, 3)
S1	SIMPSON CMST16	1	0.148"x2 1/2"	24"
S2	SIMPSON CMST12	1	0.148"x2 1/2"	39"
S3	SIMPSON CMST12	3	0.148"x2 1/2"	39"

- (1) INSTALL DIAPHRAGM STRAPS OVER NEW SHEATHING OVERLAY. LOCATE STRAPS OVER INTERIOR WALLS OR AT ROOF EXTENTS AS INDICATED IN THE DIAGRAM ABOVE.
- (2) PROVIDE THE SPECIFIED STRAPS OR SUBMIT ALTERNATES FOR APPROVAL. SPLICE AS REQUIRED PER MFR RECOMMENDATION.
- (3) PROVIDE FULL NAILING AT BOTH ENDS OF EACH STRAP AND AT 12" ON CENTER BETWEEN ENDS. FULL NAILING SHALL FILL ALL PRE-PUNCHED HOLES WITH NAILS OVER THE END LENGTH SPECIFIED.

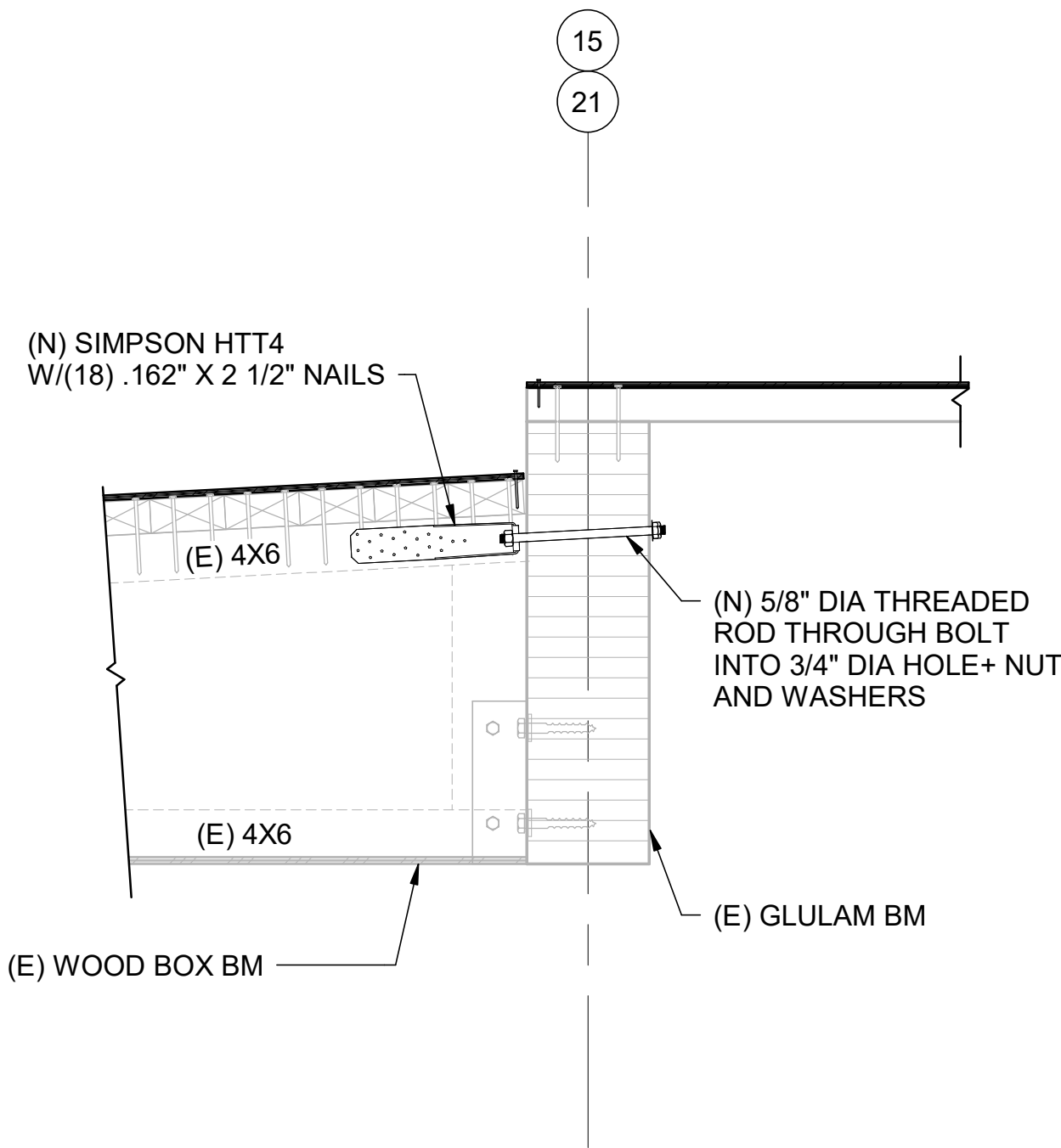


CHORD STRAP DIAGRAM - PLAN

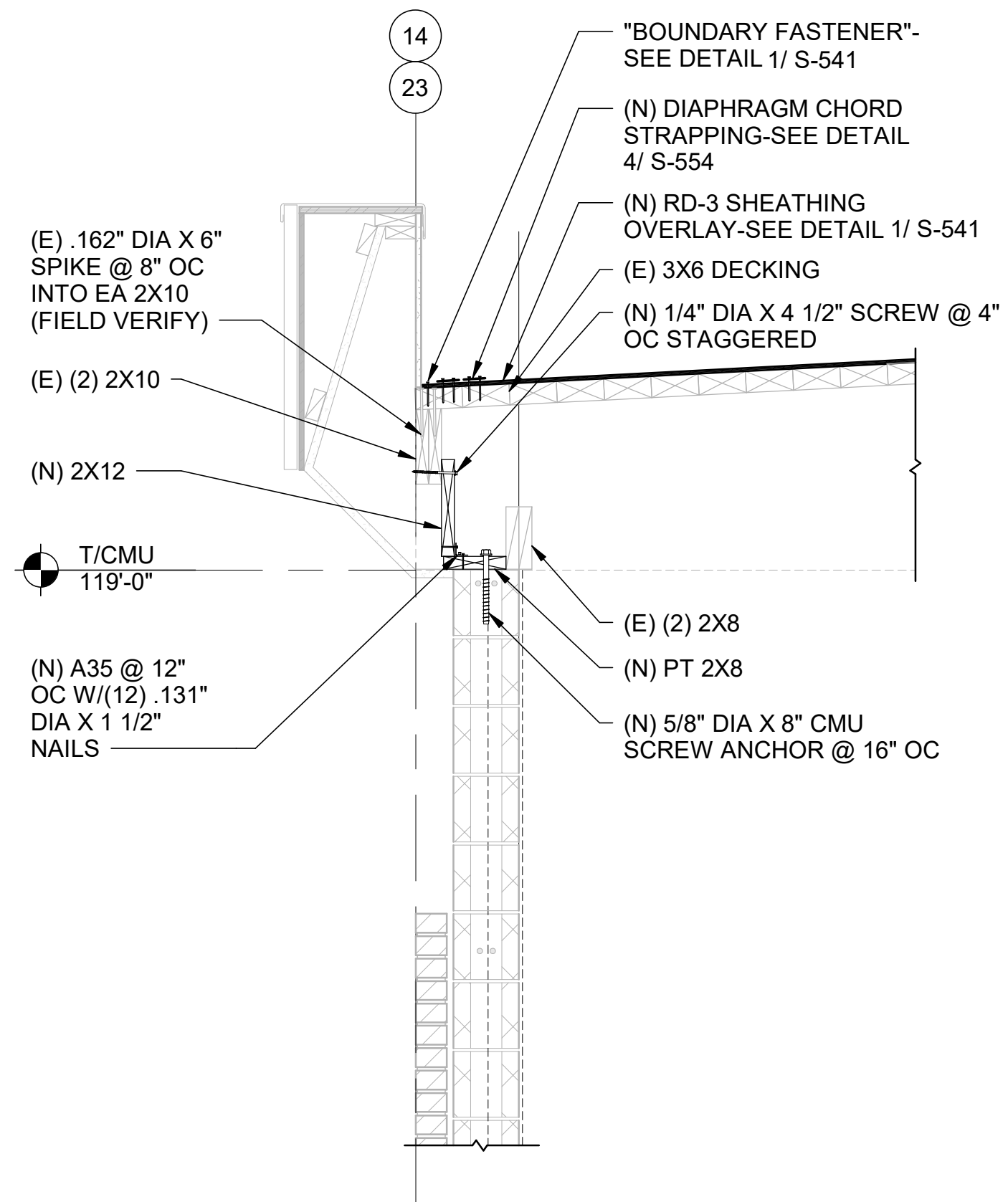
4 ROOF DIAPHRAGM CHORD STRAPPING
S-554 NTS



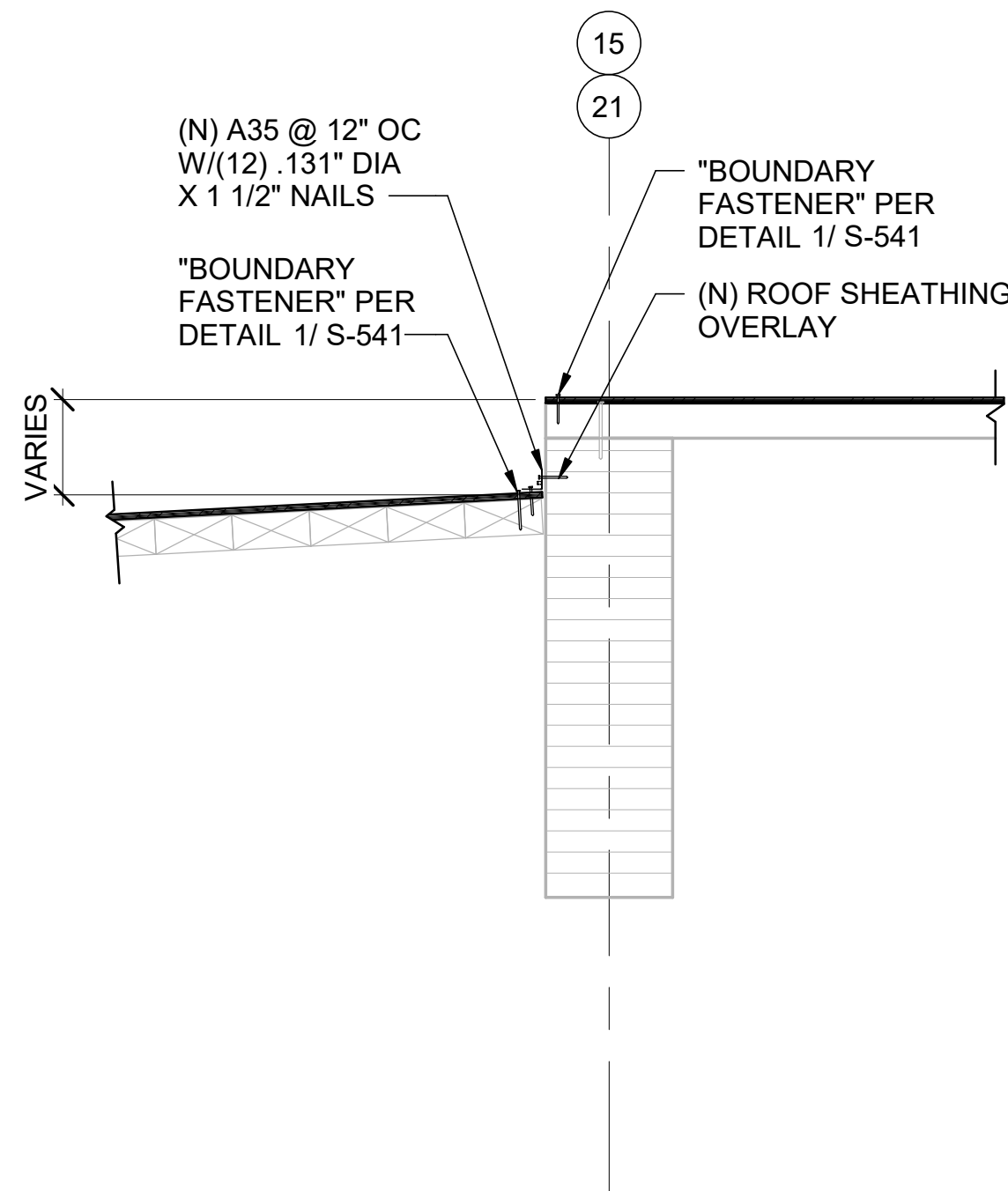
2 HIGH ROOF EAVE FRAMING @ CLERESTORY
S-554 SCALE : 3/4" = 1'-0"



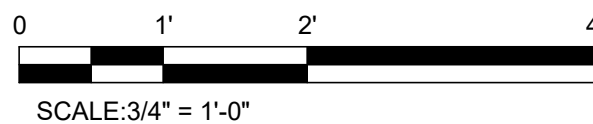
5 TYP BOX-BM CONNECTION REINFORCING
S-554 SCALE : 1" = 1'-0"



3 HIGH ROOF EAVE FRAMING @ CMU WALL
S-554 SCALE : 3/4" = 1'-0"



6 DIAPHRAGM NAILING ON 15 & 21 BTWN F & K
S-554 SCALE : 1" = 1'-0"



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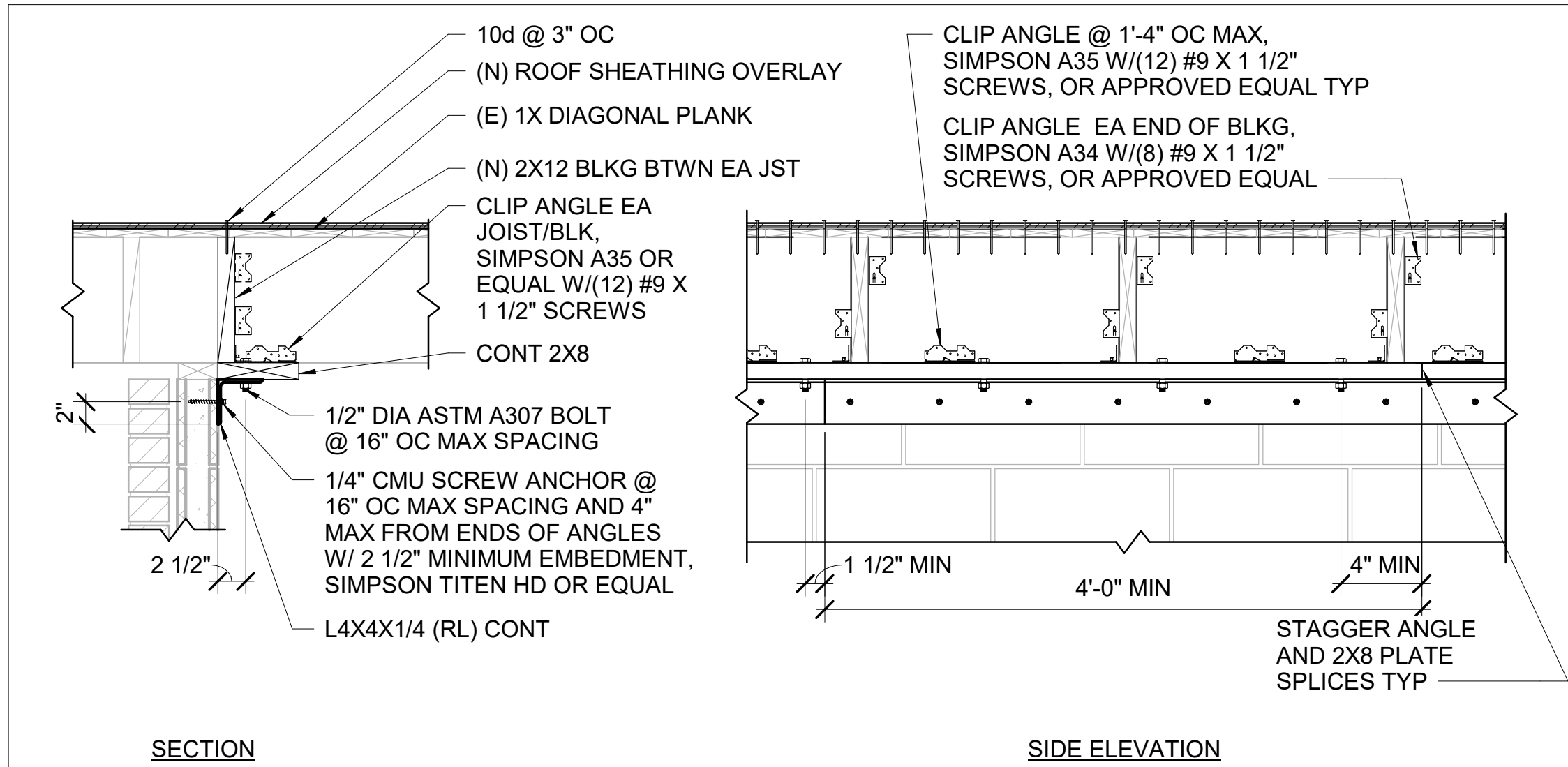
Mark	Description	Date

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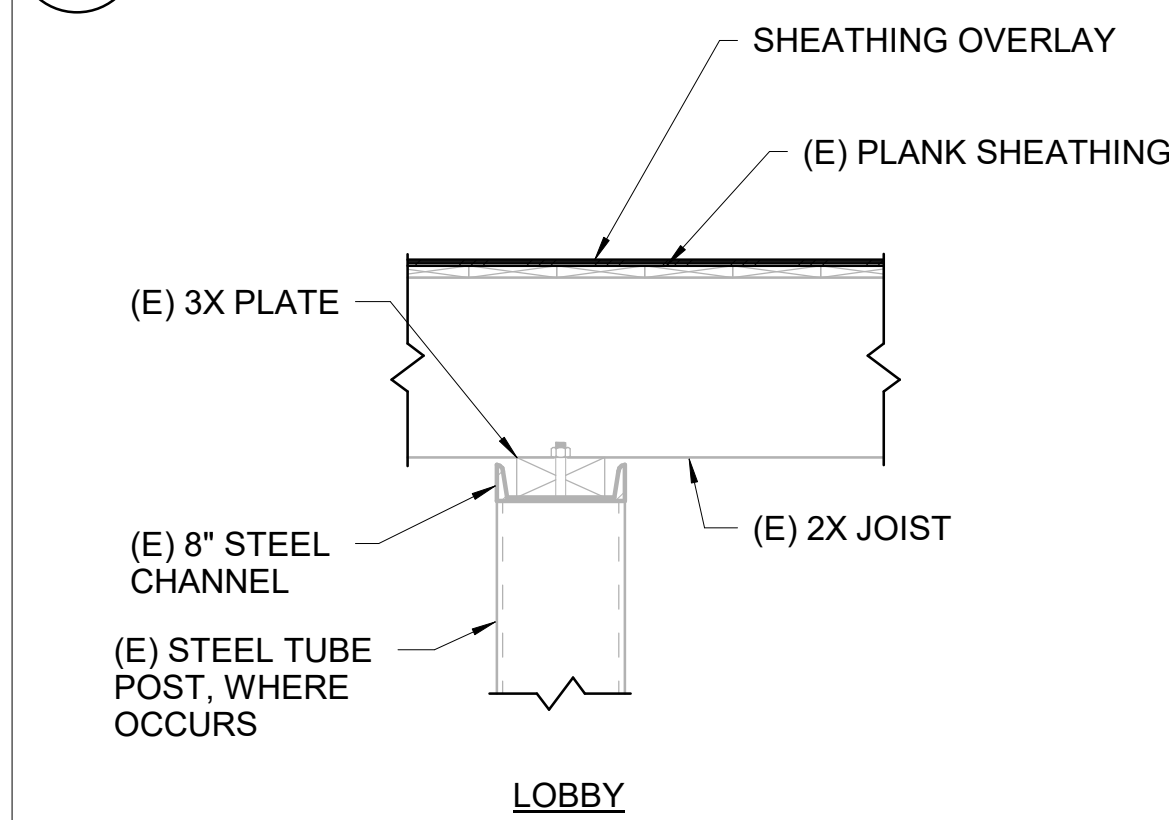
ROOF FRAMING DETAILS

S-554

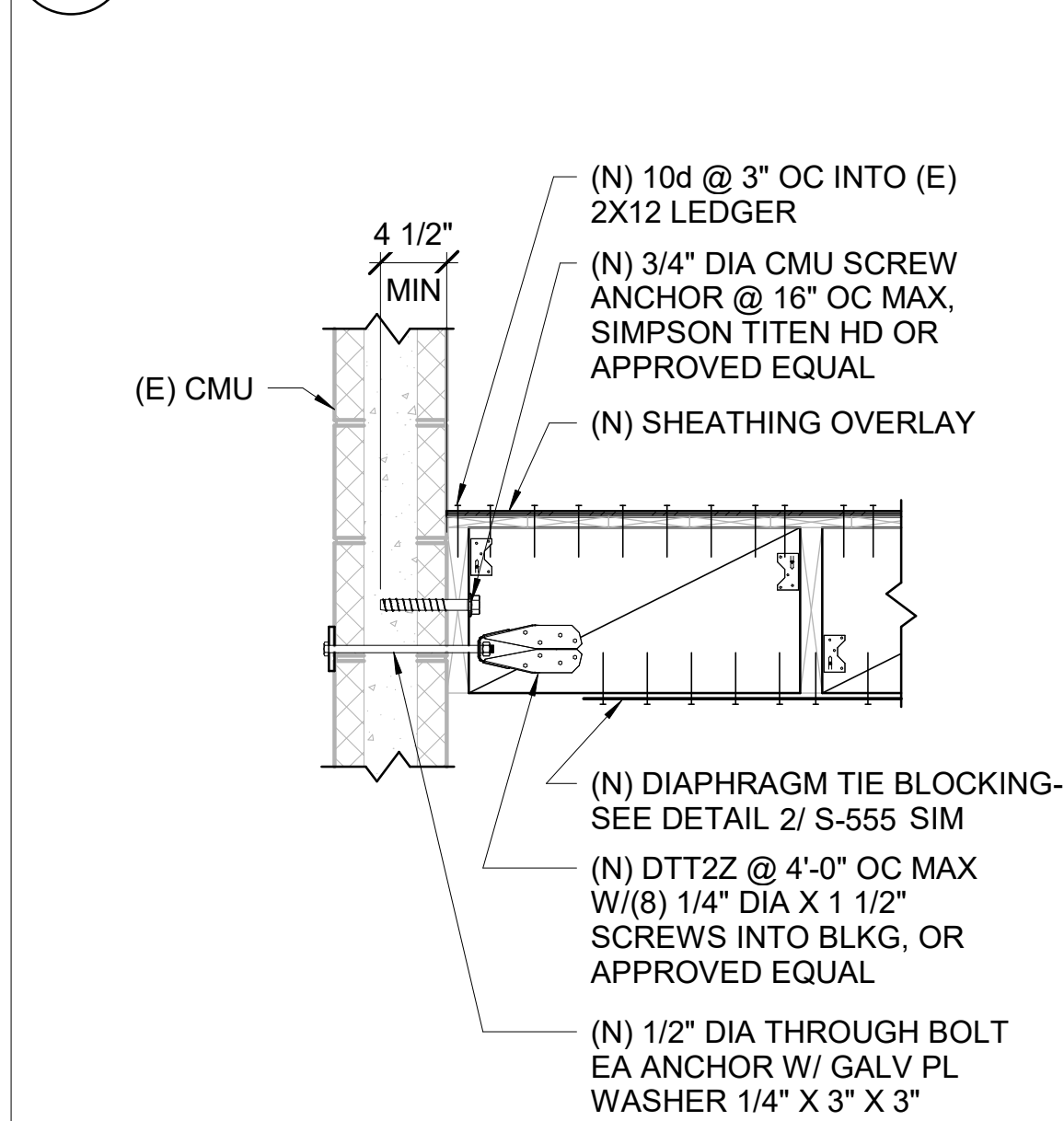
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1 TYP RETROFIT LEDGER ANGLE 'RL'
S-555 SCALE : 1" = 1'-0"

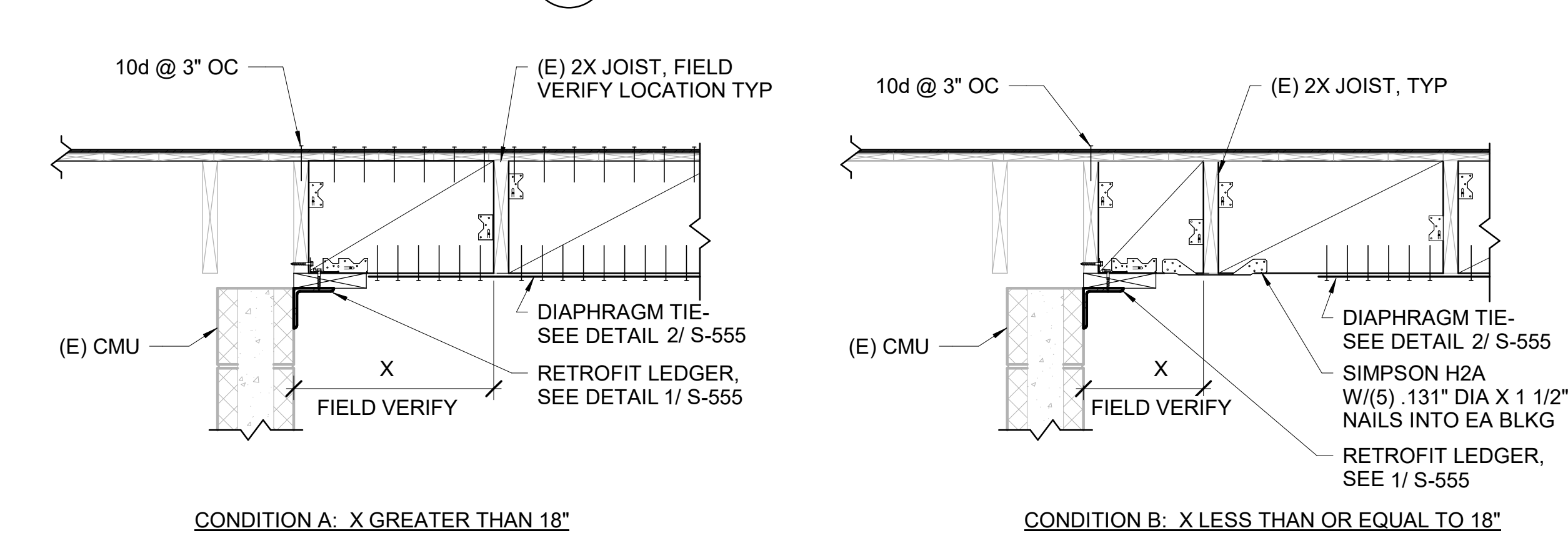


10 RETROFIT T/WALL EXTERIOR STEEL
S-555 SCALE : 1" = 1'-0"

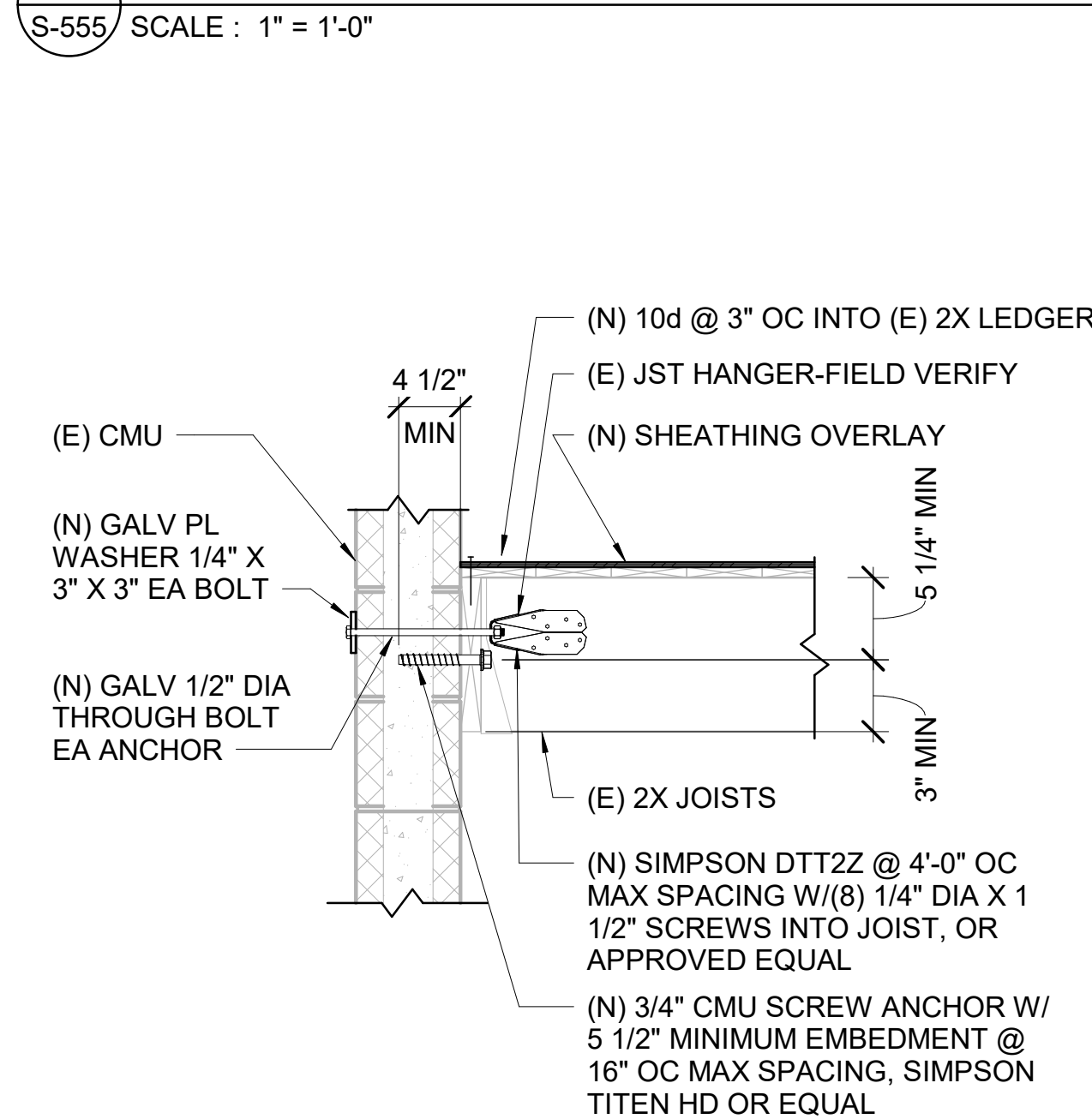


7 TYP LEDGER LOW-ROOF PARALLEL TO JST
S-555 SCALE : 1" = 1'-0"

2 TYP BRACE AT TOP OF EXISTING CMU WALL
S-555 SCALE : 1" = 1'-0"

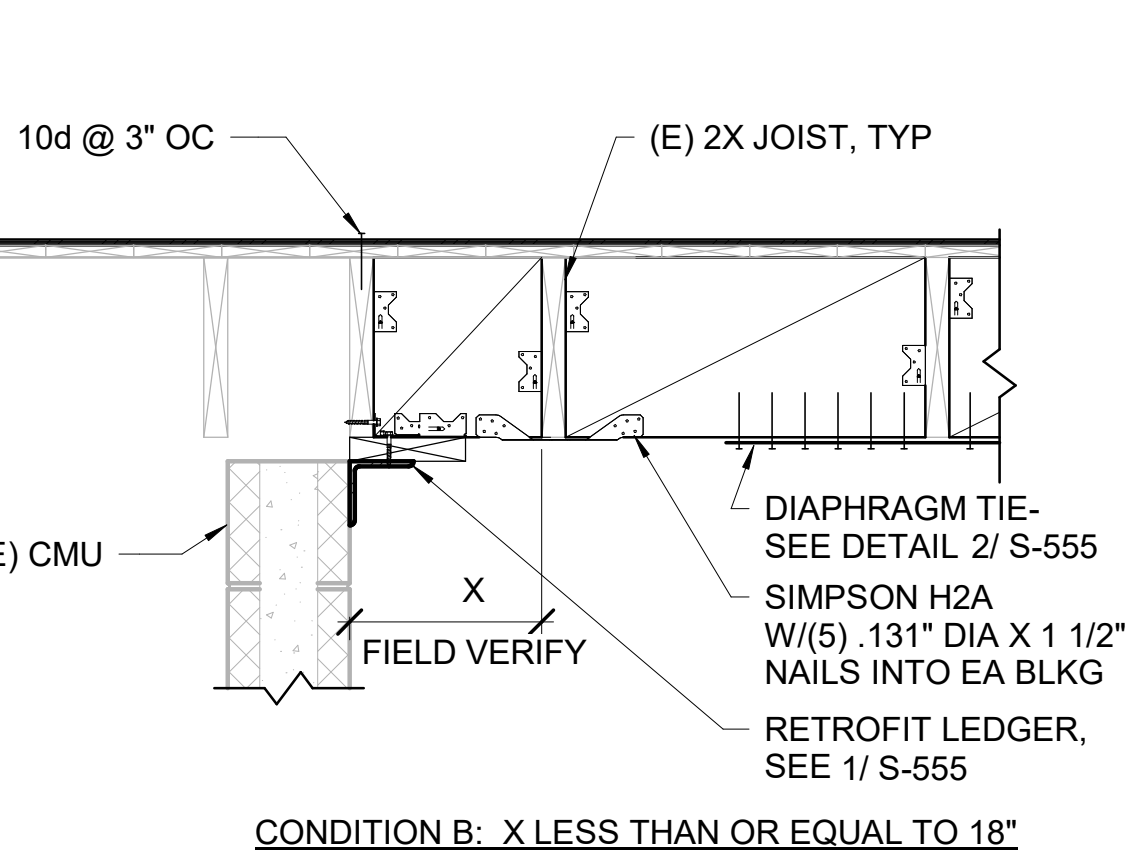


4 TYP BRACE AT TOP OF INTERIOR CMU WALL PARALLEL TO JOIST
S-555 SCALE : 1" = 1'-0"

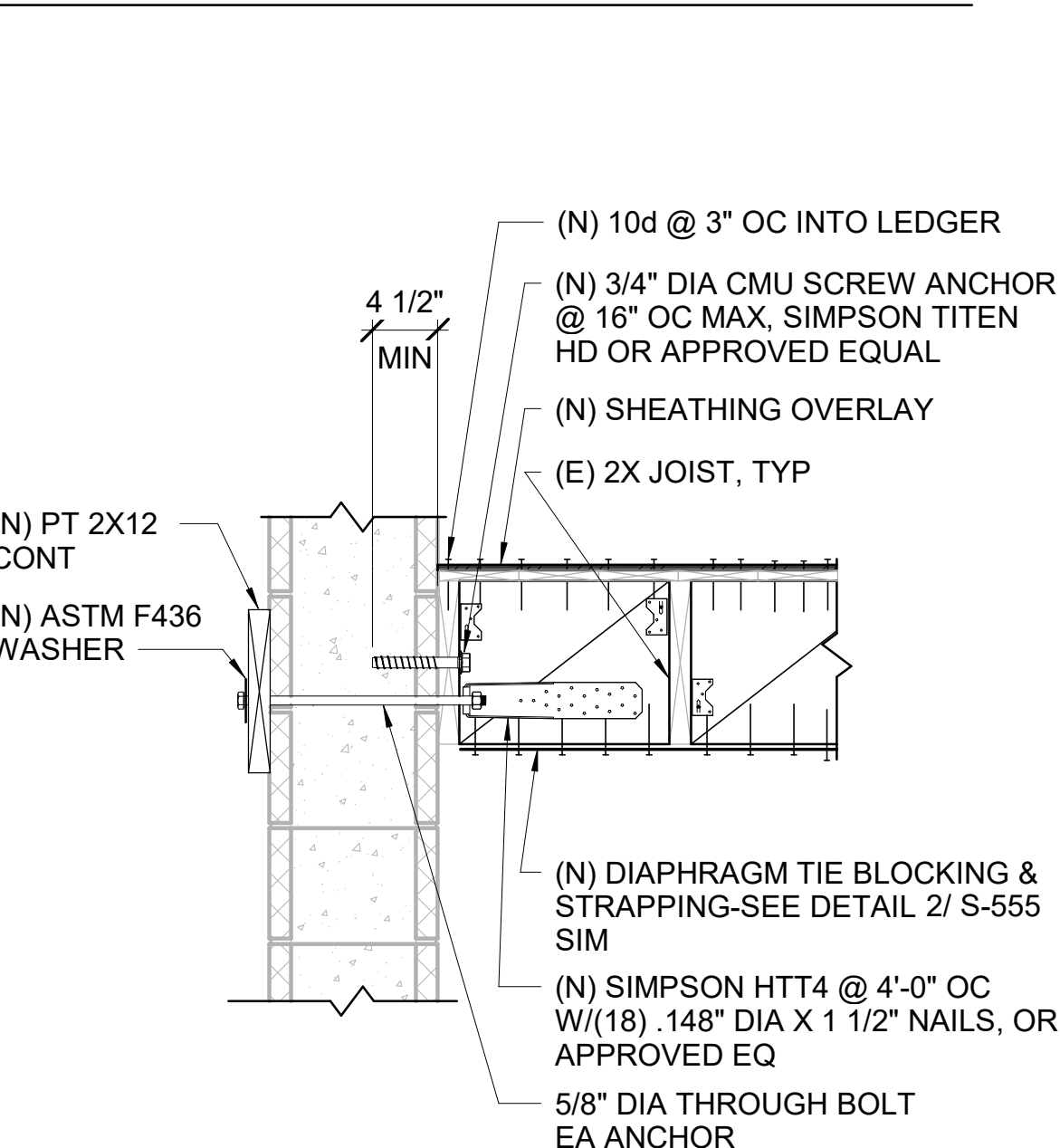


6 TYP LEDGER LOW ROOF PERP TO JST
S-555 SCALE : 1" = 1'-0"

5 TYP BRACE AT TOP OF INTERIOR CMU WALL PERPENDICULAR TO JOIST
S-555 SCALE : 1" = 1'-0"

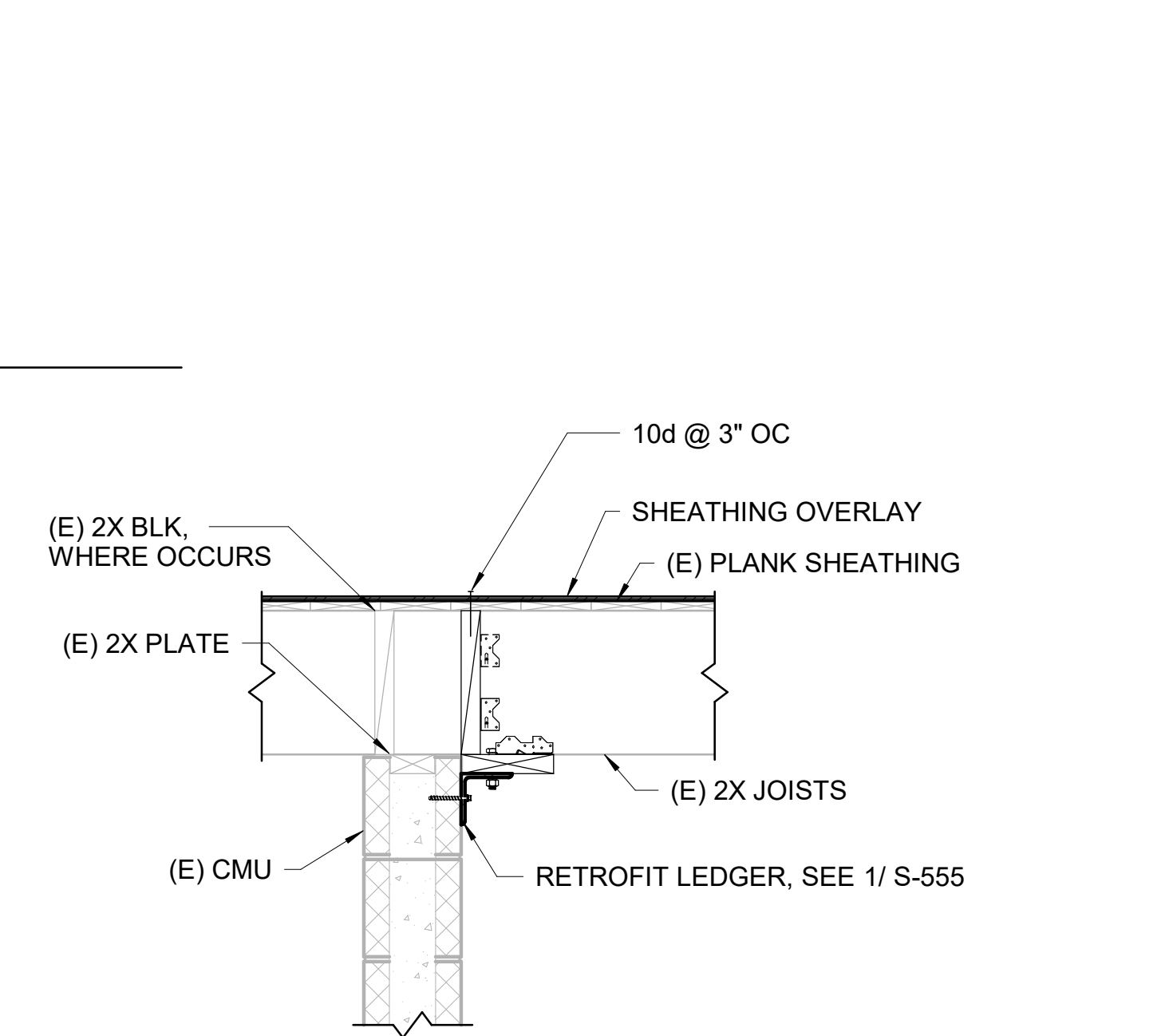
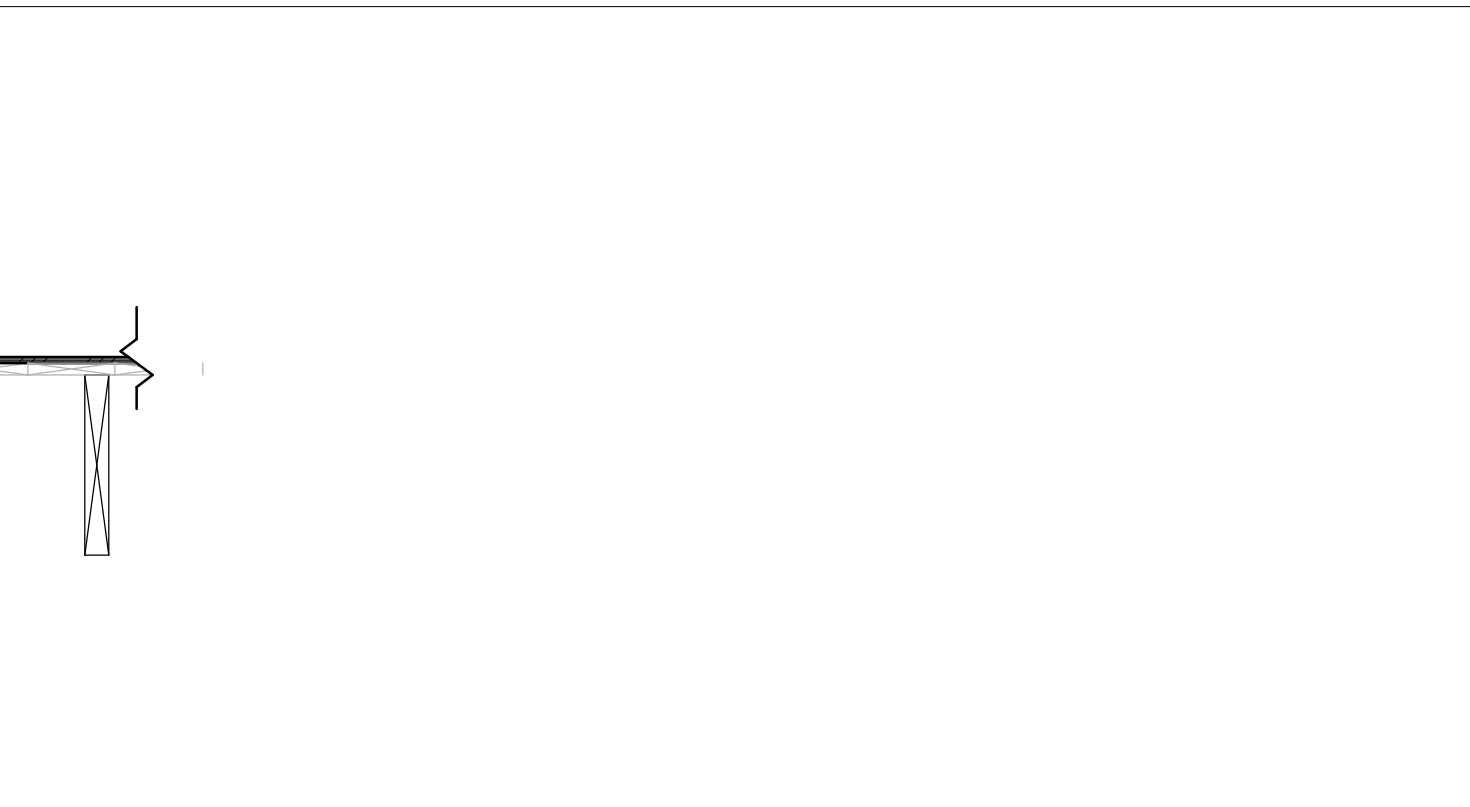


8 TYP LEDGER MID-ROOF PERP TO JOIST
S-555 SCALE : 1" = 1'-0"

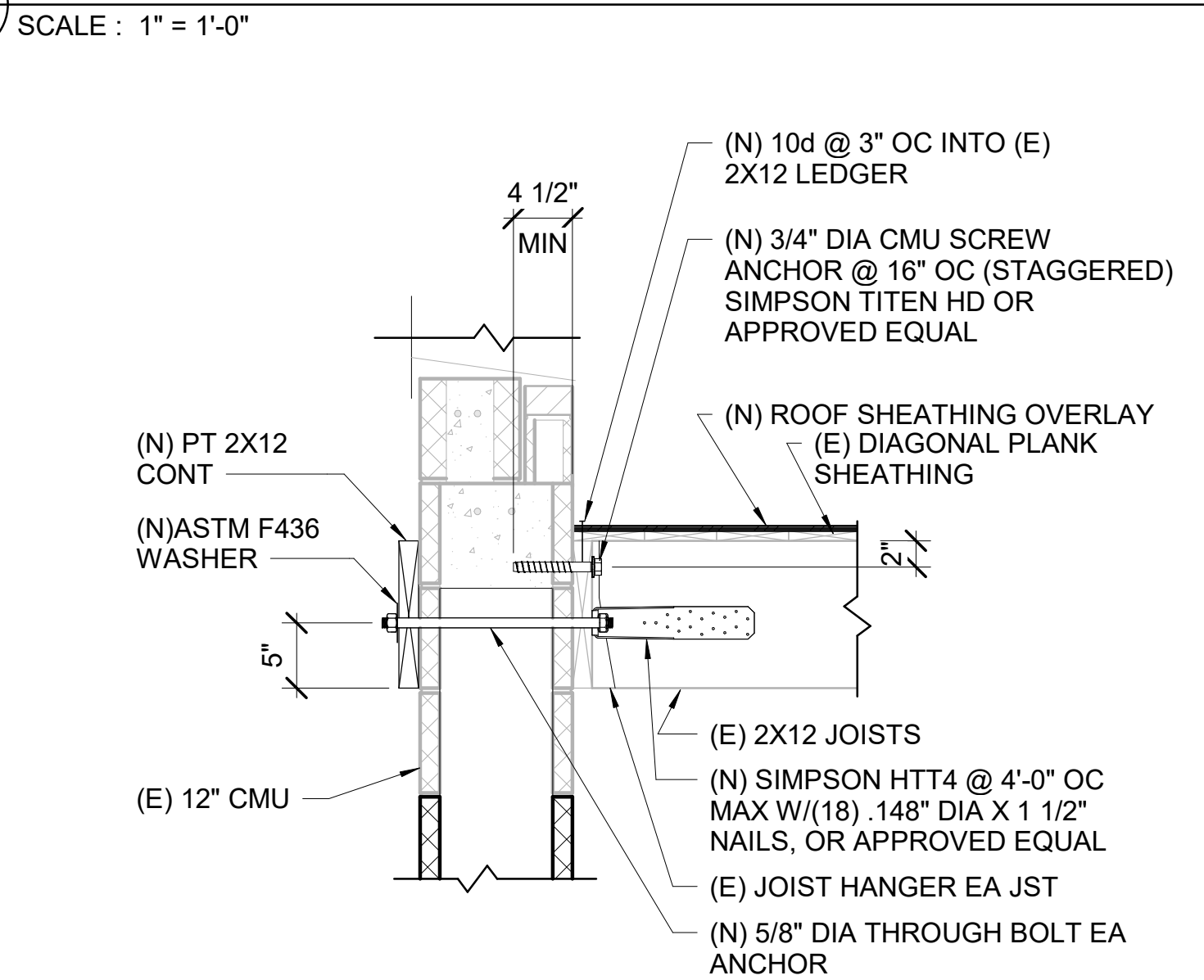


9 TYP LEDGER MID-ROOF PARALLEL TO JST
S-555 SCALE : 1" = 1'-0"

PERMIT SET



8 TYP LEDGER MID-ROOF PERP TO JOIST
S-555 SCALE : 1" = 1'-0"



8 TYP LEDGER MID-ROOF PERP TO JOIST
S-555 SCALE : 1" = 1'-0"



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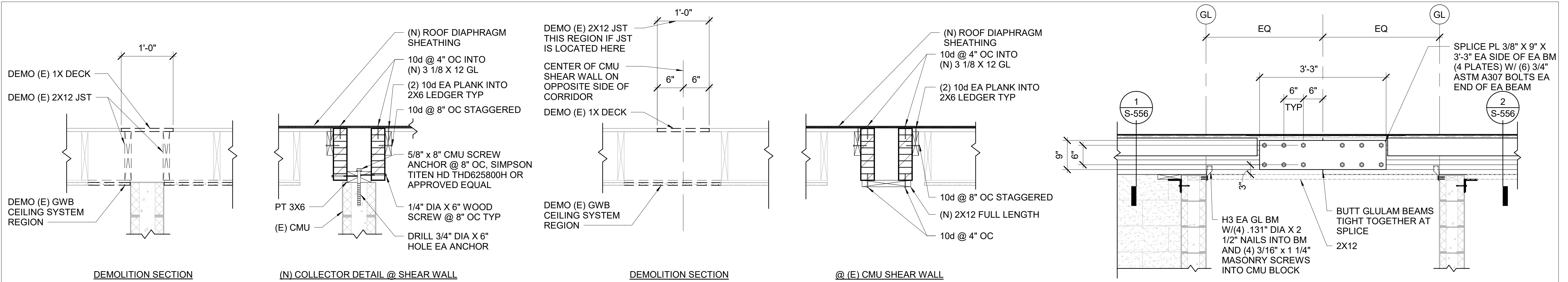
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ROOF FRAMING DETAILS

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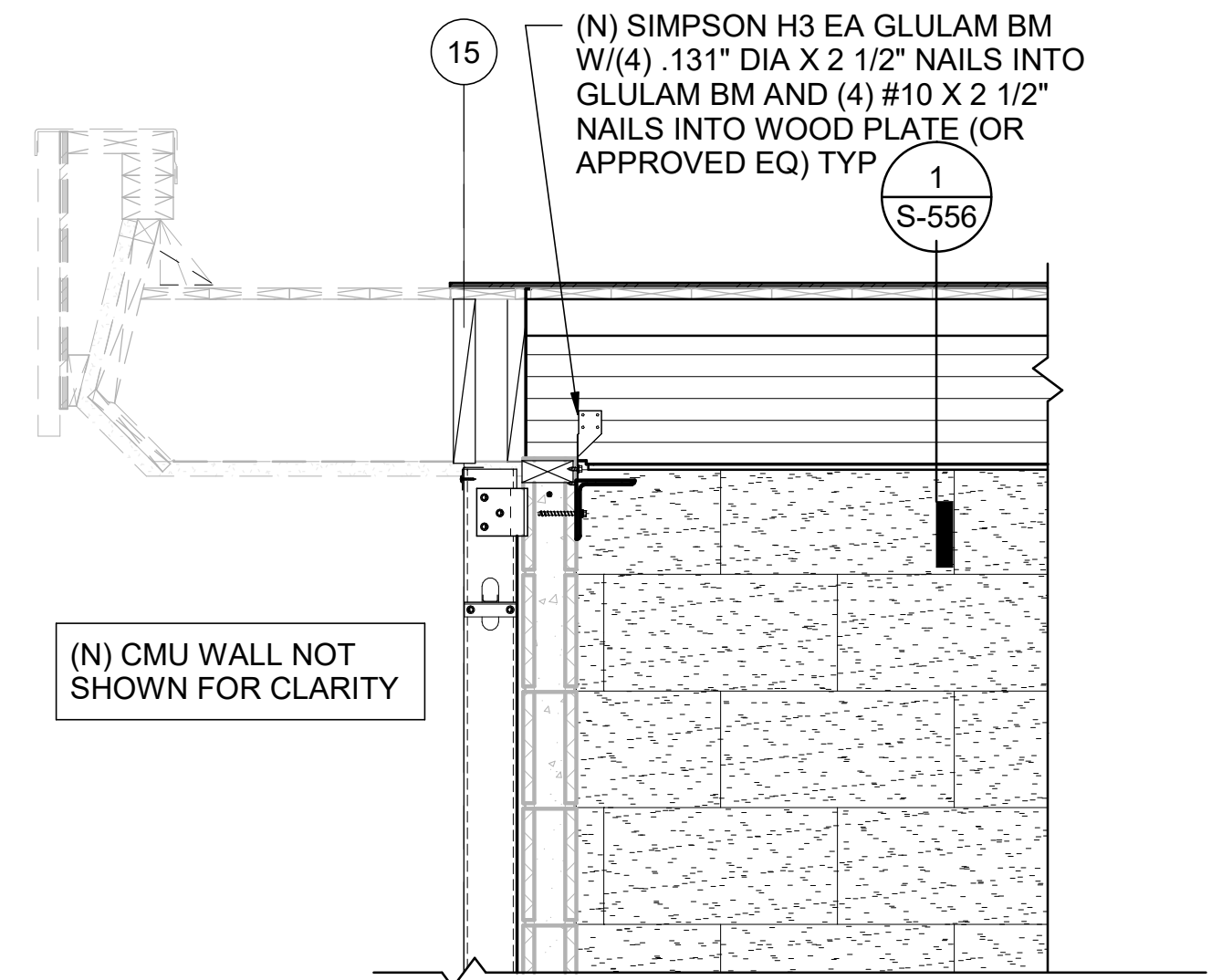
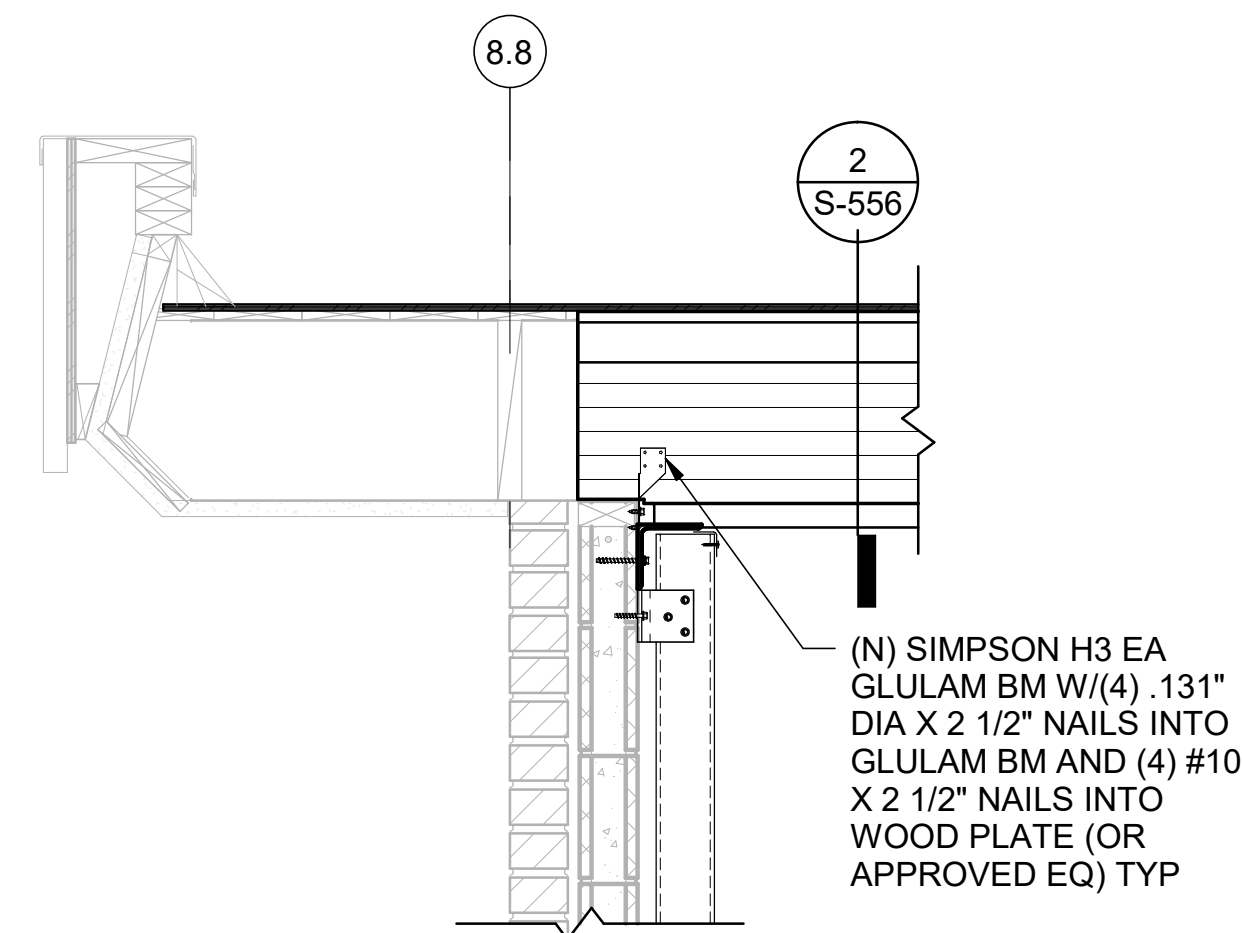
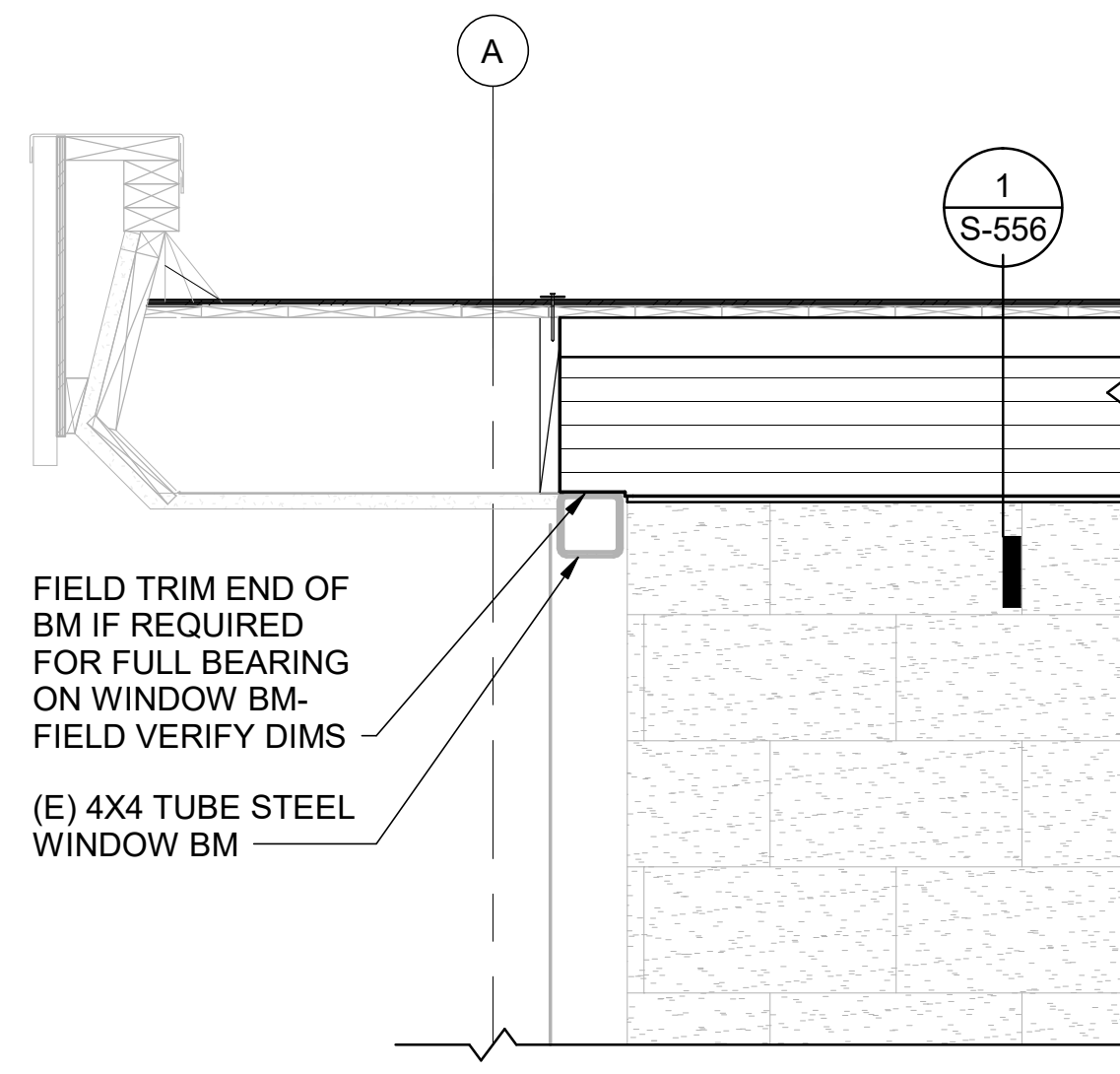
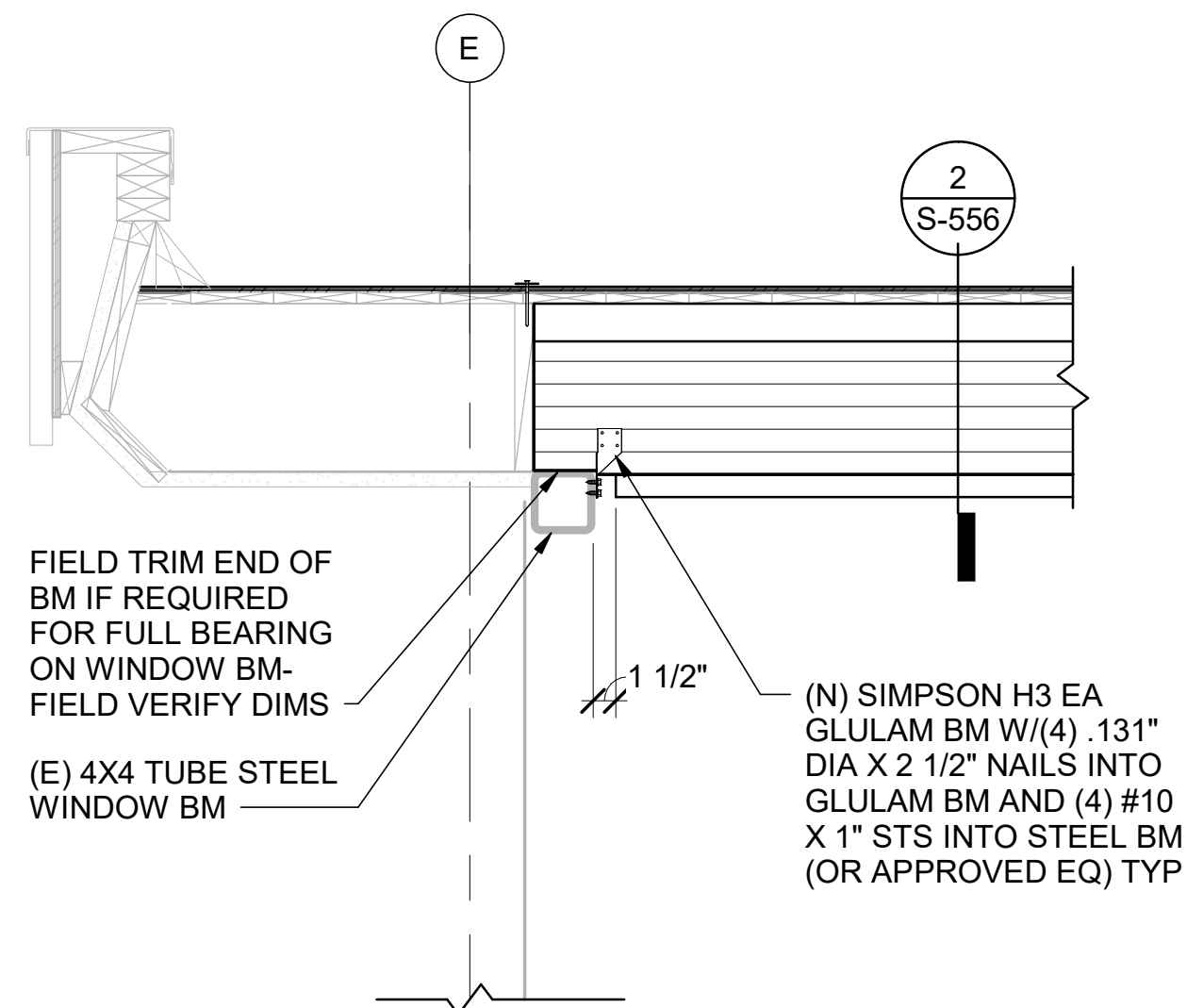


1 (N) COLLECTOR DETAIL AT (E) SHEAR WALL
S-556 SCALE : 1" = 1'-0"

2 (N) COLLECTOR DETAIL AT (E) ROOF
S-556 SCALE : 1" = 1'-0"

4 TYP SPLICE AT GLULAM COLLECTOR

S-556 SCALE : 3/4" = 1'-0"

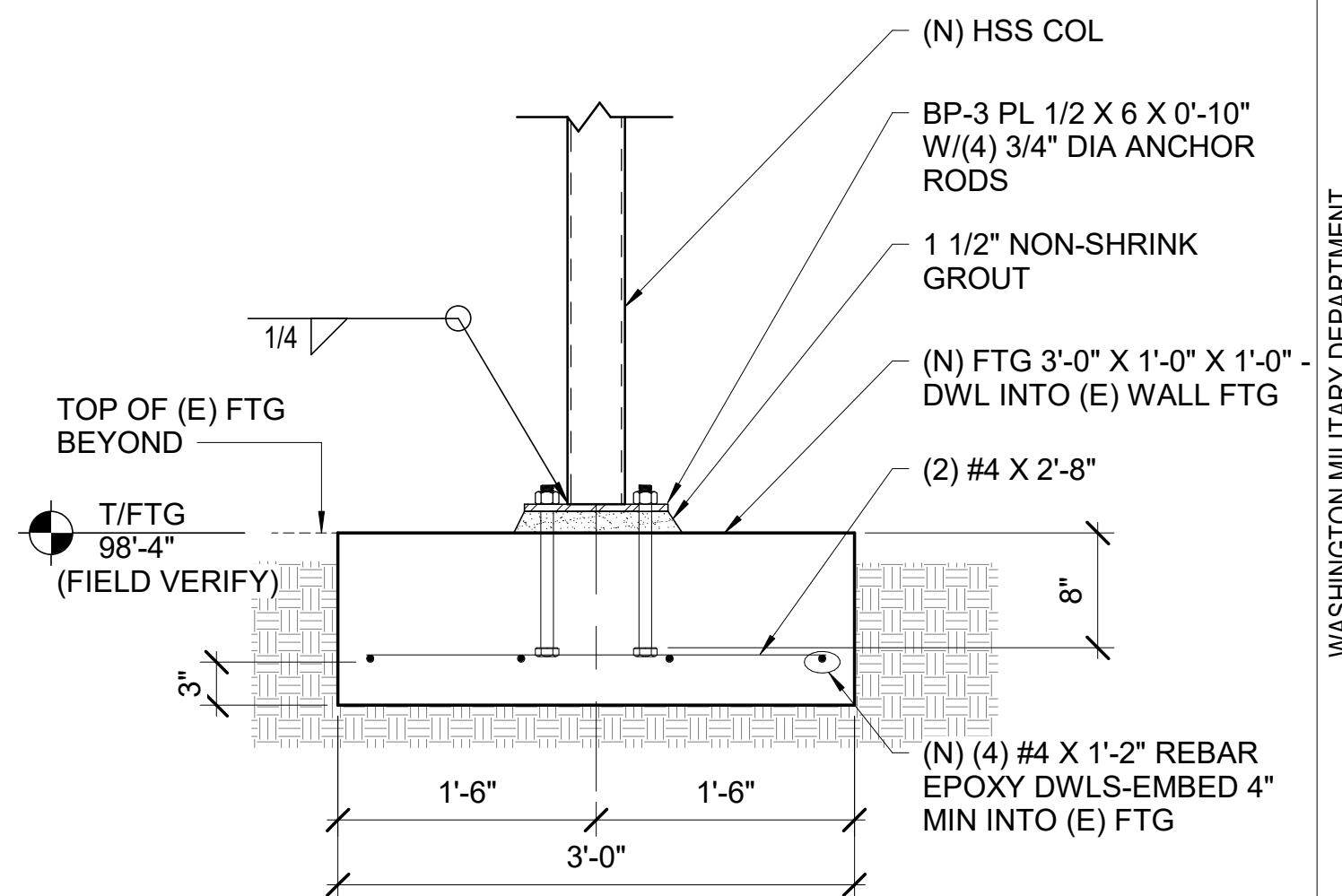
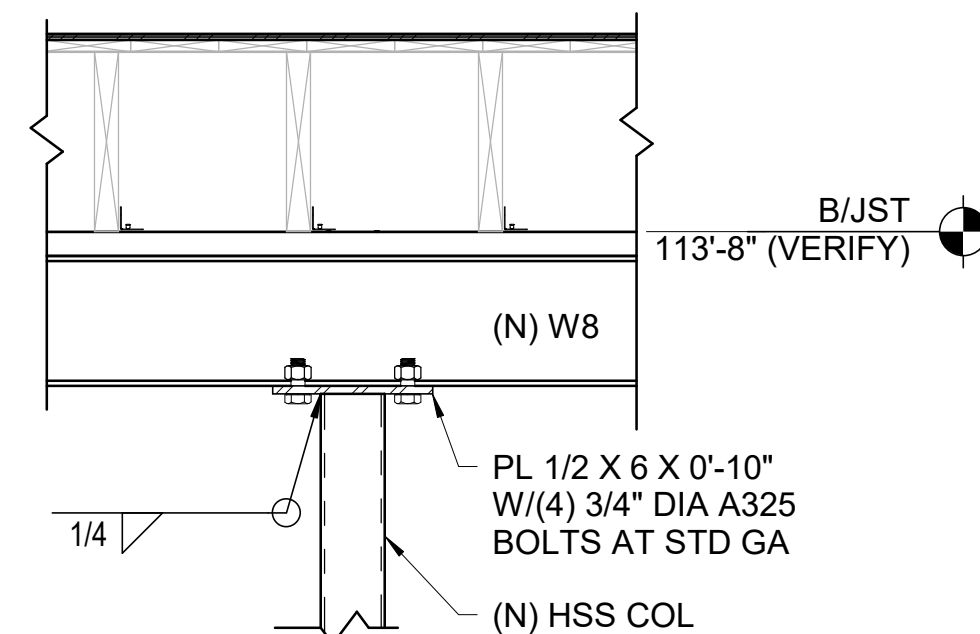
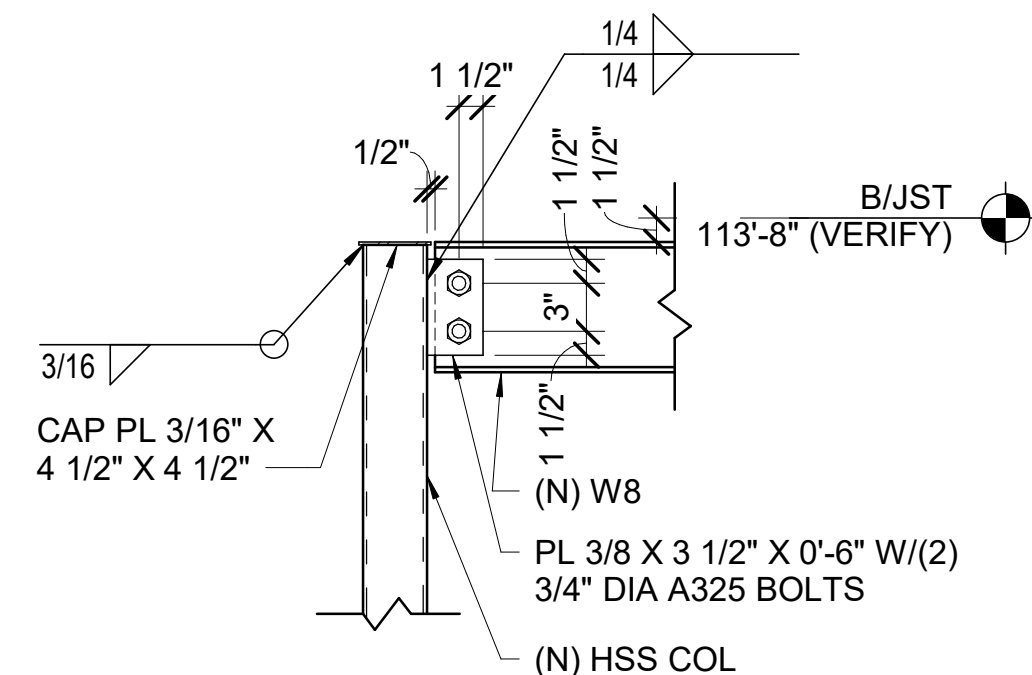
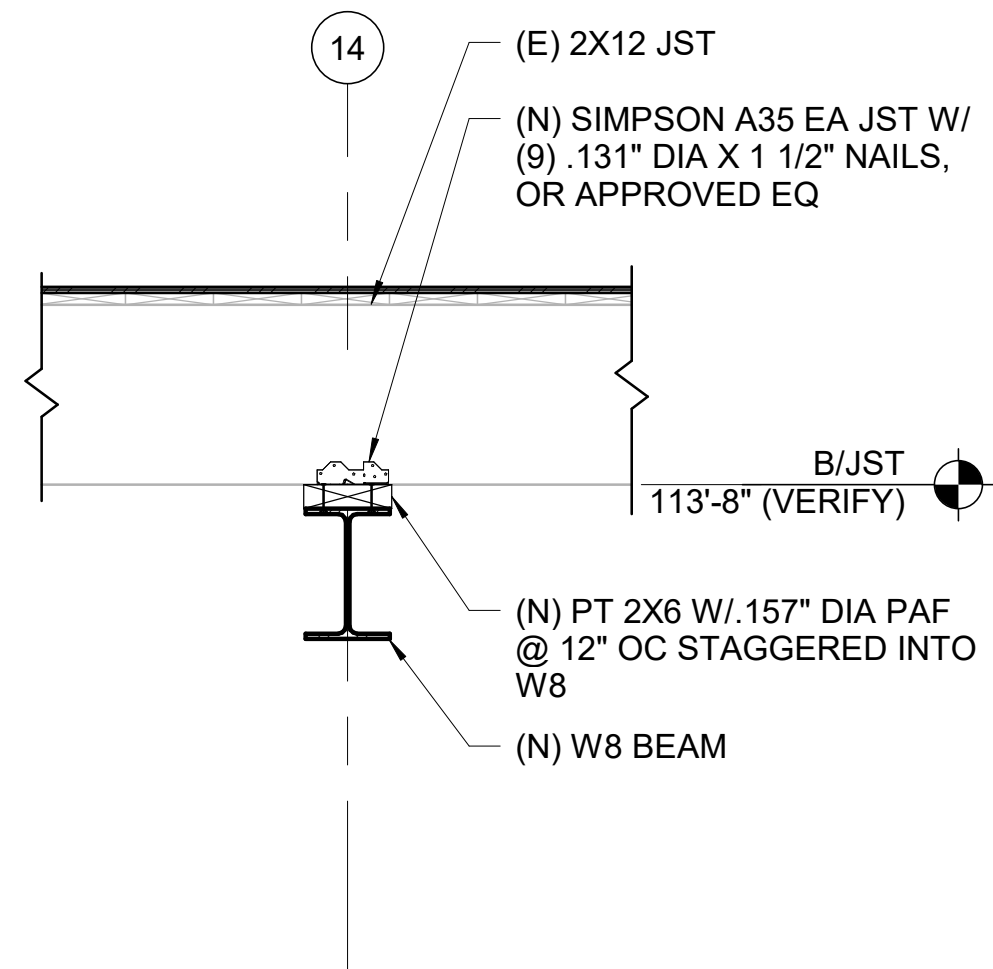


5 GL BM CONN GRID E & 6
S-556 SCALE : 1" = 1'-0"

6 GL BM CONN GRID A & 6
S-556 SCALE : 1" = 1'-0"

7 GL BM CONN AT GRID C & 8.8
S-556 SCALE : 1" = 1'-0"

8 GL BM CONN TO GRID C & 15
S-556 SCALE : 1" = 1'-0"



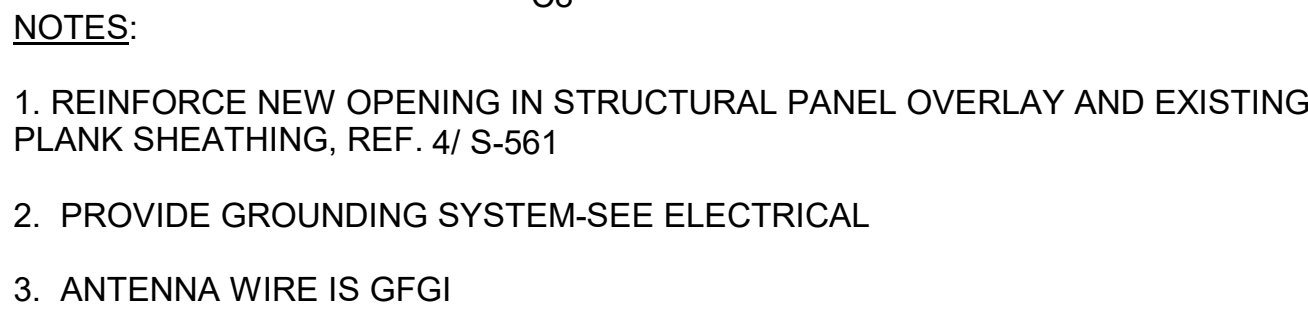
9 (N) WF BEAM SUPPORT AT (E) ROOF
S-556 SCALE : 1" = 1'-0"

10 W8 CONNECTION TO END COLUMN
S-556 SCALE : 1" = 1'-0"

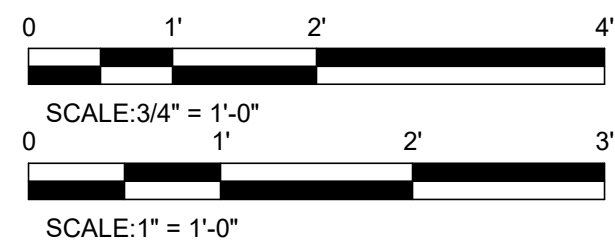
11 W8 CANTILEVER OVER HSS COLUMN
S-556 SCALE : 1" = 1'-0"

12 HSS COLUMN BP-3 CONN TO FND
S-556 SCALE : 1" = 1'-0"





1 ANTENNA MAST ELEVATION
S-561 SCALE : 3/4" = 1'-0"



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Designed By: CTS

Drawn By: DJH

Checked By: ABC

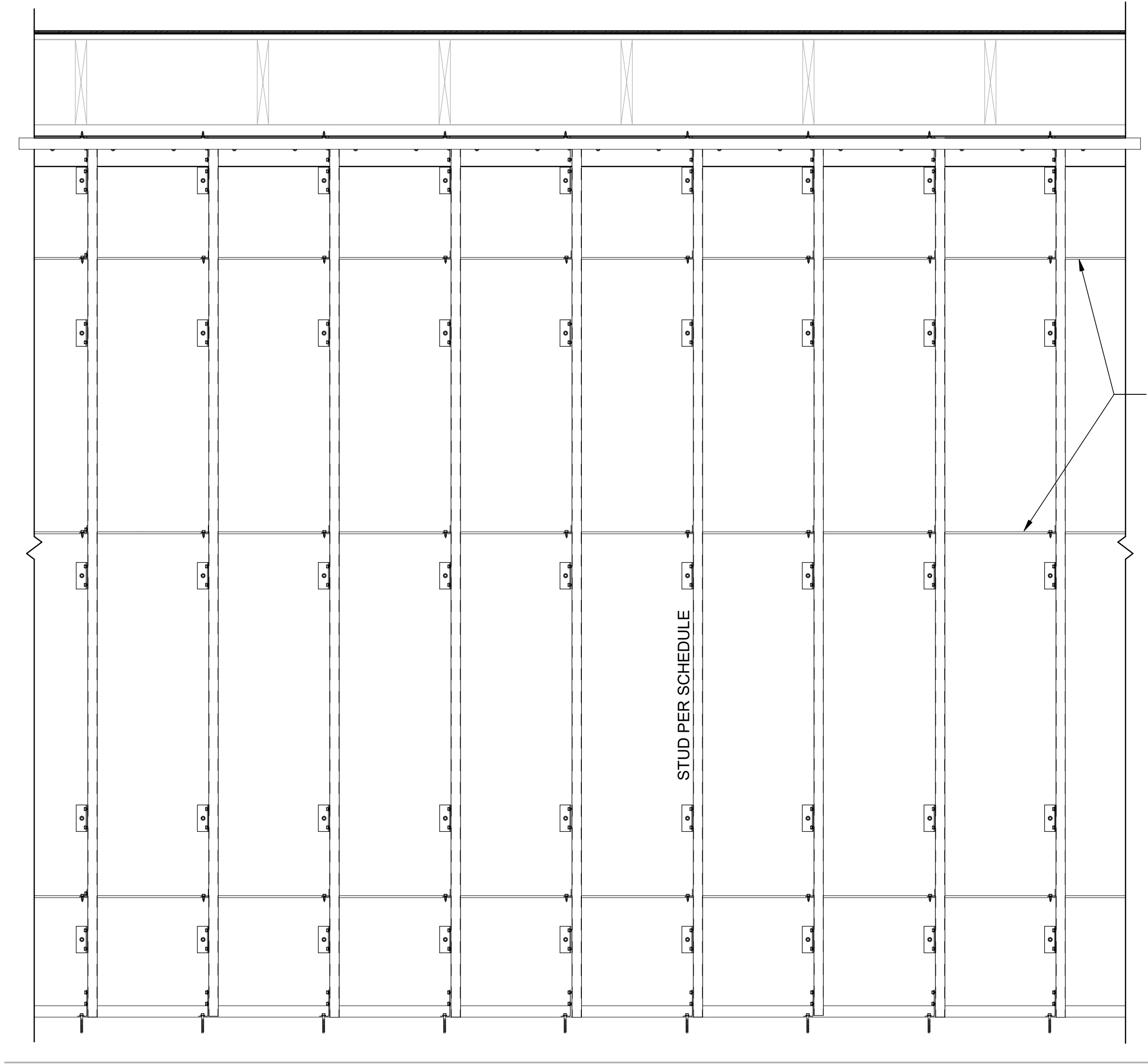
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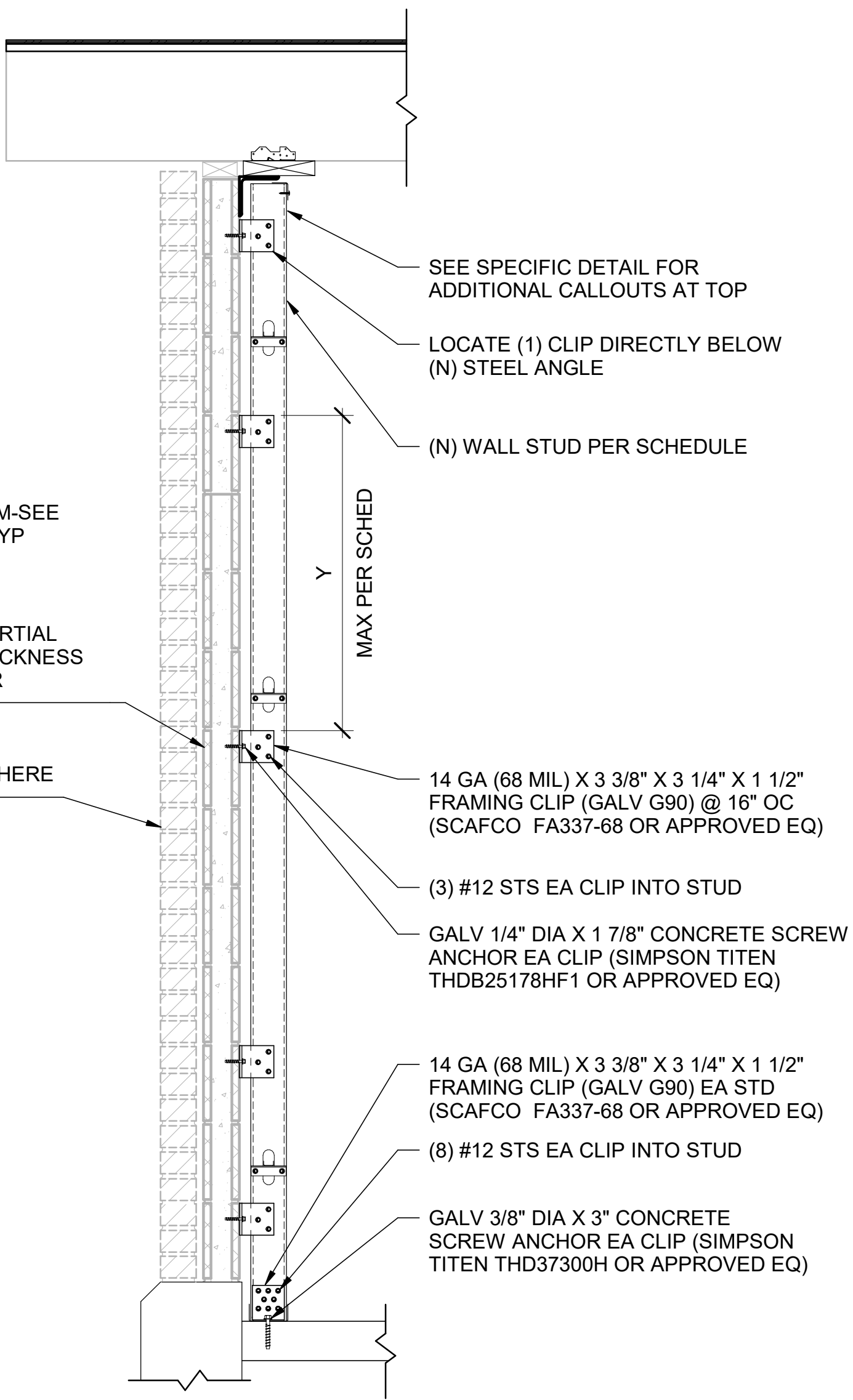
ROOF FRAMING DETAILS

S-561

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ELEVATION



SECTION

OUT-OF-PLANE WALL STRONGBACK WALL REINFORCING SCHEDULE			
MARK	STUD TYPE	CLIP ANGLE SPACING "Y" (IN)	COMMENTS
SB-1	362S137-54 @ 16" OC	24"	
SB-2	362S137-54 @ 16" OC	48"	

NOTE:

1) THIS IS A TYPICAL DETAIL TO ILLUSTRATE TYPICAL OUT-OF-PLANE WALL STRENGTHENING AT (E) MASONRY WALL (WHERE INDICATED ON THE PLAN), AND DOES NOT EXACTLY REPLICATE ANY SINGLE WALL LOCATION. SEE SPECIFIC ROOF AND WALL DETAILS FOR ADDITIONAL CALLOUTS AT SPECIFIC LOCATIONS.

2) "SB-x" INDICATES STRONGBACK CFS WALL TYPE "x". OUT-OF-PLANE WALL STRENGTHENING IS ONLY REQUIRED WHERE INDICATED ON PLAN OR ELEVATION BY SYMBOL.

1 TYP (N) CFS STRONGBACK WALL AT (E) CMU WALL
S-601 NTS



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Designed By: CTS	
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Checked By: ABC	
Mark	Description

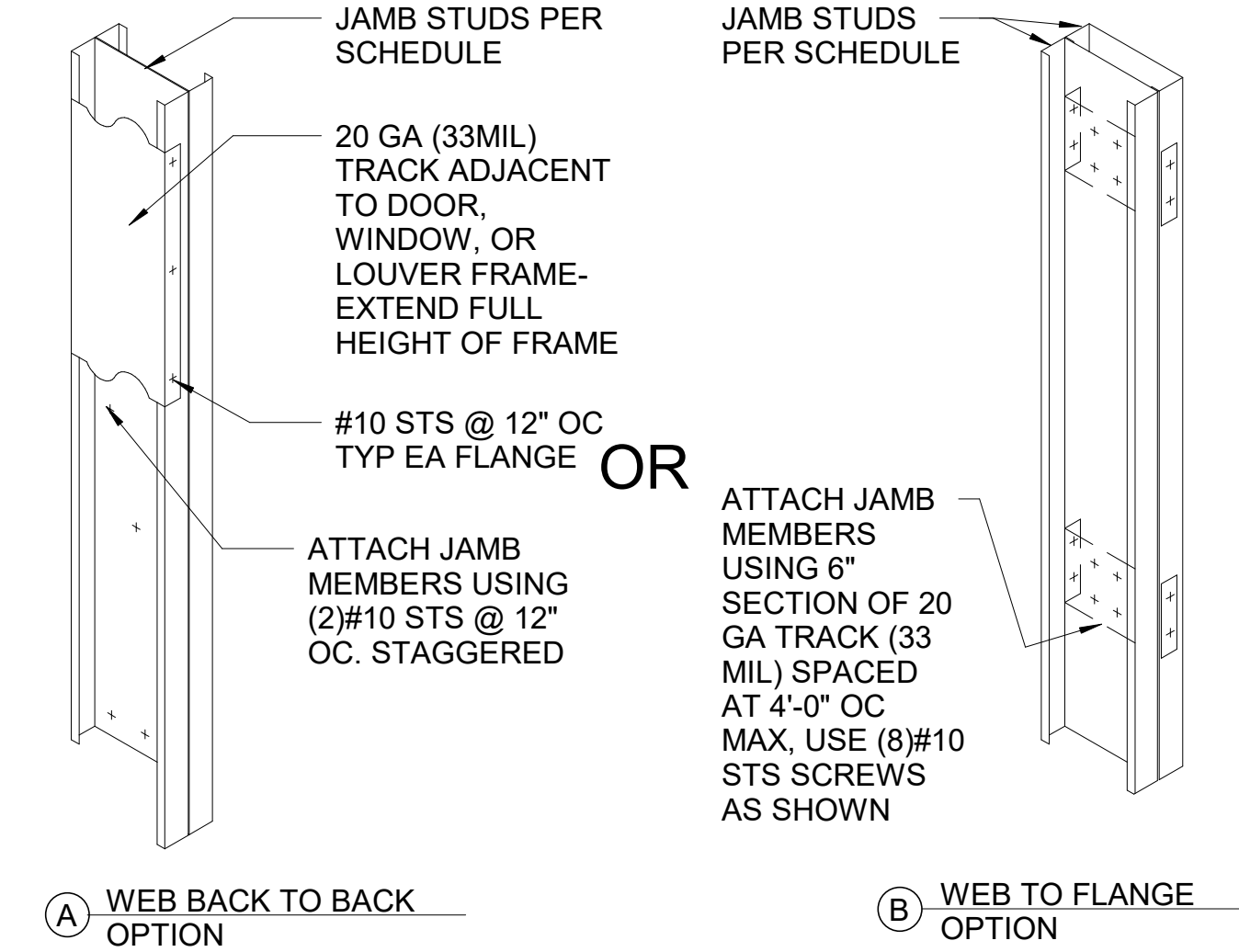
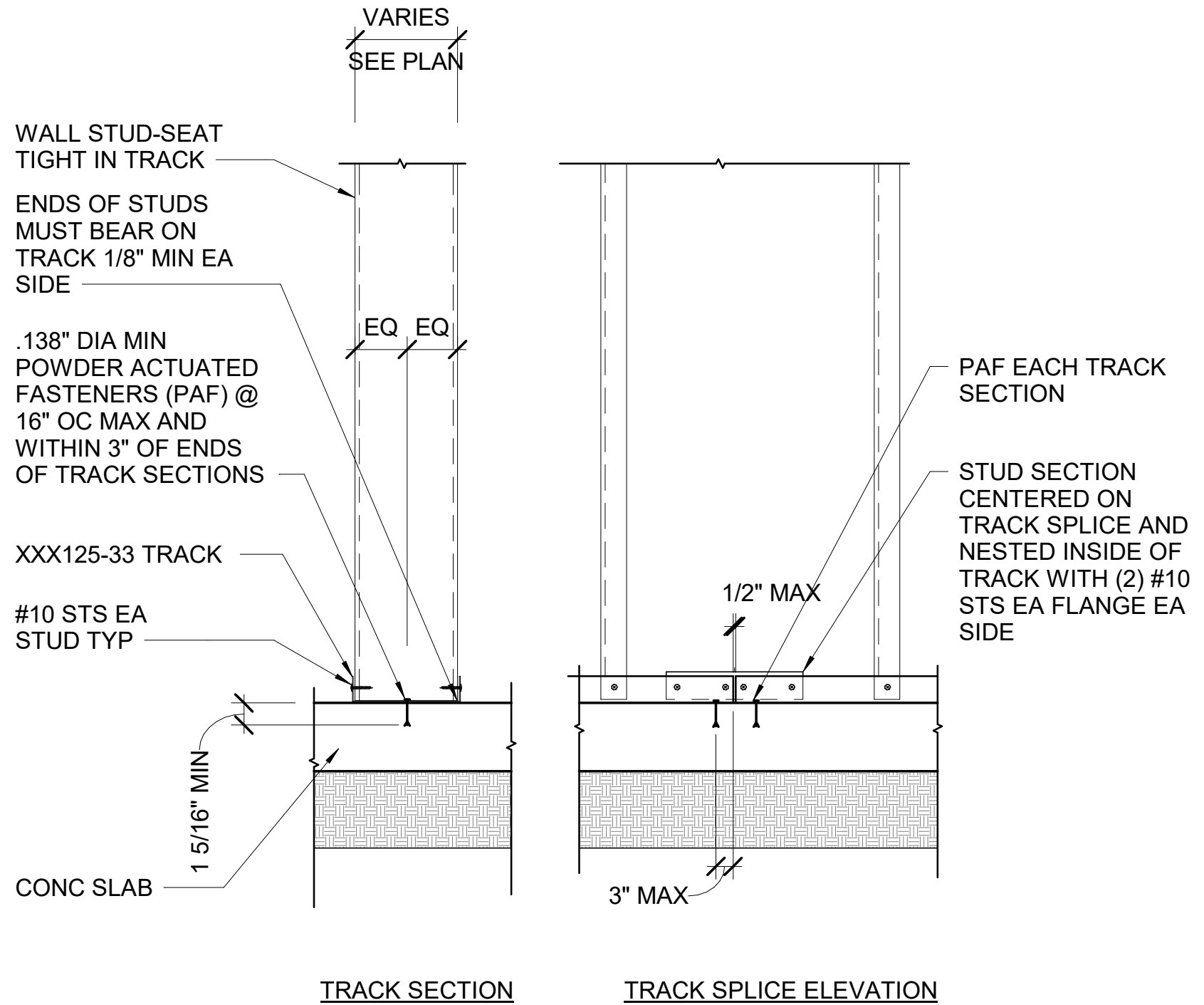
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**STRUCTURAL CFS FRAMING
DETAILS**

S-601

NON-BEARING INTERIOR STEEL STUD FRAMING SCHEDULE:				
TYPE	MAX UNBRACED LENGTH		DESIGN PRESSURE [PSF]	STUD SIZE AND SPACING
	(L/240) DEFL	(L/360) DEFL		
3 5/8" X 25 GA	12'-5"	10'-10"	5 PSF	(1) 362S125-18 @ 16" OC
3 5/8" X 20 GA	15'-6"	13'-6"	5 PSF	(1) 362S125-33 @ 16" OC
6" X 22 GA	22'-4"	19'-6"	5 PSF	(1) 600S125-27 @ 16" OC

NOTES:

- THE STUD REQUIREMENTS IN THIS TABLE ARE MINIMUM REQUIREMENTS, AND SUPPLEMENT INFORMATION THAT IS SHOWN IN OTHER AREAS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BID, PROVIDE, AND INSTALL HEAVIER GAGE STUDS THAN INDICATED IN THIS FRAMING SCHEDULE WHERE HEAVIER GAGE STUDS ARE INDICATED IN OTHER LOCATIONS IN THE CONTRACT DOCUMENTS.
- IN NO CASE SHALL THE UNBRACED STUD LENGTH OF ANY INTERIOR STUD EXCEED THE MAXIMUM UNBRACED LENGTH INDICATED IN THE TABLE.
- STUDS WHICH SUPPORT CERAMIC OR STONE TILE FINISH, CABINETS, CASEWORK, AND OTHER WALL-MOUNTED FIXTURES WEIGHING 30 LBS OR MORE SHALL BE 20 GA (33 MIL) MINIMUM THICKNESS.
- STUDS WITH TILE FINISH SHALL HAVE UNBRACED LENGTH SPANS LIMITED TO L/360 DEFLECTION MAXIMUM. OTHER WALLS WITH MORE FLEXIBLE WALL FINISH SHALL HAVE UNBRACED SPANS LIMITED TO L/240 MAXIMUM.
- THE MINIMUM YIELD STRENGTH $F_y = 33$ KSI MINIMUM UNLESS NOTED OTHERWISE. STUDS WITH 16 GAGE AND HEAVIER HAVE $F_y=50$ KSI MINIMUM.
- THE INDICATED MAXIMUM UNBRACED LENGTHS ARE BASED UPON NON-COMPOSITE WALL SYSTEMS.
- PROVIDE SUPPLEMENTAL COLD-FORMED METAL FRAMING ENGINEERING AND SHOP DRAWINGS IN ACCORDANCE WITH SPECIFICATION 05 XX XX



- NOTES:
- 2-JAMB STUD CONDITION SHOWN-SIM AT 3 AND 4 JAMB STUD CONDITIONS WHERE CONDITIONS A AND B CAN BE COMBINED

1 S-611 INTERIOR CFS STUD SCHEDULE

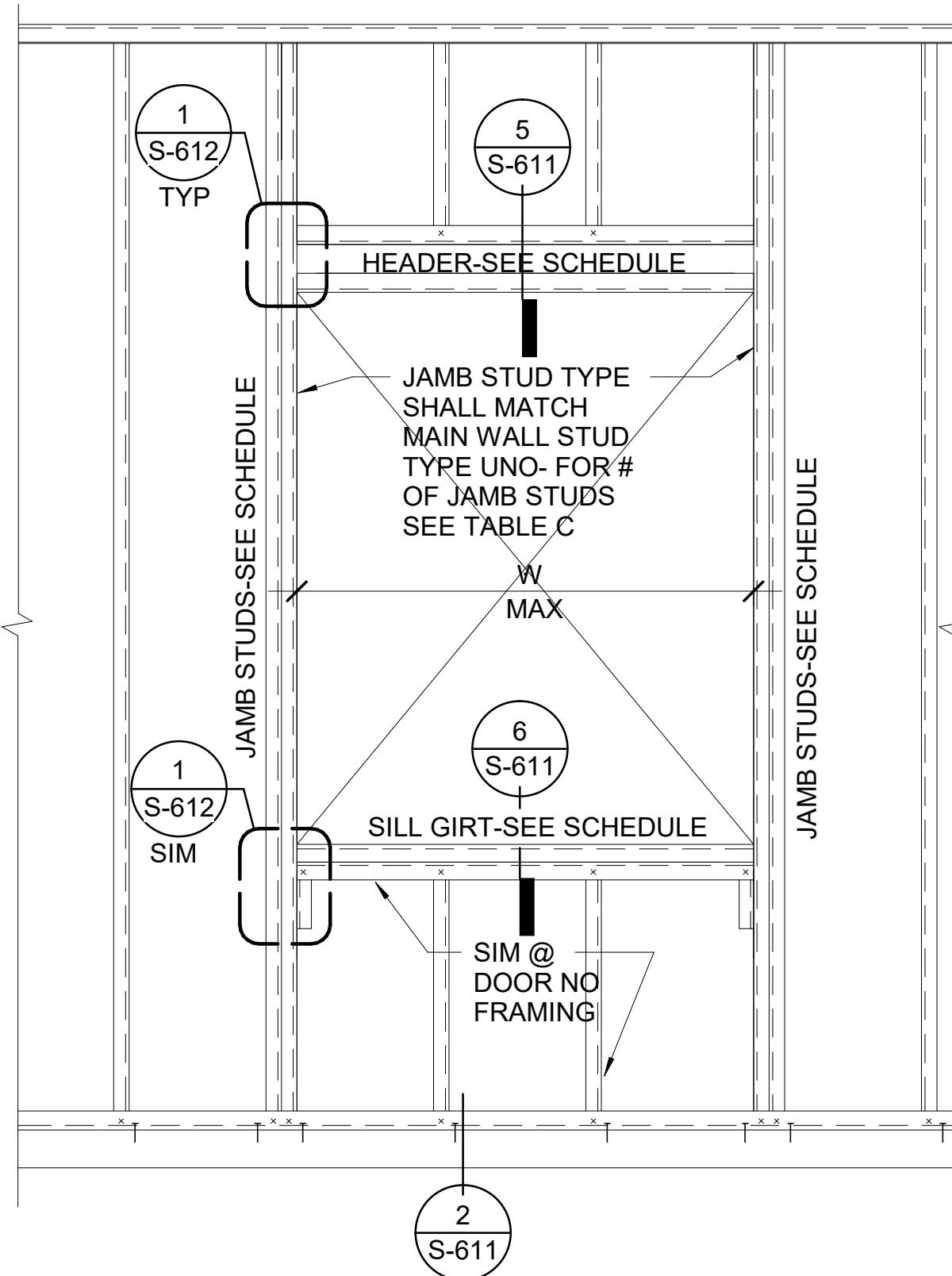
NTS

2 S-611 TYP BASE TRACK ATTACHMENT TO SLAB

NTS

3 S-611 TYP BUILTUP CFS JAMB STUDS

NTS



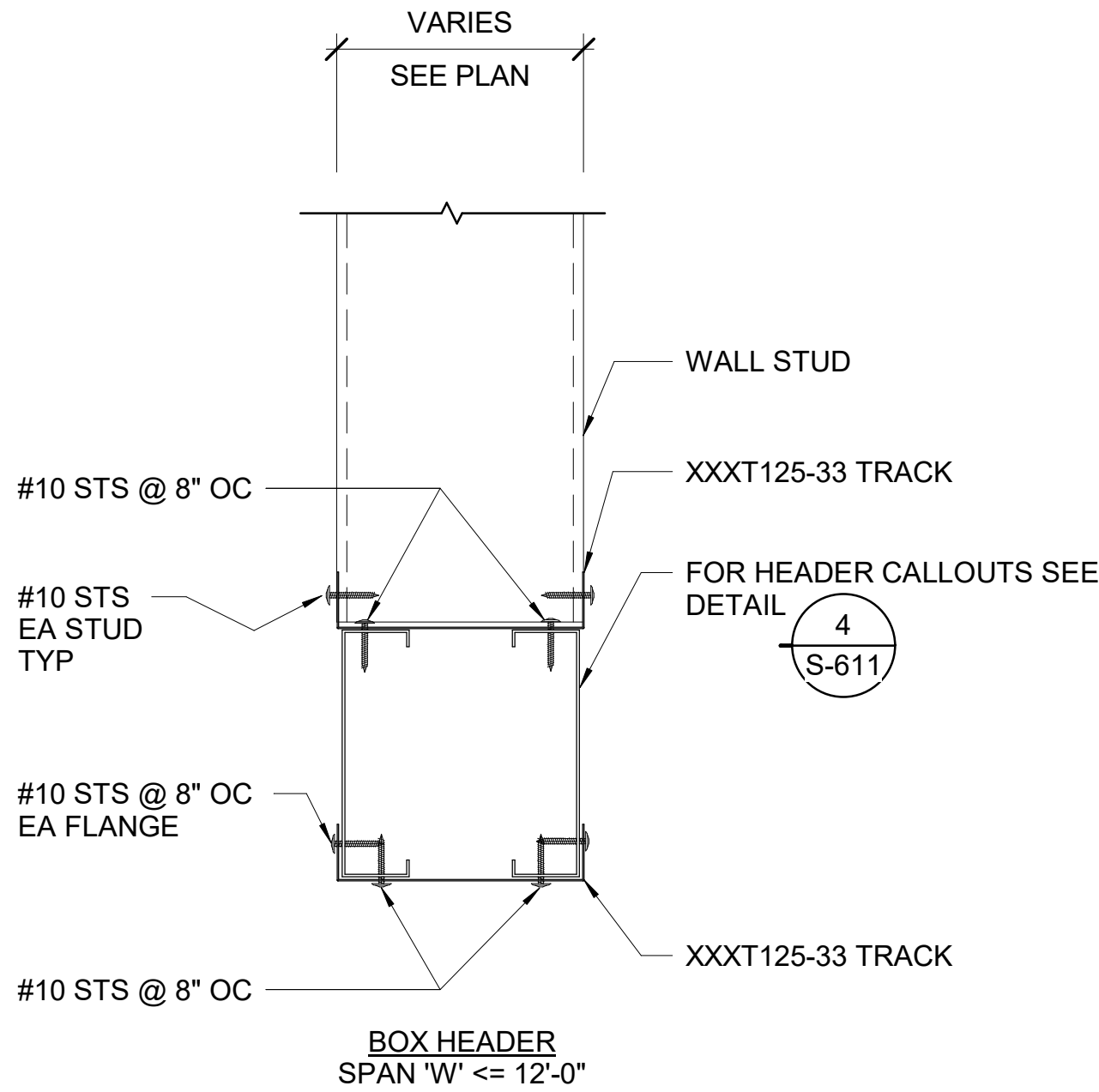
4 S-611 TYP CFS WALL OPENING FRAMING

NTS

INTERIOR NON-STRUCTURAL WINDOW/DOOR JAMB AND GIRT SCHEDULE			
W (FT)	MIN # OF JAMB STUDS EA SIDE ⁽²⁾	GIRT BELOW OPENING ⁽³⁾	HEADER ABOVE OPENING ⁽³⁾
3'-0"	[1]	(1) XXXT200-33	(1) XXXT200-33
4'-0"	[2]	(1) XXXT200-33	(1) XXXT200-33
6'-8"	[3]	(1) XXXT200-33 + (1) XXXS125-33	(2) 600S125-33 + (2) XXXT125-33
10'-8"	[4]	(1) XXXT200-33 + (2) XXXS125-33	(2) 600S125-33 + (2) XXXT125-33

NOTES:

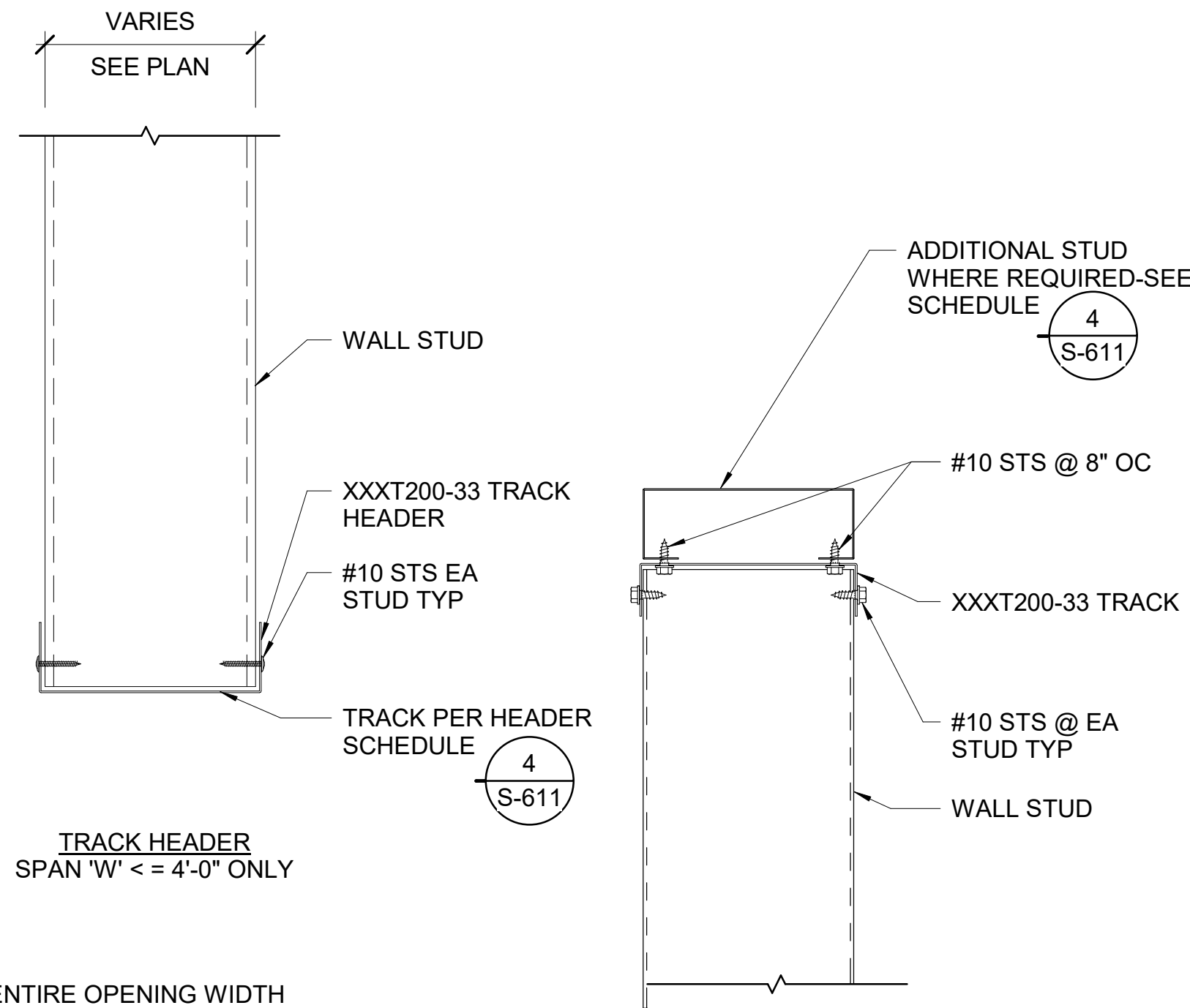
- SEE WALL TYPES ON A-601 AND DETAIL 1/ S-611 FOR INTERIOR WALL STUD SIZES UNO.
- ALL MULTIPLE BUILT-UP JAMBS AND GIRTS SHALL BE ATTACHED TOGETHER TO FORM AN INTEGRAL FRAMING MEMBER. SEE DETAIL 3/ S-611
- "XXX" SHALL BE 362 AT 3 5/8" WIDE STUDS, 400 AT 4" STUDS, 600 AT 6" STUDS, 800 AT 8" STUDS, AND 1000 AT 10" STUDS. SEE ARCH WALL SCHEDULE FOR STUD THICKNESS



- NOTES:
- ALL HEADER MEMBERS AND TRACKS SHALL BE CONTINUOUS ACROSS ENTIRE OPENING WIDTH

5 S-611 TYP CFS HEADER

NTS



6 S-611 TYP CFS SILL GIRT

NTS



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Drawn By: DJH

Checked By: ABC

Date

Description

Mark

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NON-STRUCTURAL CFS FRAMING
DETAILS

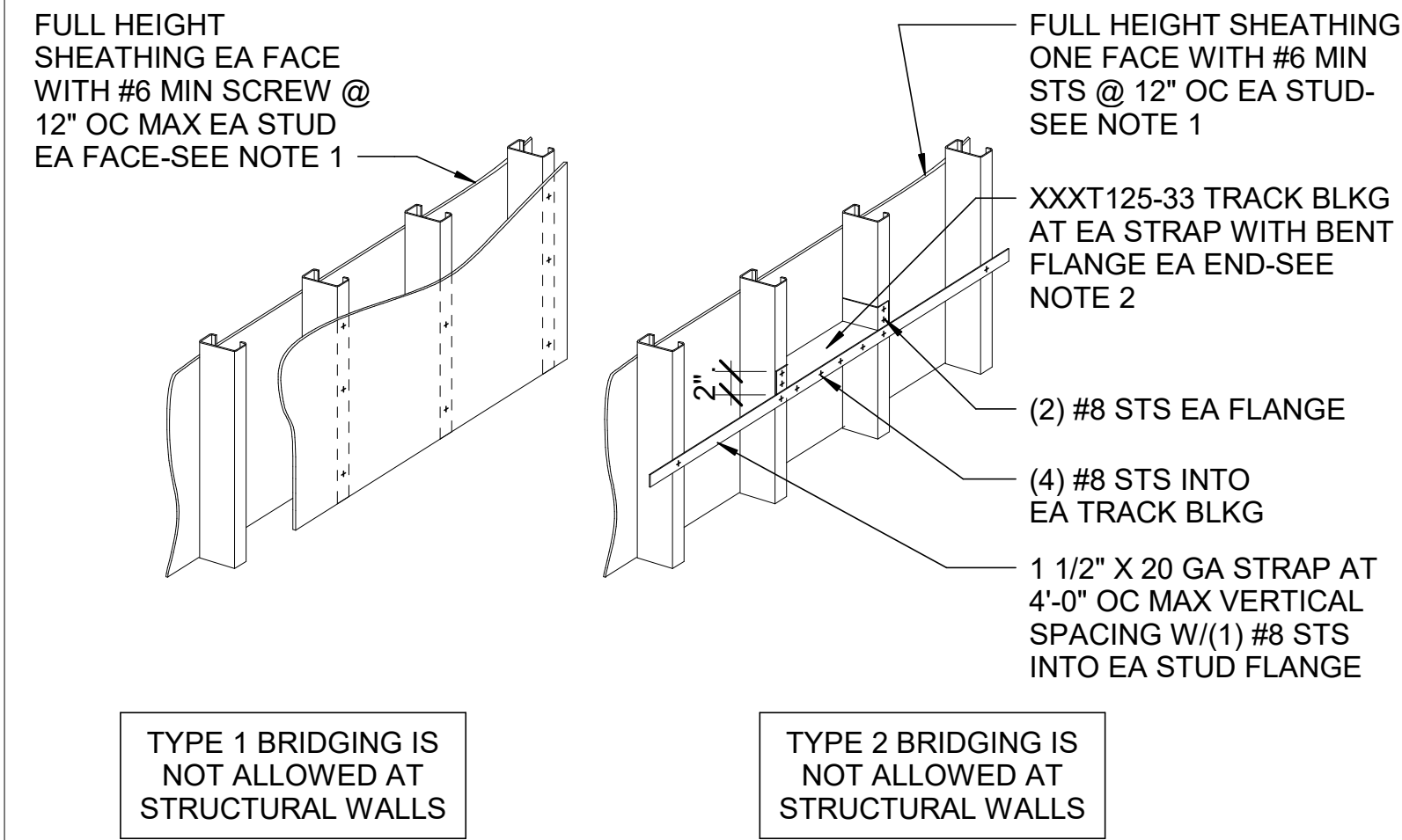
S-611

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1 TYP HEADER CONN TO JAMB STUDS



TYPE 1: SHEATHING BOTH FACES OF WALL

TYPE 2: SHEATHING ON ONE-FACE AND STRAPPING ON OPPOSITE FACE

TYPE 3: STRAPPING ON BOTH SIDES OF WALL WITH BLOCKING

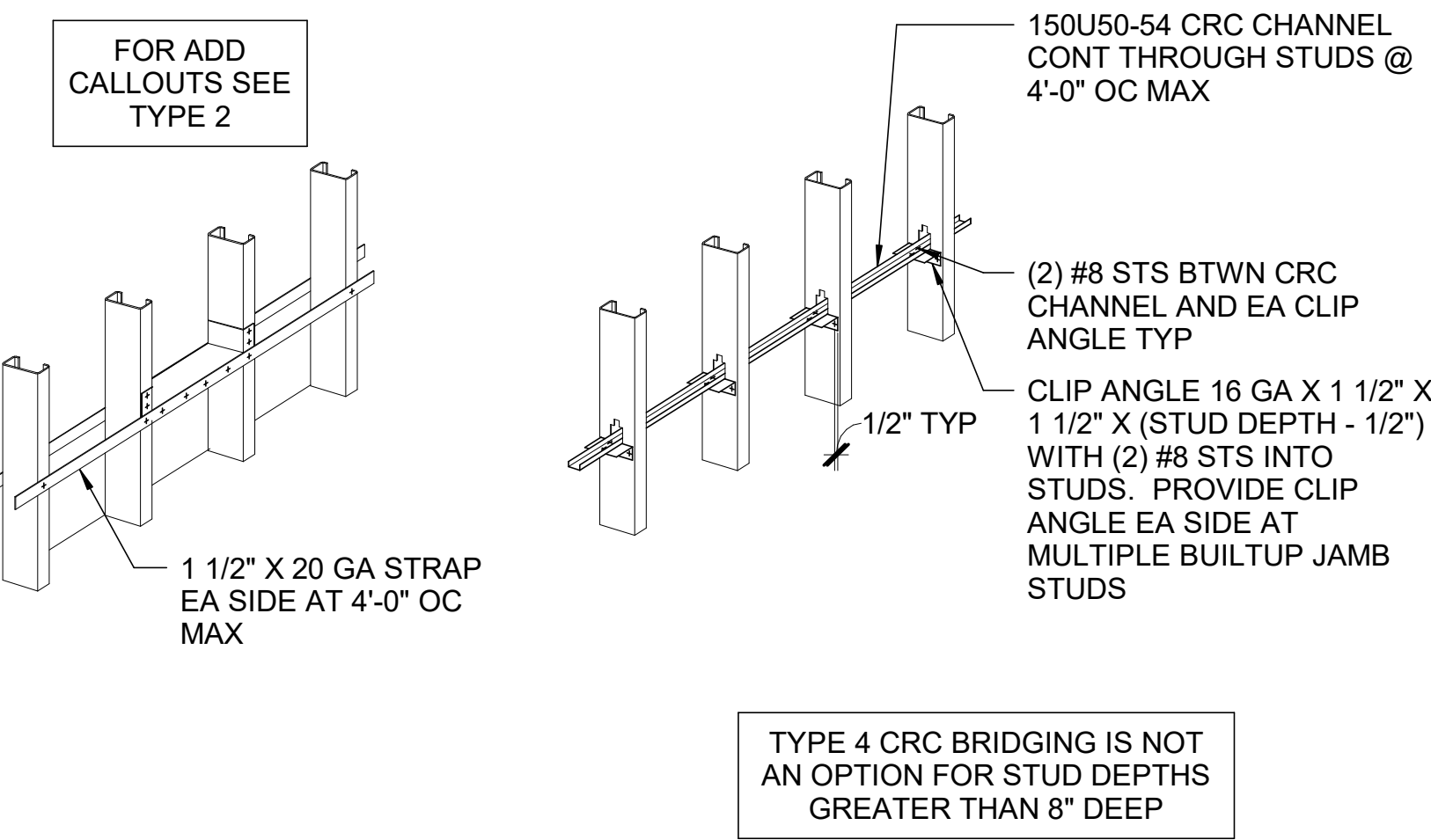
NOTES:

- IN ORDER FOR WALL SHEATHING TO QUALIFY AS LATERAL RESTRAINT FOR TYPES 1 OR TYPE 2 BRIDGING, THE SHEATHING MUST BE GYPSUM WALL BOARD, GYPSUM SHEATHING, PLYWOOD, OR ORIENTED STRAND BOARD ONLY
- TRACK BLOCKING FOR TYPE 2 AND TYPE 3 BRIDGING SHALL BE INSTALLED AT 8'-0" OC MAXIMUM SPACING HORIZONTALLY. IN ADDITION, THERE WILL BE AT LEAST ONE TRACK BLOCKING ANCHOR AT EACH STRAP. PROVIDE ADDITIONAL TRACK BLOCKING EACH SIDE OF DISCONTINUOUS STRAPS.
- USE ONLY TYPE 3 OR TYPE 4 BRIDGING AT LOAD-BEARING STUD WALLS. LOAD BEARING WALLS ARE DEFINED AS WALLS THAT SUPPORT THE WEIGHT OF FLOORS, ROOFS, OR MEZZANINES. TYPE 1 AND TYPE 2 BRIDGING ARE NOT PERMITTED AT LOAD-BEARING WALLS.
- ALL HORIZONTAL STRAPS SHALL BE TENSIONED TIGHT BEFORE SCREWING INTO THE STUDS.
- STRUCTURAL WALLS ARE DEFINED AS CMU STRONGBACK WALLS - SEE DETAIL 1/ S-601

4 TYP CFS WALL STUD BRIDGING

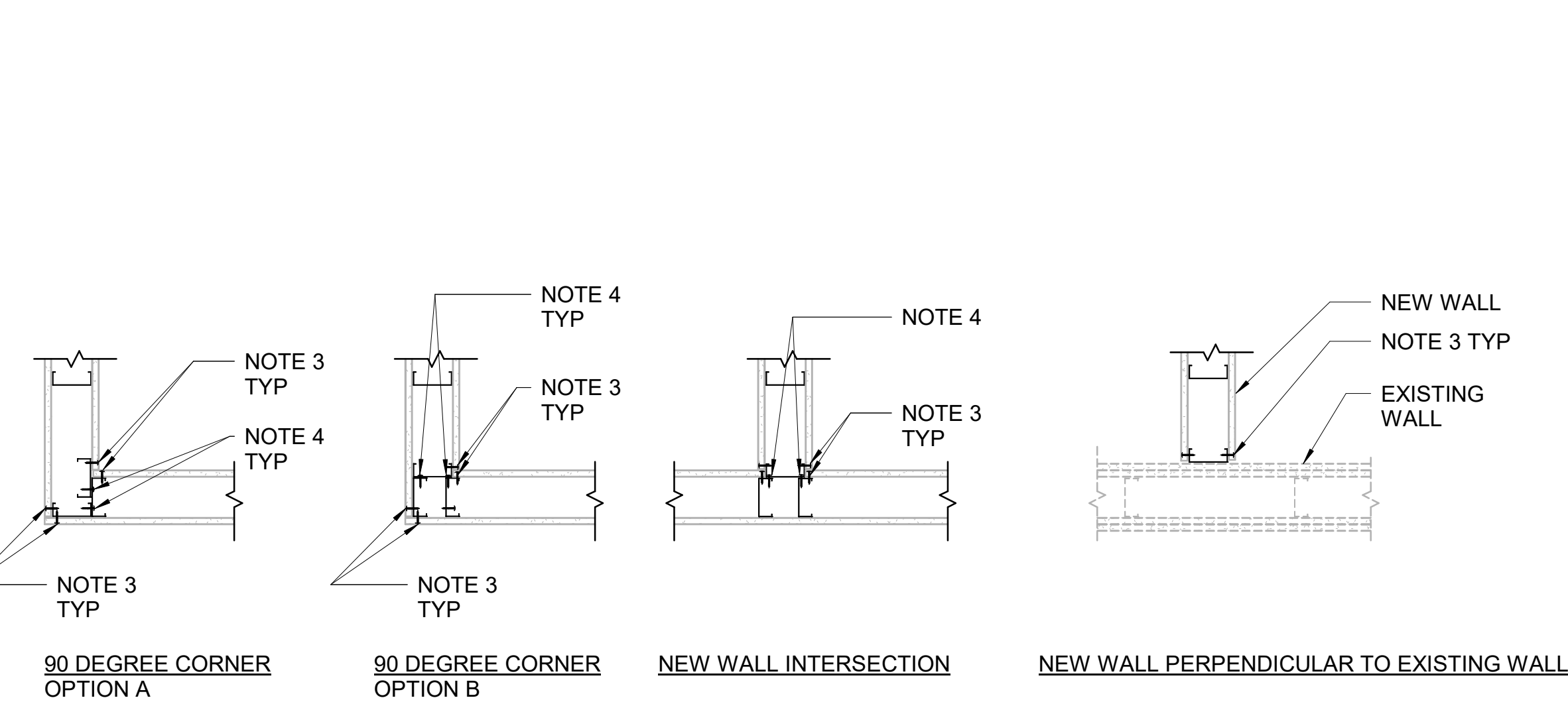
S-612 NTS

2 TYP ALLOWABLE PENETRATION THROUGH CFS FRAMING



TYPE 4: CRC WITH CLIP ANGLES

3 TYP CFS CEILING FRAMING DETAIL

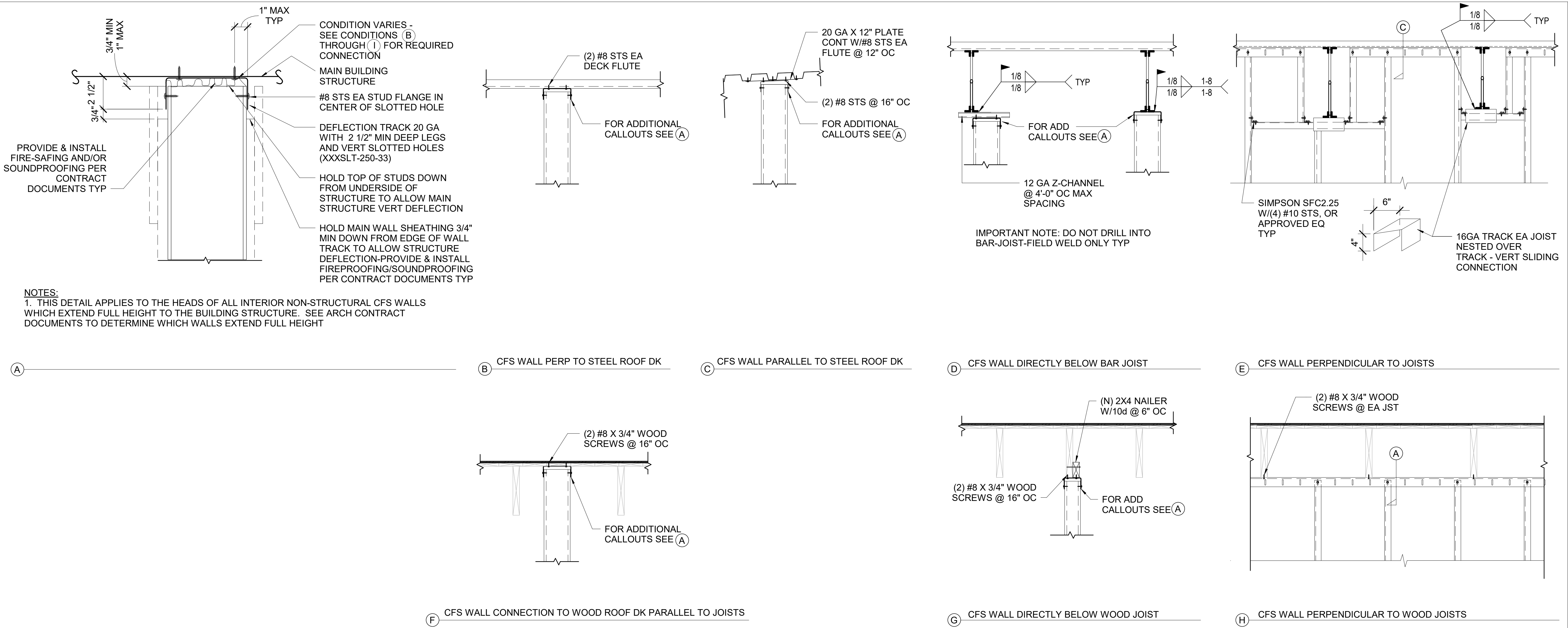


NOTES:

- THE STUD SIZE AND SHEATHING SHOWN ARE EXAMPLES ONLY, AND ARE NOT INTENDED TO EXACTLY REPLICATE ANY SINGLE LOCATION. THE ACTUAL STUD SIZE AND SHEATHING REQUIREMENTS VARY DEPENDING UPON LOCATION, AS INDICATED ON THE ARCHITECTURAL/STRUCTURAL PLANS AND WALL SCHEDULES.
- UNLESS NOTED OTHERWISE, FRAMING SHALL CONFORM TO ASTM C645 "STANDARD SPECIFICATION FOR NON-STRUCTURAL STEEL FRAMING MEMBERS" TYP
- "EDGE SCREW" - #6 MIN DRYWALL SCREW @ 6" OC TYP
- ATTACH STUDS TOGETHER WITH #6 MIN STS @ 12" OC FULL HEIGHT

6 TYP CFS STUD FRAMING AT WALL INTERSECTION

S-612 NTS



TYP DEFLECTION TRACK AT HEAD OF INTERIOR METAL STUD WALLS THAT EXTEND FULL HEIGHT TO THE BUILDING STRUCTURE

1
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Checked By: AOC

Mark	Description	Date

WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA
**NON-STRUCTURAL CFS FRAMING
DETAILS**

S-613

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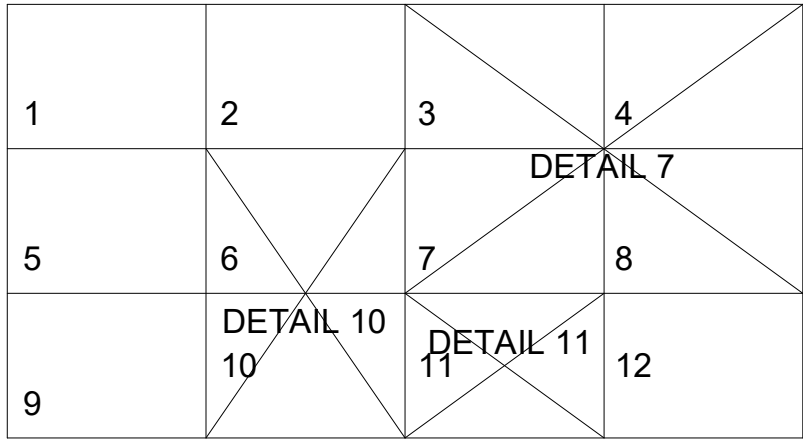
ABBREVIATIONS

AB	ANCHOR BOLT, AIR BARRIER	HM	HOLLOW METAL
ACOUSTIC	ACOUSTICAL	HORIZ	HORIZONTAL
ACT	ACOUSTICAL CEILING TILE	HT	HEIGHT
AFF	ABOVE FINISHED FLOOR	HW, HDWR	HARDWARE
AHU	AIR HANDLING UNIT	HYD	HYDRAULIC
AIB	AIR INFILTRATION BARRIER		
ALUM	ALUMINUM	IJ	ISOLATION JOINT
ARCH	ARCHITECT (URAL)	INSUL	INSULATION
AT/FP	ANTI-TERRORISM FORCE PROTECTION	INT	INTERIOR(S)
A/V	AUDIO VISUAL	IP	INTERIOR PAINT
		IT	INFORMATION TECHNOLOGY
BD	BOARD	JAN	JANITOR
		JST	JOIST
BLDG	BUILDING	JT	JOINT
BLKG	BLOCKING		
BOT	BOTTOM	LCK	LOCKER
BRK	BREAK	LIB	LIBRARY
		LLH	LONG LEG HORIZONTAL
CBB	CEMENTITIOUS BACKER BOARD	LLV	LONG LEG VERTICAL
		LRN	LEARNING
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED	M	METERS
CG	CORNER GUARD	MAT	MATERIAL
CI, C.I.	CONTINUOUS INSULATION	MAX	MAXIMUM
CIP	CAST IN PLACE CONCRETE	MB	MOISTURE BARRIER
CIRC	CIRCULATION	MBH	MOP AND BROOM HOLDER
CJ	CONTROL JOINT	MECH	MECHANIC (AL)
CLG	CEILING	MEP	MECHANICAL, ELECTRICAL, PLUMBING
CLR	CLEAR (ANCE)	MET, MTL	METAL
CT	CERAMIC TILE	MFR	MANUFACTURER
CNTR	CENTER	MG	MIRROR, GLASS
COL	COLUMN	MIN	MINIMUM
COMM	COMMUNICATIONS	MM (mm)	MILLIMETERS
CONC	CONCRETE	MO	MASONRY OPENING
CONT	CONTINUOUS OR CONTINUE	MR	MIRROR
COORD	COORDINATE	MTD	MOUNTED
CMU	CONCRETE MASONRY UNIT	N	NORTH
CPT	CARPET	NE	NORTHEAST
CR	CHAIR RAIL	NIC	NOT IN CONTRACT
		NO	NUMBER
DBL	DOUBLE	NTS	NOT TO SCALE
DET	DETAIL	NW	NORTHWEST
DF	DRINKING FOUNTAIN		
DIA	DIAMETER		
DIM	DIMENSION		
DK	DECK	OC	ON CENTER (S)
DS	DOWNSPOUT	OD	OUTSIDE DIAMETER,
DWG(S)	DRAWING(S)		OVERFLOW DRAIN
DW	DISHWASHER	OFCI	OWNER FURNISHED,
			CONTRACTOR INSTALLED
E	EAST	OFOI	OWNER FURNISHED,
EA	EACH		OWNER INSTALLED
EJ	EXPANSION JOINT		
ELEV	ELEVATION/ELEVATOR	OPH	OPPOSITE HAND
ELEC	ELECTRIC(AL)	OPP	OPPOSITE
EPS	EXPANDED POLYSTYRENE	OSB	ORIENTED STRAND BOARD
EPT	EXTERIOR PAINT	OTS	OPEN TO STRUCTURE
EQ	EQUAL		
EQUIP	EQUIPMENT	PCF	POUNDS PER CUBIC FOOT
EW	EACH WAY	PLAM	PLASTIC LAMINATE
EXIST, (E)	EXISTING	PERP	PERPENDICULAR
EXP	EXPOSED, EXPANDED, EXPANSION		
EXT	EXTERIOR, EXTENSION	PLYWD, PWD	PLYWOOD
		PNL	PANEL
FA	FIRE ALARM	POLY	POLYSTYRENE
FCO	FLOOR CLEAN OUT	PREFIN	PREFINISHED
FD	FLOOR DRAIN	PT	PAINT
FEC, FE	FIRE EXTINGUISHER (CABINET)	PTD WR	PAPER TOWEL DISPENSER/
FEB	FIRE EXTINGUISHER BRACKET		WASTE RECEPTACLE
FF	FINISHED FLOOR OR FACTORY FINISH	PTL	PORCELAIN TILE
FIN	FINISH (ED)	PTWD	PRESSURE TREATED WOOD
FLR	FLOOR (ING)		
FP	FIRE PROTECTION	QT	QUARRY TILE
FRTW	FIRE RETARDANT TREATED WOOD	R	RISER
FT	FLOOR TRIM	RB	RUBBER BASE
FTG	FOOTING	RC	READINESS CENTER
FOC	FACE OF CONCRETE	RCP	REFLECTED CEILING PLAN
FOM	FACE OF MASONRY	RD	ROOF DRAIN
FRZ	FREEZER	REC	RECRUIT
FURR	FURRING	REF	REFERENCE, OR REFRIGERATOR
		REQ'D	REQUIRED
GA	GAGE, GAUGE	RES	RESILIENT
GALV	GALVANIZED	REV	REVISION (S), REVISED
GB	GRAB BAR	RH	ROBE HOOK
GEJ	GUTTER EXPANSION JOINT	RM	ROOM
GL	GRID LINE	RO	ROUGH OPENING
GT	GROUT	RR	RESTROOM
GYPBD, GWB	GYPSUM WALL BOARD	RT	RUBBER STAIR TREADS
GYP	GYPSUM		

HATCH SYMBOLS

	EARTH (NATIVE GRADE OR COMPACTED FILL)		PLYWOOD
	GRAVEL		FINISH LUMBER
	PLASTER, GROUT, OR SAND		CONT. WOOD STUDS
	CONCRETE		BLOCKING
	CONCRETE MASONRY		BATT INSULATION
	CLAY MASONRY		ACOUSTICAL CEILING TILE
	METAL		RIGID INSULATION
	EXISTING (HALF-TONE)		SPRAY FOAM INSULATION

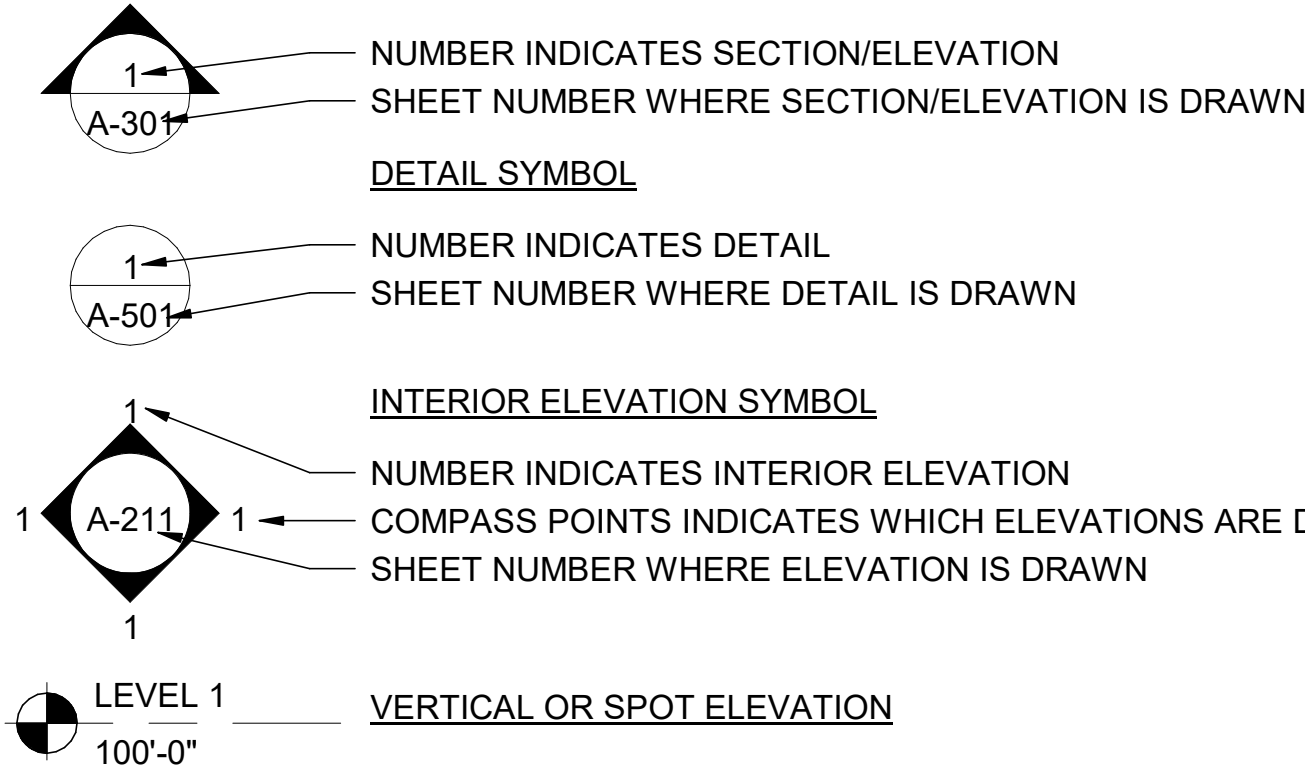
DETAIL IDENTIFICATION



- DETAIL NUMBERS ARE BASED ON LOCATION OF THE DETAIL DRAWING ON THE DETAIL SHEET AND MAY NOT BE SEQUENTIAL.
- DETAIL IDENTIFICATION NUMBER IS THE NUMBER OF THE LOWEST LEFT HAND MODULE OCCUPIED BY THE DETAIL.
- NUMBERING MAY VERY BASED ON THE INFORMATION ON THE SHEET

SYMBOLS

CALL-OUTS



IDENTIFICATION

	SA-2	ROOF, SOFFIT, FLOOR, AND CEILING TYPE		FINISH, FURNITURE, FIXTURE, AND EQUIPMENT
	GD	CONSTRUCTION GRID LINE AND BUBBLE		FIRE EXTINGUISHER BRACKET - SURFACE MOUNT
	P3	WALL TYPE		FIRE EXTINGUISHER CABINET - SEMI-RECESSED
	?	KEYNOTE		
	W33	WINDOW, LOUVER		
	G33	GUARDRAIL		
	22	REVISION		
	101	DOOR		NORTH ARROW
	Room name	ROOM NAME		
	101	ROOM NUMBER (FOR CONSTRUCTION ONLY)		

GENERAL NOTES

- REPETITIVE FEATURES NOT NOTED ON THE DRAWINGS SHALL BE COMPLETELY PROVIDED AS IF DRAWN IN FULL.
- DIMENSIONS ON DRAWINGS ARE TAKEN TO/FROM THE LOCATIONS LISTED BELOW UNLESS OTHERWISE INDICATED:
 - GRID LINES
 - FACE OF EXISTING WALL UNLESS CENTERED ON GRID
 - ROUGH OPENING FOR WINDOWS AND DOORS IN MASONRY WALLS
 - CENTERLINES OF DOORS IN METAL STUD WALLS
 - FACE OF MASONRY
- DIMENSIONS ON INTERIOR ELEVATIONS ARE TAKEN TO/FROM THE:
 - FINISHED GYPSUM WALLBOARD
 - CABINETRY
 - CENTERLINES OF FIXTURES
- PLAN VIEWS ARE CUT AT 4'-0" AFF.
- GRID LINES INDICATE THE CENTERLINE OF PRIMARY EXISTING COLUMNS, FACE OF EXISTING WALLS, AND FACE OF CMU. SEE STRUCTURAL DRAWINGS FOR EXACT LOCATION ON NEW STRUCTURAL WALLS.
- CHAMFER EXTERNAL CORNERS ON EXPOSED CONCRETE WALLS 3/4" TYPICAL, UNLESS OTHERWISE NOTED.
- MECHANICAL AND ELECTRICAL INFORMATION SHOWN ON THE ARCHITECTURAL DRAWINGS ARE PROVIDED FOR CLARITY AND/OR LOCATIONAL PURPOSES ONLY. SEE MECHANICAL AND ELECTRICAL DRAWINGS.
- FLASHING COLOR TO MATCH ADJACENT METAL WALL PANEL.
- PROVIDE ONE WAY REFLECTIVE FILM ON GLAZING ON INTERIOR SIDE ON ALL BUILDING ENTRANCES/EXITS NEW AND EXISTING. FILM MUST OBSTRUCT VIEW INWARD AND ALLOW VISIBILITY OUTWARD. FILM MUST BE COMPATIBLE WITH GLAZING AND INSTALLED TO PREVENT DELAMINATION.
- BUILDING HEIGHTS AND ELEVATIONS ARE BASED UPON PROJECT FINISH ELEVATION OF 100'-0" AT THE FIRST FLOOR. REFERENCE CIVIL DRAWINGS FOR FIRST FLOOR ELEVATION RELATIVE TO SEA LEVEL.
- ALL WORK SHALL COMPLY WITH 2018 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE STATE OF WASHINGTON AND THE CITY OF ANACORTES.
- ALL DOORS IN STUD WALLS NOT LOCATED BY DIMENSION ON PLANS OR DETAILS SHALL BE 4" FROM FACE OF ADJACENT PERPENDICULAR WALL TO EDGE OF DOOR OPENING.
- ROOM AND DOOR NUMBERS SHOWN ON DRAWINGS ARE FOR CONSTRUCTION PURPOSES ONLY.
- ROOF PITCHES INDICATED ARE NOMINAL. SEE STRUCTURAL DRAWINGS FOR BEARING HEIGHTS.
- GROSS BUILDING AREA
 - EXISTING: 15,053 SF
 - NEW ADDITION: 3,629 SF
 - TOTAL: 18,682 SF
- WA STATE ENERGY CODE: EFFICIENCY PACKAGE CREDITS TABLE C406.1THE FOLLOWING CREDITS WILL BE ACHIEVED AS INDICATED IN THE WA STATE ENERGY CODE FORMS PROVIDED TO THE CITY OF ANACORTES. (COMMERCIAL BUILDING OCCUPANCY: GROUP B) **6 CREDIT REQUIRED**
 - CREDIT 2. REDUCED LIGHTING POWER: OPTION 1 IN ACCORDANCE WITH SECTION C406.3.1 = **2 CREDITS PROPOSED**
 - CREDIT 4. ENHANCED LIGHTING CONTROLS IN ACCORDANCE WITH SECTION C406.3 = **1 CREDIT PROPOSED**
 - CREDIT 10. ENHANCED ENVELOPE PERFORMANCE IN ACCORDANCE WITH SECTION C406.10 = **3 CREDITS PROPOSED**



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617 Western Avenue
Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com



Project No.: 21024

Designed By: GJN

Drawn By: CFT

Checked By: PMM

Date

Description

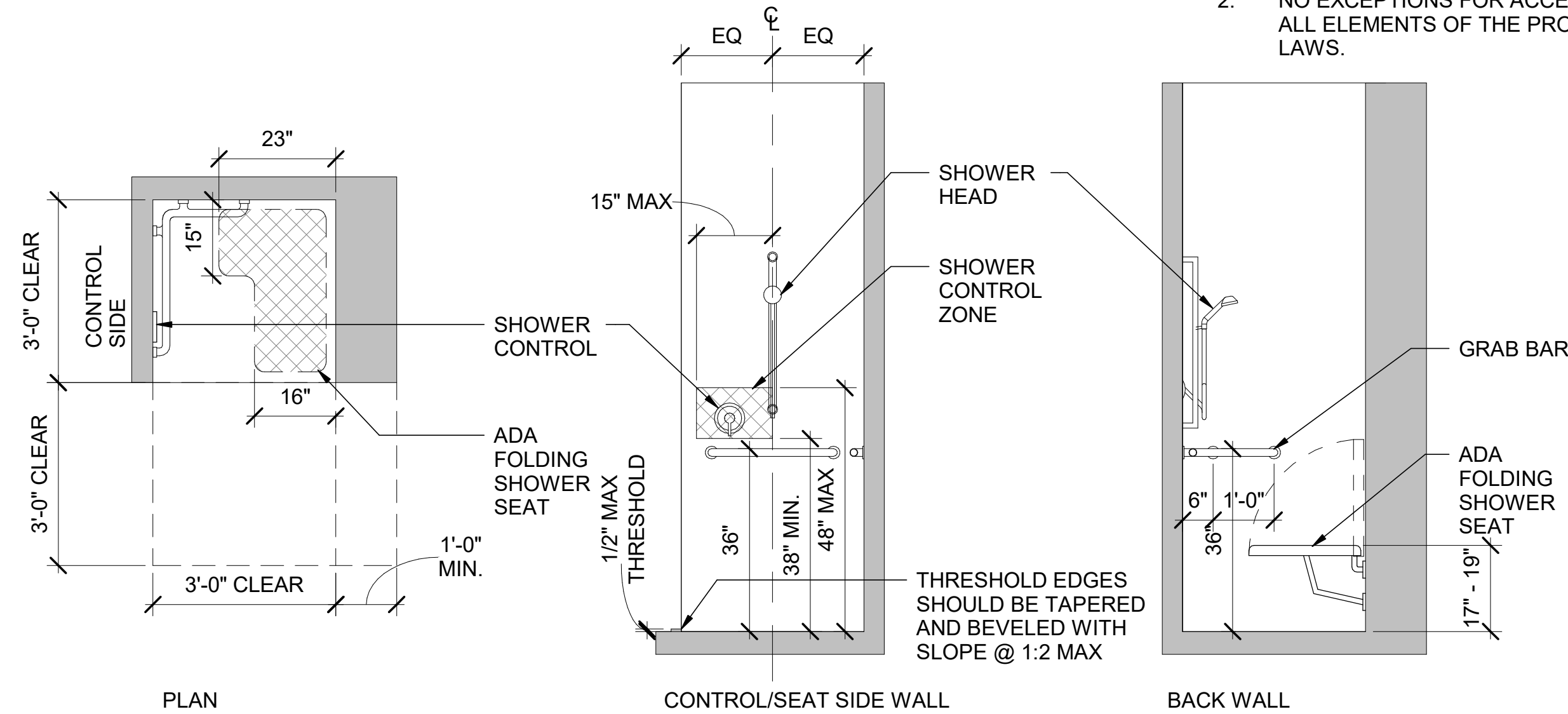
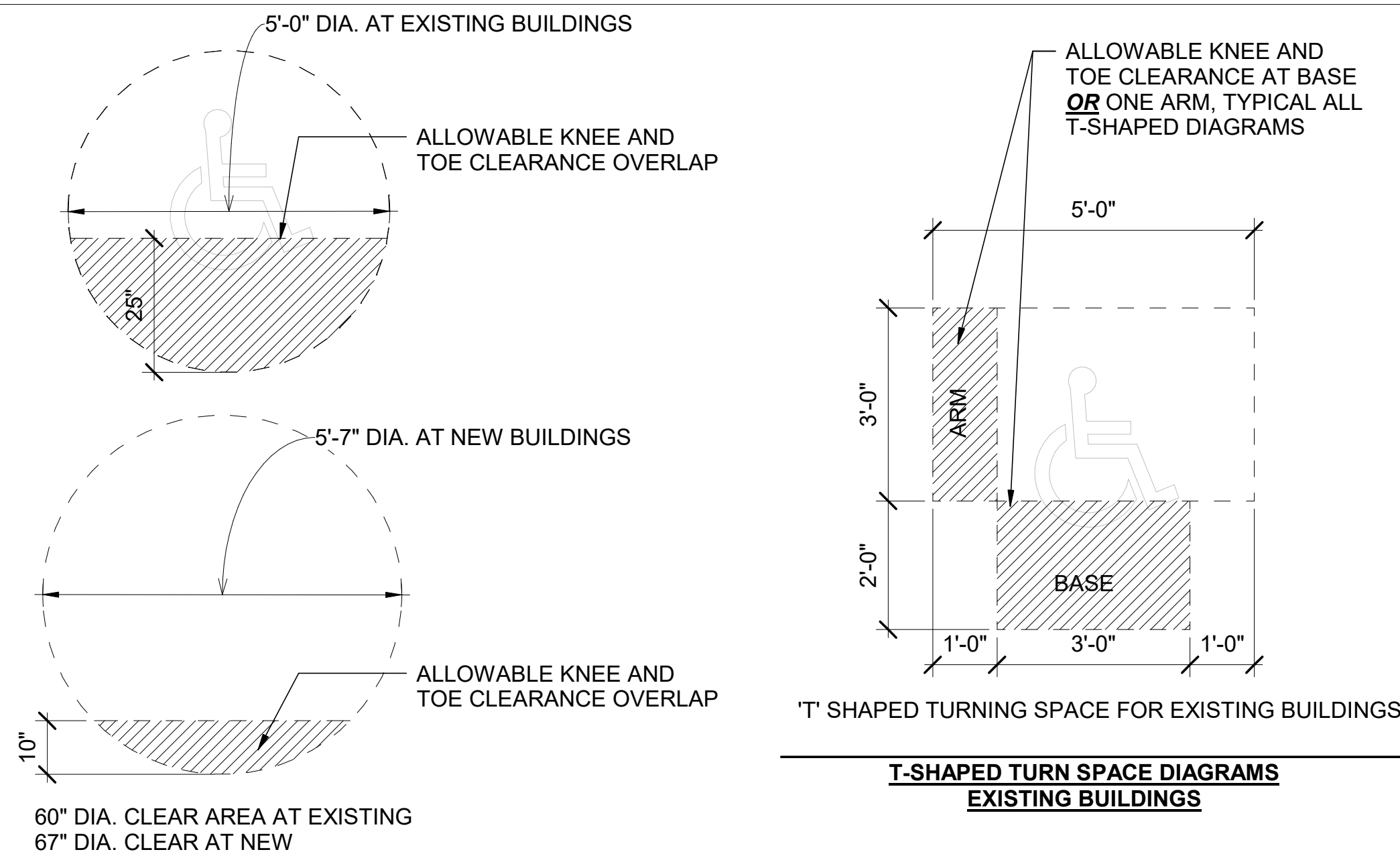
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ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA

ARCHITECTURAL GENERAL NOTES & LEGENDS

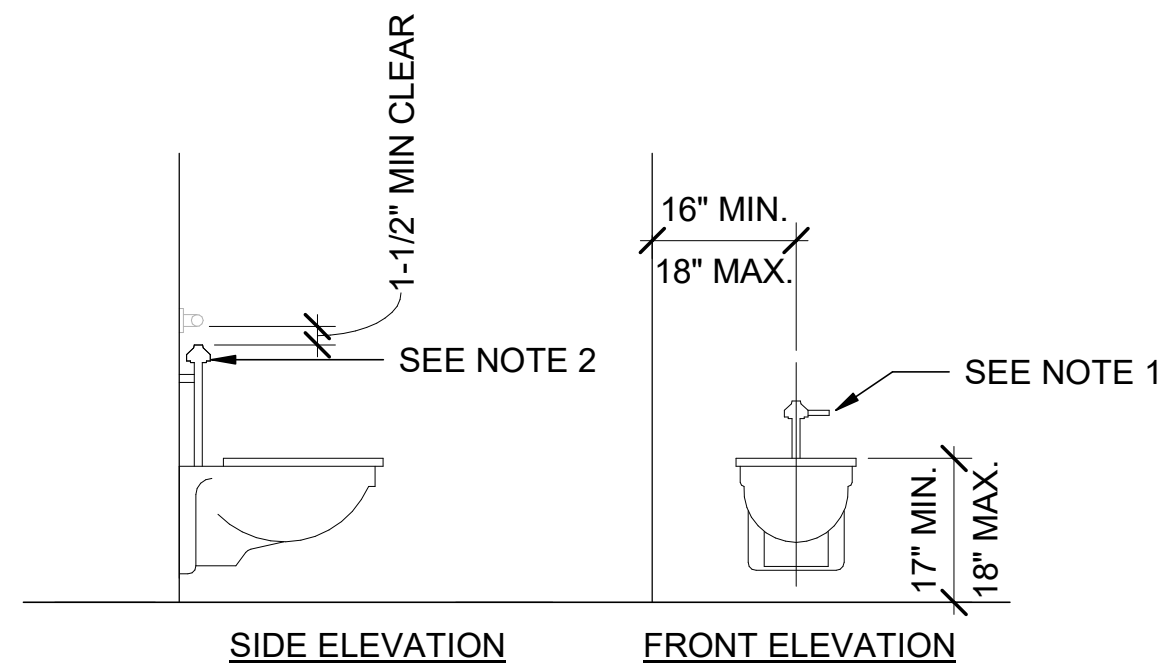
A-001



- ## ACCESSIBILITY GENERAL NOTES
1. ALL LISTED ACCESSIBILITY STANDARDS ARE REQUIRED.
 2. NO EXCEPTIONS FOR ACCESSIBILITY REQUIREMENTS PROVIDED.
ALL ELEMENTS OF THE PROJECT MUST CONFORM TO ADA-ABA LAWS.

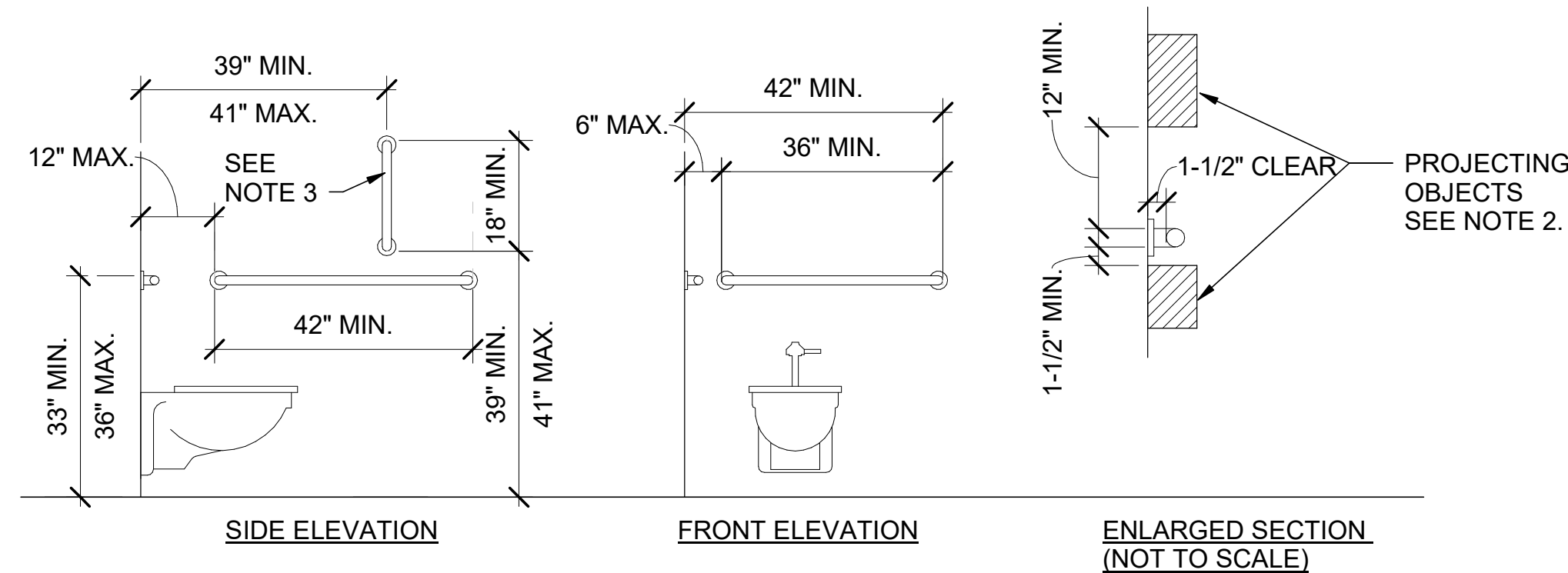
ACCESSIBLE MANEUVERING CLEARANCE AND APPROACH (PLAN VIEW)

SCALE : 1/2" = 1'-0"

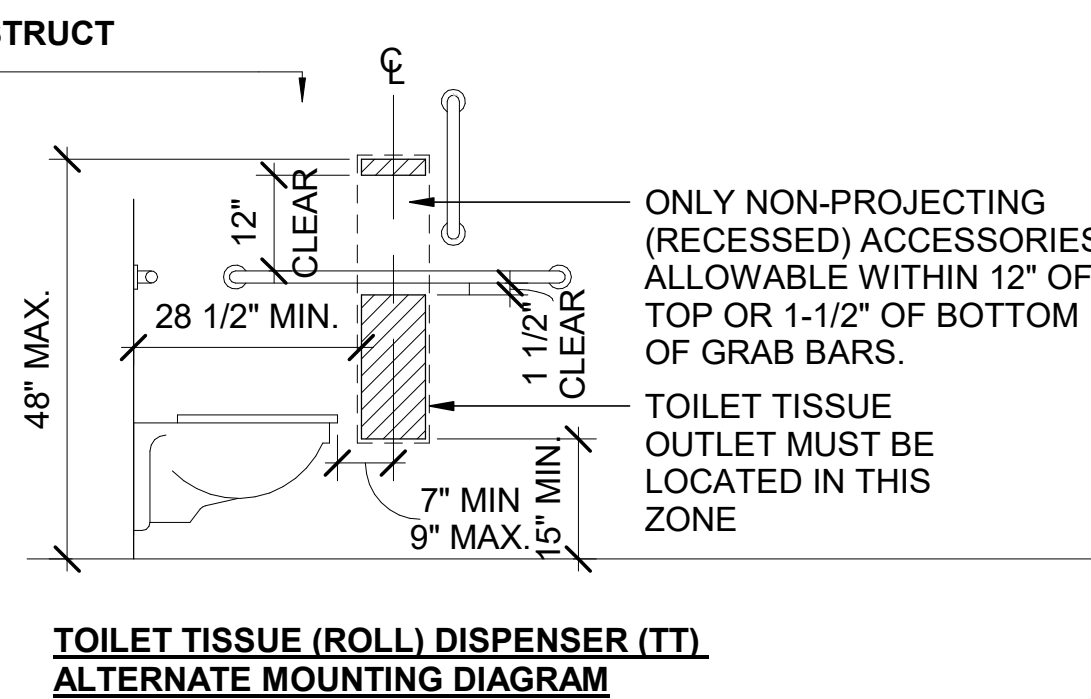
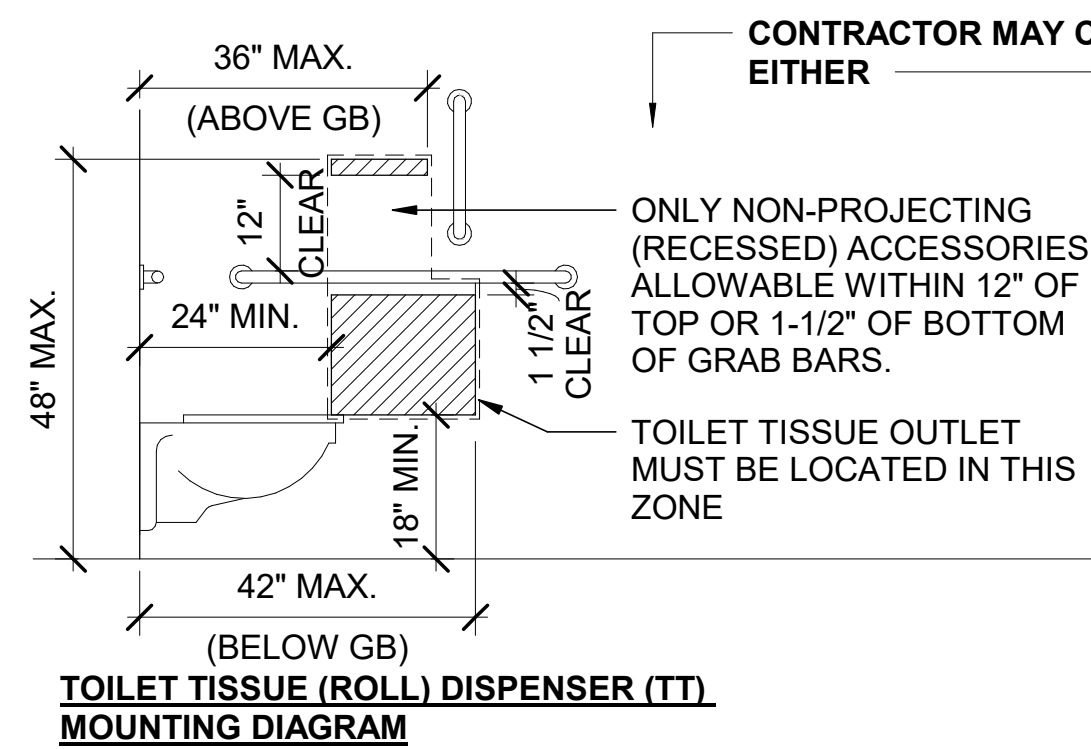


ACCESSIBLE WATER CLOSETS MOUNTING HEIGHTS AND CLEARANCES

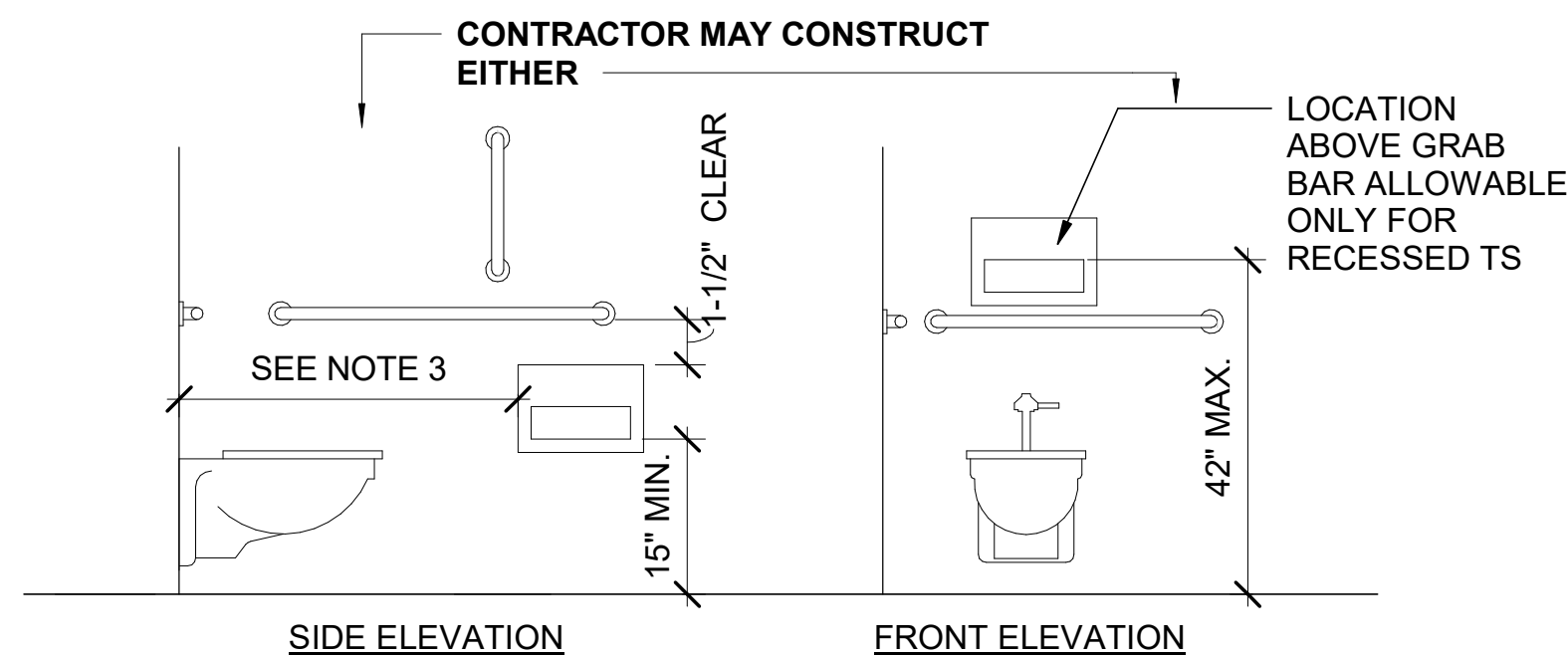
1. LOCATE MANUAL FLUSH CONTROLS ON OPEN SIDE (NON-WALL SIDE) OF THE WATER CLOSET.
2. MAINTAIN A MINIMUM OF 1-1/2" CLEAR BETWEEN FLUSH VALVE AND GRAB BARS.



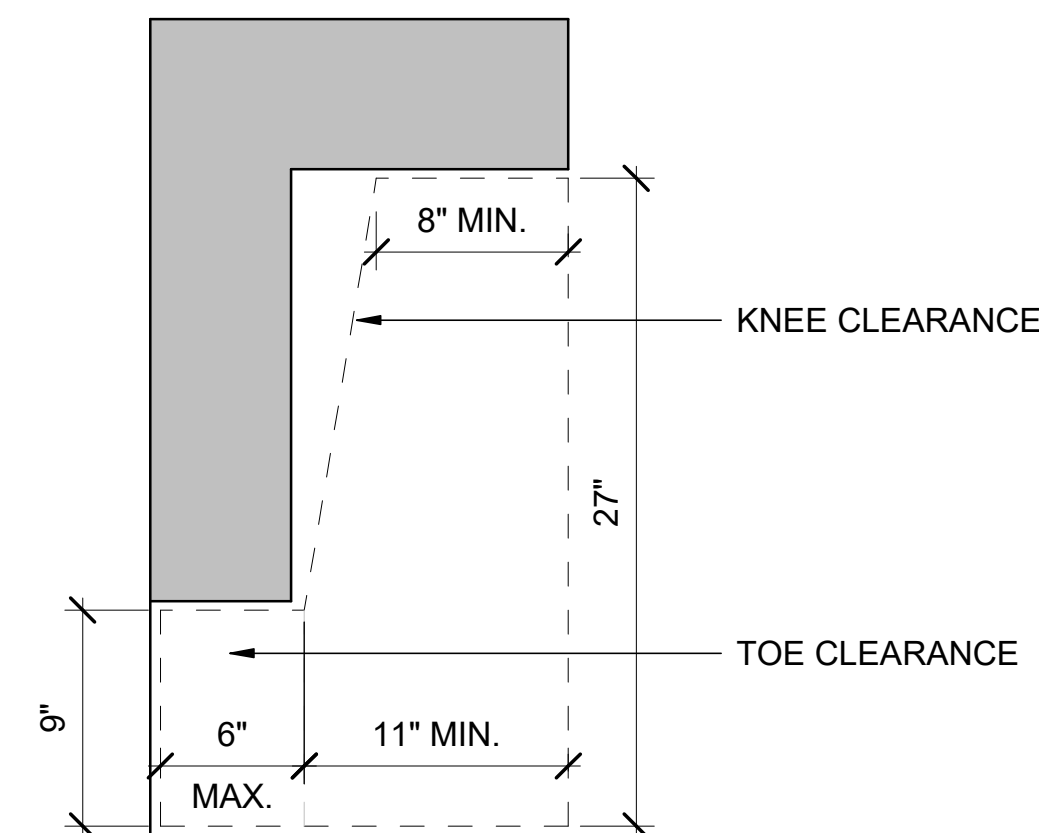
- GRAB BAR (GB) MOUNTING DIAGRAMS FOR ACCESSIBLE WATER CLOSETS**
1. CONTRACTOR IS RESPONSIBLE FOR FIELD COORDINATION OF APPLICABLE CLEARANCES WITH PLUMBING FIXTURES AND TOILET ACCESSORIES.
 2. GRAB BARS WITH A ROUND CROSS-SECTION SHALL HAVE A MINIMUM DIAMETER OF 1-1/4" AND MAXIMUM OF 2".
 3. PROJECTING OBJECTS OTHER THAN ADJACENT GRAB BARS SHALL BE A MINIMUM OF 1-1/2" CLEAR OF THE BOTTOM AND 12" CLEAR OF THE TOP OF HORIZONTAL GRAB BARS.
 4. PROVIDE VERTICAL GRAB BAR WHERE REQUIRED BY AHJ.
 5. MOUNT ALL ADJACENT HORIZONTAL GRAB BARS AT THE SAME ELEVATION.
 6. IT IS RECOMMENDED TO PROVIDE BLOCKING IN WALL ACCOMMODATING ALL RANGES OF SHOWN FOR THE GREATEST FLEXIBILITY FOR FIELD COORDINATION



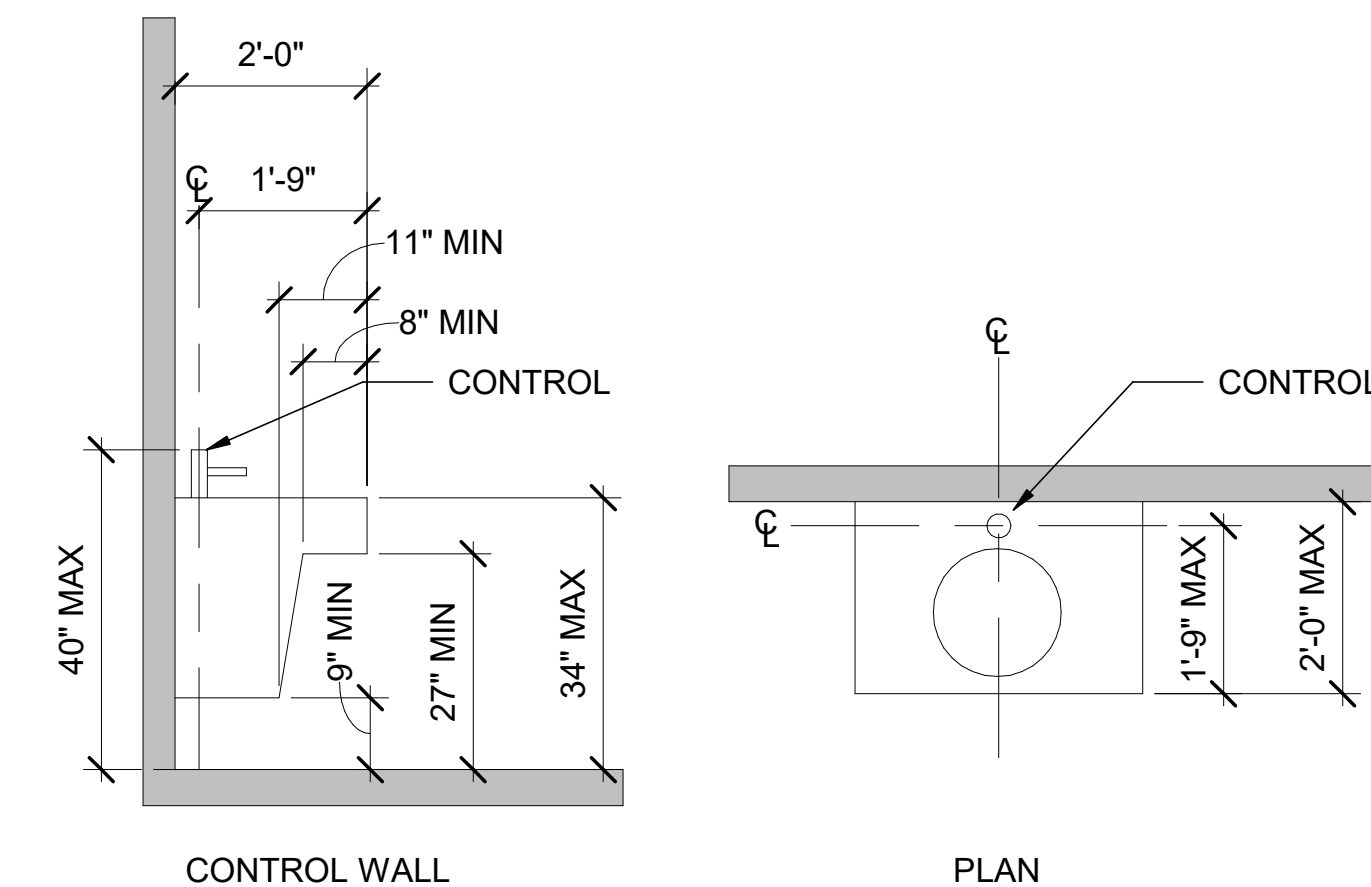
1. TT SPECIFICATION MUST MEET THE REQUIREMENTS OF **ICC A117.1 SECTION 607.1 - EXCEPTION 1**. THE TOILET TISSUE (ROLL) DISPENSER MAY ACCOMMODATE A MAXIMUM OF 2 TOILET PAPER ROLLS NOT MORE THAN 5" IN DIAMETER EACH..



- SEAT COVER DISPENSERS (TS) AT ACCESSIBLE WATER CLOSETS**
1. MINIMUM AND MAXIMUM DIMENSIONS ARE FOR THE TOILET SEAT COVER OUTLET.
 2. PROJECTING/SURFACE-MOUNTED ACCESSORIES MUST MAINTAIN MINIMUM CLEARANCES FROM ABOVE AND BELOW GRAB BARS.
 3. COORDINATE LOCATION FROM BACK WALL WITH LOCATION OF SEAT-COVER DISPENSERS AND SANITARY-NAPKIN DISPOSAL WHERE APPLICABLE.

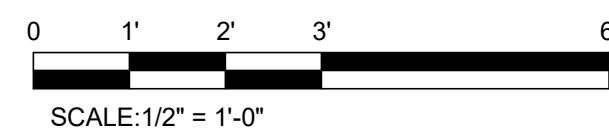


ACCESSIBLE KNEE AND TOE CLEARANCE



ACCESSIBLE SINK

SCALE: 1/2" = 1'-0"



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ACCESSIBILITY DIAGRAMS

A-002

Sheet Size: 22" x 34"

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ANACORTES READINESS CENTER

GOVERNING CODES:
INTERNATIONAL BUILDING CODE, 2018 (AS ADOPTED AND AMENDED BY WA STATE).
NFPA 13: STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS
ANSI A17.1 - SAFETY CODE FOR ELEVATORS AND ESCALATORS
ICC/ANSI A117.1-2009 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
2018 Washington State Energy Code (WSEC)

SUMMARY
OCCUPANCY GROUPS: A-3, B, S-1
CONSTRUCTION TYPE: VB
NUMBER OF STORIES: 1
SPRINKLER SYSTEM: NFPA 13
GROSS BUILDING AREA
TOTAL: 18,682 SF

IBC CHAPTER 3 – USE AND OCCUPANCY CLASSIFICATION			
SECTION	SUBJECT	ALLOWED / REQUIRED	PROPOSED
302.1	CLASSIFICATION, GENERAL	STRUCTURES SHALL BE CLASSIFIED WITH RESPECT TO OCCUPANCY IN ONE OR MORE OF THE GROUPS LISTED IN THIS SECTION.	ASSEMBLY GROUP A-3: LOCKERS BUSINESS GROUP B: ADMINISTRATION, CLASSROOMS, LIBRARY LEARNING CENTER, PHYSICAL FITNESS STORAGE GROUP S-1 – MODERATE HAZARD: ALL STORAGE ROOMS INCLUDING UNIT STORAGE, TRAINING BAY, AND FACILITY MAINTENANCE
IBC CHAPTER 5 – GENERAL BUILDING HEIGHTS AND AREAS			
THE PROPOSED BUILDING CONTAINS MIXED OCCUPANCIES AND COMPLIES WITH IBC SECTION 508.4 FOR SEPARATED OCCUPANCIES.			
TABLE 503 AND 504.2	ALLOWABLE BUILDING HEIGHTS WITH AUTOMATIC SPRINKLER SYSTEM INCREASE	GROUP A-3: 3 STORIES, 75 FEET GROUP B: 4 STORIES, 75 FEET GROUP S-1: 3 STORIES, 75 FEET	THE MAXIMUM HEIGHT OF THE BUILDING AT THE MAIN ENTRY IS 1 STORY, 16 FT.
TABLE 503 AND 506	ALLOWABLE BUILDING AREAS WITH MODIFICATIONS FOR FRONTAGE AND AUTOMATIC SPRINKLER SYSTEM PROTECTION	GROUP A-3, S1: 24,000 SF GROUP B, S1: 36,000 SF GROUP S-1 S1: 36,000 SF	SEE SECTION 508.4.2 FOR ALLOWED AND PROPOSED AREA OF EACH STORY
508.3	NONSEPERATED OCCUPANCIES	THE MOST RESTRICTIVE OCCUPANCY IS A-3	BUILDING AREA AND HEIGHT WILL NOT EXCEED A-3 LIMITS
IBC CHAPTER 6 – TYPES OF CONSTRUCTION			
602.1	CONSTRUCTION CLASSIFICATION, GENERAL	BUILDINGS SHALL BE CLASSIFIED IN ONE OF THE FIVE CONSTRUCTION TYPES	THE BUILDING IS CLASSIFIED IN CONSTRUCTION TYPE VB
TABLE 601	CONSTRUCTION CLASSIFICATION, FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS)	PRIMARY STRUCTURAL FRAME: 0 EXTERIOR BEARING WALLS: 0* INTERIOR BEARING WALLS: 0 EXTERIOR NON-BEARING WALLS: 0* INTERIOR NON-BEARING WALLS: 0 FLOOR CONSTRUCTION: 0 ROOF CONSTRUCTION: 0 * FOR FIRE SEPARATION DISTANCE ≥ 30 FT	PRIMARY STRUCTURAL FRAME: 0 EXTERIOR BEARING WALLS: 0* INTERIOR BEARING WALLS: 0 EXTERIOR NON-BEARING WALLS: 0* INTERIOR NON-BEARING WALLS: 0 FLOOR CONSTRUCTION: 0 HOUR ROOF CONSTRUCTION: 0 FIRE SEPARATION DISTANCE IS GREATER THAN 30 FT. ON ALL SIDES OF THE BUILDING
602.5	TYPE V	EXTERIOR WALLS AND INTERIOR WALLS ARE OF ANY PERMITTED MATERIAL ALLOWED BY THE CODE	ADDITION WILL BE CONSTRUCTED ON NONCOBUSTIBLE MATERIAL CONFORMING TO TYPE II CONSTRUCTION.
IBC CHAPTER 7 – FIRE AND SMOKE PROTECTION FEATURES			
705.8.1, EXCEPTION 2	EXTERIOR WALLS, ALLOWABLE AREA OF OPENINGS	BUILDINGS WHOSE EXTERIOR BEARING WALLS, EXTERIOR NONBEARING WALLS AND EXTERIOR PRIMARY STRUCTURAL FRAME ARE NOT REQUIRED TO BE FIRE-RESISTANCE RATED SHALL BE PERMITTED TO HAVE UNLIMITED UNPROTECTED OPENINGS	
IBC CHAPTER 8 – INTERIOR FINISHES			
TABLE 803.9	INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY	MOST RESTRICTIVE: GROUP A-3 SPRINKLERED INTERIOR EXIT STAIRWAYS, INTERIOR EXIT RAMPS AND EXIT PASSAGEWAYS: CLASS B CORRIDORS AND ENCLOSURE FOR EXIT ACCESS STAIRWAYS AND EXIT ACCESS RAMPS: CLASS B ROOMS AND ENCLOSED SPACES: CLASS C	PROVIDED: ALL INTERIOR WALL AND CEILING FINISH MATERIALS WILL NOT BE LESS THAN A CLASS B RATING PER IBC 803.1.1 THROUGHOUT WITH EXCEPTION TO ROOMS AND ENCLOSED SPACED WHICH WILL NOT BE LESS THAN A CLASS C RATING PER IBC 803.1.1.

IBC CHAPTER 10 – MEANS OF EGRESS			
TABLE 1004.1.2	DESIGN OCCUPANT LOAD, MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT	ACCESSORY STORAGE AREAS, MECHANICAL EQUIPMENT ROOM – 300 GROSS ASSEMBLY WITHOUT FIXED SEATS, STANDING SPACE – 5 NET ASSEMBLY WITHOUT FIXED SEATS, UNCONCENTRATED – 15 NET BUSINESS AREA – 100 GROSS EDUCATIONAL, CLASSROOM AREA – 20 NET EDUCATIONAL, SHOPS – 50 NET EXERCISE ROOMS – 50 GROSS KITCHENS, COMMERCIAL – 200 GROSS LIBRARY, READING ROOMS – 50 NET LIBRARY, STACK AREA – 100 GROSS	THE OCCUPANT LOAD OF EACH SPACE IS SHOWN ON THE LIFE SAFETY PLANS
1005.3.2	REQUIRED CAPACITY BASED ON OCCUPANT LOAD, OTHER EGRESS COMPONENTS	THE OCCUPANT LOAD SERVED BY SUCH COMPONENT X .15 INCH REQUIRED CAPACITY FOR DRILL HALL = 364 X .15 = 54.6 INCHES REQUIRED CAPACITY FOR CLASSROOM = 66 X .15 = 32 INCHES MIN	IN THE ASSEMBLY HALL, EACH OF (3) DOUBLE DOORS PROVIDES 72” (216 INCHES TOTAL) BUILDING IS FULLY SPRINKLERED
1007.1	ACCESSIBLE MEANS OF EGRESS	ONE REQUIRED, EXCEPT WHERE MORE THAN ONE MEANS OF EGRESS IS REQUIRED, TWO ACCESSIBLE MEANS OF EGRESS ARE REQUIRED.	ALL DOORS ARE ACCESSIBLE MEANS OF EGRESS
1009.3	STAIRWAYS, WIDTH	AS SPECIFIED IN SECTION 1005.1, OR 48 INCHES, WHICHEVER IS GREATER	EXISTING STAIR IS 71 INCHES WIDE
1009.5	PLATFORM LIFTS	PLATFROM LIFTS SHALL BE PERMITTED TO SERVE AS PART OF THE MEANS OF EGRESS	
1015.2	GUARDS, WHERE REQUIRED	ALONG OPEN-SIDED WALKING SURFACES THAT ARE LOCATED MORE THAN 30 INCHES ABOVE THE FLOOR OR GRADE BELOW. NOT REQUIRED ON THE LOADING SIDE OF LOADING DOCKS	GUARDS ARE PROVIDED AT HIGHER LEVEL IN THE LOBBY, NEAR THE PLATFROM LIFT
1014.3	EXIT ACCESS, COMMON PATH OF EGRESS TRAVEL	GROUPS B AND S: 100 FT. ALL OTHERS: 75 FT.	THE MAXIMUM PROPOSED COMMON PATH OF TRAVEL IS 71 FT. IN THE SIPRNET ROOM
1015.1	EXIT AND EXIT ACCESS DOORWAYS	TWO EXITS FROM ANY SPACE SHALL BE PROVIDED WHEN THE OCCUPANT LOAD EXCEEDS 49 FOR GROUPS A AND B OR 29 FOR GROUP S OR WHERE THE COMMON PATH OF EGRESS TRAVEL EXCEEDS THE LIMITATIONS OF SECTION 1014.3	EXITS ARE SHOWN ON THE LIFE SAFETY PLANS
1015.2.1	EXIT AND EXIT ACCESS DOORWAYS, TWO EXITS	EXIT DOORS SHALL BE PLACED A DISTANCE APART EQUAL TO NOT LESS THAN ONE-THIRD OF THE LENGTH OF THE MAXIMUM OVERALL DIMENSION OF THE AREA TO BE SERVED MEASURED IN A STRAIGHT LINE BETWEEN EXIT DOORS	WHERE TWO EXITS FROM A SPACE ARE PROVIDED, THEY ARE LOCATED A DISTANCE APART EQUAL TO ONE-THRID OF THE MAXIMUM OVERALL DIAGONAL DIMENSION
TABLE 1016.2	EXIT ACCESS TRAVEL DISTANCE	GROUPS A AND S-1: 250 FT. GROUP B: 300 FT.	THE MAXIMUM EXIT ACCESS TRAVEL DISTANCE IS 201 FT. FROM THE EASTERNMOST LEVEL 2 CLASSROOM TO THE LEVEL 1 MAIN ENTRY DOOR
TABLE 1018.1	CORRIDORS, CORRIDOR FIRE-RESISTANCE RATING	GROUPS A, B AND S: 0 WITH SPRINKLER SYSTEM	FIRE-RESISTANCE RATED CORRIDORS NOT PROVIDED
TABLE 1018.2	CORRIDORS, MINIMUM CORRIDOR WIDTH	44 INCHES, EXCEPT 24 INCHES FOR ACCESS TO MEP EQUIPMENT AND 36” WHERE OCCUPANCY IS LESS THAN 50	TYPICAL CORRIDOR WIDTH IS 5’-6”; MINIMUM CORRIDOR WIDTH IS 5’-0”
1018.4	CORRIDORS, DEAD ENDS	20 FT. MAX. EXCEPT 50 FT. FOR GROUPS B AND S WHERE BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM	NO DEAD END CORRIDORS PROVIDED
1021.2	NUMBER OF EXITS AND EXIT CONFIGURATION, EXITS FROM STORIES	TWO REQUIRED FROM ANY STORY	
1028.2	ASSEMBLY, ASSEMBLY MAIN EXIT	SHALL ACCOMMODATE ONE-HALF OF THE OCCUPANT LOAD	THE MAIN (SOUTH) ENTRY/EXIT FOR THE ASSEMBLY HALL ACCOMMODATES 960 OCCUPANTS. THE WEST DOORS ACCOMMODATE 480 OCCUPANTS. THE ASSEMBLY HAS AN OCCUPANT LOAD OF 364.
1028.7	ASSEMBLY, TRAVEL DISTANCE	250 FT. IN SPRINKLERED BUILDINGS	THE MAXIMUM TRAVEL DISTANCE IS 100 FT. FROM THE FITNESS ROOM FAR CORNER TO THE EXTERIOR DOOR
1028.8	ASSEMBLY, COMMON PATH OF EGRESS TRAVEL	30 FT.	THE MAXIMUM COMMON PATH OF TRAVEL IS 13 FT. FROM THE VAULT

IBC CHAPTER 29 – PLUMBING SYSTEMS

2902.1 PLUMBING FIXTURES SHALL BE PROVIDED FOR THE TYPE OF OCCUPANCY AND IN THE MINIMUM NUMBER SHOWN IN TABLE 2902.1

REQUIRED PLUMBING FIXTURES PER TABLE 2902.1

	MEN'S WATER CLOSEST	WOMEN'S WATER CLOSEST	LAVATORIES	DRINKING FOUNTAINS
REQUIRED:	Group A: 1 per 125, (364/2)/125=1.456	Group A: 1 per 65, (364/2)/65=2.8	Group A: 1 per 200, 364/200=1.82	Group A: 1 per 500, 364/500=.728
	Group B: 1 per 25 for 1st 50, then 1 per 50, (175-50)/50+2 = 4.5		Group B: 1 per 40 for 1st 80, then 1 per 80, (175-80)/80+2 = 3.1875	Group A: 1 per 100, 175/100=1.75
	Group S: 1 per 100, (12/100) = .12		Group S: 1 per 100, (12/100) = .12	Group A: 1 per 1000, 12/1000=.012
TOTAL REQUIRED:	TOTALLED 8.875 = 9 MINIMUM		TOTALLED 5.1275 = 6 MINIMUM	TOTALLED 2.49 = 3 MINIMUM

TOTALS PROVIDED

	MEN'S WC	WOMEN'S WC	MEN'S LAVS	WOMEN'S LAVS	DRINKING FOUNTAINS	SERVICE SINK
TOTALS FIXTURES PREVIOUSLY:	9(6 OF WHICH ARE URINALS)	2	5	2	1	1
TOTAL PROVIDED:	7(3 OF WHICH ARE URINALS)	3 + 1 UNISEX	4 + 1 UNISEX	3 + 1 IN MOTHERS ROOM	4	1

*NEW PLUMBING FIXTURES WILL NOT REDUCE EXISTING COUNTS. EXISTING FIXTURES ARE NOT ADA COMPLIANT. ALL NEW FIXTURES WILL MEET CURRENT CODES. WASHINGTON MILITARY DEPARTMENT HAS A 70% MALE TO 30% FEMALE RATIO



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REGISTERED ARCHITECT
GREGORY J. NELSON
STATE OF WASHINGTON

Project No.: 21024

Designed By: GJN

Drawn By: CFT

Checked By: PMM

Mark	Description	Date

WASHINGTON MILITARY DEPARTMENT

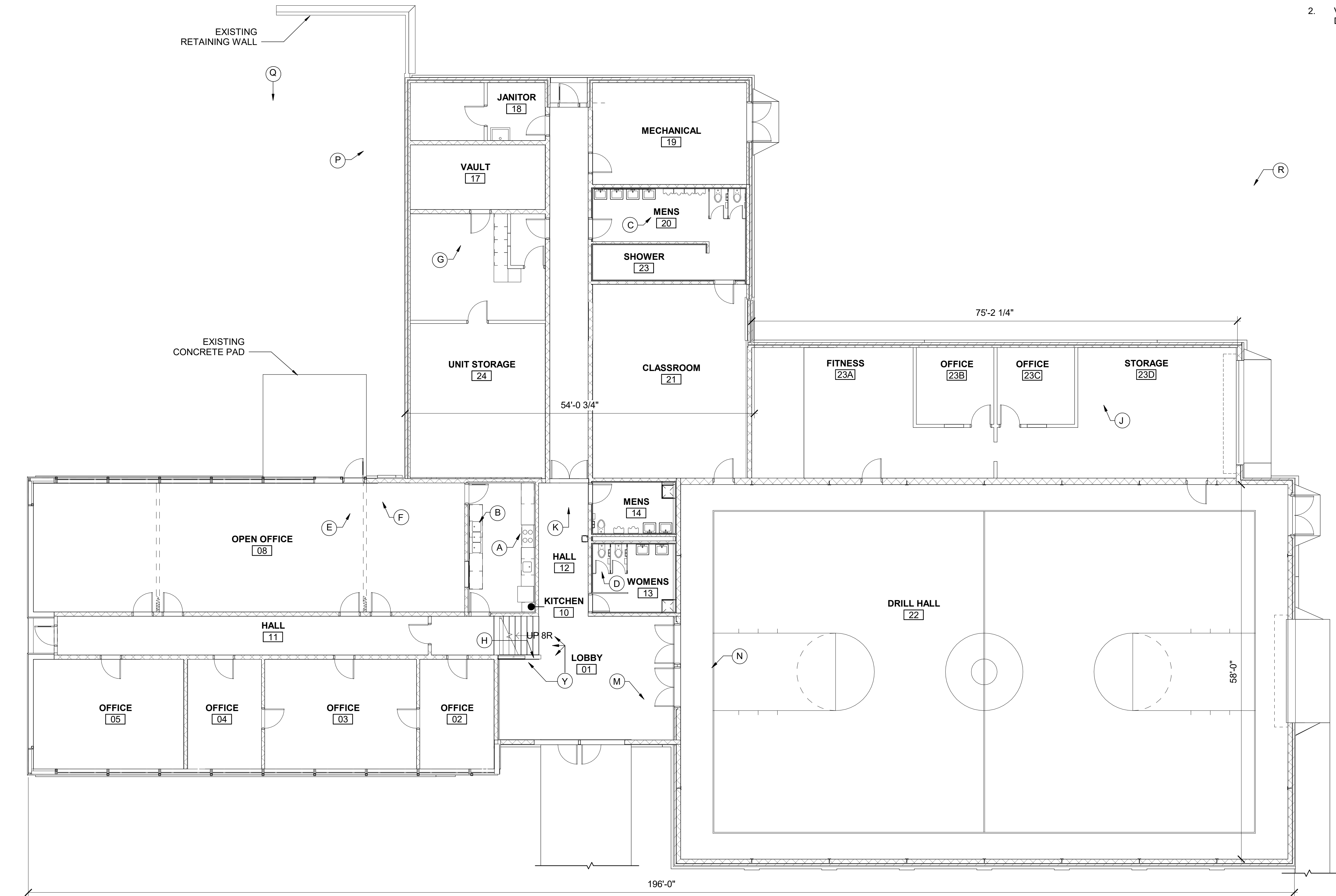
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CODE ANALYSIS

A-003

Sheet Size: 22" x 34"
Page 99 of 351

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1
A-005
EXISTING FLOOR PLAN
SCALE : 1/8" = 1'-0"

EXISTING PLAN GENERAL NOTES

1. REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
2. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS IN THE FIELD.

PLAN KEY

- EXISTING
- IMAGES - EXISTING CONDITIONS
- LOCATION AND DIRECTION OF VIEW.
REFERENCE A-006 & A-007



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EXISTING FLOOR PLAN

A-005

Sheet Size: 22" x 34"
Page 101 of 351



IMAGE A: EXISTING KITCHEN, ROOM 10. EAST WALL, SHOWING EXISTING COMMERCIAL RANGE AND HOOD, EXISTING CASEWORK, SOFFIT AND REFRIGERATOR.



IMAGE B: EXISTING KITCHEN, ROOM 10. WEST WALL, SHOWING EXISTING CASEWORK, SINK AND OVERHEAD COILING WINDOW.



IMAGE C: EXISTING MEN'S RESTROOM, ROOM 20. NORTH WALL, SHOWING EXISTING SINKS, URINALS, METAL PARTITIONS, WALL TILING AND MOSAIC TILE FLOORING . TYPICAL RESTROOM FINISH AND FIXTURE CONDITIONS.



IMAGE D: EXISTING FLOOR MOUNTED TOILET FIXTURE (TYPICAL) AND METAL PARTITIONS.



IMAGE E: EXISTING OPEN OFFICE, ROOM 08. LOOKING AT NORTH EAST CORNER OF ROOM. TYPICAL CLASSROOM DIVIDERS AND ACOUSTIC CEILING CONDITION SHOWN.



IMAGE F: EXISTING OPEN OFFICE, ROOM 08. TYPICAL CLERESTORY WINDOW, ROOM DIVIDER AND CEILING CONDITIONS SHOWN.



IMAGE G: EXISTING VAULT, ROOM 17. LOOKING AT NORTH EAST CORNER OF ROOM. EXISTING VAULT DOOR AND CASEWORK SHOWN.



IMAGE H: EXISTING HANDRAIL AT LOBBY, ROOM 01, STAIRS.



IMAGE J: EXISTING STORAGE, ROOM 23D. LOOKING AT NORTH WEST CORNER AT OFFICE, ROOM 23C. EXISTING MIRRORED OFFICE, ROOM 23B, SIMILAR.

IMAGES - EXISTING CONDITIONS

NTS



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IMAGES - EXISTING CONDITIONS

A-006



IMAGE K: EXISTING HALL, ROOM 12. LOOKING NORTH TOWARD NEW CORRIDOR, ROOM 109. EXISTING ACOUSTIC PANELS SHOWN.



IMAGE M: EXISTING LOBBY, ROOM 01. LOOKING SOUTH EAST AT EXISTING ACOUSTIC PANELS.



IMAGE N: EXISTING DRILL HALL, ROOM 22. LOOKING WEST AT EXISTING DUCT WORK AND ACOUSTIC PANELS.

IMAGES - EXISTING CONDITIONS (ACOUSTIC PANEL)

NTS



IMAGE P: EXISTING METER AND GAS LINE. LOOKING AT NORTH EAST CORNER, EXTERIOR OF VAULT, ROOM 17.



IMAGE Q: EXTERIOR OF EXISTING OPEN OFFICE WING, ROOM 08, AT RETAINING WALL LOOKING SOUTH WEST.



IMAGE R: EXISTING DRILL HALL, ROOM 22 AND STORAGE, ROOM 23D. LOOKING SOUTH WEST AT EXTERIOR BRICK WALL AT LOCATION OF NEW CLASSROOMS.

IMAGES - EXISTING CONDITIONS (YARD)

NTS



IMAGE S: EXISTING ROOF LOOKING NORTH EAST



IMAGE T: EXISTING ROOF.



IMAGE V: EXISTING ROOF DRAIN.

IMAGES - EXISTING CONDITIONS (ROOF)

NTS



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IMAGES - EXISTING CONDITIONS

A-007



IMAGE W: EXISTING BENCH, CASEWORK AND COAT HOOKS FOR POTENTIAL SALVAGE. COORDINATE ITEMS WITH OWNER'S REPRESENTATIVE.



IMAGE W1: EXISTING COAT HOOKS FOR POTENTIAL SALVAGE. COORDINATE ITEMS WITH OWNER'S REPRESENTATIVE.



IMAGE W2: EXISTING SHOWER ROOM BENCHES FOR POTENTIAL SALVAGE. COORDINATE ITEMS WITH OWNER'S REPRESENTATIVE.



IMAGE X: EXISTING DRINKING FOUNTAIN FOR POTENTIAL SALVAGE. COORDINATE ITEMS WITH OWNER'S REPRESENTATIVE.

IMAGES - EXISTING CONDITIONS (SALVAGE ITEMS)

NTS



IMAGE Y: EXISTING HANDRAILS. LOBBY, ROOM 01, STAIRS.



IMAGE Y1: EXISTING STEEL POST AND TRACK FOR EXISTING CHAIR LIFT, AND EXISTING ALUMINUM HANDRAIL ATTACHED TO WOOD VENEERED CONCRETE WALL.



IMAGE Y2: EXISTING ADA LIFT AND HANDRAILS. LOBBY, ROOM 01.



IMAGE Y3: EXISTING ALUMINUM HANDRAIL ATTACHED TO EXISTING CMU WALL WITH 3 WALL BRACKETS.

IMAGES - EXISTING CONDITIONS (HANDRAIL)

NTS



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IMAGES - EXISTING CONDITIONS

A-008

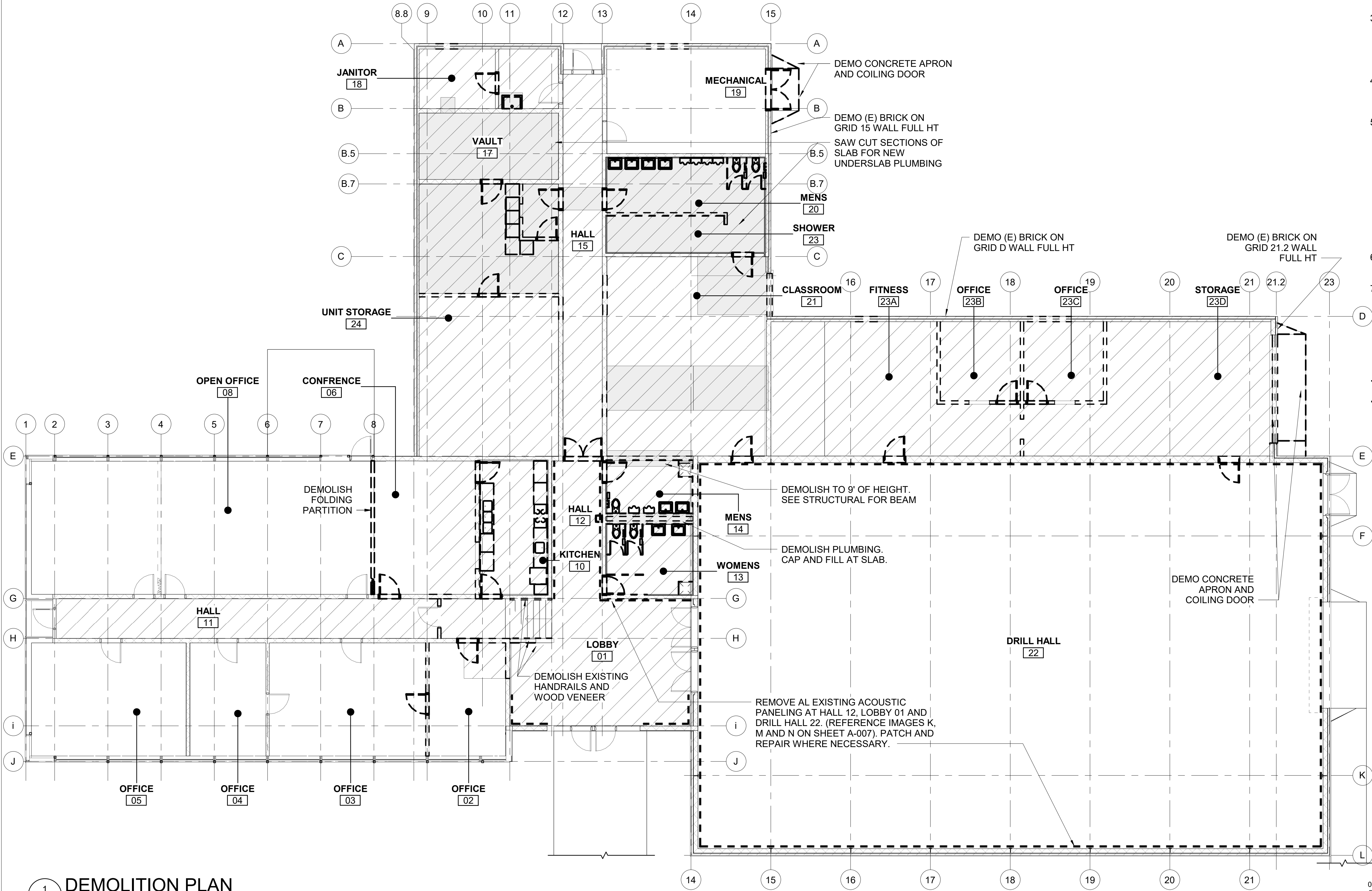
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1
AD101

DEMOLITION PLAN

SCALE : 1/8" = 1'-0"



DEMOLITION PLAN GENERAL NOTES

1. REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
2. CONTRACTOR MUST VERIFY THE ACCURACY OF EXISTING FIELD CONDITIONS. IMMEDIATELY NOTIFY THE OWNER OF ANY INCONSISTENCIES BETWEEN DRAWINGS AND ACTUAL CONDITIONS.
3. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE IF ANY DEMOLITION OR NEW WORK CANNOT BE PERFORMED DUE TO EXISTING FIELD CONDITIONS.
4. PATCH AND REPAIR ALL EXISTING CEILINGS, WALLS, AND FLOORS DISTURBED BY THE WORK.
5. COORDINATE AND VERIFY WITH OWNER FOR SALVAGING DOORS, DOOR FRAMES, SHELVING, BENCHES, COAT HOOKS, DRINKING FOUNTAIN, SOAP DISPENSERS, TOILET PAPER DISPENSERS, TISSUE DISPENSERS AND ALL OTHER FF&E ITEMS TO BE SALVAGED. VERIFY THE EXTENT OF THE ITEMS TO BE SALVAGED WITH OWNER OR OWNER'S REPRESENTATIVE. REFERENCE A-008 FOR POTENTIAL SALVAGE ITEMS.
6. SAW CUT CONCRETE SLAB FOR AREAS OF SLAB TO BE DEMOLISHED.
7. INTERIOR FOOTINGS THAT EXTEND BEYOND EXISTING SLAB AT WALLS TO BE DEMOLISHED MUST BE CUT DOWN TO BE FLUSH WITH CONCRETE SLAB.

DEMOLITION PLAN LEGEND

- AREA OF EXISTING FLOORING FINISH TO DEMOLISH
- AREA OF EXISTING SLAB TO DEMOLISH
- TO DEMOLISH
- EXISTING TO REMAIN



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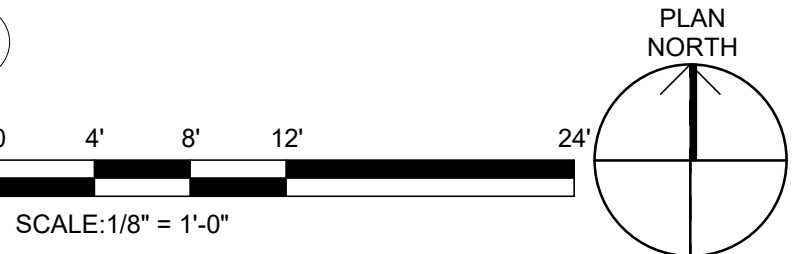
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DEMOLITION PLAN

AD101

1. REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
2. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS IN THE FIELD.
3. SEE MECHANICAL AND ELECTRICAL DEMOLITION PLANS FOR EQUIPMENT AND FIXTURE DEMOLITION.

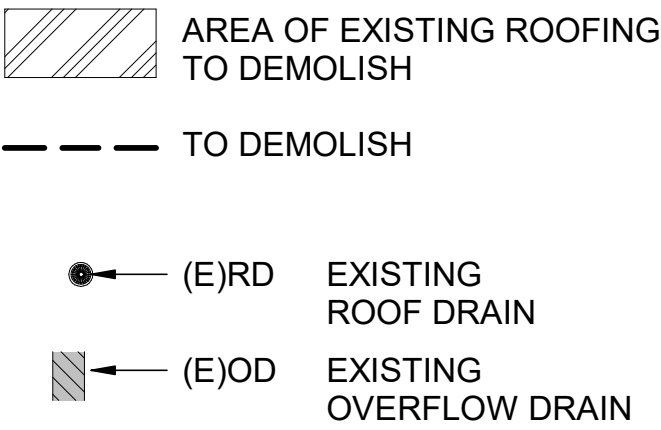
	EXISTING ROUND LED LIGHT FIXTURE TO REMAIN
	EXISTING RECESSED 4' X 2' LED LIGHT FIXTURE TO REMAIN
	EXISTING 8INX8IN ACT
	EXISTING 2X4 ACT
	EXISTING GYPSUM CEILING
	EXISTING PLASTER CEILING
	OTS (OPEN TO STRUCTURE)
	AREA OF EXISTING CEILING AND LIGHTING TO BE DEMOLISHED
	EXISTING RECESSED 4' X 2' LED LIGHT FIXTURE TO BE DEMOLISHED





DEMOLITION ROOF PLAN LEGEND

1. REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
2. VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS IN THE FIELD.
3. DEMOLISH EXISTING TPO ROOFING AND INSULATION DOWN TO SHEATHING.
4. DEMOLISH ALL EXISTING ROOF TOP EQUIPMENT.
5. COORDINATE WITH MECHANICAL DRAWING TO PRESERVE VTR ON ROOF.



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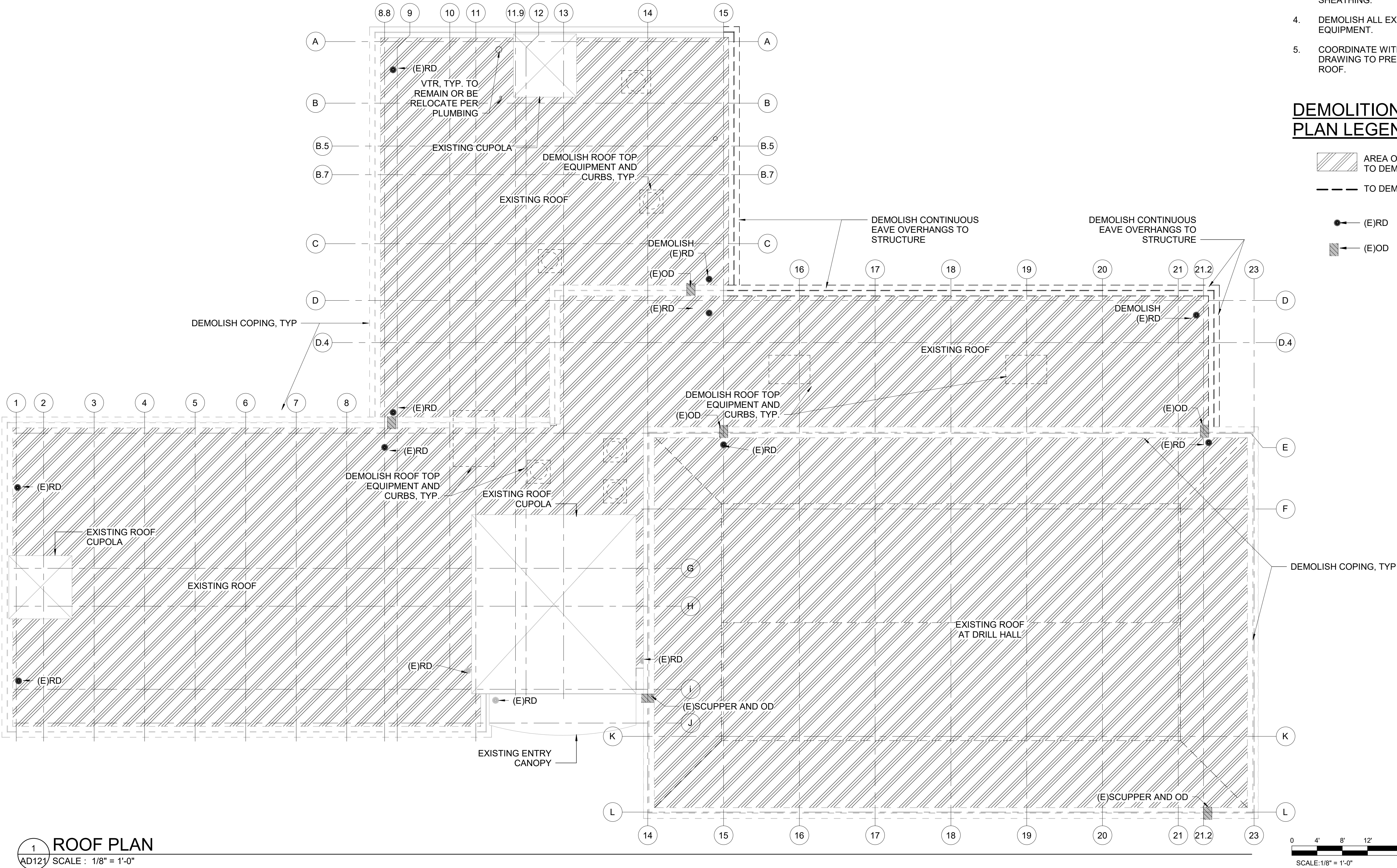
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ROOF DEMOLITION PLAN

AD121

Sheet Size: 22" x 34"



1
A-101

FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

PERMIT SET

04/29/2022

**FLOOR PLAN
GENERAL NOTES**

1. REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
2. REFERENCE SHEET A-601 FOR WALL TYPES, SHEET A-603 FOR DOOR AND WINDOW TYPES, AND SHEET A-602 THROUGH CEILING, SOFFIT, ROOF, AND FLOOR LEGEND.
3. PLAN VIEWS ARE CUT AT 4'-0" AFF.
4. SEE FEC DETAILS FOR SEMI RECESSED AND SURFACE MOUNTED CABINETS

PLAN KEY

- NEW
- EXISTING
- AREA OF NEW SLAB



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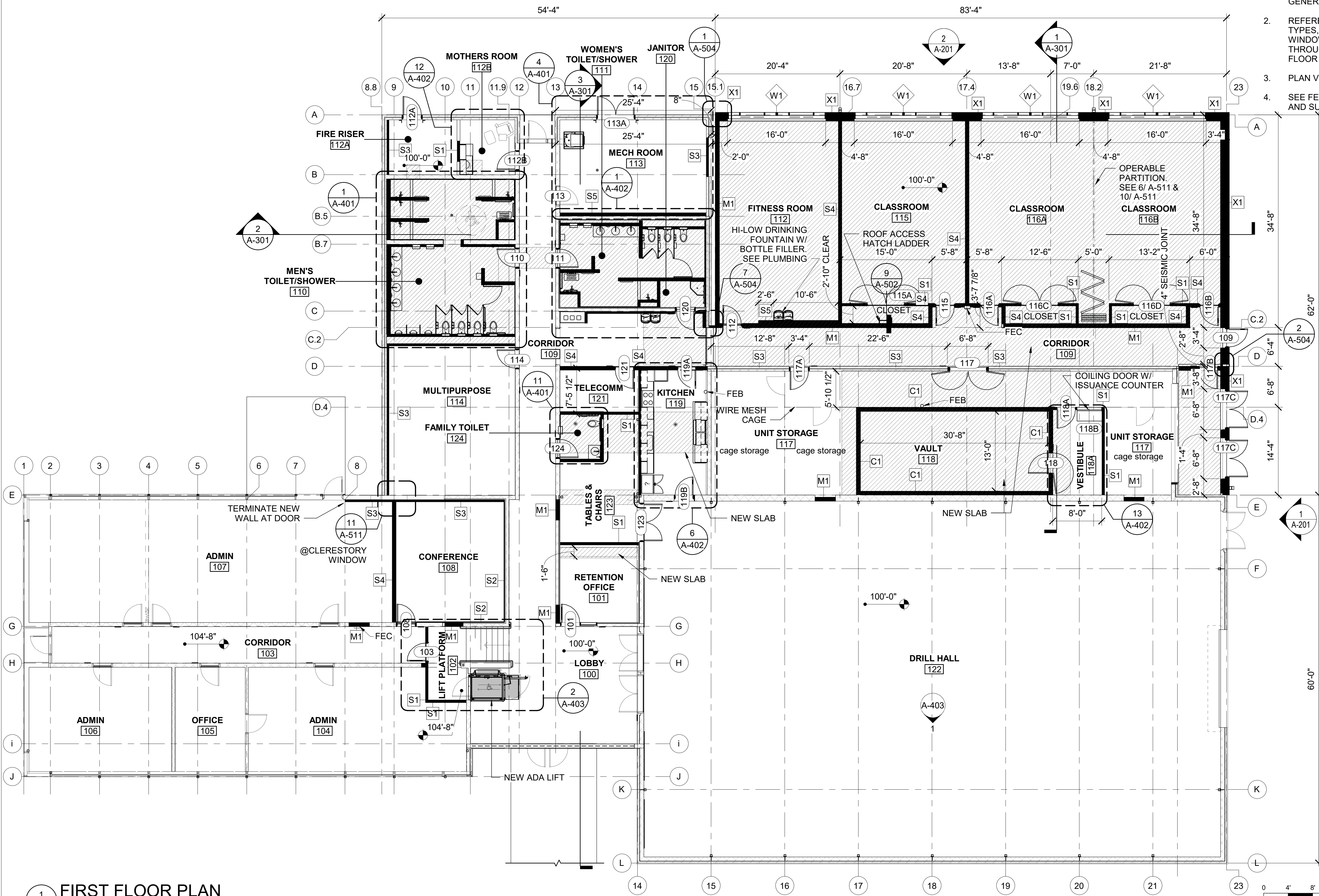
Project No.: 21024
Designed By: C/JN
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Checked By: P/MM

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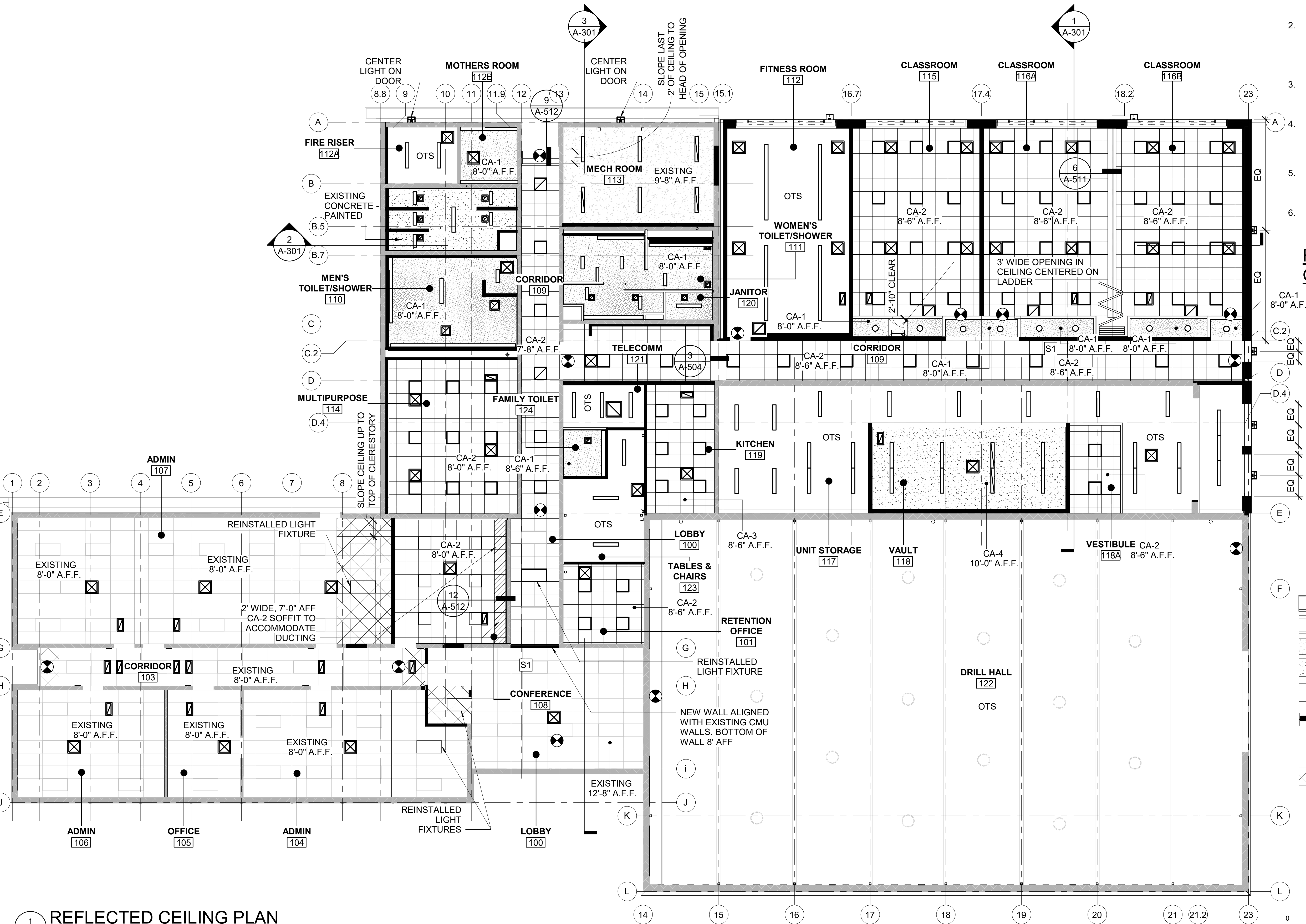
FLOOR PLAN

A-101



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1
A-111 REFLECTED CEILING PLAN
SCALE : 1/8" = 1'-0"

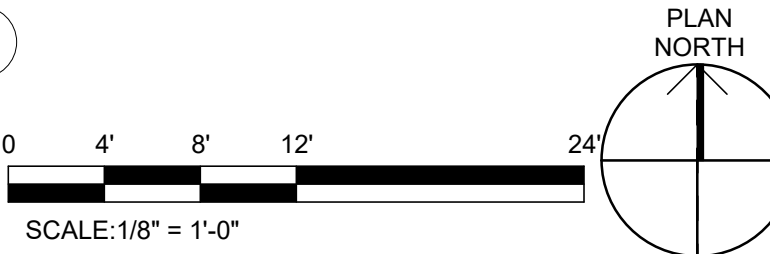


CEILING PLAN
GENERAL NOTES

1. REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
2. REFERENCE SHEET A-601 FOR WALL TYPES, SHEET A-603 FOR DOOR AND WINDOW TYPES, AND SHEET A-602 THROUGH CEILING, SOFFIT, ROOF, AND FLOOR LEGEND.
3. ACOUSTICAL CEILING TILE GRIDS ARE TO BE CENTERED IN ROOMS UNLESS OTHERWISE NOTED.
4. LIGHT FIXTURES ARE TO BE CENTERED IN ACOUSTICAL CEILING TILE GRIDS AS INDICATED OR CENTERED IN ROOMS, UNLESS DIMENSIONED OTHERWISE.
5. DIMENSIONS FOR LIGHTS ARE TO FACE OF GYPSUM WALLBOARD AND TO CENTERLINE OF FIXTURE.
6. PATCH AND REPAIR CEILING AND GRID AS NECESSARY. FILL ANY VISIBLE PENETRATIONS.

REFLECTED
CEILING KEY

- CA-1 8'-0" A.F.F.
- RECESSED 2' X 2' LIGHT FIXTURE (SEE ELECTRICAL)
- RECESSED CAN LIGHT FIXTURE (SEE ELECTRICAL)
- SURFACE LIGHT FIXTURE (SEE ELECTRICAL)
- WALL MOUNTED LIGHT FIXTURE (SEE ELECTRICAL)
- 12' DIRECT/INDIRECT LIGHT FIXTURE (SEE ELECTRICAL)
- EXISTING ROUND LIGHT FIXTURE
- EXISTING RECESSED 4' X 2' LIGHT FIXTURE
- EXISTING RELOCATED LIGHT FIXTURE
- NEW 2X2 ACT CEILING GRID
- EXISTING 2X4 ACT
- GWB CEILING
- CONCRETE CEILING - PAINT PER SCHEDULE
- OTS (OPEN TO STRUCTURE) - PAINT PER SCHEDULE
- NEW FULL HEIGHT WALL (WALL ATTACHES TO DECK)
- EXIT SIGN LOCATION (REFER TO ELECTRICAL DWGS)
- PATCH AND REPAIR PORTION OF EXISTING ACT CEILING AND GRID (SEE 7/ A-511)
- SUPPLY DIFFUSER (REFER TO MECHANICAL DWGS)
- RETURN GRILLE (REFER TO MECHANICAL DWGS)
- EXHAUST GRILLE (REFER TO MECHANICAL DWGS)



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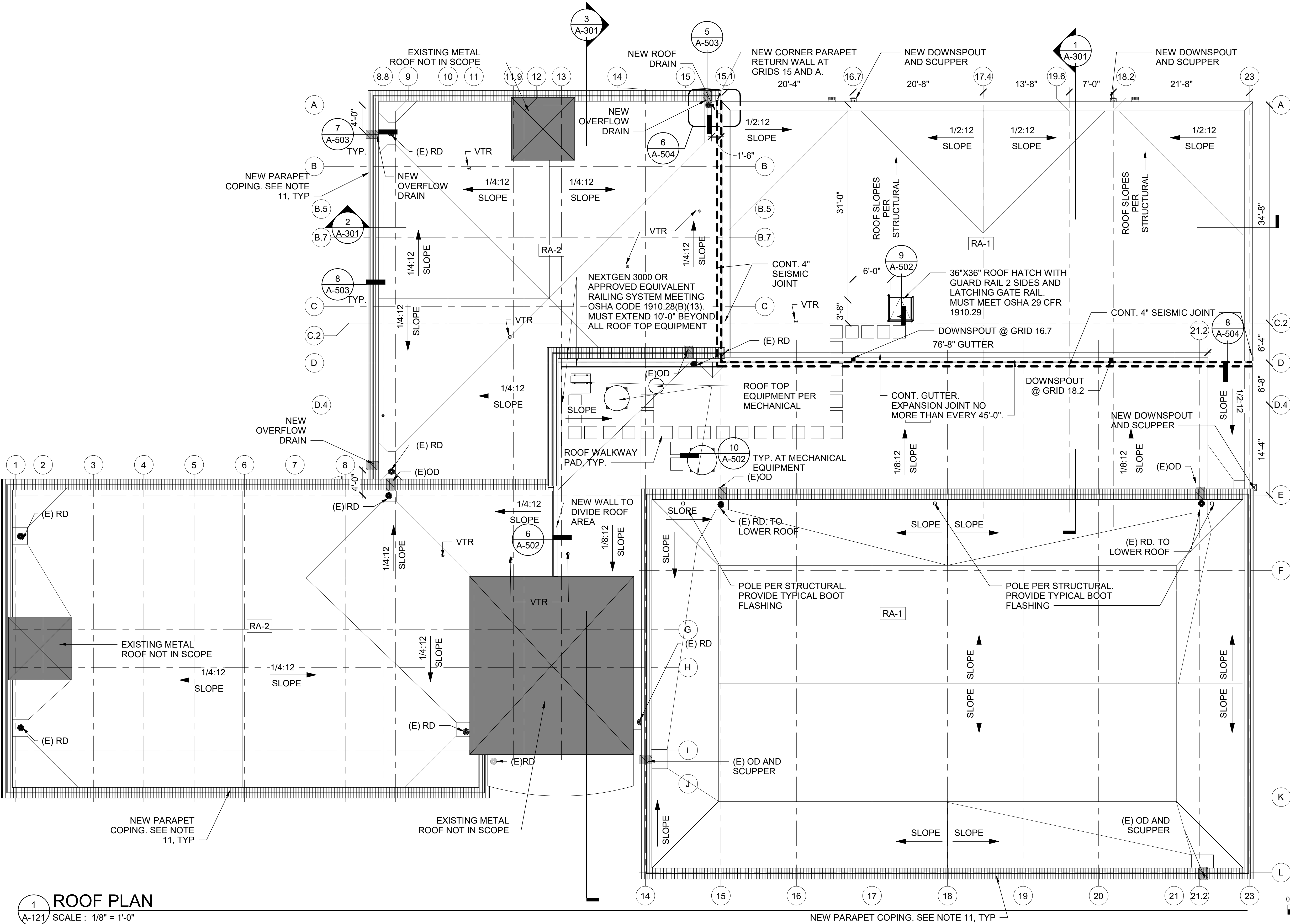
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REFLECTED CEILING PLAN

A-111

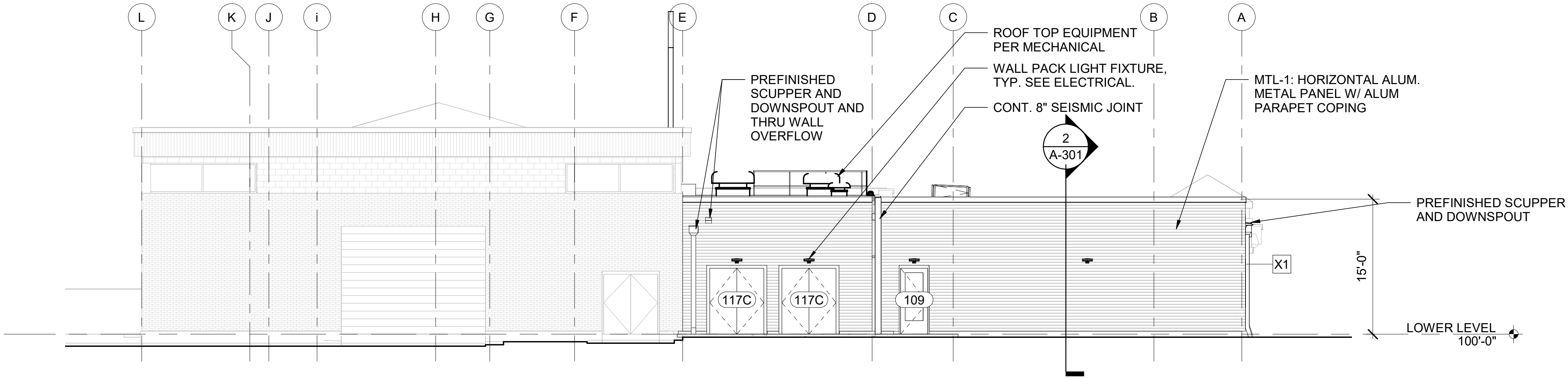
1. REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES
2. REFERENCE SHEET A-601 FOR WALL TYPES, SHEET A-603 FOR DOOR AND WINDOW TYPES, AND SHEET A-602 THROUGH CEILING, SOFFIT, ROOF, AND FLOOR LEGEND.
3. SEE DETAIL 11/ A-502 FOR VTR.
4. NEW TPO ROOF THROUGHOUT. DEMOLISH AND REPLACE EXISTING TPO WITH RA-1.
5. REUSE ALL EXISTING ROOF DRAINS AT EXISTING ROOF. SLOPE ROOF TO DRAINS.
6. EXISTING CUPOLA METAL ROOFS NOT IN SCOPE.
7. PROVIDE MANUFACTURE ROOF CURBS FOR ROOF TOP EQUIPMENT WITH NO LESS THAN AN R-15 AT THE PERIMETER.
8. SEE SHEET A-802 FOR ROOF MINIMAL R-VALUE REQUIRED BY ENERGY CODE.
9. SEE DETAIL 10/ A-502 FOR CURB DETAIL.
10. SEE SHEET A-803 FOR GUTTER AND DOWNSPOUT SIZING.
11. REPLACE ALL EXISTING COPING PER DETAIL 8/ A-503.

	← NEW RD	REPLACE EXISTING ROOF DRAIN
	← OD	THRU WALL OVERFLOW DRAIN
		EXISTING STANDING SEAM METAL ROOF OF CUPOLAS NOT IN SCOPE (REPLACE INSULATION WITHIN CUPOLAS PER A-802)
		CONT. SEISMIC JOINT

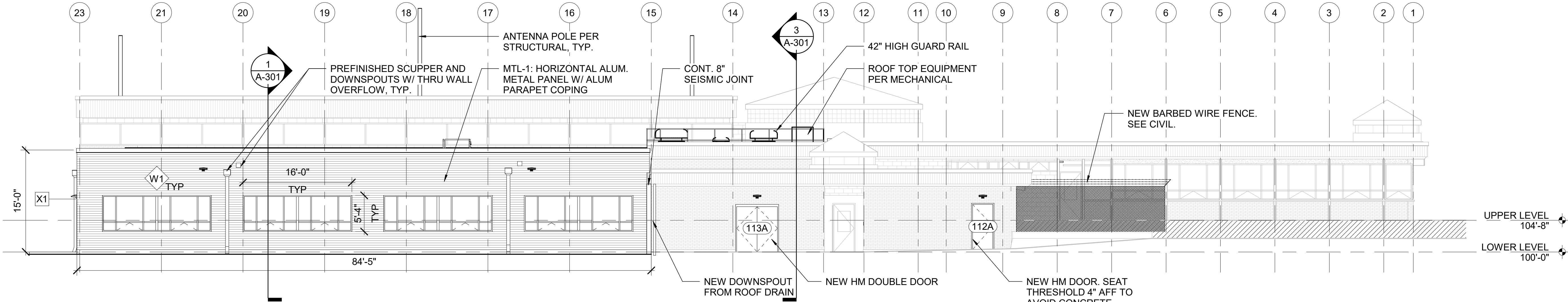


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1 EAST ELEVATION
A-201 SCALE : 1/8" = 1'-0"



2 NORTH ELEVATION
A-201 SCALE : 1/8" = 1'-0"

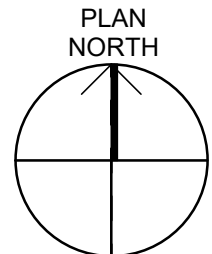
ELEVATION GENERAL NOTES

- REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
- REFERENCE SHEET A-601 FOR WALL TYPES, SHEET A-603 FOR DOOR AND WINDOW TYPES, AND SHEET A-602 THROUGH CEILING, SOFFIT, ROOF, AND FLOOR LEGEND.

ELEVATION KEY

MTL-1: HORIZONTAL ALUMINUM METAL PANEL

0 4' 8' 12' 24'
SCALE: 1/8" = 1'-0"



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Description	
Mark	

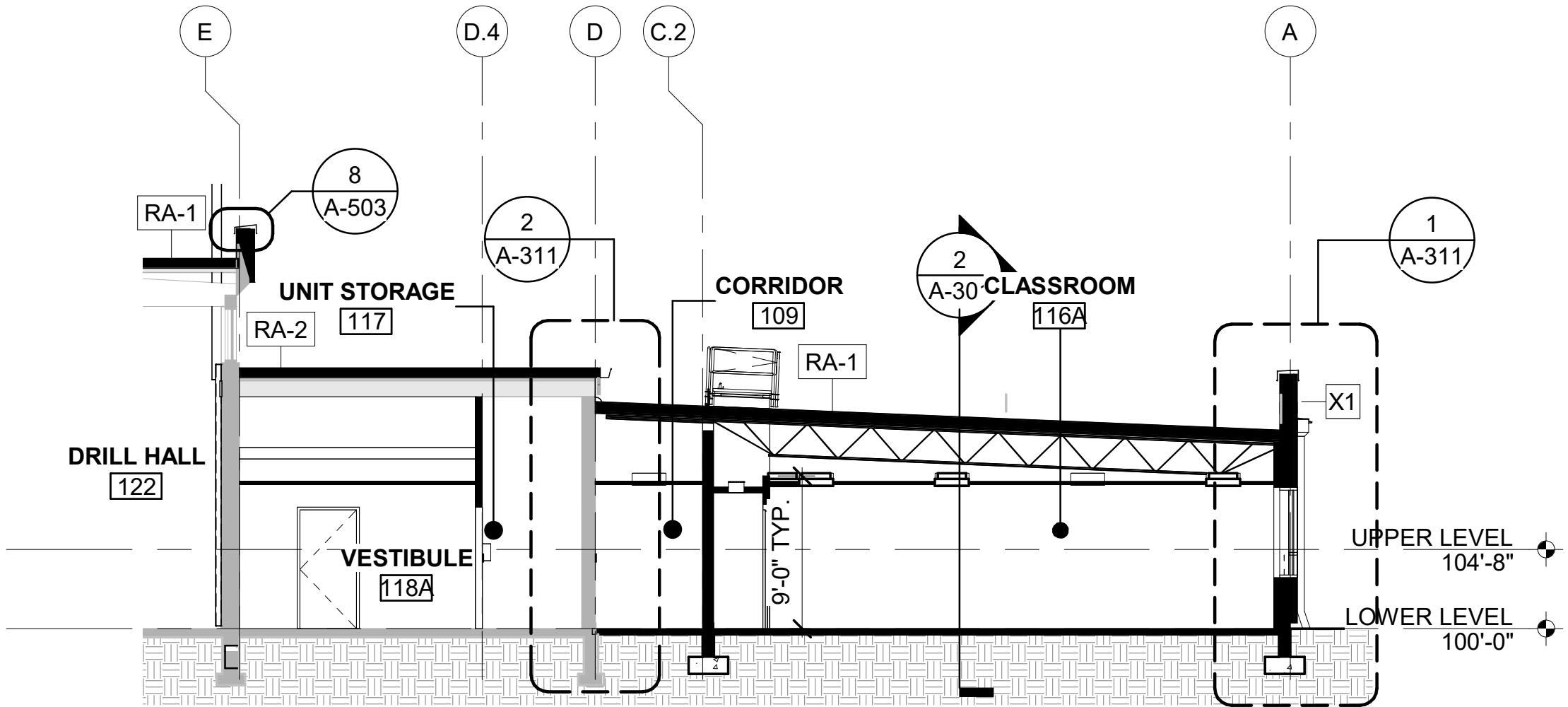
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BUILDING ELEVATIONS

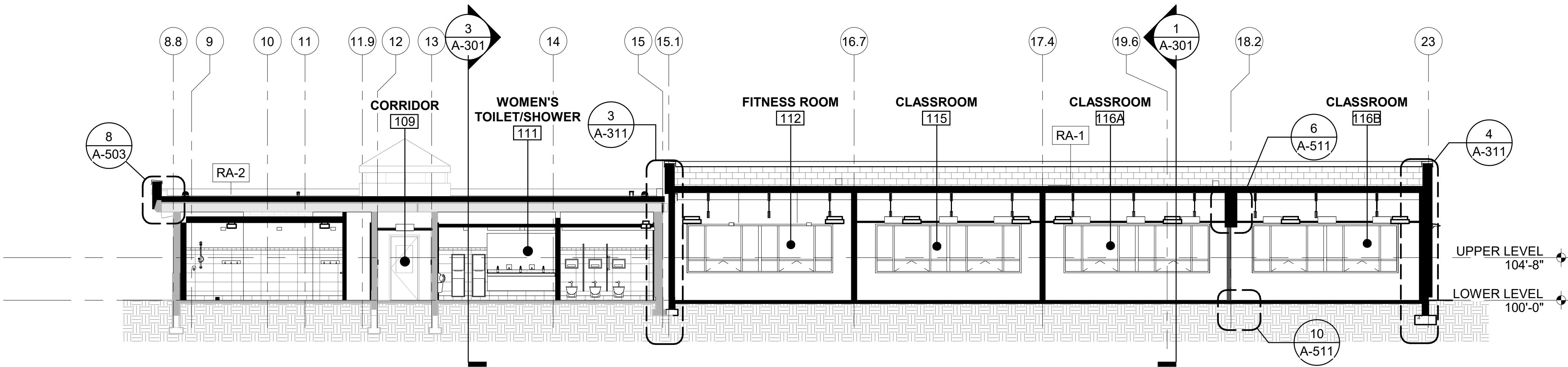
A-201

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Page 111 of 351

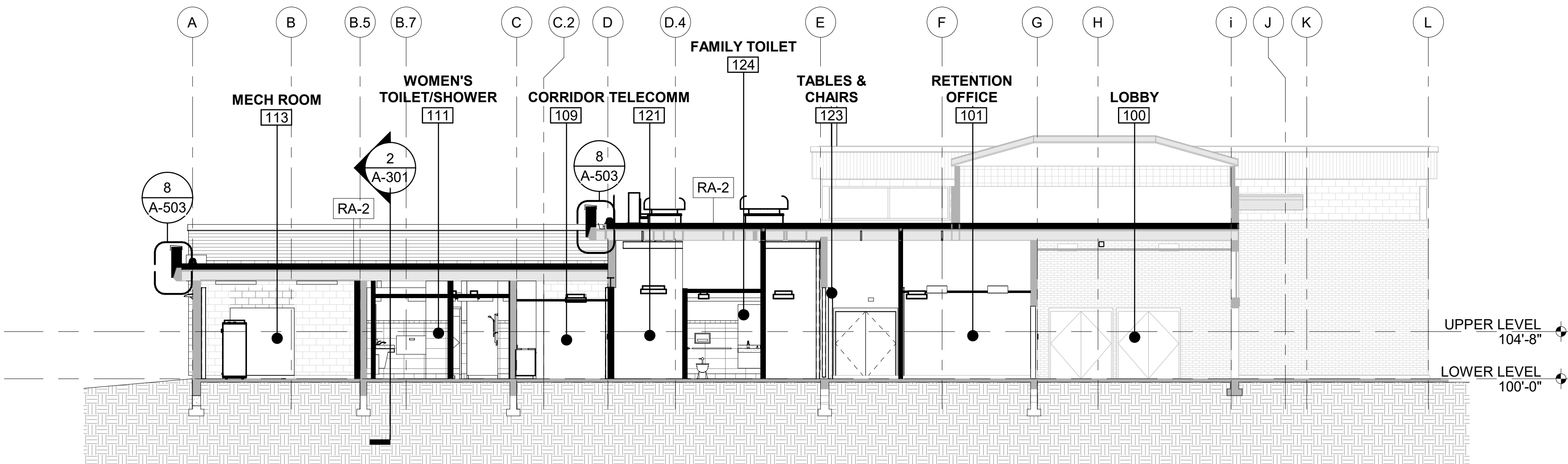
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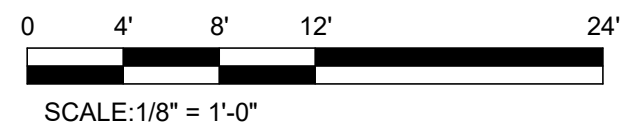
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A-301 SCALE : 1/8" = 1'-0"



2 PARTIAL BUILDING SECTION W-E
A-301 SCALE : 1/8" = 1'-0"



3 BUILDING SECTION N-S AT EXISTING
A-301 SCALE : 1/8" = 1'-0"



BUILDING SECTION GENERAL NOTES

1. REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
2. REFERENCE SHEET A-601 FOR WALL TYPES, SHEET A-603 FOR DOOR AND WINDOW TYPES, AND SHEET A-602 THROUGH CEILING, SOFFIT, ROOF, AND FLOOR LEGEND..



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BUILDING SECTIONS

A-301

1. REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
2. REFERENCE SHEET A-601 FOR WALL TYPES, SHEET A-603 FOR DOOR AND WINDOW TYPES, AND SHEET A-602 THROUGH CEILING, SOFFIT, ROOF, AND FLOOR LEGEND.



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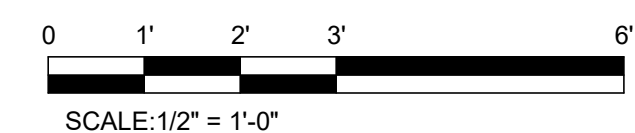
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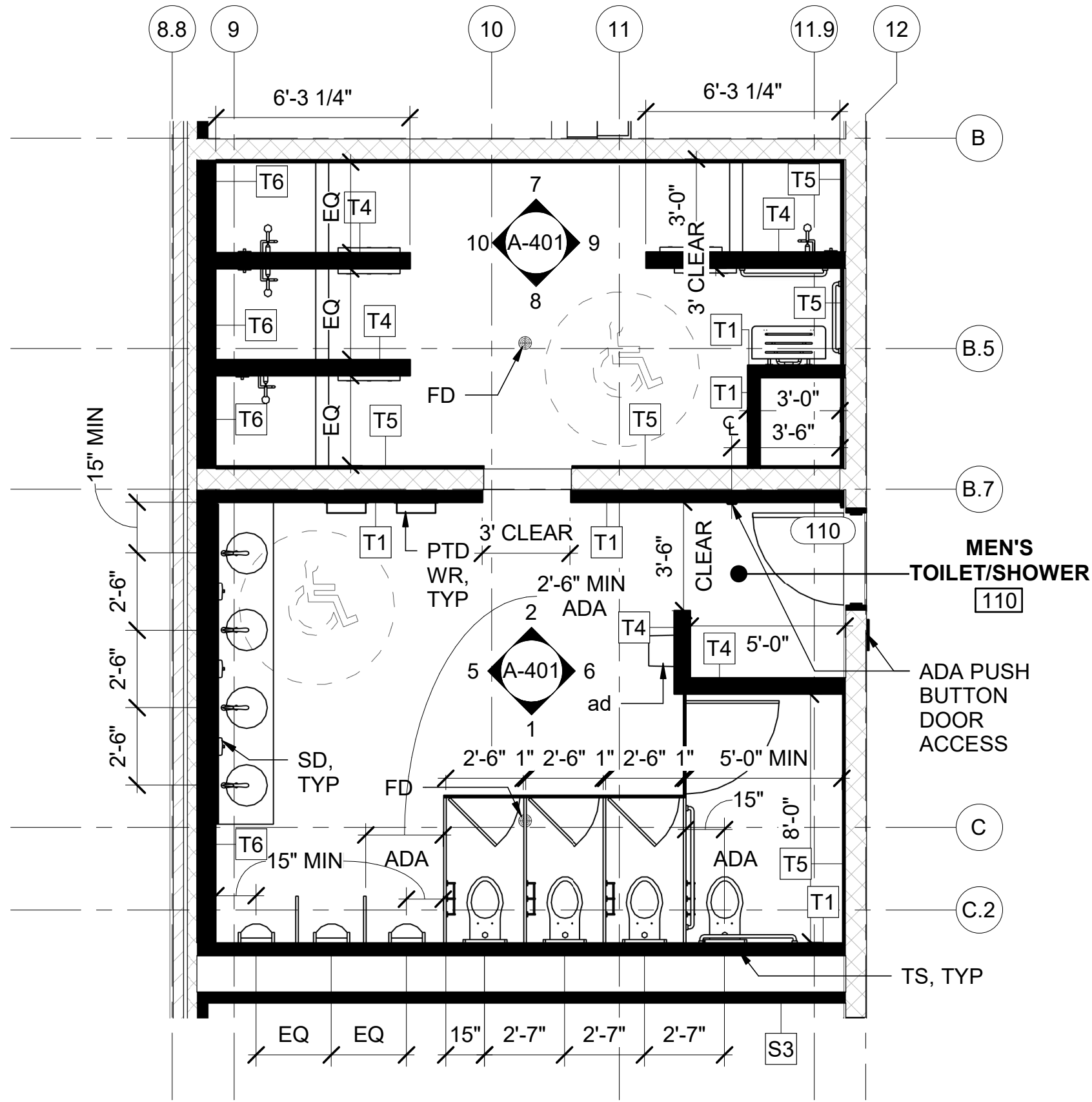
WALL SECTIONS

A-311

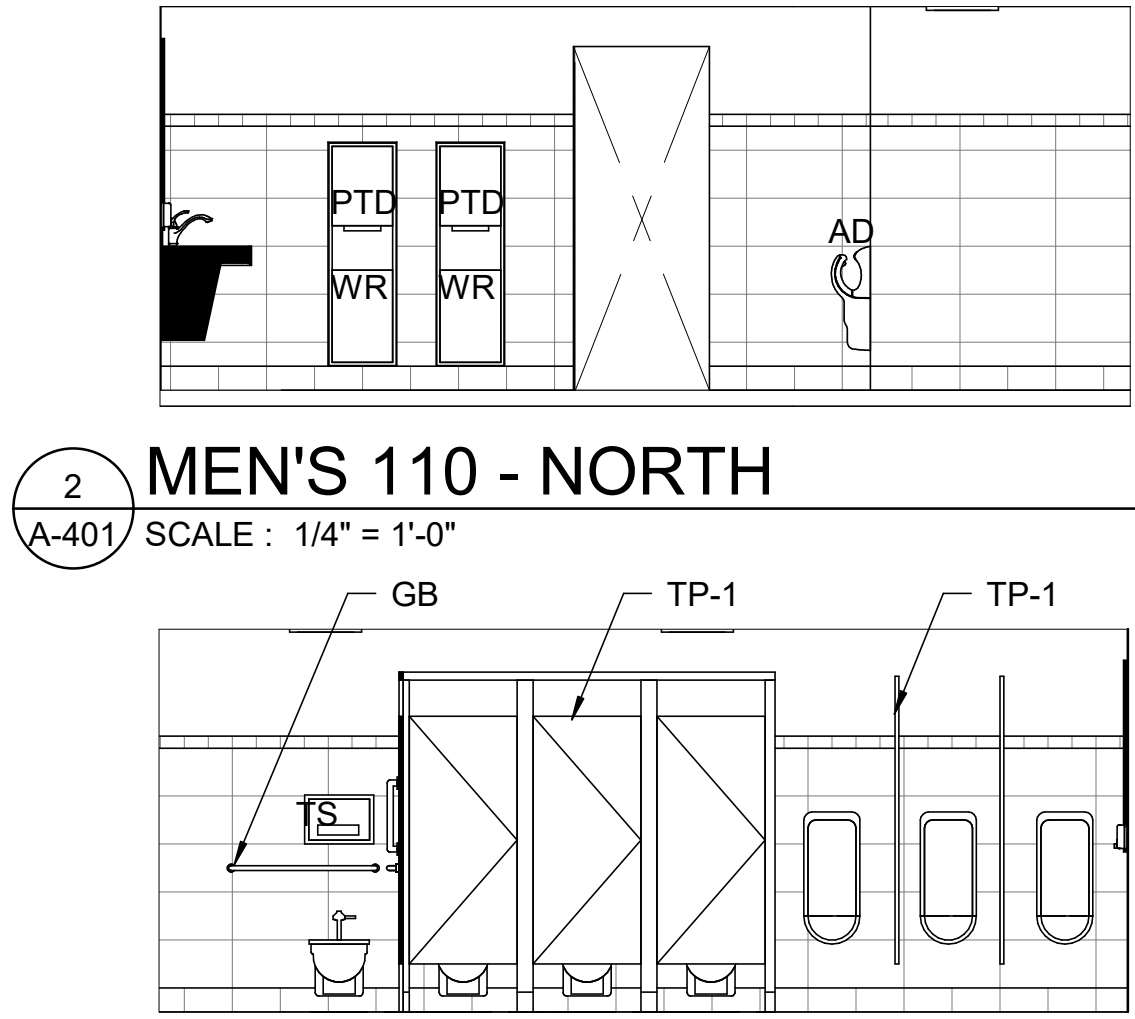
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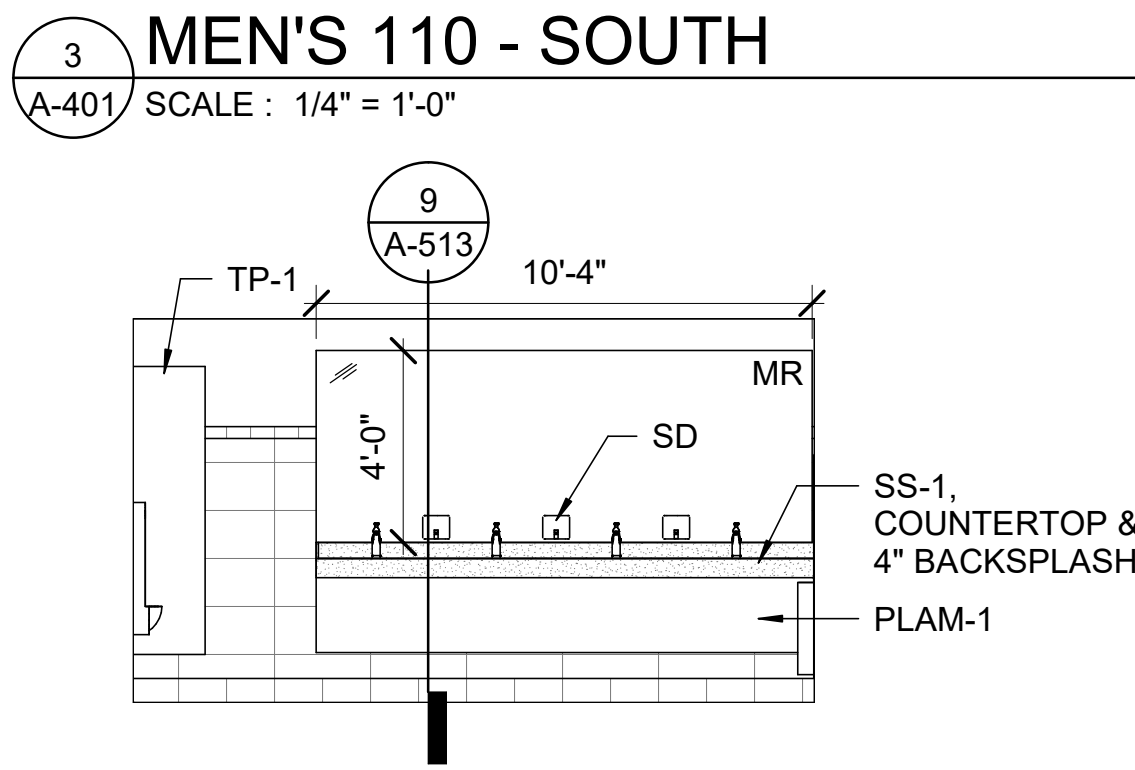
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1 ENLARGED MEN'S RESTROOM PLAN
A-401 SCALE : 1/4" = 1'-0"

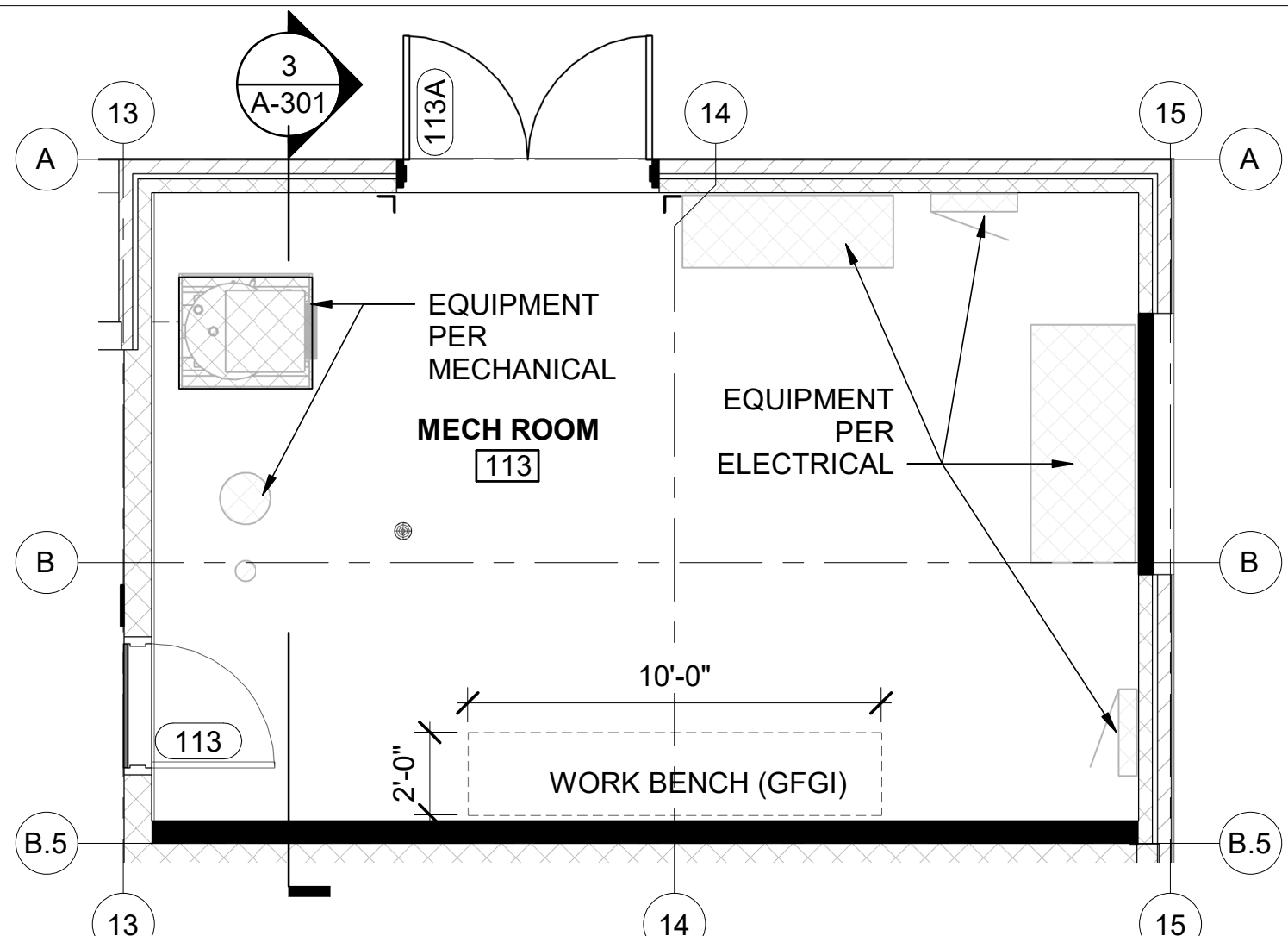


2 MEN'S 110 - NORTH
A-401 SCALE : 1/4" = 1'-0"



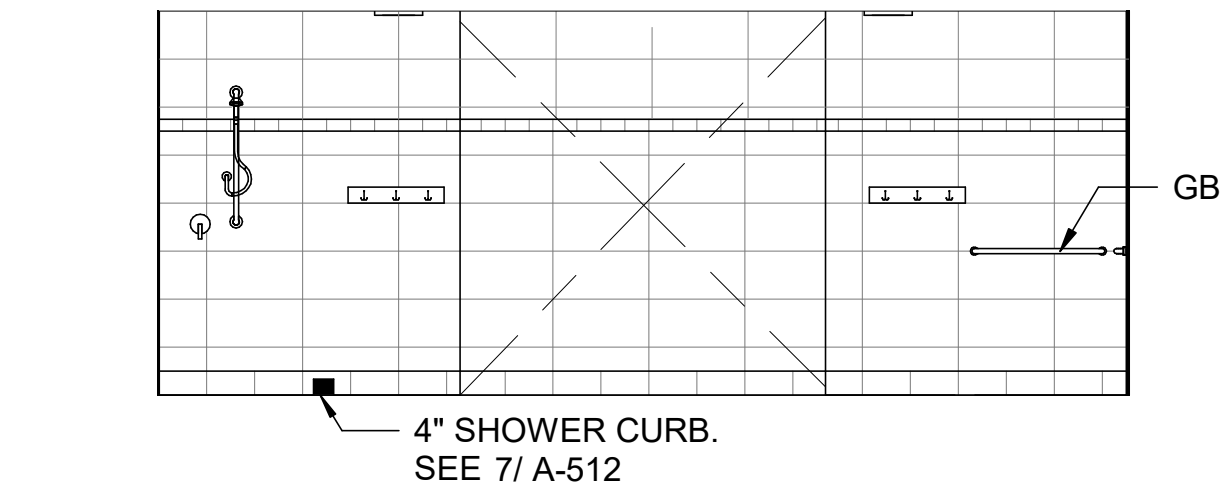
3 MEN'S 110 - SOUTH
A-401 SCALE : 1/4" = 1'-0"

5 MEN'S 110 - WEST
A-401 SCALE : 1/4" = 1'-0"

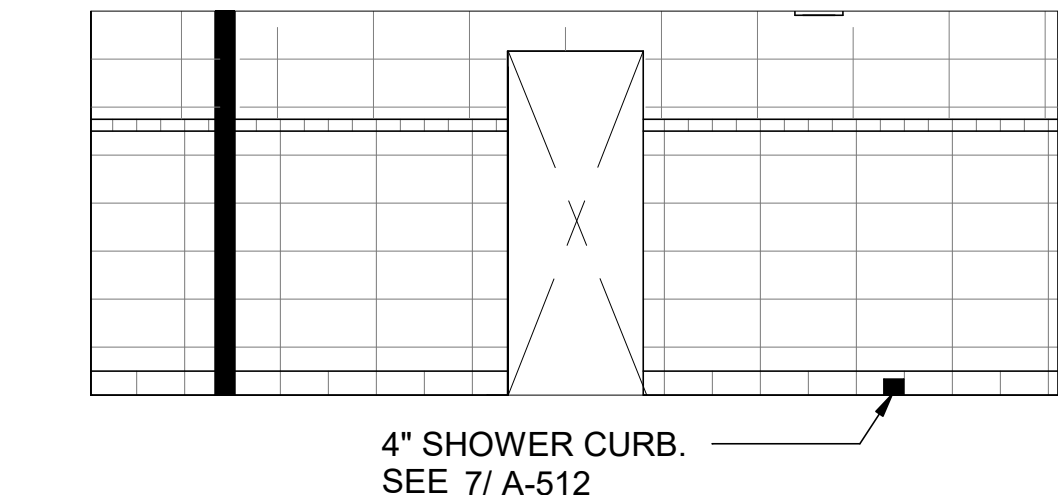


4 ENLARGED MECHANICAL ROOM PLAN
A-401 SCALE : 1/4" = 1'-0"

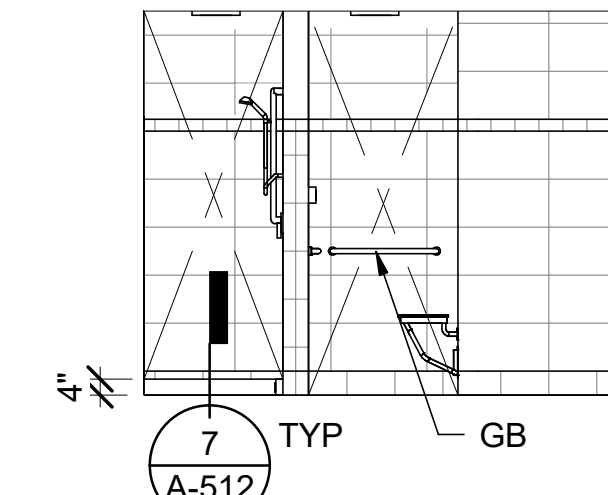
6 MEN'S 110 - EAST
A-401 SCALE : 1/4" = 1'-0"



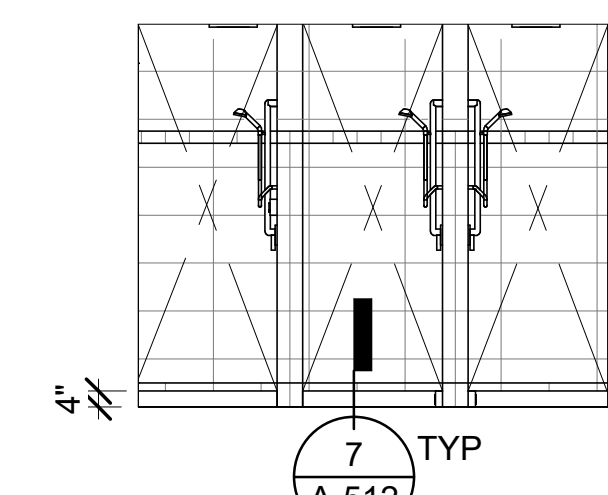
7 MEN'S SHOWER 110 - NORTH
A-401 SCALE : 1/4" = 1'-0"



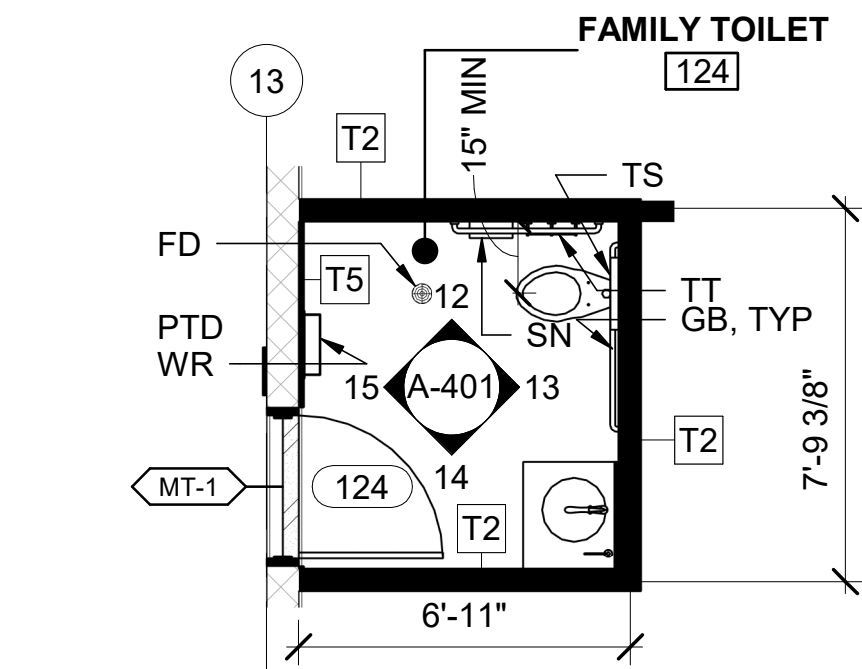
8 MEN'S SHOWER 110 - SOUTH
A-401 SCALE : 1/4" = 1'-0"



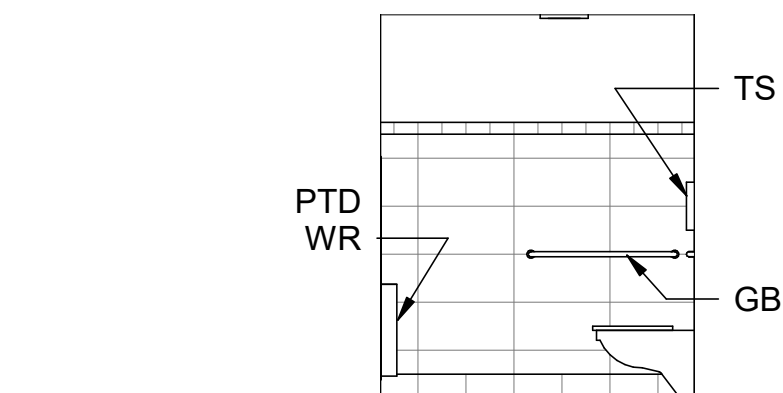
9 MEN'S SHOWER 110 - EAST
A-401 SCALE : 1/4" = 1'-0"



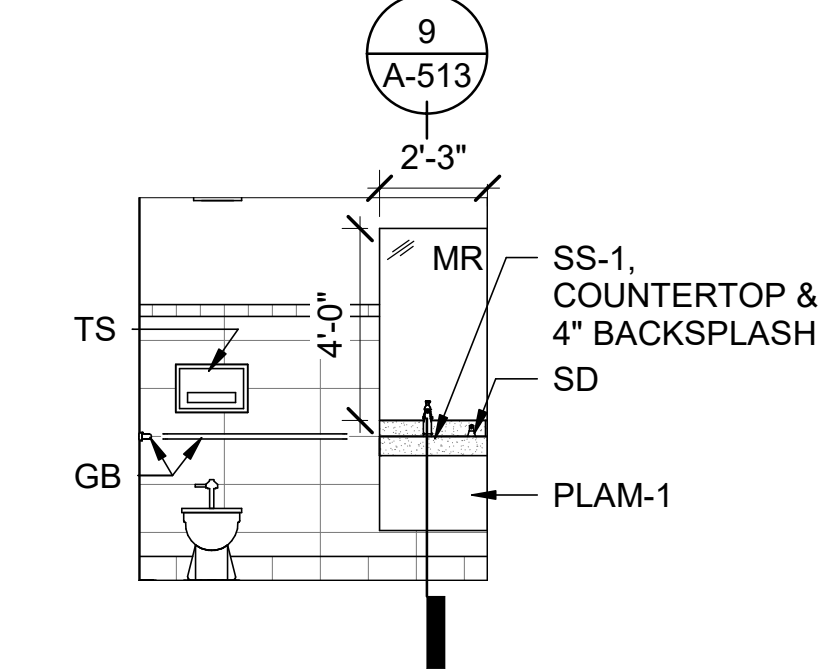
10 MEN'S SHOWER 110 - WEST
A-401 SCALE : 1/4" = 1'-0"



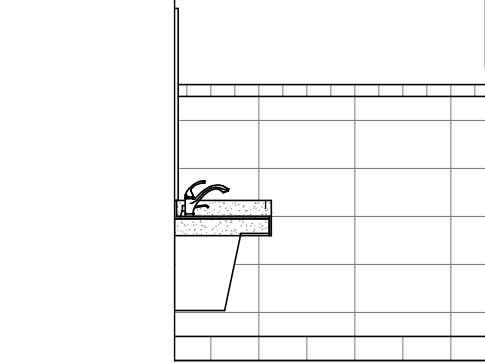
11 ENLARGED FAMILY ROOM PLAN
A-401 SCALE : 1/4" = 1'-0"



12 FAMILY ROOM 124 - NORTH
A-401 SCALE : 1/4" = 1'-0"



13 FAMILY ROOM 124 - EAST
A-401 SCALE : 1/4" = 1'-0"



14 FAMILY ROOM 124 - SOUTH
A-401 SCALE : 1/4" = 1'-0"

ENLARGED PLAN GENERAL NOTES

- REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
- REFERENCE SHEETS A-603 AND A-604 FOR DOOR TYPES, SHEET A-605 - A-607 FOR WINDOW TYPES.
- REFERENCE SHEETS A-601 THROUGH A-602 FOR WALL, CEILING, SOFFIT, ROOF, AND FLOOR LEGEND.
- PLAN VIEWS ARE CUT AT 4'-0" AFF.
- REFERENCE SHEET A-002 FOR ACCESSIBLE DETAILS.
- REFERENCE SHEET A-421 FOR TYPICAL ELEVATION DETAILS AND LOCATION OF ADA PUSH BUTTONS.
- SEE DETAIL 8/ A-512 FOR FLOOR DRAIN SLOPE. SLOPE WITHIN 2'-0" RADIUS OF DRAIN.
- PROVIDE TWO SHOWER CURTAINS FOR EACH SHOWER.

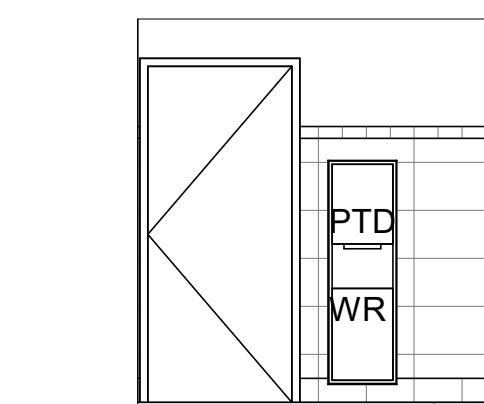
INTERIOR ELEVATION GENERAL NOTES

- REFERENCE SHEET I-601 FOR INTERIOR FINISH SCHEDULE AND I-602 FOR FINISH LEGEND & TYPICAL WALLS.

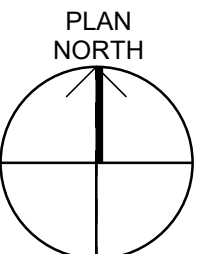
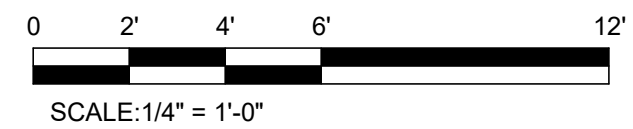
INTERIOR ABBREVIATIONS

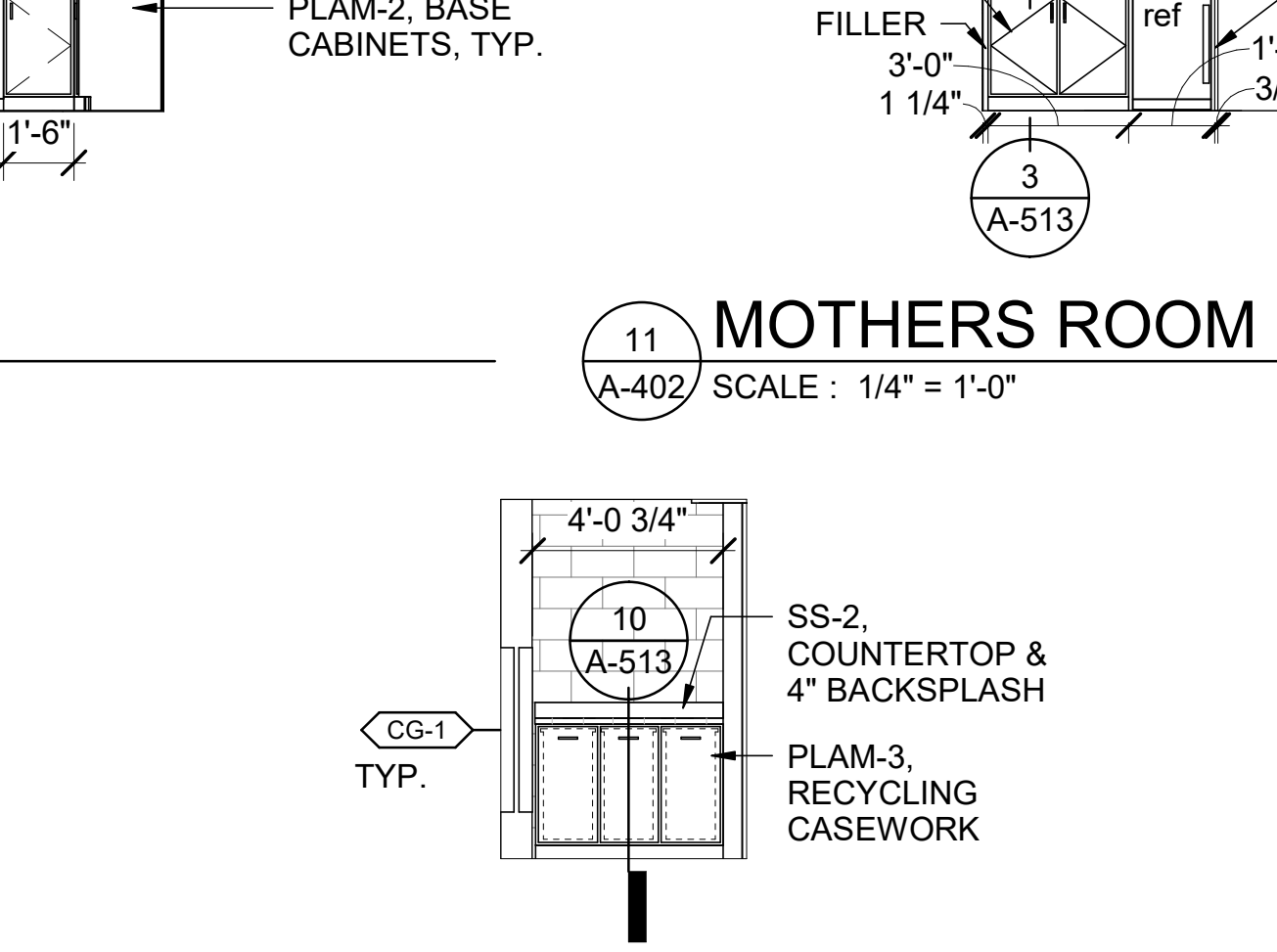
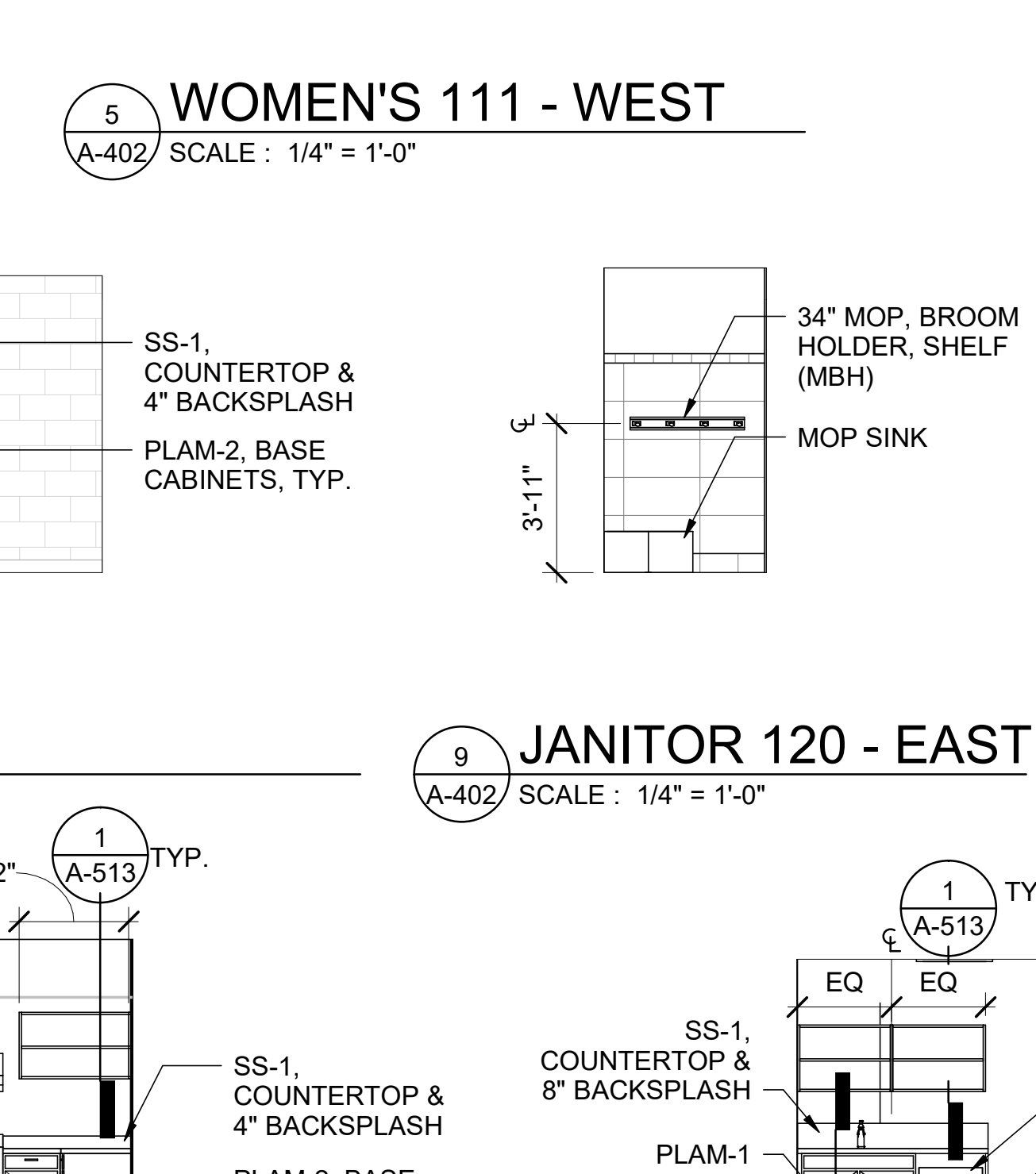
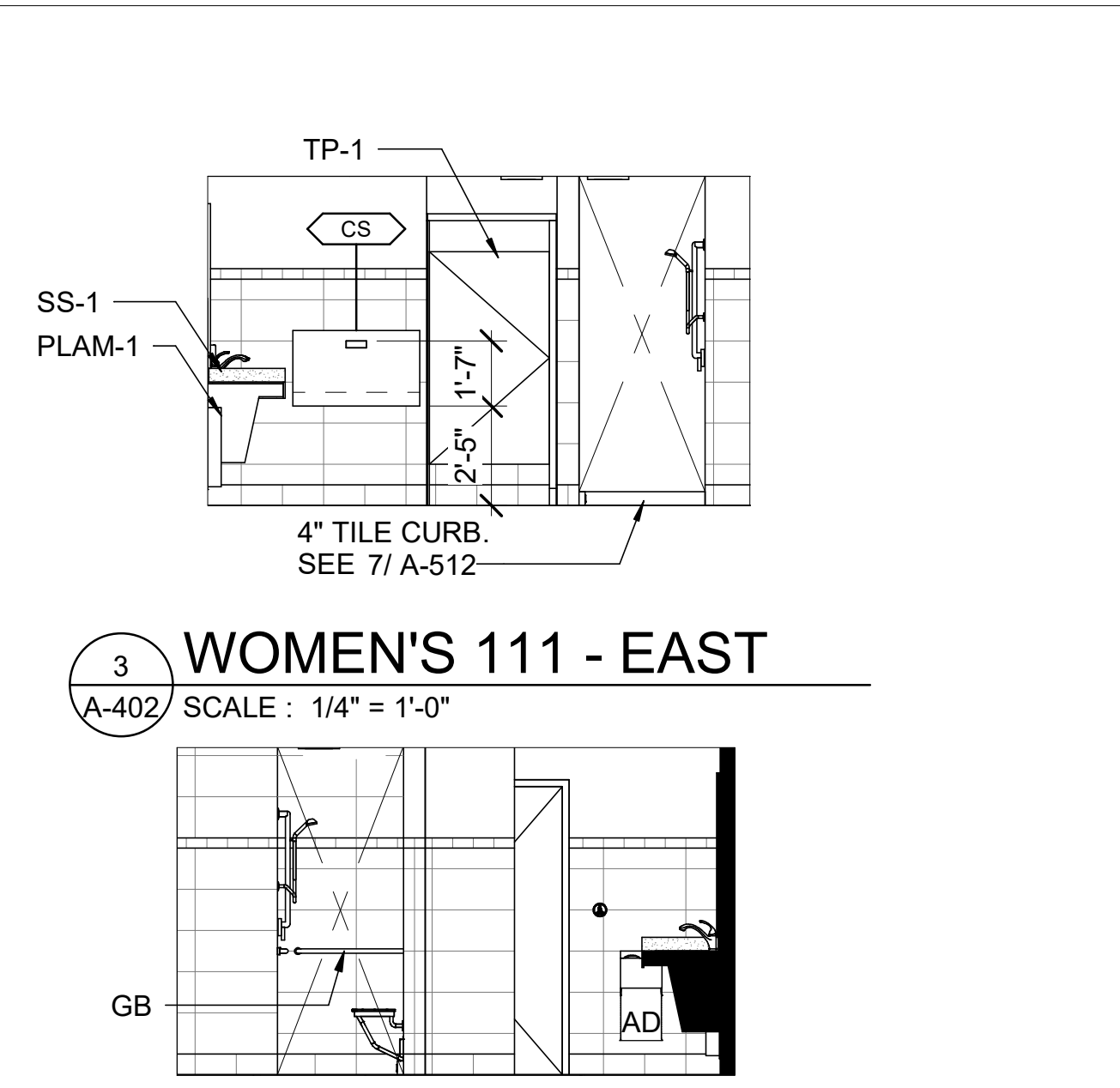
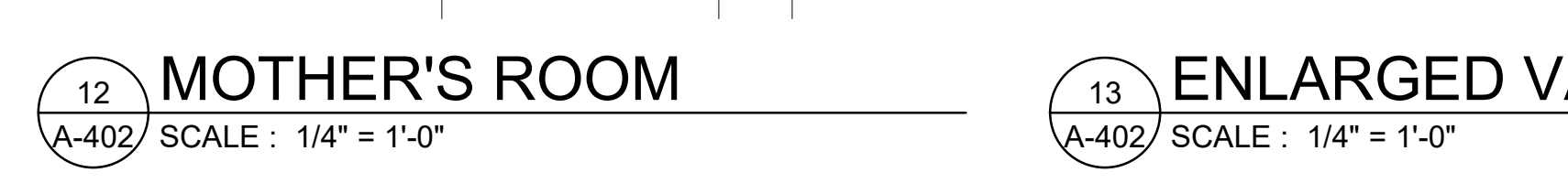
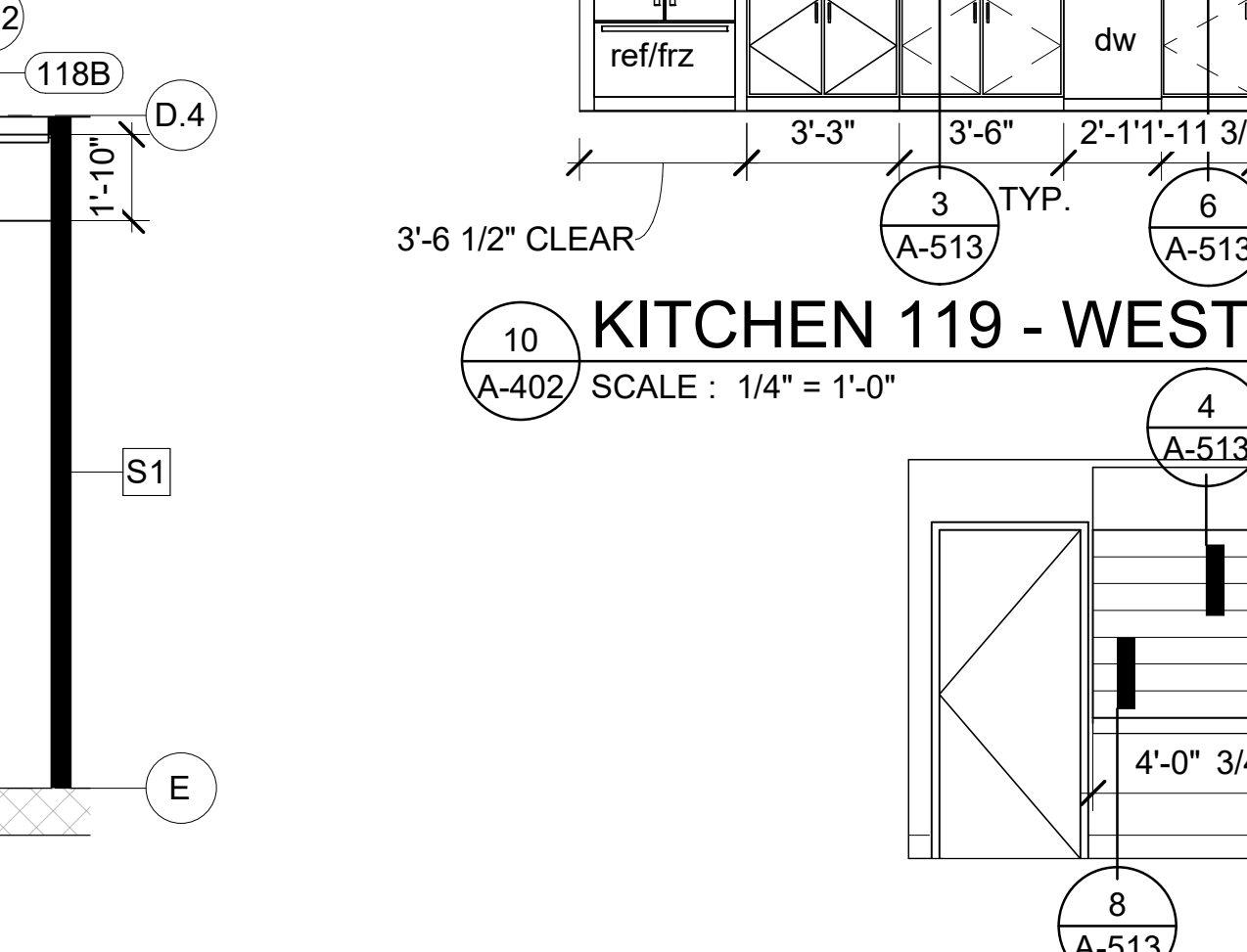
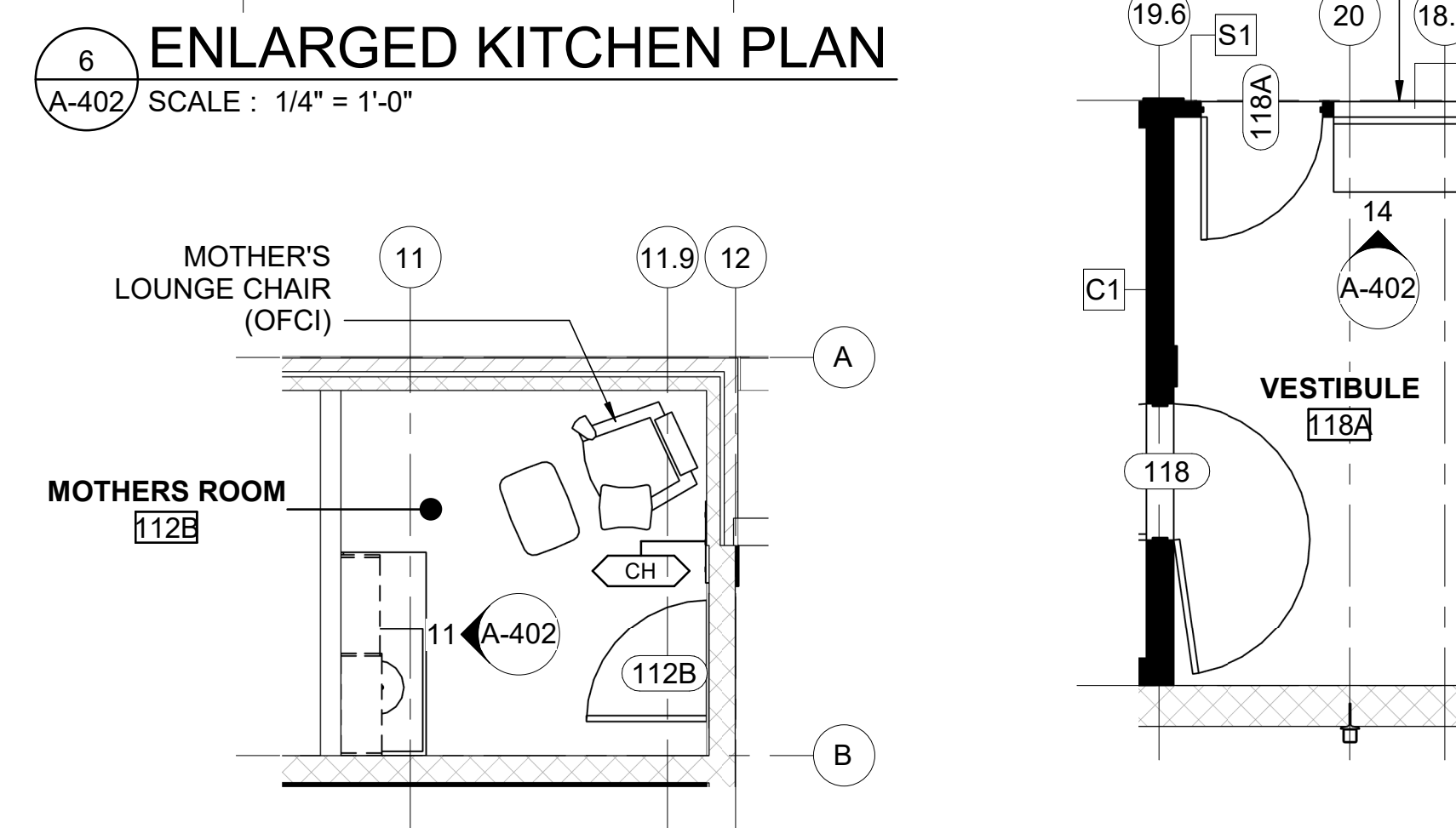
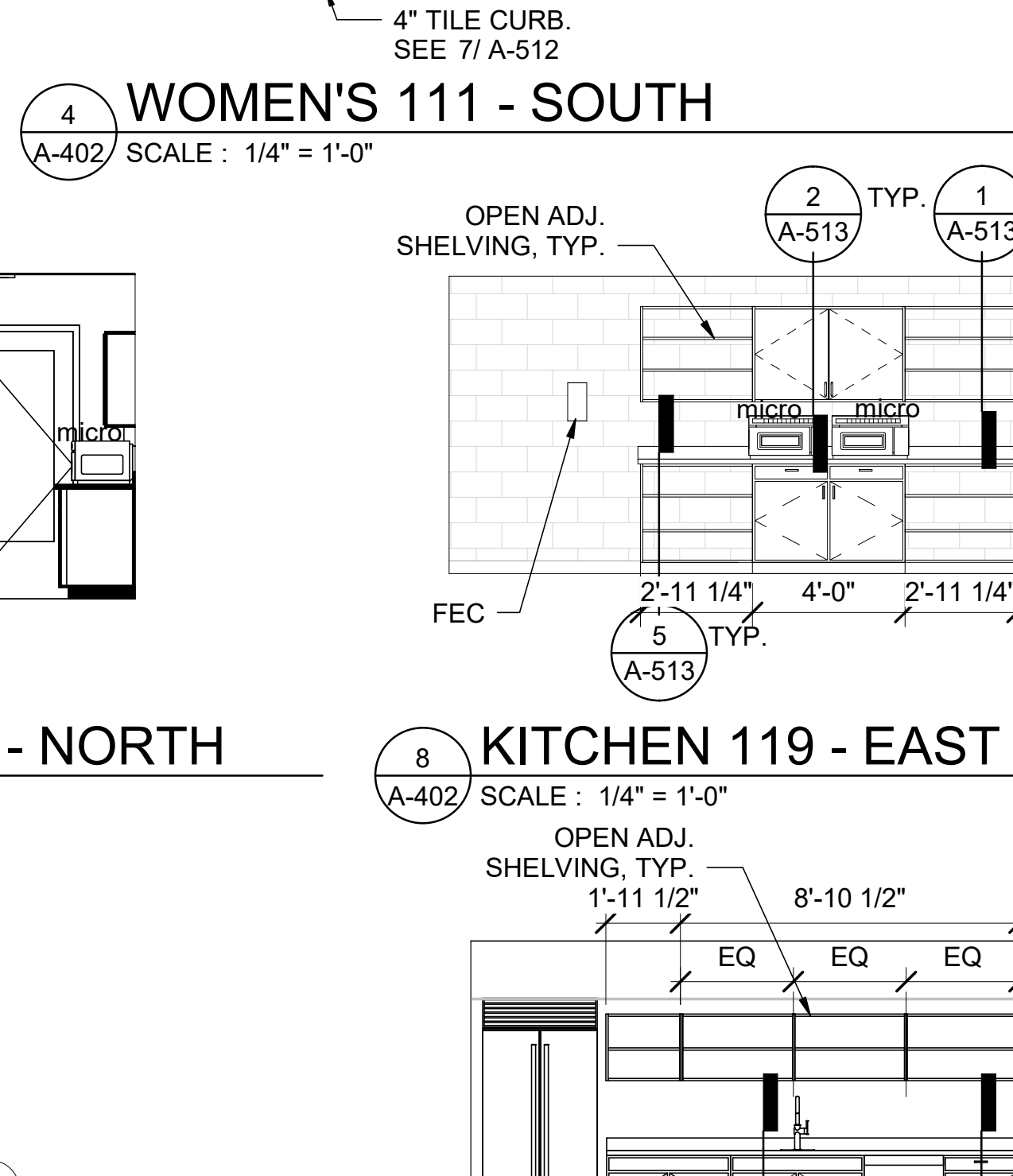
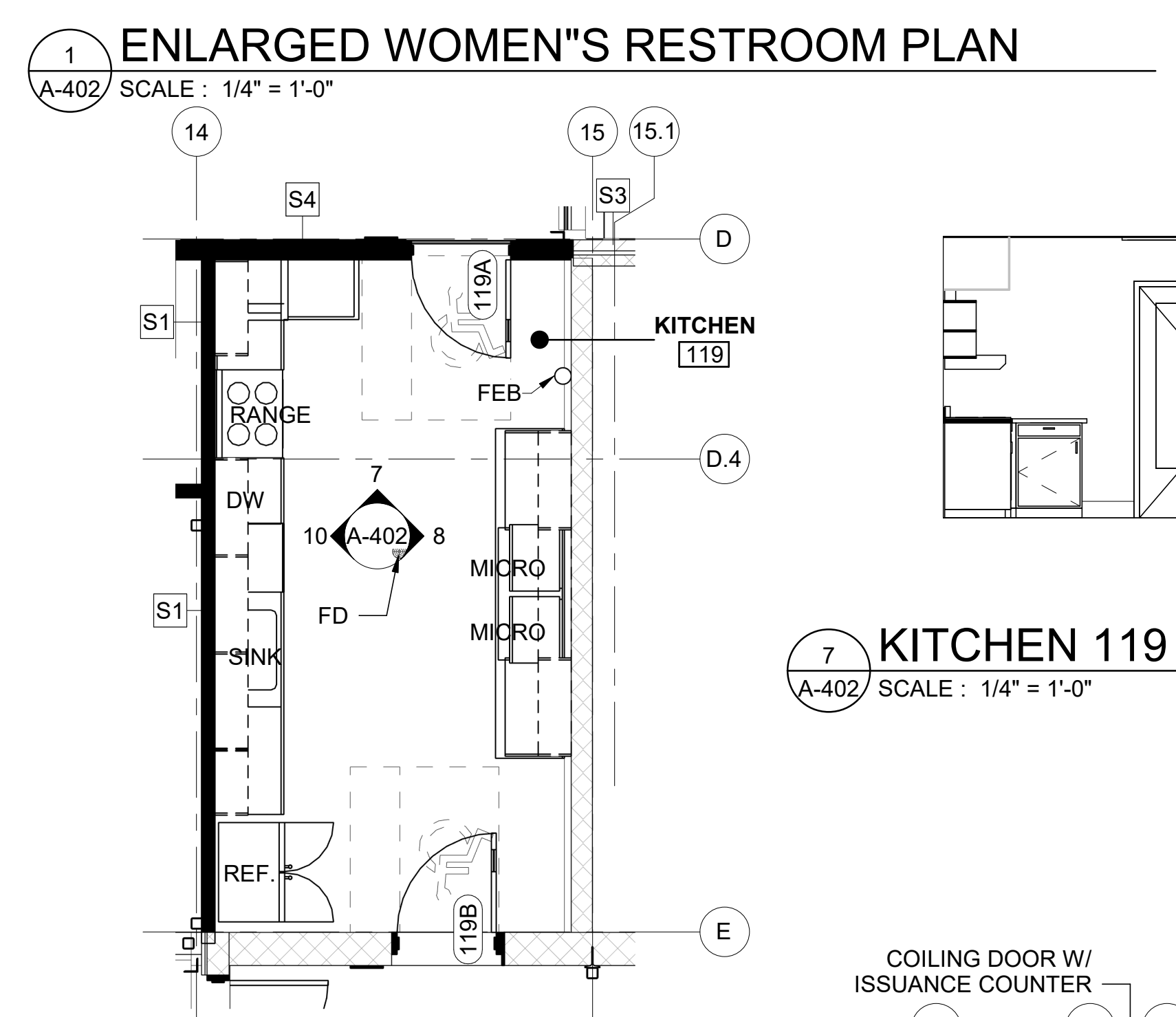
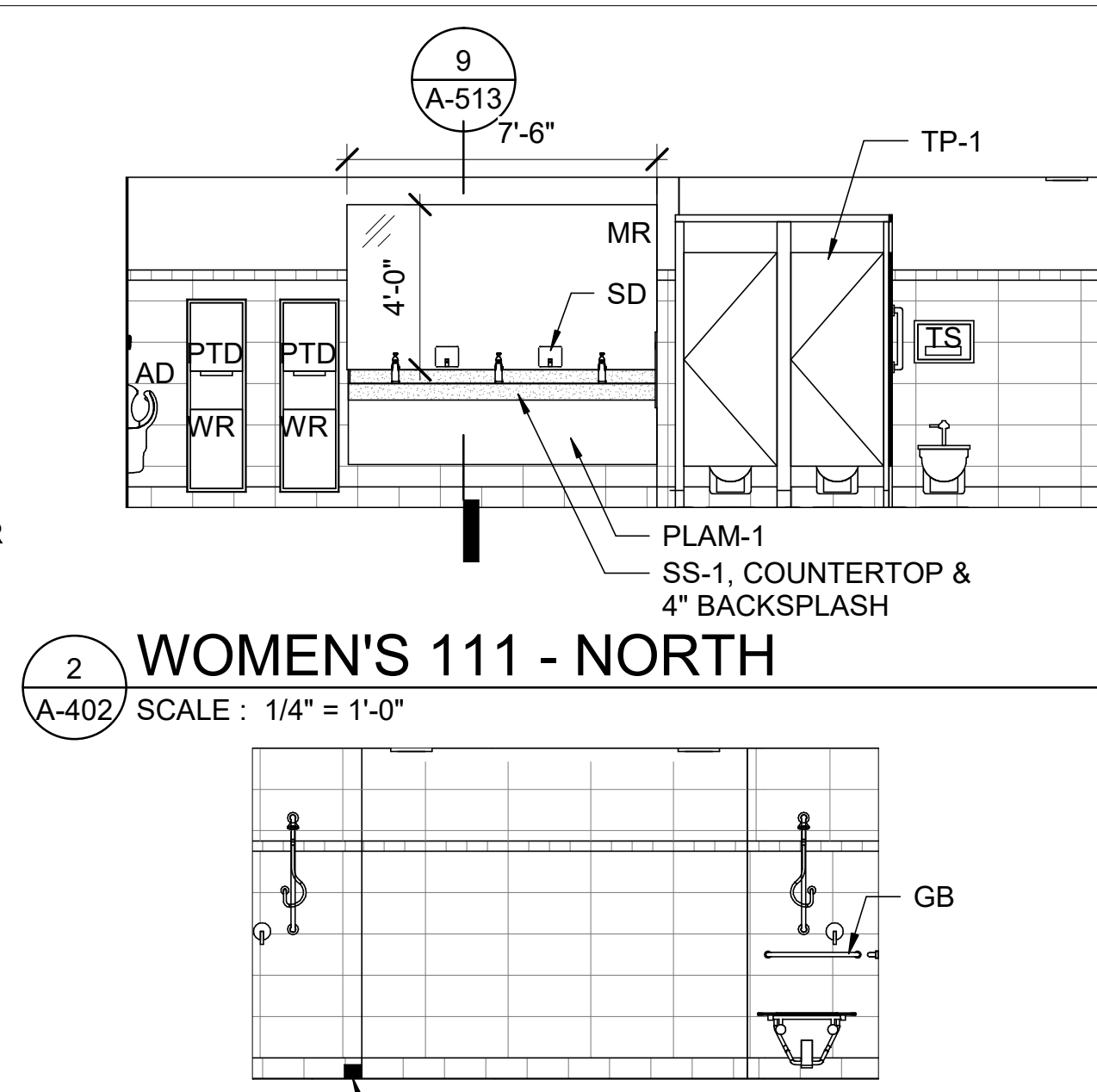
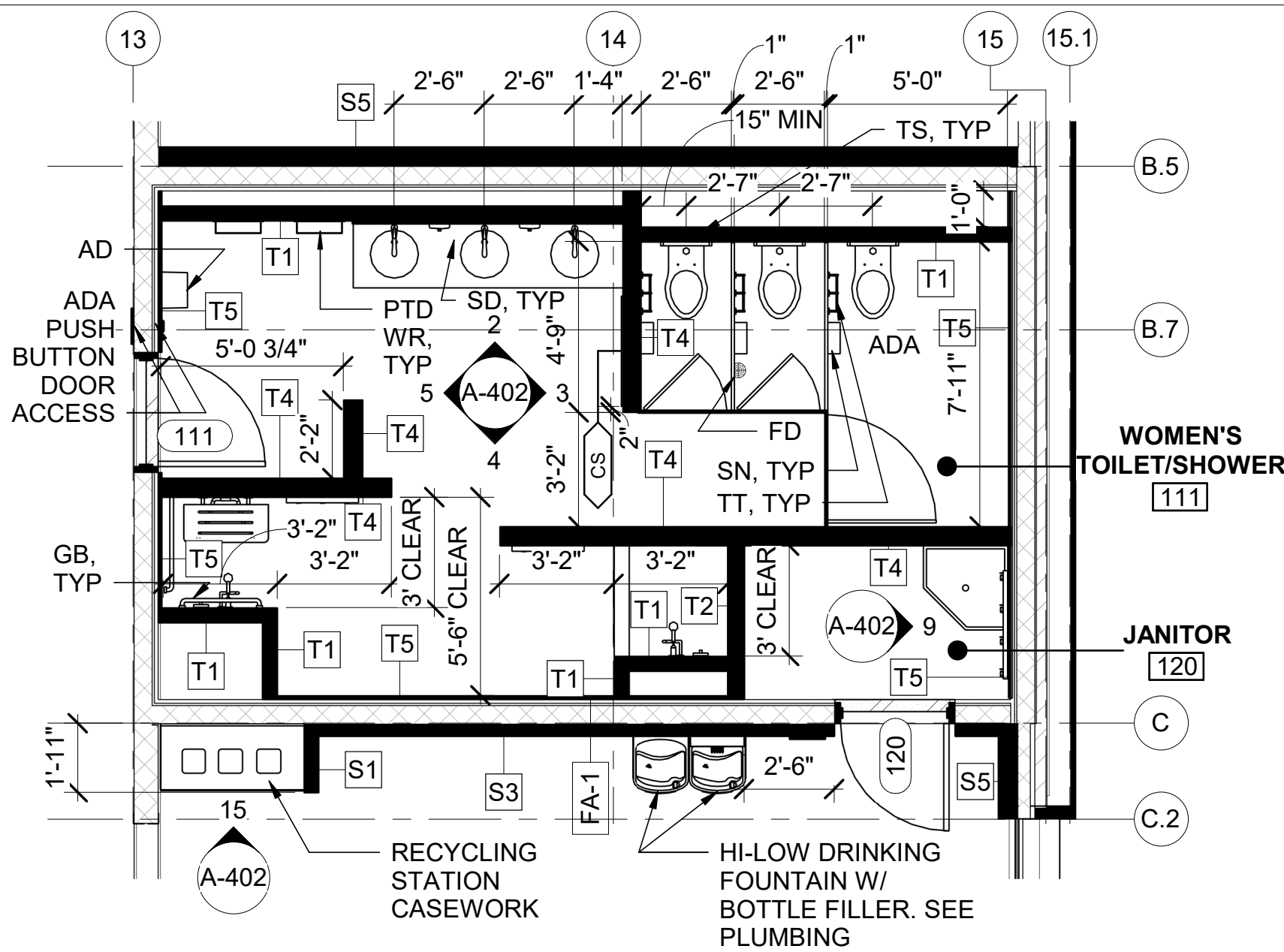
AD	HIGH-SPEED WARM-AIR DRYER
MBH	MOP, BROOM HOLDER, SHELF
CH	COAT HOOK
CS	DIAPER-CHANGING STATION
dw	DISHWASHER
FS	FOLDING SHOWER SEAT
GB	GRAB BAR
hood	RANGE HOOD VENT
lk	LOCKER
micro	MICROWAVE
MP	MOP, BROOM HOLDER, SHELF
MR	MIRROR UNIT
PTDWR	COMBINATION TOWEL (FOLDED) DISPENSER/WASTE RECEPTACLE
range	STOVETOP AND RANGE
ref/frz	REFRIGERATOR/FREEZER COMBO
SC	SHOWER CURTAIN
SCR	SHOWER CURTAIN ROD
SN	SANITARY-NAPKIN DISPOSAL UNIT
SD	LIQUID-SOAP DISPENSER
TP	TOWEL PIN
TS	SEAT-COVER DISPENSER
TT	TOILET TISSUE (ROLL) DISPENSER

*NOTE: LOWERCASE ABBREVIATION INDICATES OWNER PROVIDED ITEMS.



15 FAMILY ROOM 124 - WEST
A-401 SCALE : 1/4" = 1'-0"





ENLARGED PLAN GENERAL NOTES

- REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
- REFERENCE SHEETS A-603 AND A-604 FOR DOOR TYPES, SHEET A-605 - A-607 FOR WINDOW TYPES.
- REFERENCE SHEETS A-601 THROUGH A-602 FOR WALL, CEILING, SOFFIT, ROOF, AND FLOOR LEGEND.
- PLAN VIEWS ARE CUT AT 4'-0" AFF.
- REFERENCE SHEET A-002 FOR ACCESSIBLE DETAILS.
- REFERENCE SHEET A-421 FOR TYPICAL ELEVATION DETAILS AND LOCATION OF ADA PUSH BUTTONS.
- SEE DETAIL 8/ A-512 FOR FLOOR DRAIN SLOPE. SLOPE WITHIN 2'-0" RADIUS OF DRAIN.
- PROVIDE TWO SHOWER CURTAINS FOR EACH SHOWER.

INTERIOR ELEVATION GENERAL NOTES

- REFERENCE SHEET I-601 FOR INTERIOR FINISH SCHEDULE AND I-602 FOR FINISH LEGEND & TYPICAL WALLS.

INTERIOR ABBREVIATIONS

AD	HIGH-SPEED WARM-AIR DRYER
MBH	MOP, BROOM HOLDER, SHELF
CH	COAT HOOK
CS	DIAPER-CHANGING STATION
dw	DISHWASHER
FS	FOLDING SHOWER SEAT
GB	GRAB BAR
hood	RANGE HOOD VENT
lk	LOCKER
micro	MICROWAVE
MP	MOP, BROOM HOLDER, SHELF
MR	MIRROR UNIT
PTDWR	COMBINATION TOWEL (FOLDED) DISPENSER/WASTE RECEPTACLE
range	STOVETOP AND RANGE
ref/frz	REFRIGERATOR/FREEZER COMBO
SC	SHOWER CURTAIN
SCR	SHOWER CURTAIN ROD
SN	SANITARY-NAPKIN DISPOSAL UNIT
SD	LIQUID-SOAP DISPENSER
TP	TOWEL PIN
TS	SEAT-COVER DISPENSER
TT	TOILET TISSUE (ROLL) DISPENSER

*NOTE: LOWERCASE ABBREVIATION INDICATES OWNER PROVIDED ITEMS.



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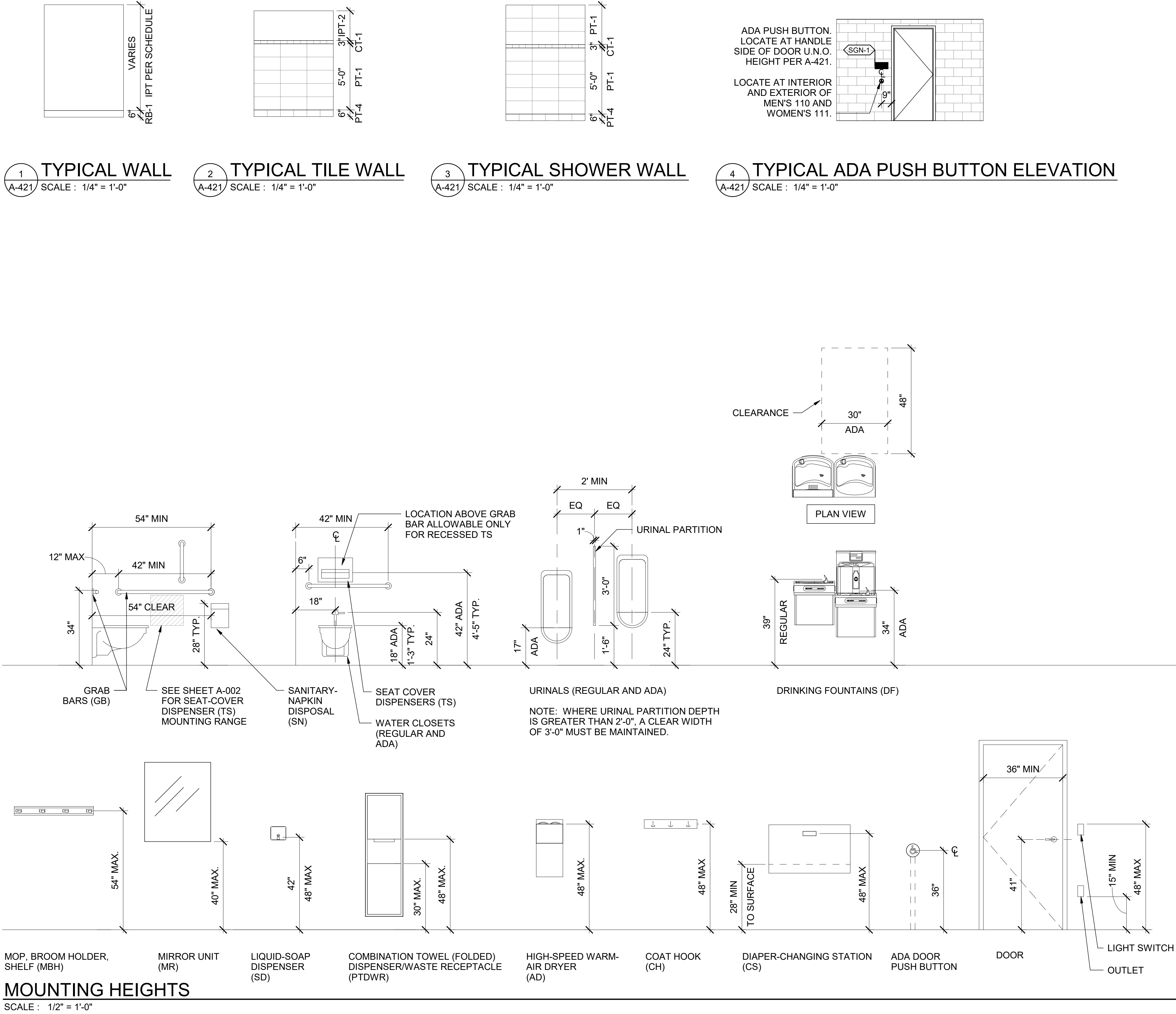


Project No. : 21024	Designed By: C/LN	Drawn By: C/FT	Checked By: P/M
Date			
Description			
Mark			

WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA
ENLARGED PLANS & ELEVATIONS

A-402

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MOUNTING HEIGHTS
GENERAL NOTES

1. ALL MOUNTING HEIGHTS APPLY THROUGHOUT UNO.
2. SEE SHEET A-002 FOR ACCESSIBILITY REQUIREMENTS
3. SEE SHEET A-002 FOR TOILET TISSUE(ROLL) DISPENSER MOUNTING RANGE



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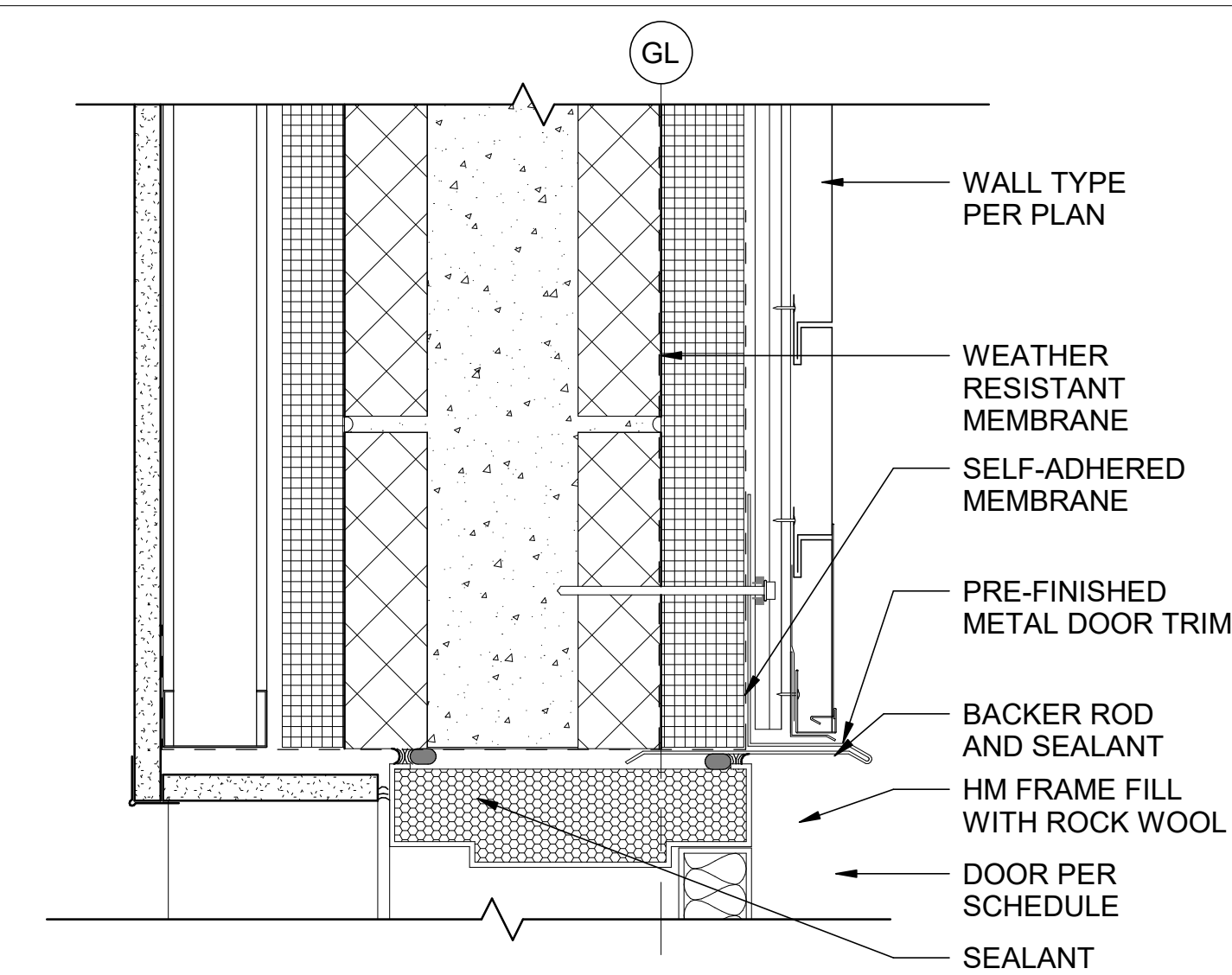
Project No.: 21024
Designed By: GJN
Drawn By: CFT
Checked By: PMM

Mark	Description	Date

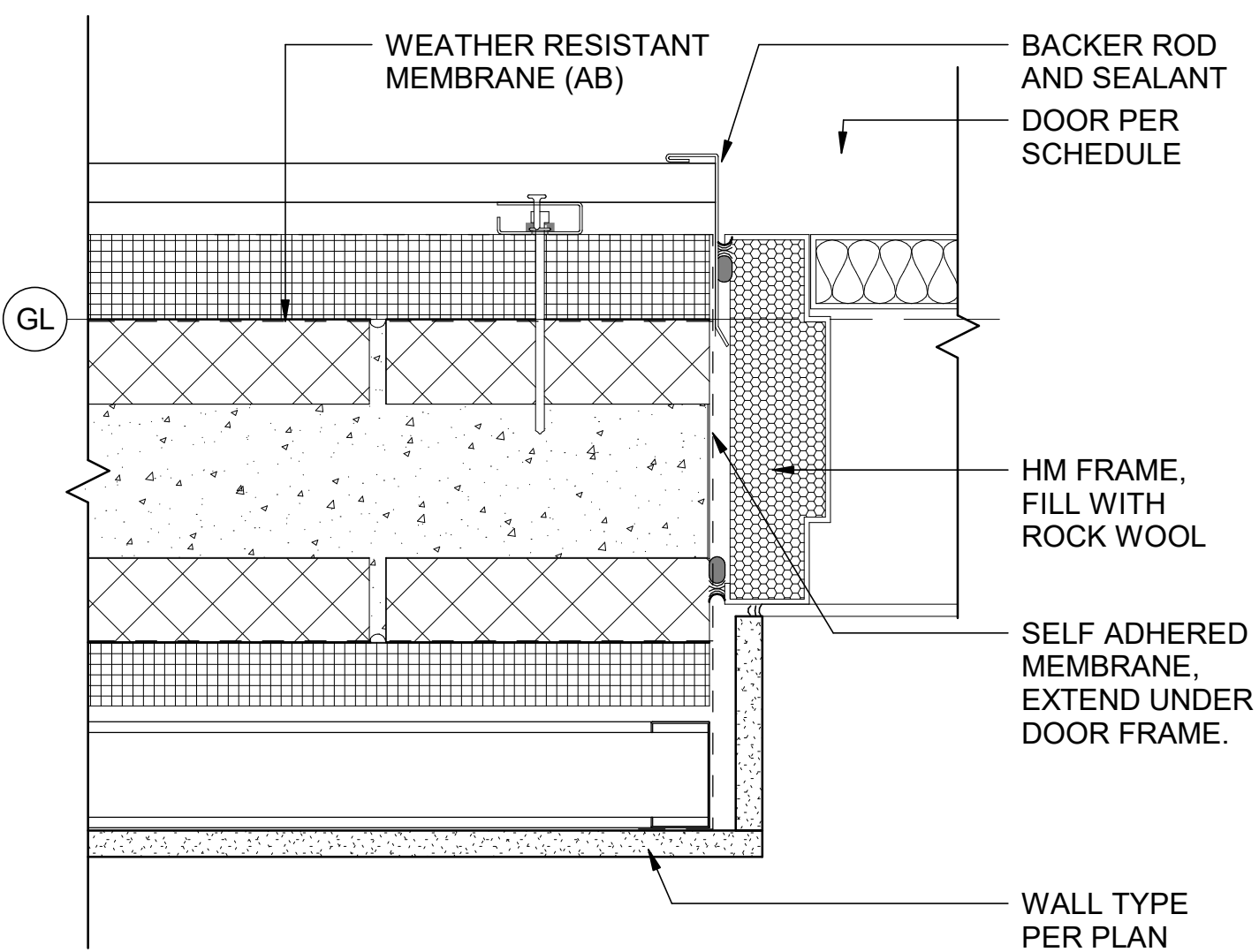
WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA
TYPICAL WALL ELEVATIONS &
MOUNTING HEIGHTS

A-421

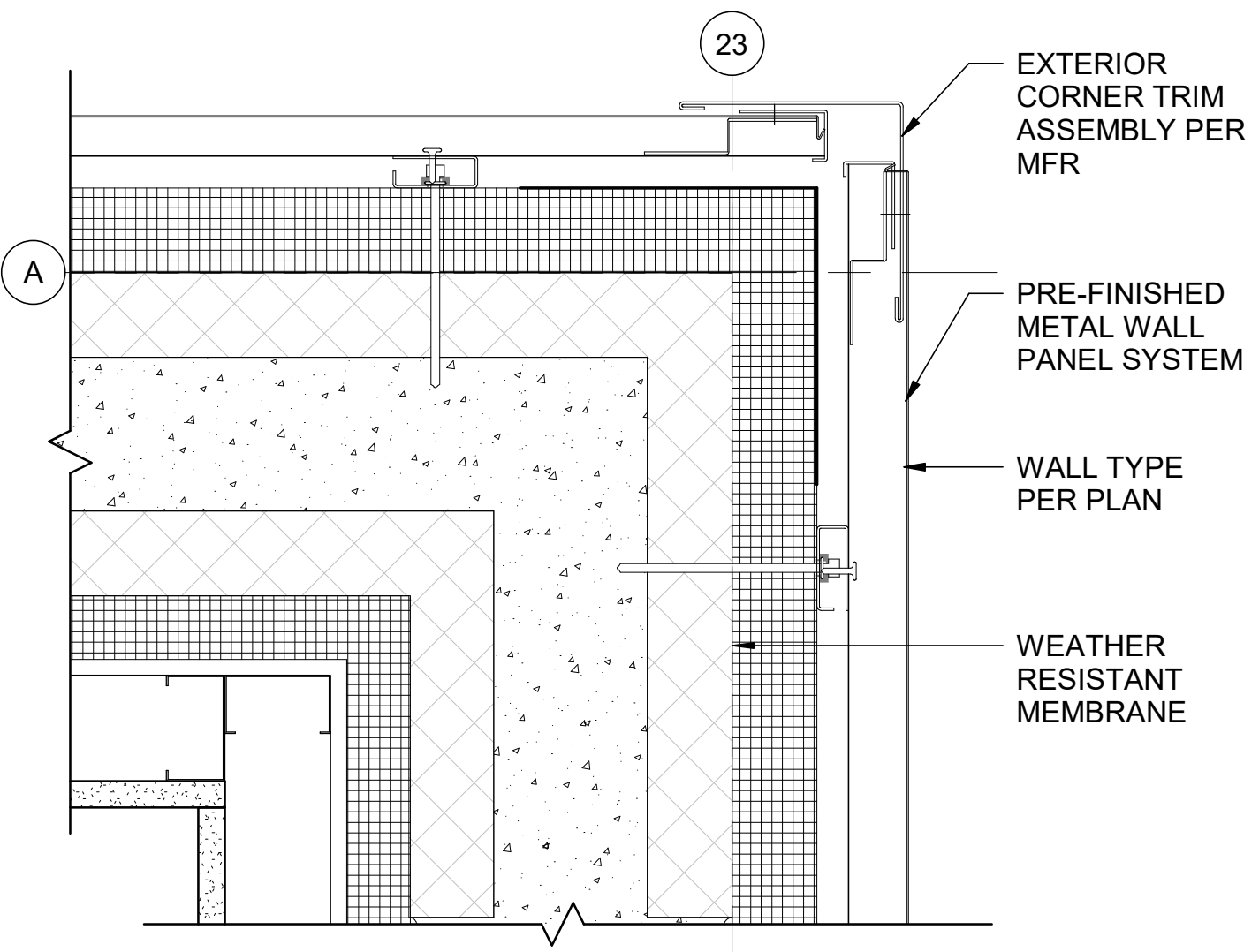
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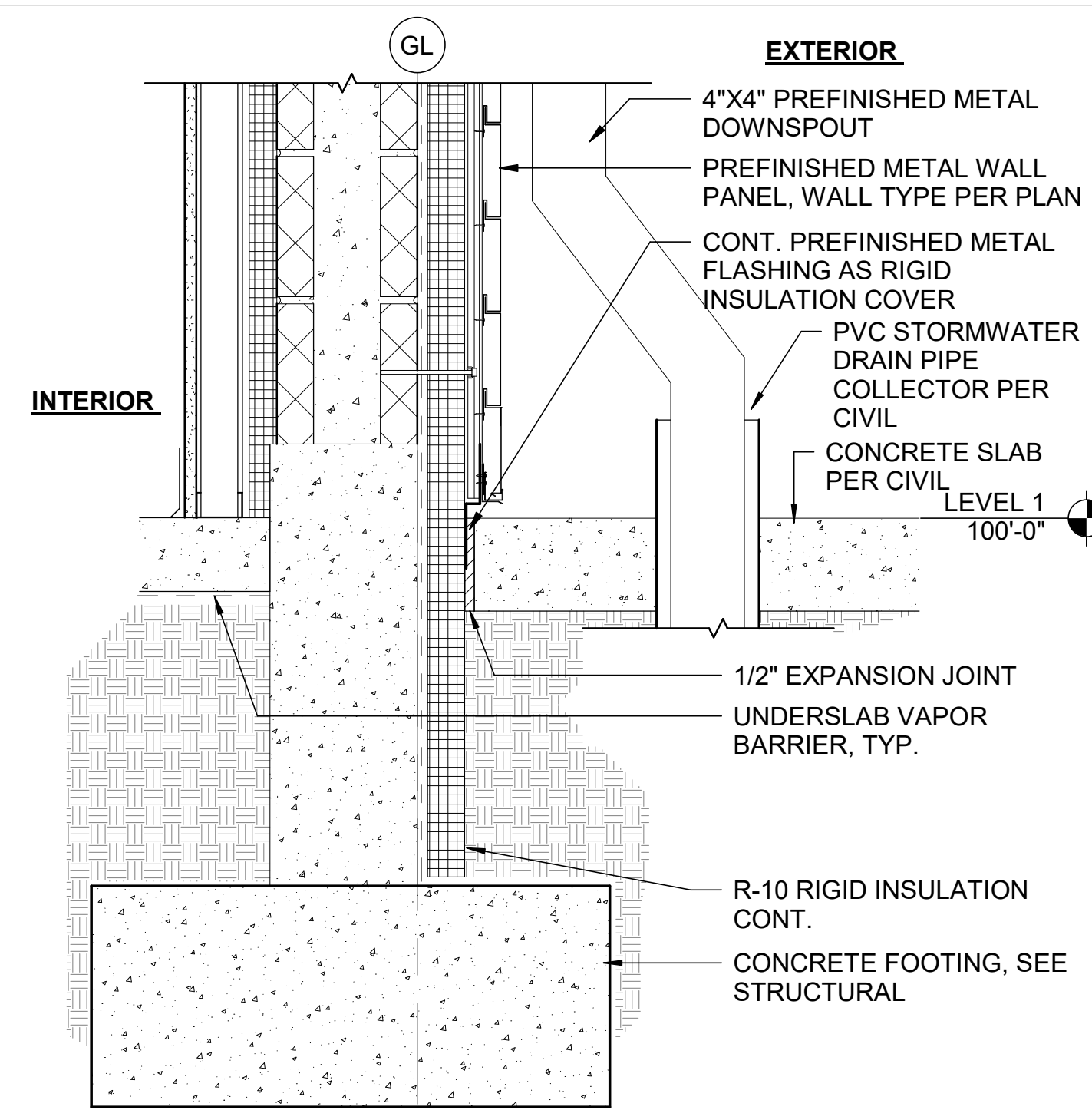
1 TYP. DOOR HEAD
A-501 SCALE : 3" = 1'-0"



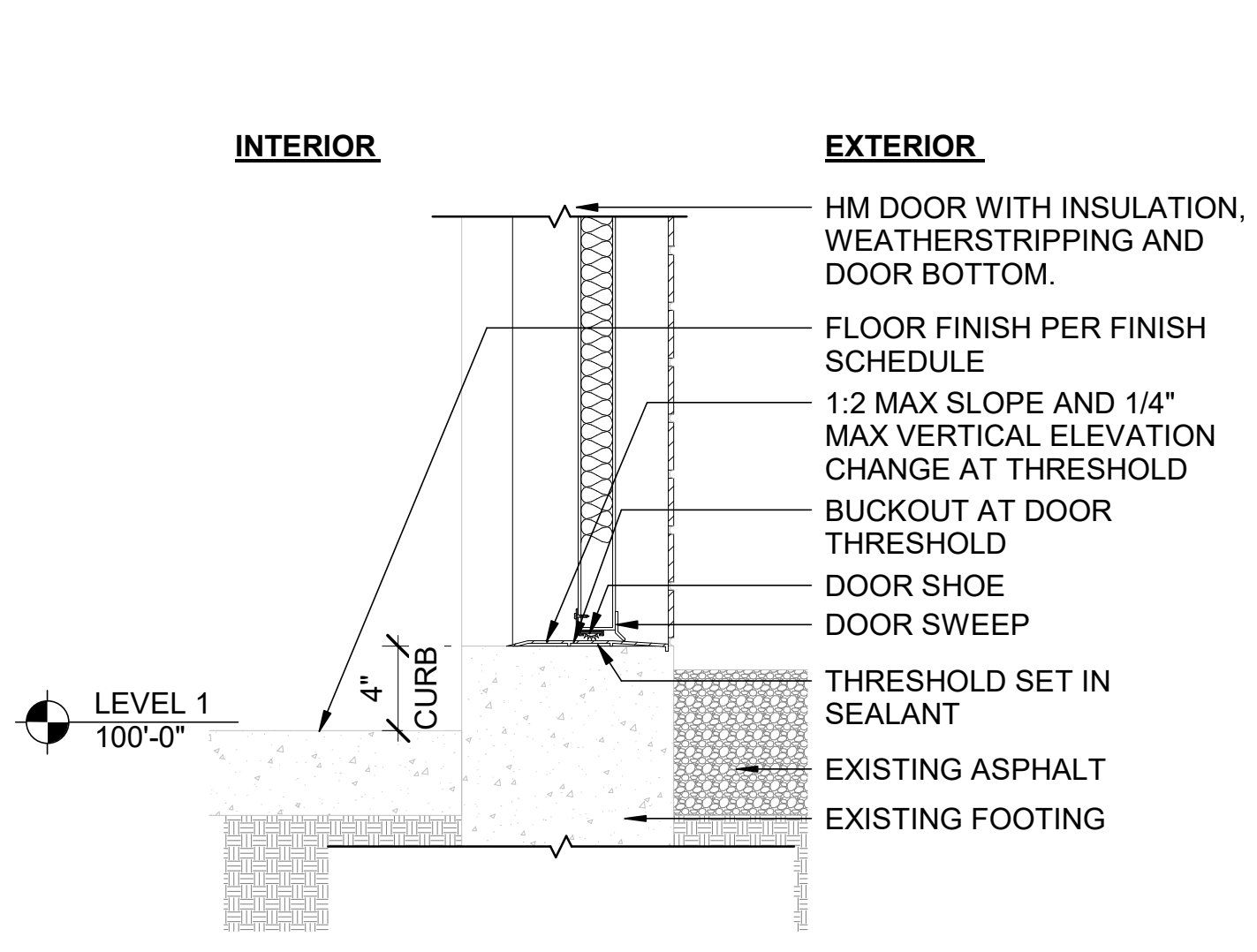
5 TYP. DOOR JAMB
A-501 SCALE : 3" = 1'-0"



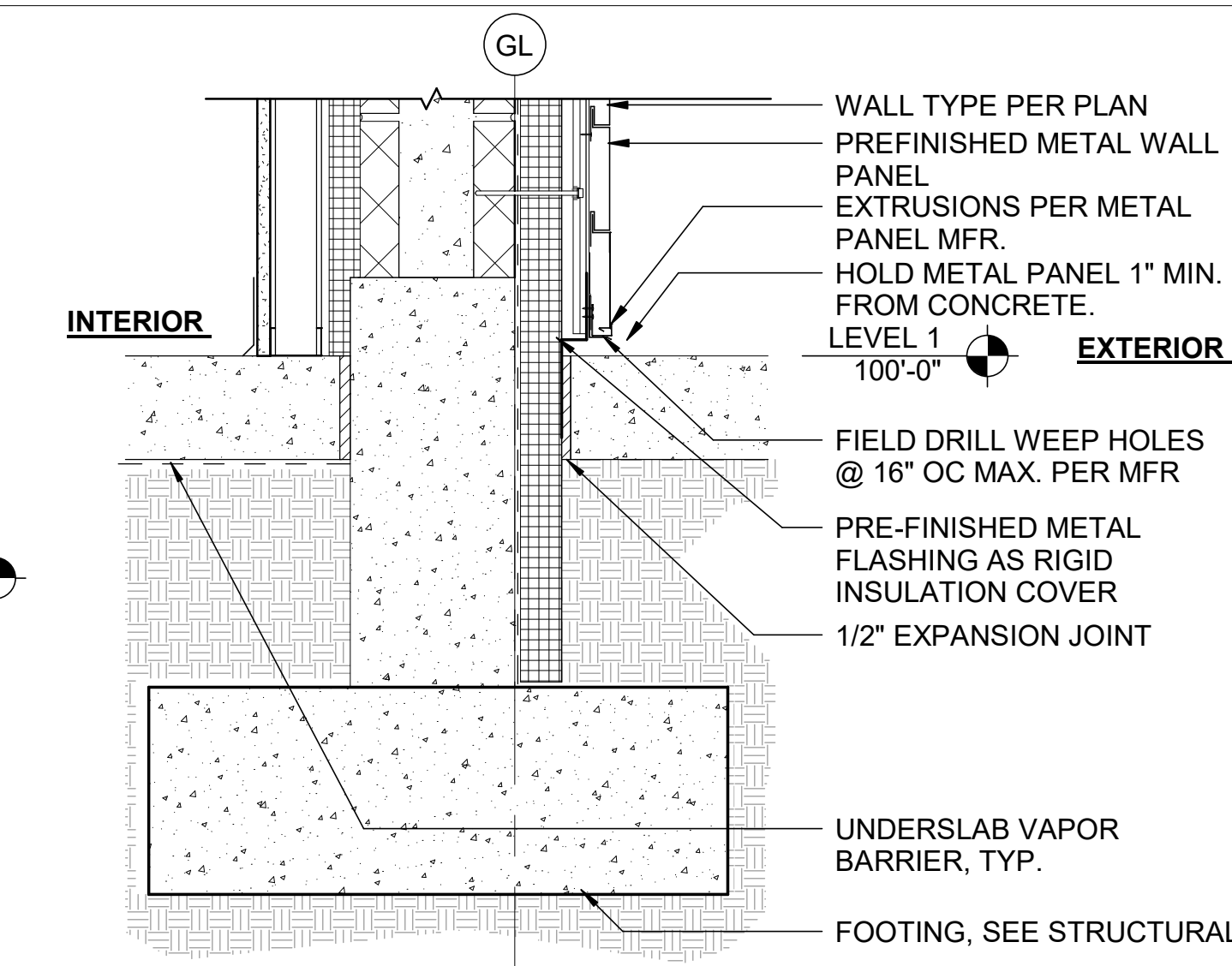
9 EXTERIOR CORNER @ METAL PANEL
A-501 SCALE : 3" = 1'-0"



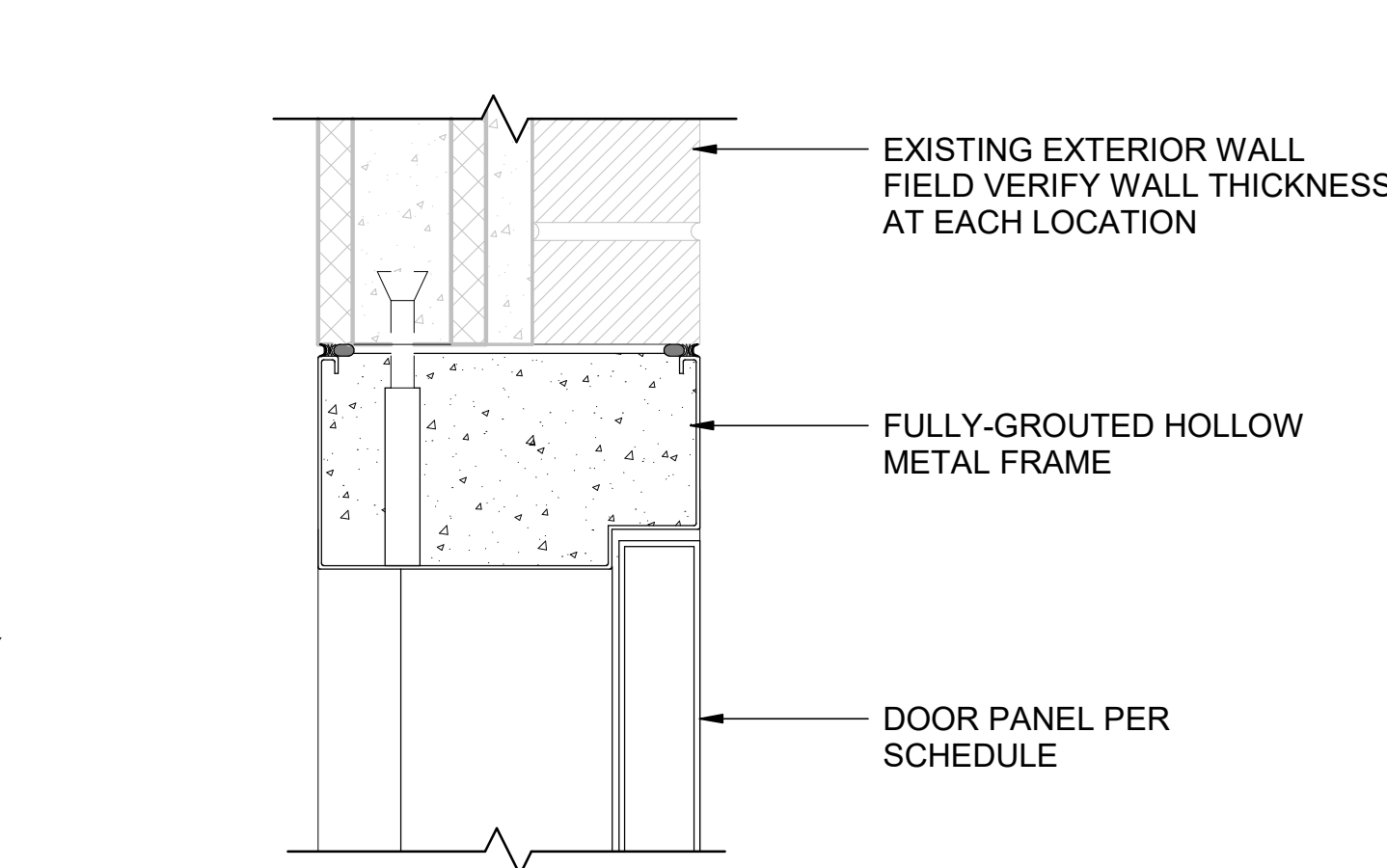
6 TYPICAL DOWNSPOUT AT FOUNDATION
A-501 SCALE : 1 1/2" = 1'-0"



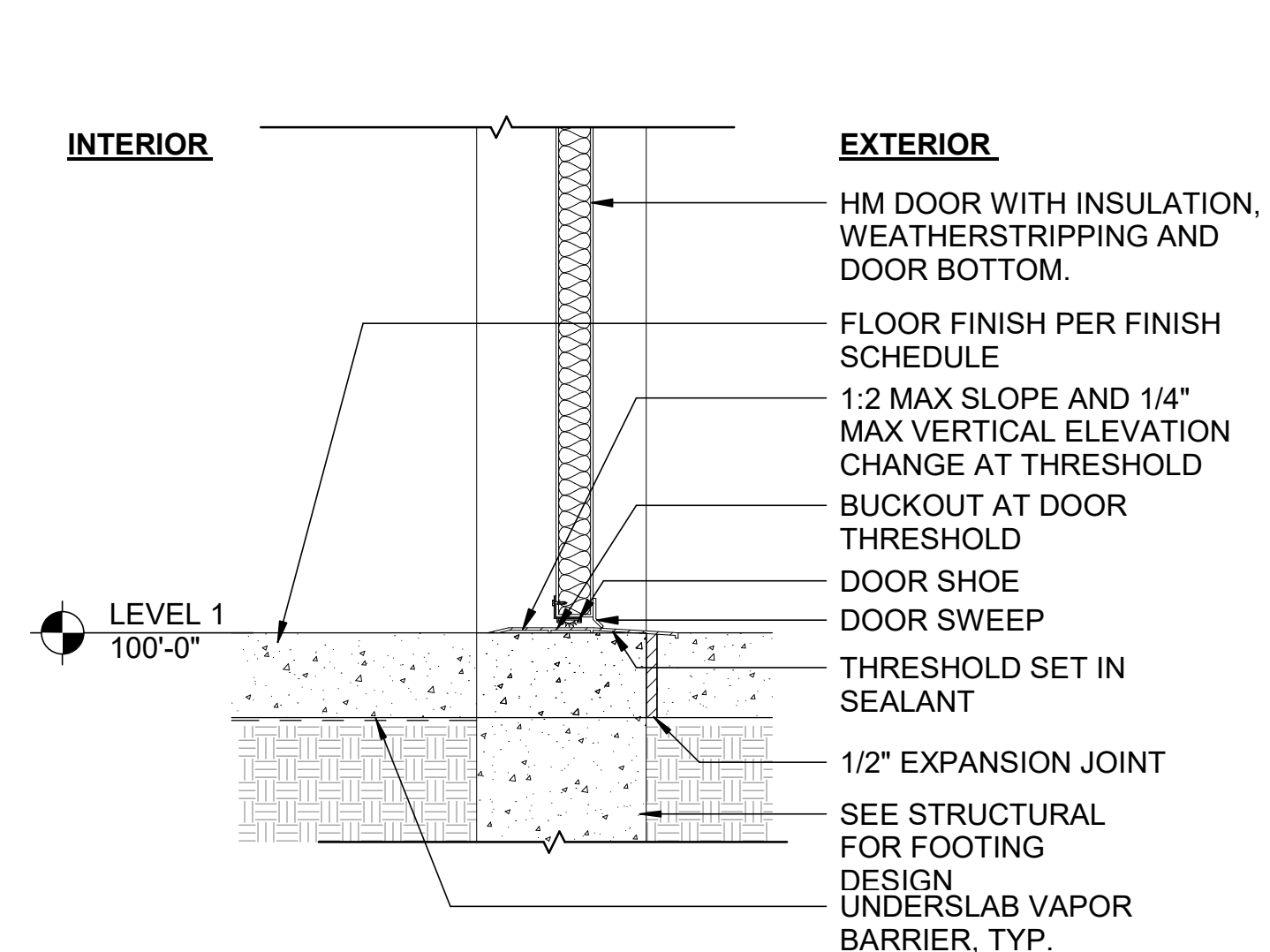
10 DOOR THRESHOLD @CURB
A-501 SCALE : 1 1/2" = 1'-0"



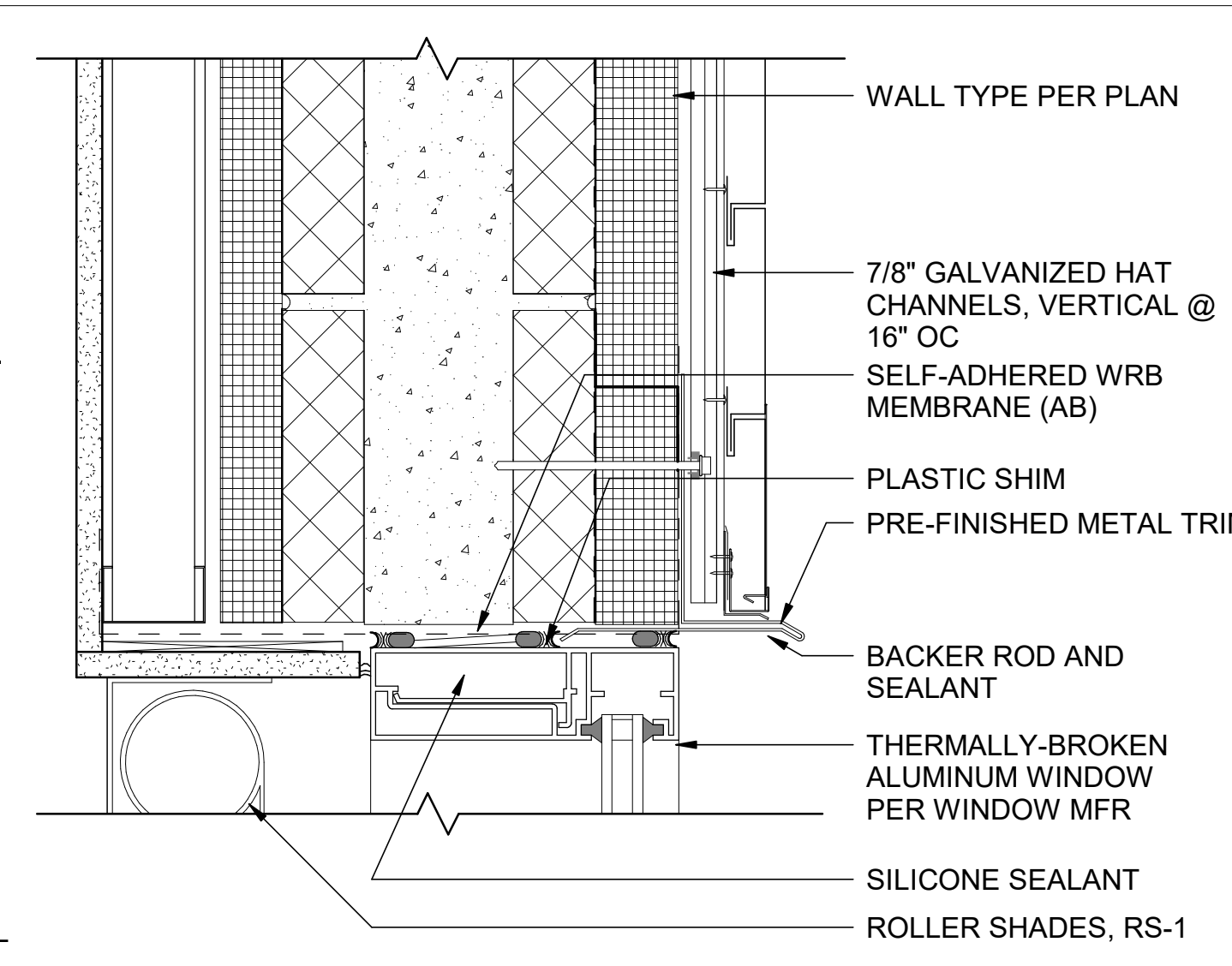
3 METAL WALL PANEL @ CONCRETE
A-501 SCALE : 1 1/2" = 1'-0"



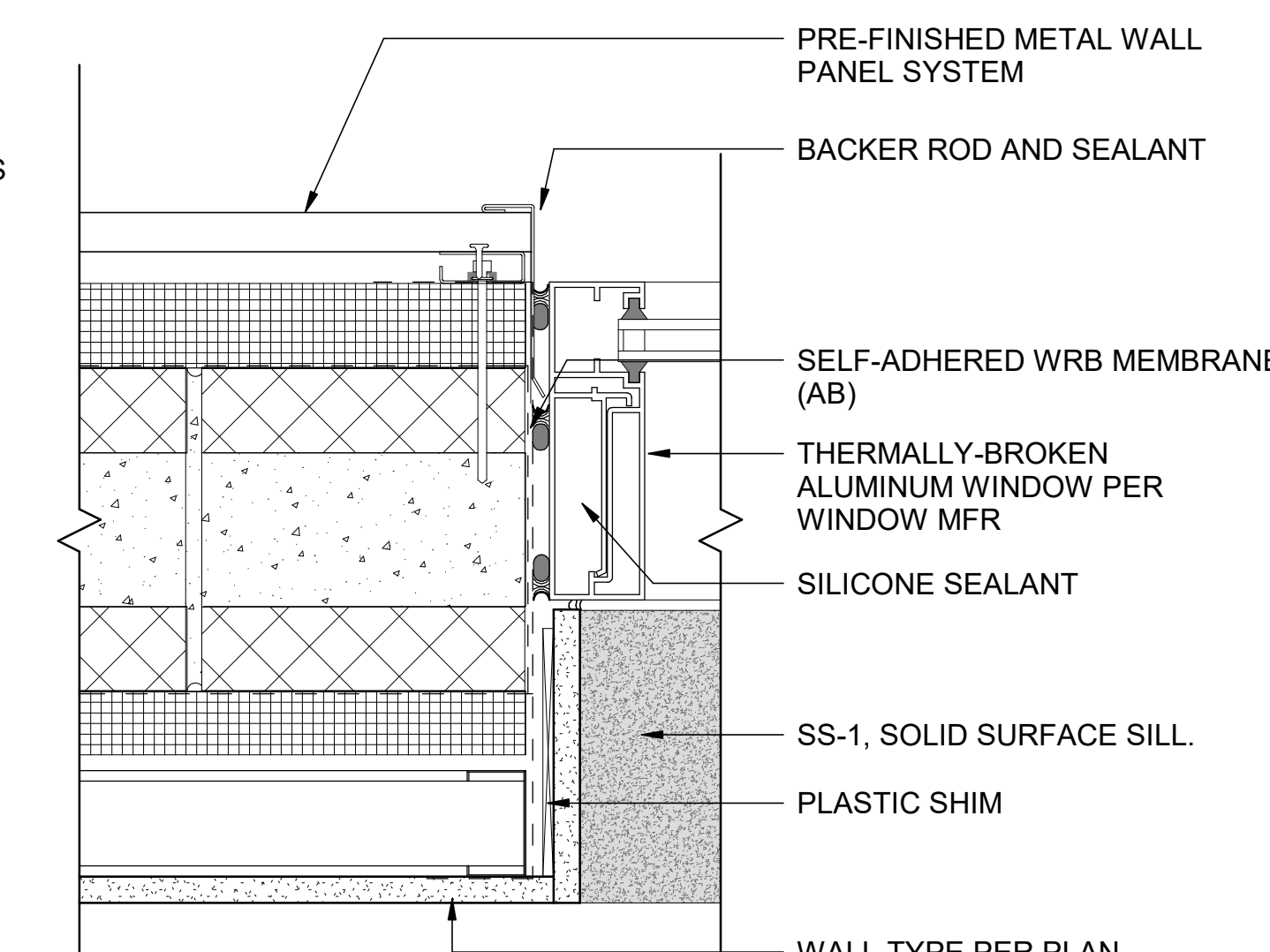
7 HEAD @ EXISTING EXT. (JAMB SIM.)
A-501 SCALE : 3" = 1'-0"



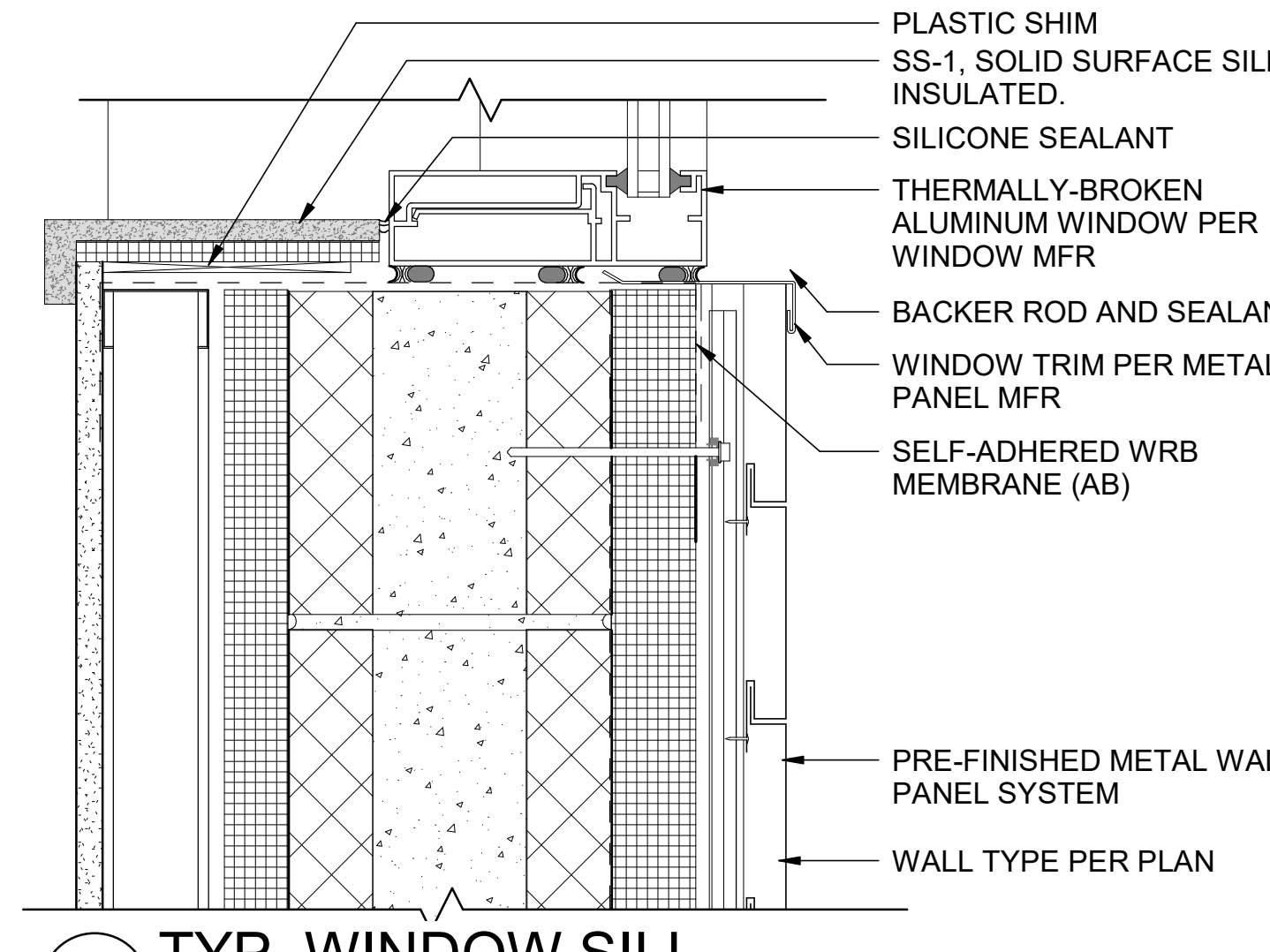
11 TYP. DOOR THRESHOLD
A-501 SCALE : 1 1/2" = 1'-0"



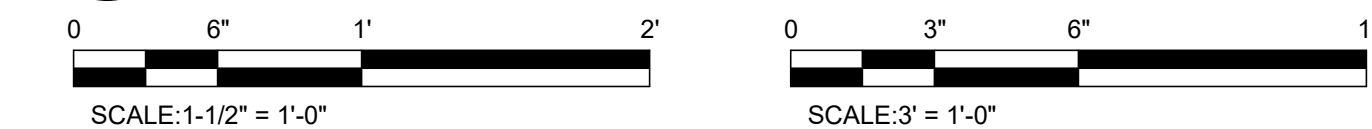
4 TYP. WINDOW HEAD
A-501 SCALE : 3" = 1'-0"



8 TYP. WINDOW JAMB
A-501 SCALE : 3" = 1'-0"



12 TYP. WINDOW SILL
A-501 SCALE : 3" = 1'-0"



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Date	Description	Mark	

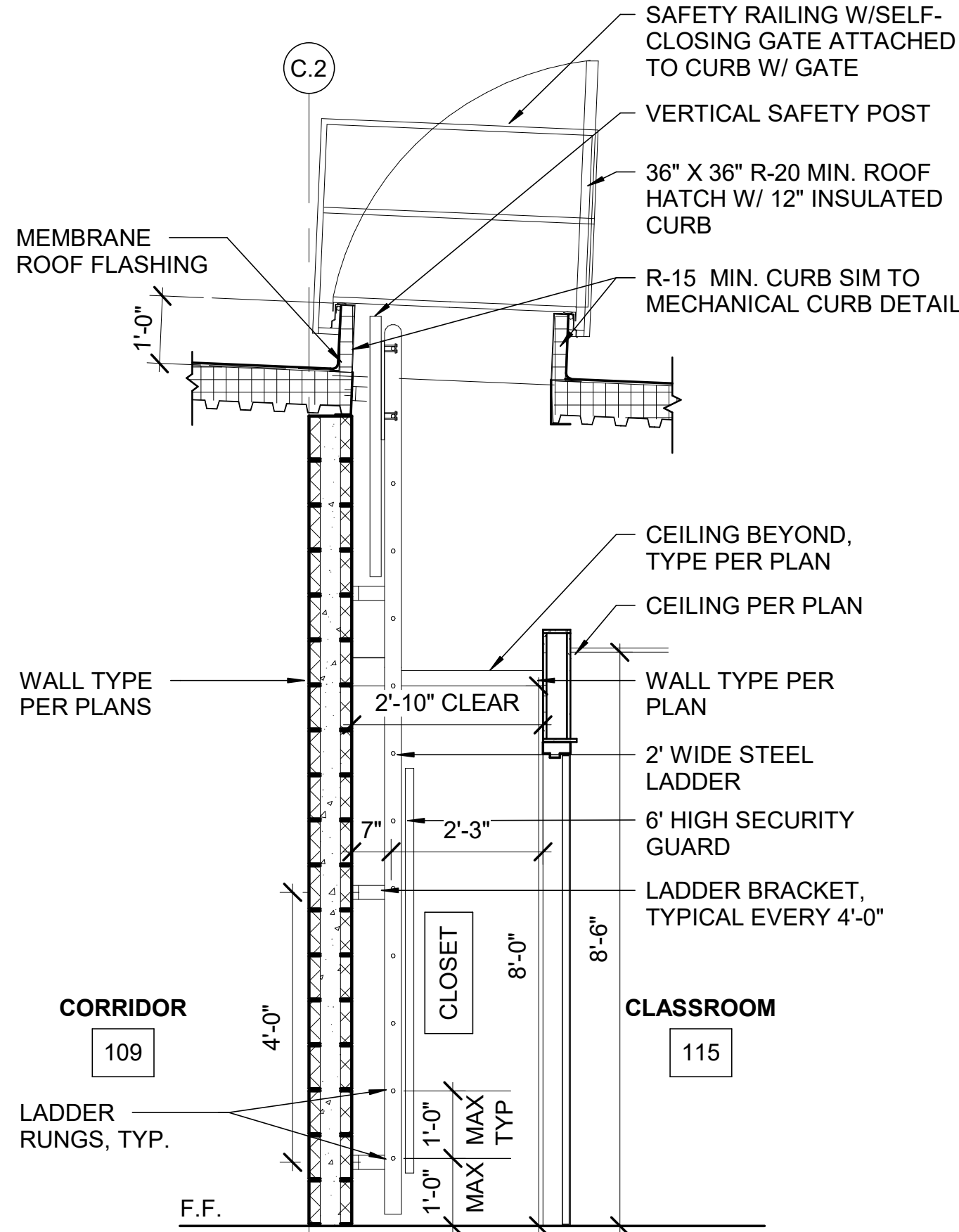
WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA
EXTERIOR DETAILS

A-501

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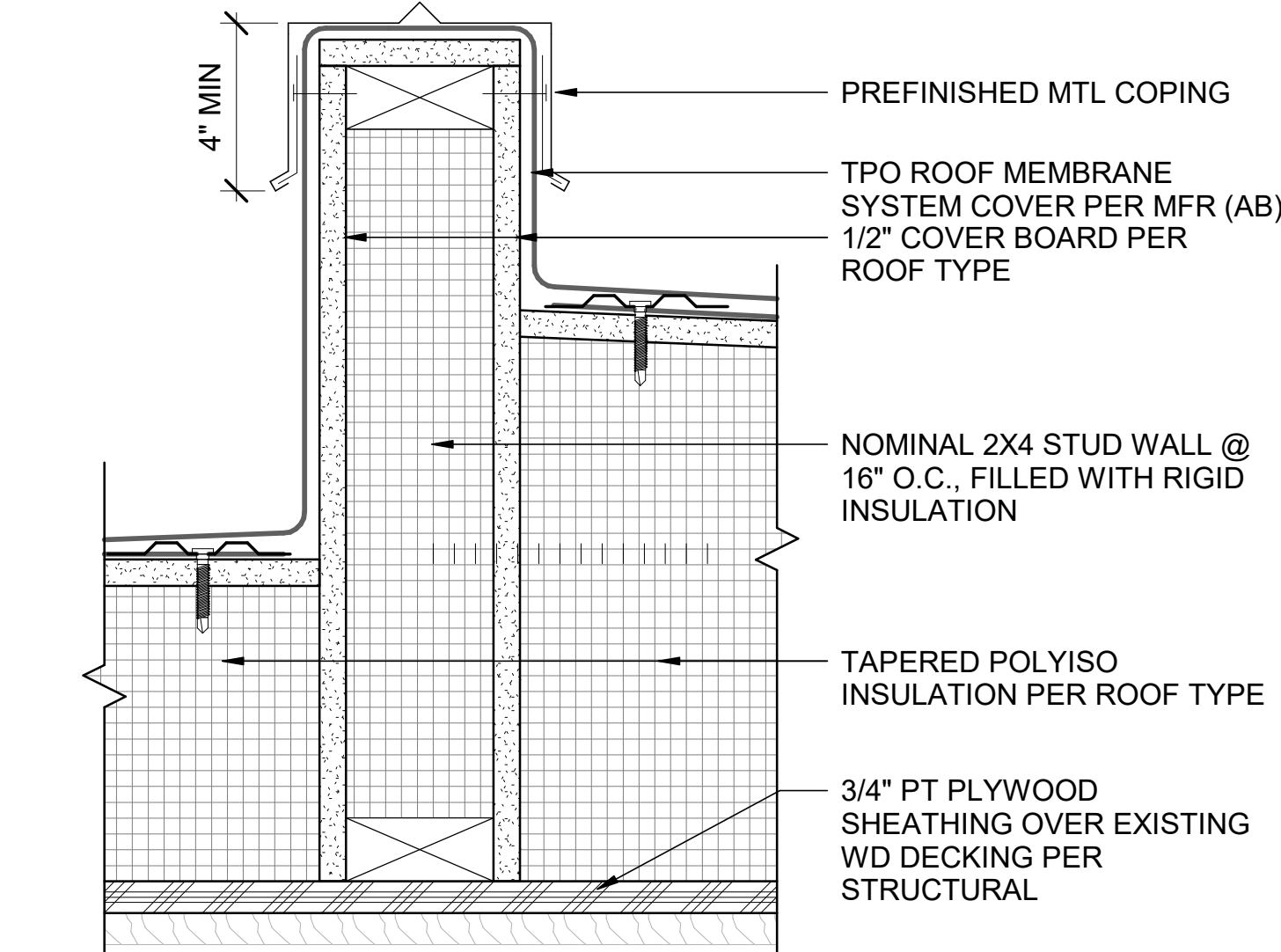
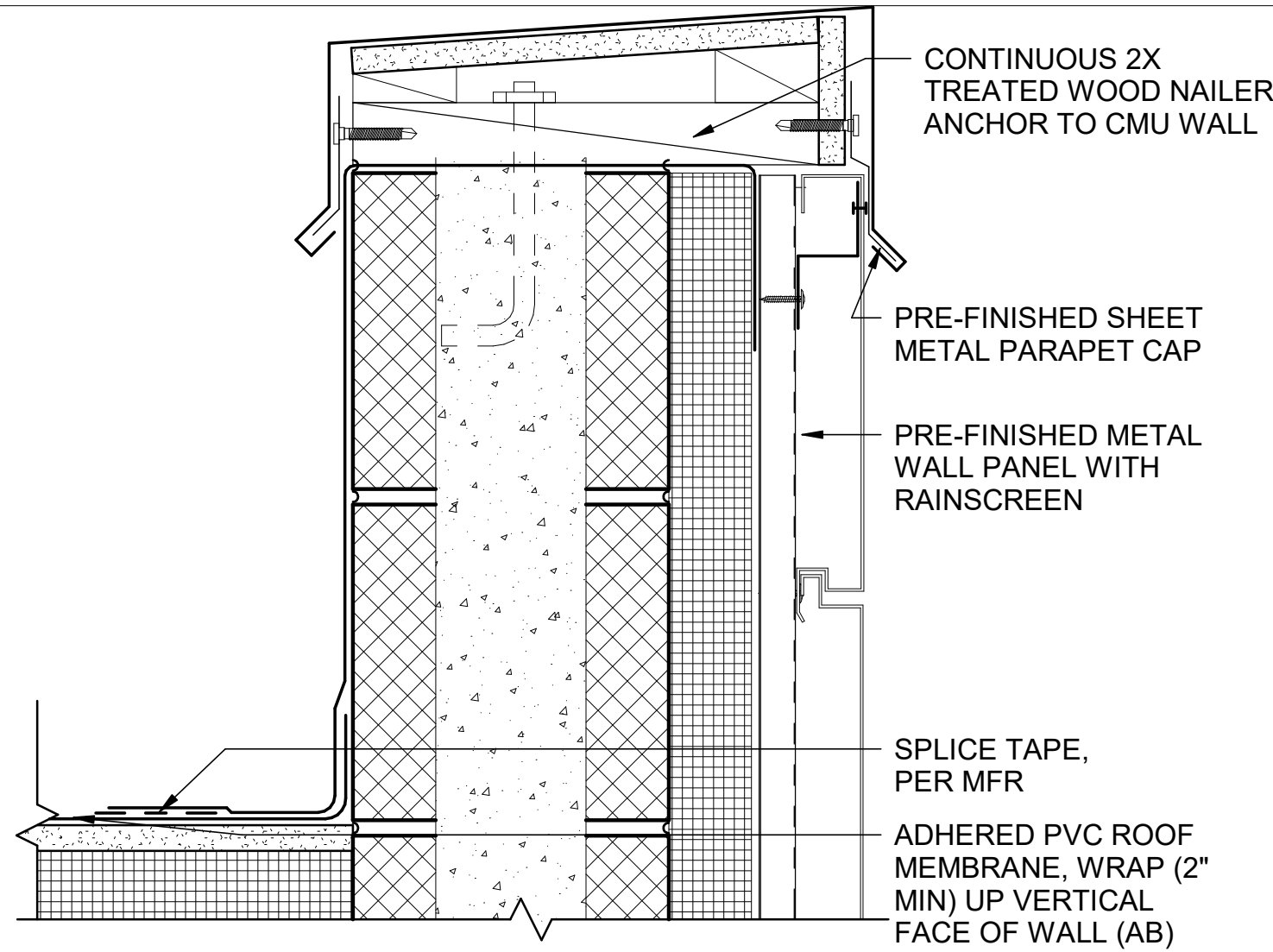
STEEL LADDERS:

1. COMPLY WITH ANSI A14.3, UNLESS OTHERWISE INDICATED. SIDERAILS: CONTINUOUS, 3/8"x2-1/2" STEEL FLAT BARS, WITH EASED EDGES. SPACE 24" APART.
2. RUNGS: 3/4" DIAMETER STEEL BARS. FIT RUNGS IN CENTERLINE OF SIDERAILS; PLUG WELD AND GRIND SMOOTH ON OUTER RAIL FACES.
3. PROVIDE NON-SLIP SURFACES ON TOP OF EACH RUNG BY COATING WITH ABRASIVE MATERIAL BONDED TO RUNG. SUPPORT EACH LADDER AT TOP & BOTTOM, & NOT MORE THAN 48" O.C. WITH WELDED OR BOLTED BRACKETS, MADE FROM SAME METAL AS LADDER.
4. PRIME INTERIOR LADDERS, INCLUDING BRACKETS AND FASTENERS, WITH ZINC RICH PRIMER.
- 5.

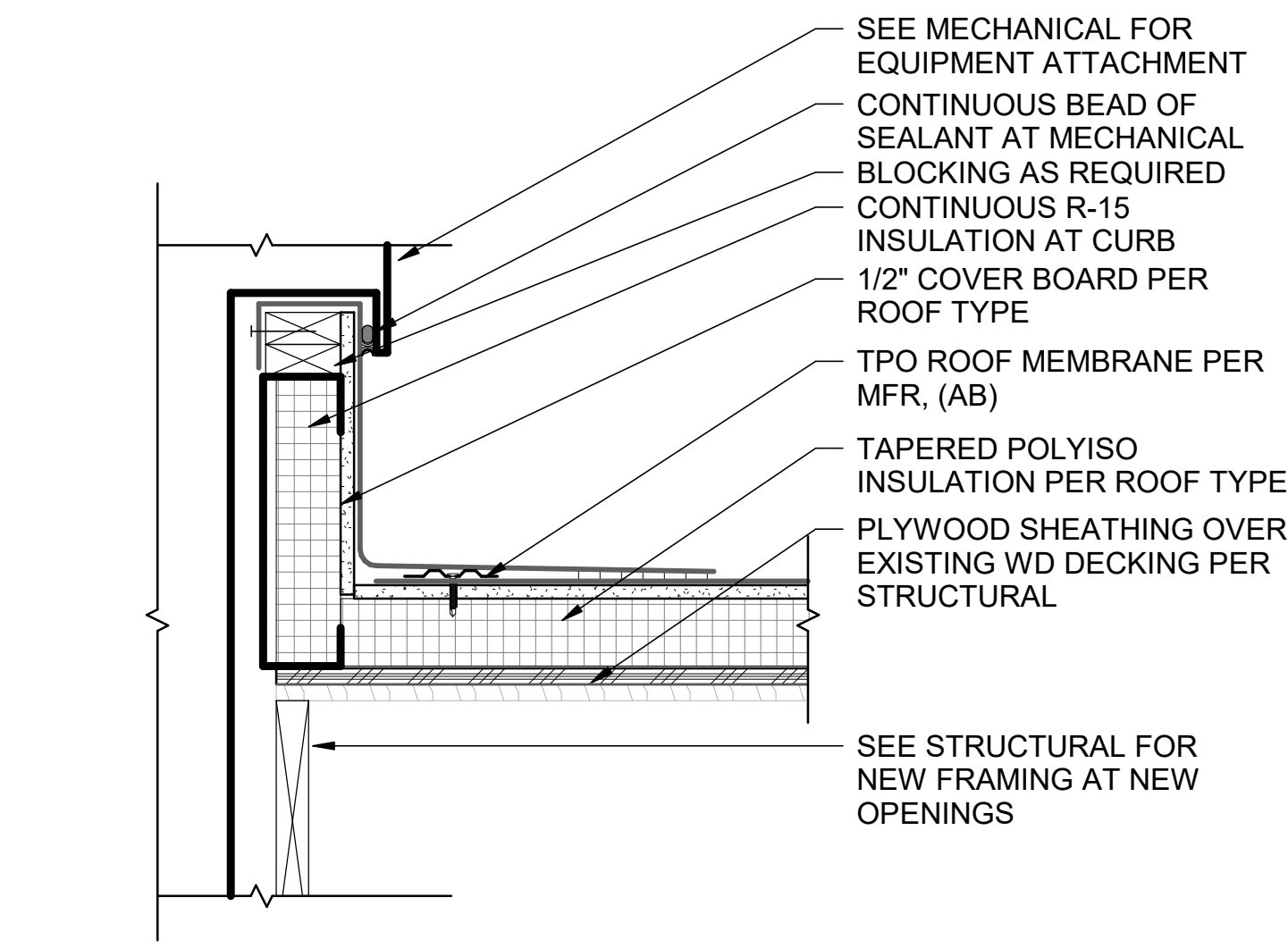


9 ROOF ACCESS HATCH-LADDER
A-502 SCALE : 1/2" = 1'-0"

2 PARAPET CAP
A-502 SCALE : 3" = 1'-0"

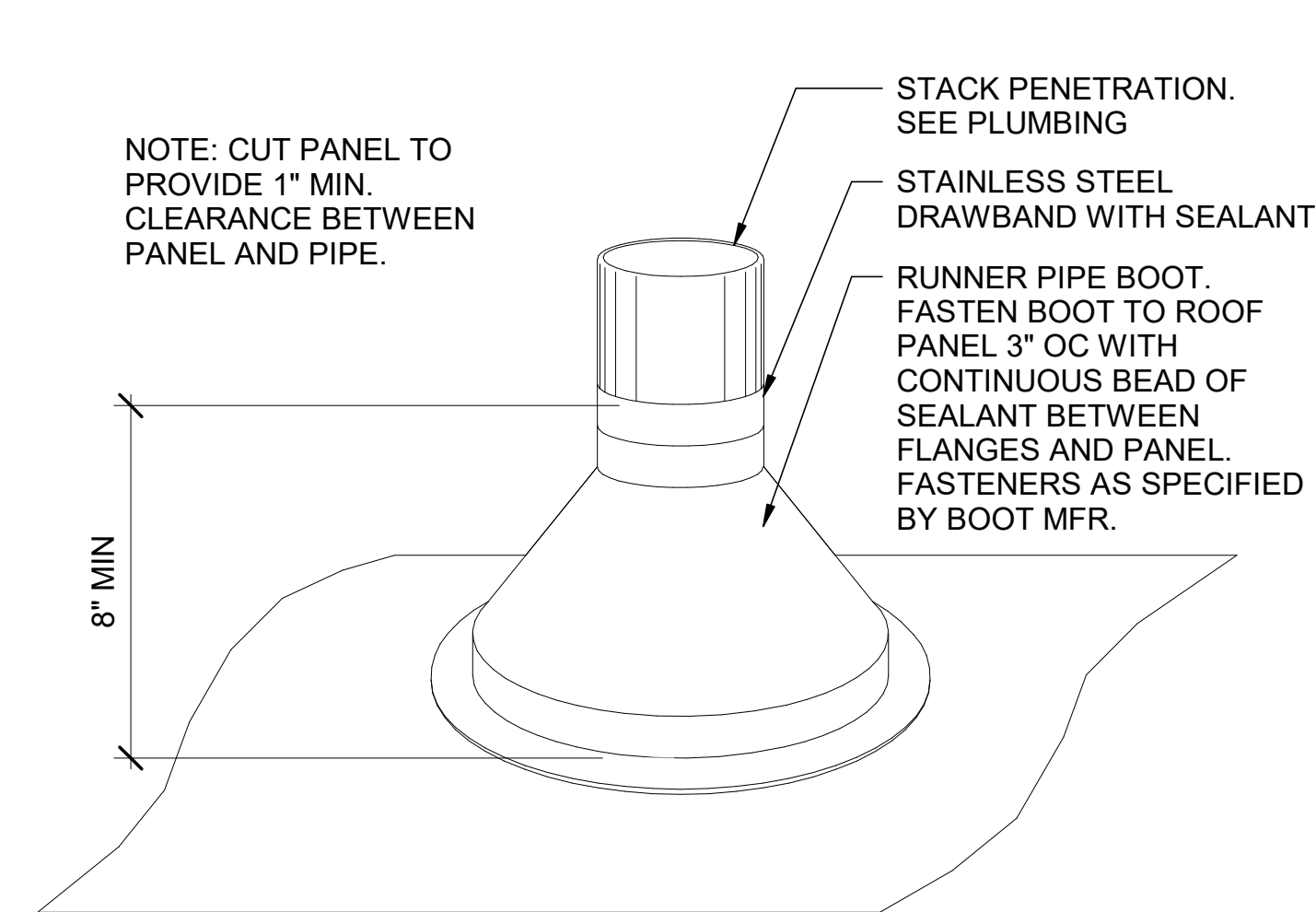


6 DIVIDING WALL AT EXISTING ROOF
A-502 SCALE : 3" = 1'-0"

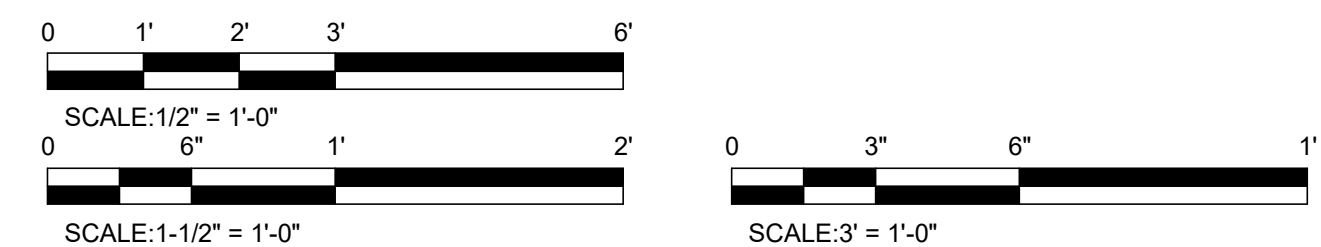
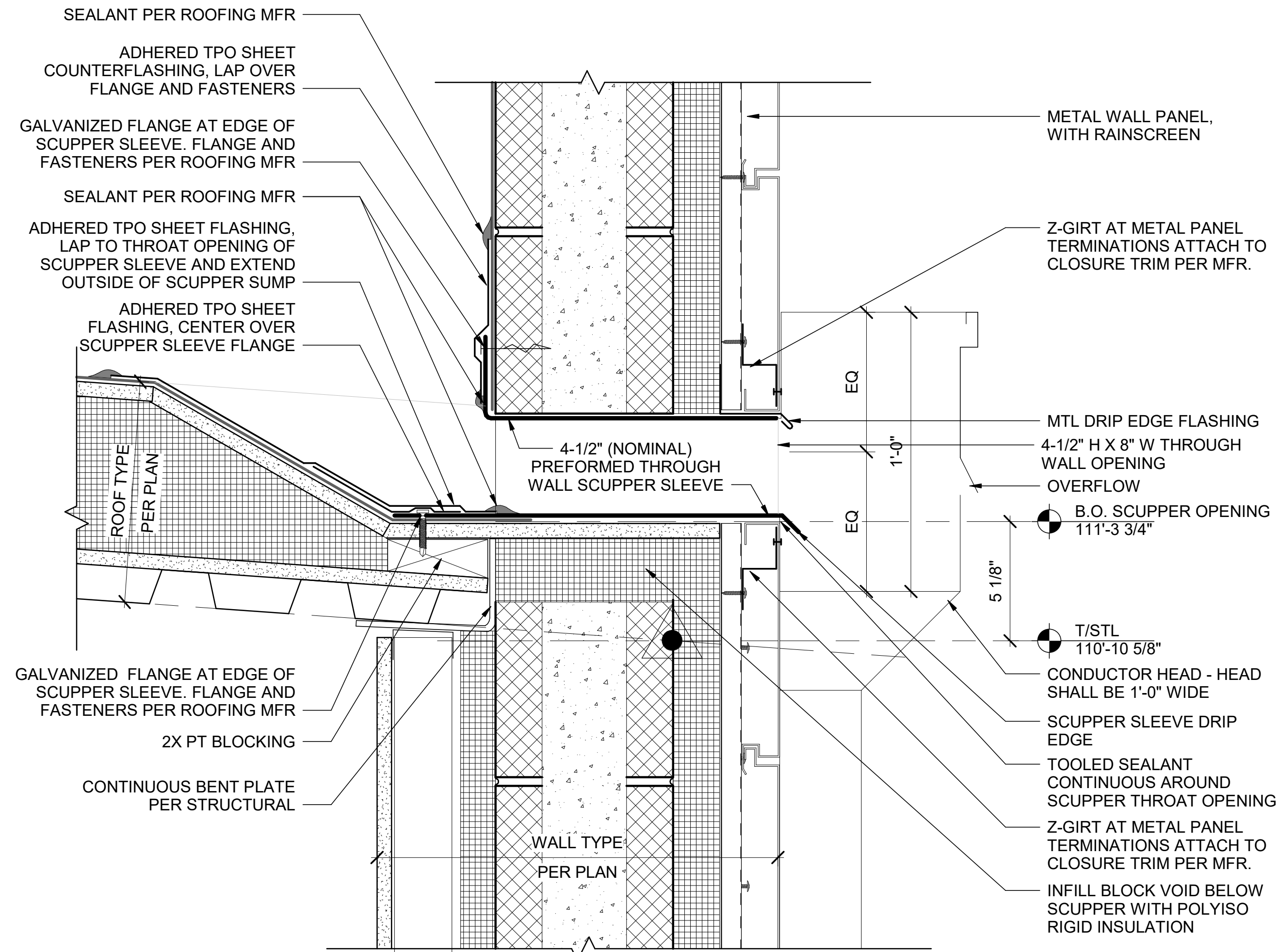


10 TYP. ROOF CURB DETAIL
A-502 SCALE : 1 1/2" = 1'-0"

7 SCUPPER AND COLLECTOR BOX
A-502 SCALE : 3" = 1'-0"



11 STACK FLASHING DETAIL
A-502 SCALE : 3" = 1'-0"



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Designed By: C/JN
Drawn By: C/FT
Checked By: P/MM

Mark	Description	Date

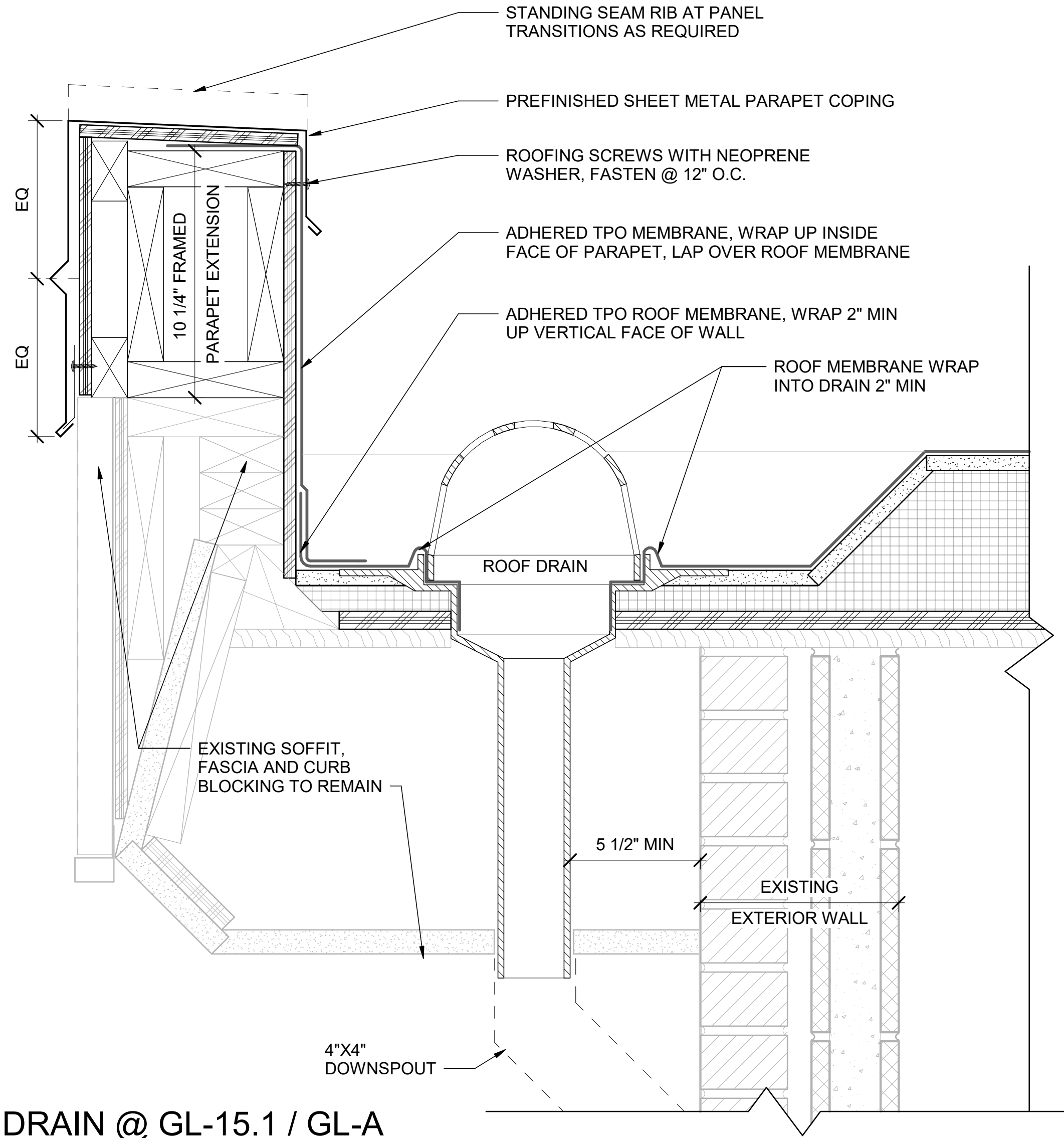
WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA

ROOF DETAILS

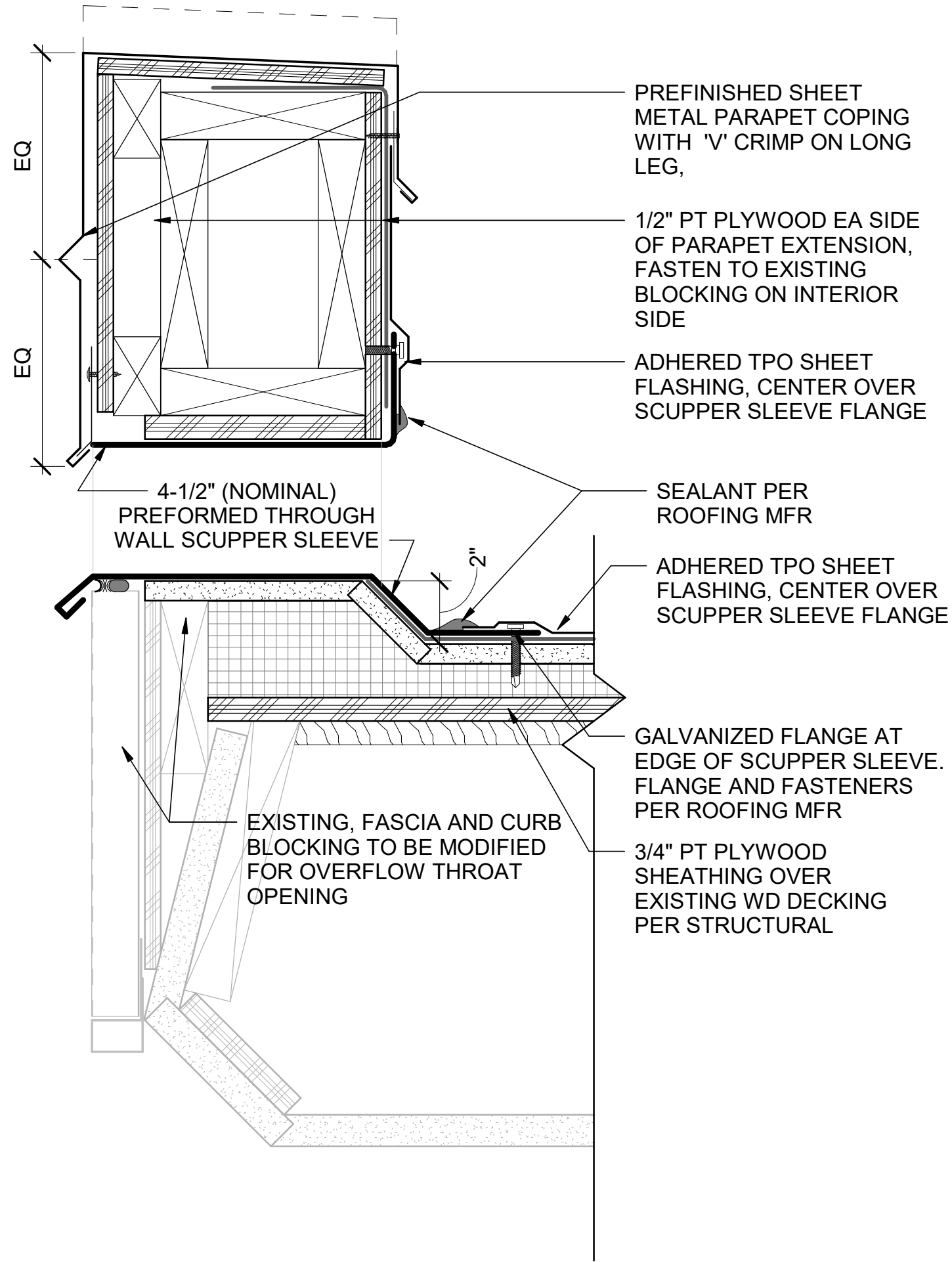
A-502

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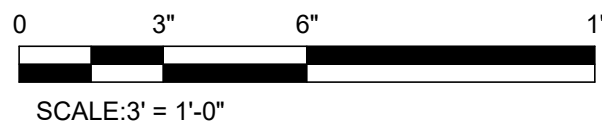
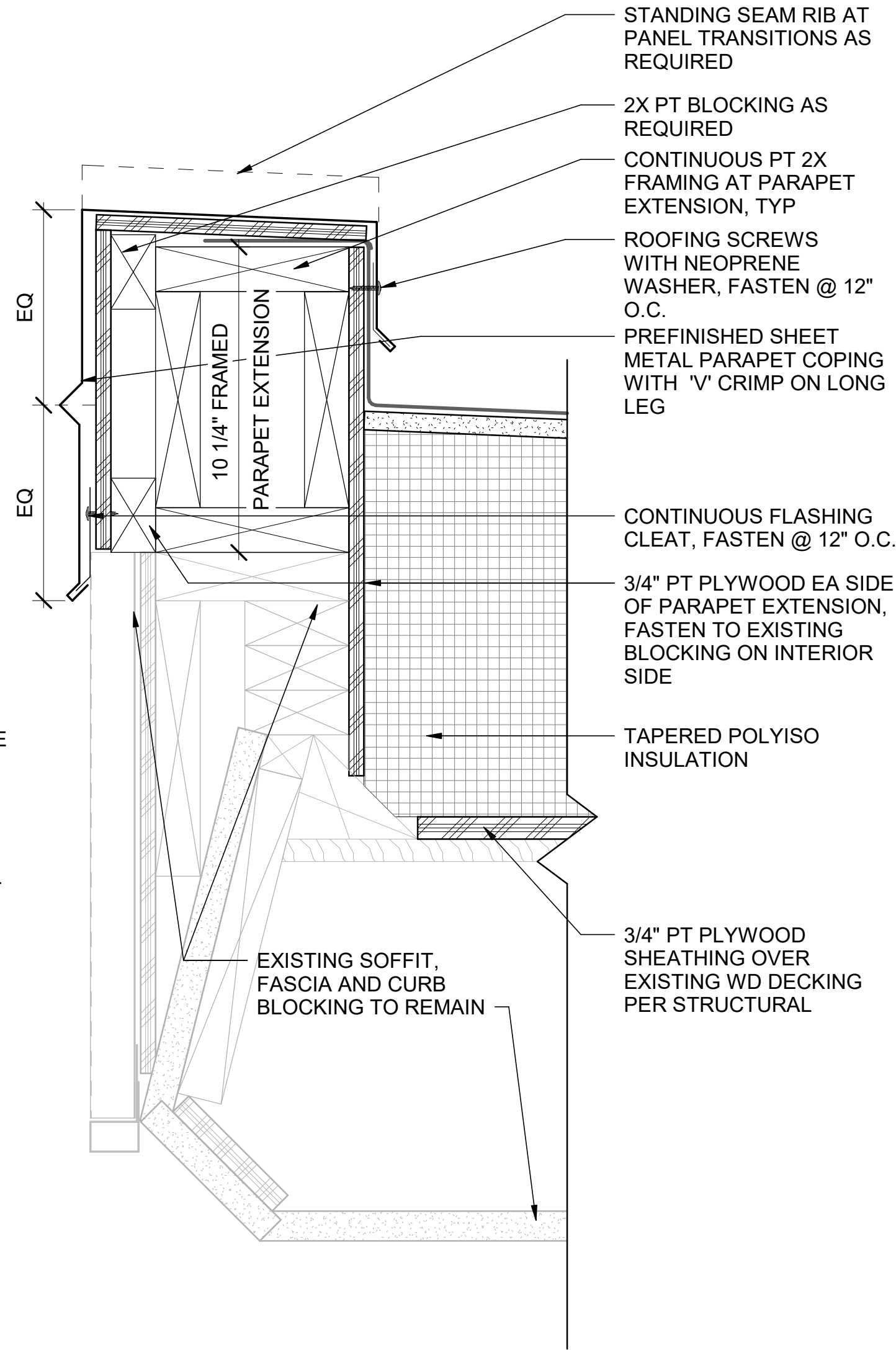
5 NEW ROOF DRAIN @ GL-15.1 / GL-A
A-503/ SCALE : 3" = 1'-0"



7 OVERFLOW SCUPPER @ EXISTING ROOF
A-503/ SCALE : 3" = 1'-0"



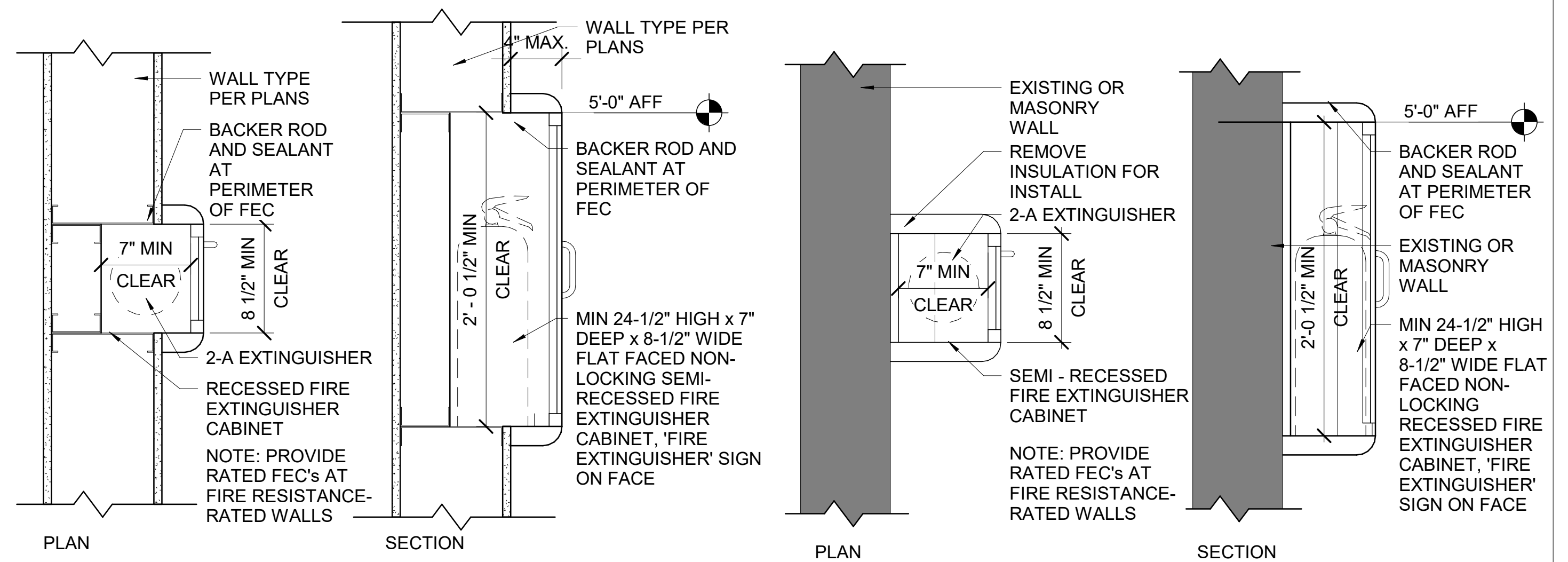
8 EXISTING PARAPET EXTENSION
A-503/ SCALE : 3" = 1'-0"



Project No. : 21024	Designed By: C/JN	Drawn By: C/FT	Checked By: Checker
Date			
Description			
Mark			



04/29/2022

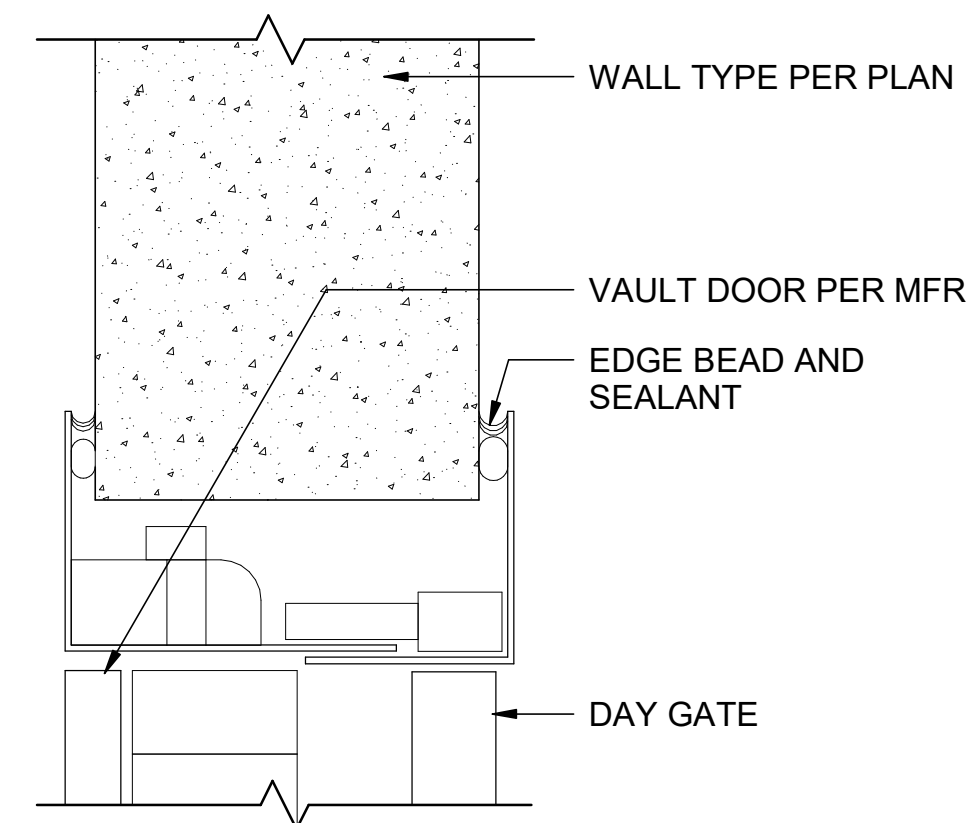
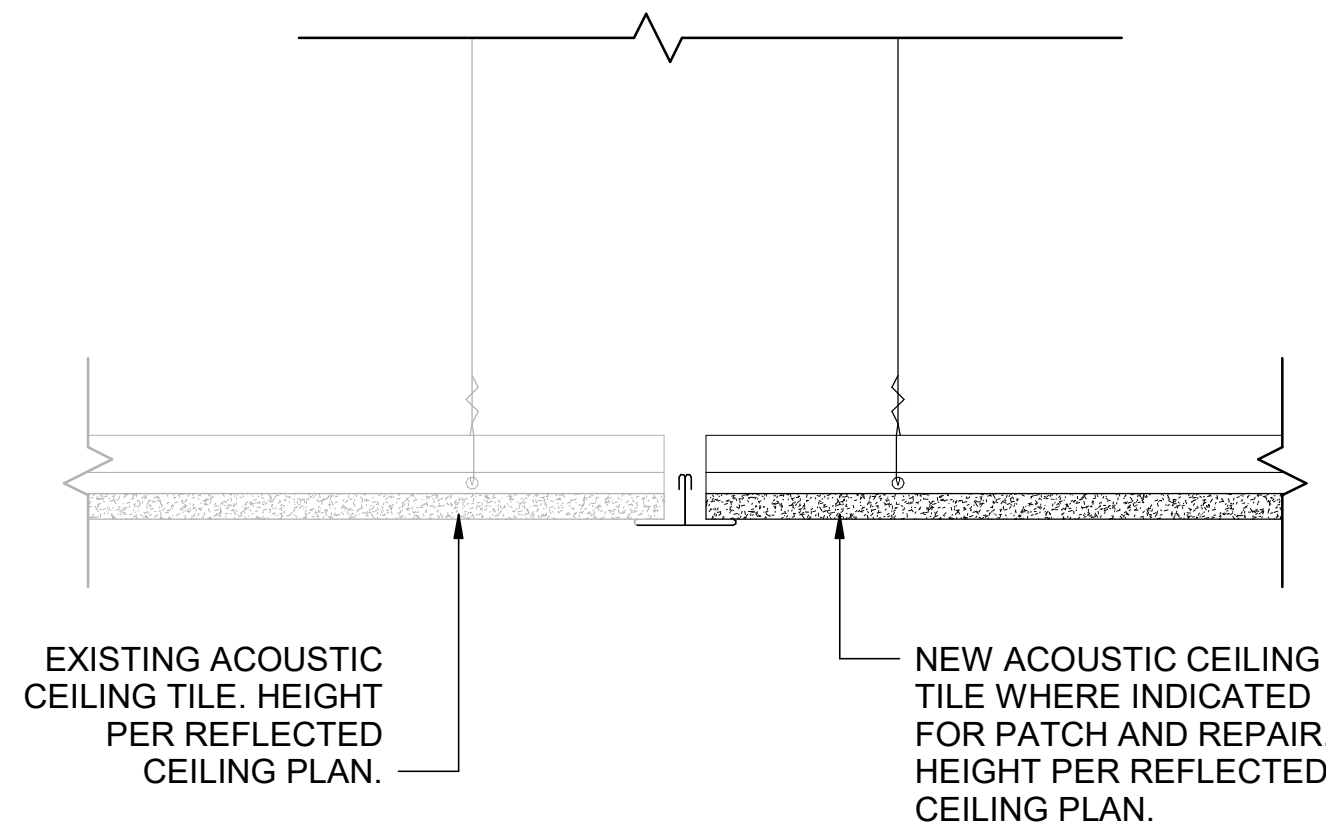


3 SEMI-RECESSED MOUNTED FEC

(A-511) SCALE : 1 1/2" = 1'-0"

A-511 SCALE : 1 1/2" = 1'-0"

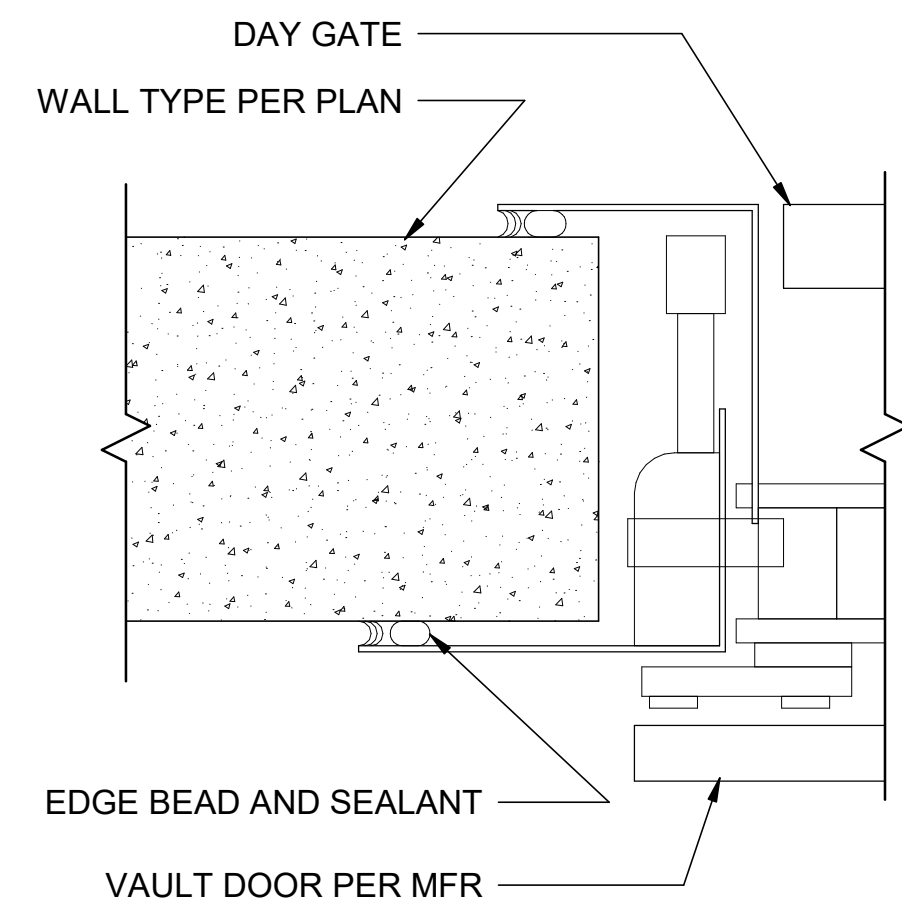
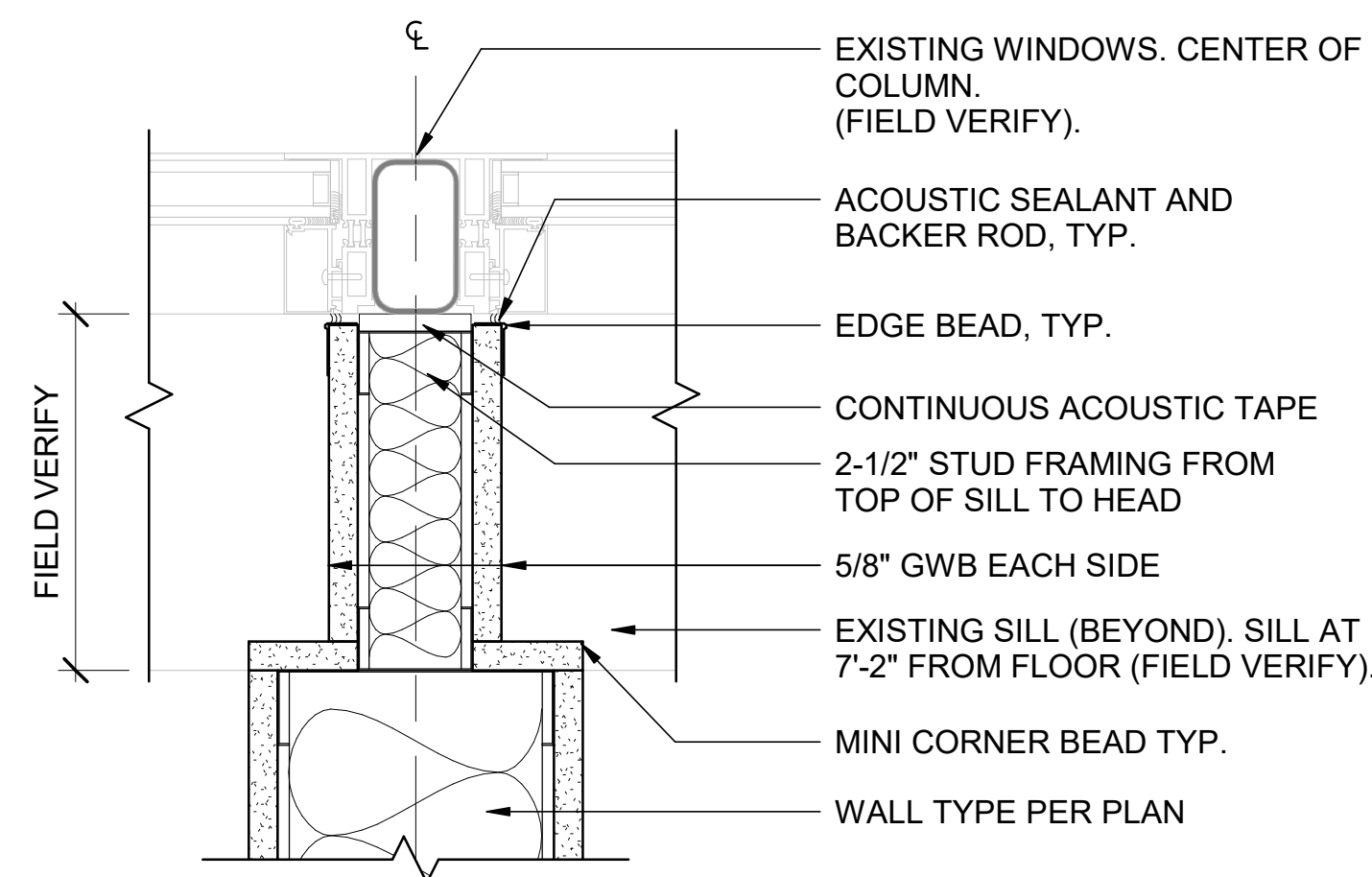
(A-511) SCALE : 1 1/2" = 1'-0"



6 PANEL FOLDING PARTITION HEAD

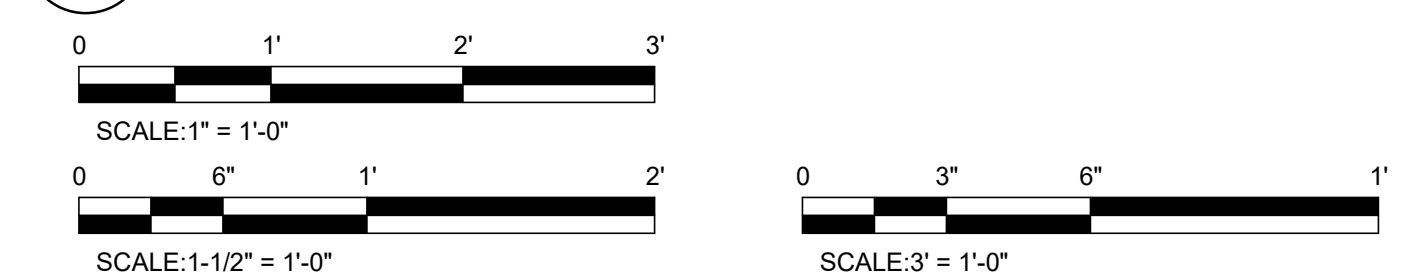
7 ACT @ PATCHED LOCATION

8 VAULT DOOR HEAD



10 PANEL FOLDING PARTITION BOTTOM

11 WALL JOINT @ WINDOW FRAME



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Designed By: GJN
Drawn By: CFT
Checked By: Check

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ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA

INTERIOR DETAILS

A-511

Sheet Size: 22" x 34"

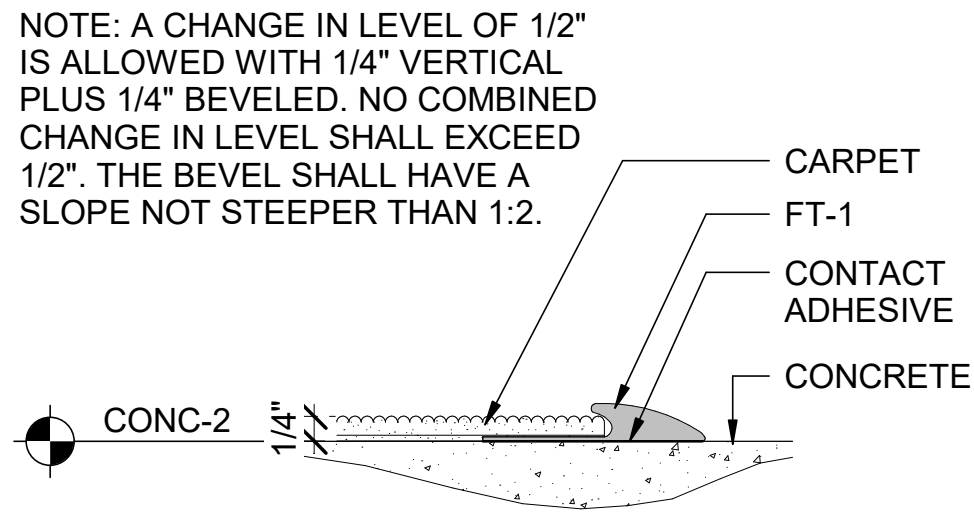
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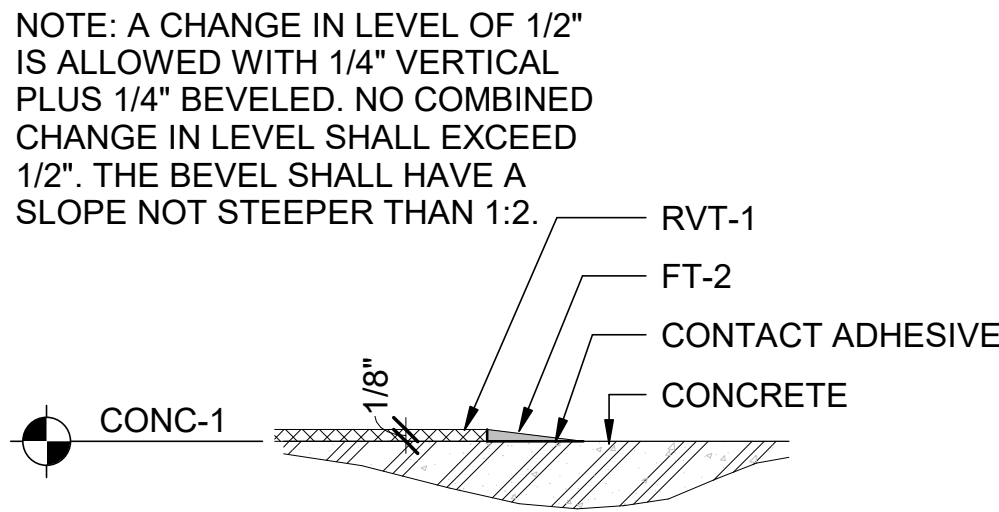
PERMIT SET

04/29/2022

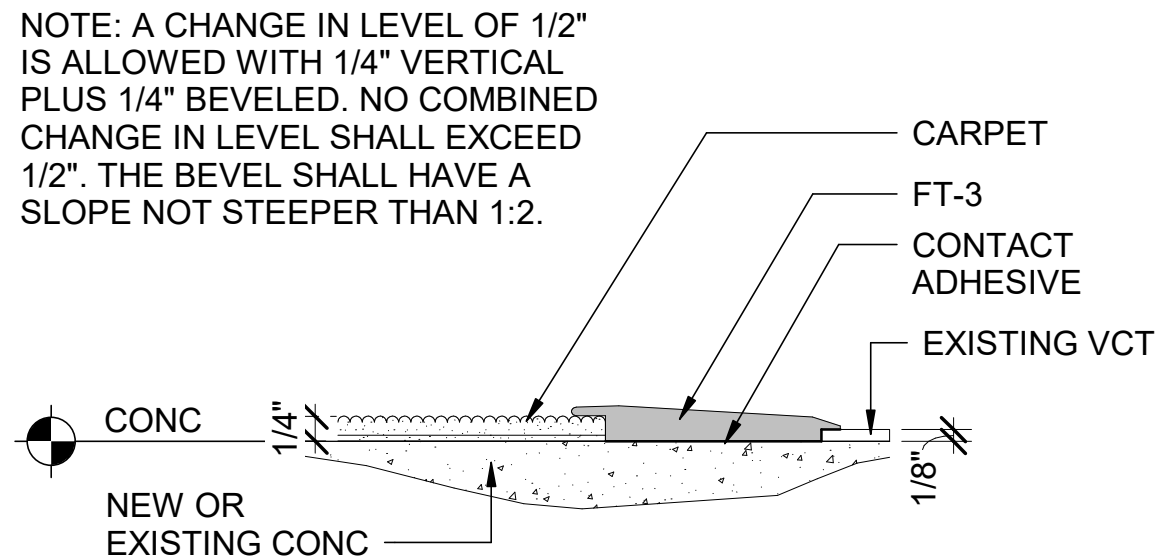
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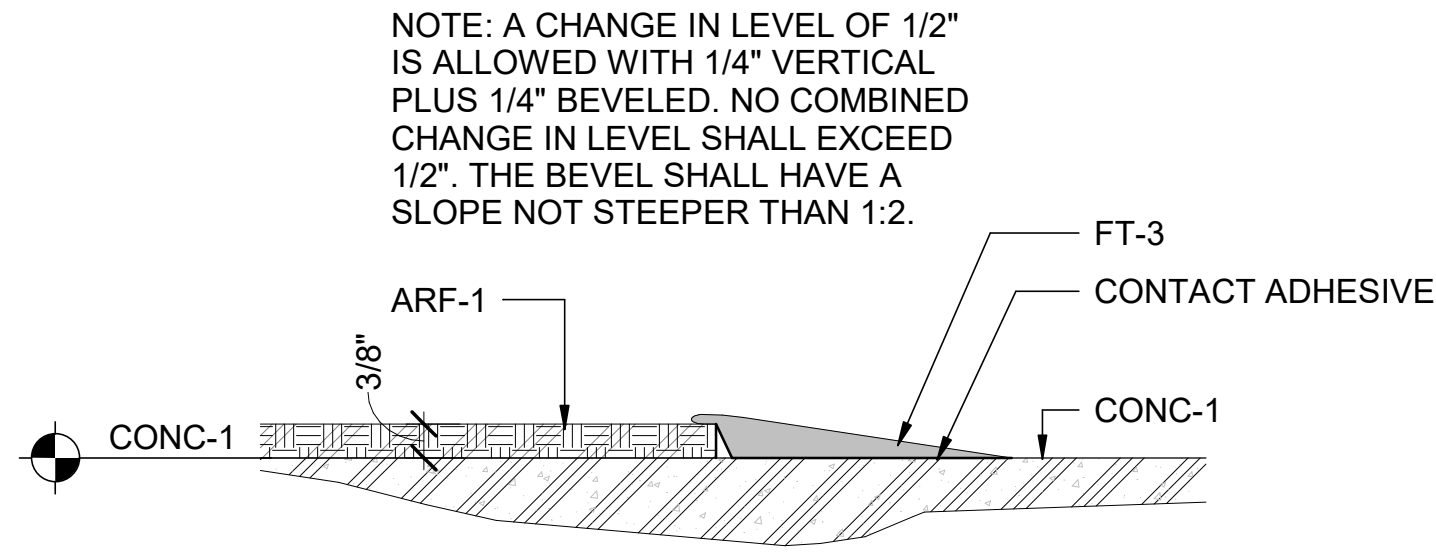
1 FT-1 CARPET TRANSITION
A-512 SCALE : 6" = 1'-0"



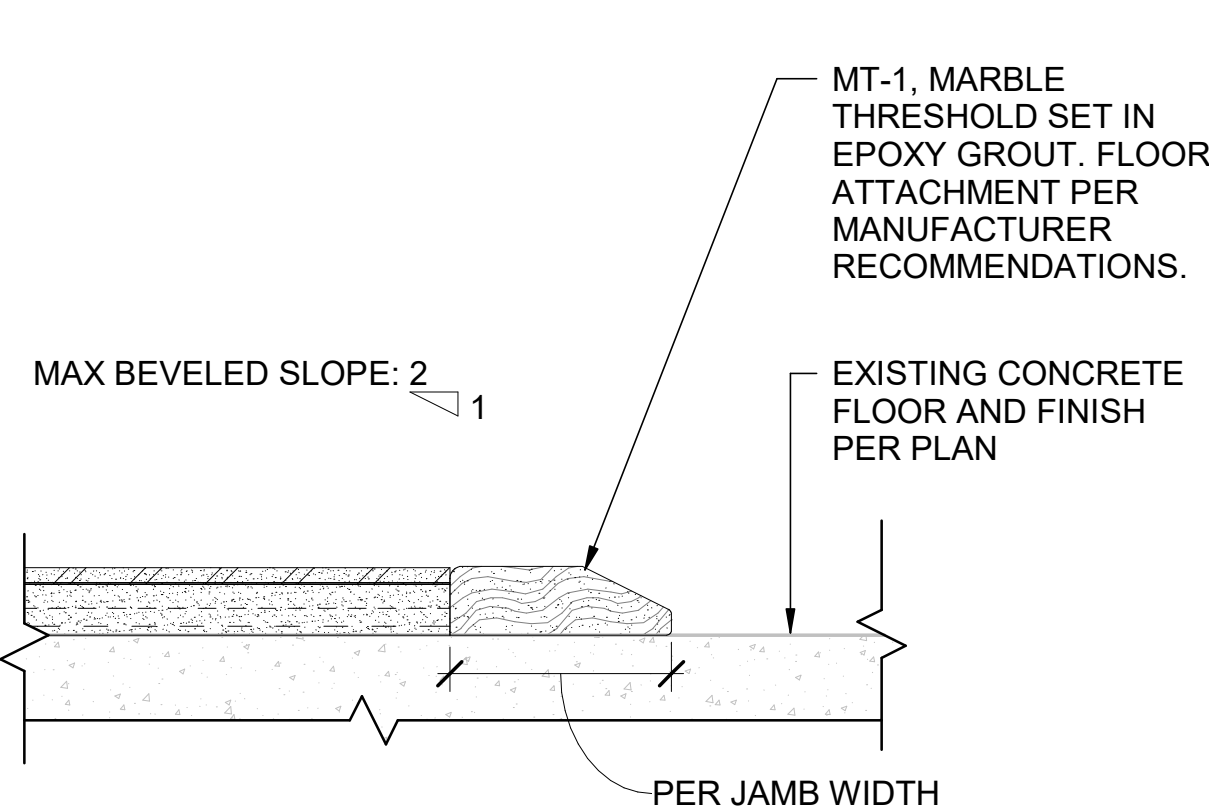
2 FT-2 EXISTING VCT TRANSITION
A-512 SCALE : 6" = 1'-0"



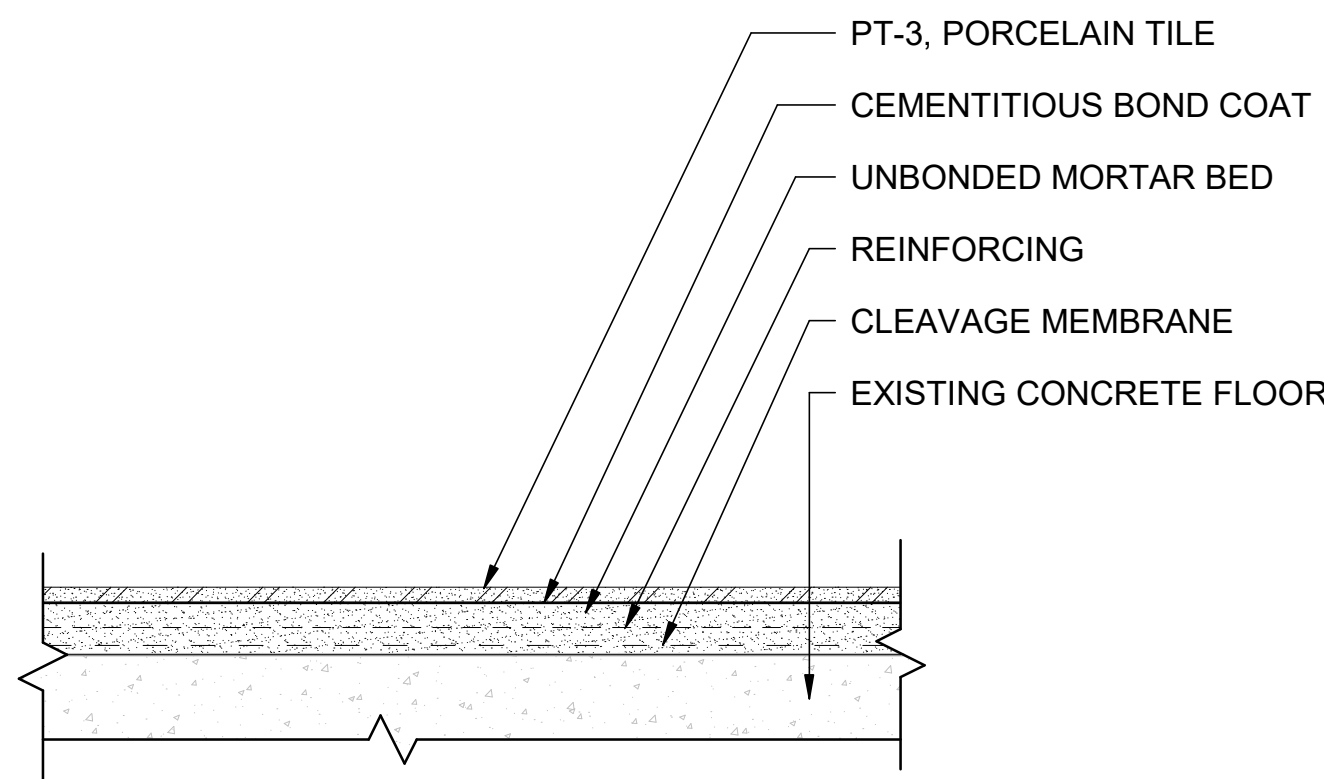
3 FT-3 CARPET TO VCT TRANSITION
A-512 SCALE : 6" = 1'-0"



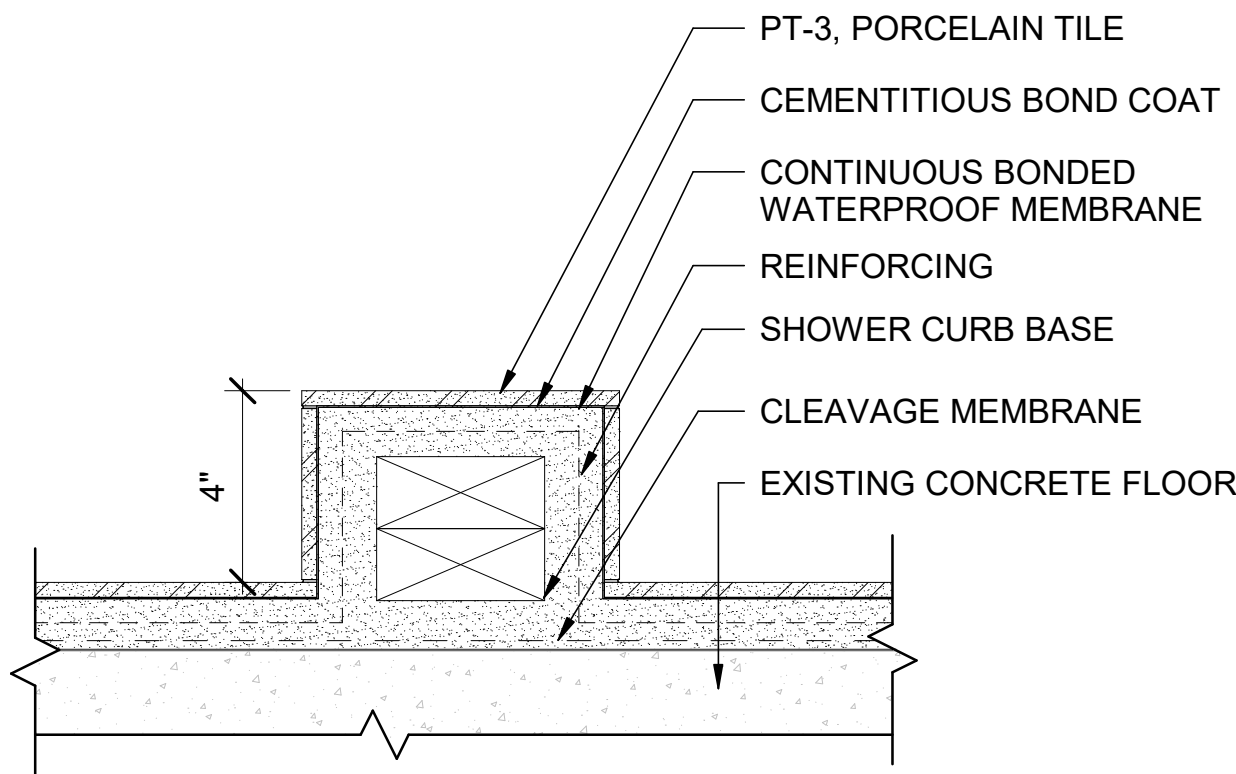
4 FT-4 ATHLETIC FLOORING TRANSITION
A-512 SCALE : 6" = 1'-0"



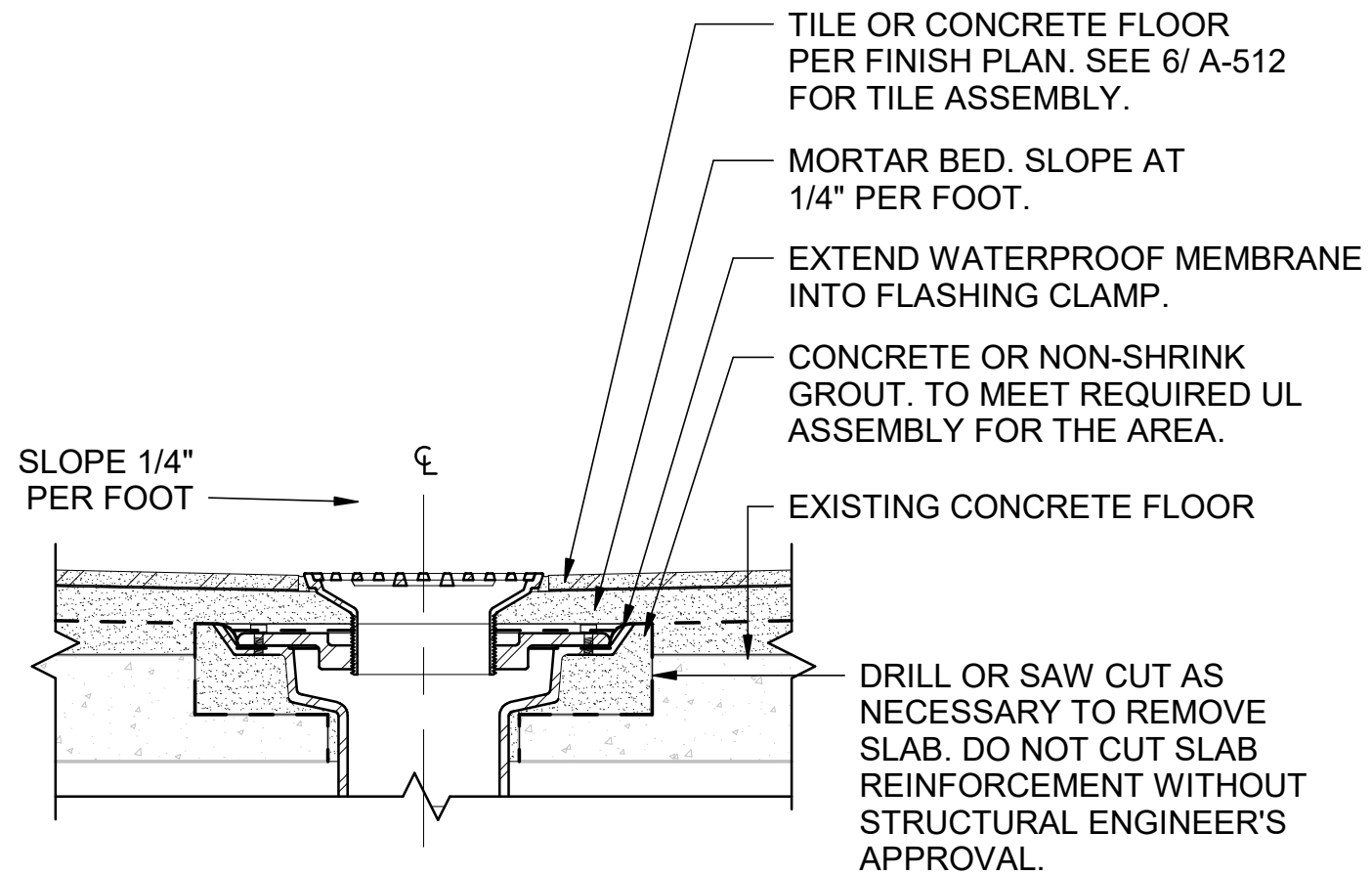
5 MT-1 MARBLE THRESHOLD
A-512 SCALE : 3" = 1'-0"



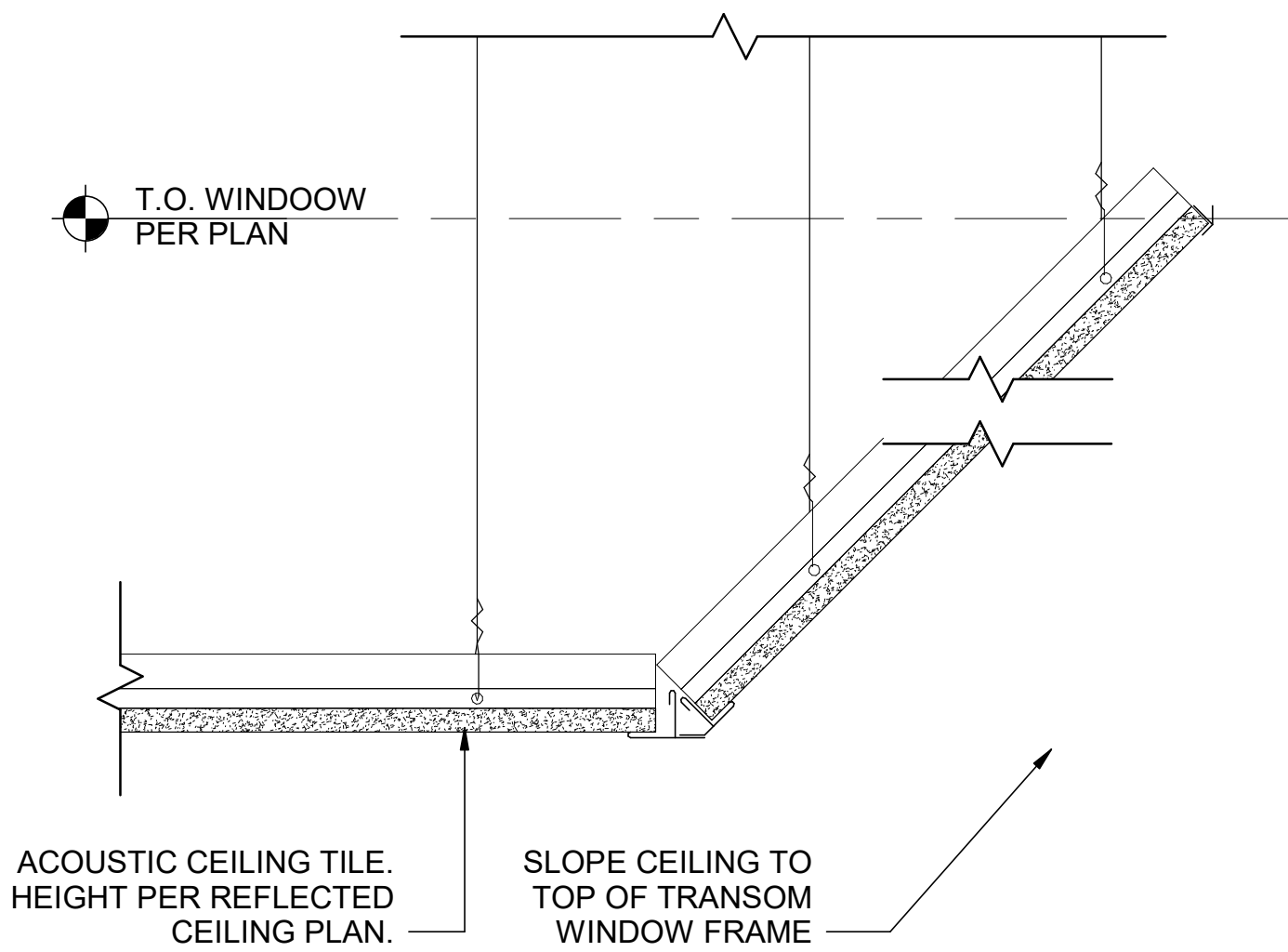
6 TILE ASSEMBLY
A-512 SCALE : 3" = 1'-0"



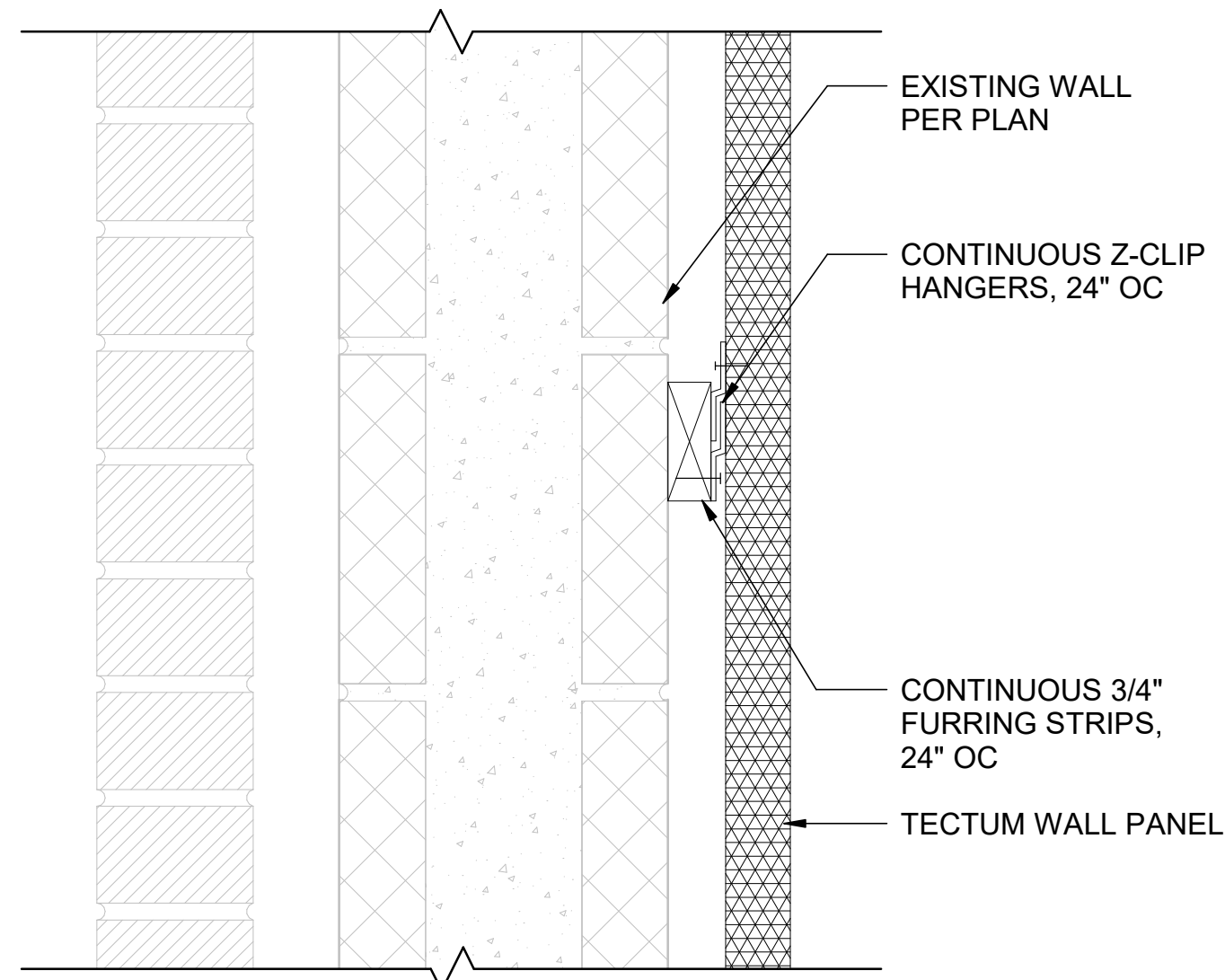
7 TILE CURB ASSEMBLY
A-512 SCALE : 3" = 1'-0"



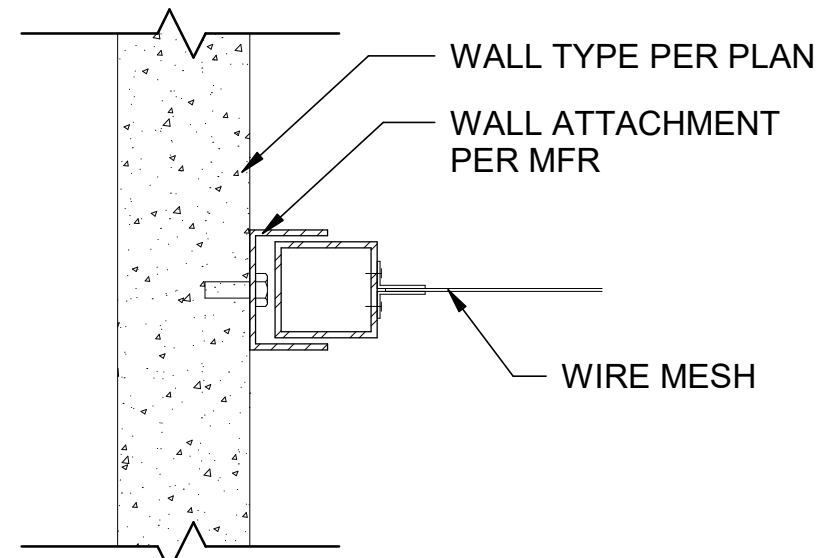
8 FLOOR DRAIN
A-512 SCALE : 3" = 1'-0"



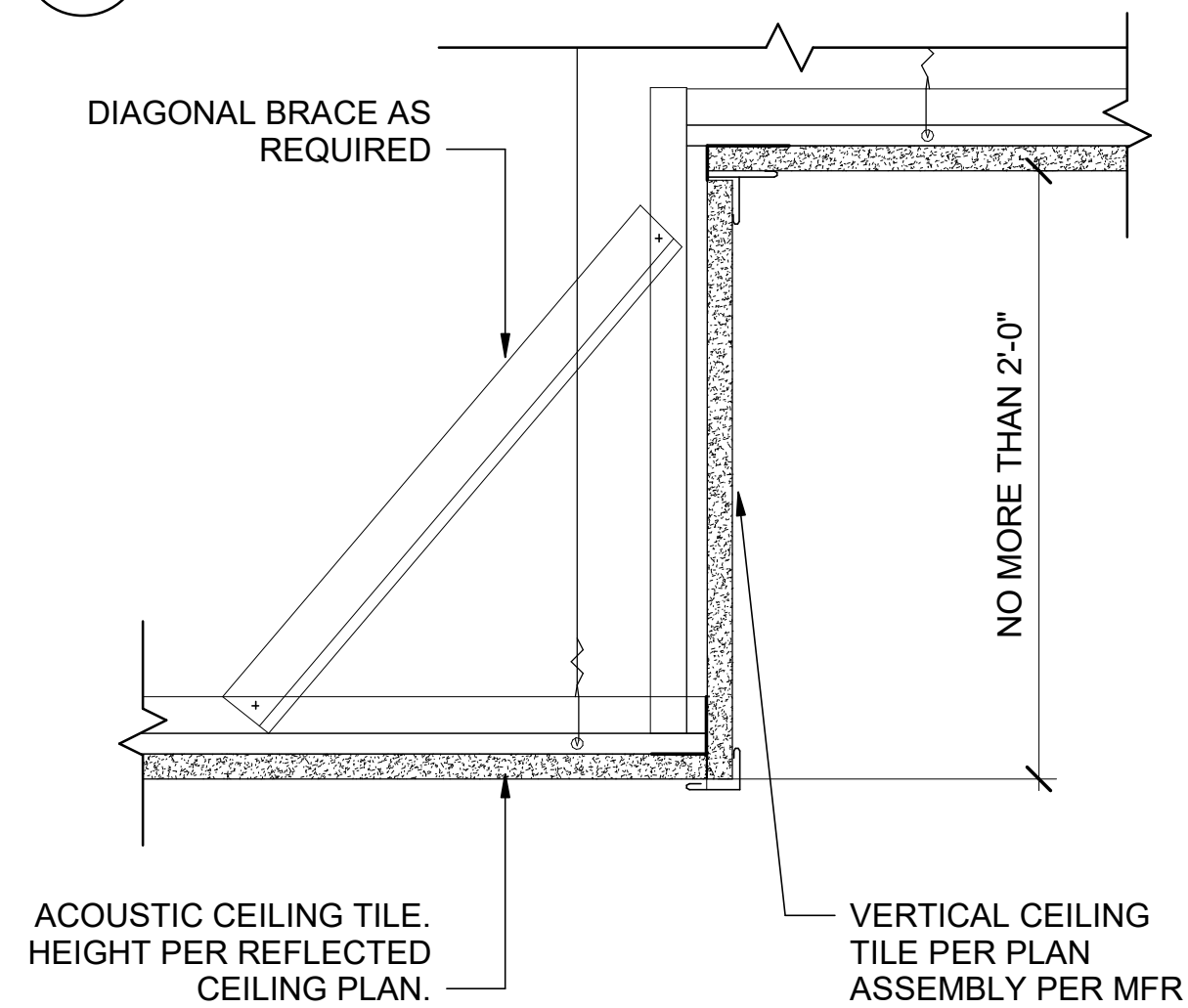
9 ACT @ SLOPED CEILING
A-512 SCALE : 3" = 1'-0"



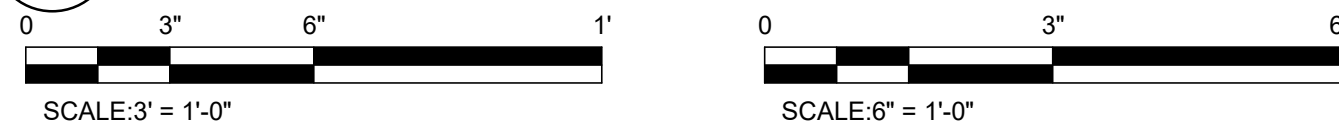
10 ACOUSTICAL PANEL ATTACHMENT
A-512 SCALE : 3" = 1'-0"



11 WIRE CAGE ATTACHMENT
A-512 SCALE : 3" = 1'-0"

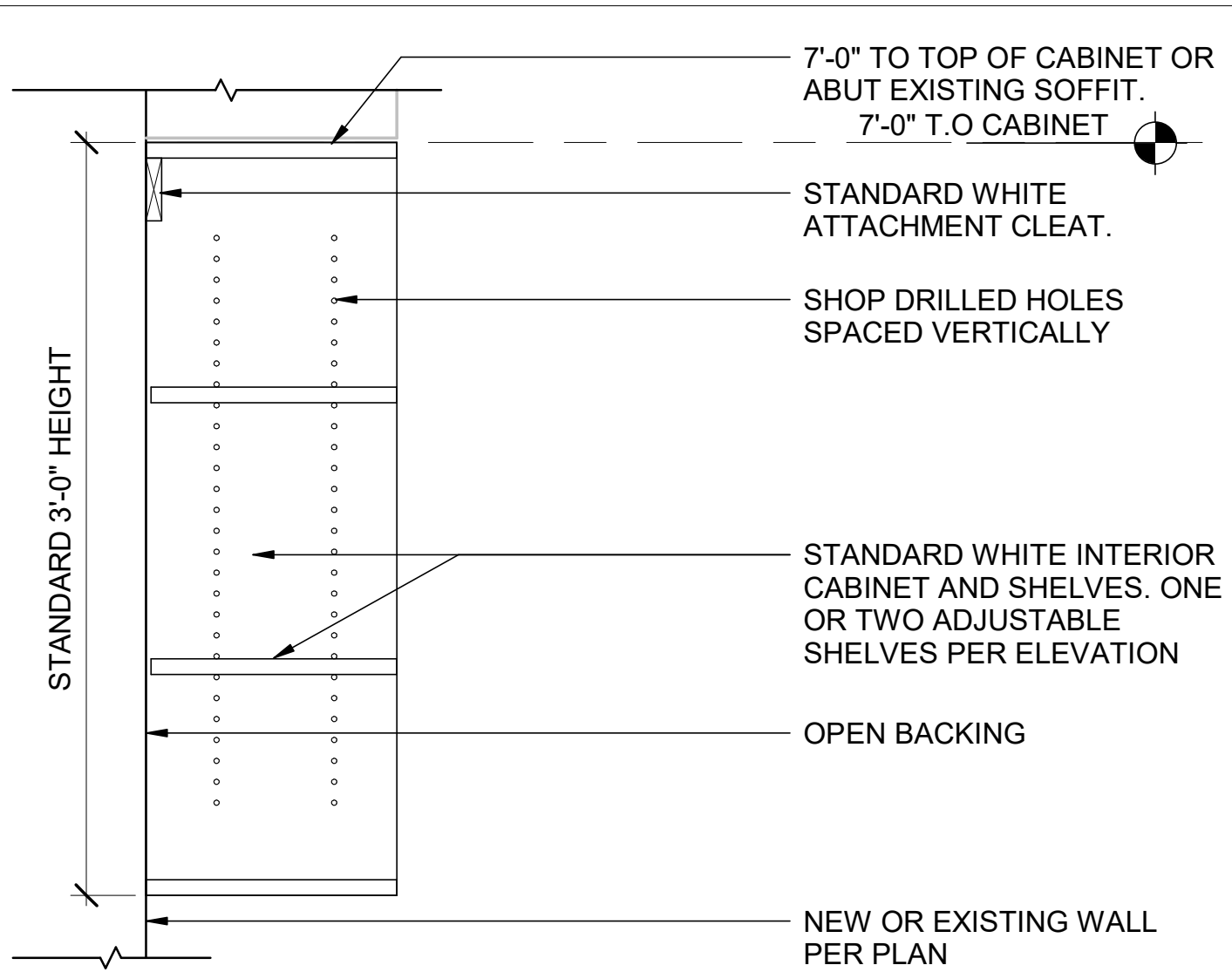


12 ACT @ SOFFITED CEILING
A-512 SCALE : 3" = 1'-0"



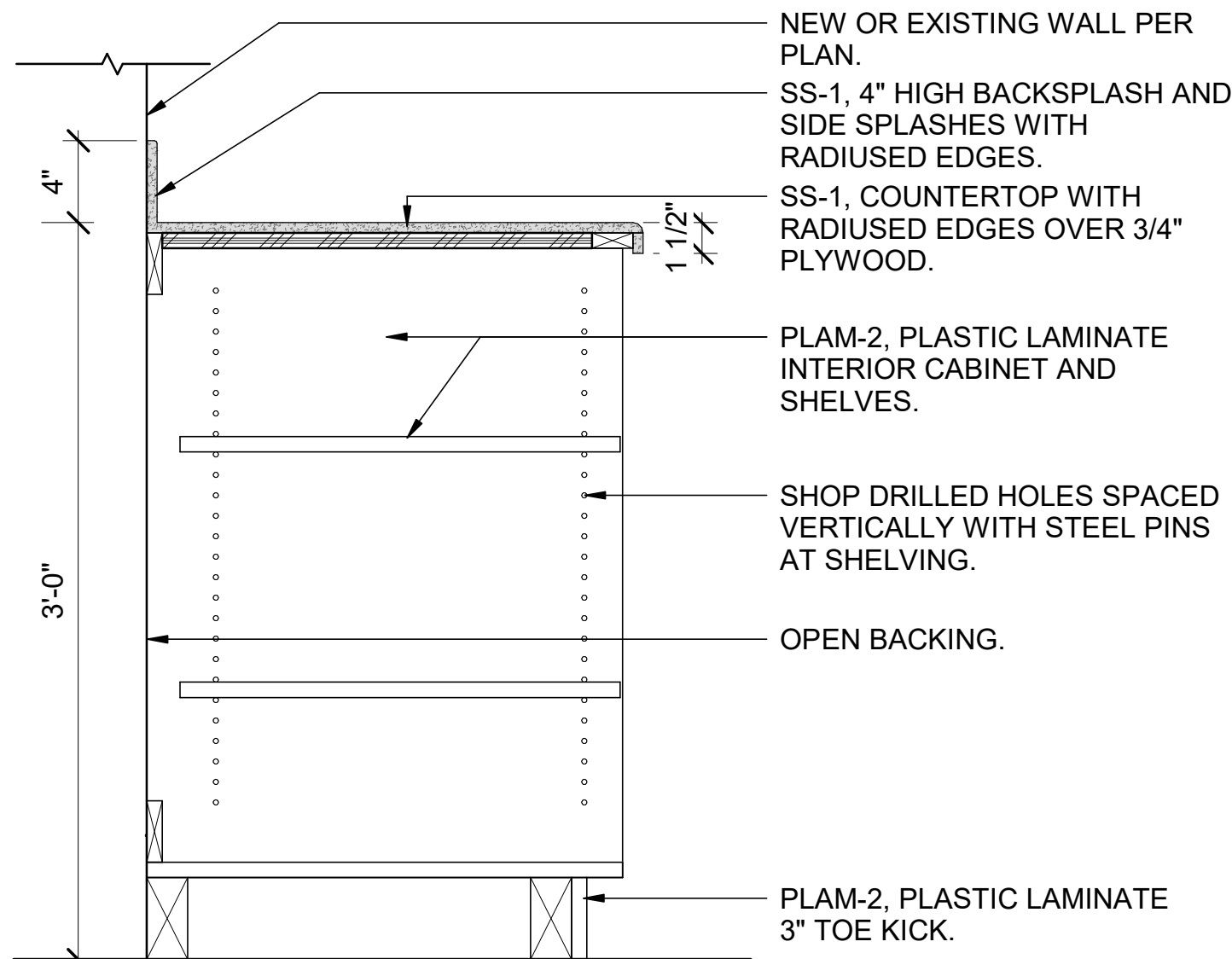
Project No. : 21024	Designed By: C/JN	Drawn By: C/FT	Checked By: P/MM
Date	Description	Mark	

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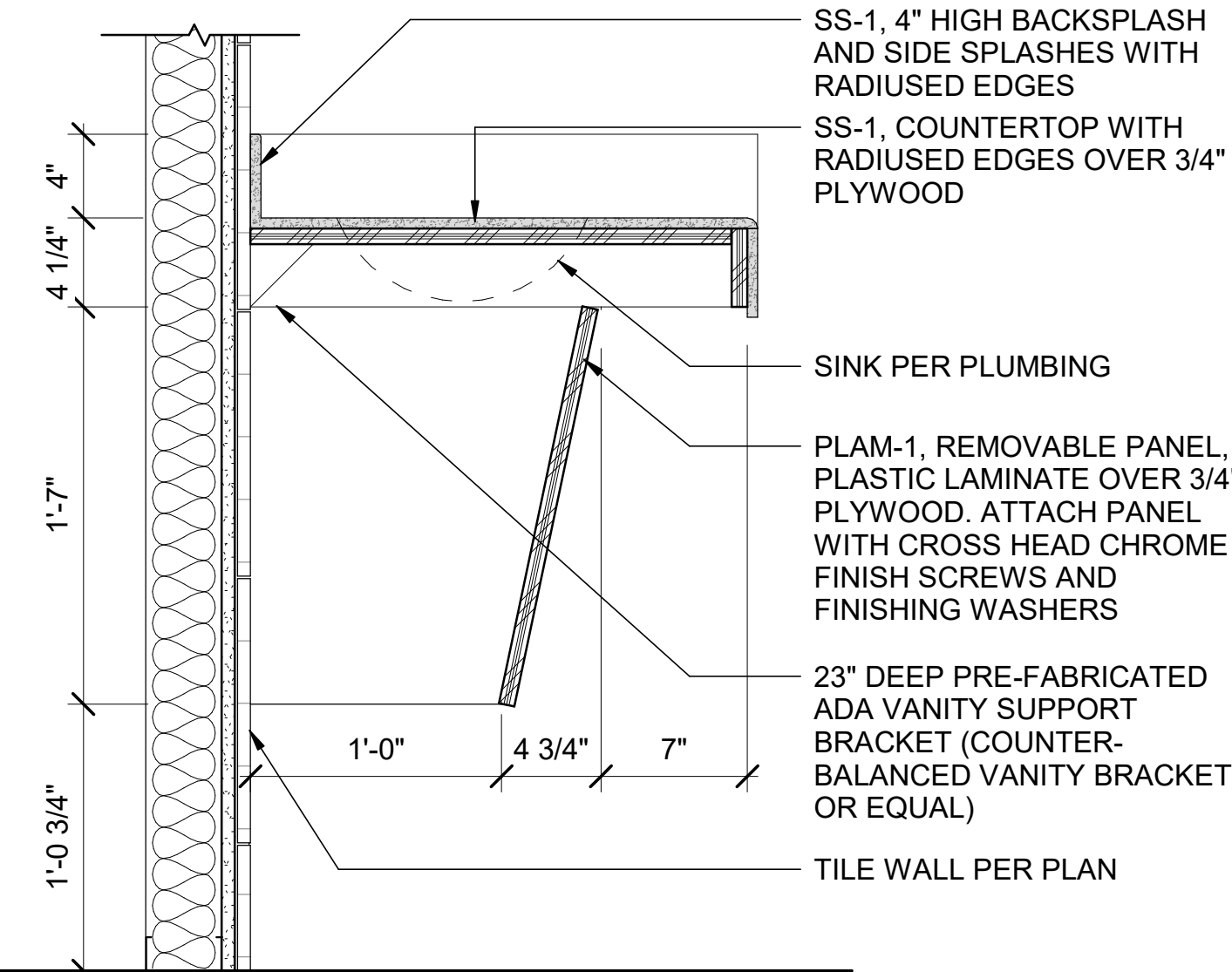
1 UPPER CABINET W/OPEN SHELVES

A-513 SCALE : 1 1/2" = 1'-0"



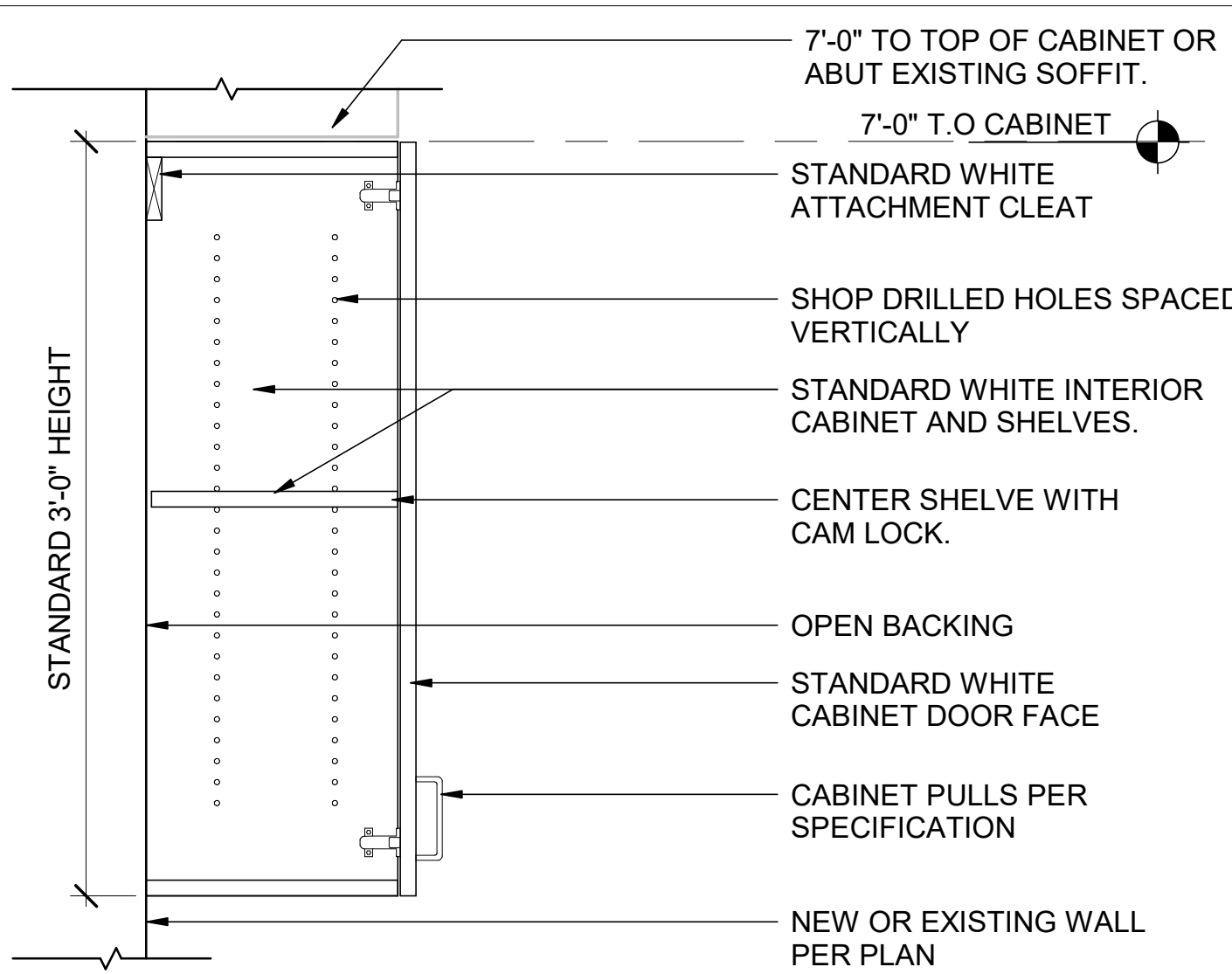
5 BASE CABINET W/OPEN SHELVES

A-513 SCALE : 1 1/2" = 1'-0"



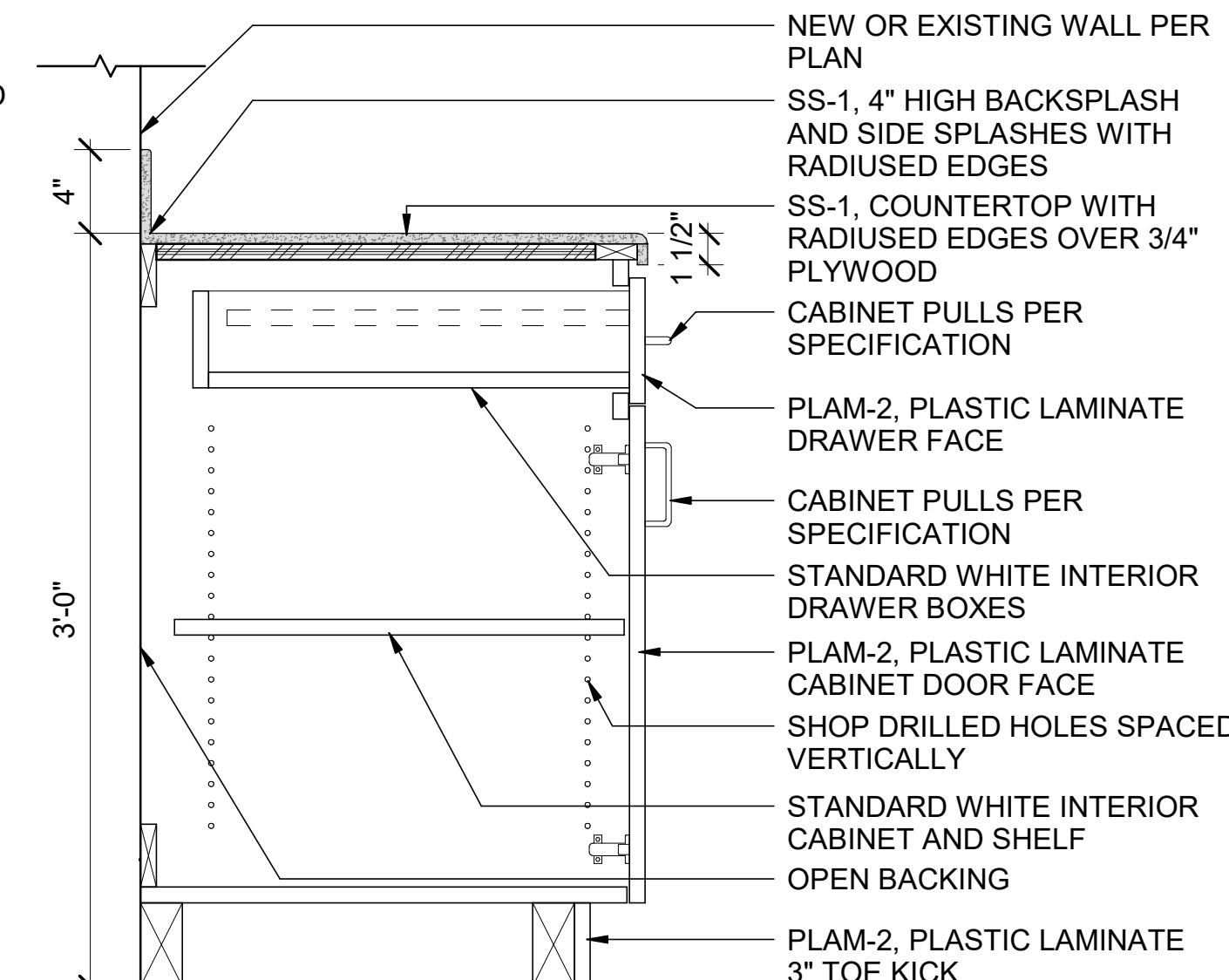
9 RESTROOM VANITY

A-513 SCALE : 1 1/2" = 1'-0"



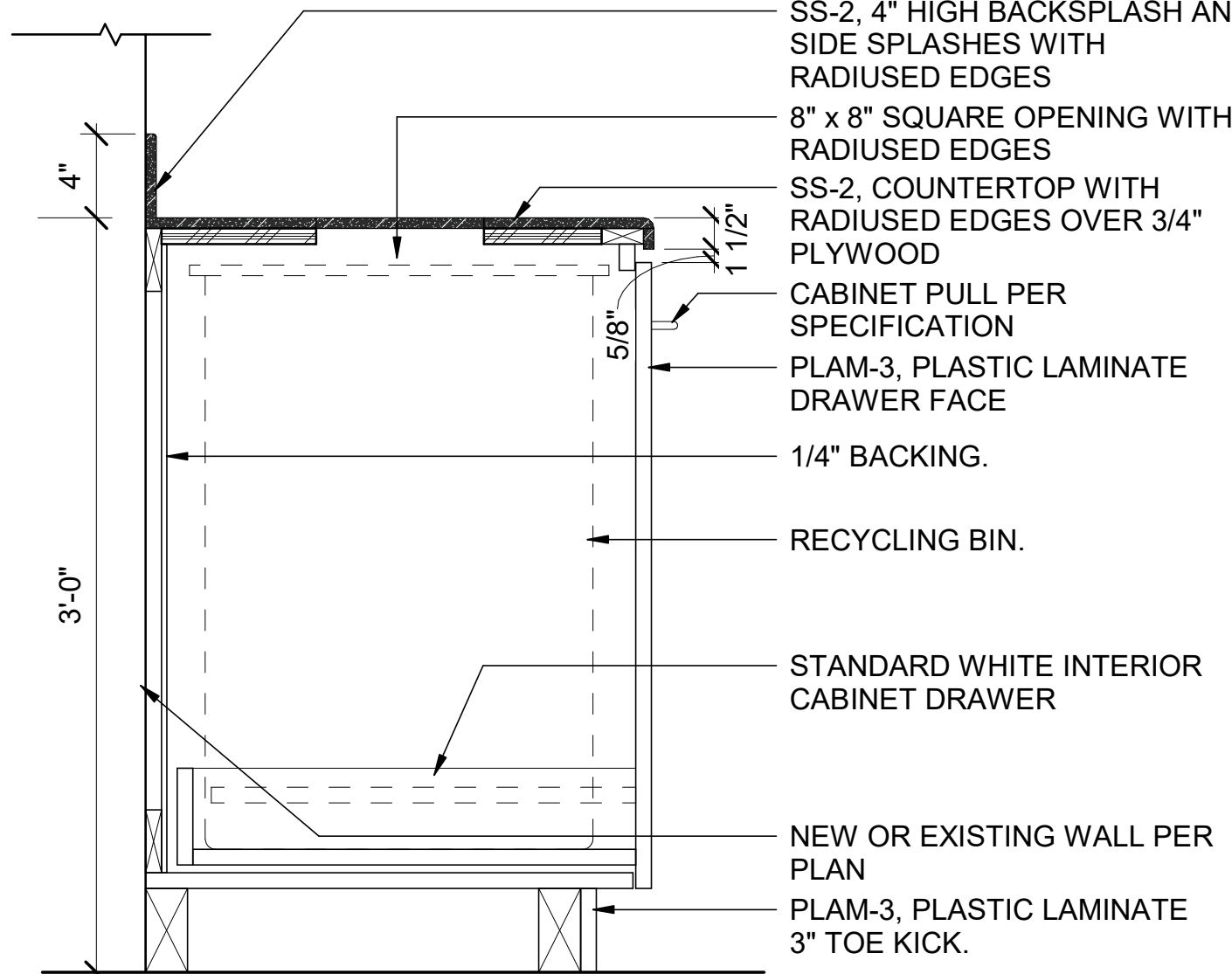
2 UPPER CABINET W/DOOR

A-513 SCALE : 1 1/2" = 1'-0"



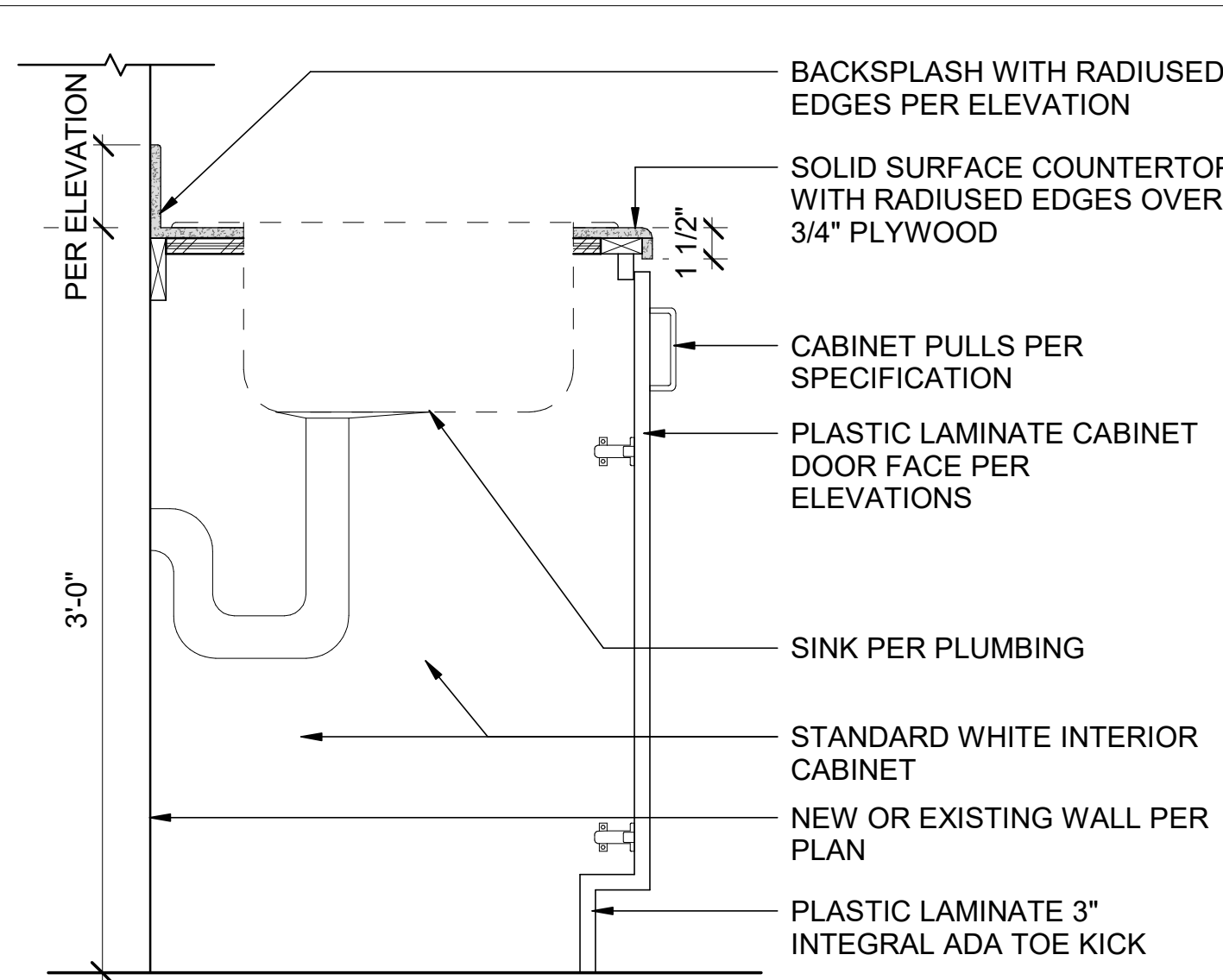
6 BASE CABINET W/DRAWER

A-513 SCALE : 1 1/2" = 1'-0"



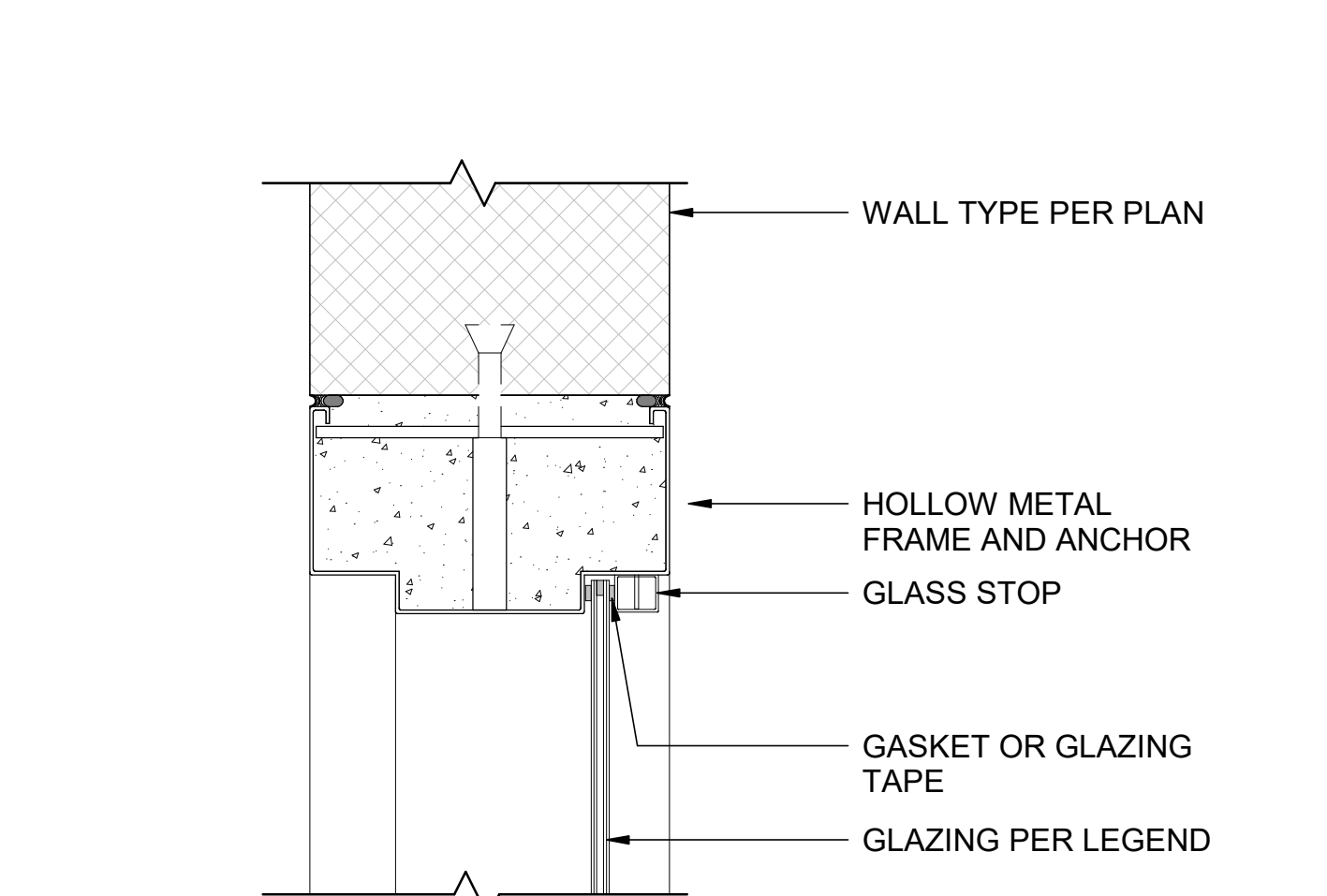
10 RECYCLING STATION

A-513 SCALE : 1 1/2" = 1'-0"



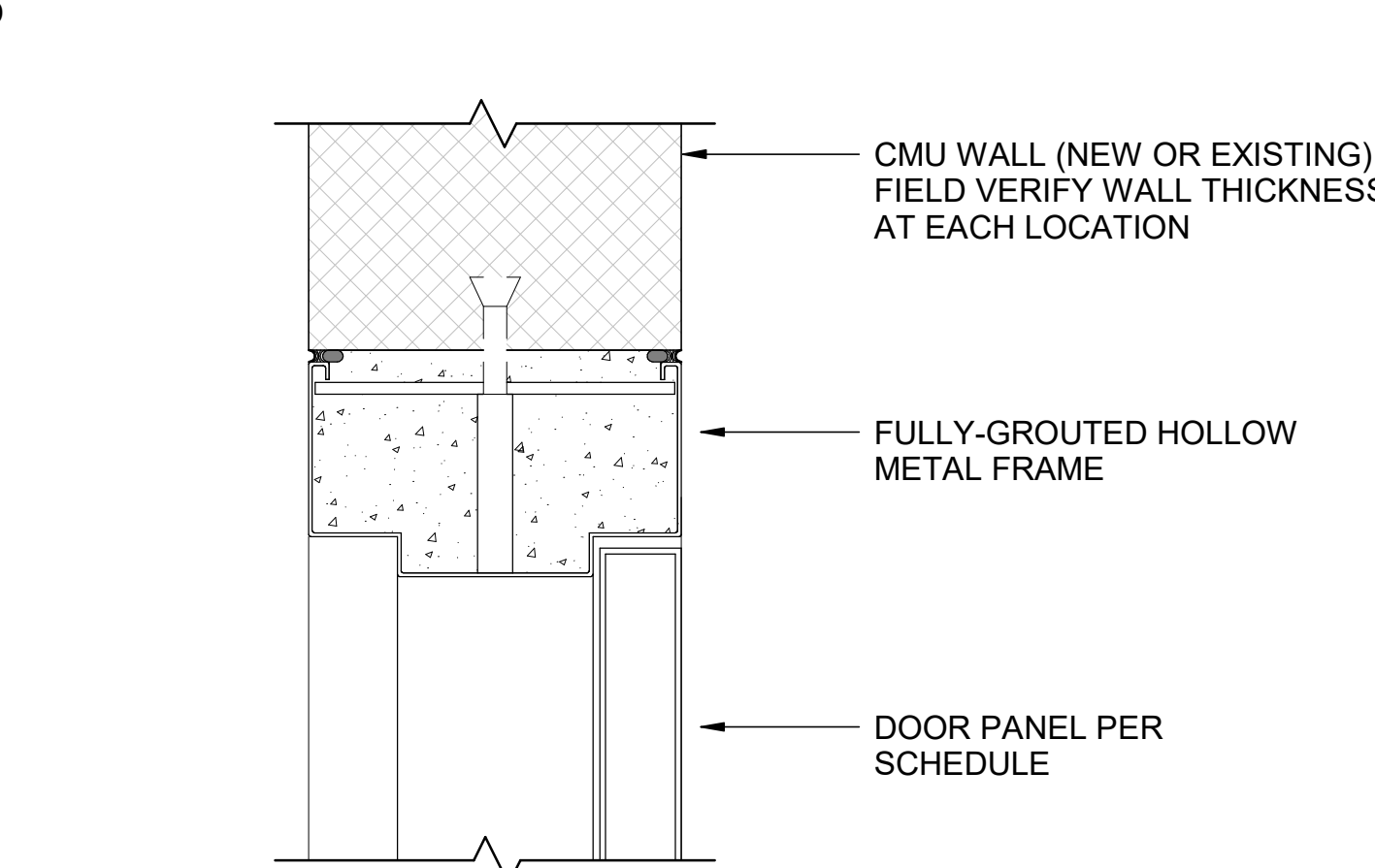
3 BASE CABINET W/SINK

A-513 SCALE : 1 1/2" = 1'-0"



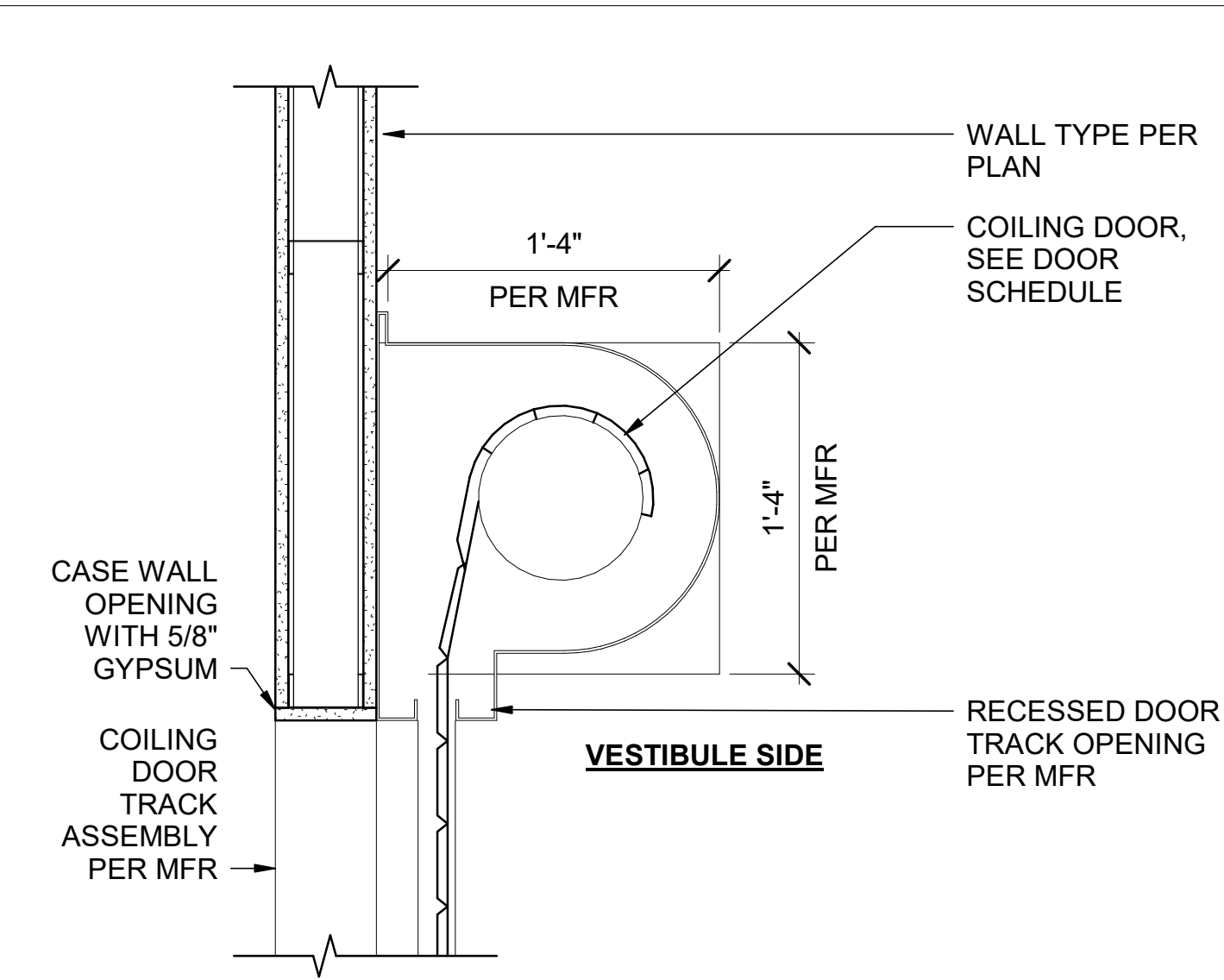
7 HEAD/JAMB - HM DOOR @ SIDELITE

A-513 SCALE : 3" = 1'-0"



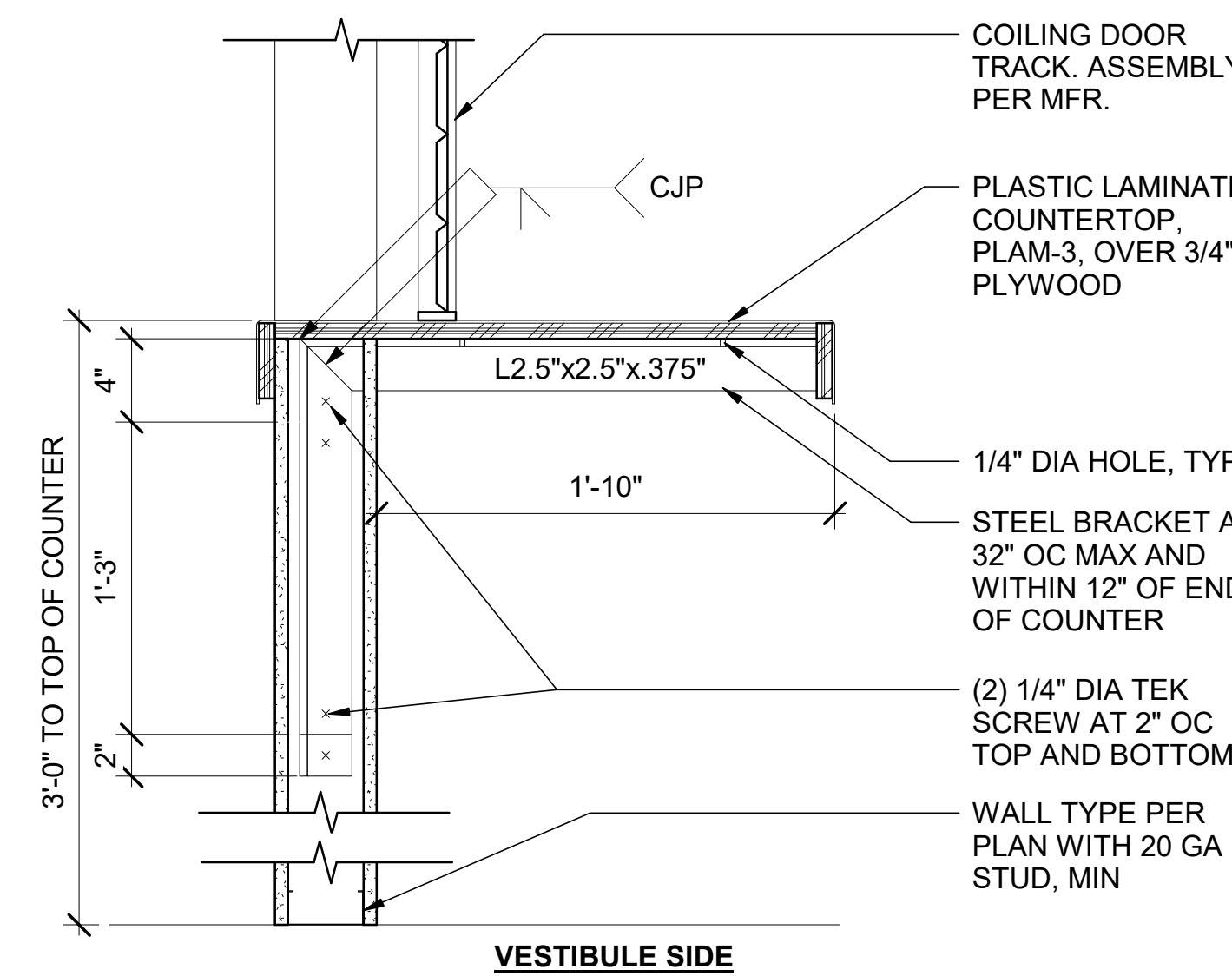
11 HM HEAD/JAMB @ CMU WALL

A-513 SCALE : 3" = 1'-0"



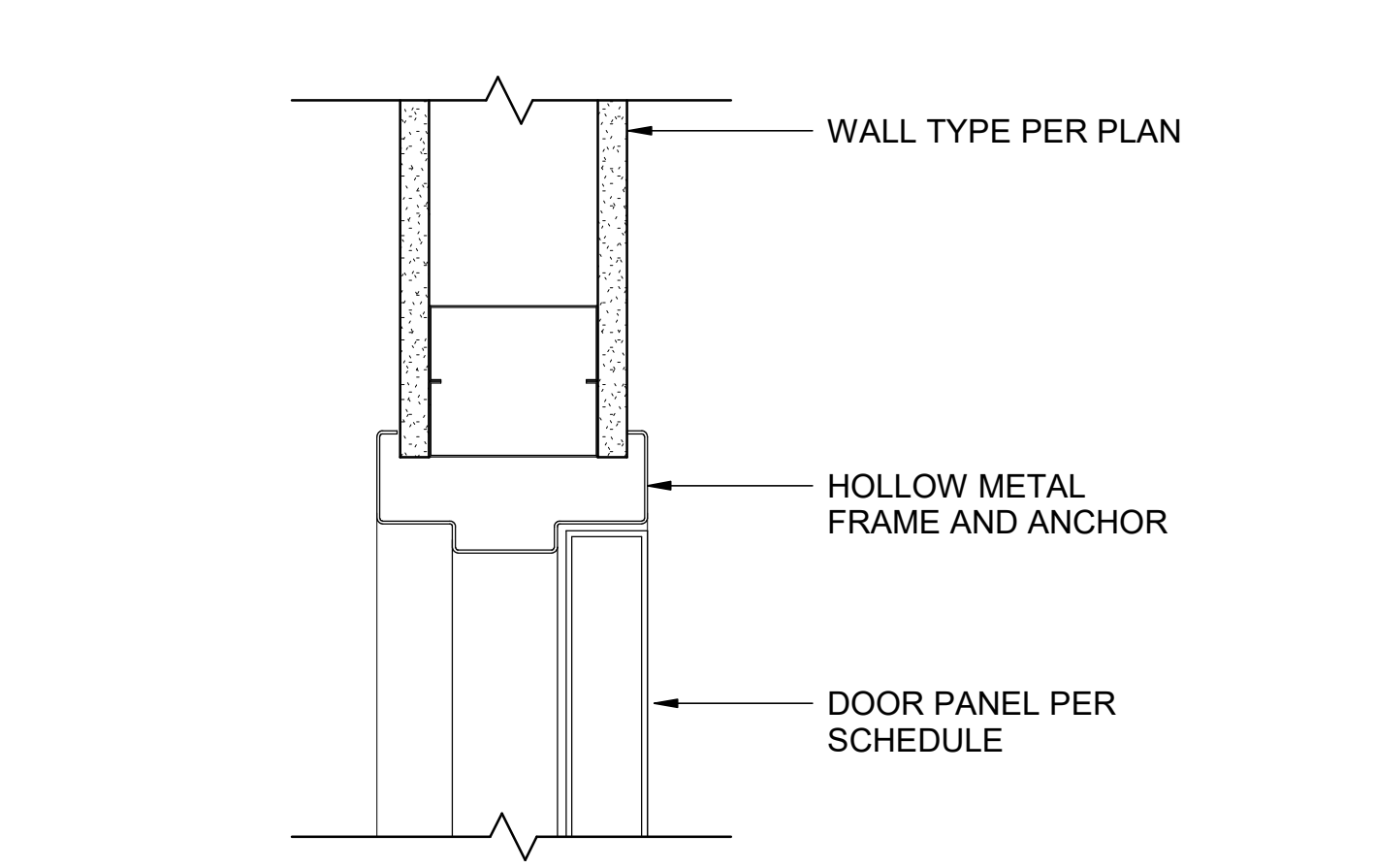
4 COILING VAULT DOOR - HEAD

A-513 SCALE : 1 1/2" = 1'-0"



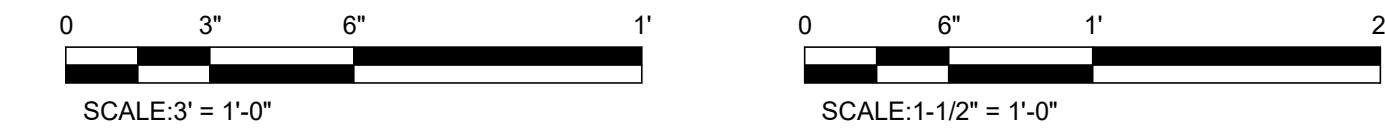
8 VAULT COUNTER

A-513 SCALE : 1 1/2" = 1'-0"



12 HEAD/JAMB - HM DOOR @ STUD WALL

A-513 SCALE : 3" = 1'-0"



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Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com



Project No.: 21024

Designed By: C/JN

Drawn By: C/FT

Checked By: P/MM

Date

Description

Mark

WASHINGTON MILITARY DEPARTMENT

ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA

INTERIOR DETAILS

A-513

Sheet Size: 22" x 34"

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WALL TYPES LEGEND				GENERAL NOTES			
X1 Exterior U-0.053	5/8" GWB 20GA 2 1/2" MTL STUD 16" OC. 3/8" AIR GAP 1 1/2" CONT. R7.5 RIGID INSULATION ADHESIVELY ADHERED NOMINAL 8" FULLY GROUTED LOAD BEARING CMU(AB) WEATHER RESISTIVE BARRIER 2" CONT. R10 RIGID INSULATION RAINSCREEN SYSTEM W/ ATTACHMENT SPANNING CONT. INSULATION 22 GA. 1' WIDE HORIZONTAL METAL PANEL Int. Ext.	S1 Interior	4 7/8" 5/8" GWB 3 5/8" METAL STUD @ 16" OC 5/8" GWB	1. 2. 3. 4. 5. 6. 7.	PROVIDE 5/8" WATER RESISTIVE AT ALL TOILET ROOMS, RESTROOMS, LOCKER ROOMS AND JANITOR CLOSETS. REFER TO CODE PLAN AND RCP FOR LOCATIONS OF FIRE-RATED OR INTERIOR WALLS WHICH TERMINATE AT UNDERSIDE OF METAL DECK/STRUCTURE. PROVIDED DEFLECTION TRACKS AT ALL INTERIOR PARTITIONS THAT TERMINATE AT THE UNDERSIDE OF METAL DECK/STRUCTURE. PROVIDE DEFLECTION TRACKS AT ALL INTERIOR WALLS THAT EXTEND TO THE UNDERSIDE OF THE ROOF DECK. ABUSE RESISTANT GYPSUM WALL BOARD SHALL BE USED IN ALL CORRIDORS. SEE FINISH PLANS FOR ADDITIONAL INFORMATION REGARDING PAINT, ETC. REFER TO SHEETS A-101 TO A-104, A-311 TO A-314, AND A-401 TO A-409 FOR LOCATIONS WALL TYPES. U-VALUES FIGURED FROM APPENDIX A IN WA STATE ENERGY CODE.		
M1 Interior STC 50	7 5/8" 8" CMU - FULLY GROUTED	S2 Interior	1 1/2" 5/8" GWB 7/8" HAT CHANNEL @ 16" OC	T1 Interior	4 3/4" CERAMIC TILE PER FINISH SCHEDULE 5/8" CEMENTITIOUS BACKERBOARD 3 5/8" METAL STUD @ 16" OC	T5 Interior	CERAMIC TILE PER FINISH SCHEDULE 5/8" CEMENTITIOUS BACKERBOARD EXISTING WALL
C1 Vault	8" CONCRETE WALL PER STRUCTURAL	S3 Interior	4 1/4" 5/8" GWB 3 5/8" METAL STUD @ 16" OC EXISTING WALL WHERE OCCURS	T2 Interior	5 3/8" CERAMIC TILE PER FINISH SCHEDULE 3 5/8" METAL STUD @ 16" OC W/ 3 1/2" SOUND ATTENUATION BATT 5/8" CEMENTITIOUS BACKERBOARD 5/8" TYPE 'X' GWB	T6 Interior	7 1/8" CERAMIC TILE PER FINISH SCHEDULE 5/8" CEMENTITIOUS BACKERBOARD 6" METAL STUD @ 16" OC
		S4 Interior STC 45	7 1/4" 5/8" GWB 6" METAL STUD @ 16" OC W/ 3 1/2" SOUND ATTENUATION BATT 5/8" GWB	T3 Interior	9 5/8" 5/8" CEMENTIOUS BACKERBOARD W/ CERAMIC TILE PER FINISH SCHEDULE 8" CMU - FULLY GROUTED 7/8" HAT CHANNEL	E1 Interior Wall Cover	MASONRY WALL 1 5/8" 20 GA STUD 12" OC 3/8" SEPARATION FOR CORRIDOR WALL TO ALIGN FLUSH 5/8" IMPACT RESISTANT GWB
		S5 Interior	6 5/8" 5/8" GWB 6" METAL STUD @ 16" OC MASONRY WALL WHERE OCCURS	T4 Interior	5 3/8" CERAMIC TILE PER FINISH SCHEDULE 3 5/8" METAL STUD @ 16" OC W/ 3 1/2" SOUND ATTENUATION BATT 5/8" CEMENTITIOUS BACKERBOARD 5/8" TYPE 'X' GWB		



617 Western Avenue
Seattle, WA 98104
Tel: 206.946.9746
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Mark	Description	Date

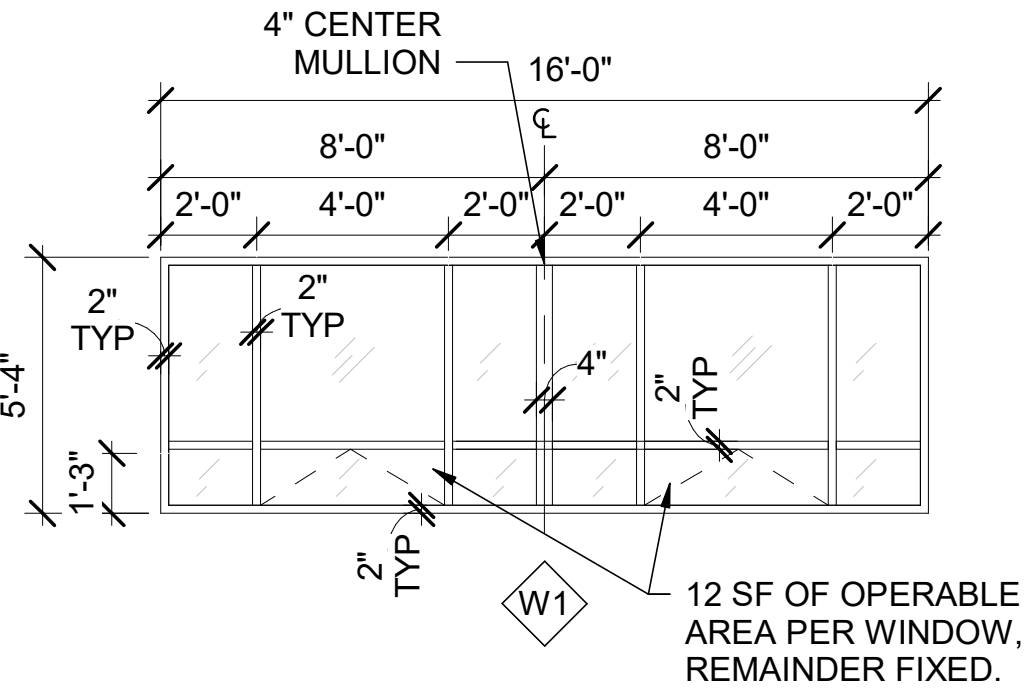
WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA
WALL TYPES LEGEND

A-601

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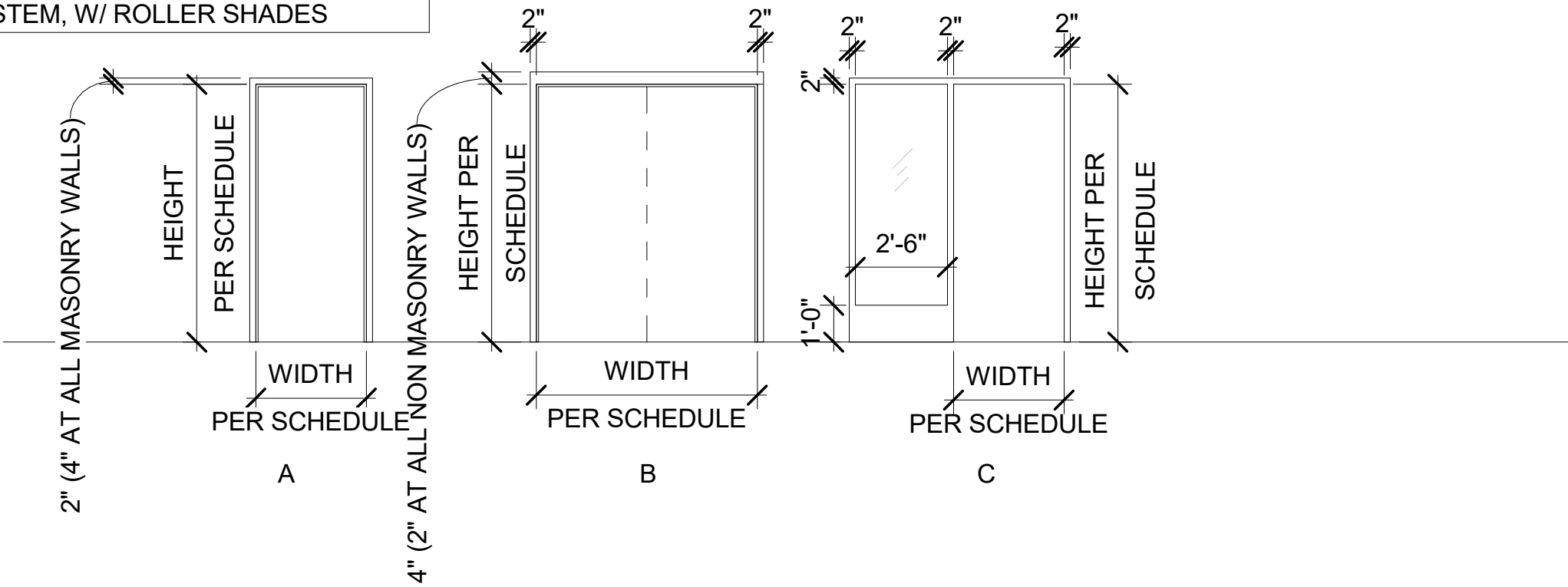
DOOR SCHEDULE																	
MARK	ROOM NAME	WIDTH	HEIGHT	THICKNES S	DOOR			FRAME			HEAD DETAIL	JAMB DETAIL	THRESHOL D	GLASS TYPE	DOOR - RATING	HARDWARE	COMMENTS
					DOOR TYPE	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH							
101	RETENTION OFFICE	3'-0"	7'-0"	1 3/4"	3	WD	WD-1	C	HM	IPT-3	7,11/A-513	7,11/A-513	3/A-512	G-2		HW-01	SEE 6/A-506 FOR SIDELITE DETAIL
103	LIFT PLATFORM	3'-0"	7'-0"	1 3/4"	6	WD	WD-1	A	HM	IPT-4	12/A-513	12/A-513	2/A-512	G-2		HW-19	
108	CONFERENCE	3'-0"	7'-0"	1 3/4"	1	WD	WD-1	A	HM	IPT-4	11/A-513	11/A-513	3/A-512			HW-22	
109	CORRIDOR	3'-0"	7'-4"	1 3/4"	2	HM	MATCH EXISTING EXTERIOR DOORS	A	HM	MATCH EXISTING EXTERIOR DOORS	1/A-501	5/A-501	4/A-501	G-1		HW-20	ALUMINUM STOREFRONT SYSTEM
110	MEN'S TOILET/SHOWER	3'-0"	7'-0"	1 3/4"	1	WD	WD-1	A	HM	IPT-3	11/A-513	11/A-513	5/A-512			HW-06	
111	WOMEN'S TOILET/SHOWER	3'-0"	7'-0"	1 3/4"	1	WD	WD-1	A	HM	IPT-3	11/A-513	11/A-513	5/A-512			HW-06	
112	FITNESS ROOM	3'-0"	7'-4"	1 3/4"	2	WD	WD-1	A	HM	IPT-3	12/A-513	12/A-513	4/A-512	G-2		HW-11	
112A	FIRE RISER	3'-0"	6'-8"	1 3/4"	1	HM	MATCH EXISTING EXTERIOR DOORS	A	HM	MATCH EXISTING EXTERIOR DOORS	7/A-501	7/A-501	10/A-501			HW-02	SEAT THRESHOLD 4" AFF
112B	MOTHERS ROOM	3'-0"	6'-8"	1 3/4"	1	WD	WD-1	A	HM	IPT-3	11/A-513	11/A-513	3/A-512			HW-05	
113A	MECH ROOM	6'-0"	6'-8"	1 3/4"	4	HM	MATCH EXISTING EXTERIOR DOORS	B	HM	MATCH EXISTING EXTERIOR DOORS	7/A-501	7/A-501	10/A-501		-	HW-03	
114	MULTIPURPOSE	3'-0"	7'-0"	1 3/4"	1	HM	IPT-3	A	HM	IPT-3	11/A-513	11/A-513	3/A-512			HW-16	
115	CLASSROOM	3'-0"	7'-0"	1 3/4"	1	HM	IPT-3	A	HM	IPT-3	12/A-513	12/A-513	1/A-512	G-2		HW-10	ALUMINUM STOREFRONT SYSTEM
115A	CLASSROOM	6'-0"	7'-0"	1 3/4"	4	HM	IPT-4	B	HM	IPT-4	12/A-513	12/A-513	1/A-512		-	HW-12	
116A	CLASSROOM	3'-0"	7'-0"	1 3/4"	2	HM	WD-1	A	HM	IPT-3	12/A-513	12/A-513	1/A-512	G-2		HW-10	
116B	CLASSROOM	3'-0"	7'-0"	1 3/4"	2	WD	WD-1	A	HM	IPT-3	12/A-513	12/A-513	1/A-512	G-2		HW-10	
116C	CLASSROOM	6'-0"	7'-0"	1 3/4"	4	HM	IPT-4	B	HM	IPT-4	12/A-513	12/A-513	1/A-512		-	HW-12	
116D	CLASSROOM	6'-0"	7'-0"	1 3/4"	4	HM	IPT-4	B	HM	IPT-4	12/A-513	12/A-513	1/A-512		-	HW-12	
117	UNIT STORAGE	6'-0"	7'-0"	1 3/4"	4	HM	IPT-4	B	HM	IPT-4	11/A-513	11/A-513	N/A		-	HW-14	
117A	UNIT STORAGE	3'-0"	7'-0"	1 3/4"	1	HM	IPT-4	A	HM	IPT-4	11/A-513	11/A-513	N/A			HW-15	
117B	UNIT STORAGE	3'-0"	7'-0"	1 3/4"	1	HM	IPT-4	A	HM	IPT-4	2/A-505	2/A-505	N/A			HW-15	
117C	UNIT STORAGE	6'-0"	7'-4"	1 3/4"	4	HM	MATCH EXISTING EXTERIOR DOORS	B	HM	MATCH EXISTING EXTERIOR DOORS	1/A-501	5/A-501	4/A-501		-	HW-21	
117C	UNIT STORAGE	6'-0"	7'-4"	1 3/4"	4	HM	MATCH EXISTING EXTERIOR DOORS	B	HM	MATCH EXISTING EXTERIOR DOORS	1/A-501	5/A-501	4/A-501		-	HW-21	
118	VAULT	3'-4"	7'-0"	1 3/4"	1	*	*	*	*	IPT-4	8/A-511	12/A-511	N/A		-	HW-18	CLASS V VAULT DOOR
118A	UNIT STORAGE	3'-0"	7'-0"	1 3/4"	1	HM	IPT-4	A	HM	IPT-4	12/A-513	12/A-513	N/A			HW-04	
118B	UNIT STORAGE	4'-0"	4'-0"	2"	5	STL	STL	*	*	*	4/A-513	PER MFR	8/A-513			HW-17	COILING DOOR
119A	KITCHEN	3'-0"	7'-0"	1 3/4"	2	WD	WD-1	A	HM	IPT-3	12/A-513	12/A-513	2/A-512	G-2		HW-07	
119B	KITCHEN	3'-0"	7'-0"	1 3/4"	2	WD	WD-1	A	HM	IPT-3	2/A-505	2/A-505	N/A	G-2		HW-07	
120	JANITOR	3'-0"	7'-0"	1 3/4"	1	HM	IPT-4	A	HM	IPT-4	11/A-513	11/A-513	5/A-512			HW-08	
121	TELECOMM	3'-0"	7'-0"	1 3/4"	1	HM	IPT-4	A	HM	IPT-4	12/A-513	12/A-513	2/A-512			HW-13	
123	TABLES & CHAIRS	6'-0"	6'-8"	1 3/4"	4	HM	IPT-4	B	HM	IPT-4	11/A-513	11/A-513	N/A		-	HW-09	PROVIDE HEAVY DUTY CRASH GUARDS ON DOOR AND DOOR JAMB.
124	FAMILY TOILET	3'-0"	7'-0"	1 3/4"	1	WD	WD-1	A	HM	IPT-4	11/A-513	11/A-513	5/A-512			HW-05	

WINDOW SCHEDULE											
TYPE MARK	COUNT	SILL HEIGHT	WIDTH	HEIGHT	MATERIAL	FINISH	SILL	JAMB	HEAD	GLASS TYPE	COMMENTS
W1	4	<varies>	0"	0"	ALUM	CLEAR ANODIZED	12/A-501	8/A-501	4/A-501	G1	INTEGRAL SASH
OPERABLE, ALUMINUM STOREFRONT SYSTEM, W/ ROLLER SHADES											



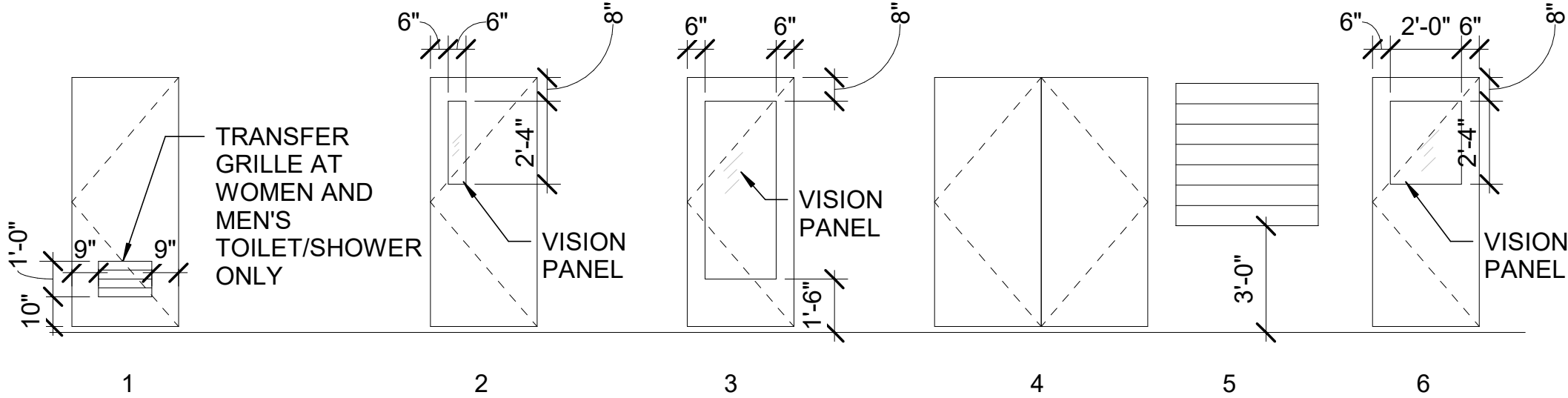
WINDOW TYPES

SCALE : 1/4" = 1'-0"



DOOR FRAME LEGEND

SCALE : 1/4" = 1'-0"



DOOR PANEL LEGEND

SCALE : 1/4" = 1'-0"

DOOR GENERAL NOTES

- REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOLS, LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
- FIELD VERIFY ROUGH OPENINGS.
- STRUCTURAL AND ANTI-TERRORISM PER MFR.
- EGRESS DOORS SHALL BE READILY OPERABLE FROM EGRESS SIDE WITHOUT USE OF KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
- ALL EXTERIOR DOORS TO BE WEATHERSTRIPPED.
- ALL EXTERIOR HM DOORS AND FRAMES TO BE GALVANIZED.
- ALL HM DOORS SHALL HAVE INSULATED CORE (U-VALUE 0.34 AT OPAQUE DOOR)
- ALL EXTERIOR SWING DOORS SHALL HAVE A MAXIMUM AIR RATE OF 0.20 CFM/SQ FT PER AAMA/WDMA/CSA101/I.S.2/A440

WINDOW LEGEND GENERAL NOTES

- FIELD VERIFY ALL ROUGH OPENINGS.
- STRUCTURAL AND ANTI-TERRORISM DESIGN PER MFR.
- ALL OPERABLE WINDOW PANES TO BE WEATHERSTRIPPED.
- ALL OPERABLE WINDOW TO BE 0.20 CFM/SQ. FT PER AAMA/WDMA/CSA101/I.S.2/A440
- ALL EXTERIOR CURTAIN WALL OR STOREFRONT GLAZING TO BE 0.06 CFM/SQ. FT PER ASTM E 283 AT 1.57PSF
- WINDOWS MUST HAVE A NFRC 100 RATING U-VALUE OF U-0.34 AT FIXED WINDOW, AND NO MORE THE U-VALUE OF U-0.44 AT OPERABLE PORTION.

GLAZING TYPES

- G-1 1" INSULATED LOW "E" WITH LAMINATED INNER PANE (VISIBLE TRANSMITTANCE 0.44 MIN) (SHGC 0.25 MAX) PER NFRC 100
- G-2 1/4" CLEAR SAFETY GLASS
- G-3 3/16" MIRRORED GLASS (AT MOTHERS ROOM & TOILET ROOMS)



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617 Western Avenue
Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com



Project No.: 21024

Designed By: C/JN

Drawn By: C/FT

Checked By: P/MM

Date

Description

Mark

WASHINGTON MILITARY DEPARTMENT

ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA

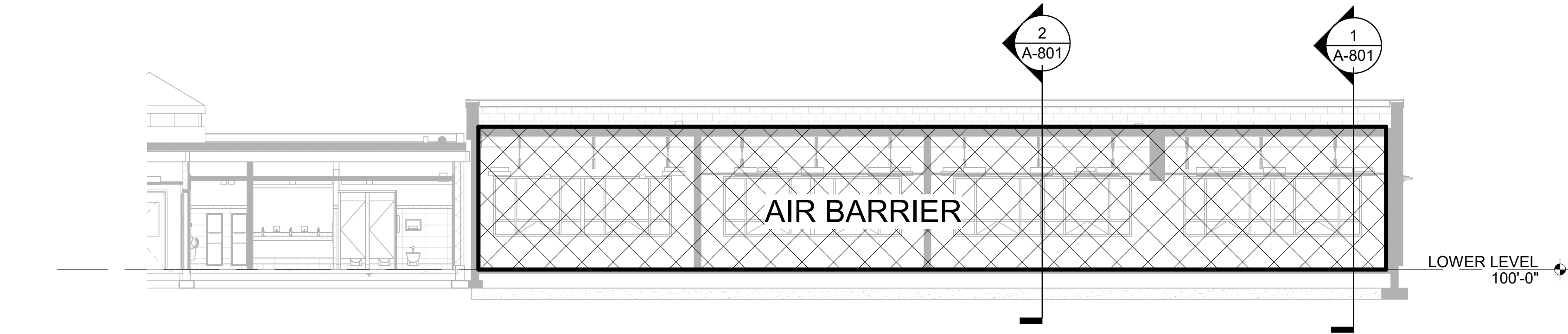
DOOR & WINDOWS SCHEDULE AND LEGEND

A-603

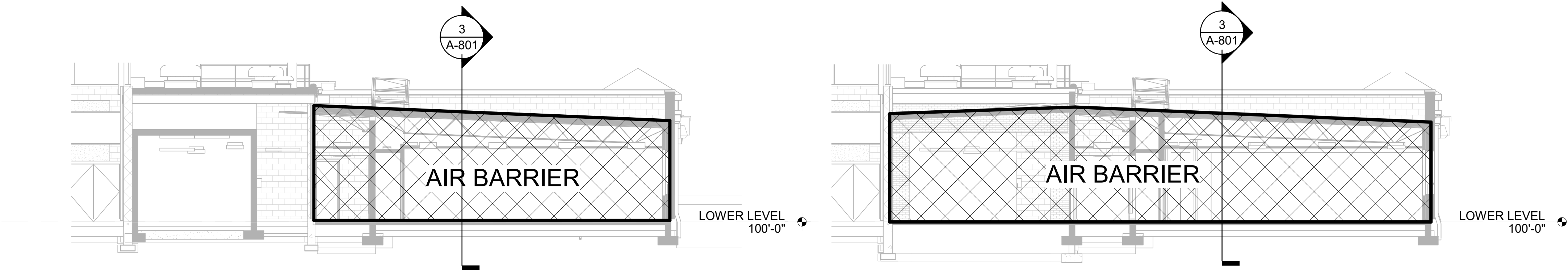
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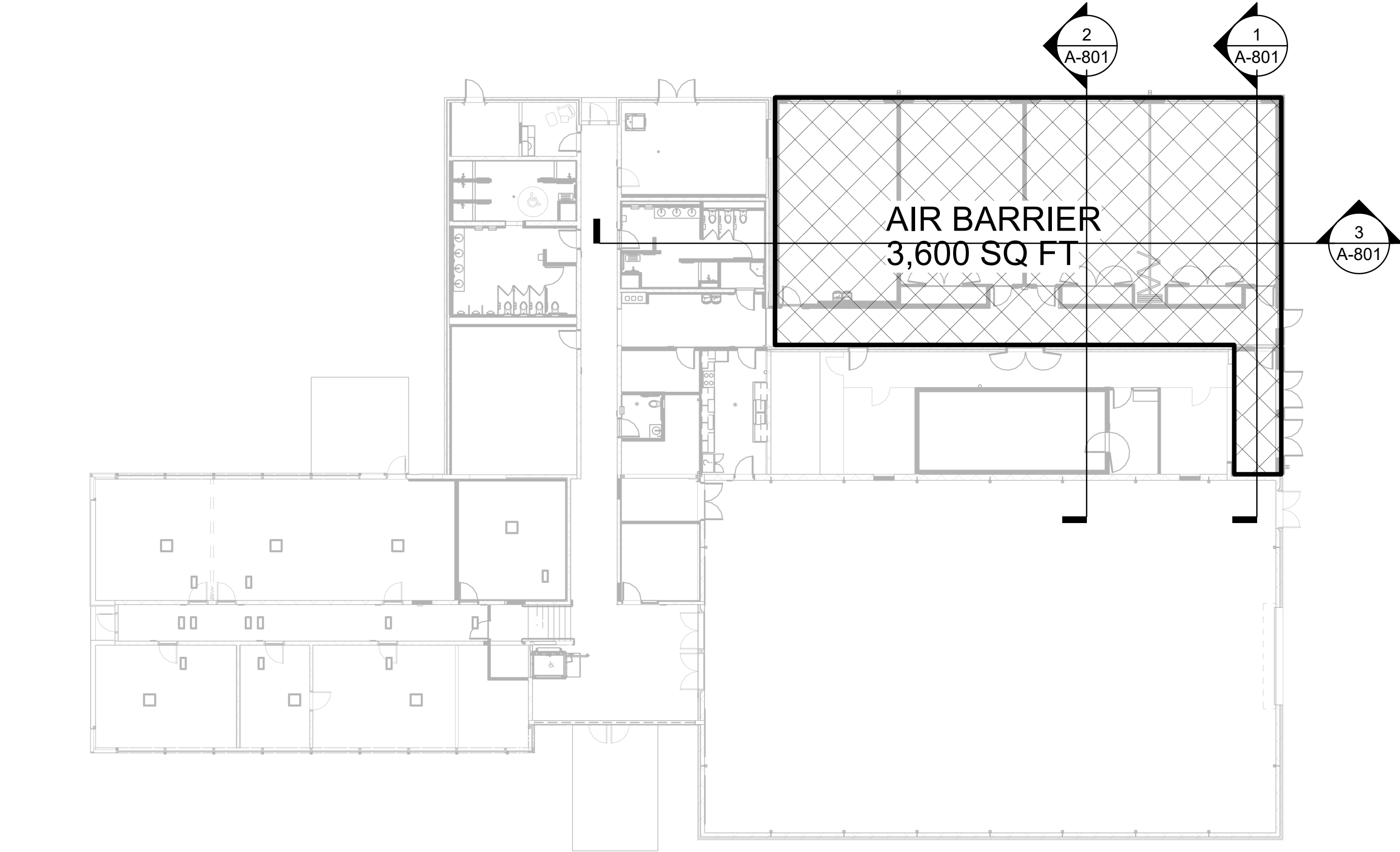


3 AIR BARRIER SECTION 3
A-801 SCALE : 1/8" = 1'-0"



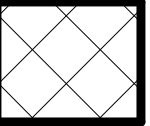
2 AIR BARRIER SECTION 2
A-801 SCALE : 1/8" = 1'-0"

1 AIR BARRIER SECTION 1
A-801 SCALE : 1/8" = 1'-0"



4 FLOOR PLAN - AIR BARRIER
A-801 SCALE : 1/16" = 1'-0"

AIR BARRIER DIAGRAM GENERAL NOTES

1.  INDICATES LOCATION OF AIR BARRIER.
2. SEE DETAILS ON A-500 SERIES SHEETS FOR AIR BARRIER MATERIAL MAKE UP. AIR BARRIER NOTED AS 'AB'

AIR BARRIER TESTING GENERAL NOTES

1. TESTING TO BE IN ACCORDANCE WITH ASTM E779 OR APPROVED EQUIVALENT. CRITERIA FOR MAXIMUM ALLOWED AIR LEAKAGE TO BE IN ACCORDANCE WITH 2018 WASHINGTON STATE ENERGY CODE.
2. MAXIMUM ALLOWED LEAKAGE IS 0.4 CFM AT 0.3IN.
3. UPON PASSING OF THE TEST AN AIR BARRIER TEST REPORT WILL BE ISSUED TO THE PROJECT TEAM.
4. FAILURE TO PASS ALLOWABLE LEAKAGE, CONTRACTOR SHALL SUBMIT A REPORT OF ALL CORRECTIVE MEASURES NEEDED TO PASS TO BE PROVIDED TO THE TEAM AND THE GOVERNING JURISDICTION.
5. AIR LEAKAGE TESTING SHALL BE PERFORMED PER ASTM C779 (OR EQUIVALENT METHOD APPROVED BY THE CODE OFFICIAL) AND THE TARGET LEAKAGE RATE IS 0.25 CFM/FT2 (1.5 L/S*M2) AT 0.3 IN. WG (75 PA)
6. ALL MUST BE SUBMITTED TO THE CITY OF ANACORTES (1) SUBMIT BUILDING ENCLOSURE AIR LEAKAGE TEST REPORTS TO JURISDICTION AND OWNER; (2) IF INITIAL TEST RESULT EXCEEDS 0.25 CFM/FT2 (1.5 L/S*M2), INDICATE THAT INSPECTION AND ALL PRACTICAL CORRECTIVE ACTIONS BE COMPLETED AND DOCUMENTED IN THE AIR LEAKAGE TEST REPORT; (3) IF INITIAL TEST RESULT EXCEEDS 0.40 CFM/FT2 (2.0 L/S*M2), INDICATE THAT CORRECTIVE ACTIONS SHALL ALSO INCLUDE RE-TESTING; (4) INDICATE THAT CORRECTIVE MEASURES AND RETESTING MUST BE REPEATED UNTIL THE TEST RESULT IS 0.40 CFM/FT2 (2.0 L/S*M2) OR LESS; (4) INCLUDE AIR BARRIER TEST REPORT IN PROJECT CLOSE OUT DOCUMENTATION PROVIDED TO BUILDING OWNER.
7. PROJECT CLOSE OUT DOCUMENTATION IS REQUIRED INCLUDING APPLICABLE CALCULATIONS, WSEC ENVELOPE COMPLIANCE REPORTS, AND FENESTRATION NFRC RATING CERTIFICATES

ENVELOPE GENERAL NOTES

1. NO ENVELOPE MODIFICATIONS TO THE EXISTING EXTERIOR WALLS.
2. COMPONENT PERFORMANCE BASED METHOD USED TO ACHIEVE WSEC COMPLIANCE AND ENHANCED ENVELOPE PERFORMANCE PER WA ENERGY CODE C406.10. SEE TOTAL UA WORKSHEET FOR WA ENERGY CODES.
3. NEW ENVELOPE AREAS
NEW WALL AND OPAQUE DOOR AREA: 1,614 SF
NEW NORTH WALL: 1050 SF
NEW EAST WALL: 564 SF
NEW ROOF AREA AT ADDITION: 3,410
NEW ROOF AREA AT EXISTING:
NEW VERTICAL FENESTRATION AREA: 341 SF



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Date	Description	Mark	

WASHINGTON MILITARY DEPARTMENT
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2219 M AVENUE, ANACORTES, WA
AIR BARRIER DIAGRAM AND
REQUIREMENTS

A-801

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ROOF AREAS

- Area 0** CONTINUOUS INSULATION @ R-60 MIN.
(SLOPES WITH ROOF)
- Area 1** CONTINUOUS AVERAGE R-46 MIN.
(CALCULATED AT A MAX. R-75.5 TO A MIN. R-25.65)
- Area 2** CONTINUOUS AVERAGE R-39.26 MIN.
(CALCULATED AT A MAX. R-57 TO A MIN. R-25.65)
- Area 3** CONTINUOUS AVERAGE R-52.3 MIN.
(CALCULATED AT A MAX. R-71.25 TO A MIN. R-38)
- Area 4** CONTINUOUS AVERAGE R-17 MIN.
(CALCULATED AT A MAX. R-38 TO A MIN. R-5.7)
- Area 5** CONTINUOUS INSULATION @ R-60 MIN.
(NO SLOPE)
- Area 6** CONTINUOUS INSULATION @ R-38 MIN.
(SLOPES WITH ROOF)

RECESSED DRAIN AREA @ EXISTING: 65 SF
CONTINUOUS INSULATION @ R-5.7 MIN.

RECESSED DRAIN AREA @ NEW: 12 SF
CONTINUOUS INSULATION @ R-5.7 MIN.

ROOF AREAS
GENERAL NOTES

1. REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
2. REFERENCE SHEET FOR ROOF TYPES LEGEND.
3. AVERAGE R-VALUES FOR AREAS CALCULATED USING THE EFFECTIVE U-FACTOR FOR RECTANGULAR TAPERED INSULATION CALCULATION PER FOOTNOTE D. TO TABLE A102.2.6.1 IN THE 2018 WASHINGTON STATE ENERGY CODE.
4. SEE SHEET A-121 FOR ROOF TYPES AND ADDITIONAL LAYERED CRICKETS AND SLOPES. SLOPES SHOWN HERE ARE INTENDED TO IDENTIFY THE BASE MINIMUM R-VALUES.
5. ROOF RIGID INSULATION IS ASSUMED TO BE R-5.7 PER INCH.
6. EXISTING ROOF AREAS BEING REPLACED WILL NOT REQUIRE A MINIMUM ONE-QUARTER VERTICAL UNIT FOR EVERY 12 UNITS HORIZONTAL FOR SLOPE PER IBC SECTION 1511.1 GENERAL, EXCEPTION 1. ALL NEW ROOFS WILL REQUIRE MINIMUM STATE ABOVE. SEE SLOPES ON SHEET A-121.



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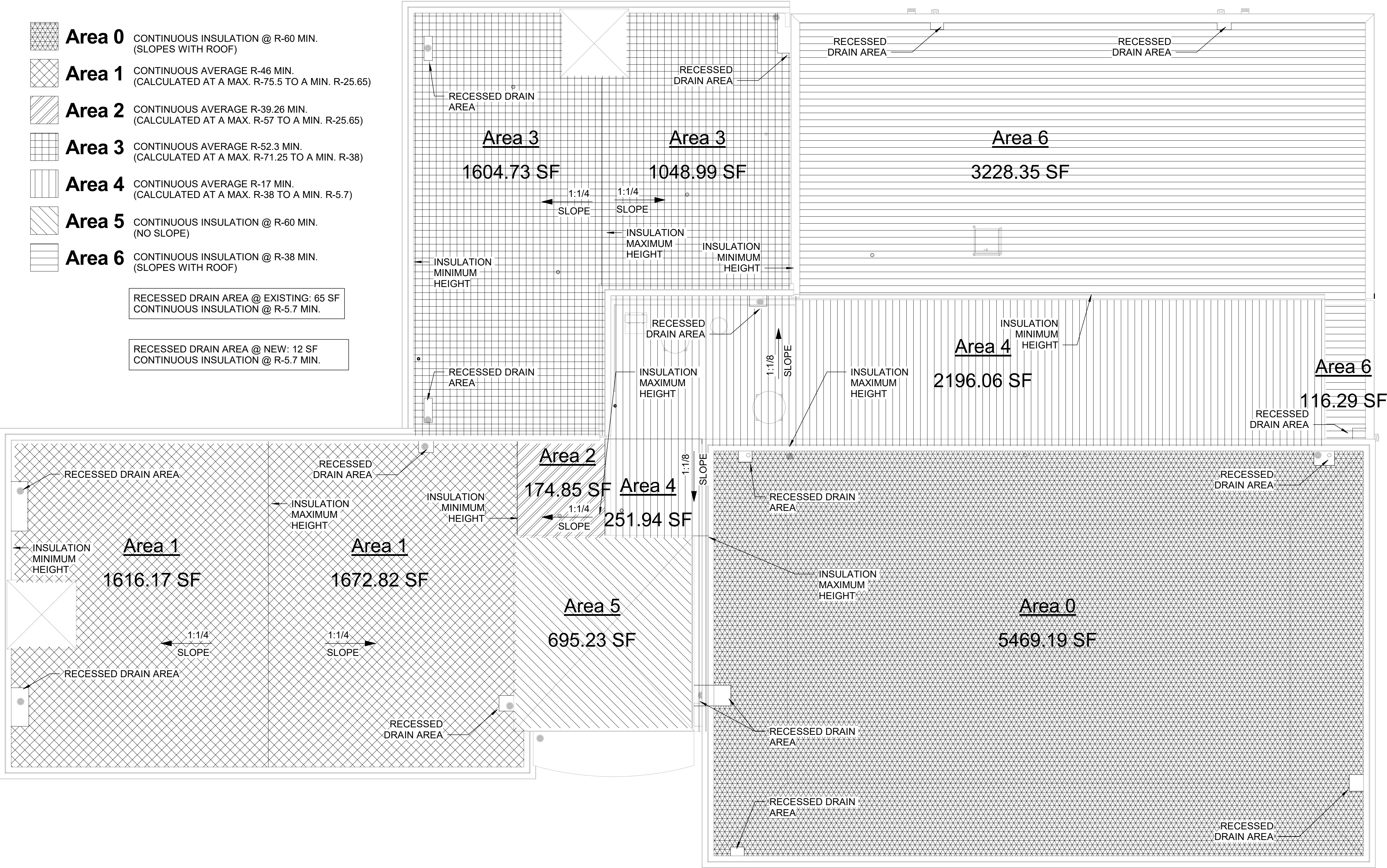
Project No.: 21024	Designed By: GJN	Drawn By: CFT	Checked By: Checker
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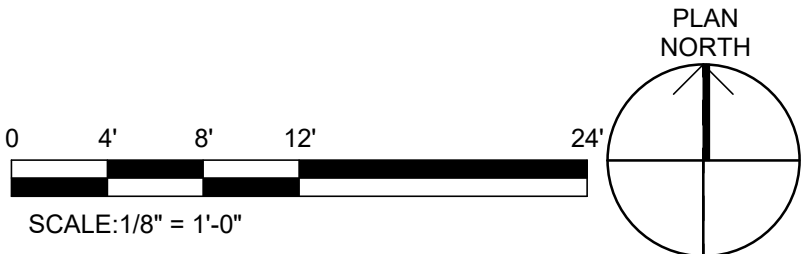
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ROOF R-VALUE ENERGY CALCULATIONS

A-802

Sheet Size: 22" x 34"
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1 ROOF SLOPE AND AREAS
A-802 SCALE : 1/8" = 1'-0"



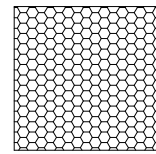
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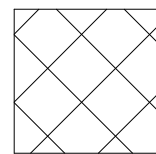
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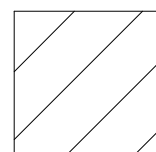
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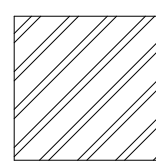
IPC 2018, CHAPTER 11: ROOF DRAINAGE | TABLE 1106.3 & TABLE 1106.6

FORMULA FOR FLOW RATE: (GPM = RATE X AREA X 0.0104)
RATE = 1 INCH PER HOUR/100 YEAR STORM

- 

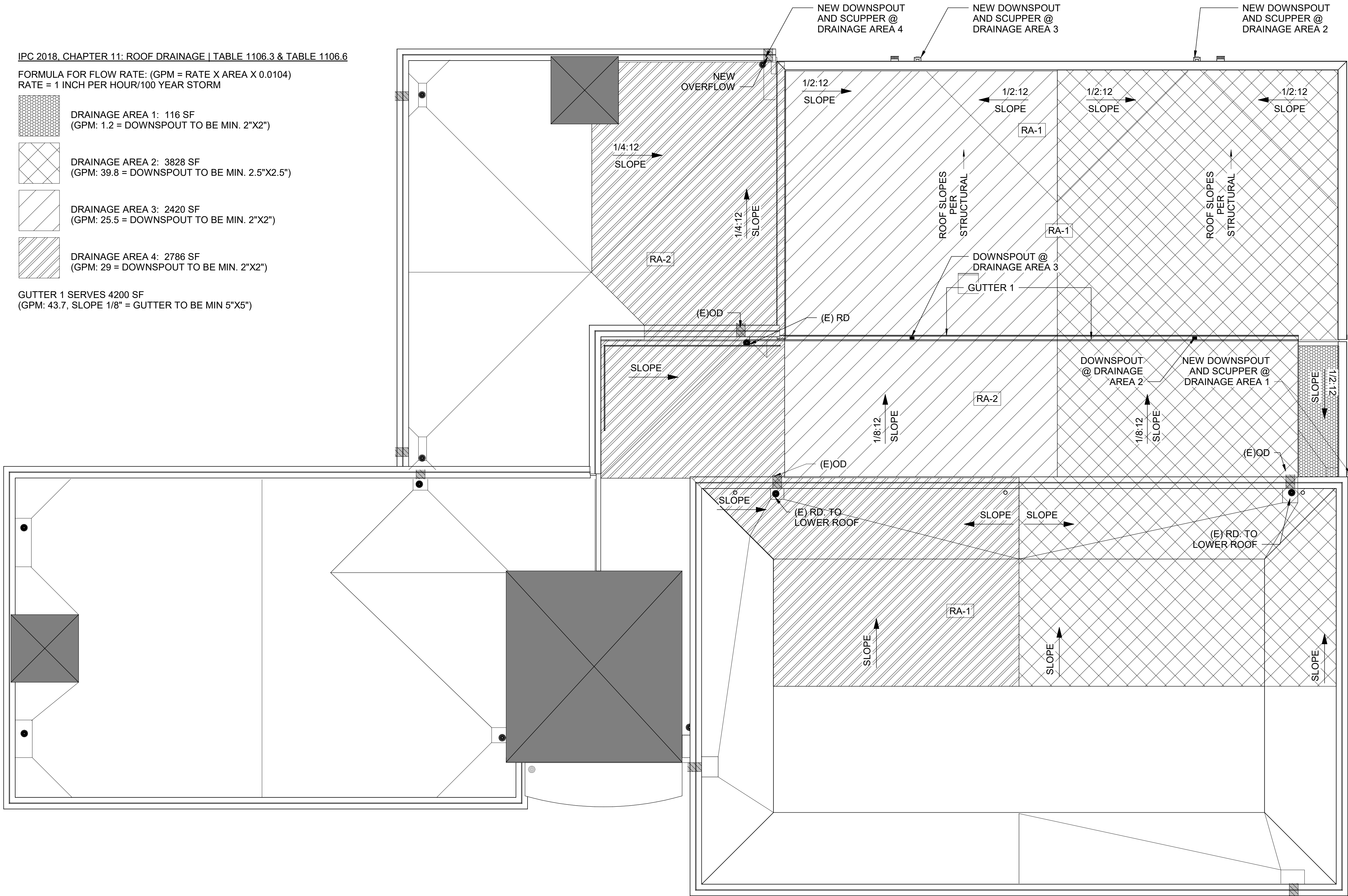
DRAINAGE AREA 1: 116 SF
(GPM: 1.2 = DOWNSPOUT TO BE MIN. 2"X2")
- 

DRAINAGE AREA 2: 3828 SF
(GPM: 39.8 = DOWNSPOUT TO BE MIN. 2.5"X2.5")
- 

DRAINAGE AREA 3: 2420 SF
(GPM: 25.5 = DOWNSPOUT TO BE MIN. 2"X2")
- 

DRAINAGE AREA 4: 2786 SF
(GPM: 29 = DOWNSPOUT TO BE MIN. 2"X2")

GUTTER 1 SERVES 4200 SF
(GPM: 43.7, SLOPE 1/8" = GUTTER TO BE MIN 5"X5")



ROOF AREAS GENERAL NOTES

1. REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
2. REFERENCE SHEET FOR ROOF TYPES LEGEND.
3. ALL DOWNSPOUTS TO BE A MIN. OF 4"X4".
4. ALL GUTTERS TO BE A MIN. OF 5"X5".
5. ALL SCUPPERS, DOWNSPOUTS, AND GUTTERS TO COMPLY WITH SMACNA.
6. DRAINAGE AREAS NOT CALLED OUT ON THIS DRAWINGS ARE UNCHANGED.



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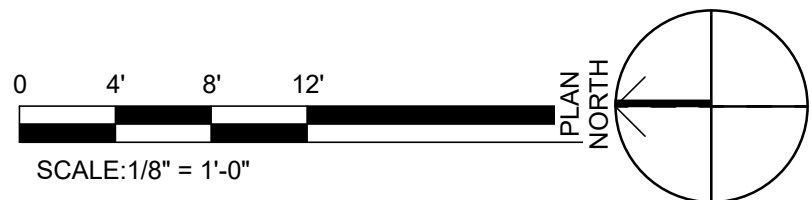
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ROOF DRAINAGE CALCULATIONS

A-803

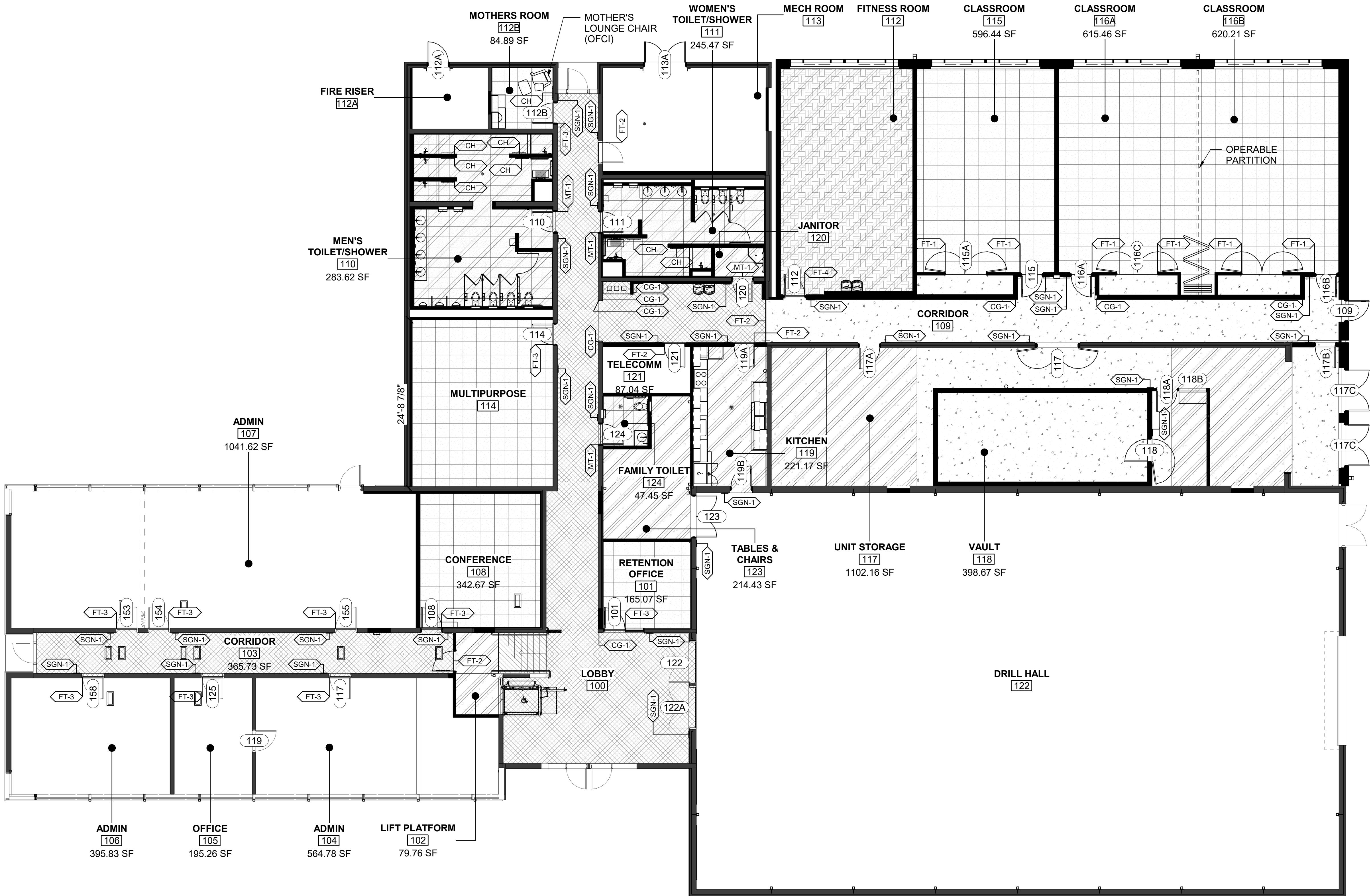
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1 ROOF PLAN
A-803 SCALE : 1/8" = 1'-0"



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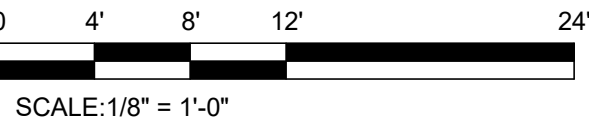


FINISH PLAN GENERAL NOTES

1. REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
2. REFERENCE SHEETS AD101, DEMOLITION PLAN, FOR DEMOLITION OF EXISTING FLOORING.
3. REFERENCE SHEET A-604 FOR FINISH LEGEND AND ADDITIONAL ABBREVIATIONS.
4. SEE SIGNAGE SCHEDULE FOR SIGN TYPE.

FINISH KEY

- CONC-1 (EXISTING FINISHED CONCRETE)
- CONC-2 (NEW FINISHED CONCRETE)
- CPT-1 (CARPET)
- ARF-1 (ATHLETIC RUBBER)
- PT-3 (PORCELAIN TILE)
- PT-4 (PORCELAIN TILE)
- MT-1 (MARBLE THRESHOLD)
- FT-(1-4) (RUBBER FLOOR TRANSITION)
- RVT-1 (RESILIENT VINYL)
- RST-1 (RUBBER STAIR TREAD)
- EXISTING TO REMAIN



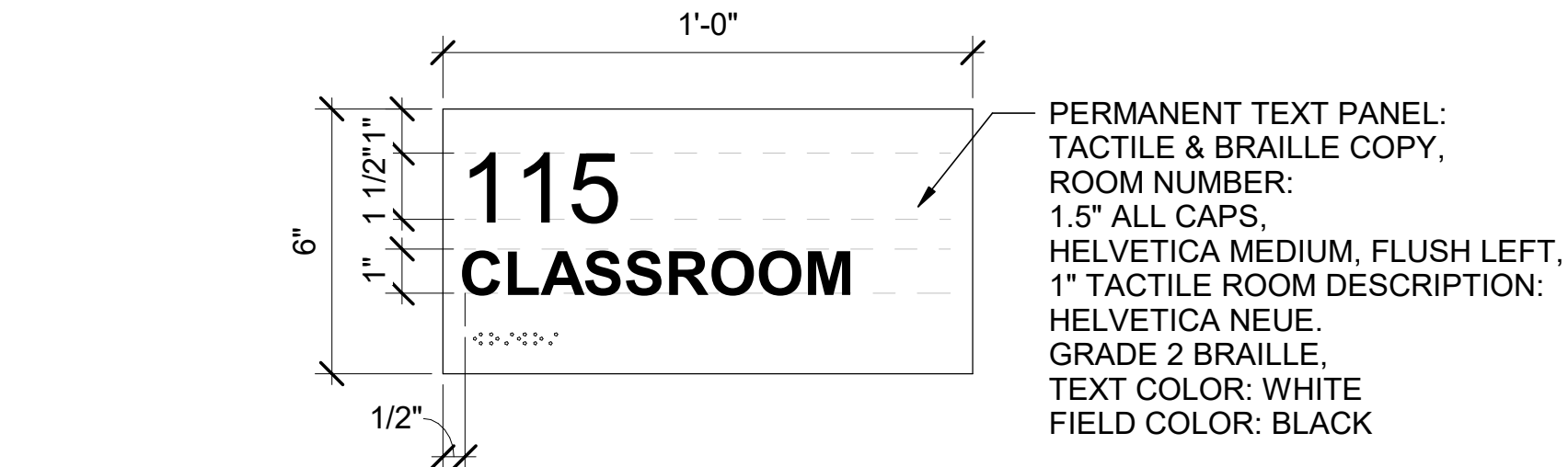
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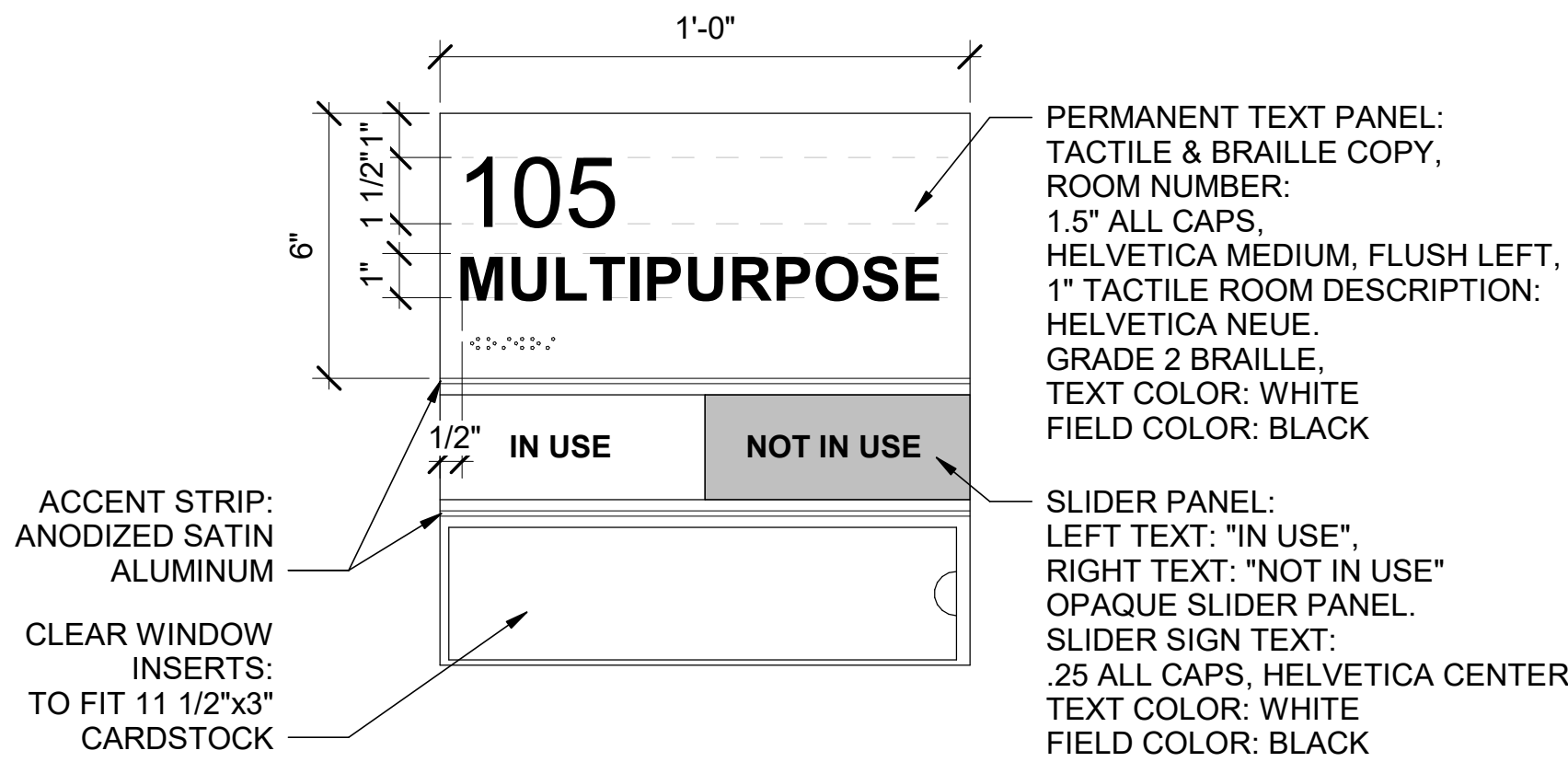
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FINISH PLAN



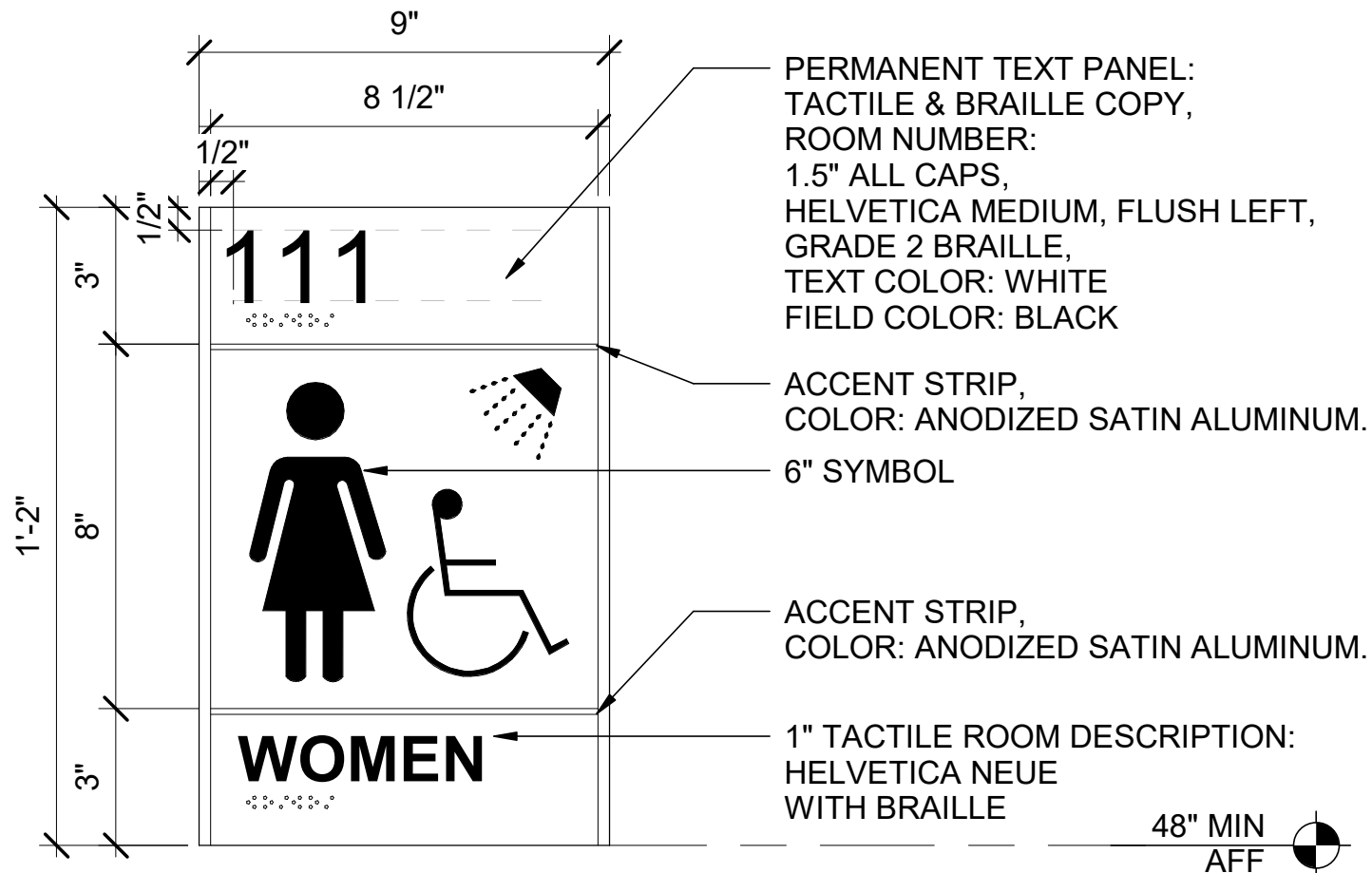
1 SIGN TYPE A

I-511 SCALE : 3" = 1'-0"



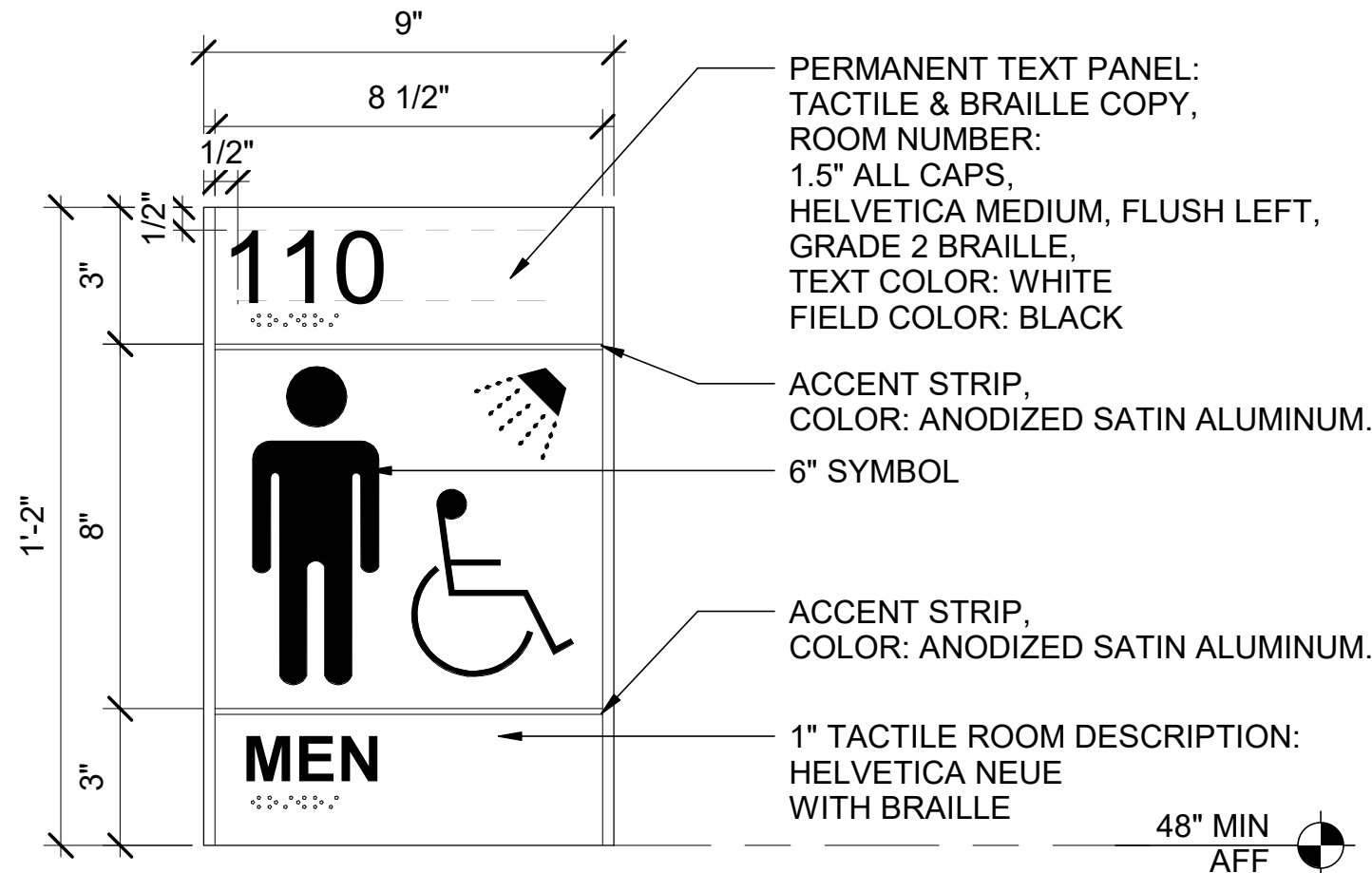
4 SIGN TYPE D

I-511 SCALE : 3" = 1'-0"



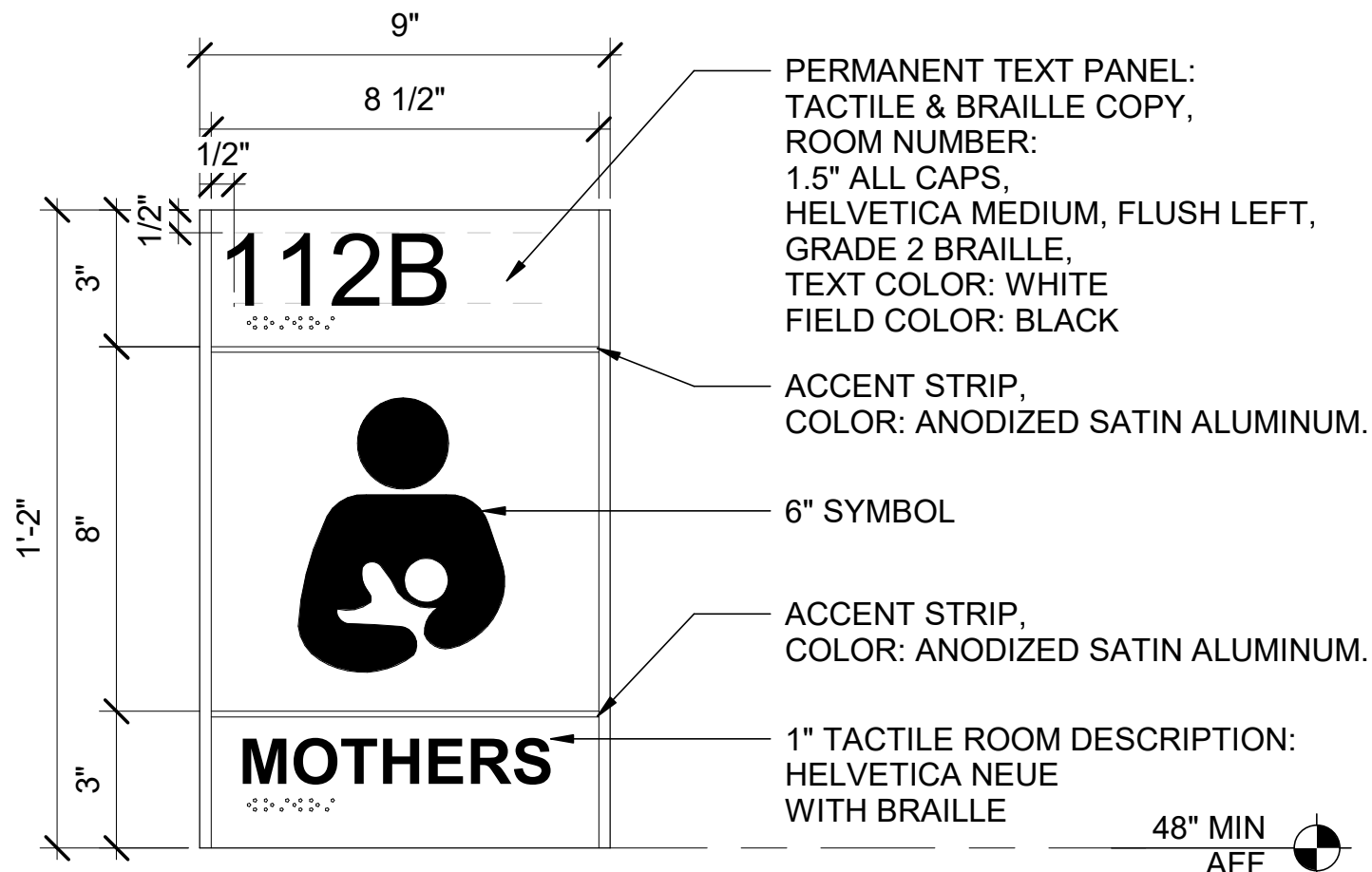
2 SIGN TYPE B

I-511 SCALE : 3" = 1'-0"



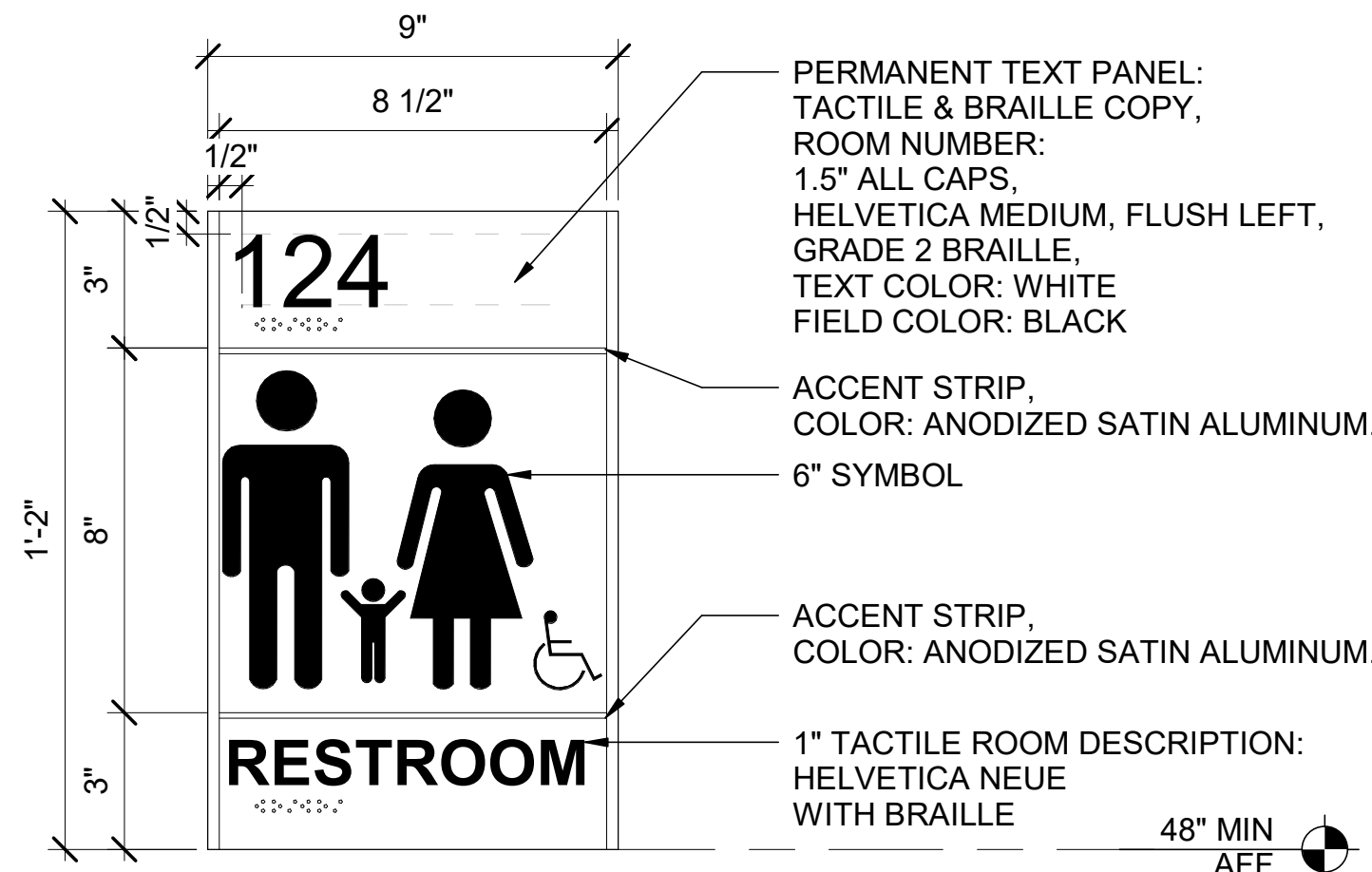
3 SIGN TYPE C

I-511 SCALE : 3" = 1'-0"



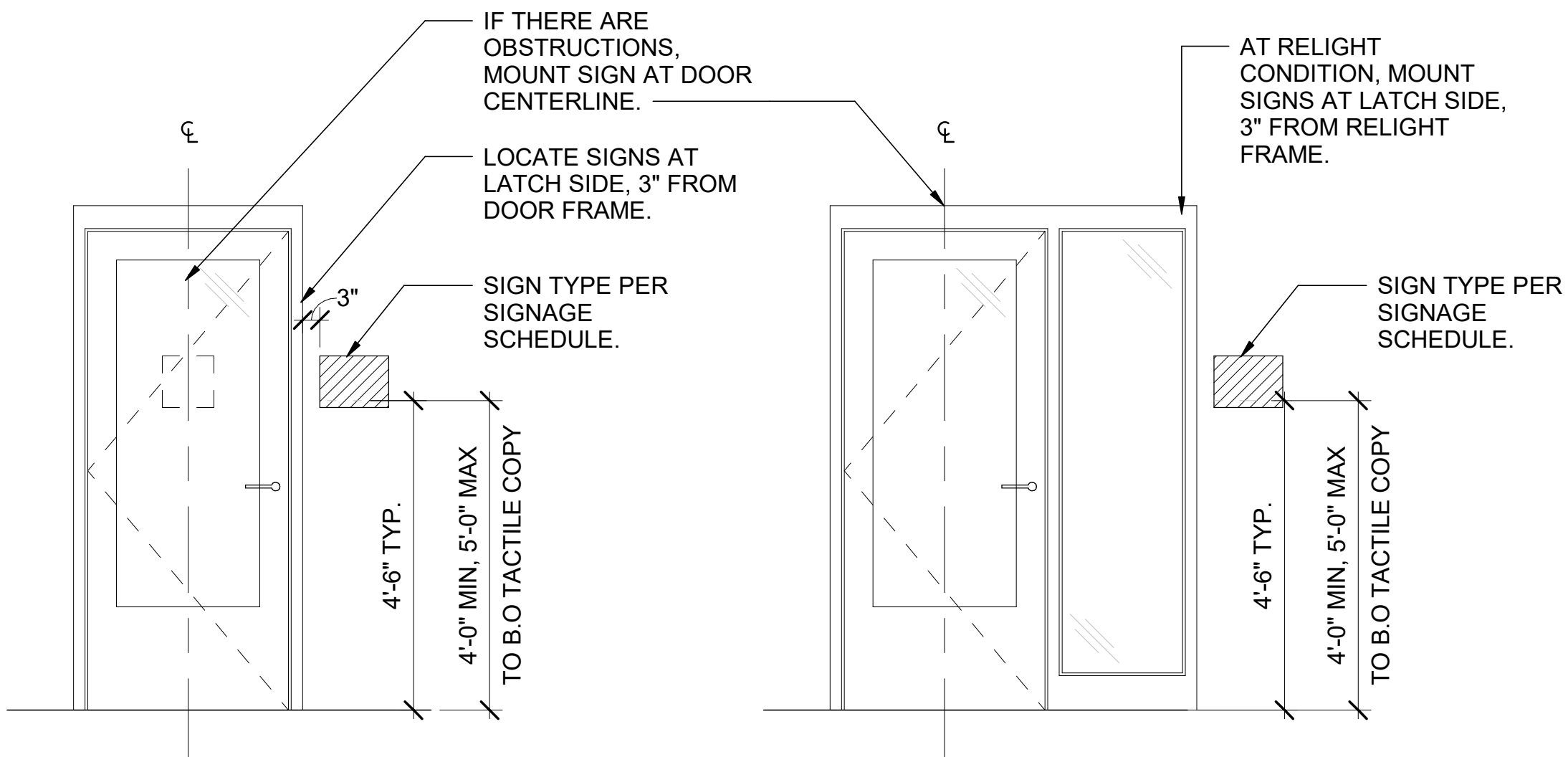
5 SIGN TYPE E

I-511 SCALE : 3" = 1'-0"



6 SIGN TYPE F

I-511 SCALE : 3" = 1'-0"



7 SIGN LOCATION

I-511 SCALE : 1/2" = 1'-0"



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SIGNAGE DETAILS

I-511

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ROOM FINISH SCHEDULE									
NO.	ROOM	BASE	CEILING	FLOOR	WALL				NOTES
					NORTH	EAST	SOUTH	WEST	
100	LOBBY	RB-1	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	CLEAN, PATCH AND REPAIR EXISTING FINISHES WHERE NECESSARY. MATCH EXISTING PAINT TO AREAS WHERE EXISTING WALL IS DISTURBED.
101	RETENTION OFFICE	RB-1	ACT-1	CPT-1	IPT-1	IPT-1	IPT-1	IPT-1	
102	LIFT PLATFORM	N/A	EXISTING	CONC-1	EXISTING	EXISTING	EXISTING	EXISTING	PAINT NEW STAIR HALF WALL IPT-1
103	CORRIDOR	RB-1	EXISTING	RVT-1	EXISTING	EXISTING	EXISTING	EXISTING	CLEAN, PATCH AND REPAIR EXISTING FINISHES WHERE NECESSARY. MATCH EXISTING PAINT TO AREAS WHERE EXISTING WALL IS DISTURBED.
104	ADMIN	RB-1	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	CLEAN, PATCH AND REPAIR EXISTING FINISHES WHERE NECESSARY. MATCH EXISTING PAINT TO AREAS WHERE EXISTING WALL IS DISTURBED.
105	OFFICE	RB-1	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	CLEAN, PATCH AND REPAIR EXISTING FINISHES WHERE NECESSARY. MATCH EXISTING PAINT TO AREAS WHERE EXISTING WALL IS DISTURBED.
106	ADMIN	RB-1	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	CLEAN, PATCH AND REPAIR EXISTING FINISHES WHERE NECESSARY. MATCH EXISTING PAINT TO AREAS WHERE EXISTING WALL IS DISTURBED.
107	ADMIN	RB-1	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	CLEAN, PATCH AND REPAIR EXISTING FINISHES WHERE NECESSARY. MATCH EXISTING PAINT TO AREAS WHERE EXISTING WALL IS DISTURBED.
108	CONFERENCE	RB-1	ACT-1	CPT-2	IPT-1	IPT-1	IPT-1	IPT-1	
109	CORRIDOR	RB-1	ACT-1	RVT-1/CONC-2 (SEE FINISH PLAN)	IPT-1	IPT-1	IPT-1	IPT-1	
110	MEN'S TOILET/SHOWER	PT-4	GWB	PT-2/PT-3	PT-1/IPT-2	PT-1/IPT-2	PT-1PT-1/IPT-2	PT-1/IPT-2	
111	WOMEN'S TOILET/SHOWER	PT-4	GWB	PT-2/PT-3	PT-1/IPT-2	PT-1/IPT-2	PT-1/IPT-2	PT-PT-1/IPT-21	
112	FITNESS ROOM	RB-1	ACT-2	ARF-1	IPT-2	IPT-2	IPT-2	IPT-2	
112A	FIRE RISER	RB-1	OTS	EXISTING	IPT-1	IPT-1	IPT-1	IPT-1	
112B	MOTHERS ROOM	RB-1	ACT-1	CPT-1	IPT-2	IPT-2	IPT-2	IPT-2	
113	MECH ROOM	RB-1	OTS	EXISTING	IPT-1	IPT-1	IPT-1	IPT-1	
114	MULTIPURPOSE	RB-1	ACT-1	CPT-2	IPT-1	IPT-1	IPT-1	IPT-1	
115	CLASSROOM	RB-1	ACT-1	CPT-2	IPT-1	IPT-1	IPT-1	IPT-1	CONC-2 AT CLOSET (SEE FINISH PLAN)
116A	CLASSROOM	RB-1	ACT-1	CPT-2	IPT-1	IPT-1	IPT-1	IPT-1	CONC-2 AT CLOSET (SEE FINISH PLAN)
116B	CLASSROOM	RB-1	ACT-1	CPT-2	IPT-1	IPT-1	IPT-1	IPT-1	CONC-2 AT CLOSET (SEE FINISH PLAN)
117	UNIT STORAGE	RB-1	OTS	CONC-1	IPT-1	IPT-1	IPT-1	IPT-1	
118	VAULT	RB-1	OTS	CONC-2	IPT-1	IPT-1	IPT-1	IPT-1	
118A	VESTIBULE	RB-1	OTS	CONC-1/CONC-2	IPT-1	IPT-1	IPT-1	IPT-1	
119	KITCHEN	RB-1	ACT-2	CONC-1	IPT-2	IPT-2	IPT-2	IPT-2	
120	JANITOR	RB-1	ACT-2	CONC-1	IPT-2	IPT-2	IPT-2	IPT-2	
121	TELECOMM	RB-1	OTS	CONC-1	IPT-1	IPT-1	IPT-1	IPT-1	
122	DRILL HALL	EXISTING	OTS	EXISTING	IPT-1	IPT-1	IPT-1	IPT-1	
123	TABLES & CHAIRS	RB-1	OTS	CONC-1	IPT-1	IPT-1	IPT-1	IPT-1	
124	FAMILY TOILET	RB-1	ACT-2	CONC-1	IPT-2	IPT-2	IPT-2	IPT-2	



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Mark	Description	Date

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FINISH SCHEDULE

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LEGEND: EXTERIOR FINISHES

MTL-1	METAL PANEL MFR: AEPSPAN COLOR:
MTL-2	COPINGS, SHEET METAL FLASHINGS, DOWNSPOUTS, GUTTER AND MISCELLANEOUS TRIM MFR: AESPAN COLOR:

LEGEND: INTERIOR FINISHES

ACT-1	ACOUSTICAL CEILING TILE MFR: ARMSTRONG STYLE: LYRA PB COLOR: WHITE SIZE: 24" x 24", 1" THICK
ACT-2	ACOUSTICAL CEILING TILE MFR: ARMSTRONG STYLE: LYRA - KITCHEN ZONE COLOR: WHITE SIZE: 24" x 24", 1" THICK
ARF-1	ATHLETIC RUBBER FLOORING MFR: ZANDUR STYLE: SUSTAIN CINEREOUS COLOR: CR4025 SIZE: 9MM THICK TILE
AWP-1	ACOUSTICAL WALL PANEL MFR: ARMSTRONG STYLE: TECTUM - FINALE COLOR: WHITE & READY TO BE PAINTED SIZE: 72"H x 12" W x 1 1/2"- 2 1/2" DEEP(VARIES)
CG-1	CORNER GUARD MFR: ACROVYN STYLE: CO-8 COLOR: STAINLESS STEEL W/ #4 SATIN FINISH SIZE: 3-1/2" WIDE LEGS, AT 3'-6" HIGH
CONC-1	EXISTING CONCRETE PREPARED AND RE-FINISHED
CONC-2	NEW FINISHED CONCRETE
CPT-1	CARPET TILE MFR: INTERFACE STYLE: CUBIC COLOR: 6395 CONSTRUCTION SIZE: 60CM X 60CM INSTALLATION: NON DIRECTIONAL
CT-1	CERAMIC TILE - RESTROOM WALL ACCENT TILE MFR: DAL TILE STYLE: COLOR WHEEL CLASSICS COLOR: ARTISAN BROWN, 0144 FINISH: MATTE SIZE: 3" x 6"
DP-1	DOOR EDGE PROTECTOR MFR: CONSTRUCTION SPECIALTIES FINISH: STAINLESS STEEL SIZE: HEIGHT 30". MOUNT AT 1" FROM THE BOTTOM OF DOOR FRAMES..
FT-1	RUBBER FLOOR TRANSITION - CARPET EDGING MFR: ROPPE STYLE: #43 REDUCER STRIP 1/4" COLOR: SMOKE, 174
FT-2	RUBBER FLOOR TRANSITION - FLOOR REDUCER STRIP MFR: ROPPE STYLE: #22 REDUCER STRIP 1/8" COLOR: SMOKE, 174
FT-3	RUBBER FLOOR TRANSITION - FLOOR REDUCER STRIP MFR: ROPPE STYLE: #74 TRANSITION 3/8" COLOR: SMOKE, 174
FT-4	RUBBER FLOOR TRANSITION - FLOOR REDUCER STRIP MFR: ROPPE STYLE: #65 TRANSITION 1/4" TO 1/8" COLOR: SMOKE, 174

GT-1	GROUT AT RESTROOM WALL MFR: CUSTOM TYPE: PER SPEC COLOR: DRIFTWOOD, #543
GT-2	GROUT AT RESTROOM FLOOR MFR: CUSTOM TYPE: PER SPEC COLOR: TRUFFLE, #540
GWB	GYPSUM BOARD PAINT COLOR AS SCHEDULED
IPT-1	INTERIOR PAINT - GENERAL WALLS AND GYPSUM CEILINGS MFR: SHERWIN WILLIAMS COLOR: WHITE SHADOW, SW5760 FINISH: EGGSHELL
IPT-2	INTERIOR PAINT - RESTROOM/KITCHEN WALLS AND CEILING (WET AREAS) MFR: SHERWIN WILLIAMS COLOR: WHITE SHADOW, SW5760 FINISH: SEMI-GLOSS ENAMEL
IPT-3	INTERIOR PAINT - INTERIOR DOOR ALCOVES AND ACCENT COLOR MFR: SHERWIN WILLIAMS COLOR: SERIOUS GRAY, SW6256 FINISH: EGGSHELL
IPT-4	INTERIOR PAINT - DOORS AND FRAMES MFR: SHERWIN WILLIAMS COLOR: GOSSAMER VEIL, SW9165 FINISH: EGGSHELL
KP-1	KICK PLATE - TABLE AND CHAIRS STORAGE DOORS MFR: CONSTRUCTION SPECIALTIES FINISH: STAINLESS STEEL SIZE: DOOR WIDTH MINUS 1" EACH SIDE. HEIGHT 30". MOUNT AT 1" FROM THE BOTTOM OF DOORS.
MT-1	MARBLE THRESHOLD
OTS	OPEN TO STRUCTURE
PLAM-1	PLASTIC LAMINATE - RESTROOMS & MOTHERS ROOM MFR: NEVAMAR PRODUCT: STANDARD HPL COLOR: BRAVE SPIRIT, WU0060-T
PLAM-2	PLASTIC LAMINATE - KITCHEN MFR: NEVAMAR PRODUCT: STANDARD HPL COLOR: POLISHED VELVET, WH0050-PV
PLAM-3	PLASTIC LAMINATE - RECYCLING CASEWORK MFR: NEVAMAR PRODUCT: STANDARD HPL COLOR: BETHANY BEIGE, S2069T
PT-1	PORCELAIN TILE - WALL FIELD TILE MFR: ARCHITESSA STYLE: ENTRADA FINISH: LIGHT HONED COLOR: GREY LIGHT, S-WF16110051151 SIZE: 12" x 24", 5/16" THICKNESS
PT-2	PORCELAIN TILE - WALL SHOWER TILE MFR: ARCHITESSA STYLE: CHARME FINISH: MATTE COLOR: VEINED STATUARIO, S-WF10710033748 SIZE: 12" x 24", 5/16" THICKNESS
PT-3	PORCELAIN TILE - FLOOR TILE MFR: ARCHITESSA STYLE: CHARME COLOR: GRAPHITE DARK, 10710033747 FINISH: MATTE SIZE: 18" x 36", 5/16" THICKNESS
PT-4	PORCELAIN TILE - COVEBASE MFR: ARCHITESSA STYLE: CHARME COLOR: GRAPHITE DARK, 10710033747 FINISH: MATTE SIZE: 6" x 12" COVEBASE, 5/16" THICKNESS

RB-1	RESILIENT RUBBER BASE MFR: ROPPE STYLE: 700 SERIES COLOR: BLACK, 100 SIZE: 6" HIGH, CONTINUOUS COIL ONLY, MFR TO NOT CUT INTO 4'-0" SECTIONS
RS-1	ROLLER SHADE MFR: MECHOSHADE STYLE: MECHOSYSTEMS ECOVEIL #0950 SERIES, 1% OPEN COLOR: EGGSHELL, #0966 SIZE: PER WINDOW SCHEDULE
RST-1	RUBBER STAIR TREADS MFR: ROPPE STYLE: #80 COLOR: SMOKE, 174
RVT-1	RESILIENT VINYL FLOORING MFR: PATCRAFT COLOR: AGGREGATE, 00140 CLAY
SGN-1	INTERIOR SIGNAGE COLOR: BLACK TEXT FINISH: 50MM WHITE
SS-1	SOLID SURFACE - RESTROOMS, MOTHER'S ROOM & KITCHEN COUNTERTOPS MFR: HANEX PRODUCT: SOLID SURFACE COLOR: VOLARE, ST-303 EDGE PROFILE: AS DETAILED 4" INTEGRAL BACKSPLASH SIZE: AS DETAILED
SS-2	SOLID SURFACE - RECYCLING CASEWORK MFR: WILSONART PRODUCT: SOLID SURFACE COLOR: NIGHT STARS, 9105CS EDGE PROFILE: AS DETAILED 4" INTEGRAL BACKSPLASH SIZE: AS DETAILED
TP-1	TOILET PARTITION MFR: SCRANTON PRODUCT: HINY HIDERS PARTITIONS COLOR: SHALE TEXTURE: ORANGE PEEL MOUNTING: FLOOR ANCHORED/OVERHEAD BRACED
WD-1	WOOD DOORS MATERIAL: BIRCH NATURAL VENEER CUT: ROTARY CUT FINISH: CLEAR
AD	HIGH-SPEED WARM-AIR DRYER
MBH	MOP, BROOM HOLDER, SHELF
CH	COAT HOOK
CS	DIAPER-CHANGING STATION
dw	DISHWASHER
FS	FOLDING SHOWER SEAT
frz	FREEZER
GB	GRAB BAR
hood	RANGE HOOD VENT
lk	LOCKER
micro	MICROWAVE
MP	MOP, BROOM HOLDER, SHELF
MR	MIRROR UNIT
PTDWR	COMBINATION TOWEL (FOLDED) DISPENSER/WASTE RECEPTACLE
range	STOVETOP AND RANGE
ref	REFRIGERATOR
SC	SHOWER CURTAIN
SCR	SHOWER CURTAIN ROD
SN	SANITARY-NAPKIN DISPOSAL UNIT
SD	LIQUID-SOAP DISPENSER
TP	TOWEL PIN
TS	SEAT-COVER DISPENSER
TT	TOILET TISSUE (ROLL) DISPENSER

FINISHES GENERAL NOTES

- REFERENCE SHEET A-001 FOR ABBREVIATIONS, SYMBOL LEGENDS, ADDITIONAL DRAWING CONVENTIONS AND GENERAL NOTES.
- SEE BUILDING ELEVATIONS FOR EXTERIOR FINISH LOCATIONS. REFERENCE FINISH PLANS AND INTERIOR ELEVATIONS FOR INTERIOR FINISH LOCATIONS.
- MANUFACTURERS LISTED ARE NOT INTENDED TO LIMIT THE SELECTION OF EQUIVALENT MATERIALS, PATTERNS AND COLORS FROM OTHER MANUFACTURERS. EQUIVALENT MATERIALS MUST MEET THE REQUIREMENTS OF THE SPECIFICATIONS AND DRAWINGS.
- ALL MATERIALS MUST COMPLY WITH THE BUY AMERICAN ACT.



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Mark	Description	Date

WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA
FINISH LEGEND

SIGNAGE SCHEDULE						
ROOM NO.	ROOM	SIGN TYPE (DETAIL)	DOOR NO.	SIGNAGE ROOM NO.	SIGNAGE CONTENT	SIGNAGE NOTES
100	LOBBY	---	---	---	---	---
101	RETENTION OFFICE	SIGN A (1/I-511)	101		RETENTION	
102	LIFT PLATFORM	---	---	---	---	---
103	CORRIDOR	---	---	---	---	---
104	ADMIN	SIGN A (1/I-511)	117	104	ADMIN	
105	OFFICE	SIGN A (1/I-511)	125	105	OFFICE	
106	ADMIN	SIGN A (1/I-511)	158	106	ADMIN	
107	ADMIN	SIGN A (1/I-511)	153,154,155	107	ADMIN	
108	CONFERENCE	SIGN D (4/I-511)	108	108	CONFERENCE	
109	CORRIDOR	---	---	---	---	---
110	MEN'S TOILET/SHOWER	SIGN C (3/I-511)	110	110	MEN	
111	WOMEN'S TOILET/SHOWER	SIGN B (2/I-511)	111	111	WOMEN	
112	FITNESS ROOM	SIGN A (1/I-511)	112	112	FITNESS	
112A	FIRE RISER	SIGN A (1/I-511)	112A	112A	FIRE RISER	
112B	MOTHERS ROOM	SIGN E (5/I-511)	112B	112B	MOTHERS	
113	MECH ROOM	SIGN A (1/I-511)	113	113	MECHANICAL	
114	MULTIPURPOSE	SIGN D (4/I-511)	114	114	MULTIPURPOSE	
115	CLASSROOM	SIGN A (1/I-511)	115	115	CLASSROOM	
116A	CLASSROOM	SIGN A (1/I-511)	116A	116A	CLASSROOM	
116B	CLASSROOM	SIGN A (1/I-511)	116B	116B	CLASSROOM	
117	UNIT STORAGE	SIGN A (1/I-511)	117, 117A, 117B	117	UNIT STORAGE	
118	VAULT	SIGN A (1/I-511)	118	118	VAULT	
118A	VESTIBULE	SIGN A (1/I-511)	118	118	VAULT	
119	KITCHEN	SIGN A (1/I-511)	119A, 119B	119	KITCHEN	
120	JANITOR	SIGN A (1/I-511)	120	120	JANITOR	
121	TELECOMM	SIGN A (1/I-511)	121	121	TELECOMM	
122	DRILL HALL	SIGN A (1/I-511)	122A	122	DRILL HALL	
123	TABLES & CHAIRS	SIGN A (1/I-511)	123	123	STORAGE	
124	FAMILY TOILET	SIGN F (6/I-511)	124	124	RESTROOM	



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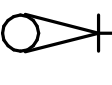
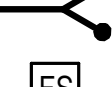
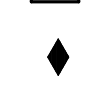
ANACORTES READINESS CENTER - RENOVATION & ADDITION
2219 M AVENUE, ANACORTES, WA

SIGNAGE SCHEDULE

FIRE PROTECTION ABBREVIATIONS

AS	AUTOMATIC SPRINKLER
FDC	FIRE DEPARTMENT CONNECTION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
SPR	SPRINKLER
UFC	UNIFORM FIRE CODE

FIRE PROTECTION LEGEND

	OS & Y VALVE
	VALVE IN RISER
	PIPING IDENTIFIER, SEE ABBREVIATIONS
	FIRE DEPARTMENT CONNECTION
	FLOW SWITCH
	DRY PIPE VALVE
	GAUGE, AIR OR WATER AS NOTED ON DRAWINGS
	DOUBLE CHECK VALVE ASSEMBLY

FIRE PROTECTION SHEET LIST

SHEET NUMBER	SHEET NAME
F-001	FIRE PROTECTION LEGEND, ABBREV. & GENERAL NOTES
F-101	FIRST FLOOR FIRE PROTECTION PLAN
F-501	FIRE PROTECTION DETAILS



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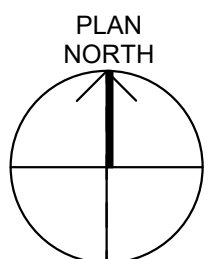
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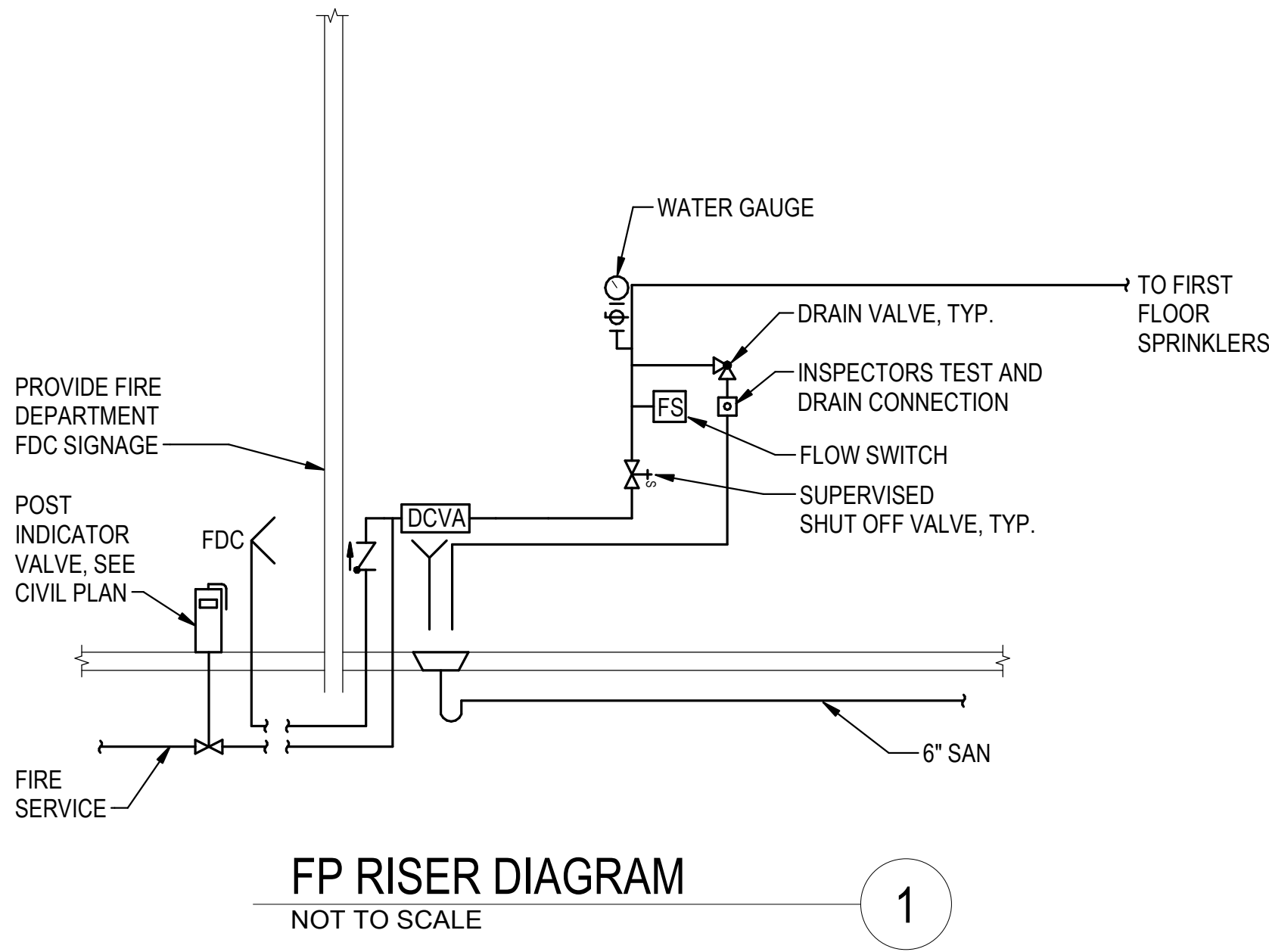
Mark	Description	Date

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ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 M AVENUE, ANACORTES, WA
**FIRE PROTECTION LEGEND,
ABBREV. & GENERAL NOTES**

F-001

- 1 PROVIDE FIRE PROTECTION SERVICE PIPING BELOW GRADE TO 5' FROM EDGE OF BUILDING. SEE CIVIL DRAWINGS FOR PIPING CONTINUATION.
- 2 PROVIDE WET SPRINKLER COVERAGE PER NFPA FOR ORDINARY HAZARD GROUP 2 OCCUPANCY, 0.20 GPM OVER 1500 SQFT.
- 3 PROVIDE WET SPRINKLER COVERAGE PER NFPA FOR LIGHT HAZARD OCCUPANCY, 0.10 GPM OVER 1500 SQFT.
- 4 PROVIDE WET SPRINKLER COVERAGE PER NFPA FOR ORDINARY HAZARD GROUP 1 OCCUPANCY, 0.15 GPM OVER 1500 SQFT.
- 5 PROVIDE SIDEWALL DRY HEADS TO PROVIDE SPRINKLER COVERAGE UNDER CANOPY FOR LIGHT HAZARD OCCUPANCY, 0.10 GPM OVER 1500 SQFT.





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WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA
FIRE PROTECTION DETAILS

F-501

FIRE ALARM & MASS NOTIFICATION SYSTEM LEGEND

- DOOR TO AUTOMATICALLY OPEN IN A FIRE ALARM EVENT
- FIRE ALARM PULL STATION
- HEAT DETECTOR
- SMOKE DETECTOR
- TAMPER SWITCH
- HORN/STROBE
- STROBE
- FLOW SWITCH
- HORN
- CARBON MONOXIDE DETECTOR,
POWERED BY FIRE ALARM SYSTEM
- ELECTRO-MAGNETIC DOOR HOLDER,
POWERED BY FIRE ALARM SYSTEM
- MASS NOTIFICATION SYSTEM (MNS)
VISUAL DISPLAY READER BOARD
- MASS NOTIFICATION SYSTEM (MNS)
SPEAKER
- FIRE ALARM CONTROL PANEL
- LOCAL OPERATING CONSOLE
- MASS NOTIFICATION SYSTEM PANEL
(AUTONOMOUS CONTROL UNIT)

FIRE ALARM SHEET LIST	
SHEET NUMBER	SHEET NAME
FA-001	FIRE ALARM GENERAL NOTES AND LEGENDS
FA-101	FIRST FLOOR FIRE ALARM PLAN
FA-501	FIRE ALARM AND MNS RISER DIAGRAM



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Mark	Description	Date

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FIRE ALARM GENERAL NOTES AND LEGENDS

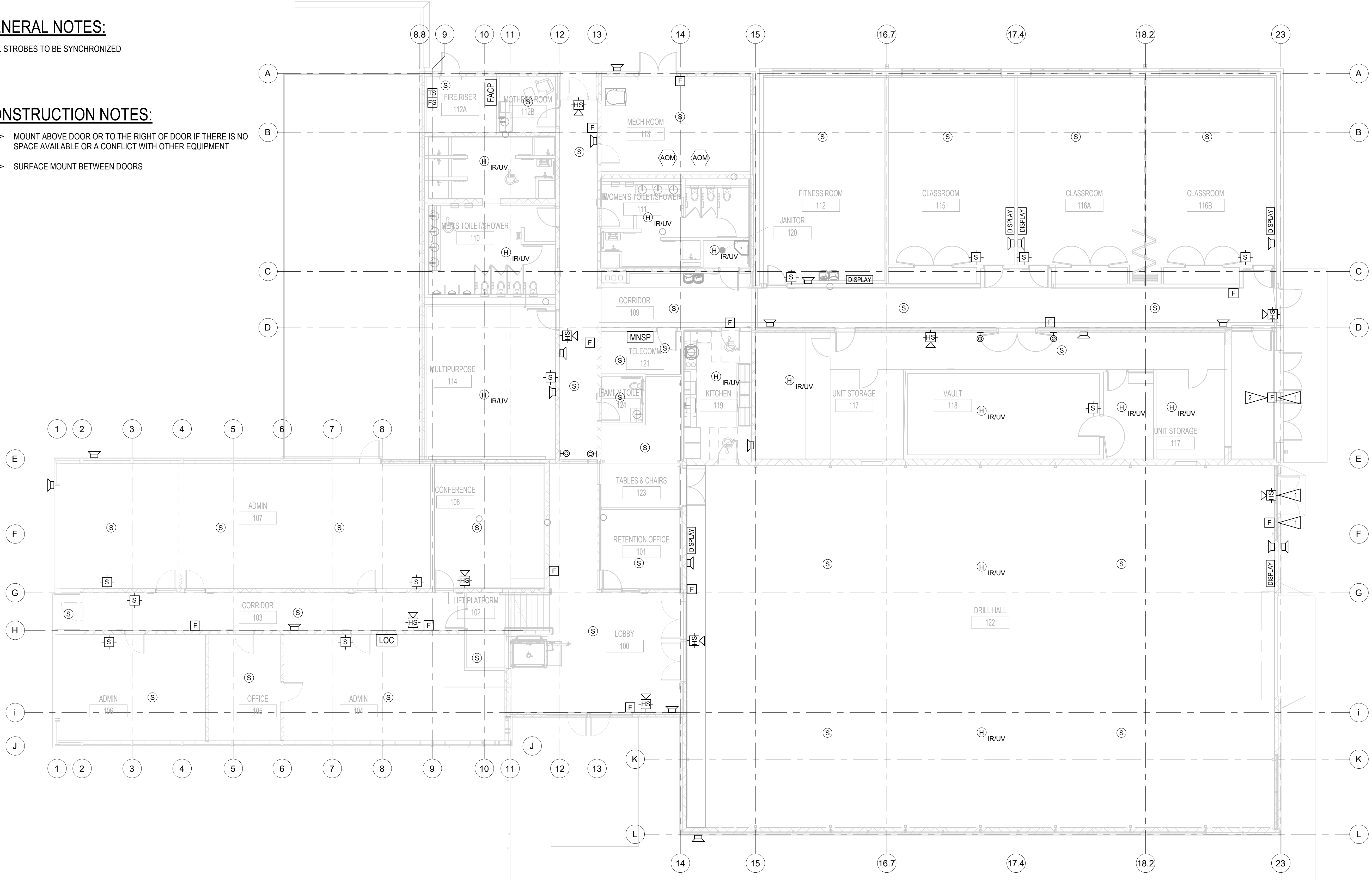
FA-001

GENERAL NOTES:

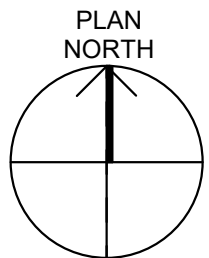
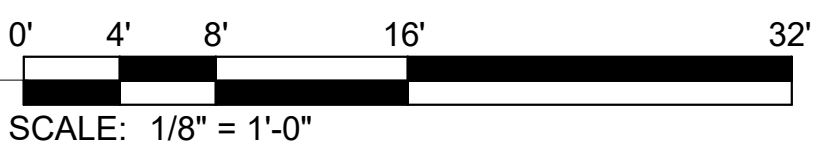
1. ALL STROBES TO BE SYNCHRONIZED

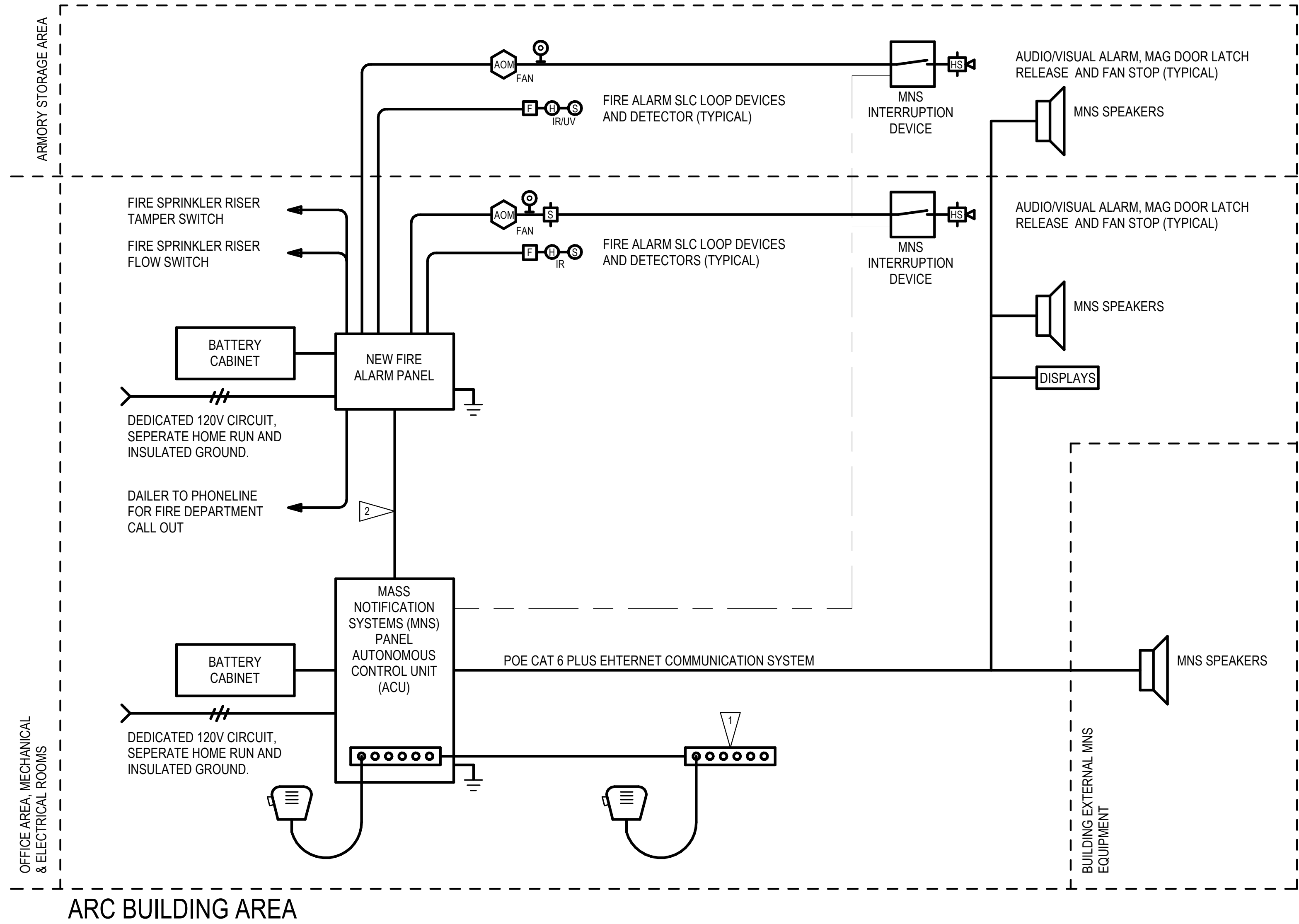
CONSTRUCTION NOTES:

- 1 MOUNT ABOVE DOOR OR TO THE RIGHT OF DOOR IF THERE IS NO SPACE AVAILABLE OR A CONFLICT WITH OTHER EQUIPMENT
- 2 SURFACE MOUNT BETWEEN DOORS



1 FIRST FLOOR FIRE ALARM PLAN
1/8" = 1'-0"





FIRE ALARM AND MNS DIAGRAM
NOT TO SCALE

1

GENERAL NOTES:

1. FIRE ALARM RISER EQUIPMENT SHOWN IS TYPICAL. REFER TO PERFORMANCE SPECIFICATION 28 31 00 FOR CONTRACT REQUIREMENTS.
2. FIRE ALARM CONTRACTOR TO COORDINATE FACP PANEL COMMUNICATIONS WITH ELECTRICAL CONTRACTOR. ROUTING OF CONDUITS AND CABLING FOR FIRE ALARM POWER AND COMMUNICATIONS CABLING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. REFER TO UFC 4-021-01 (MODIFIED) FOR SPECIFICATION REQUIREMENTS.
- 3.

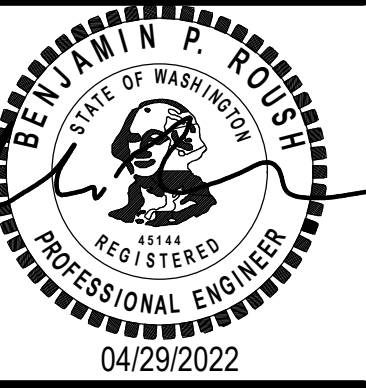
CONSTRUCTION NOTES:

1. LOCAL OPERATOR CONSOLE LOCATED AT BUILDING FRONT ENTRY.
2. SUPERVISORY SIGNALS.



design collaborative

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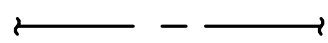
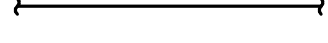
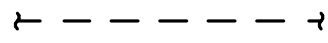
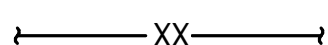
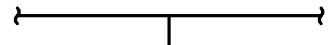
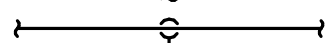
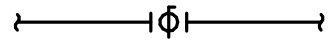
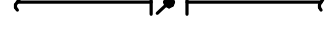
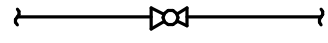
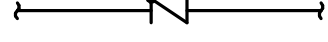
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Mark	Description	Date

WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA
**FIRE ALARM AND MNS RISER
DIAGRAM**

FA-501

PLUMBING LEGEND

	DOMESTIC COLD WATER (CW)
	DOMESTIC HOT WATER (HW)
	DOMESTIC HOT WATER CIRCULATING (HWC)
	SOIL, WASTE (S,W)
	VENT (V)
	PIPING IDENTIFIER, SEE ABBREVIATIONS
	ELBOW DOWN
	ELBOW UP
	TEE
	TEE DN
	TEE UP
	ISOLATION OR SHUT-OFF VALVE (NO), TYP AS SPECIFIED
	ISOLATION OR SHUT-OFF VALVE (NC), TYP AS SPECIFIED
	BALL VALVE (NO)
	BALL VALVE (NC)
	BUTTERFLY VALVE (NO)
	BUTTERFLY VALVE (NC)
	GLOBE VALVE (NO)
	GLOBE VALVE (NC)
	THROTTLING VALVE, TYP AS SPECIFIED
	METERING BALANCING VALVE
	CHECK VALVE
	CONTROL VALVE
	PLUG VALVE
	PRESSURE REGULATING VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	BACKFLOW PREVENTER
	CAP
	BLIND FLANGE
	EXPANSION JOINT
	REDUCER
	PRESSURE GAUGE
	STRAINER
	UNION
	PRESSURE/TEMPERATURE TAP
	TEMPERATURE GAUGE

PLUMBING ABBREVIATIONS

AW	ACID WASTE
A	AIR, COMPRESSED AIR
BOP	BOTTOM OF PIPE
C	CONDENSATE
CA	COMPRESSED IAR
CI	CAST IRON
CIRC	CIRCULATING
CW	CITY WATER; DOMESTIC COLD WATER
CO	CLEAN OUT
CA	COMPRESSED AIR
DW	DISTILLED WATER
DOM	DOMESTIC
DR	DOOR; DRAIN
DF	DRINKING FOUNTAIN
ES	EMERGENCY SHOWER
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FPHB	FREEZE PROOF HOSE BIBB
GPH	GALLONS PER HOUR
HB	HOSE BIBB
HW	DOMESTIC HOT WATER
HWC	DOMESTIC HOT WATER CIRCULATING
IPC	INTERNATIONAL PLUMBING CODE
IW	INDIRECT WASTE
JAN	JANITOR
L	LAVATORY
MV	MEDICAL VACUUM
N	NITROGEN
NG	NATURAL GAS
NO	NITROUS OXIDE; NUMBER
NPW	NON-POTABLE WATER
PC	PUMPED CONDENSATE
PLBG	PLUMBING
PRV	PRESSURE REDUCING VALVE
RWL	RAIN WATER LEADER
RECIRC	RECIRCULATING
RD	ROOF DRAIN
S	SOIL
SS	SANITARY SEWER; SERVICE SINK; STAINLESS STEEL
SD	STORM DRAIN
UPC	UNIFORM PLUMBING CODE
V	VENT
VA	VALVE
VAC	VACUUM
VB	VACUUM BREAKER
VTR	VENT THRU ROOF
W	WASTE; WATER; WIDE(DIM)
WC	WATER CLOSET
WFS	WATER FLOW SWITCH
Y	WYE

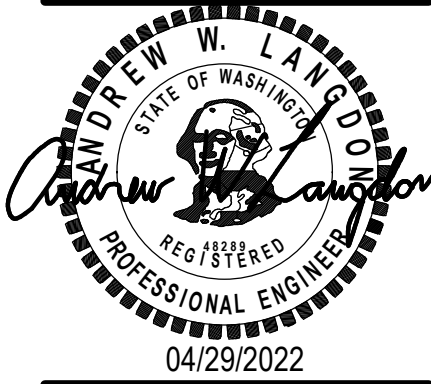
PLUMBING GENERAL NOTES

- PROVIDE COMPLETE SUPPORTS, SEISMIC AND RESTRAINTS FOR ALL PIPES AND EQUIPMENT PER SPECIFICATIONS, AS REQUIRED, AND AS SHOWN ON THE DRAWINGS.
- PROVIDE ALL REQUIRED MISCELLANEOUS STRUCTURAL STEEL, SUPPORTS, ATTACHMENTS, AND ANCHORAGES.
- PROVIDE ANCHOR BOLTS OF SIZE, TYPE, AND LENGTH AS REQUIRED TO SATISFY THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS, THE SPECIFICATIONS, AND AS INDICATED ON DRAWINGS.
- PROVIDE ADDITIONAL MISCELLANEOUS STRUCTURAL MEMBERS BETWEEN STRUCTURAL ELEMENTS AS REQUIRED TO RESIST FORCES AND MEET DEFLECTION REQUIREMENTS. ALL MISCELLANEOUS STRUCTURAL MEMBERS AND ANCHORAGES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON. NO WELDING, BOLTING, OR OTHER MEANS OF ATTACHMENT FOR SUPPORT OR RESTRAINT SHALL BE MADE ON PORTIONS OF STRUCTURAL MEMBERS AT OR NEAR CONNECTIONS BETWEEN STRUCTURAL MEMBERS OR ON ELEMENTS DESIGNATED IN THE SEISMIC LOAD RESISTING SYSTEM UNLESS APPROVED BY THE CONTRACTING OFFICER.
- PROVIDE MISCELLANEOUS STRUCTURAL STEEL SHOP DRAWINGS AND CALCULATIONS FOR REVIEW BY THE CONTRACTING OFFICER. ALL REQUIRED MISCELLANEOUS STRUCTURAL MEMBERS, BOLTS, AND WELDS SHALL BE DESIGNED AND MEET REQUIREMENTS OF THE SPECIFICATIONS.

PLUMBING SHEET LIST	
SHEET NUMBER	SHEET NAME
P-001	PLUMBING LEGEND, ABBREVIATIONS AND GENERAL NOTES
P-102-R	PLUMBING REMOVAL PLAN
P-101	UNDERGROUND PLUMBING PLAN
P-102	FIRST FLOOR PLUMBING PLAN
P-103	ROOF PLUMBING PLAN
P-401	ENLARGED PLUMBING PLANS
P-501	PLUMBING DETAILS
P-601	PLUMBING SCHEDULES



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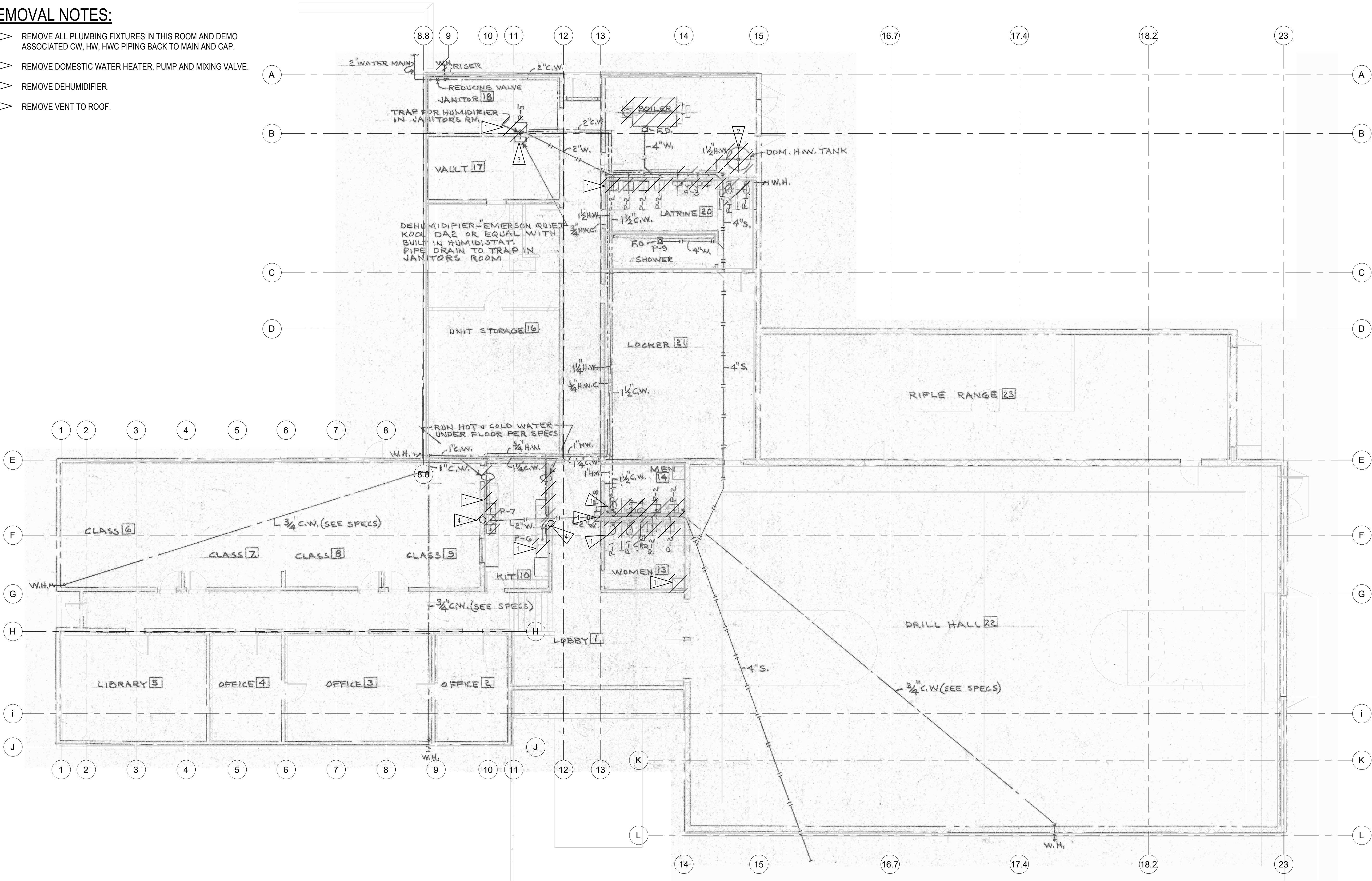
Mark	Description	Date

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2219 W AVENUE, ANACORTES, WA
**PLUMBING LEGEND, ABBREVIATIONS
AND GENERAL NOTES**

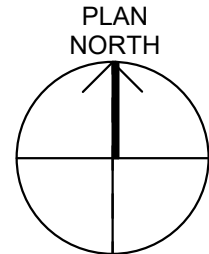
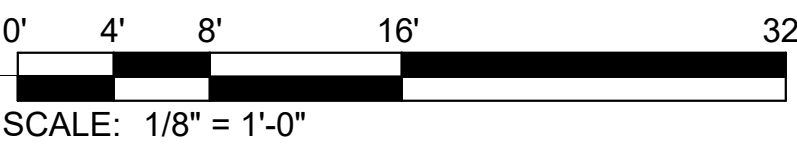
P-001

REMOVAL NOTES:

- 1 REMOVE ALL PLUMBING FIXTURES IN THIS ROOM AND DEMO ASSOCIATED CW, HW, HWC PIPING BACK TO MAIN AND CAP.
- 2 REMOVE DOMESTIC WATER HEATER, PUMP AND MIXING VALVE.
- 3 REMOVE DEHUMIDIFIER.
- 4 REMOVE VENT TO ROOF.



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



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ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA
PLUMBING REMOVAL PLAN

P-102-R



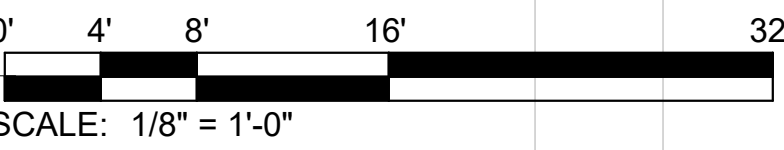
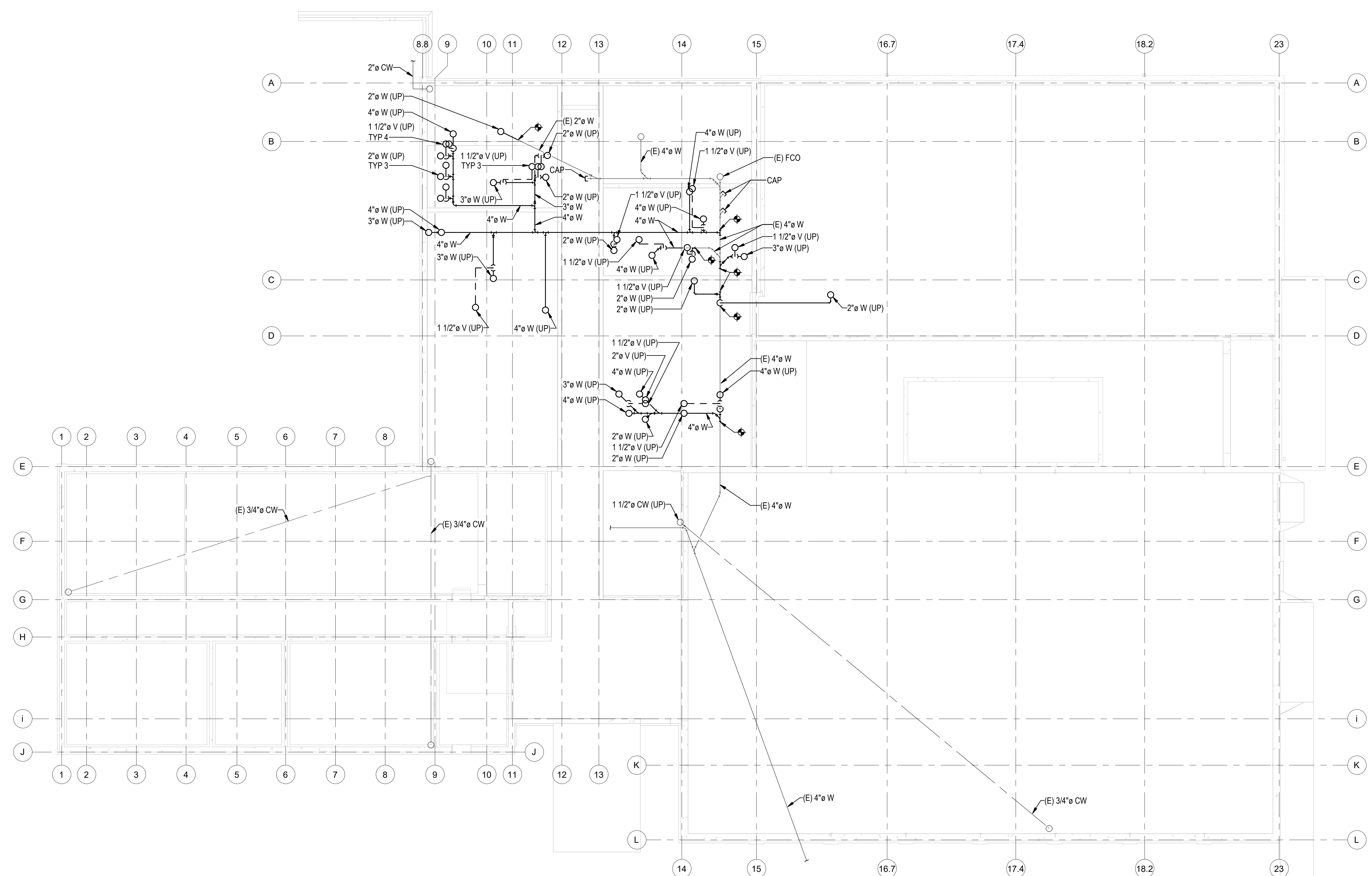
ENGINEERS
Little // Spokane // Baltimore
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UNDERGROUND PLUMBING PLAN

P-101

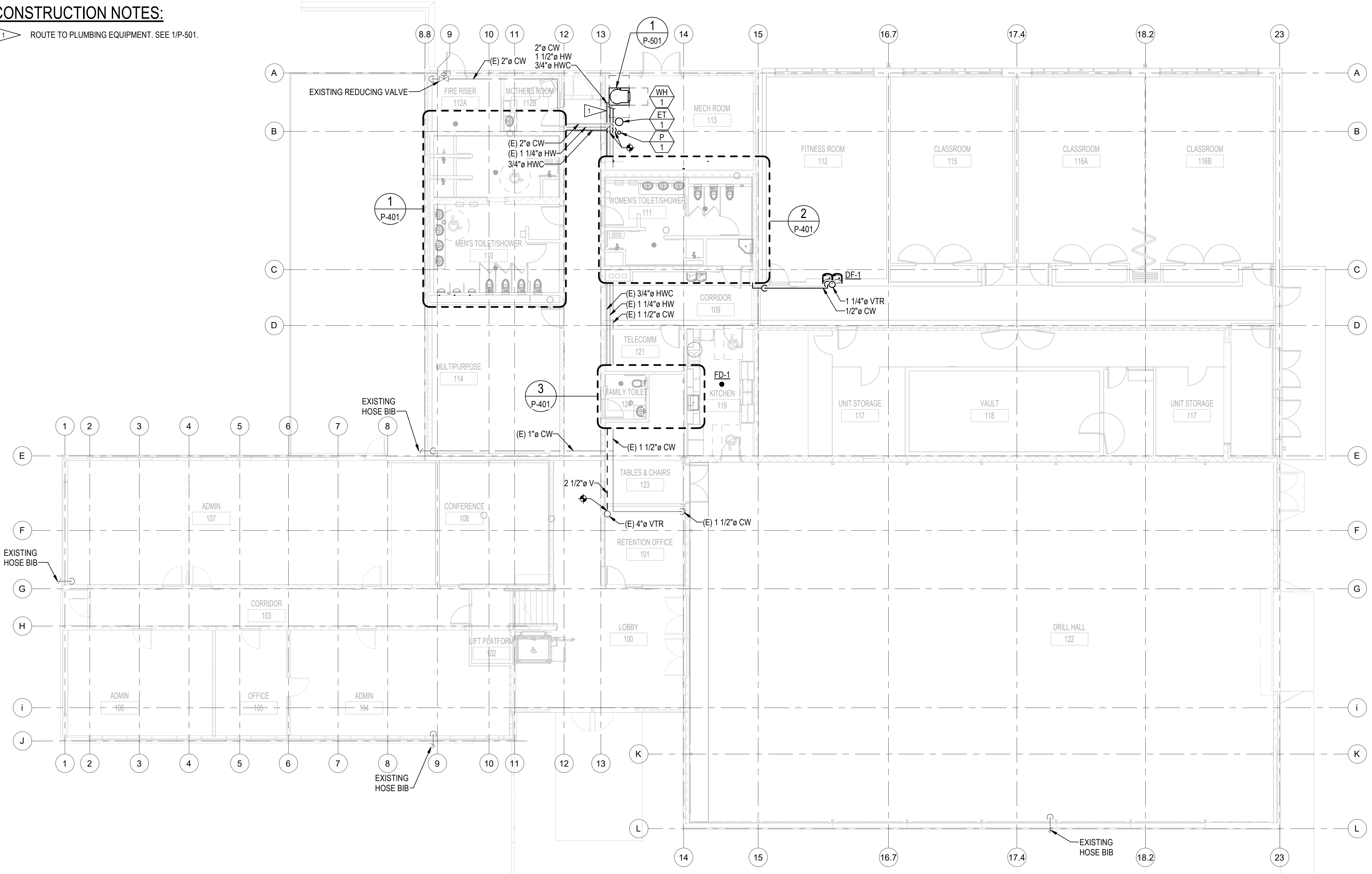
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Page 144 of 351

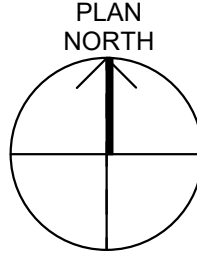
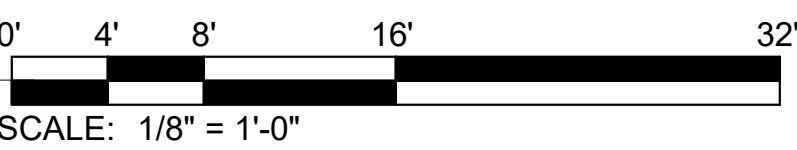


CONSTRUCTION NOTES:

1 ROUTE TO PLUMBING EQUIPMENT. SEE 1/P-501.



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



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WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA
FIRST FLOOR PLUMBING PLAN

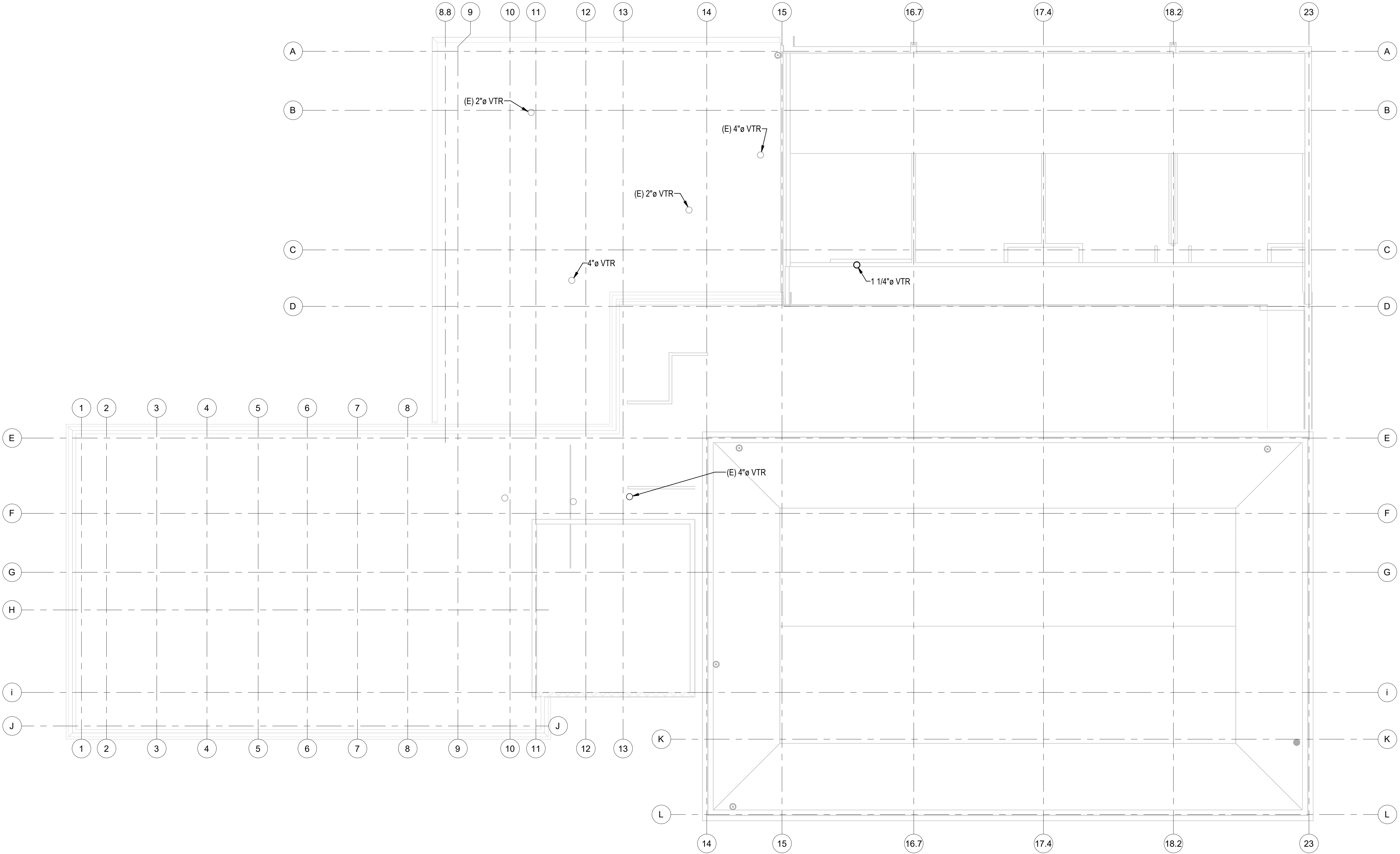
P-102

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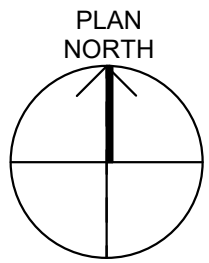
ROOF PLUMBNG PLAN

1/8" = 1'-0"



0' 4' 8' 16' 32'

SCALE: 1/8" = 1'-0"



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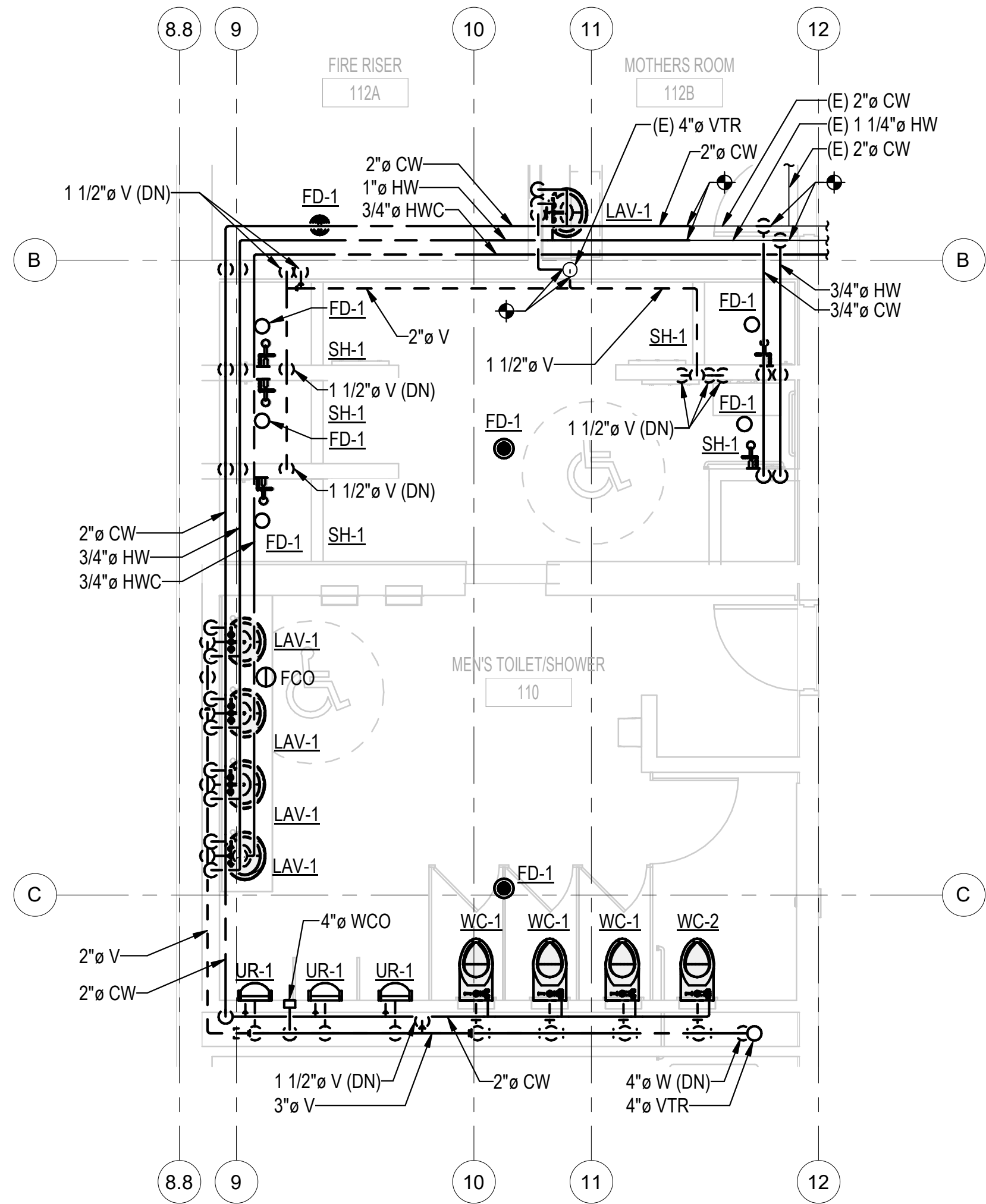
Project No.: 21067	Designed By: KRL	Drawn By: VGM	Checked By: JOI
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Mark	Description	Date

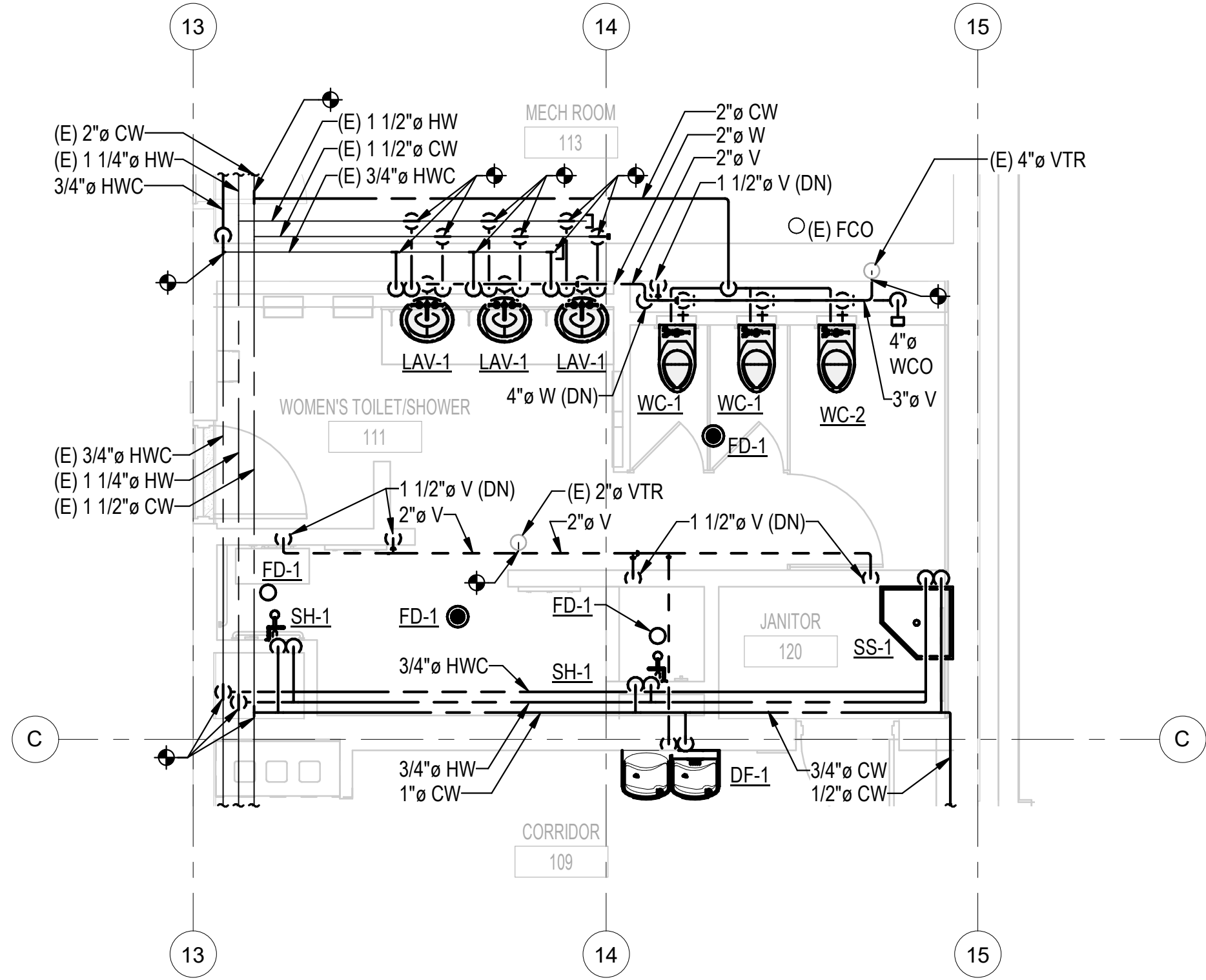
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ROOF PLUMBING PLAN

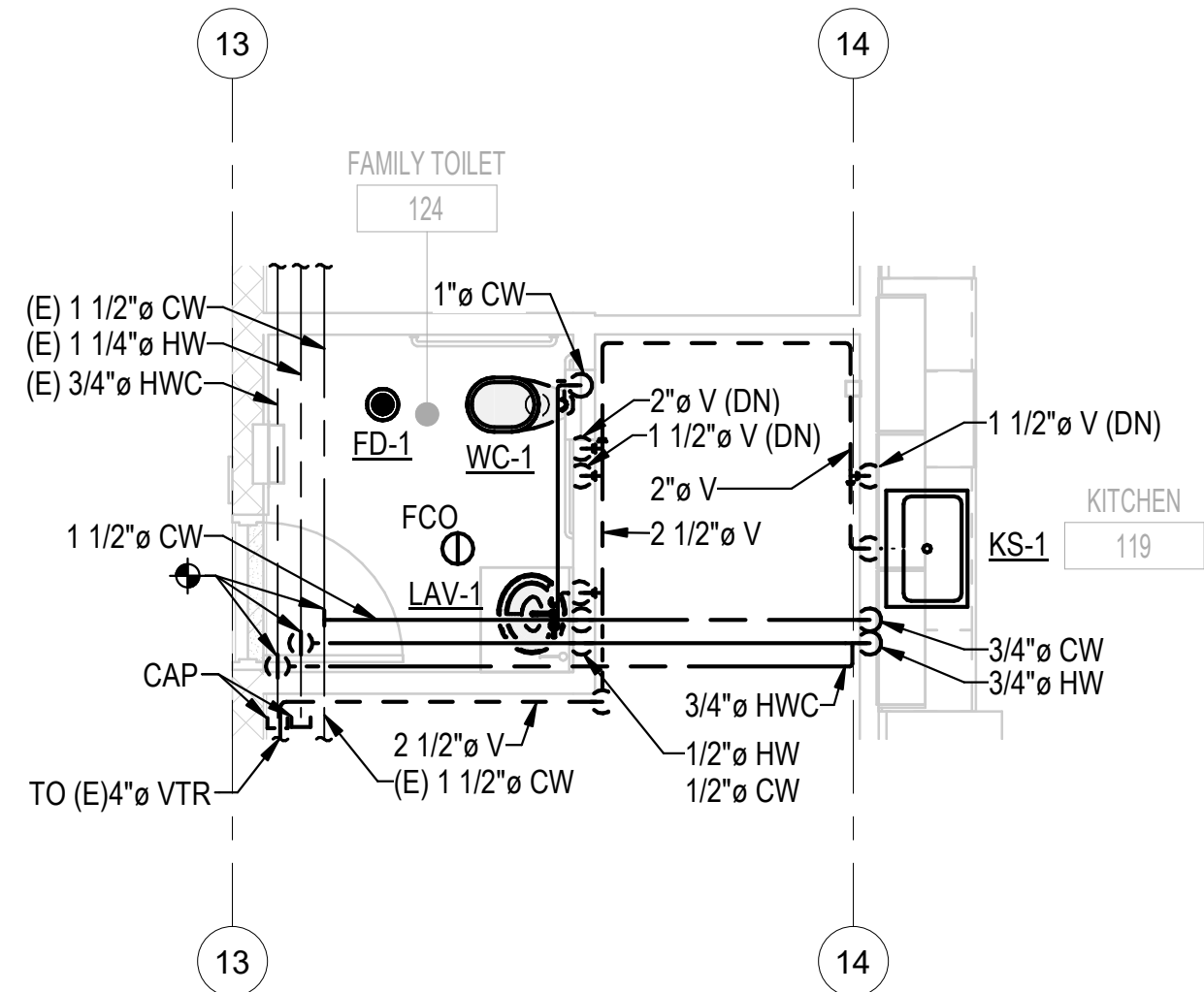
P-103



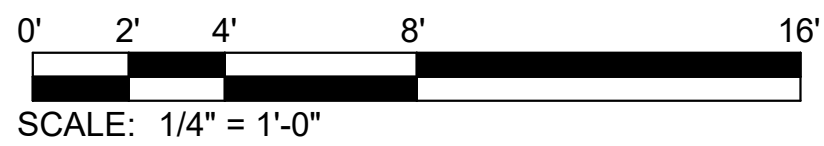
1 MEN'S TOILET/SHOWER
1/4" = 1'-0"



2 WOMEN'S TOILET/SHOWER
1/4" = 1'-0"



3 FAMILY TOILET
1/4" = 1'-0"



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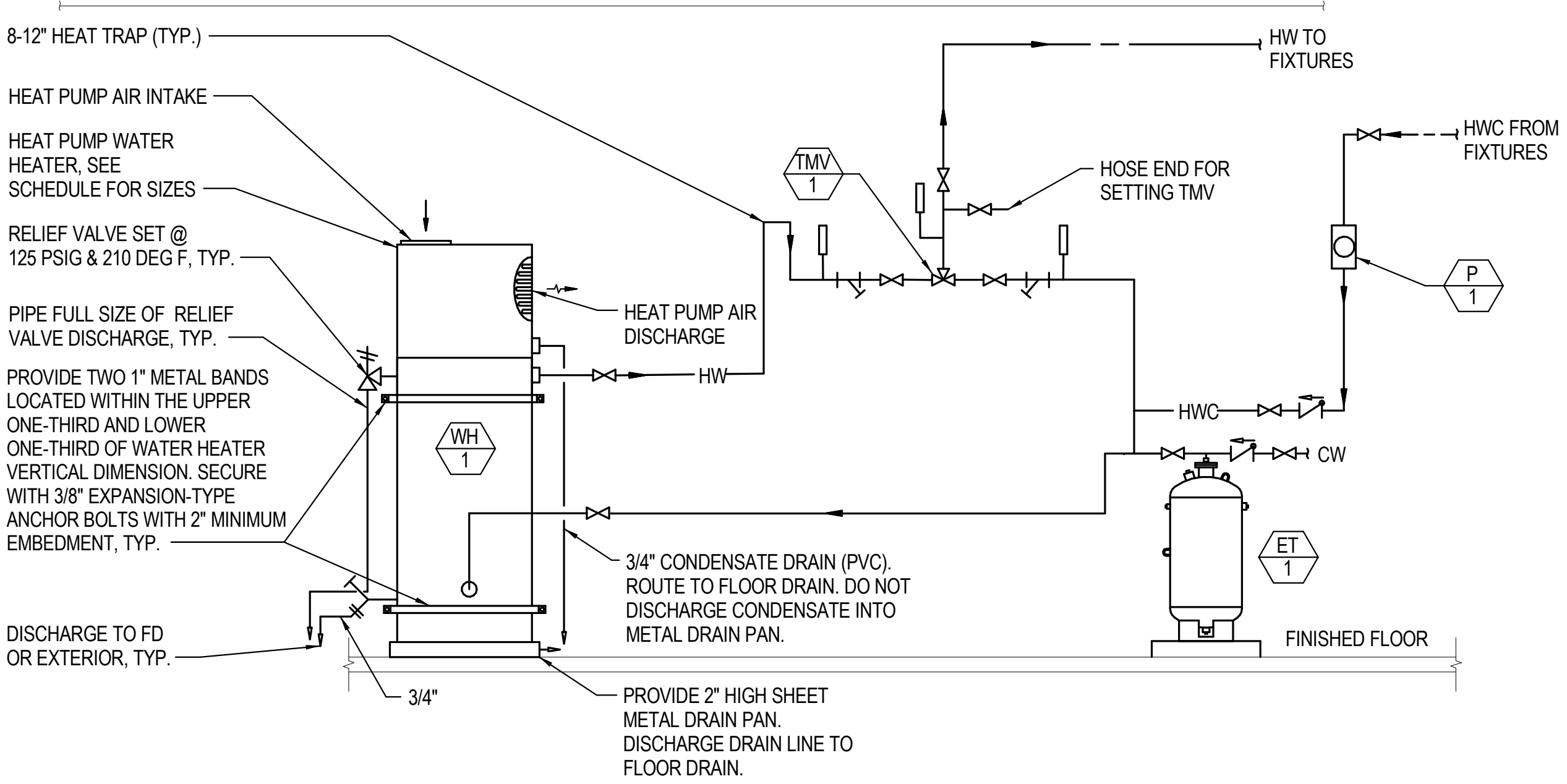
Mark	Description	Date

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ENLARGED PLUMBING PLANS

P-401



TANK STYLE DOMESTIC HEAT PUMP HOT WATER DETAIL
NOT TO SCALE

1



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PLUMBING DETAILS

P-501

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HEAT PUMP WATER HEATER SCHEDULE																				
CALLOUT		LOCATION	SERVICE	CAPACITY (GAL)	SERVICE CONDITIONS		RECOVERY CONDITIONS			ELECTRICAL ELEMENTS		ELECTRICAL					OPERATING WEIGHT (LBS)	BASIS OF DESIGN		NOTES
TYPE	MARK				EWT (DEG F)	LWT (DEG F)	ELECTRIC (GPH)	HEAT-PUMP (GPH)	COMBINED (GPH)	INPUT KW	NO. OF STEPS	V	HZ	PH	MCA	MOCP		MANUFACTURER	MODEL	
WH	1	MECH ROOM	DHW	119	50	140	53	58	111	9	2	208	60	1	67	80	620	AO SMITH	CAHP-120	[1]

SCHEDULE NOTES:
[1] SINGLE POINT POWER CONNECTION.

PUMP SCHEDULE																	
CALLOUT		LOCATION	SERVICE	PUMP					MOTOR			ELECTRICAL			BASIS OF DESIGN		NOTES
TYPE	MARK			TYPE	RPM	FLOW (GPM)	TOTAL HEAD (FT)	TEMP (DEG F)	SPEED	HP	BHP	V	HZ	Ø	MANUFACTURER	MODEL	
P	1	MECH	DOMESTIC WATER RECIRC	INLINE	2800	7	9	120	-	0.05	-	115	60	1	BELL AND GOSSETT	NBF-8S/LW	

EXPANSION TANK SCHEDULE													
CALLOUT		LOCATION	VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	DIMENSIONS		FILL TEMP (DEG F)	OPERATING TEMP (DEG F)	FILL PRESSURE (PSIG)	MAXIMUM PRESSURE (PSIG)	BASIS OF DESIGN		NOTES
TYPE	MARK				DIAMETER (IN)	HEIGHT (IN)					MANUFACTURER	MODEL	
ET	1	MECH	23.0	11.3	15	33	50	140	75	125	AMTROL	ST-42VC-DD	[1]

SCHEDULE NOTES:
[1] ASME CONSTRUCTION
[2] NSF RATED.

THERMOSTATIC MIXING VALVE SCHEDULE													
CALLOUT		LOCATION	SERVICE	FLOW		DISCHARGE		MOUNTING	VALVE PRESSURE DROP [1]	TMV ASSOCIATED PUMP	BASIS OF DESIGN		NOTES
TYPE	MARK			MIN (GPM)	MAX (GPM)	SINGLE OR DOUBLE	DISCHARGE TEMP				MANUFACTURER	MODEL	
TMV	1	MECH	HW	0.5	25	SINGLE	120	WALL	5 PSI	P-1	SYMMONS	7-700	[2]

SCHEDULE NOTES:
[1] AT MAXIMUM FLOW.
[2] PROVIDE INLET AND OUTLET SHUT-OFF VALVES.

PLUMBING FIXTURE SCHEDULE									
MARK	FIXTURE DESCRIPTION	BRANCH PIPE SIZE - INCHES DIA.				ADDITIONAL COMPONENTS	BASIS OF DESIGN		REMARKS
		COLD WATER	HOT WATER	WASTE	VENT		MANUFACTURER	MODEL	
LAV-1	COUNTERTOP-MOUNTED LAVATORY	1/2"	1/2"	1 1/2"	1 1/4"	FAUCET: CHICAGO #116.606.AB.1 (SENSOR-BATTERY) FOR AUTOMATIC FAUCET ONLY: POINT OF USE THERMOSTATIC MIXING VALVES WATTS MODEL LFMMV OR EQUAL	KOHLER	#K-2196-4	
WC-1	WALL-HUNG WATER CLOSET (FLUSH VALVE)	1"	-	4"	2"	CARRIER: JAY R. SMITH (SELECT SERIES TO SUIT APPLICATION) FLUSH VALVE: KOHLER K-10956-SV (SENSOR-1.28 GPF) SEAT: OLSONITE #95	KOHLER	#K-4325	ADA, OBC, CSA B651 COMPLIANT WHEN INSTALLED TO THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS.
WC-2	ADA COMPLIANT FLOOR-MOUNTED WATER CLOSET WITH FLUSH VALVE	1"	-	4"	2"	FLUSH VALVE: KOHLER K-7531 (SENSOR-1.28 GPF) SEAT: K-4731-CA COMMERCIAL HEAVY-DUTY TOILET SEAT	KOHLER	#K-96057	OPEN FRONT SEAT LESS COVER RIM HEIGHT = 16-1/2"
UR-1	WALL-HUNG URINAL	3/4"	-	2"	1 1/2"	CARRIER: JAY R. SMITH (SELECT SERIES TO SUIT APPLICATION) FLUSH VALVE: KOHLER K-10958-SV (SENSOR-0.5 GPF)	KOHLER	#K-5016-ET	ADA COMPLIANT WHEN INSTALLED TO THE SPECIFIC REQUIREMENTS OF THESE REGULATIONS.
DF-1	DRINKING FOUNTAIN	1/2"		1 1/2"	1 1/4"		ELKAY	LZSTL8WSLK	
SS-1	FLOOR-MOUNTED SERVICE SINK	3/4"	3/4"	3"	1 1/2"	FAUCET: CHICAGO 897-RCF	AMERICAN-STANDARD	#7745.811	WITH REMOVABLE VINYL COATED RIM GUARD
KS-1	SINGLE COMPARTMENT SINK	1/2"	1/2"	1/2"	1 1/4"	FAUCET: CHICAGO #116.943.AB.1 (SENSOR-SSPS) DRAIN: ELKAY LK-99 WHITE (WITH REMOVABLE STRAINER BASKET)	ELKAY	LR-2522	
SH-1	INDIVIDUAL SHOWER STALL (ADA COMPLIANT)	1/2"	1/2"	2"	1 1/2"	SHOWER CONTROL VALVE WITH SHOWER HEAD: CHICAGO #2502-600CP			
FD-1	FLOOR DRAIN	-	-	VARIES	VARIES	ROUND NICKEL-BRONZE STRAINER, NO-HUB OUTLET AND TRAP PRIMER CONNECTION	JAY R. SMITH	2005Y	



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PLUMBING SCHEDULES

P-601

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GENERAL ABBREVIATIONS

ADDN	ADDITION; ADDITIONAL	MAT	MATERIAL
AFF	ABOVE FINISHED FLOOR	MAX	MAXIMUM
ALT	ALTERNATE	MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
APPROX	APPROXIMATELY	MECH	MECHANICAL; MECHANICAL CONTRACTOR
ARCH	ARCHITECT	MED	MEDIUM
AUX	AUXILIARY	MFG	MANUFACTURING
		MFR	MANUFACTURER
BAL	BALANCING	MIN	MINIMUM; MINUTE
BLDG	BUILDING	MISC	MISCELLANEOUS
BSMT	BASEMENT	MTD	MOUNTED
BTU	BRITISH THERMAL UNIT		
BTUH	BRITISH THERMAL UNITS PER HOUR	N	NORTH
		NA	NOT APPLICABLE
CAP	CAPACITY	NC	NORMALLY CLOSED
CL	CENTERLINE	NIC	NOT IN CONTRACT
COND	CONDENSATE	NO	NORMALLY OPEN; NUMBER
COL	COLUMN	NOM	NOMINAL
CONN	CONNECT; CONNECTION	NTS	NOT TO SCALE
CONST	CONSTRUCTION		
CONT	CONTINUOUS; CONTINUATION	OC	ON CENTER
COORD	COORDINATE	OD	OUTSIDE DIAMETER; OVERALL DIMENSION
		OPP	OPPOSITE
DEG	DEGREE	PD	PRESSURE DROP
DIA	DIAMETER	PERF	PERFORATED
DIFF	DIFFERENTIAL	PERP	PERPENDICULAR
DIM	DIMENSION	PH	PHASE
DISCH	DISCHARGE	POC	POINT OF CONNECTION
DIV	DIVISION	PRELIM	PRELIMINARY
DN	DOWN	PRESS	PRESSURE
DP	DIFFERENTIAL PRESSURE	PROP	PROPERTY; PROPOSAL
DR	DRAIN	PS	PRESSURE SWITCH
DWG	DRAWING	PSI	POUNDS PER SQUARE INCH
		PSIG	POUNDS PER SQUARE INCH GAGE
EA	EACH	PT	PRESSURE/TEMPERATURE TAP
EFF	EFFICIENCY		
ELEC	ELECTRICAL ENGINEER	QTY	QUANTITY
ELEV	ELEVATION; ELEVATOR		
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM	REF	REFERENCE
ENT	ENTERING	REFR	REFRIGERATION
EQ	EQUAL	REQD	REQUIRED
EQUIP	EQUIPMENT	RET	RETURN
ET	EXPANSION TANK	RM	ROOM
EWT	ENTERING WATER TEMPERATURE	RPM	REVOLUTIONS PER MINUTE
EX, (E)	EXISTING		
EXP	EXPOSED	S	SOUTH
EXPL	EXPLOSION	SCHED	SCHEDULE
		SECT	SECTION
F	FAHRENHEIT	SF	SQUARE FEET
FIO	FURNISHED & INSTALLED BY OWNER	SHT	SHEET
FLEX	FLEXIBLE	SIM	SIMILAR
FLR	FLOOR	SOL	SOLENOID
FOIC	FURNISHED BY OWNER, INSTALLED BY CONTRACTOR	SPEC	SPECIFICATION
FP	FIRE PROTECTION; FREEZE PROTECTION	SPECD	SPECIFIED
FT	FEET; FOOT; FEET OF WATER(PRESS)	SQ	SQUARE
		STD	STANDARD
GA	GAGE; GAUGE	STRUCT	STRUCTURAL ENGINEER
GAL	GALLON		
GC	GENERAL CONTRACTOR	TBD	TO BE DETERMINED
GEN	GENERAL	TD	TEMPERATURE DIFFERENTIAL
GPM	GALLONS PER MINUTE	TEMP	TEMPERATURE
GWB	GYPSPUM WALLBOARD	TH	TOTAL HEAD
		THRU	THROUGH
H	HEIGHT; HIGH	TYP	TYPICAL
HOA	HAND OFF AUTOMATIC		
HOR	HORIZONTAL	UBC	UNIFORM BUILDING CODE
HP	HORSE POWER	UL	UNDERWRITER'S LABORATORY
HR	HOUR	UTIL	UTILITY
HZ	HERTZ		
		V	VOLT
IBC	INTERNATIONAL BUILDING CODE	VAR	VARIABLE
ID	INSIDE DIAMETER	VEL	VELOCITY
IFC	INTERNATIONAL FIRE CODE	VERT	VERTICAL
IMC	INTERNATIONAL MECHANICAL CODE	VOL	VOLUME
IN	INCH		
INFO	INFORMATION	W	WATER; WIDE(DIM); WATT
INSUL	INSULATE; INSULATION	W/	WITH
		W/O	WITHOUT
KW	KILOWATT	WT	WEIGHT
KWH	KILOWATT HOUR	YD	YARD
		YR	YEAR
L	LENGTH; LONG (DIM)		
LAB	LABORATORY		
LAV	LAVATORY		
LB	POUND		
LBS/HR	POUNDS PER HOUR		
LF	LINEAL FEET		
LO	LOW		
LTG	LIGHTING		
LVG	LEAVING		
LWT	LEAVING WATER TEMPERATURE		

HVAC ABBREVIATIONS

AL	ACOUSTIC LINED; ALUMINUM
AC	AIR CONDITIONING
AD	AUTOMATIC DAMPER
AF	AIR FOIL
AHU	AIR HANDLING UNIT
BDD	BACKDRAFT DAMPER
BHP	BRAKE HORSEPOWER
BI	BACKWARD INCLINED
BOD	BOTTOM OF DUCT
C	CONDENSATE; COMMON
CC	COOLING COIL
CFM	CUBIC FEET PER MINUTE
CG	CEILING GRILLE
CLG	COOLING
CLWR	COOLING WATER RETURN
CLWS	COOLING WATER SUPPLY
COND	CONDENSATE
CV	CONSTANT VOLUME
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
DDC	DIRECT DIGITAL CONTROLS
DMPR	DAMPER
DB	DRY BULB TEMPERATURE(°F)
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EXH	EXHAUST
FA	FACE AREA
FC	FAN COIL; FORWARD CURVED
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FF	FINAL FILTER
FPM	FEET PER MINUTE
FS	FLOW SWITCH
FV	FACE VELOCITY
GALV	GALVANIZED
GR	GRILLE
H	HUMIDIFIER, HUMIDISTAT
HC	HEATING COIL
HTG	HEATING
HV	HEAT AND VENT UNIT
HHWR	HEATING WATER RETURN
HHWS	HEATING WATER SUPPLY
HX	HEAT EXCHANGER
IMC	INTERNATIONAL MECHANICAL CODE
LAT	LEAVING AIR TEMPERATURE
MA	MIXED AIR
NPSH	NET POSITIVE SUCTION HEAD
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE
ODP	OPEN DRIPPROOF
OSA	OUTSIDE AIR
OV	OUTLET VELOCITY
PF	PREFILTER
PHC	PREHEAT COIL
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION (GAS)
RHC	REHEAT COIL
RH	RELATIVE HUMIDITY
RA	RETURN AIR
RF	RETURN FAN
RG	RETURN GRILLE
S	SUPPLY
SFD	SMOKE/FIRE DAMPER
SP	STATIC PRESSURE
SD	SMOKE DAMPER; SUPPLY DIFFUSER
SA	SUPPLY AIR; SOUND ATTENUATOR
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SR	SUPPLY REGISTER
SL	SOUND LINE
T, TSTAT	THERMOSTAT
TEFC	TOTALLY ENCLOSED, FAN COOLED
TG	TRANSFER GRILLE

GENERAL LEGEND

	NORTH ARROW
	DETAIL / DRAWING REFERENCE
	SECTION REFERENCE
	CONSTRUCTION NOTE
	REVISION SYMBOL
	BOLD LINE WEIGHT INDICATES NEW WORK
	LIGHT LINE WEIGHT INDICATES EXISTING WORK
	SLASHED LINE INDICATES EXISTING WORK TO BE DEMOLISHED

HVAC DUCTWORK LEGEND

	SUPPLY OR EXHAUST TAKEOFF
	SUPPLY DUCT TURNING TOWARD
	SUPPLY DUCT TURNING AWAY
	EXHAUST DUCT TURNING TOWARD
	EXHAUST DUCT TURNING AWAY
	ROUND DUCT TURNING TOWARD
	ROUND DUCT TURNING AWAY
	TRANSITION
	SMOKE DAMPER
	MOTORIZED DAMPER
	VOLUME DAMPER
	BACKDRAFT DAMPER
	FIRE DAMPER
	FLEXIBLE CONNECTION
	TURNING VANES
	FLEXIBLE DUCT
	SUPPLY DIFFUSER
	RETURN GRILLE
	EXHAUST GRILLE
	THERMOSTAT
	EQUIPMENT TAG
	DIFFERENTIAL PRESSURE SENSOR
	CARBON DIOXIDE SENSOR

MECHANICAL SHEET LIST

SHEET NUMBER	SHEET NAME
M-001	HVAC LEGEND, ABBREVIATIONS AND GENERAL NOTES
M-101-R	HVAC REMOVAL PLAN
M-101	FIRST FLOOR HVAC PLAN
M-102	HVAC PIPING FIRST FLOOR PLAN
M-103	ROOF HVAC PLAN
M-401	ENLARGED HVAC PLANS
M-402	HVAC SECTIONS
M-501	HVAC DETAILS
M-601	HVAC SCHEDULES
M-602	HVAC SCHEDULES
M-603	HVAC SCHEDULES
M-701	SEQUENCE OF OPERATIONS
M-702	CONTROL POINTS LIST

HVAC PIPING LEGEND

	PIPING IDENTIFIER, SEE ABBREVIATIONS
	ELBOW DOWN
	ELBOW UP
	TEE
	TEE DN
	TEE UP
	ISOLATION OR SHUT-OFF VALVE (NO), TYPE AS SPECIFIED
	ISOLATION OR SHUT-OFF VALVE (NC), TYPE AS SPECIFIED
	CHECK VALVE
	ISOLATION OR SHUT-OFF VALVE (NO), TYPE AS SPECIFIED
	ISOLATION OR SHUT-OFF VALVE (NC), TYPE AS SPECIFIED
	3-VALVE CONTROL VALVE
	PRESSURE REDUCING VALVE
	CAP
	REDUCER

GENERAL CONSTRUCTION NOTES

- PLANS ARE DIAGRAMMATIC AND DO NOT SHOW ALL BRANCHES, VALVES, SPECIALTIES AND EQUIPMENT.
- ALL PIPING, VALVES AND EQUIPMENT ARE TO BE REMOVED IN DEMOLITION AREAS.
- VALVES INDICATED FOR SHUT-OFF ISOLATION ARE SHOWN IN APPROXIMATE LOCATIONS. REFER TO REFERENCED BLDG. DRAWINGS FOR DETAILED SYSTEMS.
- FIELD VERIFY EXACT LOCATIONS VALVES, EQUIPMENT AND PIPING.
- CONTRACTOR TO VERIFY SYSTEM SHUT DOWN PRIOR TO ANY REMOVAL WORK.
- CONTRACTOR TO RE-OPEN VALVES AFTER COMPLETION OF REMOVAL, CAP, & CUT TO RESTORE SYSTEM OPERATION WHERE REQUIRED.
- SYSTEM SHUT DOWN REMOVAL, CUT & CAP SHALL ONLY BEGIN AFTER NEW, RE-ROUTED SYSTEM IS IN PLACE FOR SERVICE CONTINUITY WHERE REQUIRED.
- ALL SYSTEMS SHALL BE DRAINED AND DISPOSAL OF FLUIDS HANDLED AS REQUIRED PER OWNER'S STANDARDS.
- MECHANICAL DRAWINGS SHOW DISCONNECT AND RECONNECT POINTS AT THE PROJECT'S BOUNDARIES. AN ATTEMPT WAS MADE TO SHOW MAJOR MECHANICAL UTILITY WORK WITHIN THE PROJECT'S BOUNDARIES. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL/DISPOSAL OF ALL MECHANICAL WORK WITHIN THE PROJECT'S BOUNDARY.

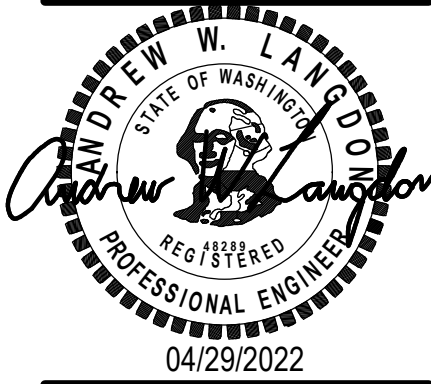
WASHINGTON STATE ENERGY CODE NOTES

- PROVIDE POST CONSTRUCTION COMMISSIONING AND COMPLETION REQUIREMENTS IN ACCORDANCE WITH SECTION C408 AND ACCORDING WITH THE CONTRACT DOCUMENTS. SEE SPECIFICATION SECTIONS 23 05 00, 23 08 00 AND ALL OTHER APPLICABLE SPECIFICATION SECTIONS.
- PROVIDE CLOSE OUT DOCUMENTATION AND TRAINING OF BUILDING OPERATIONS PERSONNEL FOR ALL MECHANICAL COMPONENTS IN ACCORDANCE WITH SECTION C103.6. SEE SPECIFICATIONS FOR MORE INFORMATION.
- EACH SUPPLY AIR OUTLET AND ZONE TERMINAL DEVICE SHALL BE EQUIPPED WITH MEANS FOR AIR BALANCING PER SECTION C408.2.2.1. SEE SPECIFICATIONS FOR DETAILS.
- BALANCE ALL HVAC SYSTEMS IN ACCORDANCE WITH SECTION C408.2.2. GENERALLY ACCEPTED ENGINEERING STANDARDS AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. SEE SPECIFICATION SECTION 23 05 93 AND ALL OTHER APPLICABLE SPECIFICATION SECTIONS.
- ALL DUCTWORK SHALL BE CONSTRUCTED AND ERECTED PER THE INTERNATIONAL MECHANICAL CODE 2018 EDITION. SEE SECTION C403.10.2 OF THE 2018 WASHINGTON STATE ENERGY CODE AND SPECIFICATIONS FOR MORE INFORMATION.
- ALL NEW DUCTWORK IS LOW PRESSURE. (EDIT AS NEEDED - SEE SECTION C403.10.2 FOR DETAILS)
- ALL DUCTS AND PLENUMS THAT ARE PART OF AN HVAC SYSTEM SHALL BE THERMALLY INSULATED IN ACCORDANCE WITH TABLE C403.10.1.1 AND C403.10.1.2. SEE SPECIFICATIONS FOR MORE INFORMATION.
- ALL PIPING SERVING AS PART OF A HEATING OR COOLING SYSTEM SHALL BE THERMALLY INSULATED IN ACCORDANCE WITH TABLE C403.10.3. SEE SPECIFICATIONS FOR MORE INFORMATION.
- PROVIDE CONTROLS IN ACCORDANCE WITH SECTION C403.4 AND IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- ALL DOMESTIC HOT WATER PIPING TO FIXTURES SHALL BE DONE IN ACCORDANCE WITH THE WASHINGTON STATE ENERGY CODE 2018 EDITION INCLUDING SECTION C404.3.
- ALL PIPING SERVING AS PART OF PLUMBING SYSTEMS SHALL BE THERMALLY INSULATED IN ACCORDANCE WITH TABLE C403.10.3. SEE SPECIFICATIONS FOR MORE INFORMATION.
- OUTPUT CAPACITIES OF HEATING AND COOLING EQUIPMENT AND SYSTEMS ARE NO GREATER THAN THE SMALLEST AVAILABLE EQUIPMENT SIZE THAT EXCEEDS THE CALCULATED LOADS.



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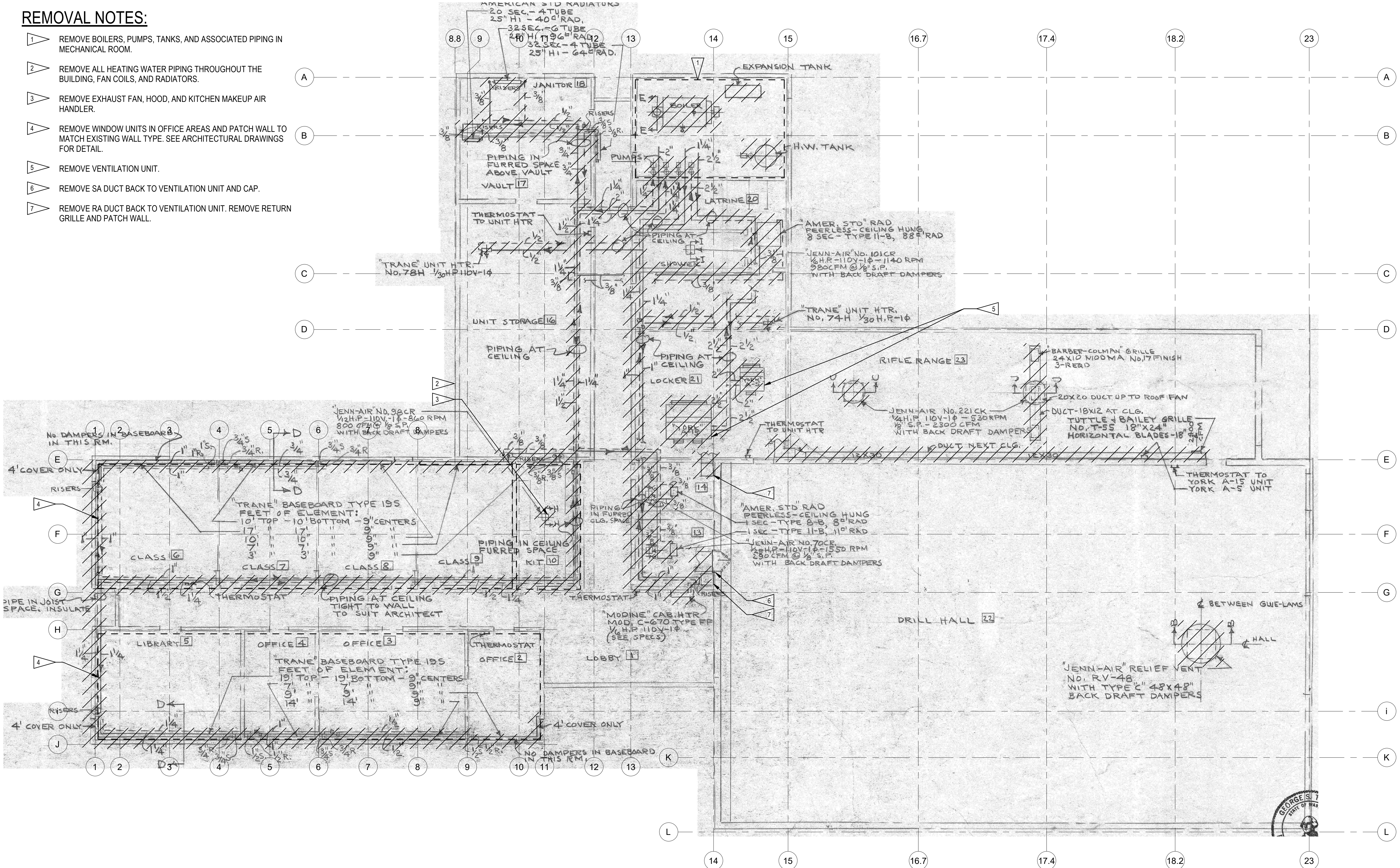
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HVAC LEGEND, ABBREVIATIONS
AND GENERAL NOTES

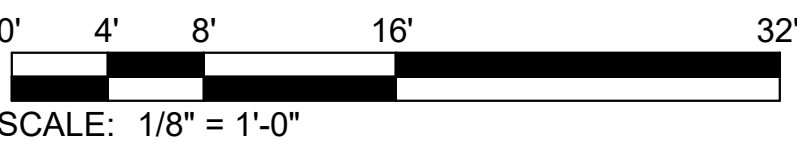
M-001

REMOVAL NOTES:

- 1
- REMOVE BOILERS, PUMPS, TANKS, AND ASSOCIATED PIPING IN MECHANICAL ROOM.
- 2
- REMOVE ALL HEATING WATER PIPING THROUGHOUT THE BUILDING, FAN COILS, AND RADIATORS.
- 3
- REMOVE EXHAUST FAN, HOOD, AND KITCHEN MAKEUP AIR HANDLER.
- 4
- REMOVE WINDOW UNITS IN OFFICE AREAS AND PATCH WALL TO MATCH EXISTING WALL TYPE. SEE ARCHITECTURAL DRAWINGS FOR DETAIL.
- 5
- REMOVE VENTILATION UNIT.
- 6
- REMOVE SA DUCT BACK TO VENTILATION UNIT AND CAP.
- 7
- REMOVE RA DUCT BACK TO VENTILATION UNIT. REMOVE RETURN GRILLE AND PATCH WALL.



1 HVAC REMOVAL PLAN
1/8" = 1'-0"



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HVAC REMOVAL PLAN

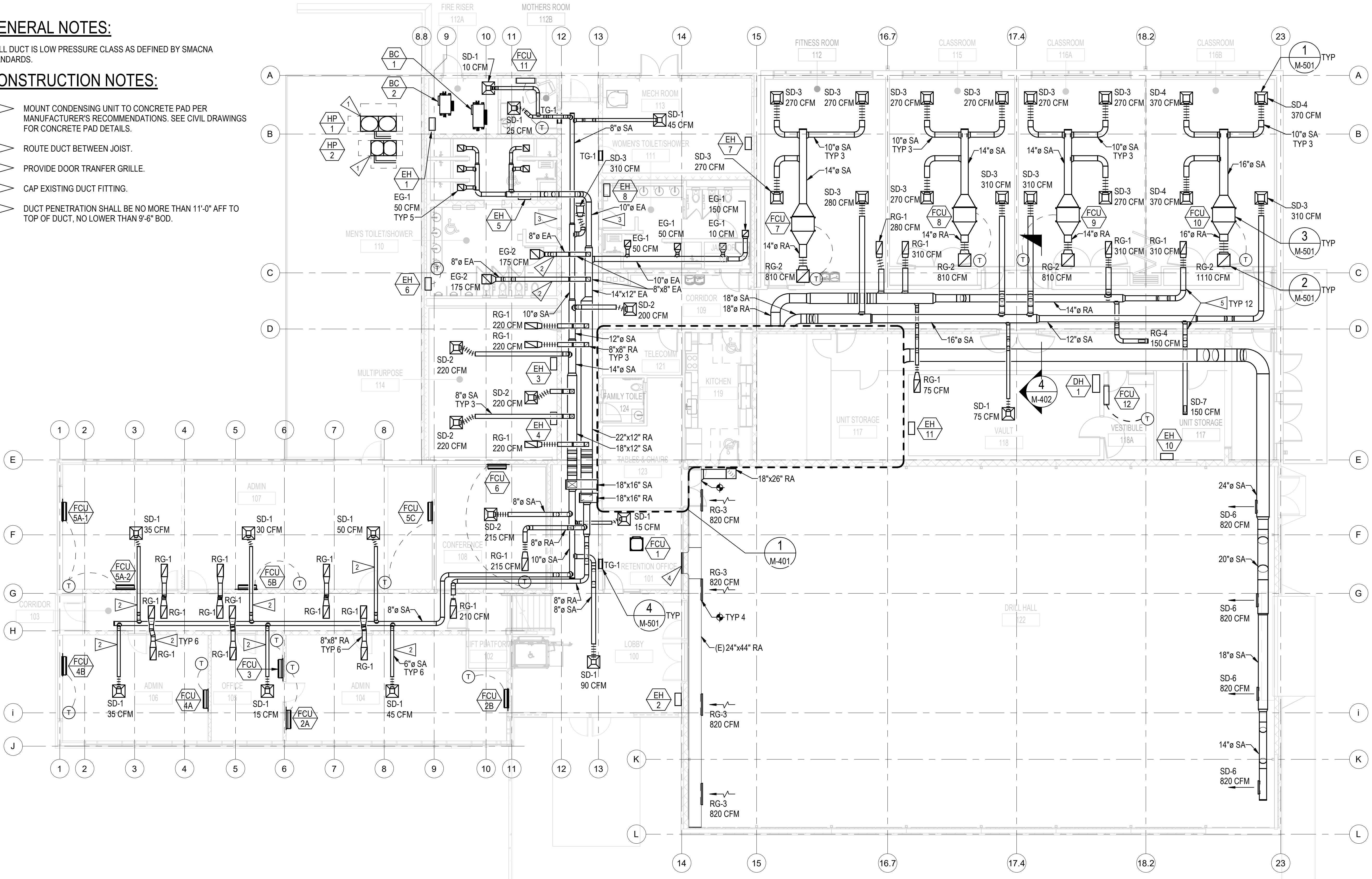
M-101-R

GENERAL NOTES:

1. ALL DUCT IS LOW PRESSURE CLASS AS DEFINED BY SMACNA STANDARDS.

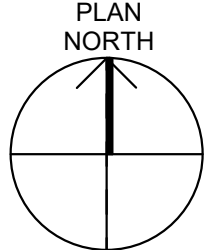
CONSTRUCTION NOTES:

- 1 MOUNT CONDENSING UNIT TO CONCRETE PAD PER MANUFACTURER'S RECOMMENDATIONS. SEE CIVIL DRAWINGS FOR CONCRETE PAD DETAILS.
- 2 ROUTE DUCT BETWEEN JOIST.
- 3 PROVIDE DOOR TRANSFER GRILLE.
- 4 CAP EXISTING DUCT FITTING.
- 5 DUCT PENETRATION SHALL BE NO MORE THAN 11'-0" AFF TO TOP OF DUCT, NO LOWER THAN 9'-6" BOD.



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

0' 4' 8' 16' 32'
SCALE: 1/8" = 1'-0"



WASHINGTON MILITARY DEPARTMENT

ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA

FIRST FLOOR HVAC PLAN

M-101

Project No.: 21067

Designed By: KRL

Drawn By: VGM

Checked By: JOI

Date

Description

Mark

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ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA

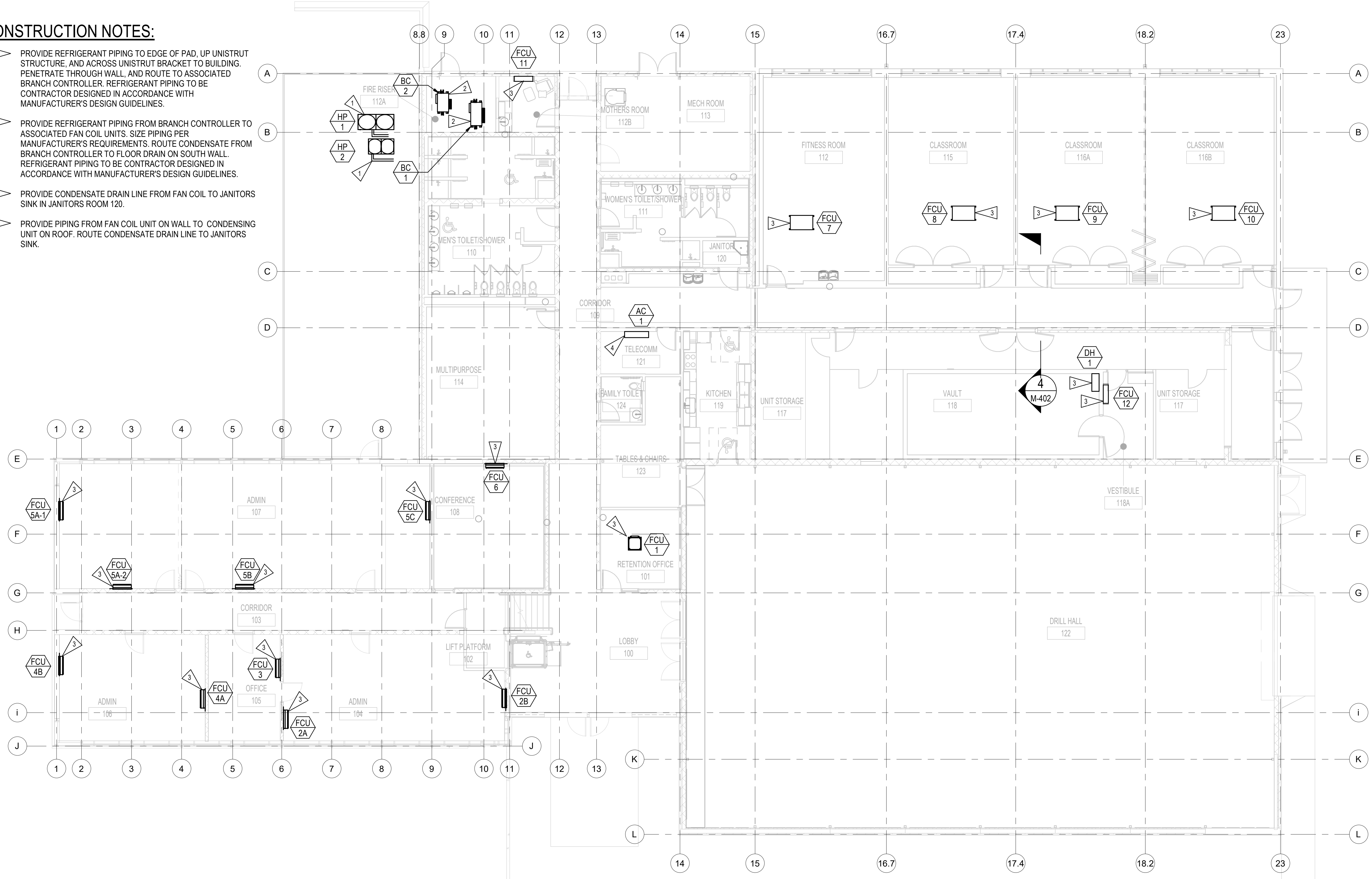
FIRST FLOOR HVAC PLAN

M-101

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CONSTRUCTION NOTES:

- 1 PROVIDE REFRIGERANT PIPING TO EDGE OF PAD, UP UNISTRUT STRUCTURE, AND ACROSS UNISTRUT BRACKET TO BUILDING. PENETRATE THROUGH WALL, AND ROUTE TO ASSOCIATED BRANCH CONTROLLER. REFRIGERANT PIPING TO BE CONTRACTOR DESIGNED IN ACCORDANCE WITH MANUFACTURER'S DESIGN GUIDELINES.
- 2 PROVIDE REFRIGERANT PIPING FROM BRANCH CONTROLLER TO ASSOCIATED FAN COIL UNITS. SIZE PIPING PER MANUFACTURER'S REQUIREMENTS. ROUTE CONDENSATE FROM BRANCH CONTROLLER TO FLOOR DRAIN ON SOUTH WALL. REFRIGERANT PIPING TO BE CONTRACTOR DESIGNED IN ACCORDANCE WITH MANUFACTURER'S DESIGN GUIDELINES.
- 3 PROVIDE CONDENSATE DRAIN LINE FROM FAN COIL TO JANITORS SINK IN JANITORS ROOM 120.
- 4 PROVIDE PIPING FROM FAN COIL UNIT ON WALL TO CONDENSING UNIT ON ROOF. ROUTE CONDENSATE DRAIN LINE TO JANITORS SINK.



1 HVAC PIPING FIRST FLOOR PLAN
1/8" = 1'-0"

PERMIT SET

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HVAC PIPING FIRST FLOOR PLAN

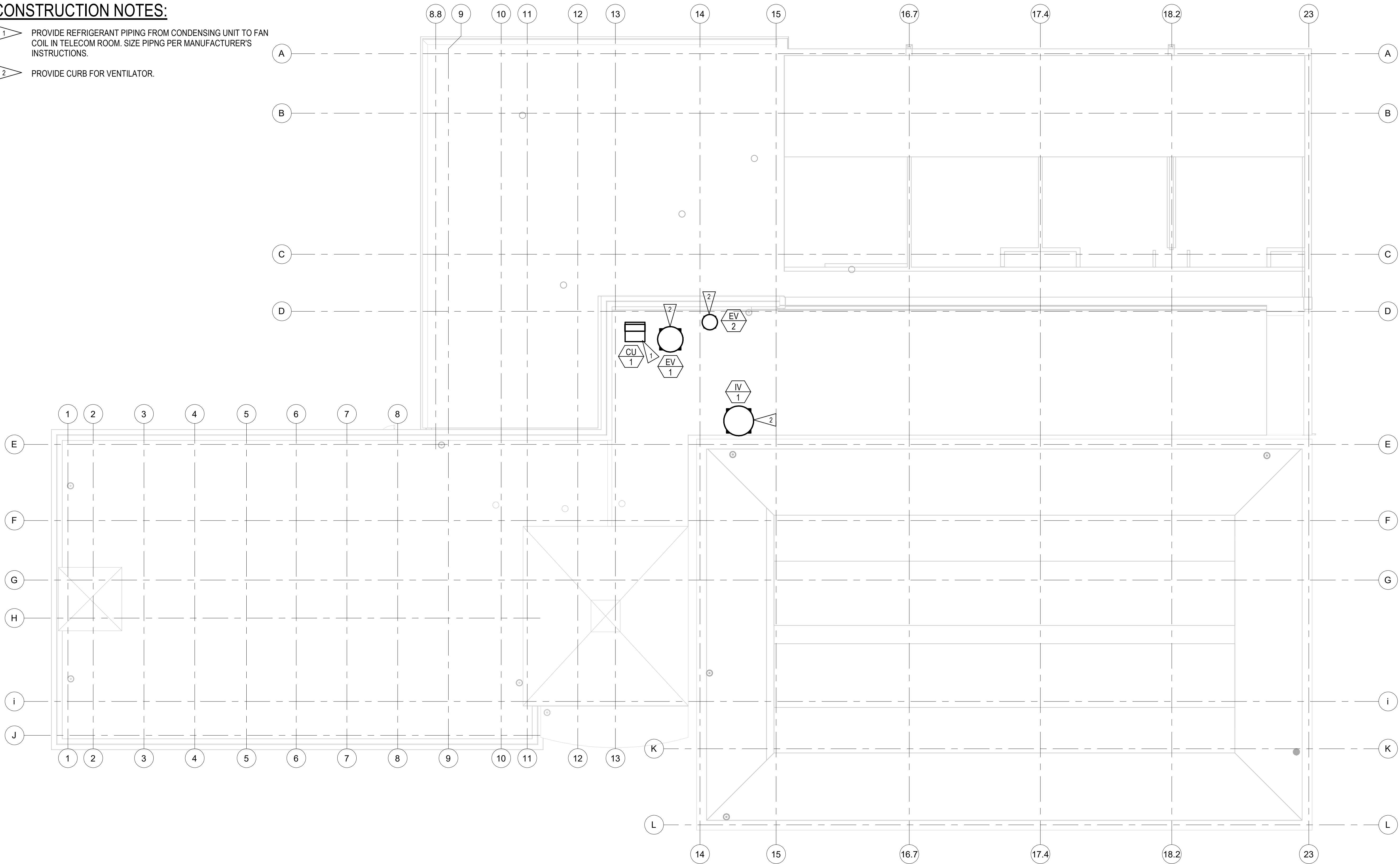
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CONSTRUCTION NOTES:

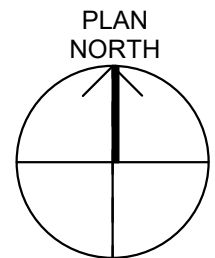
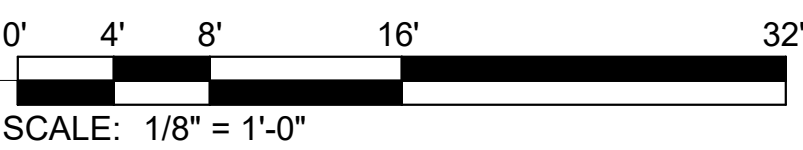
- 1

PROVIDE REFRIGERANT PIPING FROM CONDENSING UNIT TO FAN COIL IN TELECOM ROOM. SIZE PIPNG PER MANUFACTURER'S INSTRUCTIONS.
- 2

PROVIDE CURB FOR VENTILATOR.



1 ROOF HVAC PLAN
1/8" = 1'-0"



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ROOF HVAC PLAN

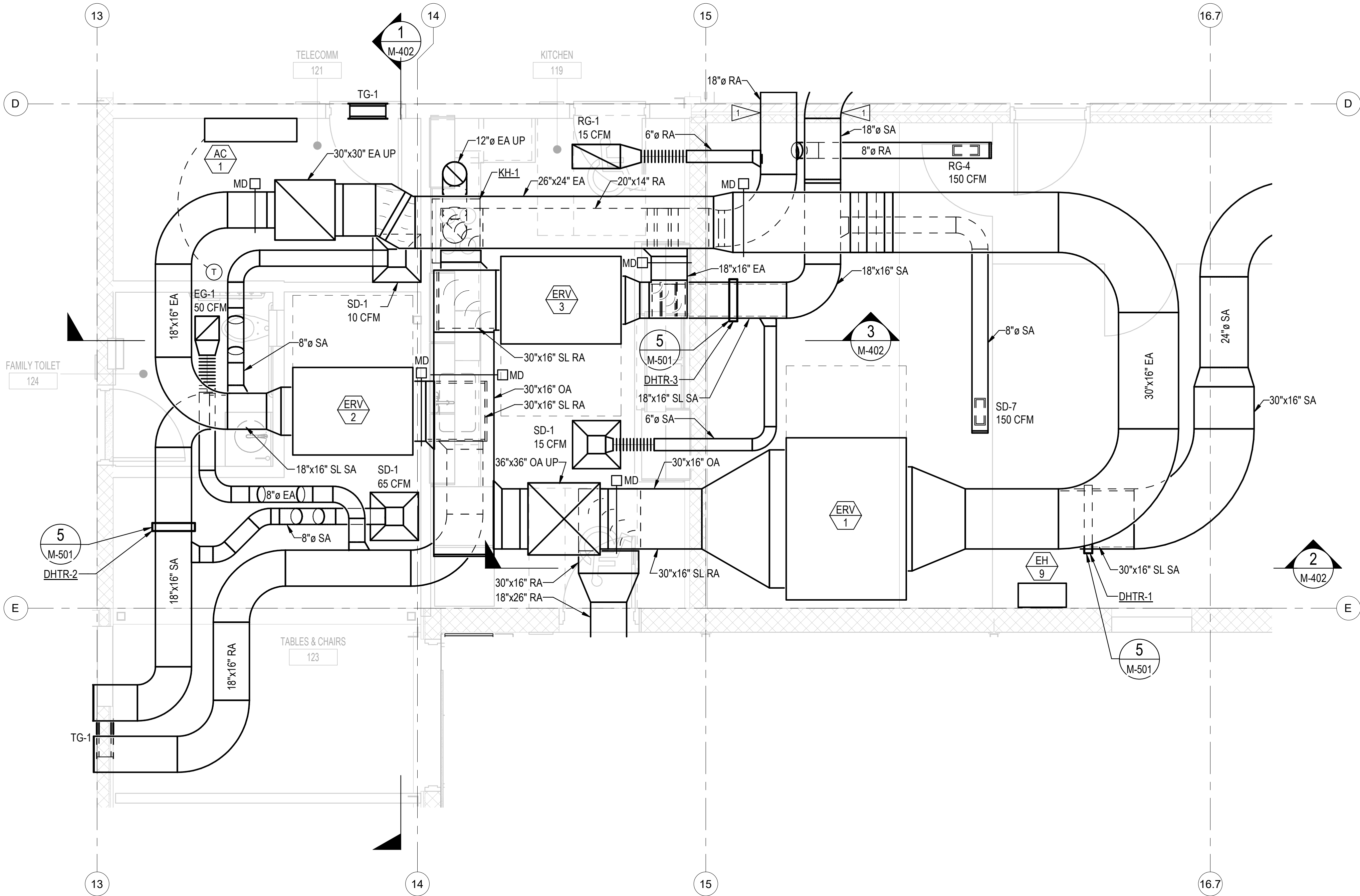
M-103

GENERAL NOTES:

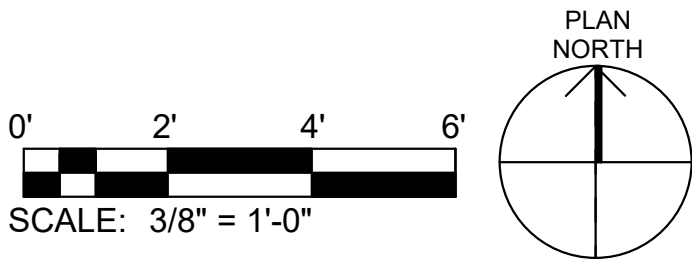
1. ALL DUCT IS LOW PRESSURE CLASS AS DEFINED BY SMACNA STANDARDS.

CONSTRUCTION NOTES:

1 DUCT PENETRATION SHALL BE NO MORE THAN 11'-0" AFF TO TOP OF DUCT, NO LOWER THAN 9'-6" BOD.



1 FIRST FLOOR HVAC ENLARGED PLAN
3/8" = 1'-0"



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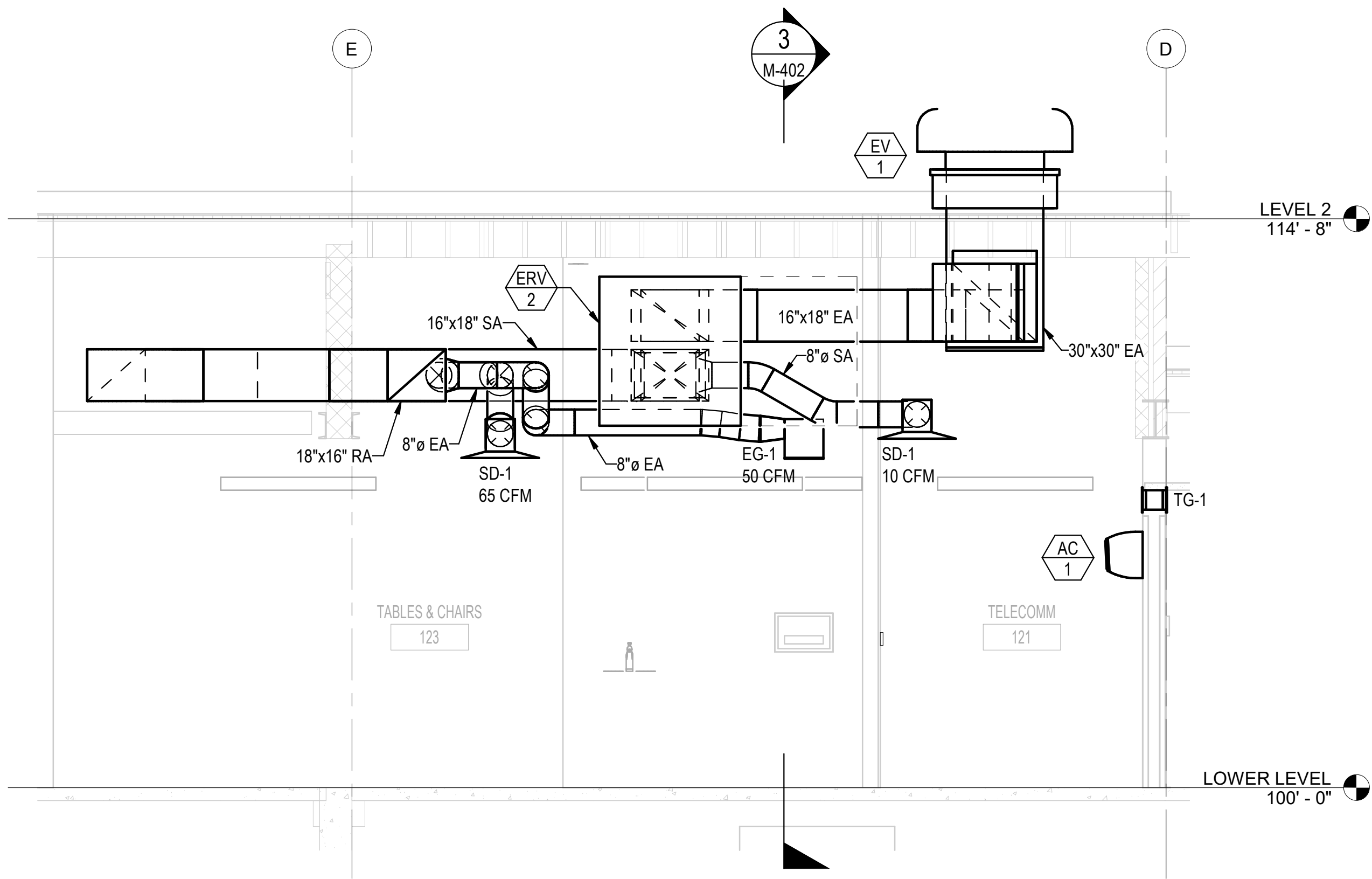
Mark	Description	Date

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ENLARGED HVAC PLANS

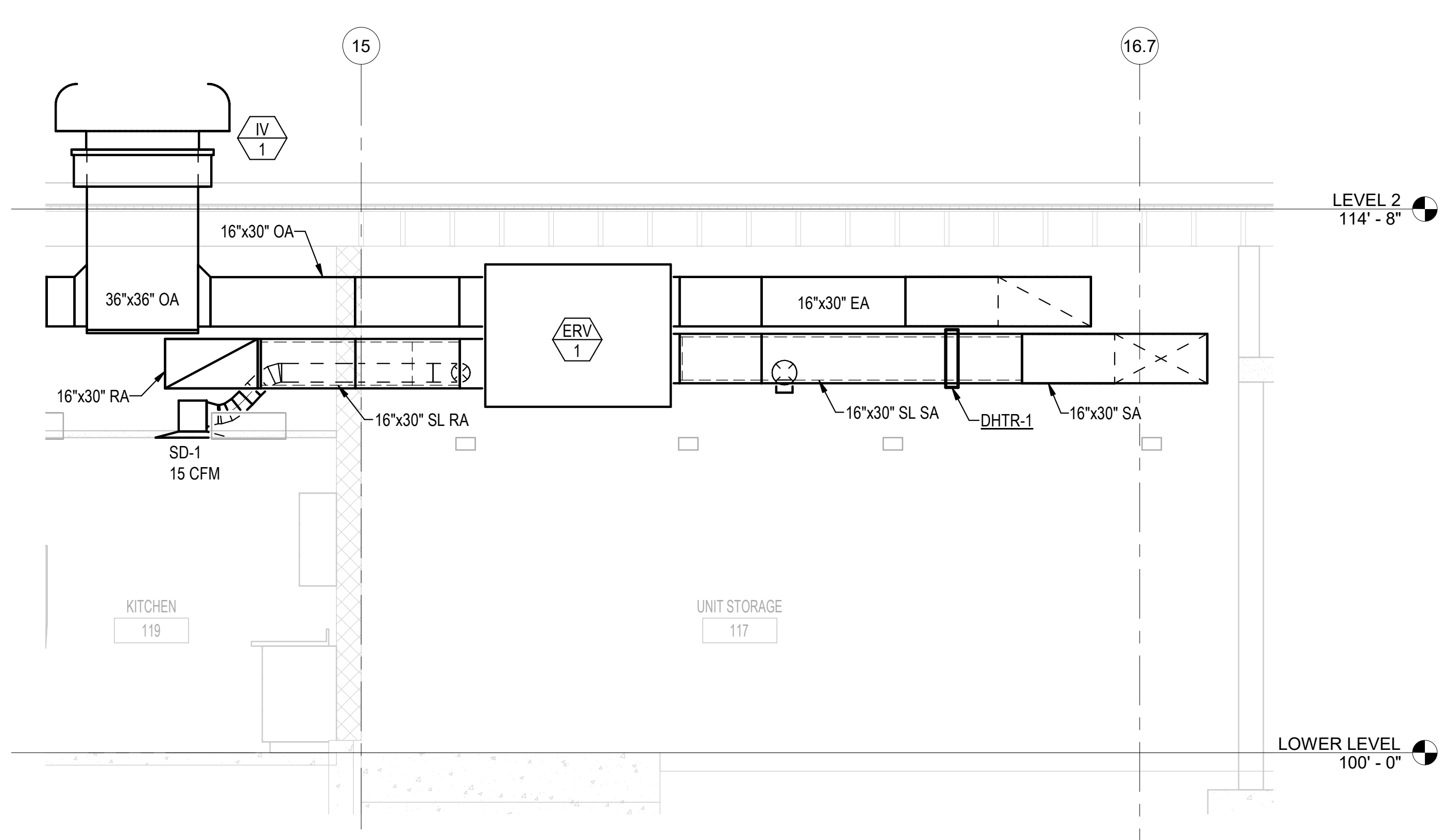
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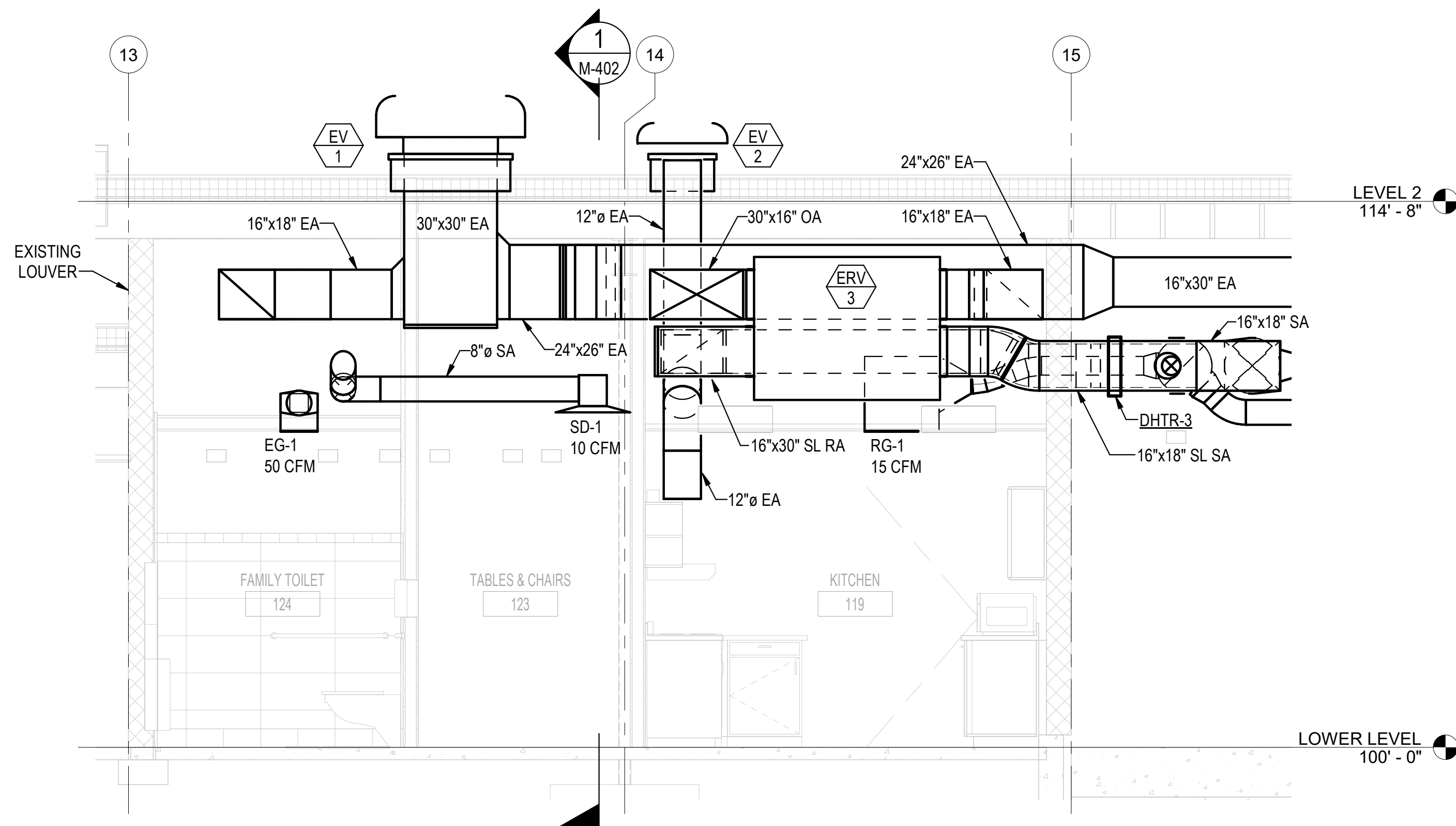
HVAC SECTION
3/8" = 1'-0"

1



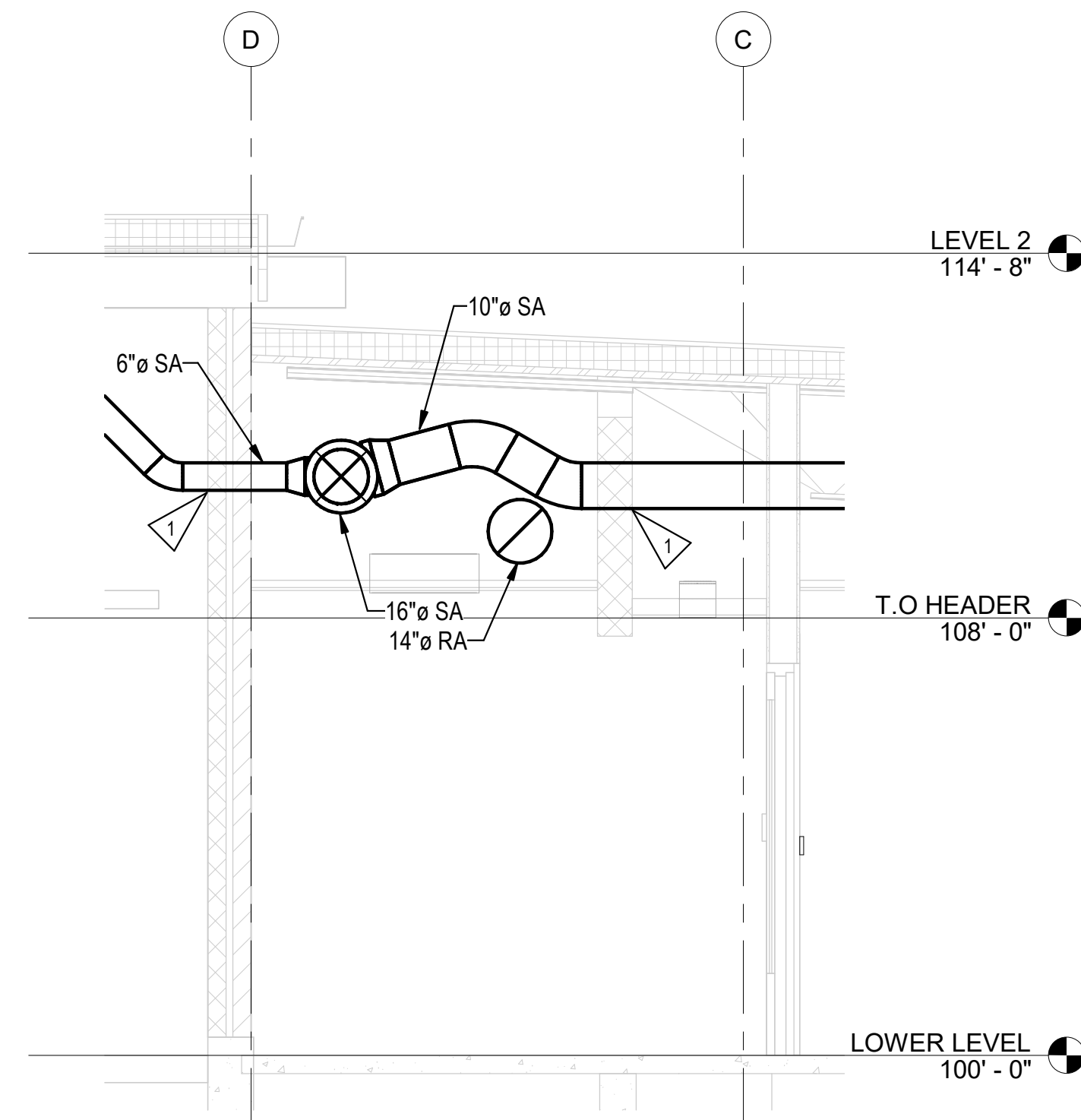
HVAC SECTION
3/8" = 1'-0"

2



HVAC SECTION
3/8" = 1'-0"

3

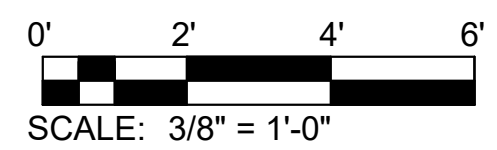


HVAC SECTION
3/8" = 1'-0"

4

CONSTRUCTION NOTES:

- 1 DUCT PENETRATION SHALL BE NO MORE THAN 11'-0" AFF TO TOP OF DUCT, NO LOWER THAN 9'-6" BOD.



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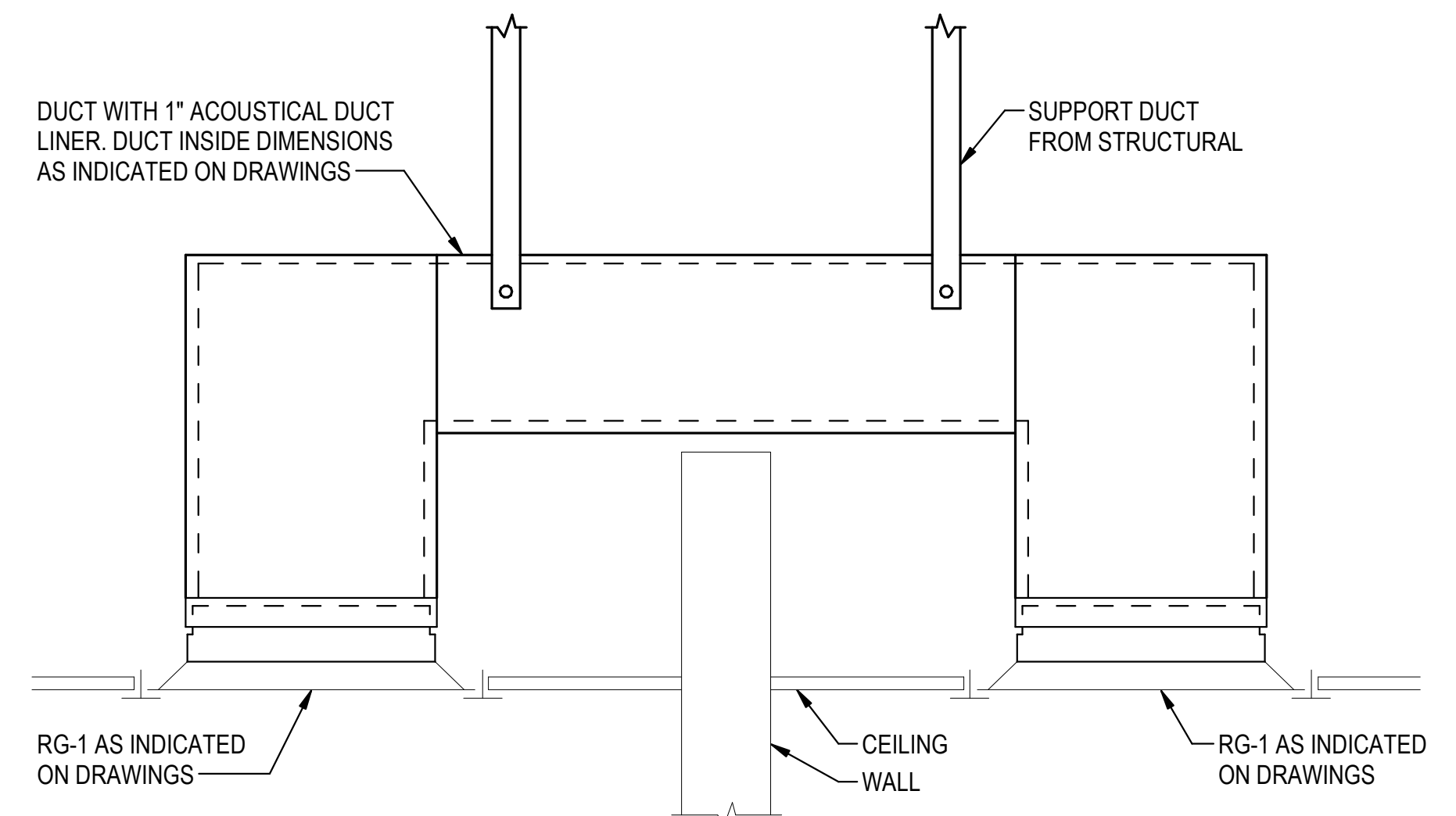
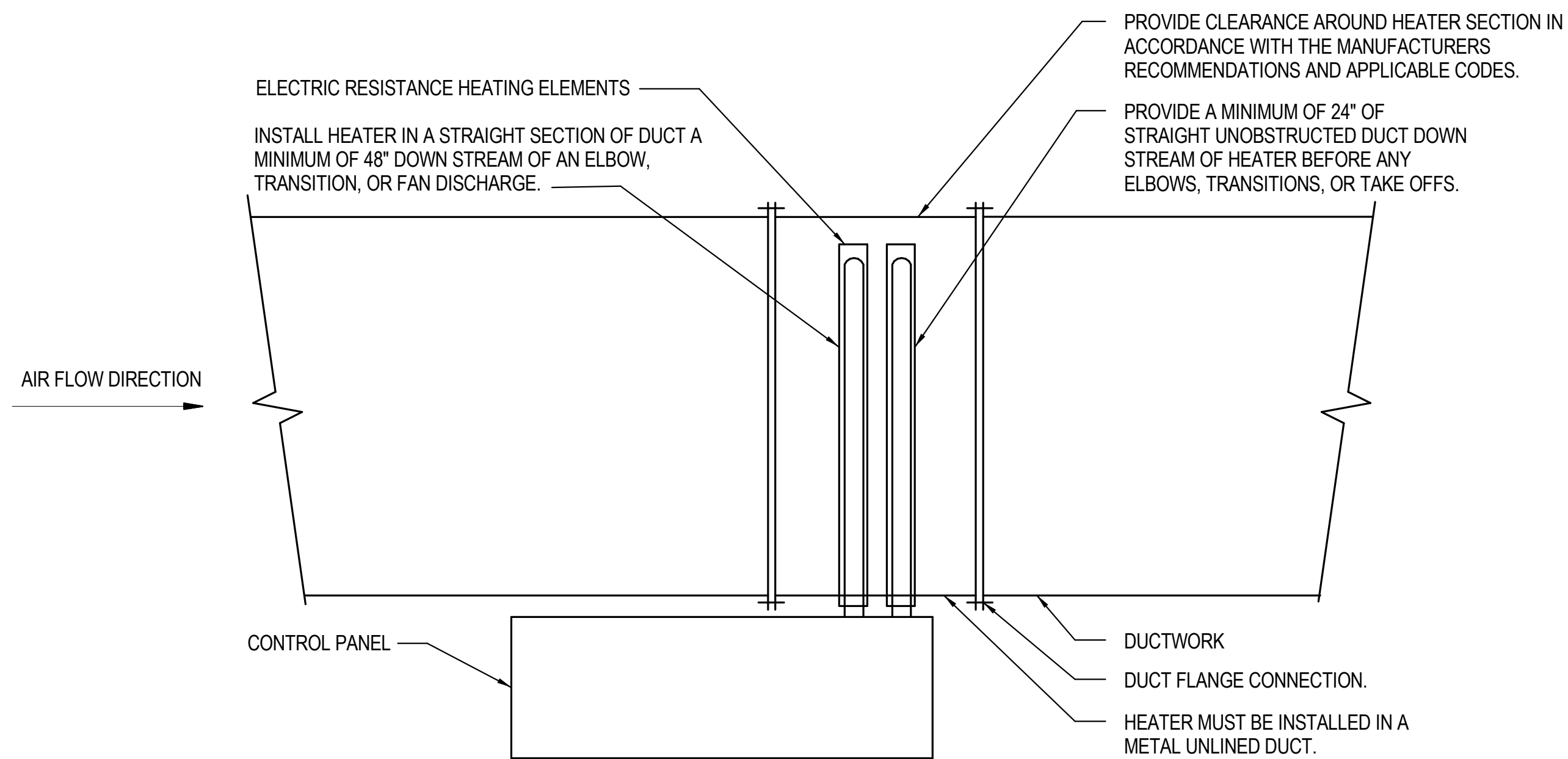
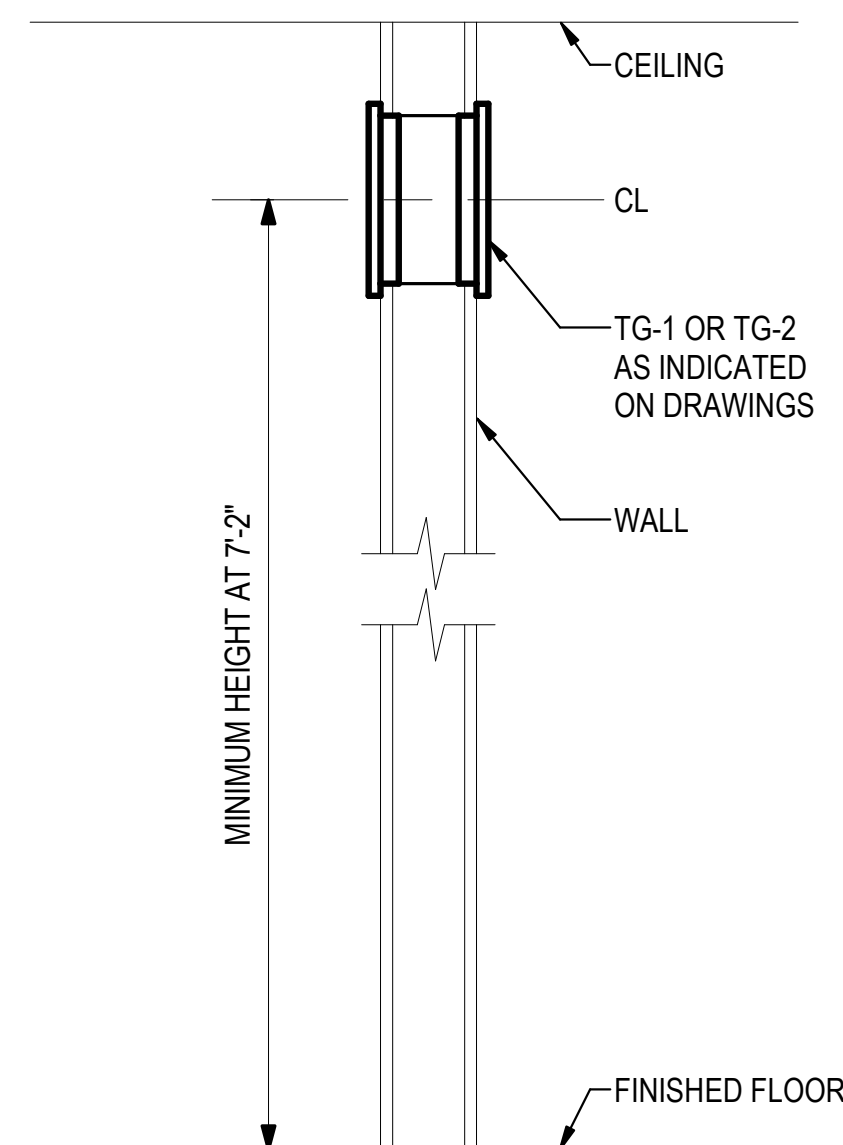
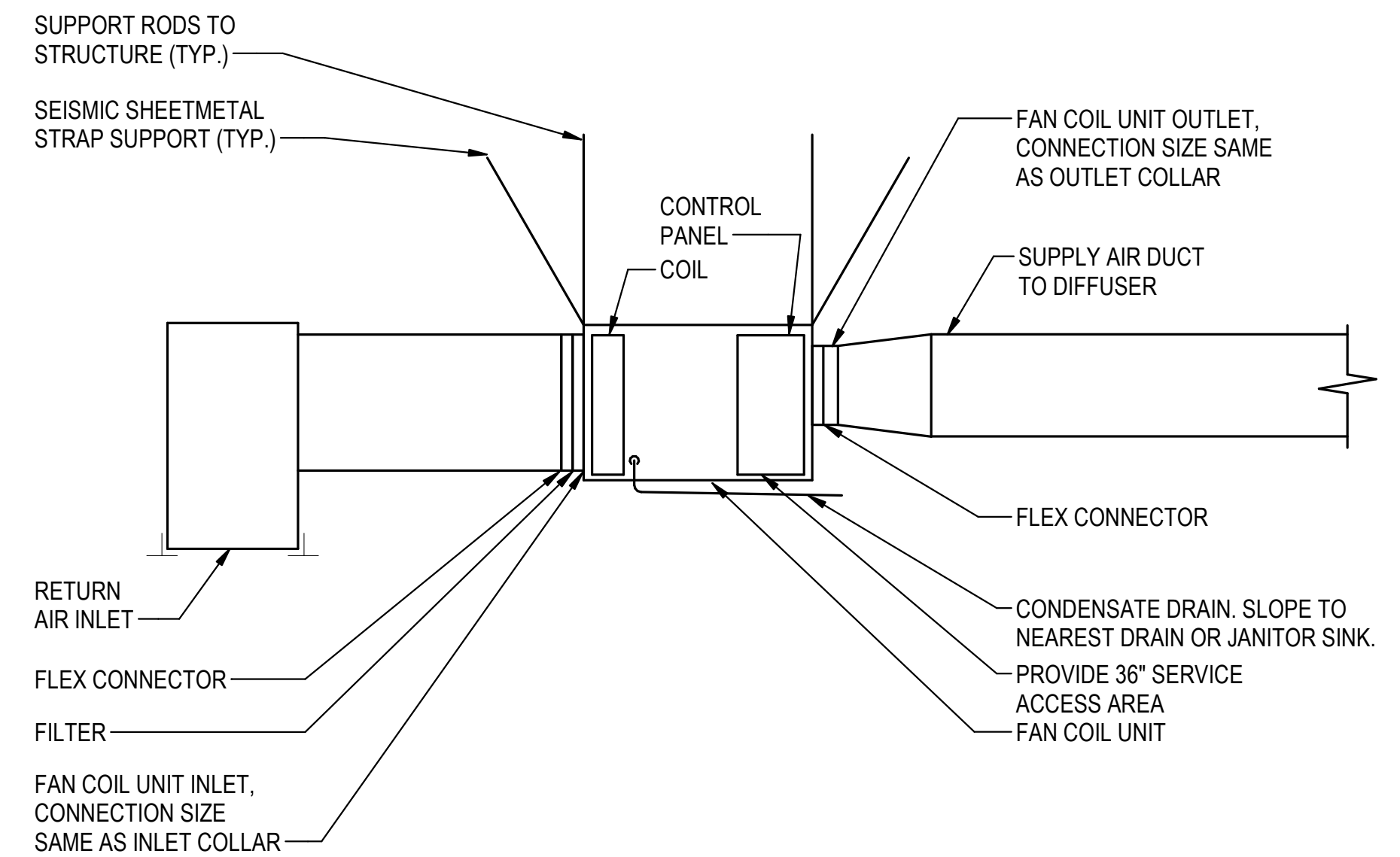
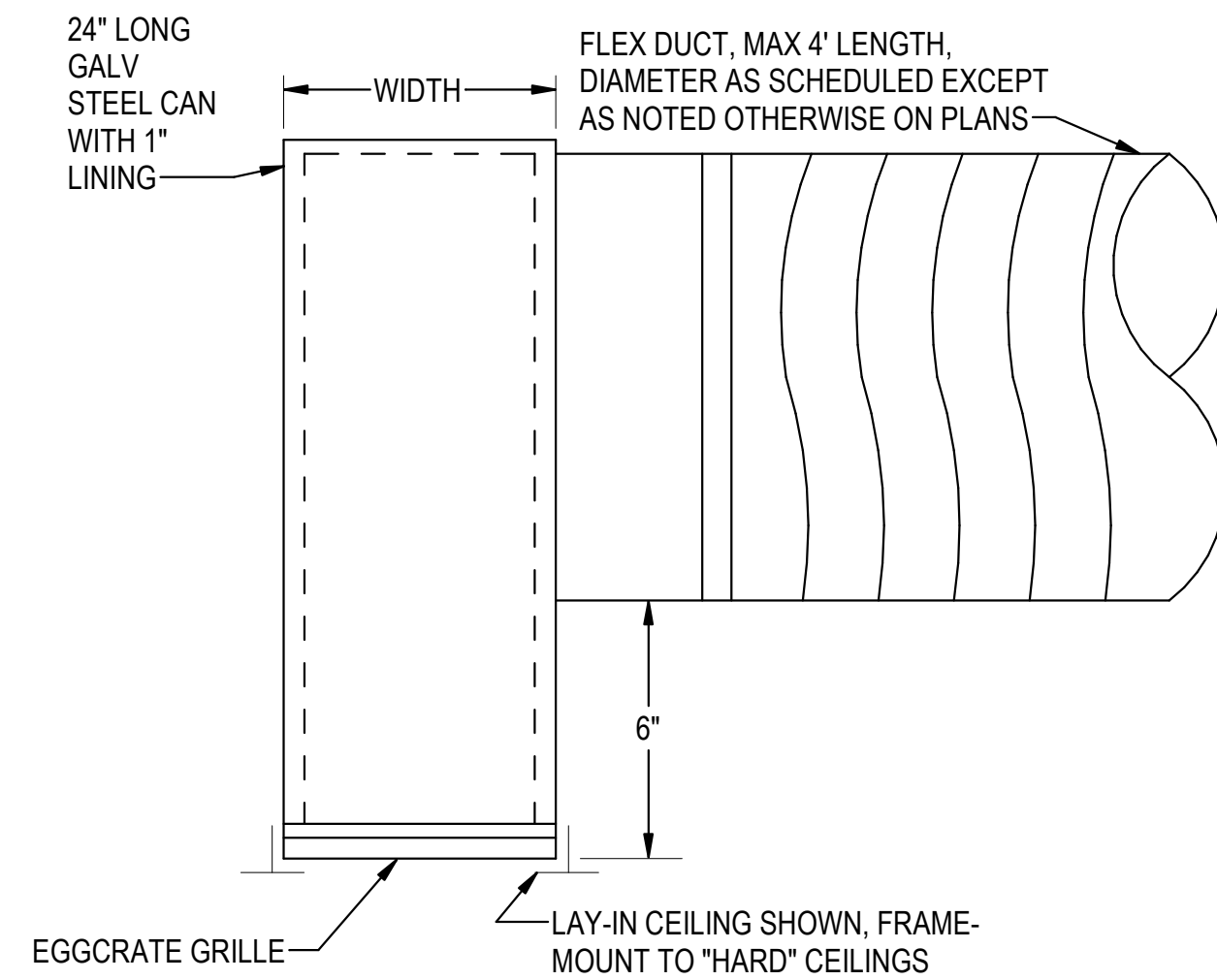
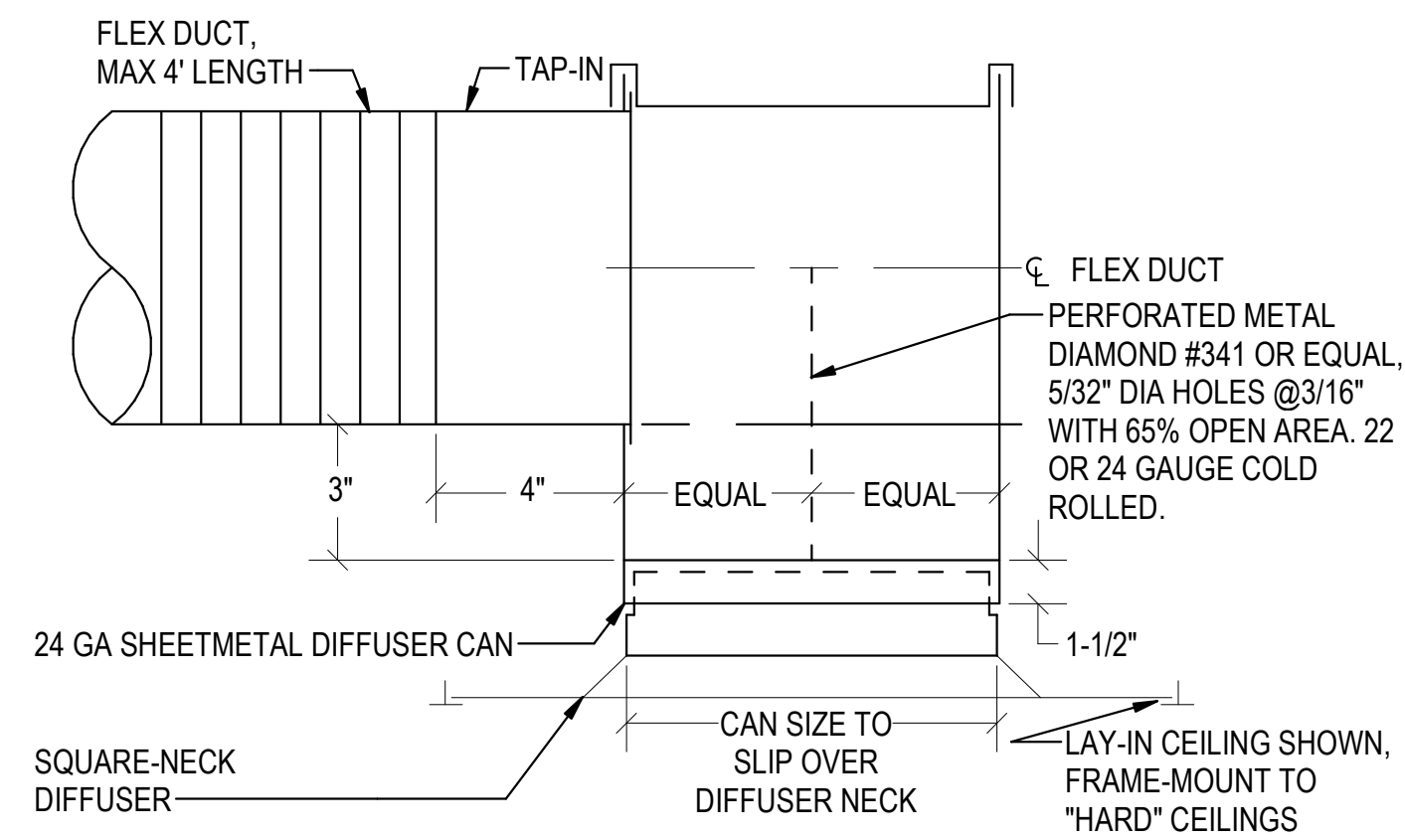
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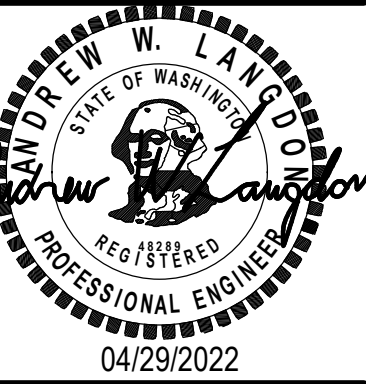
HVAC SECTIONS

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Summary

2219 M AVENUE, ANACORTES, WA

HVAC DETAILS

M-501

Size: 22" x 34"

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UNIT HEATER SCHEDULE														
CALLOUT		SERVICE	FAN			HEATING COIL			ELECTRICAL [1]			BASIS OF DESIGN		NOTES
TYPE	MARK		CFM	MOTOR HP	RPM	EAT (DEG F)	LAT (DEG F)	CAPACITY (KW)	V	HZ	Ø	MANUFACTURER	MODEL	
EH	1	FIRE RISER	100	0.1	850	55	90	4	208	60	3	QMARK	AWH44083F	[2]
EH	2	LOBBY	100	0.1	850	55	90	4	208	60	3	QMARK	AWH44083F	[2]
EH	3	MULTIPURPOSE	100	0.1	850	55	90	4.8	208	60	3	QMARK	AWH45083F	[2]
EH	4	MULTIPURPOSE	100	0.1	850	55	90	4.8	208	60	3	QMARK	AWH45083F	[2]
EH	5	MENS TOILET/SHOWER	100	0.1	850	55	90	4.8	208	60	3	QMARK	AWH45083F	[2]
EH	6	MENS TOILET/SHOWER	100	0.1	850	55	90	4.8	208	60	3	QMARK	AWH45083F	[2]
EH	7	MECH ROOM	100	0.1	850	55	90	2	208	60	3	QMARK	AWH4408F	[2]
EH	8	WOMENS TOILET/ SHOWER	100	0.1	850	55	90	2	208	60	3	QMARK	AWH4408F	[2]
EH	9	UNIT STORAGE WEST	100	0.1	850	55	90	4	208	60	3	QMARK	AWH44083F	[2]
EH	10	UNIT STORAGE EAST	100	0.1	850	55	90	4.8	208	60	3	QMARK	AWH45083F	[2]
EH	11	VAULT	100	0.1	850	55	90	2	208	60	3	QMARK	AWH4408F	[2]

SCHEDULE NOTES:
[1] UNIT PROVIDED WITH INTEGRAL DISCONNECT.
[2] 24 VOLT RELAY FOR USE WITH REMOTE THERMOSTAT.

DEHUMIDIFIER SCHEDULE													
CALLOUT		SERVICE	FAN			ELECTRICAL				DEHUMIDIFICATION	BASIS OF DESIGN		NOTES
TYPE	MARK		CFM	MOTOR HP	RPM	V	HZ	Ø	FLA	PINTS/DAY	MANUFACTURER	MODEL	
DH	1	VAULT	170	0.75	850	110	60	1	5	15	EBAC	CD30-SE	

SPLIT SYSTEM UNIT SCHEDULE																							
CALLOUT		LOCATION	AREA SERVED	UNIT CONFIGURATION	ECON	RATED UNIT EFFICIENCY [1]	INDOOR FAN				COOLING [4]			REFER TYPE	OPERATING WEIGHT (LBS)	ELECTRICAL [7] [8]						BASIS OF DESIGN	
TYPE	MARK						SEER	CFM	ESP (IN WC) [2] [3]	MOTOR		NOMINAL CAPACITY (TONS) [5]	TOTAL COOLING (BTUH)			SENSIBLE COOLING (BTUH)	V	HZ	Ø	MOCB	MCA	SCCR	MANUFACTURER
						HP				BHP [6]													
AC	1	TELECOM	TELECOM	HORIZONTAL	N	-	385	0.5	0.05	0.04	3	30017	25456	R-410A	28	208	60	1	-	-	-	MITSUBISHI	TPKA0A0361KA70A
CU	1	ROOF	TELECOM	ROOF	N	18.8	3880	-	-	-	3	30017	25456	R-410A	92	208	60	1	31	25	30	MITSUBISHI	TRUYA0361KA70NA

SCHEDULE NOTES:
[1] TEST PROCEDURE: AHRI 210/240 OR AHRI 340/360
[2] STATIC PRESSURE EXTERNAL TO UNIT
[3] INCLUDES ALLOWANCE FOR FILTER LOADING
[4] AT 95 DEG F OUTDOOR AIR DRYBULB TEMPERATURE
[5] NOMINAL TONNAGE INCLUDED FOR REFERENCE ONLY - DO NOT USE FOR FINAL SIZING OF EQUIPMENT
[6] MAXIMUM ALLOWABLE MOTOR BRAKEHORSE POWER AT MAX FLOW AND ESP PER FAN MOTOR
[7] SINGLE POINT CONNECTION AND UNIT PROVIDED WITH INTEGRAL DISCONNECT
[8] POWER CONNECTION TO BE MADE TO CONDENSING UNIT WITH CONDUIT AND POWER CONNECTED TO INDOOR UNIT FROM OUTDOOR UNIT

AIR TERMINAL SCHEDULE																	
CALLOUT	AIR TERMINAL DESCRIPTION	AIRFLOW CAPACITY LIMITS (CFM)		NOMINAL SIZE		NECK			MAX NC	MAX TSP DROP (IN. W.G.)	MATERIAL	OBD	FINISH	BASIS OF DESIGN		NOTES	
		MAXIMUM	MINIMUM	LENGTH	WIDTH	FOR ROUND	FOR RECTANGULAR							MANUFACTURER	MODEL		
							LENGTH	WIDTH									
SD-1	CEILING MOUNTED SUPPLY DIFFUSER	125	0	24"	24"	-	6"	6"	<10	0.06	STEEL		#26 WHITE	TITUS	MCD		
SD-2	CEILING MOUNTED SUPPLY DIFFUSER	225	125	24"	24"	-	8"	8"	12	0.06	STEEL		#26 WHITE	TITUS	MCD		
SD-3	CEILING MOUNTED SUPPLY DIFFUSER	350	225	24"	24"	-	10"	10"	17	0.06	STEEL		#26 WHITE	TITUS	MCD		
SD-4	CEILING MOUNTED SUPPLY DIFFUSER	475	350	24"	8"	-	12"	12"	19	0.07	STEEL		#26 WHITE	TITUS	MCD		
SD-5	SIDE WALL SUPPLY GRILLE	75	0	12"	6"	-	-	-	17	0.07	STEEL	YES	#26 WHITE	TITUS	350RL		
SD-6	DUCT MOUNTED SUPPLY GRILLE (GYM)	820	0	24"	8"	-	-	-	22	0.14	STEEL		#26 WHITE	TITUS	DL		
SD-7	DUCT MOUNTED SUPPLY GRILLE	150	0	12"	4"	-	-	-	17	0.07	STEEL		#26 WHITE	TITUS	S300F		
RG-1	CEILING MOUNTED RETURN GRILLE	799	0	24"	12"	-	22"	10"	19	0.07	STEEL		#26 WHITE	TITUS	50F		
RG-2	CEILING MOUNTED RETURN GRILLE	1200	800	24"	24"	-	22"	22"	20	0.07	STEEL		#26 WHITE	TITUS	50F		
RG-3	DUCT MOUNTED RETURN GRILLE (GYM)	820	0	28"	30"	-	-	-	20	0.07	STEEL						
RG-4	DUCT MOUNTED RETURN GRILLE	150	0	12"	4"	-	-	-	17	0.07	STEEL		#26 WHITE	TITUS	S300F		
TG-1	WALL MOUNTED TRANSFER GRILLE	75	0	18"	6"	-	-	-	19	0.07	STEEL		#26 WHITE	TITUS	350RL		
EG-1	CEILING MOUNTED EGGRATE RETURN GRILLE	50	0	12"	12"	-	10"	10"	10	0.01	STEEL	NO	#26 WHITE	TITUS	50F		
EG-2	CEILING MOUNTED EGGRATE RETURN GRILLE	175	0	18"	18"	-	16"	16"	10	0.01	STEEL	NO	#26 WHITE	TITUS	50F		
IV-1	OUTSIDE AIR VENTILATION INTAKE	4000	0	46"	46"	36"	-	-	-	0.06	ALUMINUM		-	GREENHECK	GRSI-36	[1]	
EV-1	EXHAUST VENTILATOR	4500	0	48"	48"	30"	-	-	-	0.15	ALUMINUM		-	GREENHECK	GRSR-30	[1]	
EV-2	EXHAUST VENTILATOR	1000	0	29"	29"	15"	-	-	-	0.06	ALUMINUM		-	GREENHECK	GRSR-15	[1]	

SCHEDULE NOTES:
[1] PROVIDE INSECT SCREEN AND CLASS 1 MOTORIZED DAMPER.



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HVAC SCHEDULES

M-601

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VARIABLE REFRIGERANT FLOW HEAT PUMP SCHEDULE															
CALLOUT		LOCATION	REFRIGERANT	COOLING					HEATING			COMPRESSOR		BASIS OF DESIGN	
TYPE	MARK			LBS OF REFRIGERANT	NOMINAL CAPACITY (TONS) [1]	TOTAL COOLING CAPACITY (BTH)	RATED EFFICIENCY [2]		HEATING CAPACITY (MBH)	RATED EFFICIENCY [3]	SCHE [4]	TYPE	QTY	MANUFACTURER	MODEL
							EER	IEER		COP (DUCTED/NONDUCTED)	(DUCTED/NONDUCTED)				
HP	1	OUTDOOR	R410A	70.2	18	214296	11.15	22.3	172066	3.23/3.62	23.8/27.8	INVERTER SCROLL	1	mitsubishi	TURYE2163AN40AN
HP	2	OUTDOOR	R410A	36.9	10	117801	12.65	26.05	101761	3.61/4.01	25.3/29.1	INVERTER SCROLL	1	mitsubishi	TURY1203AN40AN

SCHEDULE NOTES:
[1] NOMINAL TONNAGE INCLUDED FOR REFERENCE ONLY - DO NOT USE FOR FINAL SIZING OF EQUIPMENT.
[2] RATED EFFICIENCY PER AHRI 1230. SYSTEM IS COMPLIANT WITH TABLE C403.2.3(1) OF THE WASHINGTON ENERGY CODE, COMMERCIAL PROVISIONS; SEER=SEASONAL ENERGY EFFICIENCY RATIO; IEER=INTEGRATED ENERGY EFFICIENCY RATIO; EER=ENERGY EFFICIENCY RATIO
[3] RATED EFFICIENCY PER AHRI 1230. SYSTEM IS COMPLIANT WITH TABLE C403.2.3(1) OF THE WASHINGTON ENERGY CODE, COMMERCIAL PROVISIONS; COP=COEFFICIENT OF PERFORMANCE; HSPF=HEATING SEASONAL PERFORMANCE FACTOR
[4] SCHE AT NOMINAL CONDITIONS; SCHE=SIMULTANEOUS COOLING AND HEATING EFFICIENCY

VARIABLE REFRIGERANT FLOW FAN COIL UNIT SCHEDULE																					
CALLOUT		SERVICE	OUTDOOR UNIT	STYLE	SUPPLY AIRFLOW (CFM)		ESP (IN WC) [1] [2]		COOLING			HEATING	FILTRATION	FAN MOTOR EFFICIENCY [%]	REFRIGERANT	ELECTRICAL			BASIS OF DESIGN		NOTES
TYPE	MARK								CAPACITY (TONS) [3]	TOTAL COOLING (BTH)	SENSIBLE COOLING (BTH)	TOTAL HEATING (BTH)				POWER SUPPLY	MCA	MOP	MANUFACTURER	MODEL	
FCU	1	RETENTION OFFICE	HP-1	4 WAY CASSETTE	280	-	0.5	4598	4193	3669	MERV 13	75	R410A	208-230/1	0.24	15	mitsubishi	TPLFYP005FM140A	[4]		
FCU	2A	ADMIN (104)	HP-1	WALL MOUNTED	918	-	2.5	27591	21241	22278	-	72	R410A	208-230/1	0.63	15	mitsubishi	TPKFYP030KM142A	[4]		
FCU	2B	ADMIN (104)	HP-1	WALL MOUNTED	918	-	2.5	27591	21241	22278	-	72	R410A	208-230/1	0.63	15	mitsubishi	TPKFYP030KM142A	[4]		
FCU	3	OFFICE (105)	HP-1	WALL MOUNTED	918	-	2	22073	18797	17691	-	72	R410A	208-230/1	0.63	15	mitsubishi	TPKFY024KM142A	[4]		
FCU	4A	ADMIN (106)	HP-1	WALL MOUNTED	918	-	2.5	27591	21241	22278	-	72	R410A	208-230/1	0.63	15	mitsubishi	TPKFYP030KM142A	[4]		
FCU	4B	ADMIN (106)	HP-1	WALL MOUNTED	918	-	2	22073	18797	17691	-	72	R410A	208-230/1	0.63	15	mitsubishi	TPKFY024KM142A	[4]		
FCU	5A-1	ADMIN (107) WEST	HP-1	WALL MOUNTED	918	-	2	22073	18797	17691	-	72	R410A	208-230/1	0.63	15	mitsubishi	TPKFY024KM142A	[4]		
FCU	5A-2	ADMIN (107) WEST	HP-1	WALL MOUNTED	438	-	1.5	16555	11692	13104	-	72	R410A	208-230/1	0.24	15	mitsubishi	TPKFY018LM140A	[4]		
FCU	5B	ADMIN (107) CENTRAL	HP-1	WALL MOUNTED	297	-	1	11036	7809	8845	-	72	R410A	208-230/1	0.24	15	mitsubishi	TPKFY012LM140A	[4]		
FCU	5C	ADMIN (107) EAST	HP-1	WALL MOUNTED	297	-	1	11036	7809	8845	-	72	R410A	208-230/1	0.24	15	mitsubishi	TPKFY012LM140A	[4]		
FCU	6	CONFERENCE	HP-1	WALL MOUNTED	918	-	2	22073	18797	17691	-	72	R410A	208-230/1	0.63	15	mitsubishi	TPKFY024KM142A	[4]		
FCU	7	FITNESS ROOM	HP-2	CEILING MOUNTED DUCTED	883	1.0	2.5	28292	21091	26660	MERV 13	75	R410A	208-230/1	2.88	15	mitsubishi	TPEFYP030MA144A	[4] [5]		
FCU	8	CLASSROOM (115)	HP-2	CEILING MOUNTED DUCTED	883	1.0	2	22634	18663	21171	MERV 13	75	R410A	208-230/1	2.88	15	mitsubishi	TPEFYP024MA144A	[4] [5]		
FCU	9	CLASSROOM (116A)	HP-2	CEILING MOUNTED DUCTED	883	1.0	2	22634	18663	21171	MERV 13	75	R410A	208-230/1	2.88	15	mitsubishi	TPEFYP024MA144A	[4] [5]		
FCU	10	CLASSROOM (116B)	HP-2	CEILING MOUNTED DUCTED	883	1.0	2	22634	18663	21171	MERV 13	75	R410A	208-230/1	2.88	15	mitsubishi	TPEFYP024MA144A	[4] [5]		
FCU	11	MOTHERS ROOM	HP-2	WALL MOUNTED	297	-	1	11317	7937	10585	-	72	R410A	208-230/1	0.24	15	mitsubishi	TPKFY012LM140A	[4]		
FCU	12	VESTIBULE (118A)	HP-2	WALL MOUNTED	297	-	1	11317	7937	10585	-	72	R410A	208-230/1	0.24	15	mitsubishi	TPKFY012LM140A	[4]		

SCHEDULE NOTES:
[1] WITH UNIT AT MAXIMUM CONDITIONS.
[2] INCLUDES ALLOWANCE FOR FILTER LOADING.
[3] NOMINAL TONNAGE INCLUDED FOR REFERENCE ONLY.
[4] PROVIDE CONDENSATE PUMP OPTION.
[5] PROVIDE FILTER BOX WITH 2" MERV-13 FILTER.

VARIABLE REFRIGERANT FLOW BRANCH SELECTOR BOX SCHEDULE										
CALLOUT		SERVICE	REFRIGERANT	ELECTRICAL [1]			OPERATING WEIGHT (LBS)	BASIS OF DESIGN		NOTES
TYPE	MARK			POWER SUPPLY	MCA	MOP		MANUFACTURER	MODEL	
BC	1	HP-1	R410A	208/1	0.83	15	106	mitsubishi	TCMBM1012JA11N4BV	
BC	2	HP-2	R410A	208/1	0.83	15	106	mitsubishi	TCMBM0108JA11N4BV	

SCHEDULE NOTES:
[1] SINGLE POINT CONNECTION.

DUCT HEATER SCHEDULE											
CALLOUT		LOCATION	SERVICE	SIZE (INCHES)	COIL SIZE (kW)	ELECTRIAL (V//HZ)	CONTROL	AMPS	BASIS OF DESIGN		NOTES
TYPE	MARK								MANUFACTURER	MODEL	
DHTR	1	TABLE & CHAIRS	ERV-1	22x22	17	208/3/60	SCR	47.1	GREENHECK	IDHE	
DHTR	2	TABLE & CHAIRS	ERV-2	18x18	5	208/3/60	SCR	13.8	GREENHECK	IDHE	
DHTR	3	KITCHEN	ERV-3	18x18	5	208/3/60	SCR	13.8	GREENHECK	IDHE	



Project No.: 21067	Designed By: KRL	Drawn By: VGM	Checked By: JOI
Mark	Description	Date	

KITCHEN EXHAUST HOOD SCHEDULE																		
CALLOUT		LOCATION	FAN TYPE	FAN									MAX SOUND LEVEL (DBA)	OPERATING WEIGHT (LBS)	BASIS OF DESIGN		NOTES	
TYPE	MARK			CFM	DRIVE TYPE	E.S.P (IN WC)	RPM	MOTOR			ELECTRICAL				MANUFACTURER	MODEL		
								SPEED	HP	BHP	V	HZ						PH
KH	1	KITCHEN	PROP	400	DIRECT	0.75	1797	0.22	1/4	0.22	120	60	1	71	135	CAPTIVEAIRE	WRH-36	[1]

SCHEDULE NOTES:
[1] PROVIDE WITH CAPTRATE SOLO FILTER.

ENERGY RECOVERY VENTILATOR																																	
CALLOUT		LOCATION	SERVICE	SUPPLY FAN								RETURN FAN								FILTER		MAX SOUND LEVEL DBA	OPERATING WEIGHT (LBS)	ELECTRICAL					BASIS OF DESIGN		NOTES		
TYPE	MARK			FAN TYPE	DRIVE TYPE	CFM [1]	E.S.P. (IN WC) [2] [3]	QTY	RPM [1]	MOTOR			FAN TYPE	DRIVE TYPE	CFM [1]	E.S.P. (IN WC) [2] [3]	QTY	RPM [1]	MOTOR					TYPE	MAX VEL	V	HZ	PH	MOCP	MCA		MANUFACTURER	MODEL
										SPEED	BHP	HP							SPEED	BHP	HP												
ERV	1	UNIT STORAGE	DRILL HALL	PLENUM	DIRECT	3275	1.5	2	2172	1750	1.21	1.5	PLENUM	DIRECT	3275	1.5	2	2302	1750	1.31	1.5	MERV8	500	76.6	912	208	60	3	20	19.7	GREENHECK	ECV-40-P-L	[1]
ERV	2	TABLE AND CHAIRS	ADMIN/ OFFICE/ RESTROOMS	PLENUM	DIRECT	1800	1.5	2	2235	1750	1.33	1.5	PLENUM	DIRECT	2700	1.5	2	2386	1750	1.53	2	MERV8	500	71	647	208	60	3	15	12	GREENHECK	ECV-20-P-L	[1]
ERV	3	KITCHEN	CLASSROOM/ STORAGE	PLENUM	DIRECT	1635	1.5	1	2125	1750	1.15	1.5	PLENUM	DIRECT	1635	1.5	1	2264	1750	1.32	1.5	MERV8	500	71	645	208	60	3	15	10.4	GREENHECK	ECV-20-P-L	[1]

ENERGY RECOVERY VENTILATOR - CONTINUED									
CALLOUT		ENERGY RECOVERY							
TYPE	MARK	WINTER				SUMMER			
		OSA DB/WB (DEG F)	RETURN AIR DB/WB (DEG F)	CAPACITY (MBH)	ASHRAE 90.1 ENTHALPY RECOVERY RATIO	OUTSIDE AIR DB/WB (DEG F)	RETURN AIR DB/WB (DEG F)	CAPACITY (MBH)	ASHRAE 90.1 ENTHALPY RECOVERY RATIO
ERV	1	23.1/19.3	72.0/55.7	81.6	45.9	72.3/62.0	75/62.5	2.9	64.5
ERV	2	23.1/19.3	72.0/55.7	55.1	50.4	72.3/62.0	75/62.5	0.0	67.3
ERV	3	23.1/19.3	72.0/55.7	64.9	53.2	72.3/62.0	75/62.5	1.4	68.9

SCHEDULE NOTES:
[1] WITH UNIT AT MAXIMUM CONDITIONS
[2] STATIC PRESSURE EXTERNAL TO UNIT
[3] INCLUDES ALLOWANCE FOR FILTER LOADING



design collaborative
617 Western Avenue
Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com



Project No.: 21067	Designed By: KRL
Drawn By: VGM	Checked By: JOI

WASHINGTON MILITARY DEPARTMENT

ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA

M-603

HVAC SCHEDULES

SEQUENCE OF OPERATION

GENERAL SYSTEM DESCRIPTION AND REQUIREMENTS:

ALL SETPOINTS, TIME SETTINGS AND OTHER VALUES SHALL BE OPERATOR ADJUSTABLE UNLESS INDICATED OTHERWISE.

THE DDC SYSTEM SHALL HAVE DIRECT TRENDING CAPABILITY FOR ALL POINTS WITHIN THE SYSTEM AND THE ABILITY TO STORE SEASONAL TREND DATA AND GRAPHICALLY DISPLAY DATA.

GRAPHICALLY DISPLAY THE SYSTEM DESCRIBED IN THIS DOCUMENT AND SHOWN ON THE DESIGN DRAWINGS. INCLUDE ALL POINTS LISTED ON THE POINTS LIST. REFERENCE PLANS FOR SENSOR LOCATION AND SYSTEM LAYOUT.

ENERGY RECOVERY VENTILATOR (ERV)

THE ENERGY RECOVERY VENTILATOR (ERV) IS EQUIPPED WITH ECM SUPPLY FAN, ECM EXHAUST FAN, AND HEAT EXCHANGER BYPASS. THE ERV SYSTEM SHALL BE FULLY CONTROLLED BY THE MANUFACTURER'S ELECTRONIC CONTROLLERS AND CONTROL SYSTEM.

ERV START/STOP

THE ERV SYSTEM SHALL INTERLOCK EACH ERV WITH ASSOCIATED FCU. THE ERV SYSTEM SHALL START EACH ERV WHEN ANY ASSOCIATED FCU ARE ENABLED AND DISABLED WHEN ALL ASSOCIATED FCUS ARE DISABLED.

WHEN AN ERV IS DISABLED, THE DDC SYSTEM SHALL CLOSE ITS OUTSIDE AIR AND EXHAUST AIR DAMPER. WHEN AN ERV IS ENABLED, THE DDC SYSTEM SHALL OPEN ITS OUTSIDE AIR AND EXHAUST AIR DAMPERS.

BELOW IS THE INTENDED SEQUENCE FOR ERV OPERATION BY MANUFACTURER'S CONTROL SYSTEM

TEMPERATURE CONTROL FOR ERV 1-3

THE DDC SYSTEM SHALL MONITOR SUPPLY AIR TEMPERATURE FROM ERV 1-3 AND MODULATE THE SCR ELECTRIC COIL CONTROLLER TO MAINTAIN A SUPPLY AIR TEMPERATURE OF 60 DEG F.

ECM FAN MOTOR CONTROL

THE ECM FAN SPEED FOR THE SUPPLY FAN AND EXHAUST FAN SHALL BE SET TO MAINTAIN THE AIRFLOW SPECIFIED ON THE EQUIPMENT SCHEDULE. THE AIR BALANCER SHALL DETERMINE THE FAN SPEED SETTINGS.

HEAT EXCHANGER

WHEN THE SYSTEM IS IN HX BYPASS MODE OPEN THE HX BYPASS DAMPER. THE INVERSE CONFIGURATION SHALL BE ENABLED WHEN ALLOWING AIR TO FLOW THROUGH THE HEAT EXCHANGER.

COOLING MODE:

- 1. WHEN THE OUTSIDE AIR TEMPERATURE (OAT) IS LESS THAN THE DISCHARGE AIR SETPOINT AND THE OAT IS LESS THE THE RETURN AIR TEMPERATURE (RAT) ALLOW SUPPLY AIR TO FLOW THROUGH THE HEAT EXCHANGER (HX).
- 2. WHEN OAT IS LESS THAN THE DISCHARGE AIR SETPOINT AND OAT IS GREATER THAN RAT BYPASS SUPPLY AIR AROUND THE HEAT EXCHANGER.
- 3. WHEN OAT IS GREATER THAN THE DISCHARGE AIR SETPOINT AND THE OAT IS GREATER THAN THE RAT ALLOW SUPPLY AIR TO FLOW THROUGH THE HX.
- 4. WHEN OAT IS GREATER THAN THE DISCHARGE AIR SETPOINT AND THE OAT IS LESS THAN RAT BYPASS SUPPLY AIR AROUND THE HEAT EXCHANGER.

HEATING MODE:

- 1. WHEN OAT IS LESS THAN THE DISCHARGE AIR SETPOINT AND OAT IS LESS THAN RAT ALLOW SUPPLY AIR TO FLOW THROUGH THE HEAT EXCHANGER.
- 2. WHEN OAT IS LESS THAN THE DISCHARGE AIR SETPOINT AND THE OAT IS GREATER THAN THE RAT BYPASS HX.
- 3. WHEN OAT IS GREATER THAN THE DISCHARGE AIR SETPOINT AND THE OAT IS GREATER THAN RAT ALLOW SUPPLY AIR TO FLOW THROUGH THE HEAT EXCHANGER.
- 4. WHEN THE OAT IS GREATER THAN THE DISCHARGE AIR SETPOINT AND THE OAT IS LESS THAN RAT BYPASS SUPPLY AIR AROUND THE HEAT EXCHANGER.

MORNING WARM UP AND MORNING COOL DOWN

THE ERV SYSTEM SHALL DISABLE THE ERV WHEN THE ASSOCIATED FCU ARE IN MORNING WARM UP OR MORNING COOL DOWN MODE.

SAFETIES AND ALARMS

ANNUNCIATE ALARMS AT THE DDC SYSTEM'S FRONT END COMPUTER WHEN ANY OF THE FOLLOWING EVENTS OCCUR. CREATE SEPARATE POINTS FOR EACH ALARM LISTED BELOW.

AIR FILTERS

THE ERV SYSTEM SHALL MONITOR THE FILTER RUN TIME AND SHALL PROVIDE AN ALARM WHEN THE RUN TIME EXCEEDS THE SETPOINT.

VARIABLE REFRIGERANT FLOW(VRF) SYSTEM

THE FAN COIL UNITS (FCU), BRANCH CONTROLLERS (BC) AND HEAT PUMPS (HP) ARE EQUIPPED WITH VARIABLE REFRIGERANT FLOW (VRF). THE VRF SYSTEM SHALL BE FULLY CONTROLLED BY THE MANUFACTURER'S ELECTRONIC CONTROLLERS AND CONTROL SYSTEM.

PROVIDE GRAPHICAL DISPLAY AND INTERFACE (INTELLIGENT TOUCH MODULE) TO THE SYSTEM DESCRIBED IN THIS DOCUMENT AND SHOWN ON THE DESIGN DRAWINGS. INCLUDE AND PROVIDE ACCESS TO ALL POINTS AVAILABLE TO THE VRF SYSTEM INTERFACE MODULE. INCLUDE AND PROVIDE ACCESS TO ALL READABLE POINTS THRU THE DIRECT DIGITAL CONTROL SYSTEM AND WRITABLE POINTS AS REQUIRED WITHIN THIS SEQUENCE.

PROVIDE ROOM THERMOSTATS/SENSORS WITH THE ABILITY TO TEMPORARILY PLACE THE SYSTEM IN OCCUPIED MODE.

PROVIDE ROOM THERMOSTATS/SENSORS WITH THE ABILITY TO ADJUST SETPOINTS +/- 3° F.

INITIAL DEFAULT ROOM TEMPERATURE SETPOINTS SHALL BE 68° F HEATING, 75° F COOLING WITH A 5°F DEAD BAND UNLESS OTHERWISE NOTED.

SYSTEM OPERATION:

THE SYSTEM SHALL BE FULLY CONTROLLED BY THE MANUFACTURER'S CONTROL SYSTEM. THE DDC SYSTEM SHALL INDEX THE SYSTEM TO OCCUPIED MODE AT 7:00 AM TO 6:00 PM (ADJ.). WHEN NOT IN OCCUPIED MODE THE DDC SYSTEM SHALL INDEX THE SYSTEM TO UNOCCUPIED MODE.THE OCCUPANTS SHALL HAVE THE ABILITY TO INDEX THE SYSTEM TO OCCUPIED MODE FOR ADJUSTABLE TIME PERIOD WHEN THE SYSTEM IS INDEXED TO UNOCCUPIED MODE.

TEMPERATURE CONTROL

THE VRF SYSTEM SHALL MONITOR THE INDIVIDUAL SPACE TEMPERATURES SERVED BY THE FCU. THE VRF CONTROLLER SHALL MODULATE THE SYSTEM TO MAINTAIN SPACE TEMPERATURE SETPOINT.

NIGHT SETBACK:

WHEN UNIT IS IN UNOCCUPIED MODE AND THE SPACE TEMPERATURE REACHES 60°F (ADJ.), THE VRF SYSTEM SHALL ENABLE FCUs IN THE CORRESPONDING ZONE. WHEN THE ZONE/SPACE TEMPERATURE REACHES 65°F (ADJ.) THE VRF SYSTEM SHALL TOGGLE BACK TO UNOCCUPIED MODE AND THE FCU'S SHALL SHUTDOWN.

NIGHT SETUP:

WHEN UNIT IS IN UNOCCUPIED MODE AND THE SPACE TEMPERATURE REACHES 85°F (ADJ.), THE VRF SYSTEM SHALL ENABLE FCUs IN THE CORRESPONDING ZONE. WHEN THE ZONE/SPACE TEMPERATURE REACHES 80°F (ADJ.) THE VRF SYSTEM SHALL TOGGLE BACK TO UNOCCUPIED MODE AND THE FCUs SHALL SHUTDOWN.

MORNING WARM-UP/COOL-DOWN OPTIMIZATION

THE CONTROL SYSTEM SHALL "LEARN" THE THERMAL CHARACTERISTICS OF THE BUILDING AND AIR DISTRIBUTION SYSTEMS TO PROVIDE OPTIMUM START TIMES FOLLOWING NIGHT SETBACK AND NIGHT SETUP. THE OPTIMUM START TIMES SHALL BE BASED ON LOGGED WARM-UP TIMES, COOL-DOWN TIMES, OUTSIDE AIR TEMPERATURES AND TIME OF DAY. THE CONTROL SYSTEM SHALL REFINЕ THE OPTIMUM START TO BE THE LATEST TIME TO HAVE THE SPACES UP TO OCCUPIED TEMPERATURE BY THE BEGINNING OF THE OCCUPIED PERIOD.

SAFETIES AND ALARMS:

ANNUNCIATE ALARMS AT THE DDC SYSTEM'S FRONT END COMPUTER WHEN ANY OF THE FOLLOWING EVENTS OCCUR. CREATE SEPARATE POINTS FOR EACH ALARM LISTED BELOW.

VRF

ALL SYSTEM AND DIAGNOSTIC ALARMS FROM VRF SYSTEM.

SPACE TEMPERATURE ALARM

ALARM WHEN SPACE TEMPERATURE IS ABOVE SET POINT DURING OCCUPIED MODE FOR MORE THAN FIFTEEN (15) MINUTES.

SPLIT SYSTEM AIR CONDITIONING (SSAC) (AC-1) UNIT

THE SSAC SHALL BE FULLY CONTROLLED BY THE MANUFACTURER'S ELECTRONIC CONTROLLERS AND CONTROL SYSTEM.

PROVIDE GRAPHICAL DISPLAY AND INTERFACE (INTELLIGENT TOUCH MODULE) TO THE SYSTEM DESCRIBED IN THIS DOCUMENT AND SHOWN ON THE DESIGN DRAWINGS. INCLUDE AND PROVIDE ACCESS TO ALL POINTS AVAILABLE TO THE SSAC SYSTEM INTERFACE MODULE. INCLUDE AND PROVIDE ACCESS TO ALL READABLE POINTS THRU THE DIRECT DIGITAL CONTROL SYSTEM AND WRITABLE POINTS AS REQUIRED WITHIN THIS SEQUENCE.

PROVIDE ROOM THERMOSTATS/SENSORS WITH THE ABILITY TO ADJUST SETPOINTS +/- 3° F.

INITIAL DEFAULT ROOM TEMPERATURE SETPOINTS SHALL BE 68° F HEATING, 75° F COOLING, UNLESS OTHERWISE NOTED.

UNIT OPERATION:

THE SYSTEM SHALL BE FULLY CONTROLLED BY THE MANUFACTURER'S CONTROL SYSTEM.

TEMPERATURE CONTROL:

THE SSAC CONTROLLER SHALL MONITOR THE INDIVIDUAL SPACE TEMPERATURES SERVED BY THE FCU. THE SSAC CONTROLLER SHALL MODULATE THE SYSTEM TO MAINTAIN SPACE TEMPERATURE SETPOINT.

SAFETIES AND ALARMS:

ANNUNCIATE ALARMS AT THE DDC SYSTEM'S FRONT END COMPUTER WHEN ANY OF THE FOLLOWING EVENTS OCCUR. CREATE SEPARATE POINTS FOR EACH ALARM LISTED BELOW.

SPLIT SYSTEM HEAT PUMP CONTROLLER

ALL SYSTEM AND DIAGNOSTIC ALARMS FROM SPLIT SYSTEM HEAT PUMP CONTROLLER.

FAN FAILURE

ALARM WHEN CONTROLLER SENDS START OR STOP SIGNAL TO FAN AND THERE IS NO PROOF OF STATUS ALIGNMENT FOR ONE (1) MINUTE (ADJ.).

SPACE TEMPERATURE ALARM

ALARM WHEN SPACE TEMPERATURE IS ABOVE SET POINT DURING OCCUPIED MODE FOR MORE THAN FIFTEEN (15) MINUTES.

DEHUMIDIFIER (DH-1)

THE VAULT DEHUMIDIFIER SHALL BE FULLY CONTROLLED BY THE MANUFACTURER'S ELECTRONIC CONTROLLERS AND CONTROL SYSTEM.

SAFETIES AND ALARMS

ANNUNCIATE ALARMS AT THE DDC SYSTEM'S FRONT END COMPUTER WHEN ANY OF THE FOLLOWING EVENTS OCCUR. CREATE SEPARATE POINTS FOR EACH ALARM LISTED BELOW.

HIGH SPACE HUMIDITY

ALARM WHEN RELATIVE HUMIDITY LEVEL IS AT OR ABOVE 50% RH (ADJ.) FOR MORE THAN ONE (1) MINUTE (ADJ.).

HEAT PUMP DOMESTIC HOT WATER HEATING SYSTEM

THE DOMESTIC HOT WATER HEATING SHALL BE FULLY CONTROLLED BY THE MANUFACTURER'S ELECTRONIC CONTROLLERS AND CONTROL SYSTEM.

PROVIDE GRAPHICAL DISPLAY AND INTERFACE (INTELLIGENT TOUCH MODULE) TO THE SYSTEM DESCRIBED IN THIS DOCUMENT AND SHOWN ON THE DESIGN DRAWINGS. INCLUDE AND PROVIDE ACCESS TO ALL POINTS AVAILABLE TO THE DOMESTIC HOT WATER HEATING SYSTEM INTERFACE MODULE. INCLUDE AND PROVIDE ACCESS TO ALL READABLE POINTS THRU THE DIRECT DIGITAL CONTROL SYSTEM AND WRITABLE POINTS AS REQUIRED WITHIN THIS SEQUENCE.

RECIRCULATION PUMP START/STOP

THE DDC SYSTEM SHALL MONITOR DOMESTIC RETURN HOT WATER TEMPERATURE AND ENABLE THE RECIRCULATION PUMP IF THE RETURN WATER TEMPERATURE IS BELOW 115° F. IF THE DOMESTIC RETURN HOT WATER TEMPERATURE IS ABOVE 117°F DISABLE THE RECIRCULATION PUMP.

SAFETIES AND ALARMS

ANNUNCIATE ALARMS AT THE DDC SYSTEM'S FRONT END COMPUTER WHEN ANY OF THE FOLLOWING EVENTS OCCUR. CREATE SEPARATE POINTS FOR EACH ALARM LISTED BELOW.

LOW WATER RETURN TEMPERATURE

ALARM WHEN DOMESTIC RETURN HOT WATER TEMPERATURE IS BELOW 115° F FOR MORE THAN THIRTY (30) MINUTES.

ELECTRIC WALL HEATERS (EH-1-11)

THE DDC SYSTEM SHALL ENABLE/ DISABLE ELECTRIC WALL HEATERS WHEN TEMPERATURE DROPS BELOW 55F (ADJ.)

SAFETIES AND ALARMS

ANNUNCIATE ALARMS AT THE DDC SYSTEM'S FRONT END COMPUTER WHEN ANY OF THE FOLLOWING EVENTS OCCUR. CREATE SEPARATE POINTS FOR EACH ALARM LISTED BELOW.

SPACE TEMPERATURE ALARM

ALARM WHEN SPACE TEMPERATURE IS BELOW SET POINT (55F, ADJ.) DURING OCCUPIED MODE FOR MORE THAN FIFTEEN (15) MINUTES.



617 Western Avenue
Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com



Project No.: 21067	Designed By: KRL	Drawn By: VGM	Checked By: JOI
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Mark	Description	Date

WASHINGTON MILITARY DEPARTMENT

ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA

SEQUENCE OF OPERATIONS



POINTS LIST						
POINT DESCRIPTOR	POINT TYPE					REMARKS
	DI	AI	DO	AO	VP	
GENERAL						
OUTSIDE AIR TEMPERATURE SENSOR		●				
BUILDING OCCUPIED/UNOCCUPIED SCHEDULE				●		
FIRE ALARM CONTROL PANEL					●	FIRE ALARM
ENERGY RECOVERY VENTILATOR						
SYSTEM ON/OFF					●	
SUPPLY FAN SPEED					●	
EXHAUST FAN SPEED					●	
OUTSIDE AIR DAMPER			●			HARDWIRE INTERLOCK WITH ERV
EXHAUST AIR DAMPER			●			HARDWIRE INTERLOCK WITH ERV
OCCUPANCY CALL					●	FROM ZONE OCC OVERRRIDE
ELECTRIC COIL CONTROL (DH-1-3)				●		
ELECTRIC COIL FAILURE ALARM					●	
VARIABLE REFRIGERANT FLOW (VRF) SYSTEM						
SPACE TEMPERATURE SET POINT					●	
SPACE TEMPERATURE					●	
CU STATUS					●	HP HARDWIRED TO BAS PANEL
CU ALARM					●	HP HARDWIRED TO BAS PANEL
OCCUPANCY CALL					●	FROM ZONE OCC OVERRRIDE
SPACE TEMPERATURE ALARM					●	ALARM
SPLIT SYSTEM AIR CONDITIONING UNIT FOR TELECOM (AC-1)						
SPACE TEMPERATURE SET POINT					●	
SPACE TEMPERATURE					●	
FAN STATUS					●	
HEATING/COOLING STATUS					●	
CU STATUS					●	
FAN FAILURE ALARM					●	ALARM
SPACE TEMPERATURE ALARM					●	ALARM
DEHUMIDIFIER						
SPACE HUMIDITY LEVEL ALARM					●	ALARM
ELECTRIC WALL HEATER						
HEATER ON/OFF			●			
SPACE TEMPERATURE ALARM					●	ALARM
HEAT PUMP DOMESTIC HOT WATER HEATING SYSTEM						
DOMESTIC HOT WATER RETURN TEMPERATURE		●				
DOMESTIC HOT WATER RETURN TEMPERATURE SET POINT				●		
RECIRCULATION PUMP ENABLE			●			
LOW WATER TEMPERATURE ALARM					●	ALARM



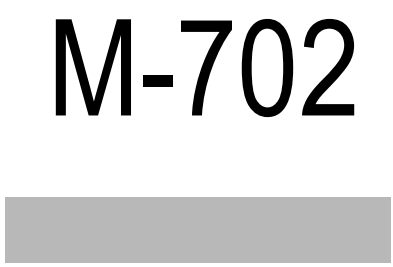
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Tel. 206.946.9746
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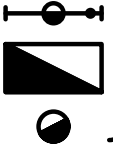
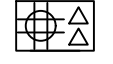
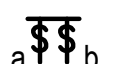
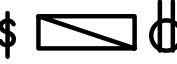
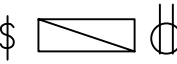
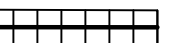
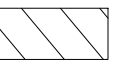
Project No.: 21067
Designed By: KRL
Drawn By: VGM
Checked By: JOJ

Mark	Description	Date

WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA
CONTROL POINTS LIST



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ELECTRICAL LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
LIGHTING		RECEPTACLES	
	RECESSED LIGHT FIXTURE		DUPLEX RECEPTACLE (E INDICATES EXISTING TO BE REPLACED)
	SURFACE OR PENDANT MOUNT LIGHT FIXTURE (CIRCLE INDICATES RECESSED OR CONCEALED JUNCTION BOX)		DUPLEX RECEPTACLE (G INDICATES GROUND FAULT CIRCUIT INTERRUPTER)
	WALL MOUNT LIGHT FIXTURE		DUPLEX RECEPTACLE (C INDICATES ABOVE COUNTER, S INDICATES SWITCHED)
	SURFACE OR PENDANT MOUNT STRIP LIGHT (CIRCLE INDICATES RECESSED OR CONCEALED JUNCTION BOX)		FOURPLEX RECEPTACLE
	EGRESS FIXTURE WITH EMERGENCY BATTERY PACK. PROVIDE ADDITIONAL UNSWITCHED HOT LEG.		(1) SWITCHED DUPLEX RECEPTACLE AND (1) NON-SWITCHED DUPLEX RECEPTACLE INSTALLED TOGETHER IN THE SAME BOX.
	EXIT LIGHT FIXTURE (PROVIDE DIRECTION ARROWS AS INDICATED) PROVIDE ADDITIONAL UNSWITCHED HOT LEG.		COMBINATION FLOOR BOX W/ (4) CAT6 DATA. FOURPLEX ISOLATED GROUND RECEPTACLE AND DATA JUNCTION BOX WITH SEPARATE 1" C. TO ACCESSIBLE CEILING OR NEAREST CABLE TRAY LOCATION, UNLESS NOTED OTHERWISE. MAINTAIN COMMUNICATION / DATA OUTLET REQUIREMENTS ('S' INDICATES CONTROLLED).
	EMERGENCY BATTERY PACK WITH TWIN HEAD FLOOD PROVIDE ADDITIONAL UNSWITCHED HOT LEG.		SPECIAL PURPOSE OUTLET - 1Ø, VOLTAGE AND AMPERES AS INDICATED
SWITCHES			CEILING MOUNTED DUPLEX RECEPTACLE
	SINGLE POLE SWITCH (3 INDICATES 3-WAY SWITCH)	EQUIPMENT, WIRING AND RACEWAYS	
	LOW VOLTAGE SWITCH FOR LIGHTING CONTROL		CONDUIT STUB OUT (PROVIDE CONCRETE MARKER ON EXTERIOR)
	COMBINATION SWITCH / OCCUPANCY SENSOR		RACEWAY CONCEALED IN WALL OR CEILING
	MULTI-GANGED SWITCH (LOWER CASE LETTERS INDICATES SWITCHING)		RACEWAY CONCEALED UNDERGROUND OR UNDER FLOOR SLAB, P = PRIMARY , S = SECONDARY
	PUSH BUTTON EMERGENCY SHUTOFF SWITCH		SURFACE METAL RACEWAY
	PUSH-BUTTON CONTROLLER		JUNCTION BOX - SIZE PER CODE (F INDICATES FIRE ALARM SYSTEM)
	LOW VOLTAGE LIGHTING CONTROL PANEL		MOTOR CONNECTION
	PHOTOCELL CONTROL		CIRCUIT BREAKER
	CEILING MOUNTED OCCUPANCY SENSOR (LIGHTING CONTROL)		120/208 VOLT PANELBOARD (OR AT RATED VOLTAGE AS NOTED)
	CEILING MOUNTED VACANCY SENSOR (LIGHTING CONTROL)		HANDHOLE
MISCELLANEOUS			ROUGH-IN FOR ADA AUTO DOOR OPENER
	CONSTRUCTION NOTES		METER
	DEMOLITION NOTES		SURGE PROTECTION DEVICE
	W INDICATES WEATHERPROOF FOR ALL DEVICES, PROVIDE LOCKING COVER ON RECEPTACLES.	NETWORK INFRASTRUCTURE	
	ALL DEVICES WITH HEAVY LINE WEIGHT INDICATES NEW WORK		TELECOMMUNICATIONS OUTLET - WALL MOUNT (4/S BOX WITH SINGLE-GANG MUDRING AND COVER PLATE) WITH (1) 1" CONDUIT TO ACCESSIBLE CEILING SPACE, MOUNT AT +18" AFF UNLESS NOTED OTHERWISE. ("C" INDICATES ABOVE COUNTER, # INDICATES QUANTITY, IF DIFFERENT THAN 2).
	ALL DEVICES WITH LIGHT LINE WEIGHT INDICATES EXISTING TO BE RETAINED		CEILING MOUNTED DATA OUTLET - ROUGH-IN NEXT TO POWER WITH BLANK COVER PLATE (# INDICATES QUANTITY, IF DIFFERENT THAN TWO)
	ALL DEVICES WITH DASH LINE INDICATES EXISTING TO BE REMOVED		LOW VOLTAGE LADDER TRAY - 18" WIDE UNLESS OTHERWISE NOTED. PROVIDE MOUNTING HARDWARE AS REQUIRED.
	DETAIL CALL OUT - A INDICATES DETAIL IDENTIFICATION, E2 INDICATES SHEET TAKEN FROM, E3 INDICATES SHEET DRAWN ON		LOW VOLTAGE WIRE TRAY - 18" WIDE UNLESS OTHERWISE NOTED. PROVIDE MOUNTING HARDWARE AS REQUIRED.
	MECHANICAL EQUIPMENT CONNECTION		TELECOMMUNICATIONS MAIN GROUNDING BUS-BAR.
	PRIMARY DAYLIGHT ZONE		
	SECONDARY DAYLIGHT ZONE		

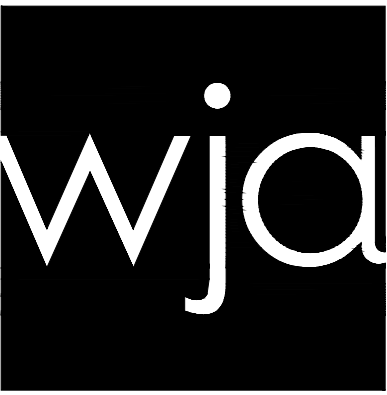
ABBREVIATIONS	
AF	AMP FRAME (MIN.)
AT	AMP TRIP

COMMISSIONING REQUIREMENTS FOR THE LIGHTING CONTROL SYSTEM

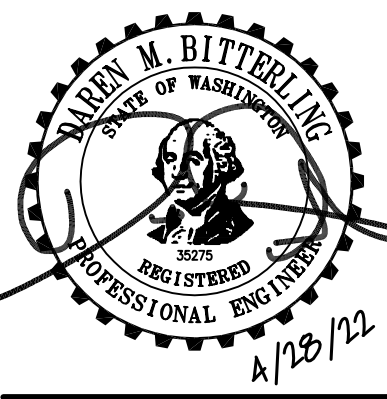
CONTRACTOR SHALL COMMISSION THE LIGHTING CONTROL AND ENERGY METERING SYSTEM FOR COMPLIANCE WITH SECTION C408 OF THE 2018 WA STATE ENERGY CODE. REFERENCE DETAILED COMMISSIONING FOR COMMISSIONING OF ELECTRICAL POWER AND LIGHTING SYSTEMS AND ENERGY METERING IN SPECIFICATIONS SECTION 26 08 00 COMMISSIONING OF ELECTRICAL SYSTEMS. TESTING SHALL ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN MANUFACTURER'S INSTALLATION INSTRUCTIONS. WRITTEN PROCEDURES WHICH CLEARLY DESCRIBE THE INDIVIDUAL SYSTEMATIC TEST PROCEDURES, THE EXPECTED SYSTEMS' RESPONSE OR ACCEPTANCE CRITERIA FOR EACH PROCEDURE, THE ACTUAL RESPONSE OR FINDINGS, AND ANY PERTINENT DISCUSSION SHALL BE FOLLOWED. AT A MINIMUM, TESTING SHALL AFFIRM OPERATION DURING NORMALLY OCCUPIED DAYLIGHT CONDITIONS. THE CONSTRUCTION DOCUMENTS SHALL STATE THE PARTY WHO WILL CONDUCT THE REQUIRED FUNCTIONAL TESTING.

FOR OCCUPANT SENSORS, TIME SWITCHES, PROGRAMMABLE SCHEDULE CONTROLS, PHOTO-SENSORS OR DAY-LIGHTING CONTROLS ARE INSTALLED, THE FOLLOWING PROCEDURES SHALL BE PERFORMED:

- CONFIRM THAT THE PLACEMENT, SENSITIVITY AND TIME OUT ADJUSTMENTS FOR OCCUPANT SENSORS YIELD ACCEPTABLE PERFORMANCE.
- CONFIRM THAT THE TIME SWITCHES AND PROGRAMMABLE SCHEDULES CONTROLS ARE PROGRAMMED TO TURN THE LIGHTS OFF.
- CONFIRM THAT THE PLACEMENT AND SENSITIVITY ADJUSTMENTS FOR PHOTO-SENSOR CONTROLS REDUCE ELECTRIC LIGHT BASED ON THE AMOUNT OF USABLE DAYLIGHT IN THE SPACE AS SPECIFIED



design collaborative
617 Western Avenue
Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com



Project No.: 21024
Designed By: BM
Drawn By: JT
Checked By: BM

Mark	Description	Date

WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 M AVENUE, ANACORTES, WA

ELECTRICAL LEGEND

E-001

4/14/2022 2:45:18 PM C:\Users\ccreat\W\ADESIGN\Documents\Anacortes RC Addition_2022-Central_ccreat@wja-dc.com.rvt

GENERAL NOTES (APPLY TO ALL SHEETS)

1. FIELD VERIFY EXISTING UTILITY LOCATIONS PRIOR TO DIGGING. PROVIDE AND MAKE ALL ARRANGEMENTS FOR A UTILITY LOCATE PRIOR TO BEGINNING ANY UNDERGROUND WORK. COORDINATE EQUIPMENT LOCATIONS AND CLEARANCES WITH ALL TRADES PRIOR TO INSTALLATION.

2. COORDINATE ALL WORK WITH OWNER PRIOR TO COMMENCING.

3. SEE ONE-LINE DIAGRAM ON E6.01 FOR MORE INFORMATION.

4. PROVIDE PULL STRING IN ALL EMPTY CONDUITS.

5. COMPLETELY SEAL ALL NEW BUILDING PENETRATIONS ON BOTH SIDES TO MATCH ADJACENT SURFACE. ALL PATCHES SHALL MATCH FIRE RATING OF EXISTING WALL ASSEMBLY.

6. THE CONTRACTOR/INSTALLING VENDOR IS RESPONSIBLE TO VERIFY ALL CMU/CONCRETE WALLS, BRICK WALLS, CABLE ROUTING AND ALL WORK REQUIRED TO FACILITATE A COMPLETE AND FULLY FUNCTIONAL SYSTEM.

7. THE CONTRACTOR SHALL REFER TO STRUCTURAL DRAWINGS FOR BRACE FRAMED OR SHEAR WALLS. CONTRACTOR SHALL MOUNT DEVICES AND ROUTE CONDUIT SO AS NOT TO INTERFERE WITH THE STRUCTURAL INTEGRITY OF THE WALL.
8. ALL CONDUITS MUST BE A MINIMUM OF 6'-6" ABOVE ALL MECHANICAL EQUIPMENT AND MECHANICAL CLEARANCE SPACES. E.C. WILL BE RESPONSIBLE TO MOVE ANY CONDUITS WHICH DO NOT COMPLY.

9. CONDUIT SHALL NOT BE SURFACE MOUNTED IN ANY FINISHED AREAS WITHOUT SPECIAL PERMISSION FROM THE ENGINEER. CONTRACTOR SHALL TAKE SPECIAL CARE AND COORDINATE WITH OTHER DISCIPLINES TO INSURE CONDUIT IS HIDDEN.

10. REVIEW ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF AREAS WITH ACCESSIBLE CEILING TILES, GWB, AND OPEN CEILINGS. PROVIDE MANUFACTURER APPROVED BACK BOXES IN AREAS WITH CEILINGS THAT ARE OPEN TO STRUCTURE. ROUTE CONDUIT ON TOP OF ROOF DECK UNDER INSULATION TO CONCEAL. UTILIZE RIGID GALVANIZED STEEL CONDUIT.

11. IN THE MDF, ELEC, MECH, UTILITY, AND OTHER LOCATIONS, COORDINATE THE EXACT LOCATIONS OF EQUIPMENT WITH THE ARCHITECT, MECHANICAL CONTRACTOR, ELECTRICAL CONTRACTOR AND ALL OTHER TRADES, PRIOR TO ROUGH IN. PROVIDE MISCELLANEOUS MATERIALS SUCH AS UNISTRUT & THREADED ROD TO MOUNT ELECTRICAL EQUIPMENT AS REQUIRED.

12. GROUNDING SHALL CONFORM TO NEC 250.

13. TELECOMMUNICATIONS GROUNDING SHALL CONFORM TO TIA-607-B.

14. COORDINATE PHASING AND SEQUENCE OF ALL WORK WITH ARCHITECT AND GC.
15. EACH LOW VOLTAGE LIGHTING CONTROL HOMERUN SHALL BE PROVIDED WITH THE REQUIRED NUMBER OF CONDUCTORS FOR EACH SWITCH LEG THAT IT SERVES.

16. PANEL DESIGNATIONS AND CIRCUIT NUMBERS ARE ONLY INDICATED ON THE DRAWINGS FOR REFERENCE BY THE ELECTRICAL CONTRACTOR. THE E.C. IS RESPONSIBLE TO PROVIDE ALL CONDUIT, WIRING, JUNCTION BOXES AND MISCELLANEOUS ACCESSORIES TO ACCOMMODATE INSTALLATION AND CONNECTION OF ALL DEVICES INDICATED ON THE CONTRACT DOCUMENTS. ALL WIRING HOMERUNS SHALL BE IN HARD CONDUIT BACK TO THE DESIGNATED PANELBOARD. ALL JUNCTION BOXES SHALL BE LABELED IDENTIFYING THE PANELBOARD AND CIRCUIT CONTAINED WITHIN. THERE SHALL BE NO MORE THAN (3) CIRCUITS PER HOMERUN. MULTI-WIRE CIRCUITS ARE NOT ALLOWED. EACH CIRCUIT SHALL CONTAIN A DEDICATED NEUTRAL UNLESS SPECIFICALLY ALLOWED BY THE ENGINEER. ALL WIRING SHALL BE SIZED ACCORDING TO THE AMPACITY OF THE CIRCUIT BREAKER INDICATED ON THE PANEL SCHEDULE. ALL CONDUITS SHALL BE SIZED PER NEC CODE BASED ON THE CONDUCTOR SIZE, TYPE, QUANTITY AND MINIMUM FILL REQUIREMENTS. CIRCUITS OVER 120' FOR 120V AND 250' FOR 277V SHALL BE UPSIZED ONE WIRE SIZE TO ACCOUNT FOR VOLTAGE DROP. E.C. IS RESPONSIBLE TO SHOW ALL JUNCTION BOX LOCATIONS, CONDUIT ROUTING AND HOMERUNS ON A SET OF AS-BUILT DRAWINGS.

GENERAL DEMOLITION NOTES

1. COORDINATE PHASING AND SEQUENCE OF ALL WORK WITH ARCHITECT, GC, AND OWNER. SEE ARCHITECTURAL PLANS AND DIVISION 0 AND 1 SPECIFICATIONS FOR ADDITIONAL INFORMATION.

2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INCLUDE IN HIS BID ALL COSTS ASSOCIATED WITH NECESSARY DEMOLITION TO ALLOW NEW CONSTRUCTION SHOWN IN CONTRACT DOCUMENTS. UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL REMOVE ALL EXISTING RECEPTACLES, LIGHTING FIXTURES, DEVICES, ABANDONED RACEWAYS, CONDUCTORS, TOGETHER WITH ANY AUXILIARY ITEMS TO ALLOW NEW CONSTRUCTION AND FINISH TO OCCUR AS COMPLEMENTED BY THE CONTRACT DOCUMENTED.

2. THESE PLANS DELINEATE THE BASIC SCOPE OF WORK FOR THE REMOVAL OF EXISTING MATERIAL.THE DEMOLITION DRAWINGS AND NOTES ARE PROVIDED WITH THE INTENT TO GENERALLY DESCRIBE AREAS AND LIMITS OF WORK. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SITE AND CONDITIONS THERE ON; AND SHALL RELY SOLEY ON REVIEW OF THE BIDDING DOCUMENTS IN DETERMINING THE EXTENT OF DEMOLITION WORK REQUIRED. COORDINATION OF THESE DRAWINGS WITH REQUIREMENTS FOR CONTRACT WORK IS THE RESPONSIBILITY OF THE CONTRACTOR, DISCREPANCIES BETWEEN OR WITHIN THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHALL PROVIDE CLARITY SKETCHES, DIAGRAMS, AND FIELD DIMENSIONS OF EXISTING CONDITIONS AT THE REQUEST OF THE ENGINEER IF/WHEN CONFLICTS ARE IDENTIFIED.

3. REMOVE ALL WIRES, CABLES, SURFACE MOUNT RACEWAYS AND ALL APPURTENANCES WHICH SERVE DEVICES BEING REMOVED. CUT CONDUIT FLUSH TO CEILING OR WALL WHEN CONCEALED, AND SEAL OFF WITH SPRAY FOAM. ABANDON FLUSH BOXES AND NON-ACCESSIBLE CONDUIT, PROVIDE COVER PLATES FOR ALL BOXES TO REMAIN. AT BUILDING EXTERIOR CUT CONDUIT FLUSH TO GRADE AND SEAL WITH GROUT.

4. CONTRACTOR TO REMOVE AND DELIVER TO OWNER ALL DEVICES THAT ARE IDENTIFIED BY OWNER TO BE RETAINED. CONTRACTOR SHALL COORDINATE WITH OWNER TO ASSURE THAT ALL ITEMS TO BE RETAINED ARE IDENTIFIED PRIOR TO THE START OF DEMOLITION. ALL ITEMS NOT IDENTIFIED SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF SITE.

5. FOR DEMOLITION SHEETS ONLY, UNLESS NOTED OTHERWISE DISCONNECT AND REMOVE ALL DEVICES. MAINTAIN CONTINUITY OF ALL DEVICES AND EQUIPMENT TO REMAIN. PROVIDE JUNCTION BOXES, CONDUIT AND WIRE TO EXTEND EXISTING CIRCUITS TO NEW PANELS AS REQUIRED.

TARGET FOOTCANDLE LEVELS

CLASSROOMS - 50FC
FITNESS ROOM - 50FC

LIGHTING SEQUENCE OF OPERATIONS

GENERAL REQUIREMENTS

1. OCCUPANCY/VACANCY SENSORS SHALL BE CONNECTED TOGETHER FOR CONTROL OF ALL LIGHTS IN THE ROOM. OCCUPANCY/VACANCY SENSOR TIME OUT PERIOD SHALL BE SET FOR 20-MINUTES AFTER NO OCCUPANCY IS DETECTED.

a. OCCUPANCY SENSORS: AUTO ON/AUTO OFF

1. AUTO ON TO NO MORE THAN 50% LIGHT FIXTURE OUTPUT, UNLESS OTHERWISE NOTED.

b. VACANCY SENSORS: MANUAL ON/AUTO OFF

2. PHOTOCELLS SHALL BE CONFIGURED TO COMPLETELY SHUT OFF ALL LIGHTS IN THE DAY LIGHT ZONES WITH ADEQUATE NATURAL LIGHT.

3. AT ALL SPACES WITH OCCUPANCY/VACANCY SENSORS, WHETHER INTEGRAL TO THE LIGHT FIXTURE OR NOT, PROVIDE AUXILIARY CONTACT FOR INTERFACE TO ENERGY MANAGEMENT SYSTEM FOR CONTROL OF HVAC EQUIPMENT DURING UNOCCUPIED TIMES.

4. PHOTOCELLS TO BE INSTALLED IN EDGE OF PRIMARY AND SECONDARY DAYLIGHT ZONES. TRIGGER ONE OF THE PHOTOCELLS TO CONTROL LIGHTS IN THE PRIMARY DAYLIGHT ZONES, TRIGGER TWO OF THE PHOTOCELLS TO CONTROL LIGHTS IN THE SECONDARY DAYLIGHT ZONES.

5. PROGRAMMING SHALL BE PROVIDED FOR THE TIME ADJUSTMENT OF LIGHTS ON SITE.

6. ALL CONTROLLED OR SWITCHED RECEPTACLES, AS INDICATED ON THE PLANS, SHALL BE SWITCHED ON AND OFF BY THE OCCUPANCY/VACANCY SENSOR IN THE SPACE.

TYPICAL SPACES:

1. CLASSROOMS / FITNESS ROOM / MULTIPURPOSE:

a. PHOTOCELL TO BE LOCATED WITHIN DZ1

b. PHOTOCELL TO TRIGGER LIGHTS TO MAINTAIN AVERAGE FOOT-CANDLE LEVEL.

c. PROVIDE WITH COMPATIBLE LOW VOLTAGE 0-10V DIMMER SWITCH.

ROOM LIGHTS DESIGNATION "(p)"

a. LIGHTS IN PRIMARY DAYLIGHT ZONE (PDZ) - DIM CONTROLLED WITH PHOTOCELL TRIGGER LEVEL 1.

ROOM LIGHTS DESIGNATION "(s)"

a. LIGHTS IN SECONDARY DAYLIGHT ZONE (SDZ) - DIM CONTROLLED WITH PHOTOCELL TRIGGER LEVEL 2.

2. CORRIDORS / VAULT:

a. LIGHTS TO 'FULL ON' BY MASTER SWITCH OR OCCUPANCY SENSOR.

b. OCCUPANCY SENSORS OVERRIDE TO 'FULL ON' UPON ACTIVATION. OFF AFTER 20 MINUTES OF NO MOTION DETECTION.

3. CONFERENCE ROOMS:

a. ALL LIGHTS TO BE DIMMED & SWITCHED ON/OFF PER DESIGNATED ZONES.

b. PROVIDE WITH COMPATIBLE LOW VOLTAGE 0-10V DIMMER SWITCH.

4. INDIVIDUAL OFFICES / MOTHER'S ROOM:

a. PROVIDE WITH COMPATIBLE LOW VOLTAGE 0-10V DIMMER SWITCH.

b. PROVIDE VACANCY SENSOR ON CEILING.

5. INDIVIDUAL RESTROOMS:

a. PROVIDE COMBINATION VACANCY SENSOR SWITCH ON WALL.

6. TOILET / SHOWERS:

a. LIGHTS TO 'FULL ON' BY LOCAL SWITCH OR OCCUPANCY DETECTION.

b. OCCUPANCY SENSORS OVERRIDE TO 'FULL ON' UPON ACTIVATION. OFF AFTER 20 MINUTES OF NO MOTION DETECTION.

7. STORAGE / CUSTODIAL:

a. LIGHTS AUTO OFF BY VACANCY SENSOR IN CEILING OR INTEGRAL WITH WALL SWITCH.

8. MECH RM / FIRE RISER / TELECOM:

a. LIGHTS CONTROLLED WITH STANDARD ON/OFF TOGGLE SWITCH.

EXTERIOR BUILDING MOUNTED LIGHT FIXTURES
LIGHT FIXTURES SHALL CONTAIN INTEGRAL MOTION/PHOTO SENSORS. LIGHT SHALL BE ON FROM DUSK TO DAWN. REDUCE LIGHT OUTPUT TO 30% UNLESS MOTION IS DETECTED, ON TO 100% FOR 5 MINUTES.

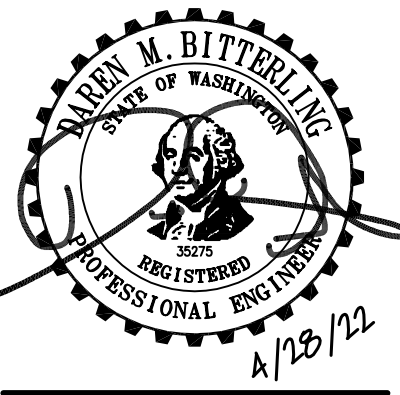


design collaborative

617 Western Avenue
Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com



6021 12th Street East, Suite 200
Fife, Washington 98424
T: 253.922.0446
F: 253.922.0896



Project No.: 21024

Designed By: BM

Drawn By: JT

Checked By: BM

Date

Description

Mark

WASHINGTON MILITARY DEPARTMENT

ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 M AVENUE, ANACORTES, WA

ELECTRICAL NOTES
AND SCHEDULES

E-002

Sheet Size: 22" x 34"

Page 164 of 351

MECHANICAL EQUIPMENT CONNECTION SCHEDULE													
EQUIP.	VOLT/PH	LOAD			CIRCUIT		CONDUIT/WIRE SIZE	MANUAL STARTER (NOTE 1)	MAGNETIC STARTER (NOTE 1)	FUSED DISC. (NOTE 1)	MIN. A.I.C. (AMPS)	DUCT DETECTOR (NOTE 2)	NOTES & REMARKS
		VA	MCA	HP	PANEL	BKR							
EH- 1	208/3	4000	11.11		A	1,3,5	3/4" C., (4) #12 CU & (1) #12 CU						3
EH- 2	208/3	4000	11.11		D	24,26,28	3/4" C., (4) #12 CU & (1) #12 CU						3
EH- 3	208/3	4800	13.33		A	7,9,11	3/4" C., (4) #12 CU & (1) #12 CU						3
EH- 4	208/3	4800	13.33		A	13,15,17	3/4" C., (4) #12 CU & (1) #12 CU						3
EH- 5	208/3	4800	13.33		A	19,21,23	3/4" C., (4) #12 CU & (1) #12 CU						3
EH- 6	208/3	4800	13.33		A	25,27,29	3/4" C., (4) #12 CU & (1) #12 CU						3
EH- 7	208/3	2000	5.56		A	31,33,35	3/4" C., (4) #12 CU & (1) #12 CU						3
EH- 8	208/3	2000	5.56		A	37,39,41	3/4" C., (4) #12 CU & (1) #12 CU						3
EH- 9	208/3	4000	11.11		C	56,58,60	3/4" C., (4) #12 CU & (1) #12 CU						3
EH- 10	208/3	4800	13.33		C	62,64,66	3/4" C., (4) #12 CU & (1) #12 CU						3
EH- 11	208/3	2000	5.56		C	68,70,72	3/4" C., (4) #12 CU & (1) #12 CU						3
DH- 1	120/1	600	5		C	20	3/4" C., (4) #12 CU & (1) #12 CU			EC			30AF/20AT
KH- 1	120/1	696	5.8	1/4	C	55	3/4" C., (2) #12 CU & (1) #12 CU	EC					
AC- 1	208/1	208	1				3/4" C., (3) #8 CU & (1) #10 CU						FED FROM OUTDOOR UNIT (CU-1)
CU- 1	208/1	5200	25		T	2,4	3/4" C., (3) #8 CU & (1) #10 CU			EC			60AF/30AT
FCU- 1	208/1	49.92	0.24		D	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 2A	208/1	131.04	0.63		D	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 2B	208/1	131.04	0.63		D	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 3	208/1	131.04	0.63		D	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 4A	208/1	131.04	0.63		D	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 4B	208/1	131.04	0.63		D	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 5A-1	208/1	131.04	0.63		D	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 5A-2	208/1	49.92	0.24		D	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 5B	208/1	49.92	0.24		D	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 5C	208/1	49.92	0.24		D	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 6	208/1	131.04	0.63		D	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 7	208/1	599.04	2.88		B	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 8	208/1	599.04	2.88		B	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 9	208/1	599.04	2.88		B	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 10	208/1	599.04	2.88		B	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 11	208/1	49.92	0.24		B	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
FCU- 12	208/1	49.92	0.24		B	20,22	3/4" C., (3) #12 CU & (1) #12 CU	EC					
BC- 1	208/1	172.64	0.83		A	12,14	3/4" C., (3) #12 CU & (1) #12 CU	EC					
BC- 2	208/1	172.64	0.83		A	12,14	3/4" C., (3) #12 CU & (1) #12 CU	EC					
DHTR- 1	208/3	17000	47.1		C	37,39,41	1-1/4" C., (4) #4 CU & (1) #10 CU			EC	10,000		60AF/60AT
DHTR- 2	208/3	5000	13.8		C	43,45,47	3/4" C., (4) #10 CU & (1) #12 CU			EC			30AF/20AT
DHTR- 3	208/3	5000	13.8		C	49,51,53	3/4" C., (4) #10 CU & (1) #12 CU			EC			30AF/20AT
HP- 1	208/3	26280	73		A	20,22,24	2" C., (4) #1 CU & (1) #6 CU			EC	10,000		200AF/125AT
HP- 2	208/3	15480	43		A	26,28,30	1-1/4" C., (4) #4 CU & (1) #8 CU			EC	5,000		100AF/70AT
ERV- 1	208/3	7092	19.7	3	C	38,40,42	3/4" C., (4) #10 CU & (1) #10 CU			EC		EC	30AF/20AT
ERV- 2	208/3	4320	12	3.5	C	44,46,48	3/4" C., (4) #12 CU & (1) #12 CU			EC			30AF/15AT
ERV- 3	208/3	3744	10.4	3	C	50,52,54	3/4" C., (4) #12 CU & (1) #12 CU			EC			30AF/15AT
P- 1	120/1			1/20	A	10	3/4" C., (2) #12 CU & (1) #12 CU	EC					
WH- 1	208/1	9000	67	---	A	16,18	1-1/4" C., (3) #4 CU & (1) #8 CU						

NOTE:

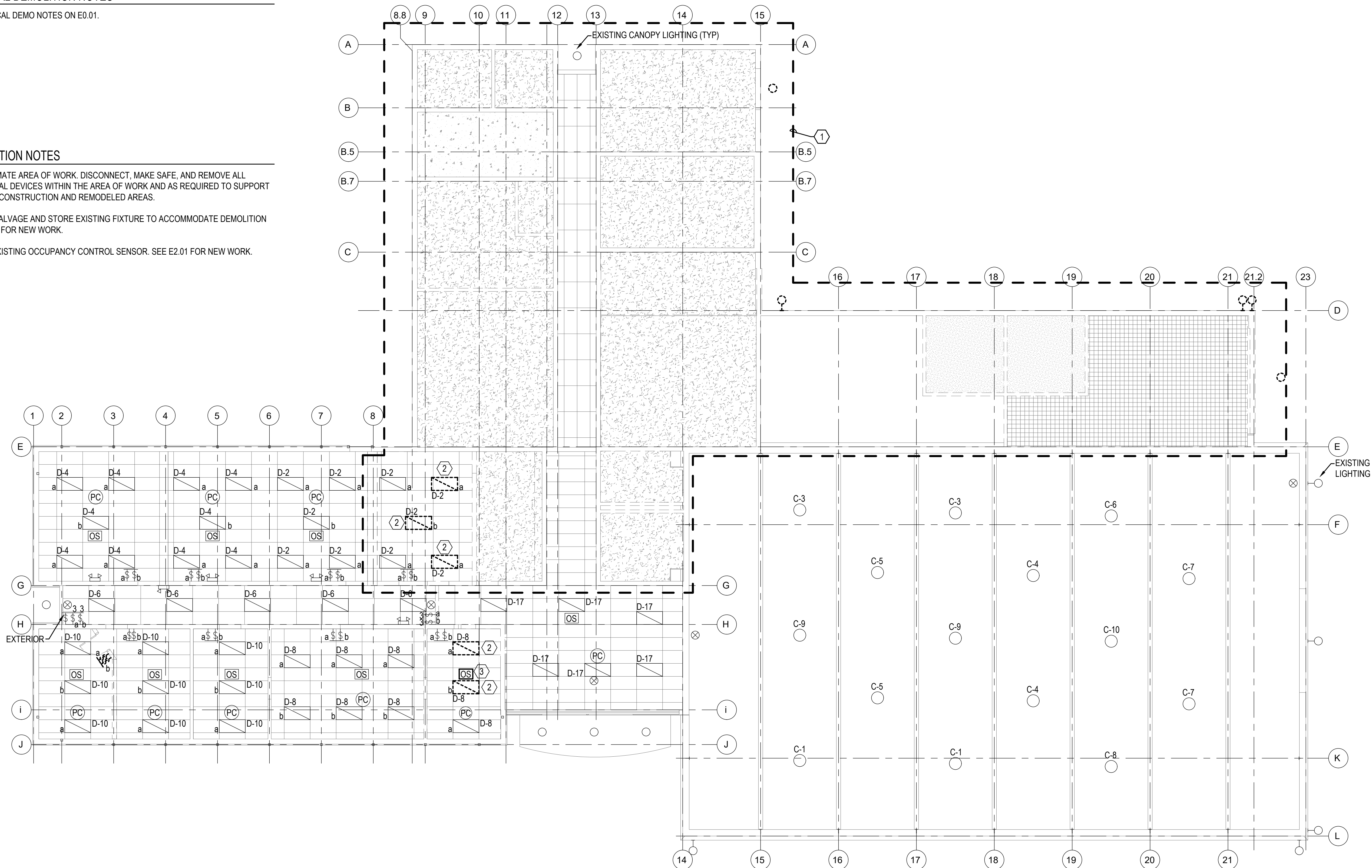
1. CONTRACTOR LISTED SHALL FURNISH AND INSTALL THE LISTED DEVICE.

2. DUCT SMOKE DETECTORS SHALL BE FURNISHED AND WIRED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR.

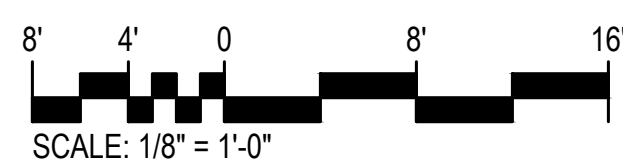
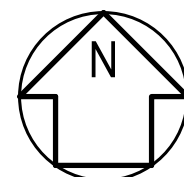
Mark	Description	Date

1. SEE TYPICAL DEMO NOTES ON E0.01.

- 1 APPROXIMATE AREA OF WORK. DISCONNECT, MAKE SAFE, AND REMOVE ALL ELECTRICAL DEVICES WITHIN THE AREA OF WORK AND AS REQUIRED TO SUPPORT THE NEW CONSTRUCTION AND REMODELED AREAS.
- 2 RETAIN, SALVAGE AND STORE EXISTING FIXTURE TO ACCOMMODATE DEMOLITION SEE E2.01 FOR NEW WORK.
- 3 RETAIN EXISTING OCCUPANCY CONTROL SENSOR. SEE E2.01 FOR NEW WORK.



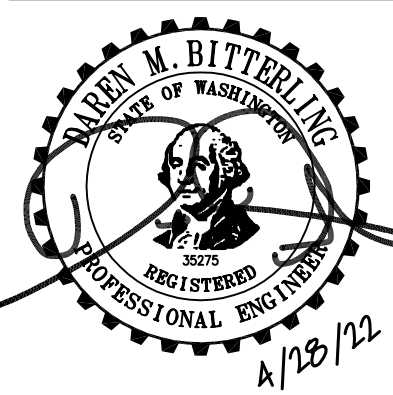
1 ELECTRICAL LIGHTING DEMO PLAN



design collaborative
617 Western Avenue
Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com



6021 12th Street East, Suite 200
Fife, Washington 98424
T: 253.922.0446
F: 253.922.0896



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Drawn By: JT
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ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 M AVENUE, ANACORTES, WA

ELECTRICAL LIGHTING DEMO PLAN

ED-201

GENERAL DEMOLITION NOTES

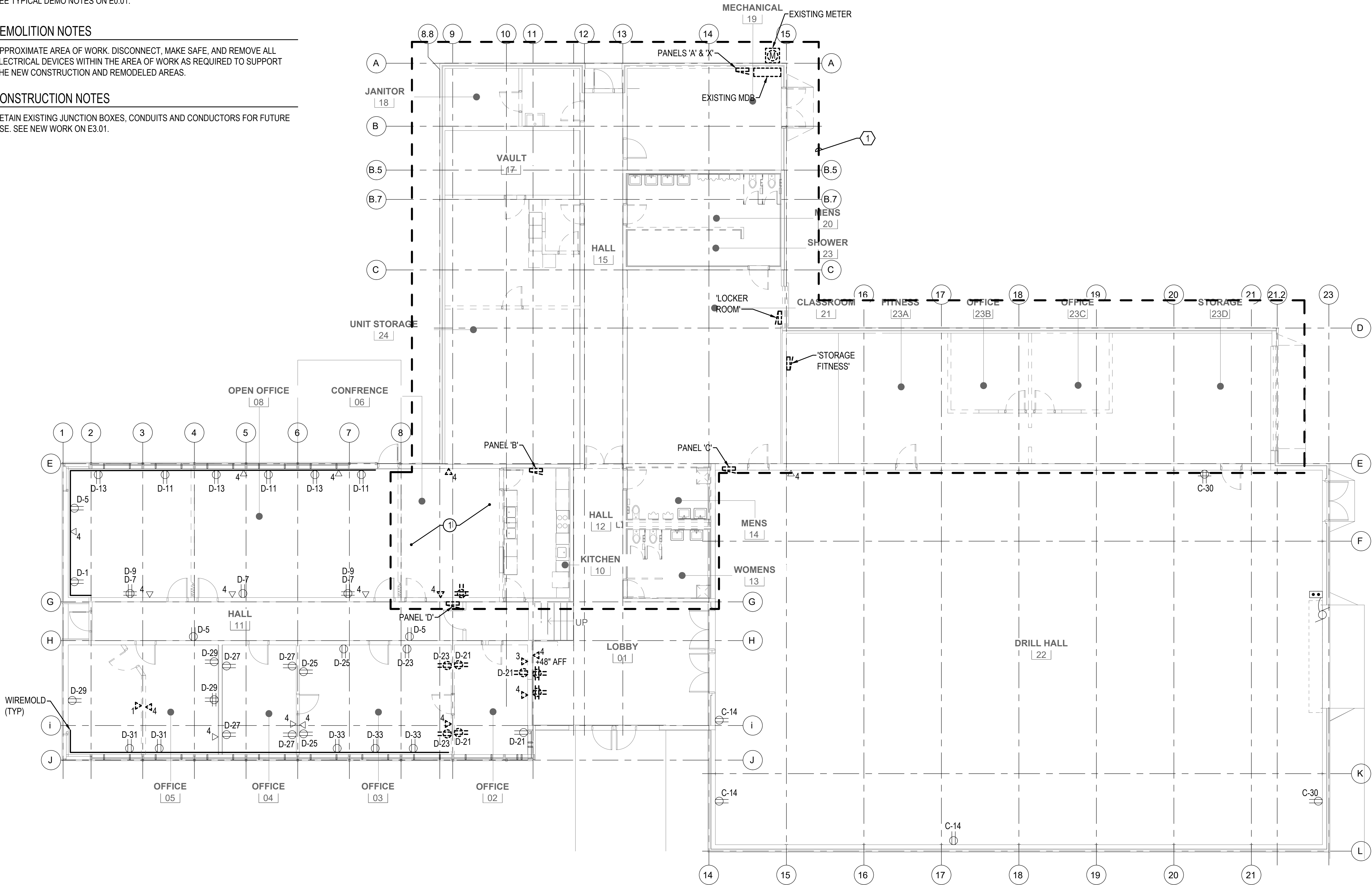
1. SEE TYPICAL DEMO NOTES ON E0.01.

DEMOLITION NOTES

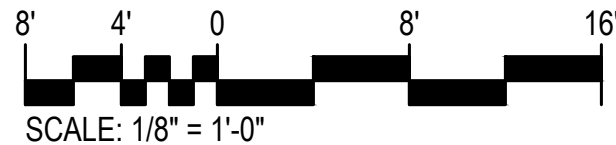
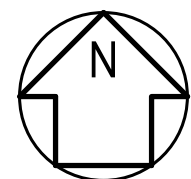
- 1 APPROXIMATE AREA OF WORK. DISCONNECT, MAKE SAFE, AND REMOVE ALL ELECTRICAL DEVICES WITHIN THE AREA OF WORK AS REQUIRED TO SUPPORT THE NEW CONSTRUCTION AND REMODELED AREAS.

CONSTRUCTION NOTES

- 1 RETAIN EXISTING JUNCTION BOXES, CONDUITS AND CONDUCTORS FOR FUTURE USE. SEE NEW WORK ON E3.01.



1 ELECTRICAL POWER & SYSTEMS DEMO PLAN
SCALE: 1/8"=1'-0"



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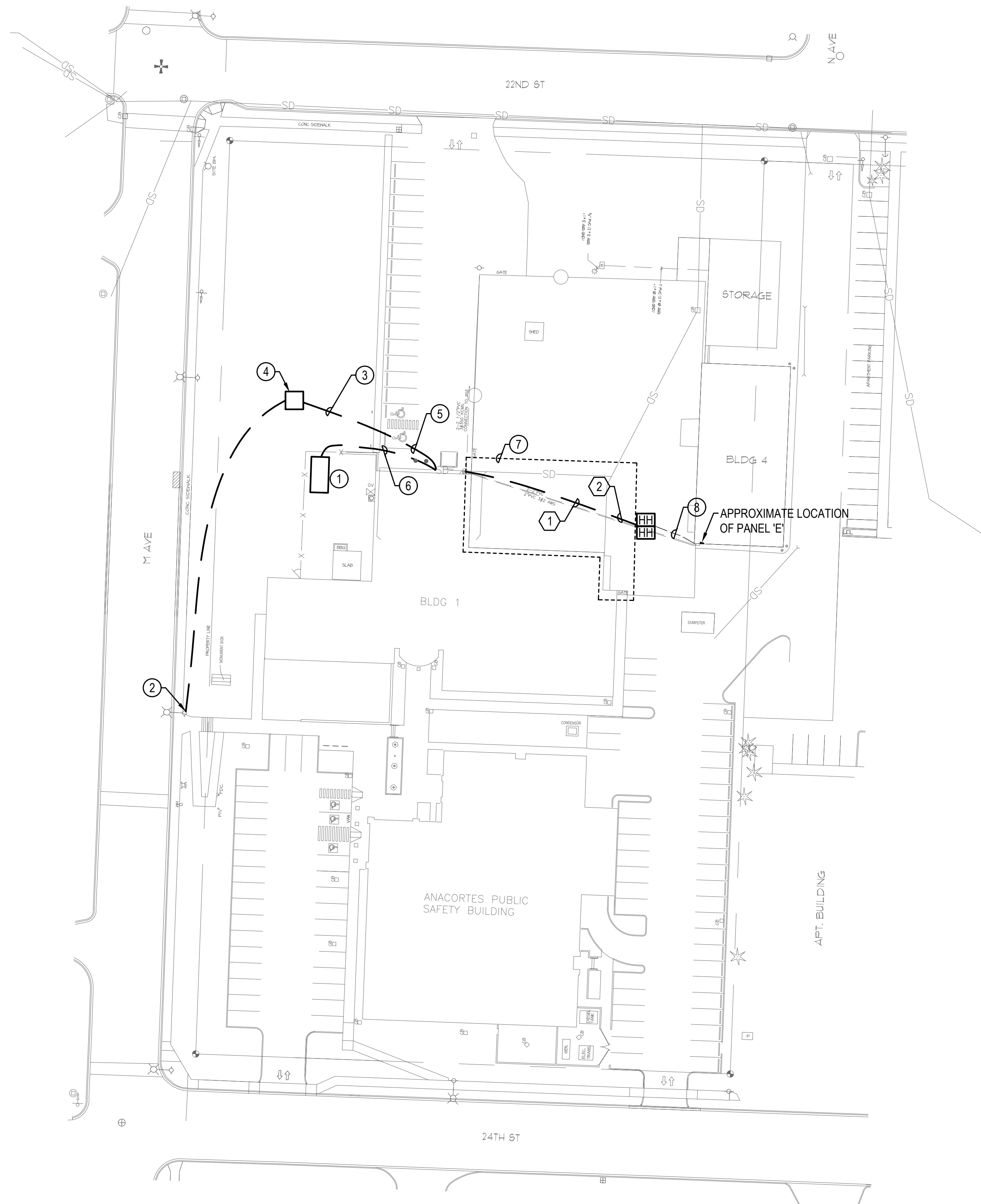


Project No.: 21024	Designed By: BM	Drawn By: JT	Checked By: BM
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Mark	Description	Date

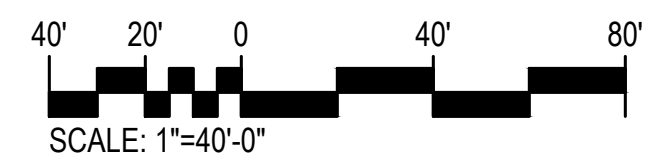
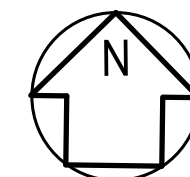
WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 M AVENUE, ANACORTES, WA
ELECTRICAL POWER & SYSTEMS DEMO PLAN

ED-301



1 ELECTRICAL SITE PLAN
SCALE: 1"=40'-0"

SCALE: 1"=40'-0"



GENERAL NOTES

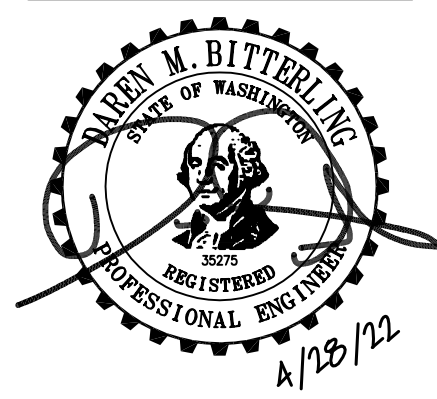
1. REFER TO GENERAL AND DEMOLITION NOTES ON E0.02.
2. FIELD VERIFY EXISTING CONDITIONS AND COORDINATE WITH ALL TRADES PRIOR TO COMMENCING WORK.
3. SEE ONE-LINE DIAGRAM ON E6.01 FOR MORE INFORMATION.
4. SEE E7.00 FOR TRENCHING DETAILS.
5. COORDINATE WITH PSE PRIOR TO STARTING WORK.
6. ALL ELECTRICAL SERVICE WORK SHALL BE PER PSE'S REQUIREMENTS AND STANDARDS.

CONSTRUCTION NOTES

- ① PROPOSED FUTURE GENERATOR LOCATION.
- ② PROPOSED UTILITY SERVICE POINT AT EXISTING UTILITY POLE.
- ③ PRIMARY ELECTRICAL FEED BY UTILITY. TRENCHING BY EC.
- ④ PROPOSED UTILITY TRANSFORMER LOCATION.
- ⑤ ELECTRICAL SERVICE CONDUCTORS. SEE ONE-LINE DIAGRAM.
- ⑥ PROVIDE (2) 4" AND (1) 1-1/2" CONDUITS FROM FUTURE GENERATOR LOCATION TO FUTURE ATS LOCATION IN ELEC/MECH ROOM. PROVIDE (3) 1" CONDUITS FROM FUTURE GENERATOR LOCATION AND TERMINATE AT FUTURE ATS LOCATION IMMEDIATELY ADJACENT TO ELEC/MECH ROOM.
- ⑦ APPROXIMATE LIMITS OF NEW ADDITION. SEE PLANS FOR NEW WORK WITHIN EXISTING BUILDING FOOTPRINT.
- ⑧ (3) 2" EXISTING UNDERGROUND CONDUIT.

DEMOLITION NOTES

- 1 COMPLETELY REMOVE ALL POWER CONDUCTORS BETWEEN BUILDING 1 AND 4 AND UNDERGROUND CONDUIT UNDER NEW BUILDING FOOTPRINT. PROVIDE NEW (3) 2" UNDERGROUND CONDUIT UNDER NEW BUILDING FOOTPRINT TO NEW HANDHOLES. RETAIN REMAINING CONDUIT INTO BUILDING 4 TO GREATEST EXTENT POSSIBLE. REPAIR AND REROUTE ANY CONDUIT DAMAGED DURING CONSTRUCTION. SEE ONE-LINE DIAGRAM FOR MORE INFORMATION.
- 2 COMPLETELY REMOVE ALL COMMUNICATION CABLES BETWEEN BUILDING 1 AND 4 AND UNDERGROUND CONDUIT UNDER NEW BUILDING FOOTPRINT. PROVIDE NEW 2" CONDUIT, AS REQUIRED, FOR RE-ROUTING OF COMMUNICATION CABLES FROM EXISTING MECHANICAL/ELECTRICAL ROOM THROUGH NEWLY CONSTRUCTED ADDITION ABOVE ACCESSIBLE CEILING, WHERE POSSIBLE, AND CONCEALED TO EXTENT POSSIBLE IF OPEN TO STRUCTURE TO NEW COMMUNICATIONS HANDHOLE.

[illegible]

GENERAL NOTES

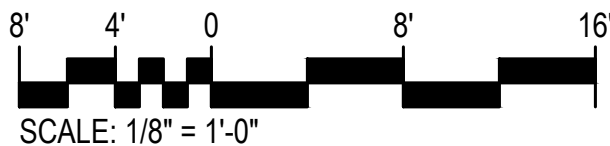
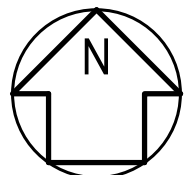
1. REFER TO GENERAL NOTES ON E0.02.

CONSTRUCTION NOTES

- ① CORRIDOR LIGHTING CONTROL SWITCH.
- ② REINSTALL RETAINED EXISTING LIGHT FIXTURE IN LOCATION INDICATED. RECONFIGURE RETAINED EXISTING LIGHT FIXTURE CONTROL, TO BE CONTROLLED WITH EXISTING LIGHT FIXTURES IN EXISTING ROOM AS INDICATED.
- ③ RELOCATE RETAINED EXISTING OCCUPANCY SENSOR TO NEW LOCATION AND ALSO RECONFIGURE THE SENSOR TO BE INCORPORATED WITH EXISTING ROOM LIGHTING CONTROLS.
- ④ MOUNT CENTERED JUST ABOVE DOOR.



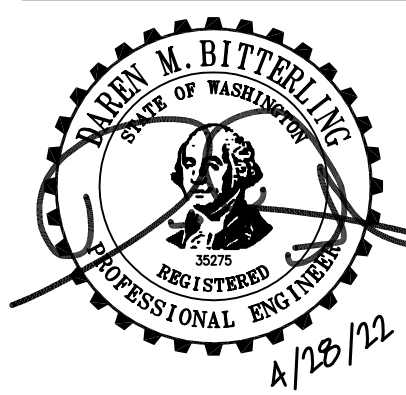
① ELECTRICAL LIGHTING PLAN
SCALE: 1/8"=1'-0"



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Project No: 21024
Designed By: BM
Drawn By: JT
Checked By: BM

Date	Description	Mark

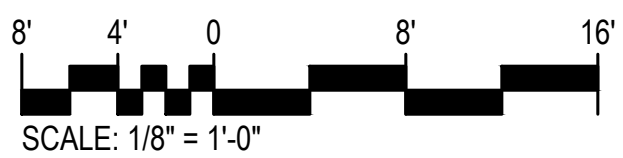
WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 M AVENUE, ANACORTES, WA

ELECTRICAL LIGHTING PLAN

E-201

1. REFER TO GENERAL NOTES ON E0.02.

- ① JUNCTION BOX ABOVE CEILING TO SPLICE AND EXTEND BRANCH CIRCUITS TO REMAIN FROM DEMOLISHED PANEL 'B'.
- ② JUNCTION BOX ABOVE CEILING TO SPLICE AND EXTEND BRANCH CIRCUITS TO REMAIN FROM DEMOLISHED PANEL 'C'.
- ③ PROVIDE (1) 2" CONDUIT ONLY WITH PULL STRING FOR SECURITY.
- ④ PROVIDE WEATHERPROOF RECESSED JUNCTION BOX FOR VAULT SECURITY SIREN. CONTRACTOR SHALL COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
- ⑤ PROVIDE DEDICATED CONNECTION TO NEW ADA LIFT. COORDINATE ALL REQUIREMENTS WITH INSTALLING VENDOR PRIOR TO ROUGH-IN.
- ⑥ PROVIDE DEDICATED CONNECTION TO AUTOMATIC HAND DRYER. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
- ⑦ PROVIDE DEDICATED CONNECTION FOR DEHUMIDIFIER MOUNT AT +7'-0" AFF.
- ⑧ MOUNT 4S BOX ABOVE ACCESSIBLE CEILING.
- ⑨ PROVIDE JUNCTION BOXES, CONDUIT AND PULL STRINGS. SEE DETAIL 4 ON SHEET E7.00. CONTRACTOR SHALL COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
- ⑩ PROVIDE (1) 1" CONDUIT ONLY WITH PULL STRING FOR SECURITY.
- ⑪ PROVIDE DEDICATED CONNECTION FOR OFOI MINI-FRIDGE. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN. FEED FROM GFCI BREAKER.
- ⑫ PROVIDE DEDICATED CONNECTION TO NEW FIRE ALARM CONTROL PANEL. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
- ⑬ EXTEND JUNCTION BOXES, CONDUITS AND CONDUCTORS AS REQUIRED TO FOR THE INSTALLATION OF NEW FURRED WALLS.



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Designed by: BIM

Drawn by: 01

Checked By: BM

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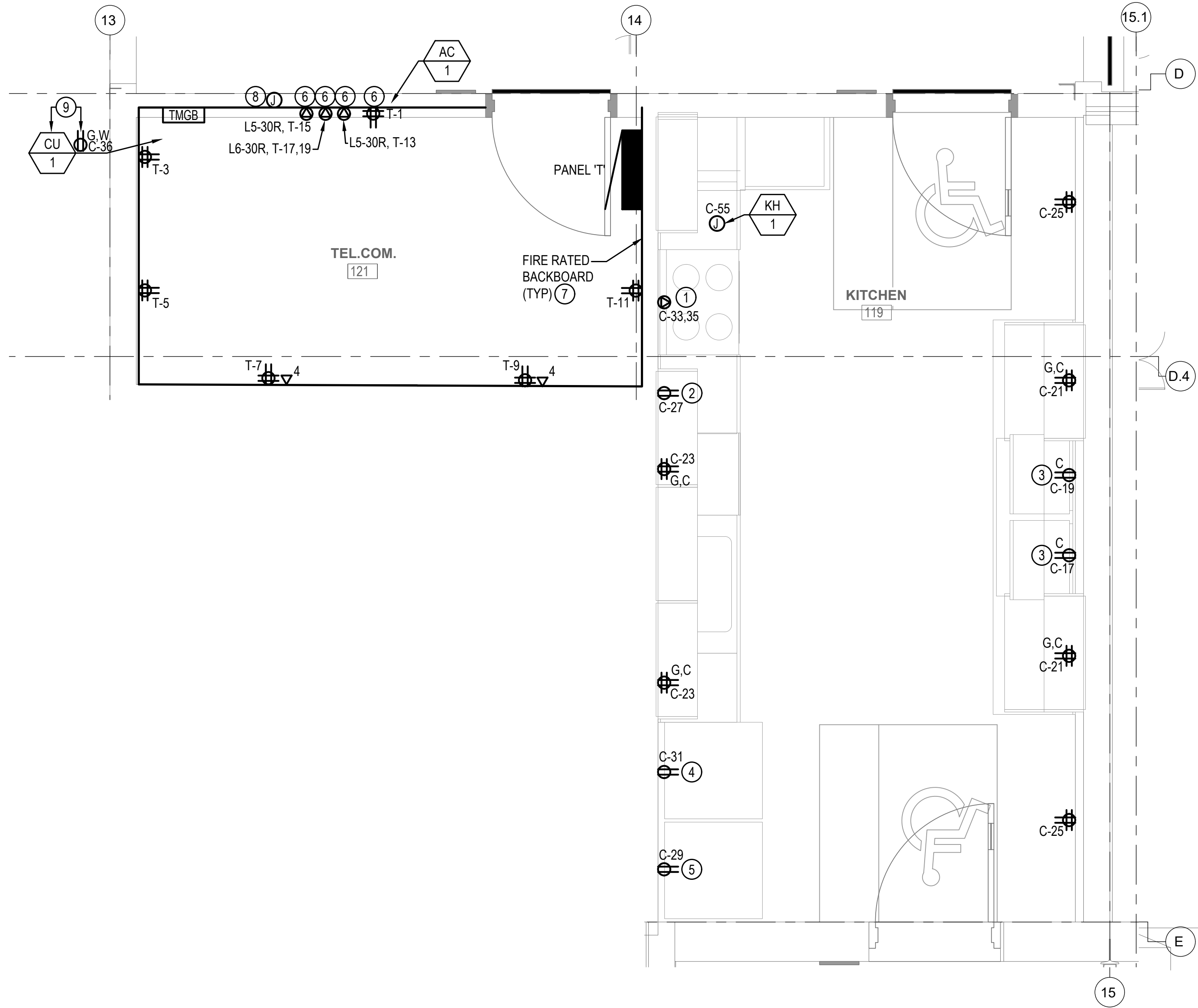
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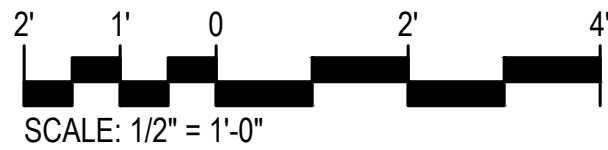
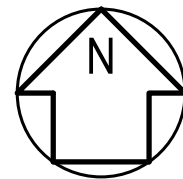
ELECTRICAL POWER & SYSTEMS PLAN

E-301

Sheet Size: 22" x 34"



1 ELECTRICAL ENLARGED TELECOM 121 AND KITCHEN 119
SCALE: 1/2"=1'-0"



GENERAL NOTES

1. REFER TO GENERAL NOTES ON E0.02.

CONSTRUCTION NOTES

1. 208V, 50A OUTLET FOR OVEN/RANGE. CONNECT WITH 3/4" C., (3)#6 CU AND (1)#10 CU GND.
2. PROVIDE DEDICATED CONNECTION FOR DISHWASHER. PROVIDE CORD AND PLUG ATTACHMENT AND PUNCH OUT TO ADJACENT ACCESSIBLE CABINET AS REQUIRED. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN. FEED FROM GFCI BREAKER.
3. PROVIDE DEDICATED CONNECTION FOR MICROWAVE. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN. FEED FROM GFCI BREAKER.
4. PROVIDE DEDICATED CONNECTION FOR REFRIGERATOR. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN. FEED FROM GFCI BREAKER.
5. PROVIDE DEDICATED CONNECTION FOR FREEZER. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN. FEED FROM GFCI BREAKER.
6. MOUNT ABOVE RACK. COORDINATE EXACT LOCATION WITH OWNER REPRESENTATIVE.
7. PROVIDE FIRE RATED BACKBOARD FROM +6" AFF TO 8'-6" AFF.
8. PROVIDE DEDICATED CONNECTION TO MASS NOTIFICATION SYSTEM. COORDINATE EXACT LOCATION PRIOR TO ROUGH-IN.
9. LOCATED ON ROOF. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR.

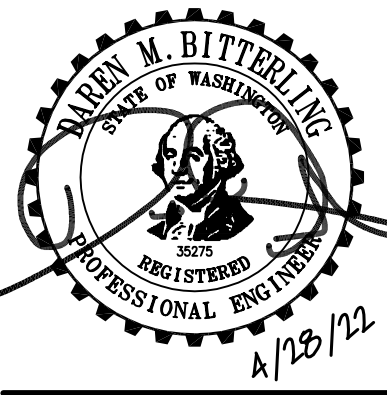


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Fife, Washington 98424
T: 253.922.0446
F: 253.922.0896



Project No.: 21024

Designed By: BM

Drawn By: JT

Checked By: BM

Mark

Description

Date

WASHINGTON MILITARY DEPARTMENT

ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 N AVENUE, ANACORTES, WA

ELECTRICAL ENLARGED
PLANS

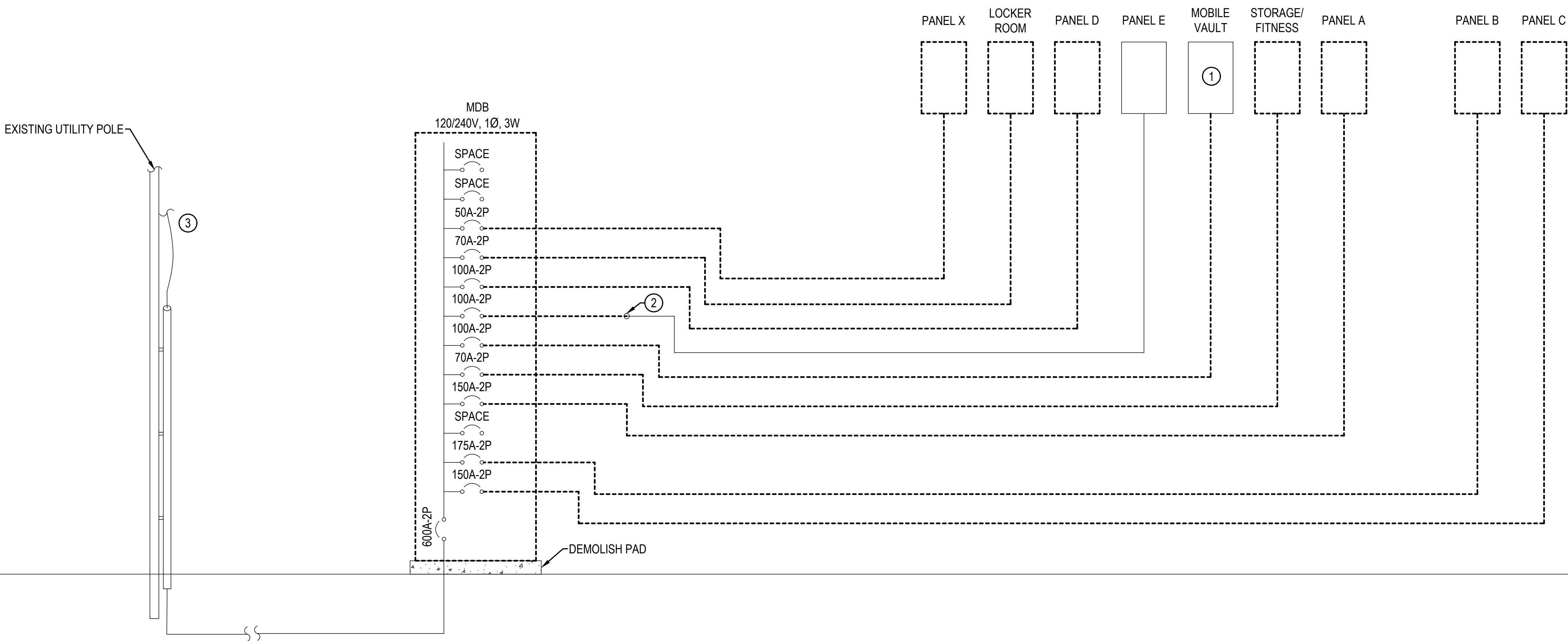
E-501

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1

EXISTING ONE-LINE DIAGRAM

SCALE: DIAGRAMMATIC



GENERAL NOTES

1. DEMO EQUIPMENT AND DEVICES INDICATED AS REQUIRED.

CONSTRUCTION NOTES

1. EQUIPMENT TO BE REMOVED BY GOVERNMENT. EC TO COMPLETELY REMOVE ALL CONDUIT, CONDUCTORS, AND ASSOCIATED APPURTENANCES.
2. RETAIN CONDUIT AND CONDUCTORS TO PANEL 'E' FOR RECONNECTION.
3. TO UTILITY TRANSFORMER. COORDINATE WITH PSE FOR ALL ELECTRICAL SERVICE WORK AND DISCONNECTION OF EXISTING SERVICE.

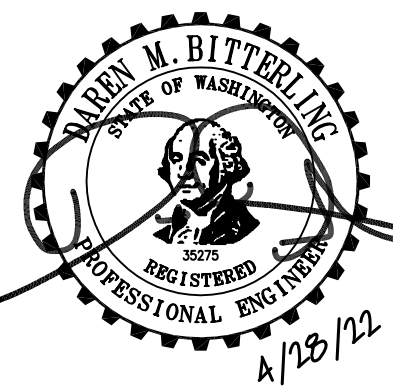


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ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 N AVENUE, ANACORTES, WA

ELECTRICAL ONE-LINE DIAGRAMS

E-600

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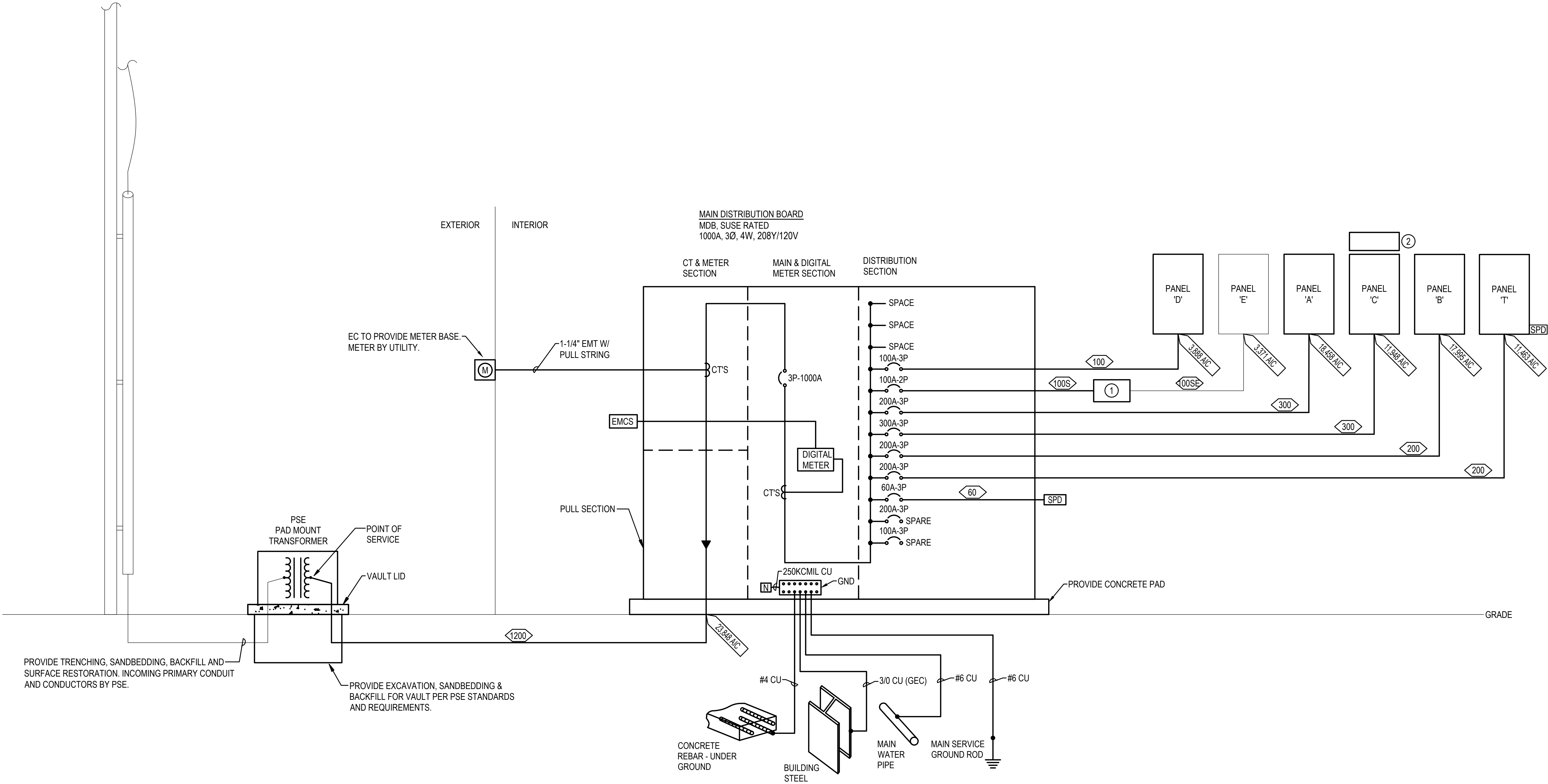
COPPER CONDUIT/FEEDER SCHEDULE	
FEEDER NUMBER	CONDUIT/FEEDER SIZE
60	(1) 1-1/4"C., W/ (4) #4 CU & (1) #10 CU GND
100	(1) 2"C., W/ (4) #2 CU & (1) #8 CU GND
100S	(1) 2"C., W/ (3) #2 CU & (1) #8 CU GND
100SE	(1) 2"C., W/ (3) #2 CU & (1) #8 CU GND IN EXISTING CONDUIT
200	(1) 2-1/2"C., W/ (4) 3/0 CU & (1) #6 CU GND
300	(1) 3"C., W/ (4)350KCMIL & (1) #4 CU GND
1200	(3) SETS OF 4"C., W/ (4) 600KCMIL CU & (1) 3/0 CU GND IN EACH

GENERAL NOTES

1. COORDINATE ALL WORK WITH PSE PRIOR TO STARTING CONSTRUCTION.

CONSTRUCTION NOTES

- ① INTERCEPT EXISTING CONDUIT FOR PANEL 'E' IN ELEC/MECH ROOM. PROVIDE JUNCTION BOX, EXTEND CONDUIT TO RE-FEED PANEL 'E' FROM NEW 'MDB' AS REQUIRED.
- ② JUNCTION BOX TO SPLICE AND EXTEND EXISTING BRANCH CIRCUITS FROM NEW PANEL 'C'.



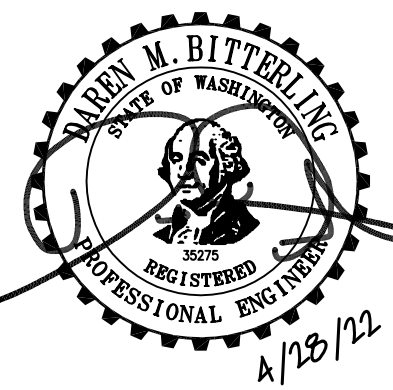
① ONE-LINE DIAGRAM
SCALE: DIAGRAMMATIC



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WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA
ELECTRICAL ONE-LINE DIAGRAMS

E-601

PANEL: MDB (NEW)		3 PH			4 WIRE			VOLTAGE: 208Y/120V			1000A MCB			
LOC:		MOUNT: FLUSH			FEED: BOTTOM									
TYPE: NEMA 1		POLES: 36			SF MAINS: NO			25,000AIC MINIMUM						
LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR. BRKR P	AMP	A	B	C	CIR. BRKR P	AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
SF	25199	PANEL 'A'	1	3	300	34497			3	200	2	PANEL 'B'	9298	SF
SF	28797		3				35760				4		6963	SF
SF	28379		5					34469			6		6090	SF
SF	27967	PANEL 'C'	7	3	300	34639			3	100	8	PANEL 'D'	6672	SF
SF	29144		9				36041				10		6897	SF
SF	28744		11					34716			12		5972	SF
H	8407	PANEL 'E'	13	2	100	16581			3	200	14	PANEL 'T'	8174	SF
H	7231		15				13155				16		5924	SF
			17					2970			18		2970	SF
		SPARE	19	3	200				3	100	20	SPARE		
			21								22			
			23								24			
		SPACE	25								26	SPACE		
			27								28			
			29								30			
		SPACE	31						3	30	32	SPD		
			33								34			
			35								36			
	183868	TOTAL	THIS PANEL->			85717	84955	72156	TOTAL			58960		
						85717	84955	72156	TOTAL CONNECTED LOAD (VA): 242,828.24					
									TOTAL CONNECTED CURRENT (A): 674.02					
									TOTAL DEMAND LOAD (VA): 231,981.64					
									TOTAL DEMAND CURRENT (A) 643.92					
NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED														

PANEL: B (NEW)		3 PH		4 WIRE		VOLTAGE: 208Y/120V				200A MCB					
LOC:		MOUNT: FLUSH				FEED: TOP									
TYPE: NEMA 1		POLES: 42				SF MAINS: NO				19,000AIC MINIMUM					
LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR. BRKR P	AMP	A	B	C	CIR. BRKR P	AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE	
R	360	RECEPT. - FITNESS ROOM 112	1	1	20	970			1	20	2	LTG - CORRIDOR 109	610	L	
R	360	RECEPT. - FITNESS ROOM 112	3	1	20		1575		1	20	4	LTG - CLASSROOMS 115, 116A, 116B	1215	L	
R	360	RECEPT. - FITNESS ROOM 112	5	1	20			1410	1	20	6	LTG - RESTROOMS	1050	L	
D	1200	DRINKING FOUNTAIN - FITNESS 112	7	1	20	2400			1	20	8	DRINKING FOUNTAIN - CORRIDOR 109	1200	D	
R	540	RECEPT. - CLASSROOM 115	9	1	20		900		1	20	10	RECEPT. - WOMENS 111	360	R	
R	1080	RECEPT. - CLASSROOM 115	11	1	20			1440	1	20	12	RECEPT. - MENS 110	360	R	
R	1080	RECEPT. - CLASSROOM 115	13	1	20	1800			1	20	14	RECEPT. - MOTHERS ROOM 112B	720	R	
R	1080	RECEPT. - CLASSROOM 115	15	1	20		1080		1	20	16	SPARE			
R	1080	RECEPT. - CLASSROOM 116A,116B,115	17	1	20			1080	1	20	18	SPARE			
R	720	RECEPT. - CLASSROOM 116A, 116B	19	1	20	1968			2		20	FCU-7,8,9,10,11,12	1248	D	
R	1080	RECEPT. - CLASSROOM 116A	21	1	20		2328			20	22		1248	D	
R	1080	RECEPT. - CLASSROOM 116A	23	1	20			1080	1	20	24	SPARE			
R	1080	RECEPT. - CLASSROOM 116A	25	1	20	1080			1	20	26	SPARE			
R	1080	RECEPT. - CLASSROOM 116B	27	1	20		1080				28	SPACE			
R	1080	RECEPT. - CLASSROOM 116B	29	1	20			1080			30	SPACE			
R	1080	RECEPT. - CLASSROOM 116B	31	1	20	1080					32	SPACE			
		SPARE	33	1	20						34	SPACE			
		SPARE	35	1	20						36	SPACE			
		SPARE	37	1	20				3		38				
		SPACE	39								40	SPARE			
		SPACE	41							20	42				
	14340	TOTAL	THIS PANEL->				9298	6963	6090	TOTAL				8011	
						9298	6963	6090							
		LIGHTING(125%) = 3593.75					LARGEST MOTOR(125%) = 0.00				KITCHEN LOADS(65%) = 0.00				TOTAL CONNECTED LOAD (VA): 22,351.00
		RECEPTS<=10000(100%) = 10000.00					OTHER MOTORS(100%) = 0.00				APPLIANCES(100%) = 0.00				TOTAL CONNECTED CURRENT (A): 62.04
		RECEPTS>10000(50%) = 2290.00					MOTOR TOTAL = 0.00				DEDICATED(100%) = 4896.00				
		RECEPTS TOTAL = 12290.00					WATER HEATERS(100%) = 0.00				MISC(100%) = 0.00				TOTAL DEMAND LOAD (VA): 20,779.75
		ELECTRIC HEAT(100%) = 0.00													TOTAL DEMAND CURRENT (A) 57.68
NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED															

PANEL: A (NEW)		3 PH			4 WIRE			VOLTAGE: 208Y/120V			300A MCB				
LOC:		MOUNT: FLUSH			FEED: TOP			SF MAINS: NO			19,000AIC MINIMUM				
TYPE: NEMA 1		POLES: 42													
LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR. BRKR P	AMP	A	B	C	CIR. BRKR P	AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE	
H	1333	EH-1	1	3	20	1513			1	20	2	LTG - MECH ROOM 113	180	L	
H	1333		3				1393		1	20	4	LTG - FIRE RISER RM 112A	60	L	
H	1333		5					2053	1	20	6	RECEPT. - MECH ROOM 113	720	R	
H	1600	EH-3	7	3	20	1960			1	20	8	RECEPT. - FIRE RISER 112A	360	R	
H	1600		9					2100	1	20	10	P-1	500	D	
H	1600		11						1773	2		12	BC-1, BC-2	173	D
H	1600	EH-4	13	3	20	1773				20	14		173	D	
H	1600		15					6100	2		16	WH-1	4500	WH	
H	1600		17						6100	60	18		4500	WH	
H	1600	EH-5	19	3	20	10360			3		20	HP-1	8760	ML	
H	1600		21					10360					22	8760	ML
H	1600		23						10360		125		24	8760	ML
H	1600	EH-6	25	3	20	6760			3		26	HP-2	5160	ML	
H	1600		27					6760					28	5160	ML
H	1600		29						6760		60		30	5160	ML
H	667	EH-7	31	3	20	2167			1	20	32	EM. LTG - DRILL HALL (EX. CKT X-3)	1500	L	
H	667		33					1417		1	20	34	EM. LTG - DRILL HALL (EX. CKT X-4)	750	L
H	667		35						667			36			
H	667	EH-8	37	3	20	667					38				
H	667		39					667				40			
H	667		41						667			42			
	27200	TOTAL	THIS PANEL->			25199	28797	28379				TOTAL	55175		
						25199	28797	28379				TOTAL CONNECTED LOAD (VA): 82,375.28			
												TOTAL CONNECTED CURRENT (A): 228.65			
												TOTAL DEMAND LOAD (VA): 89,567.78			
												TOTAL DEMAND CURRENT (A) 248.62			
NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED															

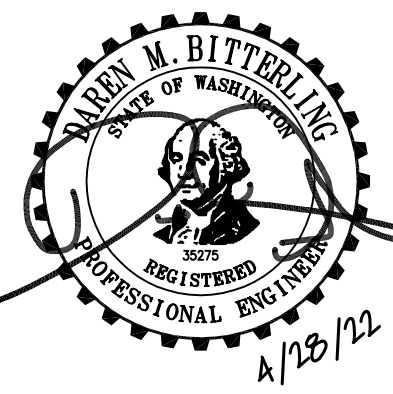


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Seattle, WA 98104
Tel. 206.946.9746
www.wja-dc.com



6021 12th Street East, Suite 200
Fife, Washington 98424
T: 253.922.0446
F: 253.922.0896



Project No.: 21024

Designed By: BM

Drawn By: JT

Checked By: BM

Date

Mark Description

WASHINGTON MILITARY DEPARTMENT

ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 W AVENUE, ANACORTES, WA

PANEL SCHEDULES

C:\Users\ccreat\W\ADESIGN\Documents\Anacortes RC Addition_2022-Central_ccreat@wja-dc.com.rvt

4/14/2022 2:45:18 PM

PANEL: D (NEW)		3 PH			4 WIRE			VOLTAGE: 208Y/120V			100A MCB			
LOC:		MOUNT: FLUSH			FEED: TOP									
TYPE: NEMA 1		POLES: 42			SF MAINS: NO						10,000AIC MINIMUM			
LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR. BRKR P	AMP	A	B	C	CIR. BRKR P	AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE
R	180	RECEPT. - ADMIN 107 (EX. CKT D-1)	1	1	20	620			1	20	2	LTG E. CLASSROOMS (EX. CKT D-2)	440	L
		SPARE	3	1	20		550		1	20	4	LTG W. CLASSROOMS (EX. CKT D-4)	550	L
R	540	RECEPT. - CORR. 103 (EX. CKT D-5)	5	1	20			815	1	20	6	LTG CORRIDOR (EX. CKT D-6)	275	L
R	540	RECEPT. - ADMIN 107 (EX. CKT D-7)	7	1	20	980			1	20	8	LTG E. OFFICES (EX. CKT D-8)	440	L
R	360	RECEPT. - ADMIN 107 (EX. CKT D-9)	9	1	20		855		1	20	10	LTG W. OFFICES (EX. CKT D-10)	495	L
R	540	RECEPT. - ADMIN 107 (EX. CKT D-11)	11	1	20			1044	1	20	12	LTG CONF. 108 & MULTIPURPOSE 114	504	L
R	540	RECEPT. - ADMIN 107 (EX. CKT D-13)	13	1	20	660			1	20	14	LTG RETENTION OFFICE 101	120	L
R	1080	RECEPT. - ADMIN 107 & CONF. 108	15	1	20		1800		1	20	16	RECEPT. - RENTENTION OFFICE 101	720	R
L	440	LTG LOBBY (EX. CKT D-17)	17	1	20			1160	1	20	18	RECEPT. - RENTENTION OFFICE 101	720	R
R	900	RECEPT. - CONF. 108	19	1	20	1458			2		20	FCU-1,2A,2B,3,4A,4B,5A-1,5A-2,5B,5C,6	558	D
R	180	RECEPT. - ADMIN 104 (EX. CKT D-21)	21	1	20		738			20	22		558	D
R	180	RECEPT. - ADMIN 104 (EX. CKT D-23)	23	1	20			1513	3		24		1333	H
R	540	RECEPT. - ADMIN 104 (EX. CKT D-25)	25	1	20	1873					26	EH-2	1333	H
R	720	RECEPT. - OFFICE 105 (EX. CKT D-27)	27	1	20		2053			20	28		1333	H
R	720	RECEPT. - ADMIN 106 (EX. CKT D-29)	29	1	20			720			30			
R	360	RECEPT. - ADMIN 106 (EX. CKT D-31)	31	1	20	360					32			
R	540	RECEPT. - ADMIN 104 (EX. CKT D-33)	33	1	20		540				34			
R	720	RECEPT. - MULTIPURPOSE 114	35	1	20			720			36			
R	720	RECEPT. - MULTIPURPOSE 114	37	1	20	720					38			
R	360	RECEPT. - CONF. 108	39	1	20		360				40			
		SPARE	41	1	20						42			
	10160	TOTAL	THIS PANEL->			6672	6897	5972				TOTAL	9381	
						6672	6897	5972				TOTAL CONNECTED LOAD (VA): 19,540.96		
												TOTAL CONNECTED CURRENT (A): 54.24		
												TOTAL DEMAND LOAD (VA): 19,776.96		
												TOTAL DEMAND CURRENT (A) 54.90		
NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED														

PANEL: T (NEW)		3 PH		4 WIRE		VOLTAGE: 208Y/120V		200A MCB								
LOC:		MOUNT: FLUSH		FEED: TOP												
TYPE: NEMA 1		POLES: 42		SF MAINS: NO		12,000AIC MINIMUM										
LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR. BRKR P	AMP	A	B	C	CIR. BRKR P	AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE		
R	360	RECEPT. - TEL. COM. 121	1	1	20	3064			2		2	AC-1, CU-1	2704	D		
R	360	RECEPT. - TEL. COM. 121	3	1	20		3064			40	4		2704	D		
R	360	RECEPT. - TEL. COM. 121	5	1	20			360			6	SPACE				
R	360	RECEPT. - TEL. COM. 121	7	1	20	360					8	SPACE				
R	360	RECEPT. - TEL. COM. 121	9	1	20		360				10	SPACE				
R	360	RECEPT. - TEL. COM. 121	11	1	20			360	3		12					
R	2500	30A RECEPT. - TEL. COM. 121	13	1	30	2500					14	SPARE				
R	2500	30A RECEPT. - TEL. COM. 121	15	1	30		2500			20	16					
R	2250	30A RECEPT. - TEL. COM. 121	17	2				2250			18	SPACE				
R	2250		19		30	2250					20	SPACE				
		SPACE	21								22	SPACE				
		SPACE	23								24	SPACE				
		SPACE	25								26	SPACE				
		SPACE	27								28	SPACE				
		SPACE	29								30	SPACE				
			31								32					
			33								34					
			35								36					
			37								38					
			39								40					
			41								42					
	11660	TOTAL	THIS PANEL->				8174	5924	2970	TOTAL				5408		
							8174	5924	2970							
			LIGHTING(125%) = 0.00				LARGEST MOTOR(125%) = 0.00				KITCHEN LOADS(65%) = 0.00				TOTAL CONNECTED LOAD (VA): 17,068.00	
			RECEPTS<=10000(100%) = 10000.00				OTHER MOTORS(100%) = 0.00				APPLIANCES(100%) = 0.00				TOTAL CONNECTED CURRENT (A): 47.38	
			RECEPTS>10000(50%) = 830.00				MOTOR TOTAL = 0.00				DEDICATED(100%) = 5408.00					
			RECEPTS TOTAL = 10830.00				WATER HEATERS(100%) = 0.00				MISC(100%) = 0.00				TOTAL DEMAND LOAD (VA): 16,238.00	
			ELECTRIC HEAT(100%) = 0.00												TOTAL DEMAND CURRENT (A) 45.07	
NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED																

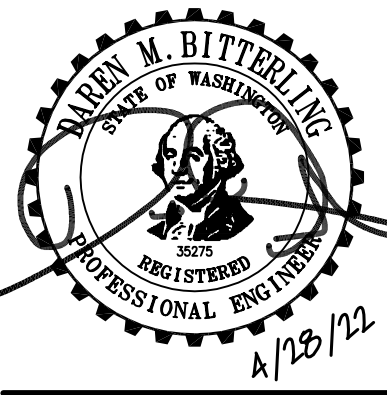


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Project No.: 21024

Designed By: BM

Drawn By: JT

Checked By: BM

Date

Description

Mark

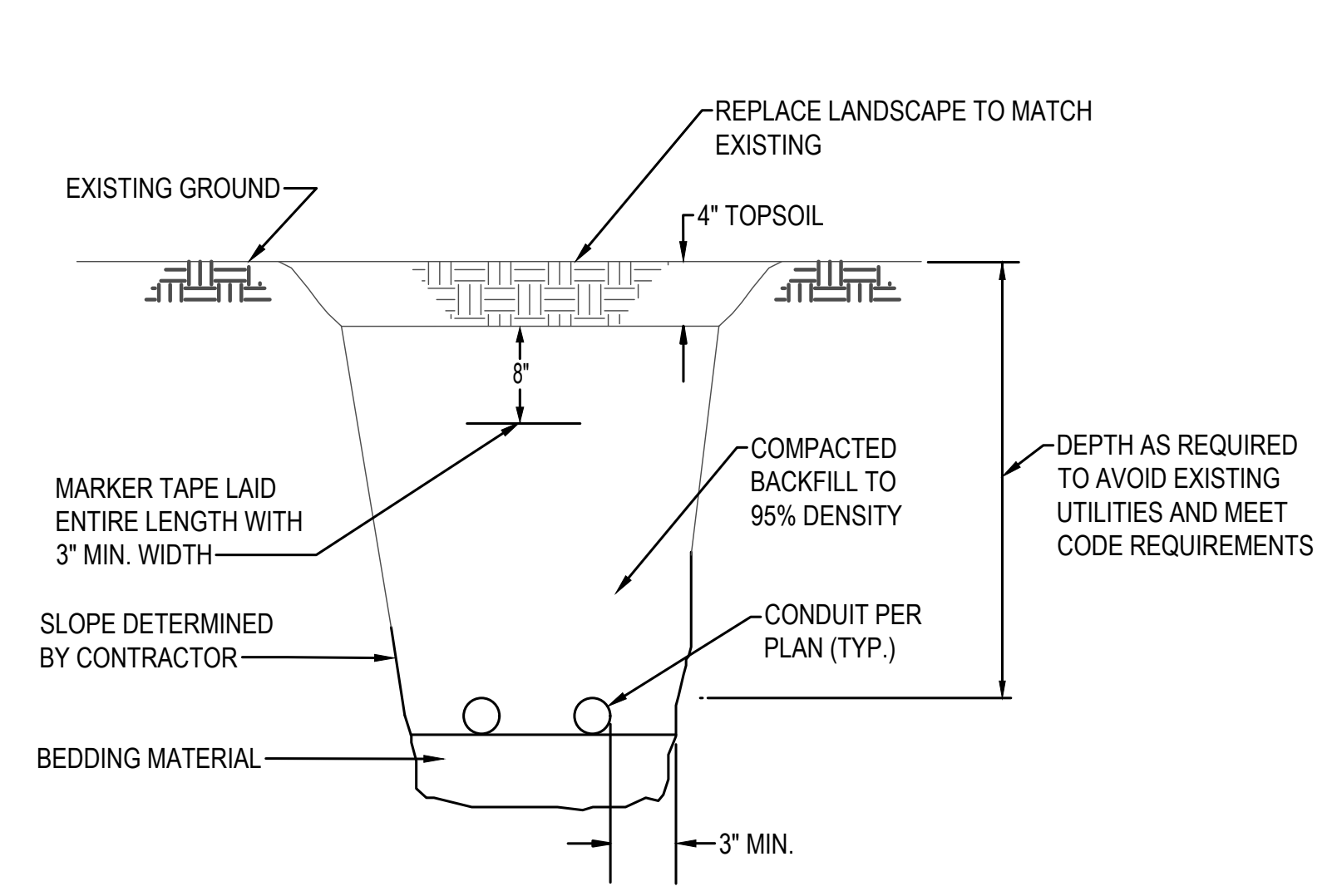
WASHINGTON MILITARY DEPARTMENT

ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 M AVENUE, ANACORTES, WA

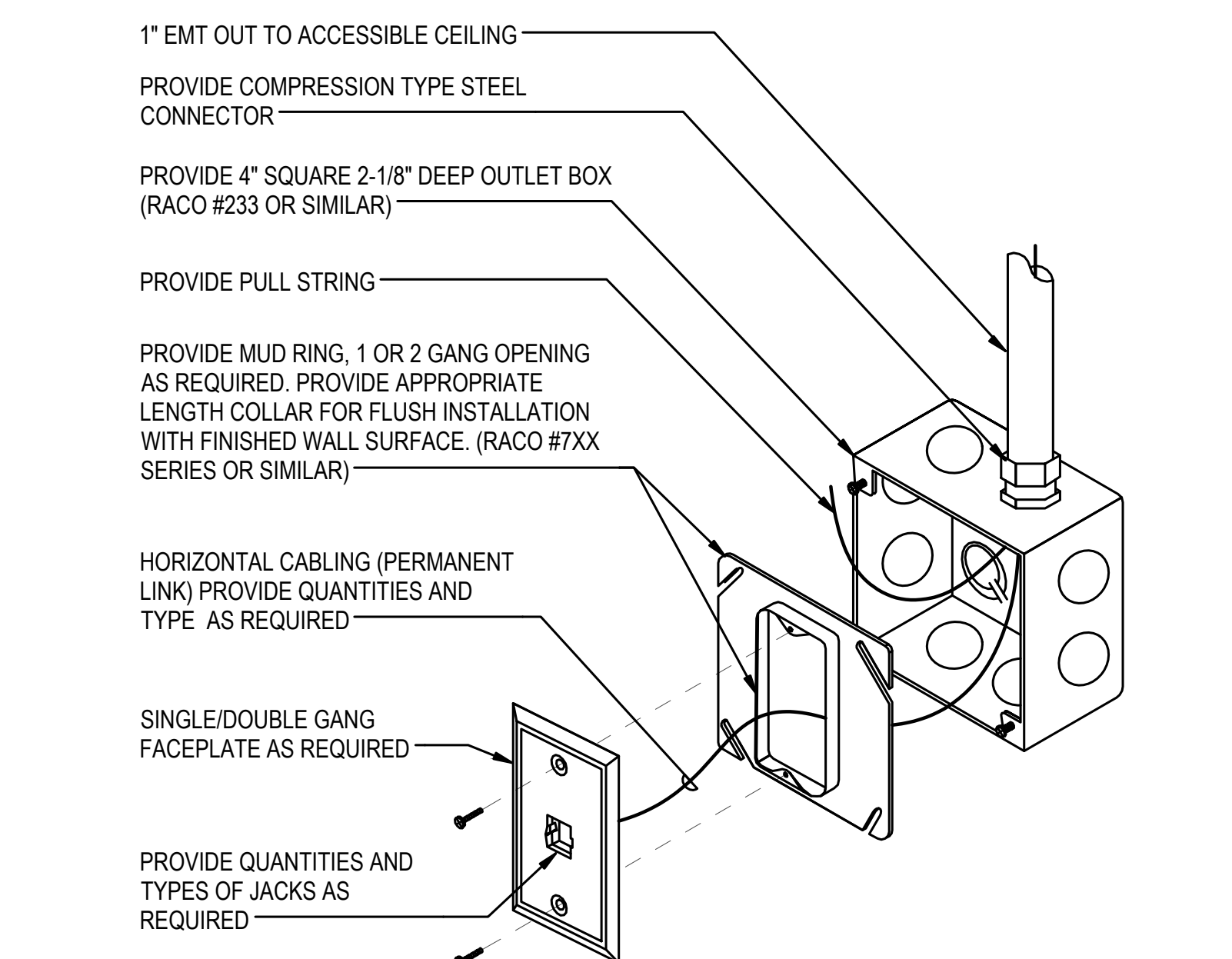
PANEL SCHEDULES

E-612

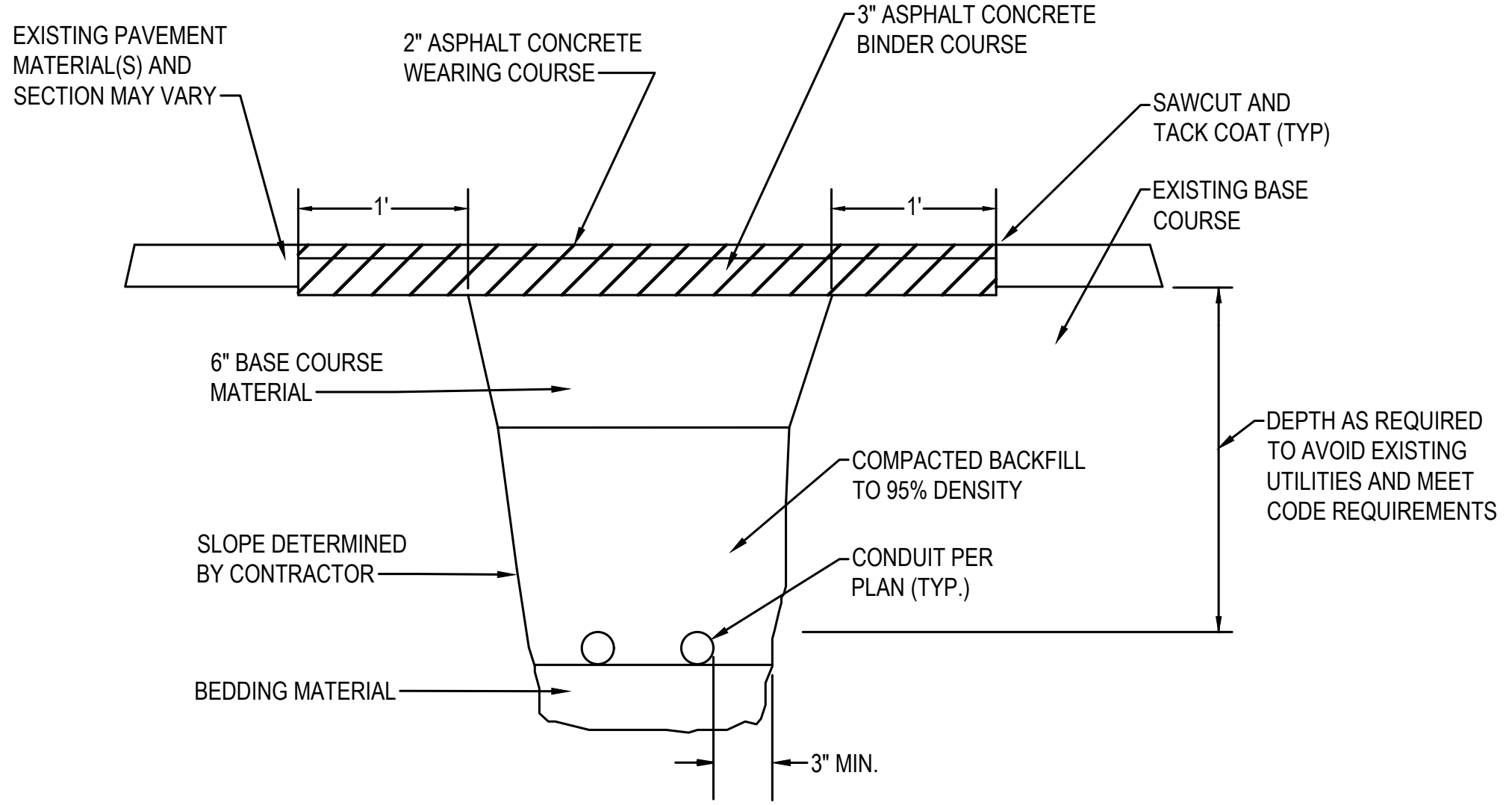
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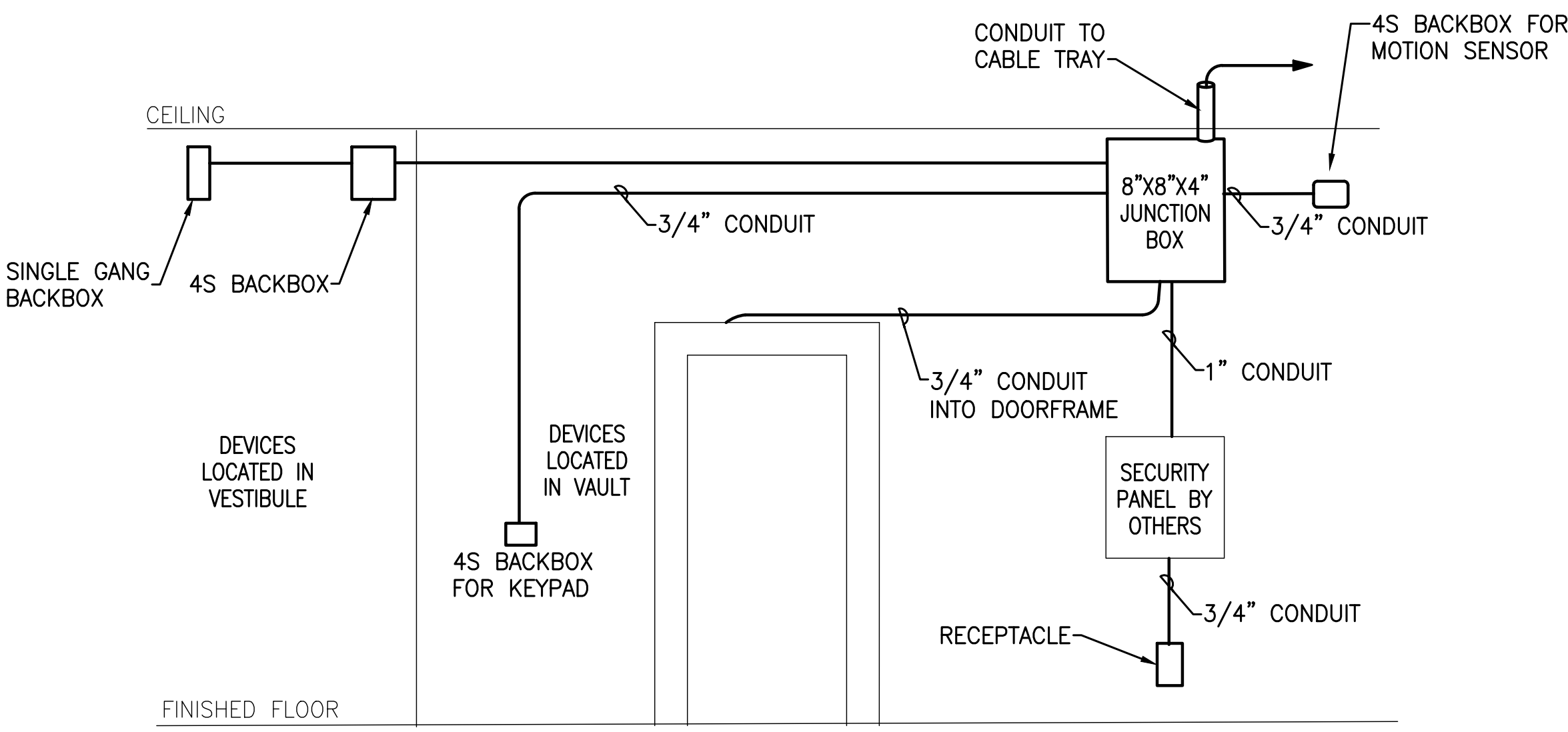
1 UNDERGROUND - LANDSCAPE AREAS
SCALE: DIAGRAMMATIC



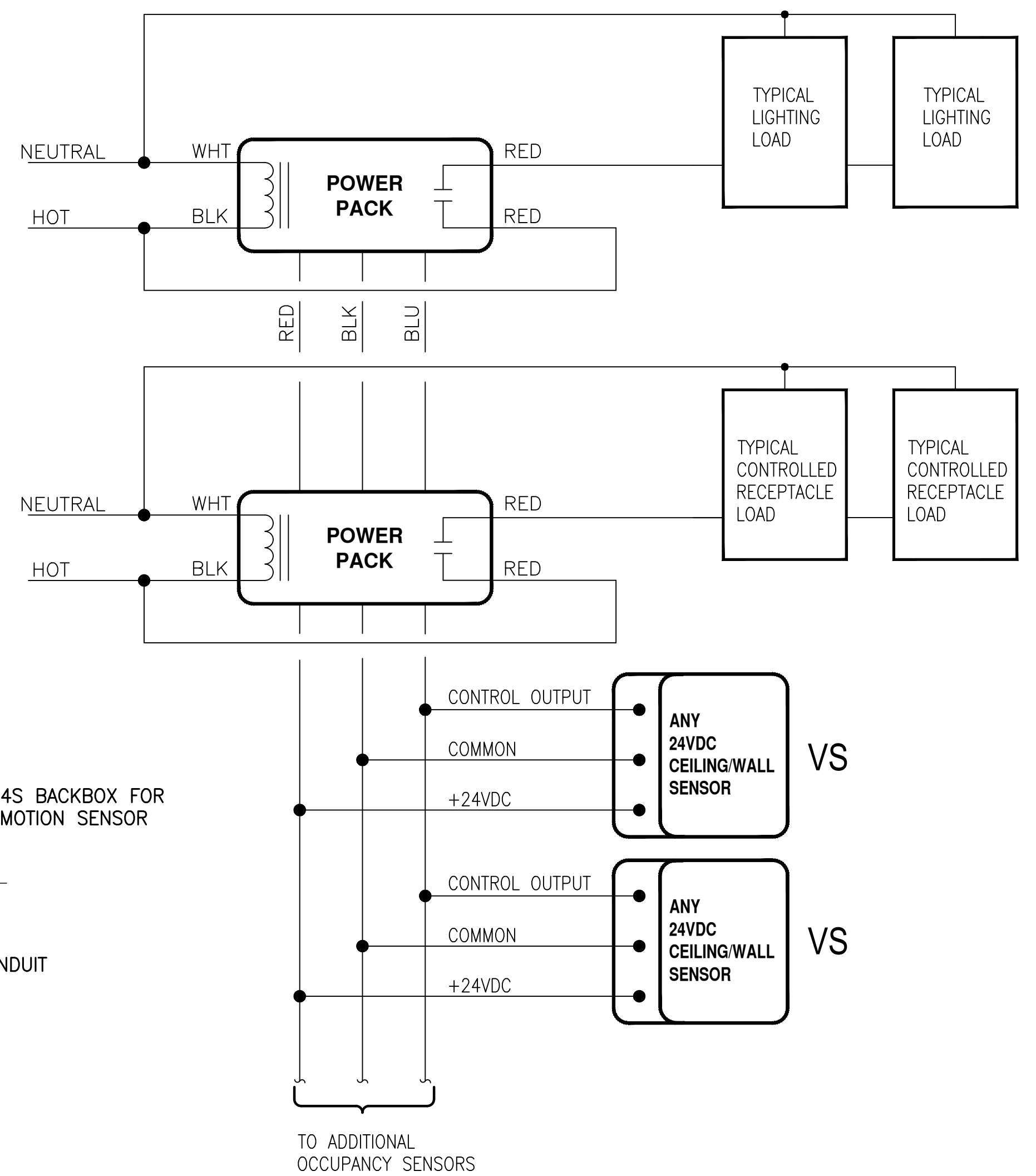
3 TELECOMMUNICATIONS OUTLET
INSTALLATION DETAIL - NEW LOCATION IN NEW WALLS
SCALE: DIAGRAMMATIC



2 UNDERGROUND - ASPHALT AREAS
SCALE: DIAGRAMMATIC



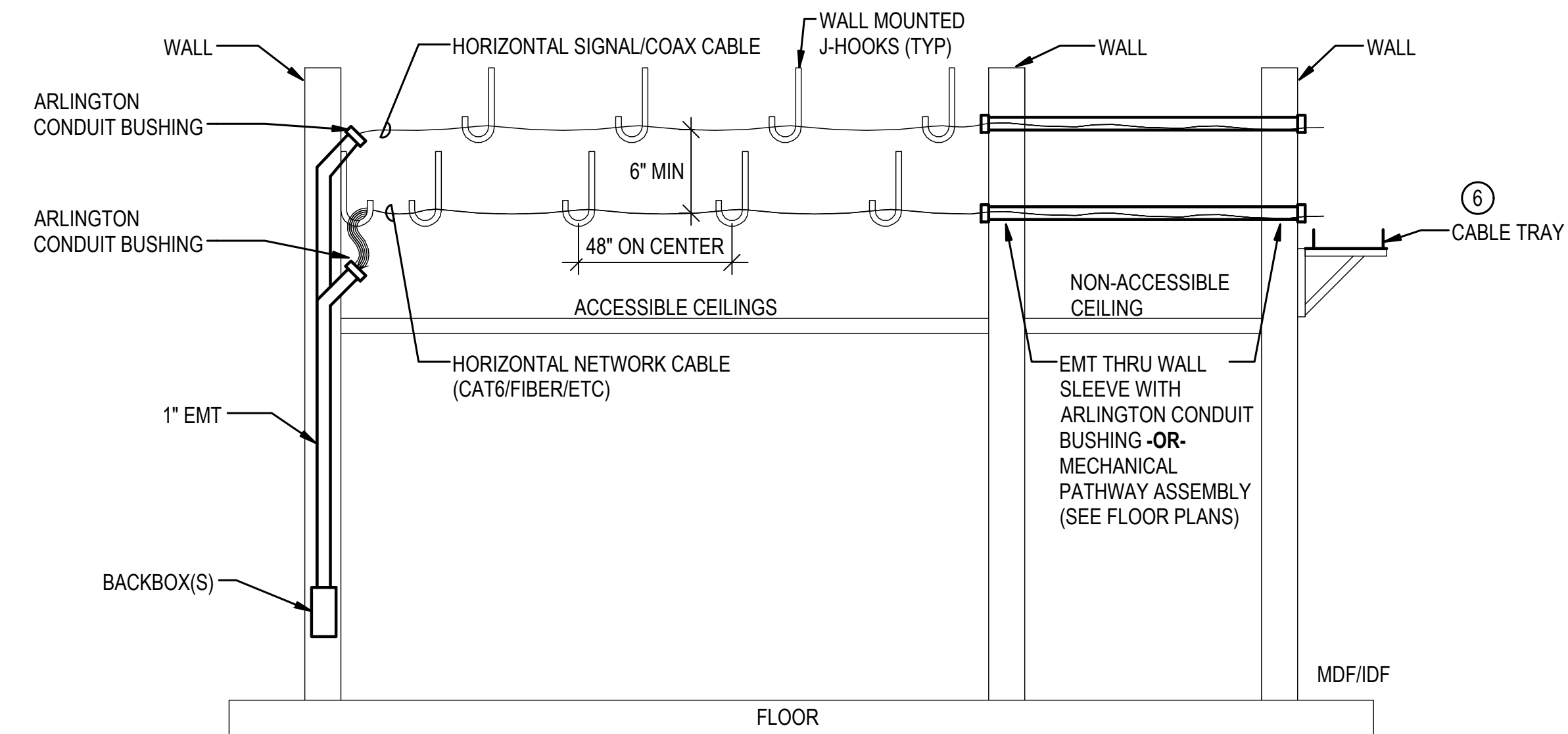
4 VAULT SECURITY DIAGRAM ROUGH-IN
SCALE: DIAGRAMMATIC



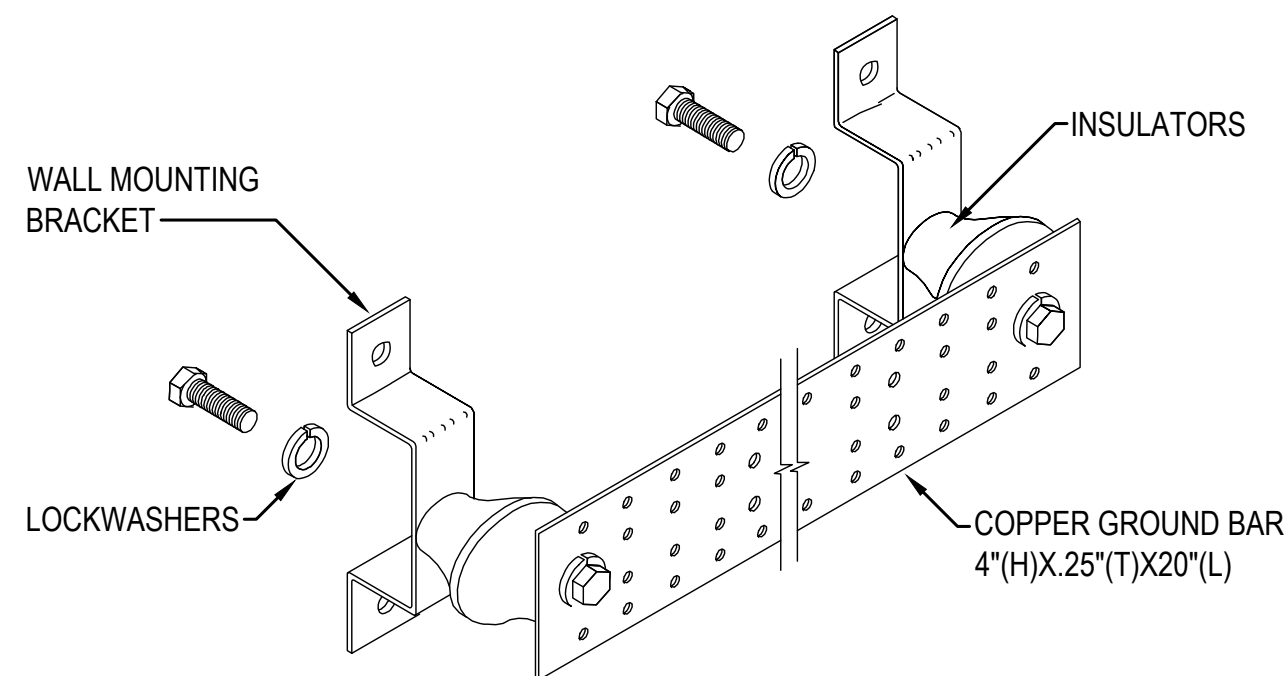
5 LIGHTING AND POWER CONTROL DIAGRAM
SCALE: DIAGRAMMATIC

Project No.: 21024	Designed By: BM	Drawn By: JT	Checked By: BM
Date			
Description			
Mark			

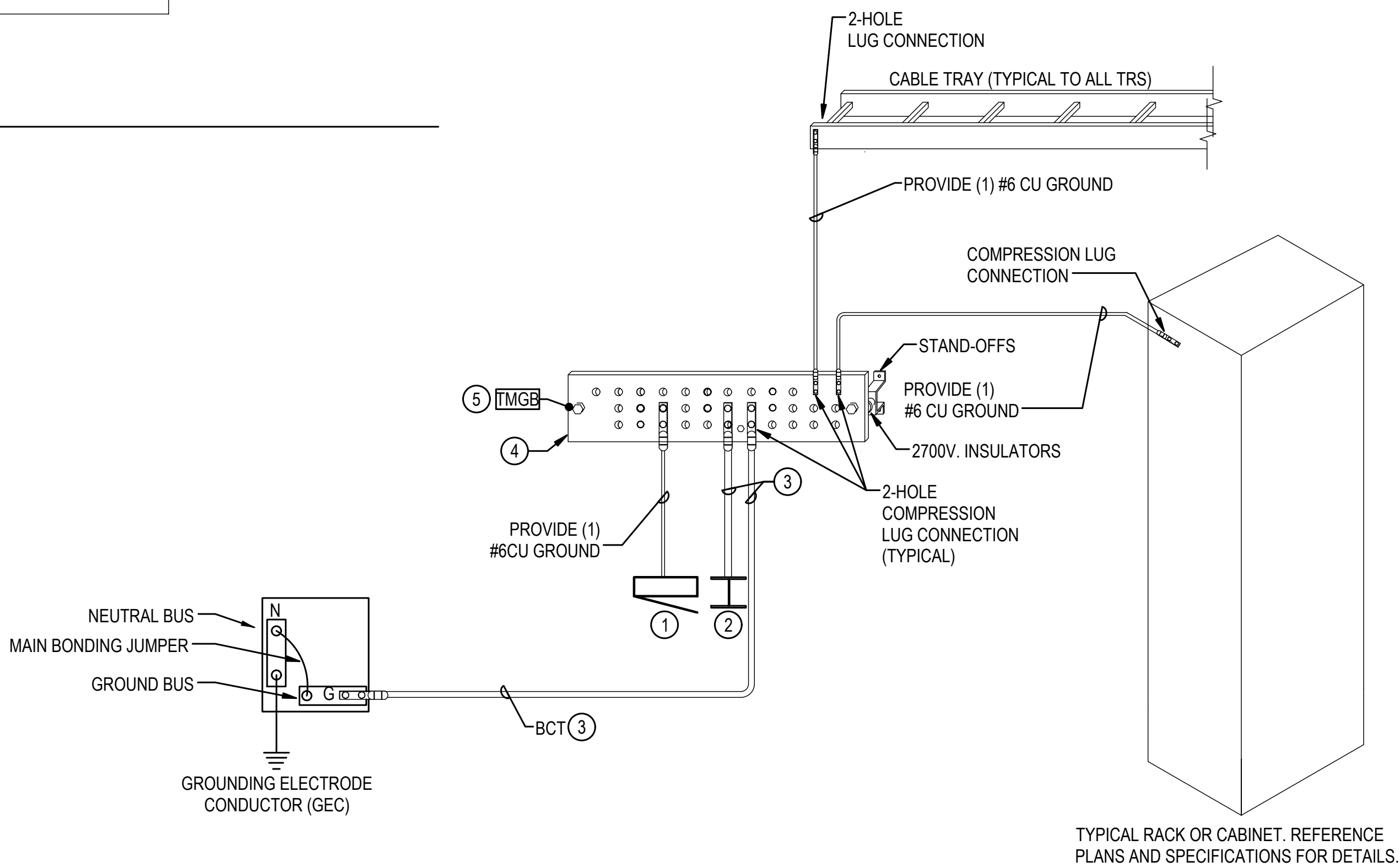
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1 J-HOOK AND CABLE TRAY SECTION DETAIL
SCALE: DIAGRAMMATIC



2 TYPICAL TELECOMMUNICATIONS GROUNDING BAR DETAIL
SCALE: DIAGRAMMATIC



3 TYPICAL TELECOMMUNICATIONS GROUNDING AND BONDING DETAIL
SCALE: DIAGRAMMATIC

TELECOMMUNICATIONS BONDING BACKBONE (TBB) CONDUCTOR SIZE VS LENGTH	
TBB/GE LINEAR LENGTH m (FT)	TBB/GE SIZE (AWG)
LESS THAN 4 (13)	6
4-6 (14-20)	4
6-8 (21-26)	3
8-10 (27-33)	2
10-13 (34-41)	1
13-16 (42-52)	1/0
16-20 (53-66)	2/0
20-26 (67-84)	3/0
26-32 (85-105)	4/0
32-38 (106-125)	250 kcmil
38-46 (126-150)	300 kcmil
46-53 (151-175)	350 kcmil
53-76 (176-250)	500 kcmil
76-91 (251-300)	600 kcmil
GREATER THAN 91 (301)	750 kcmil

SCHEDULE NOTES	
1.	MINIMUM TBB/GE SHALL BE #6 AWG. THE TBB SHOULD BE SIZED AT 2 KCMIL PER LINEAR FOOT OF CONDUCTOR LENGTH UP TO A MAXIMUM OF 750 KCMIL.
2.	THE BCT SHALL BE, AT A MINIMUM, THE SAME SIZE AS THE LARGEST TBB.
3.	THE TABLE IS REFERENCED FROM TIA-607-B 6.3.2 TABLE 1.

- CONSTRUCTION NOTES
- 1 PROVIDE CONNECTION TO MAIN PANEL BOARD 'T'.
 - 2 PROVIDE BOND CONNECTION TO BUILDING STEEL, SIZED PER FIGURE 6.3.2 (SIZING OF THE TBB) OF TIA-607-B2 INCLUDED ON THIS SHEET.
 - 3 PROVIDE COPPER GROUND CONDUCTOR WITH GREEN OUTER JACKET. SIZED AS SHOWN ON THE TELECOMMUNICATIONS GROUNDING AND BONDING RISER DIAGRAM.
 - 4 MOUNT PLATE ON PLYWOOD BACKBOARD.
 - 5 TELECOMMUNICATION GROUNDING BUSBAR 4"(H)X.25"(T)X12"(L).
 - 6 CABLE TRAY IS SHOWN FOR REFERENCE ONLY. REVIEW FLOOR PLANS FOR CABLE TRAY LOCATIONS AND INSTALLATION.



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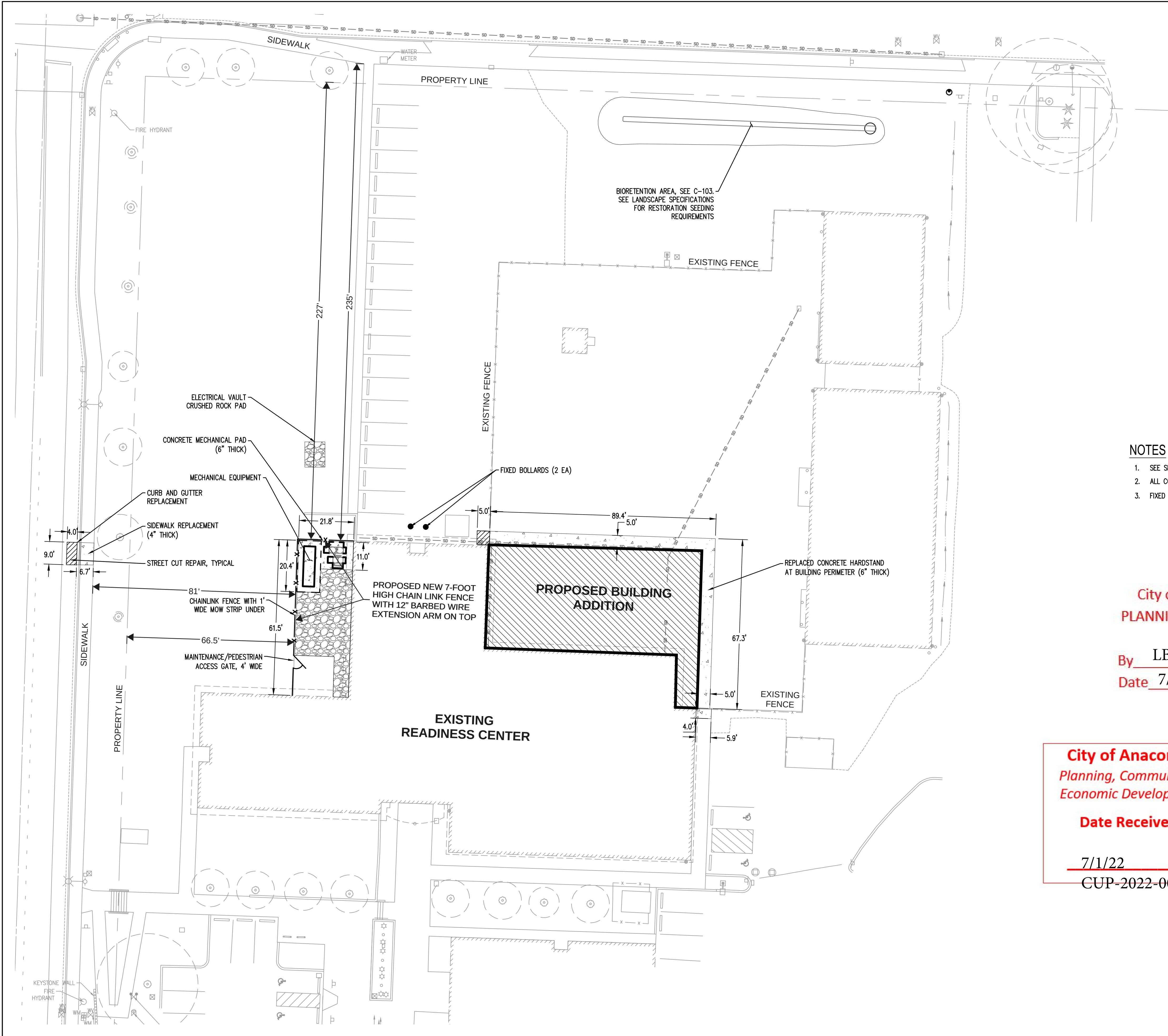
Project No.: 21024
Designed By: BM
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WASHINGTON MILITARY DEPARTMENT
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 M AVENUE, ANACORTES, WA

ELECTRICAL DETAILS

E-701



LEGEND

●

— x — x — x —

FIXED BOLLARD (SEE DETAIL 5, SHEET C-503)

7" HIGH CHAIN LINK FENCE (UNPAINTED) WITH SINGLE 3-STRAND BARBED WIRE OUTRIGGER, (SEE DETAILS 1-4, SHEET C-503)

CONCRETE PAVEMENT, 6" THICK (SEE DETAIL 2, SHEET C-501)

CRUSHED ROCK, 4" THICK

ASPHALT PAVEMENT, MATCH EXISTING STREET CUT REPAIR, SEE CITY OF ANACORTES STANDARD DETAIL, ST-01 (SEE DETAIL 1, SHEET C-502)

CURB AND GUTTER REPLACEMENT, SEE CITY OF ANACORTES STANDARD DETAIL, ST-03 (SEE DETAIL 2, SHEET C-502)

NOTES

- SEE SHEET C-100 FOR SURVEY NOTES.
- ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3500 PSI.
- FIXED BOLLARDS MUST BE 4" MINIMUM IN DIAMETER, A316 STAINLESS STEEL.

City of Anacortes
PLANNING APPROVED

By LBG
Date 7/1/22

City of Anacortes
Planning, Community & Economic Development

Date Received:
7/1/22
CUP-2022-0003

wja

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617 Western Avenue
Seattle, WA 98104
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SCJ ALLIANCE

CONSULTING SERVICES

8730 TALLON LANE NE, SUITE 200,
LACEY, WA 98516
P: 360.352.1465 F: 360.352.1509
SCJALLIANCE.COM

Project No.: 21024

Designed By: KK

Drawn By: KK

Checked By: CJ

Mark	Description	Date

WASHINGTON MILITARY DEPARTMENT

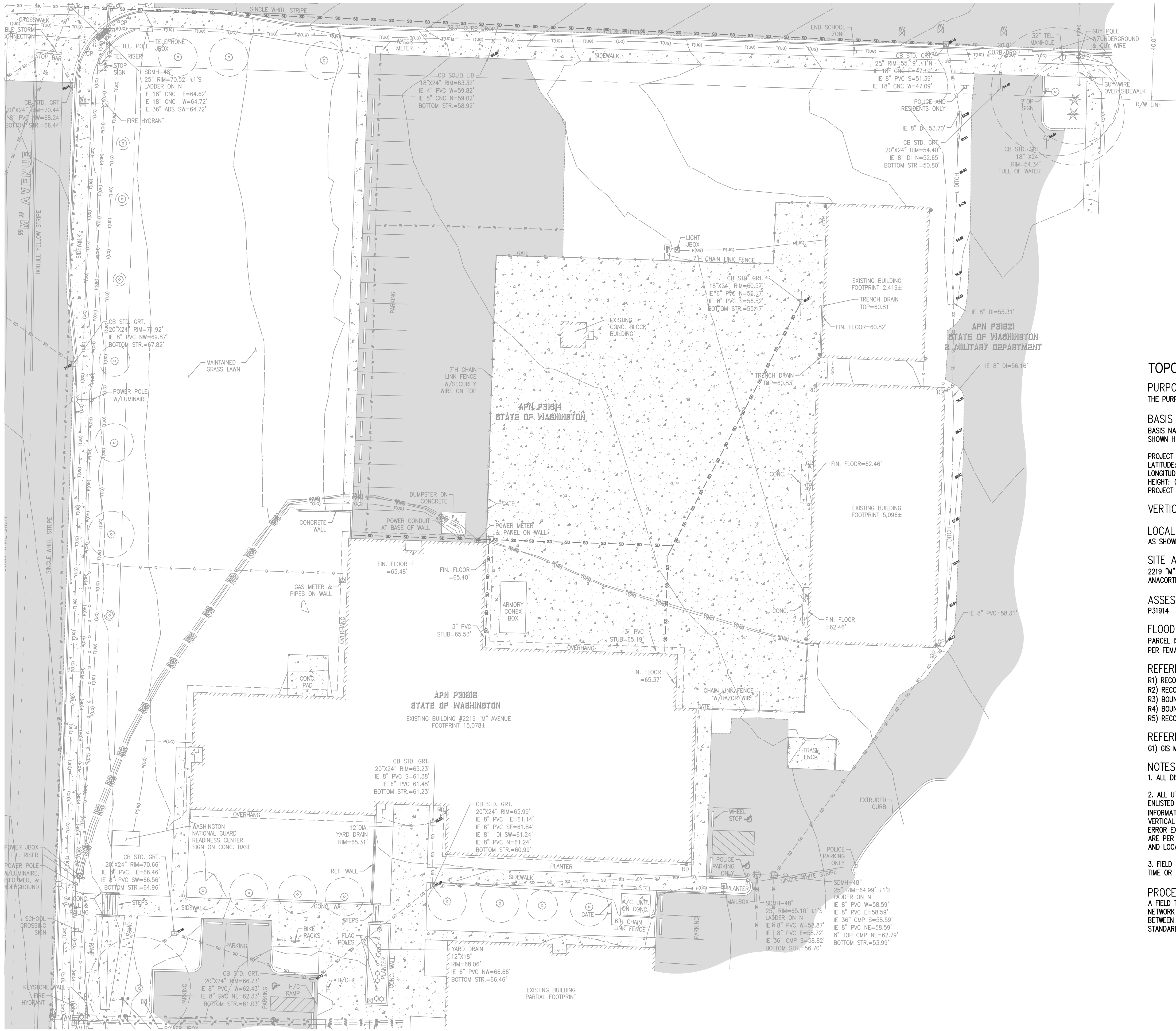
ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 N AVENUE, ANACORTES, WA

CIVIL SITE PLAN

C-102

Sheet Size: 22" x 34"

Page 179 of 351



EXISTING LEGEND

(NOTE: NOT ALL SYMBOLS MAY APPEAR ON THE MAP)

- SURVEY MONUMENT (AS NOTED)
- LUMINAIRE (LUM.)
- YARD LIGHT
- POWER METER (PM)
- POWER POLE (PP)
- JUNCTION BOX (AS NOTED)
- TELEPHONE MANHOLE (TM)
- TELEPHONE RISER (TR)
- CATCH BASIN (CB)
- STORM MANHOLE (SDMH)
- STORM CLEANOUT (SDCO)
- ROOF DRAIN (RD)
- SANITARY SEWER MANHOLE (SSMH)
- SANITARY CLEANOUT (SSCO)
- GAS METER (GM)
- WATER VALVE (WV)
- FIRE HYDRANT(FH) / CONNECTION(FDC)
- POST INDICATOR VALVE (PIV)
- WATER MANHOLE
- WATER METER (WM)
- SIGN
- IRRIGATION VALVE (IV)
- DIRECTIONAL ARROW
- HANDICAP
- MAILBOX (MB)
- BICYCLE LANE
- PLANTER LIGHTS

- CHAIN LINK FENCE
- WATER LINE
- GAS LINE
- TELEPHONE LINE (OH) OR (UG)
- POWER LINE (OH) OR (UG)
- STORM LINE
- SEWER LINE
- KEYSTONE WALL
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE DRIPLINE
- CONCRETE
- ASPHALT
- BUILDING LINE

TOPOGRAPHIC SURVEY

PURPOSE OF THIS SURVEY

THE PURPOSE OF THIS SURVEY IS TO SHOW EXISTING DEVELOPMENT AND/OR DESIGN

BASIS NAD83(2011) DATUM PER WASHINGTON STATE REFERENCE NETWORK(WSRN)
BASIS NAD83(2011) DATUM WAS ESTABLISHED BY HOLDING WSRN OBSERVATIONS ON MONUMENTS, SAID DIMENSIONS AS SHOWN HEREON.

PROJECT BASE POINT
LATITUDE: N48.504462070
LONGITUDE: W122.616812101
HEIGHT: 0.000000
PROJECT COMBINED SCALE: 1.0000350011

VERTICAL DATUM IS NAVD88 PER WSRN TIED TO GEOID18

LOCAL SITE/PROJECT BENCHMARKS
AS SHOWN ON THIS SURVEY

SITE ADDRESS
2219 "M" AVENUE
ANACORTES, WA 98221

ASSESSOR'S PARCEL NUMBER
P31914

FLOOD INFORMATION

PARCEL IS LOCATED IN ZONE "X" - AREA OF MINIMAL FLOOD HAZARD.
PER FEMA PANEL NUMBER 5303170040A, DATED 09/17/2003.

REFERENCE SURVEYS

- R1) RECORD OF SURVEY, AFN 20130090067
- R2) RECORD OF SURVEY, AFN 200402170205
- R3) BOUNDARY LINE ADJUSTMENT, AFN 201509250039
- R4) BOUNDARY LINE ADJUSTMENT, AFN 201902140052
- R5) RECORD OF SURVEY, AFN 201112190135

REFERENCE GIS DATA

- G1) GIS MAP DATA PROVIDED OR DOWNLOADED ON 11/12/2021 FROM PUGET SOUND ENERGY.

NOTES

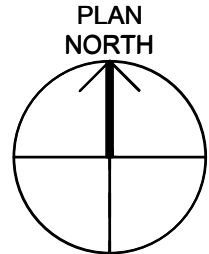
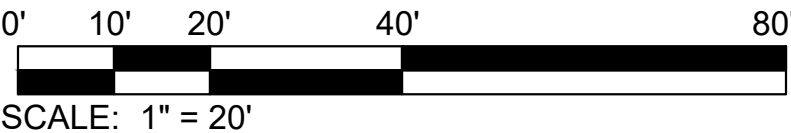
- 1. ALL DISTANCES SHOWN ON THIS SURVEY ARE IN US SURVEY FOOT.

2. ALL UTILITIES ARE SHOWN PER SURFACE OBSERVATIONS, UTILITY PAINT MARKINGS PER PRIVATE UTILITY LOCATOR ENLISTED AS PART OF THIS SURVEY AND PERFORMED BY APPLIED PROFESSIONAL SERVICES INC. AND OTHER REFERENCE INFORMATION. QUOTED ACCURACY OF UTILITIES SHOWN PER UTILITY LOCATOR PAINT MARKINGS ARE 1.5'± HORIZONTALLY. VERTICAL UTILITY INFORMATION IS SHOWN TO THE SIGNIFICANT FIGURE AT WHICH THEY WERE MEASURED, BUT INHERENT ERROR EXISTS IN RESTRICTION OF ACCESS TO UNDERGROUND UTILITIES. UTILITIES SHOWN PER REFERENCE INFORMATION ARE PER BEST FIT AND INTERPOLATION AND SHOULD BE VERIFIED PRIOR TO CONSTRUCTION. FOR EXACT UTILITY DEPTH AND LOCATION INFORMATION, IT IS RECOMMENDED THAT POTHOLING BE PERFORMED.

- 3. FIELD SURVEY WAS COMPLETED IN NOVEMBER 2021 AND ALL MONUMENTS SHOWN AS FOUND WERE VISITED AT THIS TIME OR AS NOTED.

PROCEDURE / NARRATIVE:

A FIELD TRAVERSE USING A TRIMBLE SX10 TOTAL STATION SUPPLEMENTED WITH FIELD NOTES AND TRIMBLE R10-2 NETWORK RTK GPS ROVER, WAS PERFORMED, ESTABLISHING THE ANGULAR, DISTANCE, AND VERTICAL RELATIONSHIPS BETWEEN THE MONUMENTS, PROPERTY LINES AND IMPROVEMENTS. THE RESULTING DATA MEETS OR EXCEEDS THE STANDARDS FOR LAND BOUNDARY SURVEYS AS SET FORTH IN WAC 332-130-090.



Project No.: 21024

Designed By: KK

Drawn By: KK

Checked By: CJ

Date

Description

Mark

WASHINGTON MILITARY DEPARTMENT

ANACORTES READINESS CENTER - RENOVATION & EXPANSION
2219 M AVENUE, ANACORTES, WA

EXISTING CONDITIONS



NOTICE OF APPLICATION and Public Hearing

SCAN HERE TO VIEW
Application Materials:



File Number: CUP-2022-0003

Property Owner: Washington Military Department

Applicant: Clint Treat, AIA

Date of Application: May 3, 2022

Date of Completeness: May 9, 2022

Project Location: 2219 M Avenue

NOTICE IS HEREBY GIVEN THAT AN APPLICATION WAS MADE FOR THE FOLLOWING PROPOSAL:

The applicant is requesting a Conditional Use Permit for the renovation and addition of the existing Anacortes Readiness Center. Work includes a 3,600 SF building addition with new classrooms, fitness room and corridor. Alterations to portions of the existing include new toilet/showers rooms, kitchen, conference, mother's room, multipurpose room, and a new ADA lift. New mechanical, fire protection, mass notification and electrical service to be incorporated. Building to receive a complete structural seismic upgrade and reroof. Minor repair and finishes to be provided in areas affected.

Required Project Permits/Approvals: The following may be required in addition to the above: Commercial Building Permit, Fence Permit

SEPA Review: The proposal is subject to SEPA review. The Washington Military Department is the lead SEPA lead agency.

Public Comment Period: The joint Notice of Application and Public Hearing was published on June 8, 2022. Written comments must be submitted to the contact person listed below by **5:00 PM on June 29, 2022**.

Public Hearing: Planning Commission Open Record Public Hearing - Wednesday, **July 13, 2022, at 6:00 PM**
City Council Closed Record Decision Hearing - Monday, **July 25, 2022, at 6:00 PM**

- Virtual meeting participation instructions and connection information can be viewed here: <https://www.anacorteswa.gov/700/Meeting-Documents-and-Video>. Meeting attendance options will be posted on the applicable agenda published the week before the meeting. Hearings will be conducted in accordance with the rules of procedure adopted by the hearing body.
- Members of the public who require special assistance to participate in or access the public hearing may contact the [City Clerk](#) 24 hours before the meeting to make special arrangements. Dial 360-299-1960.

ANY PERSON HAS THE RIGHT TO RECEIVE NOTICE, PARTICIPATE IN ANY HEARINGS, REQUEST A COPY OF THE FINAL DECISION AND APPEAL THE DECISION AS PROVIDED BY LAW.

Document Availability: Application documents may also be reviewed at <https://www.anacorteswa.gov/161/Planning-Community-Economic-Development> by clicking "**Current Land Use Projects & Notices**".

Appeals: Any party with standing may appeal the decision, once made, within 14 calendar days after written notice of the decision is mailed, per the provisions in AMC 19.20.180, *Appeals*.

For Project Information: Nathan Goldschmidt, Associate Environmental Planner; 360-588-8376, nathang@cityofanacortes.org; City of Anacortes Department of Planning, Community, & Economic Development, P.O. Box 547, Anacortes, WA 98221

AFFIDAVIT OF POSTING

City of Anacortes Planning, Community, & Economic Development

I, **Nathan Goldschmidt**, declare under the penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

That on **June 7, 2022**, the general notice of land use action containing the permit #, applicant name and a description of the proposal for a **CUP-2022-0003**, was posted on the subject property.



June 9, 2022

Signature

Date

ADVERTISING PROOF

1215 Anderson Rd,
Mount Vernon, WA 98274
Ph. Fax: (907) 452-5054



STANWOOD CAMANO NEWS

BILLING DATE:	ACCOUNT NO:
06/03/22	45993



NOTICE OF APPLICATION and Public Hearing

File Number:
CUP-2022-0003

Property Owner: Wash-
ington Military Department

Applicant: Clint Treat, AIA

Date of Application:
May 3, 2022

Date of Completeness:
May 9, 2022

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CITY OF ANACORTES
PO BOX 547
ANACORTES, WA 98221

AD #	DESCRIPTION	START	STOP	TIMES	AMOUNT
245206	NOTICE OF APPLICATION	06/08/22	06/08/22	2	\$166.46

Payments:

Date	Method	Card Type	Last 4 Digits	Check	Amount
------	--------	-----------	---------------	-------	--------

Discount: \$0.00
Surcharge: \$0.00
Credits: \$0.00

Gross: \$166.46
Paid Amount: \$0.00

Amount Due: \$166.46

We Appreciate Your Business!

AD# 245206

military Department is the lead SEPA lead agency.

Public Comment Period:
The joint Notice of Application and Public Hearing was published on June 8, 2022. Written comments must be submitted to the contact person listed below by **5:00 PM on June 29, 2022.**

Public Hearing:
Planning Commission
Open Record Public Hearing - Wednesday, **July 13, 2022, at 6:00 PM**
City Council Closed
Record Decision Hearing - Monday, **July 25, 2022, at 6:00 PM**

> Virtual meeting participation instructions and connection information can be viewed here: <https://www.anacorteswa.gov/700/Meeting-Documents-and-Video>. Meeting attendance options will be posted on the applicable agenda published the week before the meeting. Hearings will be conducted in accordance with the rules of procedure adopted by the hearing body.

> Members of the public who require special assistance to participate in or access the public hearing may contact the City Clerk 24 hours before the meeting to make special arrangements.
Dial 360-299-1960.

ANY PERSON HAS THE RIGHT TO RECEIVE NOTICE, PARTICIPATE IN ANY HEARINGS, REQUEST A COPY OF THE FINAL DECISION AND APPEAL THE DECISION AS PROVIDED BY LAW.

Document Availability:
Application documents may also be reviewed at <https://www.anacorteswa.gov/161/Planning-Community-Economic-Development> by clicking "*Current Land Use Projects & Notices*".

Appeals: Any party with standing may appeal the decision, once made, within 14 calendar days after written notice of the decision is mailed, per the provisions in AMC 19.20.180, Appeals.

For Project Information:
Nathan Goldschmidt,
Associate Environmental Planner
360-588-8370

Planner; 360-588-8370,
nathang@cityofanacortes.org; City of Anacortes
Department of Planning,
Community, & Economic
Development, P.O. Box
547, Anacortes, WA 98221

**Published
June 8, 2022
AA-245206**



Land Use Permit Application - Departmental Review

Designated staff in each identified department review and comment on the permit application. Managing Planner uploads comments received from identified outside agencies and from the public during the comment period.

Application Information

Routing Date *

5/3/2022

Application Date *

5/3/2022

Managing Planner *

Nathan Goldschmidt

Planner Phone

360-588-8231

Permit Number *

CUP-2022-0003

Applicant Name *

CLINT TREAT

Applicant Email *

ctreat@wja-dc.com

Applicant Phone

Applicant Address *

617 WESTERN AVE SEATTLE, WA 98104

Parcel(s)

Parcel No.

P31914

Parcel No.

P31915

Parcel No.

P31912

Project Name *

CUP-2022-0003 - Anacortes Readiness Center Addition and Alteration

Project Contact *

CLINT TREAT

Project Contact Email *

ctreat@wja-dc.com

Project Address *

2219 M AVE ANACORTES, WA 98221-3728

Project Description *

RENOVATION AND ADDITION OF THE EXISTING ANACORTES READINESS CENTER. WORK INCLUDES 3,600 SF BUILDING ADDITION WITH NEW CLASSROOMS, FITNESS ROOM AND CORRIDOR. ALTERATIONS TO PORTIONS OF THE EXISTING INCLUDE NEW TOILET/SHOWER

Review Type *

Type 4

Review Type Description *

City Council Decisions

SEPA Type *

Optional DNS

Is this permit related to other current or prior permit applications? *☒ Yes ☐ No**Child Permits**

Subordinate permits submitted for approval in conjunction with this primary permit

Permit**Description****Related Permits**

Previously approved permits related to this primary permit

Permit**Description**

BLD-2022-0330

Renovate old building including seismic upgrade, and add a 3600 sf addition.
Part of CUP-2022-0003

Reviewer Selection**Comment Period (CD from NOA) ***

21

Comment Period End Date *

6/29/2022

Applicant Comment Response Due

7/6/2022

Departmental Review Required by *

Please check all City departments that must review this application. Other members of the DRG list will be notified of the application and will receive a link to view the application packet but the review process will not wait for their feedback.

- | | | |
|--|---|--|
| ☒ Building | ☒ Engineering | ☐ Fiber |
| ☒ Fire | ☐ Legal | ☐ Museum |
| ☒ Operations | ☐ Parks | ☒ Police |
| ☒ Sanitation | ☐ Streets | ☒ Water Distribution |
| ☐ WWTP | ☐ N/A | |

Outside Review

Select which outside agencies and utilities you would like to invite to comment on the application.

Type *

Local ▾

Agency *

Anacortes School District - Assistant to ▾

Email *

tramsay@asd103.org

Reviewer Comments**Application is ***☒ Complete ☐ Voided**Comments due by:**

6/29/2022

Staff Comments

Enter your comments in the blank row below, or click Next Reviewer to create a new row for your remarks. You may Upload Word or PDF files with your remarks.

Commenter	Dept	Comments	Upload
Koegel, Matt ▾	Sanitation	All good from Solid Waste	Upload
Nemeth, Terry ▾	Water	No water issues at this time	Upload

Fuller, Chris ▾	Police	No issues	Upload
Kennedy, Jack ▾	Fire	No issues with Land Use. Building alterations required per previous correspondence.	Upload
Lange, Steve ▾	Engineering	No issues	Upload
Frisinger, Rob ▾	Building	Building has no concerns.	Upload

Agency Comments

Commenters will automatically be emailed notification of the decision.

Commenter	Commenter Email	Comment
		Upload

Public Comments

Commenters will automatically be emailed notification of the decision.

Commenter	Commenter Email	Comment
		Upload

Comments

Nathan Goldschmidt

From: M. Wallis <mattwallisphotography@gmail.com>
Sent: Friday, June 10, 2022 9:32 PM
To: Nathan Goldschmidt
Subject: Cup-2022-0003 Washington Military

Follow Up Flag: Follow up
Flag Status: Flagged

***** This email is from outside the City of Anacortes network. Please use caution when clicking on links, opening attachments, or replying. *****

Thank you for the notice of Conditional use permit. Our only concern with this project is: noise from construction done outside appropriate work hours. Please remind all contractors of the allowable work hour per city code and enforce these rules.

Thank you
Matt & Jill Wallis
2027 L Ave.
Anacortes



ANACORTES PLANNING COMMISSION

Findings of Fact, Conclusions of Law and Recommendation

File Number	CUP-2022-0003
Project Name	Anacortes Readiness Center Addition and Alteration
Proposal Description	The agent on behalf of the property owner has requested a Conditional Use Permit for the construction of an addition to the existing Anacortes Readiness Center. Work includes a 3,600 sq. ft. building addition with new classrooms, fitness room and corridor. The work will also include alterations to portions of the existing building including new toilet/shower rooms, kitchen, conference room, mother's room, multipurpose room, and a new ADA lift.
Public Hearing	Anacortes Planning Commission
Public Hearing Date	July 13, 2022
PC Deliberations	July 13, 2022
Decision Body	Anacortes City Council
Closed Record Hearing Date	July 25, 2022
Exhibits	Exhibit 1: Staff Report Exhibit 2: Application Materials Exhibit 3: Project Site Plan Exhibit 4: Noticing Exhibit 5: Comments

After considering the written and spoken comments and considering the record before it, the Planning Commission enters the following findings of fact, conclusions of law, and recommendation:

Findings of Fact & Conclusions of Law

1. The Staff report dated July 1, 2022 (Exhibit 1) accurately describes the project proposal and its Findings of Fact and Conclusions of Law are hereby incorporated by reference as the Planning Commission's Findings of Fact and Conclusions of Law.
2. The following members of the public provided testimony during the public hearing: ____
3. The following additional exhibits were entered into the record at the public hearing: ____
4. The following additional Findings of Fact and/or Conclusions of Law are entered: ____

Recommendation

Based on the foregoing findings and conclusions of law, and review of the City's regulatory authority to implement the policies, standards, and regulations of the Anacortes Municipal Code, the Planning

Commission hereby makes the following recommendation regarding the subject Conditional Use Permit application:

- ☐ Approve with Conditions
☐ Approve
☐ Deny

Subject to staff's recommended conditions in the Staff Report dated July 1, 2022 and any additional Commissioner conditions of approval as listed below:

1. _____

PLANNING COMMISSION RECOMMENDATION				
Planning Commissioners	Approve	Deny	Absent	Abstain
Frank Jeretzky				
Jack Curtis				
Sarah Reuther				
Linda Martin				
Gary Molyneaux				
Jeff Graf				
Ward MacKenzie				
TOTAL				

ANACORTES PLANNING COMMISSION
Anacortes, Washington

Ward MacKenzie
Planning Commission Chair

Date



Planning Commission Agenda Bill

Meeting Date: July 13, 2022

Agenda Item: D.2.

Subject: Critical Areas Regulation Amendments to address Riparian (Stream) Corridors and Riparian Management Zones(Buffers)

Staff Contact: DON MEASAMER

Approved for Submittal to Commission by

DON MEASAMER

LIBBY GRAGE

Grace Pollard

DON MEASAMER

Action Type

Discussion

Summary Statement: As a result of the Growth Management Hearings Board findings, the City is required to address Best Available Science (BAS) in determining stream buffers within city limits. Previously, buffers for streams were 50 feet from each side of the stream. The best Available Science report was updated by GeoEngineers on June 29, 2022, included in the PC packet. Staff proposes that streams be addressed as Riparian Corridors, which consist of the Riparian Water Course and The Riparian Management Zone, using City of Seattle regulations as a guideline. For development proposed within a Riparian Corridor, the draft regulations would require a critical areas report to determine functions and values of the existing Riparian Management Zone (RMZ) and the proposed RMZ based on WDFW Site Potential Tree Height, in no case less than 100 feet. Section 19.70.330.B.3. Standards are proposed for limited development on platted lots prior to the adoption of the draft regulations within the RPZ which could reduce the RPZ to 50 feet with improvements to storm water quality and the applicant carries out a restoration plan with monitoring. Small project waivers include rockeries, fences, and utilities when meeting the criteria listed in Section 19.70.330.C.8. Maps with Riparian Watercourses (streams) are included in the packet. Several are not named only numbered as they have not currently been named.

Background: Proposed amendments to Critical area regulations to address the Growth Management Board findings regarding best available science for Riparian Corridors (Streams)

Previous Action: Adoption of Amended Critical Area Regulations by City Council via Ordinance 3064, July 2021

Competing Viewpoints Considered: NA

Recommended Motion: NA

Alternative Actions: NA

Attachments (listed in order presented):

1. Critical Areas AMC Chapter 19.70 Riparian Corridors

2. Figures 1 thru 14 combined_revised 061322
3. Ordinance 4025 Critical Areas Amendments Riparian Corridors
4. Revised City of Anacortes_Stream Buffer BAS Review and Buffer Recommendations Report
5. RMZ SEPA DNS
6. SEPAChecklist-RMZs

Chapter 19.70

CRITICAL AREAS

Sections:

Introduction – General Provisions

- 19.70.010 Purpose.
- 19.70.015 Applicability.
- 19.70.020 Identification, classification, and rating of critical areas.
- 19.70.025 Protection of critical areas.
- 19.70.030 Project evaluation.
- 19.70.035 Critical areas review.
- 19.70.040 Exempt activities.
- 19.70.045 Permitted alterations.
- 19.70.050 Reasonable use exception and critical area variance.

Article I. Critical Areas Review Procedures

- 19.70.110 Critical area identification form.
- 19.70.115 Critical area report.
- 19.70.120 Application requirements.
- 19.70.125 Mitigation requirements.
- 19.70.130 Mitigation plan requirements.
- 19.70.135 Title notification.
- 19.70.140 Field marking.
- 19.70.145 Construction plan review, monitoring, and inspection.
- 19.70.150 Financial guarantee requirements.
- 19.70.165 Unauthorized critical area alterations.
- 19.70.170 Final decision and appeals.

Article II. Wetlands

- 19.70.210 Description and purpose.
- 19.70.215 Designation and rating.
- 19.70.220 Mapping and delineation.
- 19.70.225 General development standards.
- 19.70.230 Specific wetland category development standards.
- 19.70.235 Required buffer areas.
- 19.70.240 Critical area report additional requirements.
- 19.70.245 Compensatory mitigation performance standards and requirements.

Article III. Fish and Wildlife Habitat Conservation Areas

- 19.70.310 Description and purpose.
- 19.70.315 Designation.
- 19.70.320 Mapping.
- 19.70.325 General development standards for all FWHCAs.
- 19.70.330 Specific standards for streams. Riparian Corridors
- 19.70.335 Specific standards for other FWHCAs.
- 19.70.340 Stormwater management facilities.
- 19.70.350 Critical area report additional requirements.
- 19.70.355 Mitigation performance standards and requirements.

Definitions

Introduction – General Provisions

19.70.010 Purpose.

- A. The purpose of this chapter is to designate critical areas and to establish standards for the protection of their functions and values, in compliance with the provisions of the Washington State Growth Management Act of 1990 (Chapter [36.70A](#) RCW), and consistent with the goals and policies of the Anacortes comprehensive plan.
- B. By identifying and regulating development and alterations to critical areas and their buffers, this chapter seeks to accomplish the following goals:
1. Protect members of the public and public resources and facilities from injury, loss of life, or property damage due to landslides and steep slope failures, erosion, seismic events, or flooding;
 2. Protect, maintain and restore healthy, functioning ecosystems through the protection of unique, fragile, and valuable elements of the environment, including, but not limited to, ground and surface waters, wetlands, and fish and wildlife and their habitats, and to conserve the biodiversity of plant and animal species;
 3. Direct activities not dependent on critical area resources to less environmentally sensitive sites and mitigate unavoidable impacts to critical areas by regulating alterations in and adjacent to critical areas;
 4. Prevent cumulative adverse environmental impacts to water quality, wetlands, and fish and wildlife habitat, and the overall net loss of wetlands, frequently flooded areas, and habitat conservation areas;

5. Alert owners, potential purchasers, real estate agents, appraisers, lenders, builders, developers and other members of the public to natural conditions that pose a hazard or may otherwise limit development;
6. Serve as a basis for exercise of the city's substantive authority under the State Environmental Policy Act (SEPA).

C. The regulations of this chapter are intended to protect critical areas in accordance with the Growth Management Act, through the application of best available science, as determined according to WAC [365-195-900](#) through [365-195-925](#), and in consultation with state and federal agencies and other qualified professionals.

D. This chapter is intended to be administered with limited flexibility and attention to site-specific characteristics. It is not the intent of this chapter to make a parcel of property unusable by denying its owner reasonable economic use of the property, or to prevent the provision of public facilities and services necessary to support existing development and that planned for by the community without decreasing current service levels below minimum standards.

E. The city's enactment or enforcement of this chapter must not be construed for the benefit of any individual person or group of persons other than the general public. (Ord. 3064 § 2 (Att. A), 2021)

19.70.015 Applicability.

A. Unless explicitly exempted, the provisions of this chapter apply to all land uses, development activity, and all structures and facilities within the city of Anacortes that are within the critical area, within the maximum buffer distance of, or likely to affect the functions and values of, one or more critical areas.

B. *Relationship to Other Regulations.*

1. Shorelines of the state and shorelands as defined in RCW [90.58.030](#), and critical areas occurring within the jurisdiction of shorelines of the state and shorelands ("shoreline jurisdiction"), are regulated and protected through the Anacortes shoreline master program (AMC Chapter [19.72](#)), as amended. Activities occurring within shoreline jurisdiction are reviewed through the shoreline permit review and issuance process; a separate critical areas permit is not required. The shoreline master program incorporates by reference portions of this chapter; however, certain provisions of this chapter that are not consistent with the Shoreline Management Act, Chapter [90.85](#) RCW and supporting Washington Administrative Code chapters do not apply in shoreline jurisdiction.
2. These critical areas regulations apply in addition to zoning and other regulations adopted by the city. Notwithstanding AMC [19.12.040\(E\)](#), in the event of any conflict between these regulations and any other regulations of the city, the regulations apply that provide greater protection to the critical areas' functions and values, as determined by the Director.

3. When any provision of this chapter or any existing easement, covenant, or deed restriction conflicts with this chapter, that which provides more protection to the critical areas applies.
4. Compliance with the provisions of this chapter does not constitute compliance with other federal, state, or local regulations and permit requirements that may be required. The applicant is responsible for complying with other agency requirements, apart from the process established in this chapter. (Ord. 3064 § 2 (Att. A), 2021)

19.70.020 Identification, classification, and rating of critical areas.

A. *Critical Areas Maps.* The general locations of many critical areas in Anacortes are displayed on the city of Anacortes' critical areas maps. The maps are used to alert the public of the potential location of critical areas in Anacortes. As new environmental information related to critical areas becomes available, the city is authorized to make changes as necessary to the critical areas maps. The city Geographic Information Systems office must maintain an interactive, publicly available online map containing the location of known and potential critical areas and must make PDF maps available to the public upon request.

B. *Actual Site Conditions.* Regardless of whether a critical area is shown on the critical areas map, the actual presence or absence of the features defined in this code as critical areas will govern. Prior to acting on any development permit the city may require an applicant to submit technical information to indicate whether critical areas actually exist on or adjacent to the applicant's site based on the definitions of critical areas in this code. This will be administered as a critical area identification form (AMC [19.70.110](#)) included with appropriate permit forms.

C. *Classification and Rating.* To promote consistent application of the standards and requirements of this chapter, critical areas within the city will be rated or classified using best available science according to their characteristics, function and value, and/or their sensitivity to disturbance.

1. Classification of critical areas will be determined by the city using the following tools:
 - a. Application of the criteria contained in these regulations;
 - b. Consideration of the critical area reports submitted by qualified professionals in connection with applications subject to these regulations; and
 - c. Review of maps and other resources adopted pursuant to this chapter.
2. Rating categories will not change due to illegal modifications. If the development proposal site contains or is within a critical area suspected of illegal modifications the rating will be based on pre-modification conditions of the critical area. Abatement of the unauthorized modification will be required prior to authorization of the current development proposal being processed for the subject site. (Ord. 3064 § 2 (Att. A), 2021)

19.70.025 Protection of critical areas.

- A. Critical areas and their required buffers may not be altered except as allowed by this chapter.
- B. Any action taken pursuant to this chapter must result in equivalent or greater functions and values of the critical areas associated with the proposed action, as determined by the best available science.
- C. All actions and development must be designed and constructed in accordance with mitigation sequencing per AMC [19.70.125](#) to achieve no net loss of critical area functions and values.
- D. Applicants must first demonstrate an actual inability to avoid or reduce impacts before restoration and compensation of impacts will be allowed.
- E. No activity or use may be allowed that results in a net loss of the functions or value of critical areas.
- F. Any individual critical area adjoined by another type of critical area must have the buffer and meet the requirements that provide the most protection to the critical areas involved.
- G. Violations of this chapter are subject to AMC Title [20](#), Civil Enforcement and Penalties. Where a violation occurs within a suspected protected critical area or as depicted on city mapping, the property owner must provide an appropriate critical area report to determine impacts. The report may be subject to third party review at the property owner's expense. (Ord. 3064 § 2 (Att. A), 2021)

19.70.030 Project evaluation.

- A. As part of the review, the city will:
 - 1. Verify the information submitted by the applicant;
 - 2. Evaluate the project area and vicinity for critical areas;
 - 3. Determine whether the proposed project is likely to impact the functions or values of critical areas; and
 - 4. Determine if the proposed project adequately addresses the impacts and avoids impacts to the critical area associated with the project.
- B. If the proposed project is within, adjacent to, or is likely to impact a critical area, the city will:
 - 1. Require a critical area report from the applicant that has been prepared by a qualified professional, to be reviewed and evaluated;

2. Determine whether the development proposal conforms to the purposes and performance standards of this chapter, including the criteria in AMC [19.70.035](#), Critical areas review;
3. Assess the potential impacts to the critical area and determine if they can be avoided or minimized; and
4. Determine if any mitigation proposed by the applicant is sufficient to protect the functions and values of the critical area and public health, safety, and welfare concerns consistent with the goals, purposes, objectives, and requirements of this chapter.

C. The city may require third party review of any critical area report, at the expense of the applicant. (Ord. 3064 § 2 (Att. A), 2021)

19.70.035 Critical areas review.

A. *When Required.* A proposal to modify any critical area and/or required buffer including, but not limited to, clearing, grading, draining, removal or alteration of vegetation, construction of structures, utilities and related infrastructure, must require a critical area permit unless it qualifies as an exemption, as provided in AMC [19.70.040](#). Except that, for within shoreline jurisdiction, administration of this chapter shall be through the shoreline master program and appropriate shoreline permit administration process.

B. *Best Management Practices.* All activities, including those allowed without critical areas review, must be conducted using the best management practices appropriate for that activity that result in the least amount of impact to the critical areas. Best management practices must be used for tree and vegetation protection, construction management, erosion and sedimentation control, water quality protection, and regulation of chemical applications. The use of best management practices is required to ensure that the activity does not result in degradation to the critical area. Appropriate BMP sources include Ecology's Construction Storm Water General Permit and NRCS Conservation Practices. Any incidental damage to, or alteration of, a critical area and/or buffer must be restored, rehabilitated, or replaced at the responsible party's expense.

C. *Modifications to Existing Nonconforming Structures and Uses.* In these provisions the burden of proof is on the applicant to bring evidence in support of their position. Existing structures, activities, and uses that were established legally but do not meet the current critical area, buffer, or buffer setback requirements may continue in accordance with AMC [19.49.040](#), and may be modified as follows:

1. Routine maintenance and repairs;
2. Structural modifications or additions that do not intensify the nonconformity of the structure or increase the area of hardscape lying within the critical area or buffer. The Director may require an updated critical area report to confirm location of buffers and that the addition is located entirely outside the critical area or buffer;

3. Vertical additions above the ground floor that do not encroach further into the critical area or buffer beyond the existing exterior walls, except that critical areas review is required for additions in landslide hazard areas or buffers;
 4. Restoration or replacement of a structure that is damaged by fire, natural disaster or other calamity when:
 - a. A complete application for reconstruction or replacement is submitted within one year of the damage; and
 - b. The restoration or replacement is made to conform to the current critical areas regulations, or if such regulations cannot be physically met without reducing the size of the building, the restoration or replacement may not intensify any nonconformity that existed prior to the damage;
 - c. Except that critical areas review is required for restoration and replacement in landslide hazard areas or buffers;
 5. *State Ferry Terminal*. The existing developed footprint, except for infill between the toll booth area in the lowest parking lot, hillside walking paths, and a hillside side slope along the western side of the main terminal parking lot, and including all associated parking, at the Washington State Ferry terminal facility. Redevelopment may occur within the existing footprint only, provided there is no net loss of ecological function and value in the adjacent buffer areas for Cannery Pond and Ship Harbor Interpretive Preserve wetlands.
- D. *Demolition*. Demolition of structures located within critical areas or their buffers is permitted, excluding demolition of structures necessary to support or stabilize landslide hazard areas, and will be subject to approval of a stormwater pollution prevention plan consistent with the adopted stormwater management manual and clearing limits that will adequately protect the critical area. (Ord. 3064 § 2 (Att. A), 2021)

19.70.040 Exempt activities.

- A. *General Requirements for All Exempt Activities*. Activities listed in this section are exempt from the rest of the provisions of this chapter only if they meet the specific terms of this section.
- B. To be exempt from this chapter does not give permission to degrade a critical area or buffer or to ignore risk from natural hazards. All exempt activities must use reasonable methods to avoid potential impacts to critical areas and buffers. In every case, disturbance to the critical area must be minimized through best management practices and the use of low-impact equipment.
- C. Any incidental damage to, or alteration of, a critical area or buffer that is not a necessary outcome of the exempted activity must be restored, rehabilitated, or replaced at the responsible party's expense.

D. This chapter may not exempt an activity from the provisions of other city permits such as clearing and grading for vegetation removal and ground disturbing activities, or agency permit requirements such as Washington Department of Fish and Wildlife hydraulic permit, or Army Corps of Engineers regulatory requirements.

E. *Burden of Proof.* The burden of proof is on the applicant to bring forth evidence that the activity meets the precise description of the exemption.

F. Table 19.70.040(A) describes activities that must meet the precise description to be allowed without following a critical area process. Activities are divided into the categories of permitted in the critical area and permitted in the buffer, marked by a yes or no in the appropriate column.

Table 19.70.040(A) Exempt Activities

EXEMPT ACTIVITIES: (No review required, must strictly meet standards)	Critical Area	Buffer
Emergencies. Alterations in response to emergencies which threaten the public health, safety, and welfare or which pose an imminent risk of damage to private property, and that require remedial or preventative action in a timeframe too short to allow for compliance with the requirements of this chapter, if the following requirements are met: a. Only the minimum intervention necessary to reduce the risk to public health, safety, or welfare and/or the imminent risk of damage to private property may be authorized by this exemption. b. The alteration undertaken must be reported to the Director no later than 30 days after the alteration has occurred. Once notified, the Director must confirm that an emergency existed and determine what, if any, additional applications and/or measures are required of the property owner to protect the critical area(s) consistent with the provisions of this chapter, and to repair any damage to a pre-existing resource. c. After the emergency, the person or agency undertaking the action must fully fund and conduct necessary site evaluations and critical area reports, mitigation plans, and restoration for any impacts to the critical area and buffers resulting from the emergency action. The person or agency undertaking the action must meet the review procedures contained herein. Mitigation activities must be initiated within one year of the date of the emergency or as directed by the Department. d. If the Director determines that the action taken, or any part of the action taken, was beyond the scope of an allowed emergency action, or any required mitigation, the Director may take action to enforce this chapter consistent with AMC Titles 19 and 20.	Yes	Yes
Yard and garden activities. Maintenance or repair activities including, but not limited to, cutting, mowing, weeding, hand removal of noxious and invasive species, harvesting and replanting of garden crops, pruning and planting of noninvasive ornamental vegetation or indigenous native species to maintain the general condition and extent of such areas; provided, that such maintenance or repair activities are limited to legally existing landscaping improvements and do not further expand into critical areas or associated buffers, do not alter topography, do not destroy or clear native vegetation, do not remove non-hazard trees in the buffer or critical area, and do not diminish water	No	Yes

EXEMPT ACTIVITIES: (No review required, must strictly meet standards)	Critical Area	Buffer
quality or quantity. a. Native growth protection areas, mitigation sites, or other areas protected via permit conditions, conservation easements or similar restrictive covenants (as defined in AMC 19.70.135) are not covered by this exemption. b. If an activity has ceased for one year or more any future use of such land, building or structure must thereafter be in conformity with this chapter and the zone in which it is located.		
Site Investigation. Minimal site investigative work and studies necessary for preparing land use applications, including, but not limited to, surveys, soil logs and borings, percolation tests, water quality studies, scientific research, wildlife studies, and similar tests and investigations; provided, that such activities do not require clearing, fill, construction of new roads, or heavy equipment, and only minimal amounts of excavation and disturbed areas must be immediately restored.	Yes	Yes
Outdoor Recreation Activities. Outdoor recreation activities that do not involve modifying the land or vegetation, and that will not adversely affect the functions and values of critical areas.	Yes	Yes
EXEMPTIONS that require a letter of exemption be obtained from the Director prior to construction or initiation of activities. Subject to conditions by the Director to ensure compliance with this chapter.	Critical Area	Buffer
Utility Operation, Maintenance, Repair, or Replacement. Public water, electric, and natural gas distribution, public stormwater and sewer collection, cable communications, telephone, utility and related activities undertaken pursuant to city-approved best management practices, and best available science with regard to protection of threatened and endangered species, as follows: a. Normal and routine maintenance or repair of existing utility structures or rights-of-way; when the activity does not involve the expansion of facilities or improvements into a previously unimproved portion of critical areas or required buffers; b. Replacement, operation, repair, modification, installation or construction in an improved city road right-of-way or city-authorized private roadway of all electric facilities, lines, equipment or appurtenances, not including substations, with an associated voltage of 55,000 volts or less; to include relocation only when required by the city of Anacortes, which approves the new location of the facilities; c. Relocation of public sewer or stormwater local collection, public water local distribution, natural gas, cable communication or telephone facilities, lines, pipes, mains, equipment or appurtenances, only when required by the city of Anacortes, which approves the new location of the facilities; d. Replacement, operation, repair, modification, relocation, installation or construction of public sewer or stormwater local collection, public water local distribution, natural gas, cable communication, or telephone facilities, lines, pipes, mains, equipment or appurtenances when such facilities are located within an improved public right-of-way or city-authorized private roadway;	Yes	Yes

EXEMPT ACTIVITIES: (No review required, must strictly meet standards)	Critical Area	Buffer
e. Repair and maintenance of existing private connections to public utilities and private stormwater management facilities; f. Regular maintenance of stormwater facilities that are within a segment of a regulated stream, such as conveyance ditches/swales within the right-of-way or within public drainage easements.		
Transportation Infrastructure Operation, Maintenance, Repair, or Replacement. Maintenance, operation, repair, modification, or replacement of publicly improved roadways or city-authorized private roadways, including the road prism and associated stormwater management systems; as long as any such alteration does not involve expansion of roadways or related improvements into previously unimproved rights-of-way or portions of rights-of-way, and does not alter a critical area or required buffer, or watercourse, such as culverts or bridges, or result in the transport of sediment or increased stormwater. Retention and replanting of native vegetation must occur whenever possible along the right-of-way improvement and resulting disturbance.	Yes	Yes
Recreation Areas Operation, Maintenance, Repair, or Replacement. Maintenance, operation, repair, modification, or replacement of existing trails, and existing facilities within publicly improved recreation areas, such as the Anacortes Community Forest Lands and public parks, may be performed subject to the following:	Yes	Yes
a. The activity does not involve the expansion of facilities and disturbance to adjacent areas is minimized and disturbed areas must be immediately restored; b. Work is conducted using best management practices; c. Flow and circulation patterns and biological characteristics are not impaired and adverse impacts are minimized; d. Where trail relocation is the least impactful method of repair, trail relocation further away from the critical area is not to be considered a new trail but is included in the exemption for operation, maintenance, repair, or replacement.		
Vegetation Management, including:	Yes	Yes
1. Removal of noxious weeds or invasive vegetation, as identified by the Washington State or Skagit County Noxious Weed Control Board, in a wetland buffer, stream buffer, other fish and wildlife habitat conservation areas and buffers, is allowed when:		
a. Undertaken with hand labor, including handheld mechanical tools, and integrated pest management; b. Plants that appear on the Washington State or Skagit County Noxious Weed Control Board lists must be handled and disposed of in accordance with the best management practices appropriate to that species and approved by the city when permit review is applicable; c. Areas cleared by removal of noxious and/or invasive plant species must be revegetated with site-appropriate native species at natural densities and the site must be stabilized against erosion in accordance with the stormwater manual adopted by the city; d. All work performed is above the ordinary high water mark and above the top of a stream bank; and		

EXEMPT ACTIVITIES: (No review required, must strictly meet standards)	Critical Area	Buffer
e. The following limits may not be exceeded: Within city-owned property, no more than 3,000 square feet of soil may be exposed at any one time; and within private property, not more than 500 square feet of area may be cleared, as calculated cumulatively, over one year, without a permit and critical area report prepared by a qualified professional.		
2. Vegetation management consistent with a previously approved critical area mitigation, restoration, remediation, or enhancement plan that requires ongoing maintenance and vegetation management beyond final inspection and the required monitoring period for the permitted project.		
3. Hazard Trees.		
a. The felling of hazard trees may be permitted when necessary to:		
i. Control fire; or ii. Halt the spread of disease or damaging insects consistent with Chapter 76.09 RCW; iii. Avoid a threat to existing structures, above-ground utility lines or other facilities; or iv. Remove an actual threat to life or property from slope instability that would be caused by toppling.		
b. Unless there is an emergency pursuant to emergency exemptions above, the landowner must first obtain prior written approval from the Department. A tree risk assessment prepared by an ISA certified arborist must be submitted by the applicant to the Department that includes the following information:		
i. Identification of the tree(s) proposed to be removed; ii. A conclusion that the condition constitutes an actual threat to life or property; iii. An assessment of whether a portion of the tree suitable for a snag for wildlife habitat may be safely retained; iv. If a tree to be removed provides priority habitat, such as an eagle perch or occupied nest, a description of timing and methods of removal that will minimize and mitigate impacts; v. If a tree to be removed is located within a landslide hazard area or buffer, an evaluation of potential impacts on slope stability must be completed by a qualified professional, including recommendations for replanting and other measures to avoid adverse impacts to slope stability.		
c. All work must be done using handheld implements only, unless the property owner requests and the Director approves otherwise in writing. d. Any removed tree or vegetation must be replaced in-kind, with similar or appropriate native species, within one year in accordance with an approved restoration plan including species, size, and maintenance plan.		
Clearing, grading, and the construction of fences and arbors are allowed within the required 10-foot stream setback for a piped stream segment if no other critical area or buffer is present.	No	Yes

(Ord. 3064 § 2 (Att. A), 2021)

19.70.045 Permitted alterations.

A. *Applicability.* An applicant may seek an alteration of a critical area and/or critical area buffer through a permitted alteration when application of the standards in this chapter would result in the denial of all reasonable and economically viable use of the property and the proposed development meets the specific terms of this section.

B. *General Requirements.* The actions in the permitted alteration table below must be considered permitted alterations, unless as otherwise specified under AMC [19.70.230](#), Specific wetland category development standards, and provided they are consistent with the general standards for mitigation sequencing and other applicable requirements established in this chapter.

C. *Review Process.*

1. A critical area permit must be required for all permitted alterations. Requests for such permits must be reviewed using the procedures outlined in AMC Chapter [19.20](#), Table 19.20.030-1, Review classification and process matrix. No permit must be issued unless it can be shown that the proposed development is fully consistent with the requirements of this chapter.
2. In addition to other project-related documents, all permitted alterations must require a critical area assessment report per AMC [19.70.115](#), Critical area report, to evaluate the permitted alteration. The report must include:
 - a. A description of the function and condition of the critical area and/or buffer that would be altered;
 - b. An analysis of the effect of the development proposal on the critical area and/or buffer;
 - c. A description of actions that can be taken to modify the development proposal to avoid or reduce the alteration of the critical area and/or buffer and a discussion of whether these modifications are practical and reasonable;
 - d. A mitigation plan as required by this chapter.
3. *Burden of Proof.* The burden of proof is on the applicant to bring forth evidence in support of the application and upon which any decision has to be made on the application.
4. *Public Comment.* Consistent with AMC [19.20.030](#), Types of review, the city must ensure the opportunity for public comment, including that from appropriate federal, state, and tribal natural resource agencies, to ensure the use of best available science before deciding on approval.

D. *Decision Criteria.* A permit for alterations of a critical area and/or buffer width requirements of this chapter may only be issued if the applicant demonstrates that all of the following criteria are met:

1. Special circumstances applicable to the subject property, including size, shape, or topography, and the strict application of this chapter is found to deprive the subject property of rights and privileges enjoyed by other properties in the vicinity; provided, however, that the fact that those surrounding properties have been developed under regulations in force prior to the adoption of this chapter may not be the sole basis for granting approval;
2. The issuance of a variance to zoning requirements (setback, height, coverage, etc.) by itself will not provide sufficient relief to avoid the need for a permitted alteration to the critical area and/or buffer and other requirements for the critical areas regulated by this chapter;
3. Mitigation sequencing per AMC [19.70.125\(A\)](#), Mitigation Sequencing, has been applied;
4. The proposed alteration is supported by best available science; and
5. The proposed alteration allows for development of the subject parcel with the least impact on critical areas while providing a reasonable use of the property.

E. Conditions may be required. In granting any approval, conditions and safeguards may be prescribed as are necessary to secure adequate protection of critical areas from adverse impacts, protect adjacent property, and ensure conformity with this chapter.

F. Table 19.70.045 describes activities that must meet the precise description to be allowed following the prescribed critical area process. Activities are divided into the categories of permitted in the critical area and permitted in the buffer, marked by a yes or no in the appropriate column.

Table 19.70.045 Permitted Activities

Permitted Alterations: (Critical Area Permit Required – Type 2 Administrative Decision)	Critical Area	Buffer
Buffer Modifications, including: increased buffer width, buffer averaging, and buffer alterations as described specifically in this chapter.	No	Yes
Public Services. To protect wetlands, streams, wildlife habitat and other sensitive critical areas while allowing services when the strict application of the standards in this chapter would otherwise unreasonably prohibit the provision of public services and amenities.	Yes	Yes
1. “Public services” include, but are not limited to, water supply, sewer and stormwater management facility; electric power, telecommunication and natural gas lines; and public road and multimodal transportation corridors (e.g., the Tommy Thompson Trail and Guemes Channel Trail).		
2. Public services may be allowed to alter critical areas and buffers when:		
a. Mitigation sequencing per AMC 19.70.125(A) has been applied;		

Permitted Alterations: (Critical Area Permit Required – Type 2 Administrative Decision)	Critical Area	Buffer
b. The application of the critical areas regulations would unreasonably restrict the ability to provide public services; c. There is no other practical alternative to the proposed development with less impact on the critical area; d. The proposed development does not create a health or safety hazard on or off the development site, and must not be detrimental to the properties or improvements in the vicinity; e. Where feasible, development is located on existing road grades, utility corridors, or previously disturbed areas; f. Designs for crossings, boardwalks, bridges, and culverts are consistent with Washington Department of Fish and Wildlife and National Marine Fisheries Service best available science for the protection of fish and wildlife habitat. These structures shall not interfere with fish passage, the flow and circulation of water, or other wetland or stream riparian corridors processes, and shall be located at a 90-degree angle, or as close as possible thereto, to the stream, wetland, or buffer. In streams with salmonid habitat, bridges, bottomless culverts, or other alternatives that will allow for fish passage are required. Bridge piers or abutments may not be placed within wetlands, streams, or stream banks unless there is no feasible alternative; g. Construction of crossings will occur during work windows and time limits established by state and federal agencies with jurisdiction to decrease impacts to protected species; h. Any alterations permitted to the critical area and buffer are mitigated in accordance with AMC 19.70.125, Mitigation requirements, and relevant mitigation standards for the impacted critical areas(s) type; i. The proposal is consistent with the Anacortes comprehensive plan and other applicable regulations.		
3. Conditions Authorized. Conditions may be established as necessary to mitigate impacts to critical areas and to conform to the standards required in this chapter. 4. It will be a condition of any alteration granted a public agency and services exception that only the portion of the alteration that must be located in a critical area may be so located.		
Conservation, Restoration, and Fish Habitat Enhancement Projects. Conservation or restoration activities aimed at protecting or enhancing the soil, water, vegetation, or wildlife; including voluntary fish, wildlife, and wetland restoration or enhancement activities not required as project mitigation that have been approved by the U.S. Fish and Wildlife Service, the Washington State Department of Ecology, Washington State Department of Fish and Wildlife, or other appropriate local, state, federal, or tribal jurisdiction and/or that meet the criteria of RCW 77.55.181(1) and that are reviewed and approved according to the provisions of RCW 77.55.181. A biological evaluation report is required to determine whether the proposal would conserve, preserve, or enhance critical area functions in the long term to minimize temporary environmental impacts.	Yes	Yes
Chemical Applications. The application of herbicides, pesticides, organic or	Yes	Yes

Permitted Alterations: (Critical Area Permit Required – Type 2 Administrative Decision)	Critical Area	Buffer
mineral-derived fertilizers, or other hazardous substances, if necessary for the control of nuisance weeds and algae; except that their use will be restricted in accordance with the State Department of Ecology and State Department of Fish and Wildlife Management recommendations, and regulations of the State Department of Agriculture and the U.S. Environmental Protection Agency.		
Recreational Areas/Facilities. Low impact activities which are consistent with the purpose and function of the critical area buffer (not to include the ACFL) and do not detract from its integrity may be permitted within the buffer depending on the sensitivity of the critical area. 1. Limited public park or public recreational access including trails, viewing platforms, fishing access (no wider than six feet), and foot bridges; provided, that all of the following are satisfied: a. The area/facility is part of a public park that is dependent on its location for recreational function; and b. The area/facility is limited to the minimum necessary to accomplish the recreational function; and c. The removal of trees and native vegetation is minimized; and d. The balance of the development is consistent with other requirements of this chapter; and e. The project is identified in the Anacortes comprehensive plan or parks master plan. 2. Private pedestrian walkways and public trails must meet the following standards: a. The trail is generally parallel to the perimeter of the critical area; b. The trail is located in the outer 25 percent of the buffer area and is designed to avoid removal of trees and native vegetation; c. The trail does not exceed six feet in width, and is limited to native soils or pervious surfaces. Raised boardwalks utilizing nontreated pilings may be acceptable; and d. The trail may be subject to closure during critical spawning, migration or breeding time periods of sensitive species that are present. 3. Informational Signs. Construction and placement of informational signs or educational demonstration facilities no more than nine square feet surface area and four feet high, as long as there is no permanent infringement on hydrology or stream flow and nontreated wood is used; 4. Limited excavating and filling necessary for the repair and maintenance of piers, walkways, observation decks, wildlife management shelters, boathouses, and other similar water related structures, provided they are built on pilings to allow unobstructed flow of water and preserve the natural contour of the critical area.	No	Yes
Single-Family Residences and Normal Appurtenances. New single-family dwellings on existing legal lots may intrude into critical areas or their buffers when all of the	Yes	Yes

Permitted Alterations: (Critical Area Permit Required – Type 2 Administrative Decision)	Critical Area	Buffer
following conditions are met:		
1. It is demonstrated that it is not feasible to avoid the critical area or buffer through avoidance or buffer averaging, or reconfiguration of lots in the same ownership at the date of adoption of this chapter, and the development is the minimum necessary to achieve reasonable use of the lot as determined by the decision-maker; and 2. Alteration of critical areas and their buffers including all clearing, grading, structures, and appurtenances, has not and will not exceed cumulatively 2,800 square feet of disturbance; and 3. This action does not allow critical areas or their buffers to be converted to lawn or residential landscaping beyond a minimal area needed to maintain an approved structure; and 4. Mitigation sequencing provided in this chapter under AMC 19.70.125 is applied and the proposal includes on-site mitigation to the extent feasible as determined by the critical area report. 5. Normal appurtenances included in this provision include garages, decks, and walkways incidental to residential living and that do not constitute a special privilege.		
Anacortes Community Forest Lands. Given the unique qualities of the community forest, all properties designated as ACFL have been nominated as a regulated critical area. Any and all new uses and development of new facilities within the ACFL must meet the requirements of the conservation easements/deed restrictions of the land, Anacortes comprehensive plan, The ACFL comprehensive plan, this chapter, and AMC Chapter 8.10 , Parks and the Anacortes Community Forest Lands.	Yes	Yes
Critical Area Aquifer Recharge Areas. All regulated activities listed under AMC 19.70.515 , Applicability and hazardous materials questionnaire.	Yes	Yes

(Ord. 3064 § 2 (Att. A), 2021)

19.70.050 Reasonable use exception and critical area variance.

A. *Applicability.* If the application of this chapter would result in denial of all reasonable and economically viable use of a property, and if such reasonable and economically viable use of the property cannot be obtained by consideration of a permitted alteration pursuant to AMC [19.70.045](#), then a landowner may seek a reasonable use exception from the standards of this chapter. Reasonable use exceptions are considered a critical area variance and are intended as a last resort and only when a variance can meet the requirements of this chapter.

B. *General Requirements.* Reasonable use is a legal concept articulated by federal and state courts in regulatory takings cases. Within the context of these cases and for the purposes of this title, reasonable use means uses allowed by the underlying zoning designation and subdivision of property is not allowed. When no

possible alternative exists, a reasonable use exception must be considered a critical area variance, provided they are consistent with the general standards for variances under AMC [19.38.040](#) and other applicable requirements established in this chapter.

C. Procedures for Review.

1. A variance permit must be required for all reasonable use exceptions. Requests for such permits must be reviewed using the procedures applicable to Type 3 Hearing Examiner decisions outlined in chapter AMC [19.20.030](#). A permit may not be issued unless it can be shown that the proposed development is fully consistent with the variance approval criteria enumerated in AMC [19.38.040](#) (variance criteria) as well as all of the requirements of this chapter.
2. In addition to other project related documents, all critical area variances must require a critical area assessment report per AMC [19.70.115](#) to evaluate the proposed disturbance. The report must include:
 - a. A description of the function and condition of the critical area and/or buffer that would be altered;
 - b. An analysis of the effect of the development proposal on the critical area and/or buffer;
 - c. A description of actions that can be taken to modify the development proposal to avoid or reduce the alteration of the critical area and/or buffer and a discussion of whether these modifications are practical and reasonable;
 - d. A mitigation plan as required by this chapter.
3. *Burden of Proof.* The burden of proof is on the applicant to bring forth evidence in support of the application and upon which any decision has to be made on the application.
4. *Public Comment.* Consistent with AMC [19.20.030](#) the city must ensure the opportunity for public comment, including that from appropriate federal, state, and tribal natural resource agencies, to ensure the use of best available science before a decision is made.

D. Variance Criteria. A reasonable use exception may be granted only if the applicant demonstrates that all of the requested action is consistent with all of the variance approval criteria as set forth:

1. The application of this chapter would deny all reasonable economic use of the property and that there is no reasonable economically viable use with a lesser impact on the critical area than that proposed; and
2. Special conditions and circumstances exist that are peculiar to the land, the lot, or something inherent in the land, and that are not applicable to other lands subject to the provisions of this chapter; and
3. The inability of the applicant to derive reasonable use of the property is not the result of actions by the current or previous owner in subdividing the property or adjusting a boundary line, thereby creating the undevelopable condition, after the effective date of the ordinance codified in this chapter; and

4. Any proposed modification to a critical area will be evaluated through consideration of a critical area report and mitigation plan prepared by a qualified professional pursuant to the requirements of this chapter, and will be the minimum necessary to allow reasonable and economically viable use of the property. The critical area report and mitigation plan must be prepared utilizing best available science; and
5. Mitigation sequencing per AMC [19.70.125\(A\)](#) has been applied, and the proposal mitigates impacts on the critical area to the maximum extent possible, while still allowing reasonable use of the lot; and
6. The proposed development does not pose a threat to adjacent property or to the public health and safety; and
7. The applicant has demonstrated that the criteria in AMC [19.38.040](#) (variance criteria) are met; and
8. Granting the variance requested will not confer on the applicant any special privilege that is denied by this chapter to other lands, structures, or buildings under similar circumstances; and
9. The granting of the variance is consistent with the general purpose and intent of the Anacortes comprehensive plan, and planning policies.

E. *Conditions.* Conditions of approval may be included as part of the decision, including modifications to the size and placement of structures and facilities to minimize impacts to critical areas and associated buffers and mitigation requirements that ensure that all impacts are mitigated to the maximum extent feasible utilizing best available science.

F. *Variances – Geologically Hazardous Areas.* A variance must not authorize development within a geologically hazardous area or required setback or buffer from a geologically hazardous area unless a qualified professional has determined the development will not pose a threat to public safety or property. (Ord. 3064 § 2 (Att. A), 2021)

Article I. Critical Areas Review Procedures

19.70.110 Critical area identification form.

Prior to the city's consideration of any proposed activity found not to be exempt under AMC [19.70.040](#), the applicant must submit to the Department a completed form identifying suspected critical areas on, and within 300 feet, of the site. (Ord. 3064 § 2 (Att. A), 2021)

19.70.115 Critical area report.

A. *Report Required.* When the Director determines a proposed development is within, abutting, or is likely to adversely affect a critical area or buffer pursuant to the provisions of this chapter, the Director may require a critical areas assessment report that is prepared by a qualified professional. The assessment of critical areas and analysis of impacts must be commensurate with the value or sensitivity of a particular critical area and relative to the scale and potential impacts of the proposed activity. This provision is not intended to expand or limit an applicant's other obligations under WAC [197-11-100](#).

B. *Third Party Review of Critical Area Reports.* The Director may require, at the applicant's expense, a third party review of a critical area report by a qualified professional under contract with or employed by the city in any of the following circumstances:

1. The project requires a critical area permit, or critical area variance; or
2. Third party review is specifically required by the provisions of this chapter for the critical area(s) or critical area buffer(s) potentially being impacted; or
3. When the Director determines that such services are necessary to demonstrate compliance with the standards and guidelines of this chapter or other appropriate regulations.

C. *Critical Area Report Types or Sections.* Critical area report requirements may be met in stages through multiple reports or combined in one report. A critical area report must include one or more of the following sections or report types unless exempted by the Director based on the extent of the potential critical area impacts. The scope and location of the proposed project will determine which report(s) alone or combined are sufficient to meet the critical area report requirements for potentially impacted critical area type(s). The typical sequence of required sections or reports that will fulfill the requirements of this section include:

1. *Reconnaissance.* The existence, general location, and type of critical areas on, adjacent to, or likely to be impacted by activities on a project site. Determination of whether the project will adversely impact or be at risk from the potential critical areas based on maximum potential buffers for the particular critical area type. Possible application of exemptions should also be addressed;
2. *Delineation.* The extent, boundaries, rating or classification, and applicable standard buffers of critical areas where the project area could potentially impact the critical area or its buffer including an assessment of the characteristics of or functions and values of the critical area and buffers identified;
3. *Analysis.* The proposal and impact assessment report documenting the potential project impacts to the critical area and buffers including a discussion of the efforts taken to avoid, minimize, and reduce potential impacts to those areas per AMC [19.70.125\(A\)](#);
4. *Mitigation.* The measures that prevent or compensate for the potential impacts of the project designed to meet the requirements of this chapter, AMC [19.70.130](#), Mitigation plan requirements, and the standards for the specific critical areas impacted. Mitigation includes, but is not limited to, adjustments to required

buffer sizes, best practices to minimize impacts, and critical area or buffer enhancement, restoration, or preservation plans. Mitigation plans include but are not limited to habitat management plans, revegetation or replanting plans, and restoration plans;

5. *Maintenance and Monitoring.* The goals of the mitigation proposed, performance standards for success, monitoring methods and reporting schedule, and contingency actions. Maintenance and monitoring plans must be consistent with the mitigation performance standards and requirements of this chapter, including the specific mitigation plan requirements outlined in each critical area type section.

D. *Minimum Report Requirements.* At a minimum, critical area reports must contain the following information:

1. The names and qualifications of the persons preparing the report and documentation of any fieldwork performed on the site;
2. A description of the proposal, proposal location including address and parcel number(s), and a vicinity map for the project;
3. Identification and characterization of all critical areas, water bodies, shorelines, and buffers on or within 300 feet of the proposed project area. The Director may require critical area and buffer dimensions be accurately surveyed, depending on the scope of the project;
4. Documentation of any fieldwork performed on the site, including field data sheets, for delineations, rating system forms, baseline hydrologic data, site photos, etc.;
5. A statement specifying the accuracy of the report and all assumptions made and relied upon;
6. A description of methodologies used to conduct the critical areas investigation, including references;
7. A scaled drawing of critical areas and buffers identified in the report including buffers for off-site critical areas that extend onto the project site.

E. *Existing Reports.* Critical areas assessment reports must generally be valid for a period of five years. Unless otherwise provided, a critical area report may incorporate, be supplemented by, or composed of any reports or studies required by other laws and regulations or previously prepared for and applicable to the development proposal site, as approved by the Director. At the discretion of the Director, reports previously compiled or submitted as part of a proposal for a development may be used as a critical area report to the extent that the requirements of this section and the requirements for each specific critical area type are met. Supplemental critical area report(s) may be required to provide information or analysis to address changes to the project scope, potential impacts to or changes to applicable regulations that have been made subsequent to existing, valid critical area reports, or other circumstances.

F. *Modifications to Report Requirements.* The applicant may consult with the Director, prior to or during preparation of the critical area report, to obtain approval of modifications to the required contents of the report

where, in the judgement of a qualified professional, more or less information is required to adequately address the potential critical area impacts and required mitigation.

1. In some cases, such as when it is determined that no specific critical area is present, a full report may not be necessary to determine compliance with the critical area regulations, and in those cases a letter or reconnaissance-only report may be required.
2. *Limitations to Study Area.* The Director may limit the required geographic area of the critical area report as appropriate if:
 - a. The applicant, with assistance from the city of Anacortes, cannot obtain permission to access properties adjacent to the project area; or
 - b. The proposed activity will affect only a limited part of the project site. (Ord. 3064 § 2 (Att. A), 2021)

19.70.120 Application requirements.

A. A complete application for a permitted alteration permit or reasonable use exception/variance permit must include the following information and materials on a form provided by the Director. For the purpose of this section, a complete application includes:

1. The name and contact information of the applicant;
2. Adequate information to determine compliance with the requirements of the critical area regulations, including a critical area report, impact and hazard assessment, and mitigation requirements specific to each critical area type, as indicated in the corresponding sections of this chapter;
3. Identification of the development permit(s) requested and all other local, state, and/or federal critical area-related permits required for the project;
4. Site plan, a scaled drawing of the development proposal including:
 - a. Property and project site boundaries;
 - b. An accurate depiction of all critical areas, including off-site critical areas and buffers that extend onto the project site; a desk survey is acceptable when access to the adjacent property has been denied;
 - c. The development proposal, including grading and clearing limits and areas of proposed impacts to critical areas and/or buffers (include square footage estimates);

- d. A scaled depiction and description of the proposed stormwater pollution prevention plan consistent with the adopted stormwater manual, for the development and consideration of impacts to critical areas due to drainage alterations;
- e. An assessment of probable impacts to the critical areas resulting from the proposed development of the site based upon identified findings;
- f. A description of reasonable efforts made to apply mitigation sequencing pursuant to AMC [19.70.125](#), Mitigation requirements, to avoid, minimize, and mitigate impacts to critical areas; and
- g. Plans for mitigation required to offset any critical areas impacts, in accordance with AMC [19.70.130](#), Mitigation plan requirements, and the corresponding mitigation performance standards sections of this chapter, including a discussion of the applicable development standards and cost estimates for determination of financial guarantee requirements.

B. *Additional Requirements.* The Director may require additional information to be included in the critical areas permit submittal when determined to be necessary to the review of the proposed activity in accordance with this chapter. Additional information that may be required includes, but is not limited to:

- 1. Historical data, including original and subsequent mapping, historical aerial photographs, data compilations and summaries, and available reports and records relating to the site or past operations at the site;
- 2. Grading and stormwater management plans; and
- 3. Information specific to the type, location, and nature of the critical area. (Ord. 3064 § 2 (Att. A), 2021)

19.70.125 Mitigation requirements.

Mitigation must be sufficient to restore impacted functions and values, or compensate for the impacted functions and values, of the critical area and to prevent risk from a hazard posed to a critical area by the proposed activity. Mitigation must not be implemented until after the decision-maker has provided approval of a critical area report that includes a mitigation plan.

A. *Mitigation Sequencing.* This section applies to mitigation required with all critical areas reviews, approvals, and enforcement pursuant to this chapter. This section is supplemented with specific measures under parts for particular critical area types. Mitigation for specific development proposals may include a combination of the measures below and must be designed and constructed in accordance with the provisions of this section. Before impacting any critical areas, an applicant must demonstrate that the following actions have been taken in the following sequential order:

- 1. Avoiding the impact altogether by not taking a certain action or parts of actions;

2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;
3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment or by restoring or stabilizing the critical area through natural, engineering, or other methods;
4. Reducing or eliminating the impacts or hazard over time by preservation and maintenance operations during the life of the action;
5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or
6. Monitoring, measuring and reporting the impact to the decision-maker and taking appropriate corrective measures.

B. Applicants must first demonstrate an inability to avoid or reduce impacts before the use of actions to mitigate potential impacts will be allowed. No activity or use may be allowed that results in a net loss of the functions or values of a critical area.

C. *Type, Location and Timing of Mitigation.* Unless it is demonstrated that higher levels of ecological functioning or greater reduction of hazard risk would result from an alternative approach or as otherwise allowed in this chapter, mitigation for adverse impacts must be based on best available science and must be in-kind, on site, and prior to the activities that will disturb the critical area. Mitigation measures that cannot be implemented prior to the critical area impacts must be completed immediately following disturbance and prior to use or occupancy of the action or development. Construction of mitigation projects must be timed to reduce impacts to existing fisheries, wildlife, and flora.

1. The decision-maker may authorize a one-time temporary delay in completing construction or installation of the mitigation when the applicant provides a written explanation from a qualified professional as to the rationale for the delay and satisfactory financial guarantee that the installation will occur. An appropriate rationale would include identification of the environmental conditions that could produce a high probability of failure or significant construction difficulties (e.g., project delay lapses past a fisheries window, or installing plants should be delayed until the dormant season to ensure greater survival of installed materials). The delay must not create or perpetuate hazardous conditions or environmental damage or degradation, and the delay must not be injurious to the health, safety, or general welfare of the public.
2. *Alternative Mitigation Approaches.* If the applicant can demonstrate that off-site concurrent or advance mitigation would provide a higher level of ecological function or a greater reduction of hazard risk, off-site mitigation that occurs on Fidalgo Island will be considered by the decision-maker. (Ord. 3064 § 2 (Att. A), 2021)

19.70.130 Mitigation plan requirements.

When mitigation is required, the applicant must submit for approval by the city a mitigation plan as part of the critical area report. The mitigation plan must include:

A. *Environmental Goals and Objectives.* The mitigation plan must identify environmental goals and objectives of the mitigation proposed and including:

1. A description of the anticipated impacts to the critical areas, the mitigating actions proposed, and the purposes of the compensation measures, including the site selection criteria; identification of compensation goals; identification of resource functions; and dates for beginning and completion of site compensation construction activities. The goals and objectives must be related to the functions and values of the impacted critical area; and
2. A review of the best available science supporting the proposed mitigation and a description of the report author's experience to date in restoring or creating the type of critical area proposed.

B. *Performance Standards.* The mitigation plan must include measurable specific criteria for evaluating whether or not the goals and objectives of the mitigation project have been successfully attained at the end of the required monitoring period and whether or not the requirements of this chapter have been met.

C. *Detailed Construction Plans.* In order to convey proposed construction techniques and anticipated final outcome, the mitigation plan must include written specifications, descriptions, and drawings of the mitigation proposed, including:

1. The proposed construction sequence, timing, and duration;
2. Best management practices including erosion and sediment control features to be implemented;
3. Site plans showing grading and excavation details, slope gradient, and final grade elevations with minimum two-foot contour intervals;
4. Cross-sectional drawings;
5. A planting plan specifying plant species, quantities, locations, size, spacing, and density; and
6. Measures to protect and maintain plants until established.

D. *Monitoring Program and Contingency Plan.* A monitoring and contingency plan is required for all projects requiring mitigation.

1. The mitigation plan must include a monitoring program to be implemented by the applicant to determine the success of the mitigation project and any necessary corrective actions. This program must determine if the original goals and objectives of the mitigation plan are being met.

2. A contingency plan must be established for indemnity in the event that the mitigation project is inadequate or fails. Contingency plans include identification of potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met. Corrective measures must be taken when the qualified professional indicates, in a monitoring report, that the contingency actions are needed to ensure project success by the end of the monitoring period. A performance and maintenance bond, or other acceptable financial guarantee, is required to ensure the applicant's compliance with the terms of the mitigation agreement consistent with AMC [19.70.150](#), Financial guarantee requirements.
3. Monitoring programs prepared to comply with this section must include the following requirements:
 - a. Best available scientific procedures must be used to establish the success or failure of the project. A protocol outlining the schedule for site monitoring (for example, monitoring must occur in years zero (as-built), one, three, and five after site construction), and how the monitoring data will be evaluated to determine if the performance standards are being met.
 - b. For vegetation determinations, permanent sampling points must be established.
 - c. The monitoring program must include measurable specific criteria, or performance standards, for evaluating whether or not the goals and objectives of the mitigation plan have been successfully attained.
 - d. A monitoring report must be submitted as needed to document milestones, successes, problems, and contingency actions of the mitigation project. Monitoring reports on the current status of the mitigation project must be submitted, consistent with subsection [\(D\)\(3\)\(e\)](#) of this section, to the city on the schedule identified in the monitoring plan, but not less than every other year. The reports are to be prepared by a qualified professional and reviewed by the city, or a qualified professional retained by the city, and should include monitoring information on wildlife, vegetation, water quality, water flow, stormwater storage and conveyance, and existing or potential degradation, as applicable.
 - e. Monitoring programs must be established for a period necessary to establish that performance standards have been met, but not for less than a minimum of five years without approval from the decision-maker. A longer monitoring period may be required depending on the mitigation goals.
 - f. If necessary, failures in the mitigation project must be corrected.
 - g. Dead or undesirable vegetation must be replaced with appropriate plantings.
 - h. Damage caused by erosion, settling, or other geomorphological processes must be repaired.
 - i. The mitigation project must be redesigned (if necessary) and the new design must be implemented and monitored, as in subsection [\(D\)\(3\)\(d\)](#) of this section.

j. Correction procedures must be approved by the decision-maker; the decision-maker may request review by a qualified professional.

k. If the mitigation goals are not obtained within the initial monitoring period, the applicant remains responsible for restoration of the impacted values and functions or hazard risk reduction until the mitigation goals agreed to in the mitigation plan are achieved.

E. *Monitoring Reports.* Monitoring reports must be submitted to the city consistent with the approved monitoring plan.

1. The as-built report, required prior to final inspection, must, at a minimum, include documentation of the following:

- a. Departures from the original approved plans;
- b. Construction supervision provided by the qualified professional;
- c. Approved project goals and performance standards;
- d. Baseline data for monitoring per the approved monitoring methods;
- e. Photos from established photo points; and
- f. A site plan showing final mitigation as constructed or installed, monitoring points, and photo points.

2. Subsequent monitoring reports must, at a minimum, include:

- a. Monitoring visit observations, documentation, and analysis of monitoring data collected;
- b. Photos from established photo points;
- c. Determination whether performance standards are being met; and
- d. Maintenance and/or contingency action recommendations to ensure success of the project at the end of the monitoring period.

3. The applicant is responsible for reimbursement of the cost of review of monitoring reports and site inspections during the monitoring period which are completed by the city or a qualified professional under contract with or employed by the city.

F. *Cost Estimates.* The mitigation plan must include cost estimates that will be used by the city to calculate the amounts of financial guarantees, if necessary, to ensure that the mitigation plan is fully implemented. Financial guarantees ensuring fulfillment of the compensation project, monitoring program, and any contingency measures must be posted in accordance with AMC [19.70.150](#), Financial guarantee requirements.

G. *Approved Mitigation Projects – Signature.* On completion of construction, an as-built report for any approved mitigation project must be prepared and signed off by the applicant’s qualified professional and approved by the city. Signature of the qualified professional on the required as-built report and approval by the Director indicates that the construction has been completed as planned. (Ord. 3064 § 2 (Att. A), 2021)

19.70.135 Title notification.

A. *Generally.* A critical area notice on title is required, as a condition of permit issuance or project approval, when a permit or development application is submitted for development on any property containing a critical area or buffer. The purpose is to inform subsequent purchasers of real property of the existence of critical areas.

1. The title notice requirement can be met through recording of a title notice on forms prepared by the city, establishment of a critical area tract, or recording of a native growth protection area easement, consistent with subsections (B) through (D) of this section, as applicable.
2. The following must be noted on all critical area title notice documents:
 - a. Identification of ownership and long-term maintenance responsibility of critical areas, buffers, and permanent field markings (e.g., fencing, signage);
 - b. Restrictions on development, vegetation removal, and application of hazardous substances (pesticides, herbicides, fertilizers) within the critical areas and buffers;
 - c. The right of the city to enforce the terms of the restrictions.

B. *Title Notice.* The title notice applicable to the property must be approved by the decision-maker and City Attorney for compliance with this provision and be filed by the property owner, at their expense, with the Skagit County Auditor’s Office. The title holder will have the right to challenge this notice and to have it extinguished if the critical area designation no longer applies. However, the titleholder is responsible for completing a critical area report, subject to approval by the decision-maker, before the notice on title can be extinguished. The title notice runs with the land.

C. *Critical Area Tract.* Subdivisions, short subdivisions, and binding site plans must establish a separate critical area tract as a permanent protective measure for wetlands, fish and wildlife habitat conservation areas, and geological hazard areas and their buffers. The plat or binding site plan for the project must note the long-term ownership/maintenance responsibility as well as clearly depict the critical area tract, including all of the subject critical area, any required buffer, and any additional lands included voluntarily as part of the project. Should the critical area tract include several types of critical areas, separate critical area tracts must be identified.

D. *Native Growth Protection Easements (NGPE)*. NGPE easements are required on a property where no subdivision, short subdivision, or binding site plan is proposed or required. Unless otherwise required in this chapter, NGPE easements must be recorded on title for all affected parcels prior to approval of a development application or building permit, when two or more dwelling units and/or nonresidential developments are proposed on one parcel, to delineate and protect critical areas and their buffers. The easement to be recorded must clearly depict the critical area(s), required buffer(s) and the limits of the NGPE easement. (Ord. 3064 § 2 (Att. A), 2021)

19.70.140 Field marking.

A. *Temporary Field Marking During Construction*. The outer perimeter of the critical area buffer and the clearing limits identified by an approved permit or authorization must be marked in the field with temporary “clearing limits” fencing in such a way as to ensure that no unauthorized intrusion will occur. The marking is subject to inspection by the Director prior to the commencement of permitted activities. This temporary marking and fencing must be maintained throughout construction and may not be removed until permanent fencing and/or signs, if required, are in place.

B. *Permanent Field Marking*. The decision-maker may require installation of permanent signs, markers, and fencing along the outer perimeter of a critical area or its buffer when it is determined necessary to protect the critical areas’ functions and values. Permanent markings must be installed prior to final project approval or occupancy, as determined by the decision-maker.

1. *Signs*. All critical areas, tracts, easements, and dedications should be clearly marked on the site using permanent markings, as follows:

a. Signs must be placed at least every 50 feet, with a minimum of one per lot, which include the following text, or similar, as approved by the decision-maker:

City of Anacortes Designated Critical Area. Activities, including clearing and grading, removal of vegetation, pruning, cutting of trees or shrubs, planting of nonnative species, and other alterations may be prohibited. Help protect and care for this area. Please contact the City of Anacortes with questions or concerns.

b. Signs must be made of an enamel-coated metal face and attached to a metal post or another nontreated material of equal durability.

2. *Fencing*. Permanent fencing should be designed so as not to interfere with species migration or wildlife movement, unless exclusion fencing is more pertinent, and constructed in a manner that minimizes impacts to the critical areas and buffers. Proposed fencing type and materials will be determined on a case-by-case basis and must be approved by the decision-maker prior to installation.

C. *Maintenance and Replacement.* It is the responsibility of the landowner, successors, or as otherwise assigned to maintain in perpetuity and replace, if necessary, all permanent fencing and field markings. (Ord. 3064 § 2 (Att. A), 2021)

19.70.145 Construction plan review, monitoring, and inspection.

A. The Director may require project building and construction plans be reviewed by a qualified professional for confirmation of consistency with the critical area report and recommendations prior to approval of construction plans.

B. The Director may require monitoring by a qualified professional during site alteration activities within, or adjacent to, critical areas or buffers, and/or a final inspection report by the qualified professional stating that construction has or has not implemented the design recommendations provided in the project critical area report, and evaluation of any deviation from the recommendations.

C. When the Director determines that such services are necessary to demonstrate compliance with the standards and guidelines of this chapter, they will be at the applicant's expense. (Ord. 3064 § 2 (Att. A), 2021)

19.70.150 Financial guarantee requirements.

When determined necessary by the Director, bonds, and other financial guarantees, and associated performance agreements or maintenance/defect/monitoring agreements are required for projects with required mitigation or restoration of impacts to critical areas or critical area buffers consistent with the following:

A. A performance agreement and bond, or other acceptable financial guarantees, are required from the applicant when mitigation required pursuant to a development proposal is not completed prior to final permit approval, such as final plat approval or final building inspection. The amount of the performance bond(s) must equal 125 percent of the cost of the mitigation project.

B. A performance agreement and bond, or other acceptable financial guarantees, are required from the applicant when restoration is required for remediation of a critical area violation. The amount of the performance bond(s) must equal 125 percent of the cost of the mitigation project.

C. A maintenance/defect/monitoring agreement and bond, or other acceptable financial guarantees, are required to ensure the applicant's compliance with the conditions of the approved mitigation plan pursuant to a development proposal or restoration plan for remediation of a violation. The amount of the maintenance bond(s) must equal 125 percent of the cost of the mitigation project in addition to the cost for monitoring for a minimum of five years. The monitoring portion of the financial guarantee may be reduced in proportion to

work successfully completed over the period of the bond. The bonding period must coincide with the monitoring period. (Ord. 3064 § 2 (Att. A), 2021)

19.70.165 Unauthorized critical area alterations.

A. When a critical area or its buffer has been altered in violation of this chapter, all work must stop and the critical area and buffer must be restored. The Director may issue a stop work order to cease all work, and order restoration measures at the owner's or other responsible party's expense to remediate the impacts of the violation of the provisions of this chapter. The city may take formal enforcement action under AMC Title [20](#), Civil Enforcement and Penalties, to ensure the violation is abated.

B. *Requirement for Restoration Plan.*

1. All work must remain stopped until a restoration plan is provided by the responsible party and approved by the city. Such a plan must be prepared by a qualified professional using the best available science and must describe how the actions proposed meet the minimum requirements described in subsection [\(C\)](#) of this section.
2. The Director may, at the responsible party's expense, seek expert advice, including but not limited to third party review by a qualified professional under contract with or employed by the city, in determining if the plan meets the minimum performance standards for restoration.
3. Submittal, review, and approval of required restoration plans for remediation of violations of this chapter must be completed through a site development permit application process, either after the fact for regulated activities, or as a restoration permit for activities not allowed under these provisions.

C. *Minimum Performance Standards for Restoration.*

1. For alterations to critical aquifer recharge areas, wetlands, and fish and wildlife habitat conservation areas, the following minimum performance standards must be met for the restoration:
 - a. The pre-violation function and values of the affected critical areas and buffers must be restored, including but not limited to hydrologic, water quality and habitat functions;
 - b. The pre-violation soil types and configuration must be replicated;
 - c. The critical area and buffers must be replanted with a native vegetation community that reproduces the structure, species content and condition of the pre-violation vegetation community. Based on the historical or pre-violation vegetation community, native plant species must be replaced at minimum of a five-to-one ratio or installed at a density of five-feet-on-center unless approved by the decision-maker. The pre-violation functions and values should be replicated at the location of the alteration; and

d. Information demonstrating compliance with the requirements in AMC [19.70.130](#), Mitigation plan requirements, and the applicable mitigation sections for the affected type(s) of critical area(s) and their buffer(s) must be submitted to the decision-maker with a complete site development permit application.

e. These standards may be modified by the decision-maker when it can be demonstrated that greater functional and habitat values can be obtained.

2. For alterations to special flood hazard and geologically hazardous areas, the following minimum performance standards must be met for the restoration of a critical area:

- a. The hazard must be reduced to a level equal to, or less than, the pre-violation hazard;
- b. Any risk of personal injury resulting from the alteration must be eliminated or minimized; and
- c. The hazard area and buffers must be replanted with native vegetation sufficient to minimize the hazard.
- d. These standards may be modified by the decision-maker if the violator can demonstrate that greater safety can be obtained.

D. *Site Investigation.* The Director is authorized to take such actions as are necessary to enforce this chapter. The Director (or Director's authorized representative) must present proper credentials and obtain permission before entering onto private property.

E. *Penalties.* Any responsible party violating the provisions of this chapter may be subject to applicable penalties per AMC Title [20](#), Civil Enforcement and Penalties, plus the following:

1. A square footage cost of \$3.00 per square foot of impacted critical area buffer; and a square footage cost of \$15.00 per square foot of impacted critical area; and
2. A per-tree penalty in the amount of \$3,000 per nonsignificant tree and \$9,000 per significant tree, for trees removed, or otherwise damaged, within a critical area or buffer in violation of the provisions of this chapter. (Ord. 3064 § 2 (Att. A), 2021)

19.70.170 Final decision and appeals.

A. *Completion of the Critical Area Review.* The city's determination regarding critical areas pursuant to this chapter is final concurrent with the final decision to approve, condition, or deny the underlying permit for the development proposal or other activity involved.

B. *Appeals.* Any decision to approve, condition, or deny a development activity proposal or other activity based on the requirements of this chapter may be appealed according to, and as part of, the appeal procedure for the underlying permit or approval involved. (Ord. 3064 § 2 (Att. A), 2021)

Article II. Wetlands

19.70.210 Description and purpose.

It is the purpose of this chapter to protect the functions and values of wetlands, which serve many important ecological and environmental functions and help to protect public health, safety, and welfare by providing flood storage and conveyance, and erosion control, while also providing fish and wildlife habitat, recreation, water quality protection, water storage, education, scientific research opportunities and other public benefits. (Ord. 3064 § 2 (Att. A), 2021)

19.70.215 Designation and rating.

A. *Designation.* All areas meeting the definition of a wetland and the wetland identification criteria pursuant to this chapter, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this chapter.

B. *Rating.* Wetlands must be rated by a qualified professional according to the Washington State Department of Ecology Wetland Rating System for Western Washington – 2014 Update (Ecology Publication No. 14-06-029, October 2014), or as revised. Wetland rating categories will be applied as the wetland exists on the date of adoption of the rating system by the city, as the wetland naturally changes in accordance with permitted activities.

1. *Category I.* Category I wetlands are those that represent unique or rare wetland types, are more sensitive to disturbance than most wetlands, are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime, or provide a high level of functions. The following types of wetlands are Category I:

- a. Relatively undisturbed estuarine wetlands larger than one acre;
- b. Wetlands of high conservation value identified by scientists of the Washington Natural Heritage Program/Department of Natural Resources (DNR);
- c. Bogs;

- d. Mature forested wetlands larger than one acre;
- e. Wetlands in coastal lagoons; and
- f. Wetlands that perform many functions well and have a total score of 23 points or more in the wetland rating.

2. *Category II.* Category II wetlands are those wetlands that are difficult, though not impossible, to replace, and provide high levels of some functions. The following types of wetlands are Category II:

- a. Estuarine wetlands smaller than one acre or disturbed estuarine wetlands larger than one acre;
- b. Wetlands with a moderately high level of functions and a total score of 20 to 22 points in the wetland rating;
- c. Wetlands in coastal lagoons that are relatively undisturbed and equal to or smaller than one-tenth acre (4,350 square feet).

3. *Category III.* Category III wetlands are those with a moderate level of functions, generally have been disturbed in some ways, can often be adequately replaced with a well-planned mitigation project, and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands. The following types of wetlands are Category III:

- a. Wetlands with a moderate level of functions with a total score of 16 to 19 points in the wetland rating.

4. *Category IV.* Category IV wetlands have the lowest levels of functions and are often heavily disturbed, with a total score of 15 points or less in the wetland rating. The functions provided by Category IV wetlands are generally easier to replace, and in some cases can be improved. However, experience has shown that replacement of functions cannot be guaranteed in any specific case. These wetlands may provide some important functions that need to be protected.

C. *Illegal Modifications.* When a violation occurs wetland rating categories do not change due to illegal modifications or alterations. A wetland's category must be based on the pre-violation condition of the wetland. (Ord. 3064 § 2 (Att. A), 2021)

19.70.220 Mapping and delineation.

A. *Mapping.* The approximate location and extent of potential wetlands are shown in the wetland data layer maintained in the city of Anacortes geographic information system (GIS). In addition, the following maps and inventories, that depict areas of hydric soils and potential wetland areas, are hereby adopted by reference as amended:

1. Soils maps produced by the U.S. Department of Agriculture, National Resources Conservation Service; and
2. The National Wetlands Inventory, produced by the U.S. Fish and Wildlife Service.

B. *Reference Only.* The maps and resources cited above are to be used as a guide for the Department, project applicants, and/or property owners and may be continuously updated as new critical areas are identified. They are a reference and do not provide a final critical area designation.

C. *Identification and Delineation.* Identification of wetlands and delineation of their boundaries pursuant to this chapter must be done in accordance with the adopted federal wetland delineation manual and applicable regional supplements per WAC [173-22-035](#). The exact location of a wetland's boundary must be determined through the performance of a field investigation by a qualified professional. Evidence documenting the results of the boundary survey, including evidence of a lack of wetland indicators if no wetlands are identified, must be submitted to the city. (Ord. 3064 § 2 (Att. A), 2021)

19.70.225 General development standards.

A. All development activities and uses are prohibited in wetlands and wetland buffers, unless administered through the permit procedures above, and the performance standards described herein, and only when it is demonstrated that the activity will not result in a loss of the functions and values of the wetland through the application of mitigation sequencing in AMC [19.70.125](#), Mitigation requirements.

B. *Exemptions.* Exemptions to this chapter are listed in the provisions established in AMC [19.70.050](#), Exempt activities.

C. *Subdivisions.* The subdivision and/or short subdivision of land in wetlands and associated buffers are subject to the following:

1. Land that is located wholly within a wetland and/or its buffer may not be subdivided; and
2. Land that is located partially within a wetland and/or its buffer may be subdivided; provided each lot will meet all zoning standards in AMC Chapter [19.42](#) without encroaching into the wetland or buffer.
(Ord. 3064 § 2 (Att. A), 2021)

19.70.230 Specific wetland category development standards.

A. *Category I Wetlands.* Development activities and uses that result in alteration of Category I wetlands and their associated buffers are prohibited, unless the denial will prevent all reasonable economic use of the property. The development may be permitted through a critical area variance if it is determined to be the

minimum impact possible and a reasonable use as prescribed in AMC [19.70.050](#), Reasonable use exception and critical area variance.

B. *Category II, III and IV Wetlands*. Development activities that result in alteration of Category II, III or IV wetlands may be permitted upon demonstration, through a critical area report meeting the requirements of this chapter, that:

1. Mitigation sequencing has been applied per AMC [19.70.125\(A\)](#);
2. The proposed alteration will not degrade the quantitative and qualitative functioning of the wetland, or that any degradation can be adequately mitigated to protect or compensate for the wetland functions that are lost;
3. *Small, Hydrologically Isolated Category IV Wetlands (Less Than 1,000 Square Feet)*. The decision-maker may allow small, hydrologically isolated Category IV wetlands to be exempt from the requirement to avoid impacts (AMC [19.70.125\(A\)\(1\)](#), Mitigation requirements) and allow alteration of such wetlands if all of the following conditions are met:
 - a. The remaining mitigation sequencing actions of AMC [19.70.125\(A\)\(2\)](#) through [19.70.125\(A\)\(6\)](#) are followed;
 - b. The wetland is less than 1,000 square feet in area;
 - c. The wetland does not have unique characteristics that would be difficult to replace through standard compensatory mitigation practices;
 - d. The wetland is a low-quality Category IV wetland with a habitat score of less than five points in the adopted rating system;
 - e. The wetland does not provide significant suitable breeding habitat for native amphibian species. Suitable breeding habitat may be indicated by adequate stable and seasonal inundation that is persistent from February to at least through April and presence of thin-stemmed emergent vegetation and/or clean water;
 - f. The wetland does not contain habitat identified as essential for local populations of priority species identified by the Washington Department of Fish and Wildlife or species of local importance which are regulated as fish and wildlife habitat conservation areas in Part 3 FWHCA;
 - g. The wetland is not associated with shorelines of the state or their associated buffers;
 - h. The wetland is not associated with riparian areas or buffers;
 - i. The wetland is not part of a wetland mosaic; and

j. A mitigation plan to replace lost wetland functions and values is developed, approved, and implemented consistent with AMC [19.70.130](#), Mitigation plan requirements.

k. In order to verify that the wetland meets these exemption conditions, a critical area report for wetlands meeting the requirements in this chapter must be submitted;

4. *Small, Hydrologically Isolated Category IV Wetlands (Less Than 1,000 Square Feet)*. Wetlands less than 1,000 square feet that meet the criteria in subsection [\(B\)\(3\)](#) of this section and that do not contain federally listed species or their critical habitat are exempt from the buffer provisions contained in this chapter. In order to verify that the wetland meets this exemption, a critical area report for wetlands meeting the requirements in this chapter must be submitted. (Ord. 3064 § 2 (Att. A), 2021)

19.70.235 Required buffer areas.

A. *Buffer Requirements*. Wetland buffers must be established to protect the integrity, functions and values of the wetland. The standard buffer widths in Tables 19.70.235(B), 19.70.235(C) and 19.70.235(D) have been established in accordance with the best available science. The buffer widths must be determined based on the category of wetland, surrounding land use intensity, and the habitat score as assigned by a qualified wetland professional using the most up-to-date version of the Washington State Wetland Rating System for Western Washington.

1. *Measurement of Wetland Buffers*. All buffers must be measured horizontally from the edge of the wetland boundary as surveyed in the field. The width of the wetland buffer must be determined according to Tables 19.70.235(B), (C) and (D).

2. *Buffer Standards*. The buffer standards required by this chapter presume the existence of a dense vegetation community in the buffer adequate to protect the wetland functions and values. When a buffer lacks adequate vegetation, the decision-maker may increase the standard buffer, require buffer planting or other enhancements, and/or deny a proposal for buffer reduction or buffer averaging.

B. For the purposes of buffer determination below, land use intensity rating is as follows:

Table 19.70.235(A)

High Land Use Intensity	Land use that includes the following uses or activities: commercial, industrial, institutional, retail sales, nonresidential use in zones where the primary intent is residential, residential, high-intensity recreation (such as golf courses, ball fields), and hobby farms.
Moderate Land Use Intensity	Land use that includes the following uses or activities:

	moderate-intensity open space (parks, paved trails, and logging roads).
Low Land Use Intensity	Land use that includes the following uses or activities: forestry (cutting of trees only), low-intensity open space (such as outdoor recreation activities and natural resources preservation), unpaved trails.

C. There are three sets of buffer standards, based on these parameters:

1. Buffer widths for wetlands that have a high level of function for wildlife habitat as indicated by a habitat function score of eight or nine points on the wetland rating form:

Table 19.70.235(B)

Wetland Category	Buffer Width (feet)		
	High Intensity	Moderate Intensity	Low Intensity
Category I	300	225	150
Category II	300	225	150
Category III	300	225	150
Category IV	50	40	25

2. Buffer widths for wetlands that have a moderate level of function for wildlife habitat as indicated by a habitat function score of six or seven points on the wetland rating form:

Table 19.70.235(C)

Wetland Category	Buffer Width (feet)		
	High Intensity	Moderate Intensity	Low Intensity
Category I	150	110	75
Category II	150	110	75
Category III	150	110	75
Category IV	50	40	25

3. Buffer widths for wetlands that have a low level of function for wildlife habitat as indicated by a habitat function score of three to five points on the wetland rating form:

Table 19.70.235(D)

Wetland Category	Buffer Width (feet)		
	High Intensity	Moderate Intensity	Low Intensity
Category I	100	75	50
Category II	100	75	50
Category III	80	60	40
Category IV	50	40	25

D. *Reducing Buffer Widths.*

1. For wetlands that score six points or more for habitat function, buffer widths for high intensity may be reduced to moderate intensity if both of the following criteria are met:
 - a. A relatively undisturbed, vegetated corridor at least 100 feet wide is protected between the wetland and any other relatively undisturbed area, as defined in the 2014 wetland rating system, or any other priority habitat as defined by the Washington State Department of Fish and Wildlife. The latest definitions of priority habitats and their locations are available on the WDFW web site at: <http://wdfw.wa.gov/hab/phshabs.htm>.
 - b. The corridor must be protected for the entire distance between the wetland and the relatively undisturbed area or priority habitat by some type of legal protection such as a conservation easement. Presence or absence of a nearby habitat must be confirmed by a qualified biologist.
2. The measures in Table 19.70.235(E) are implemented, where applicable, to minimize the impacts of the adjacent land uses.
3. For wetlands that score three to five habitat points, only the measures in Table 19.70.250(E) are required for the use of moderate intensity buffer widths.
4. If an applicant chooses not to apply the mitigation measures in Table 19.70.250(E), or is unable to provide a protected corridor where available, then high intensity buffer widths must be used.

Table 19.70.235(E)

Disturbance	Required Measures to Minimize Impacts
Lights	• Direct lights away from wetland
Noise	• Locate activity that generates noise away from wetland

Disturbance	Required Measures to Minimize Impacts
	• If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source • For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10-foot heavily vegetated buffer strip immediately adjacent to the outer wetland buffer
Toxic runoff	• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered • Establish covenants limiting use of pesticides within 150 feet of wetland • Apply integrated pest management
Stormwater runoff	• Retrofit stormwater detention and treatment for roads and existing adjacent development • Prevent channelized flow from lawns that directly enters the buffer • Use low intensity development techniques (for more information refer to the stormwater manual)
Change in water regime (increase or decrease in the frequency, duration, timing, extent, depth or variability of water in a wetland)	• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns
Pets and human disturbance	• Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion • Place wetland and its buffer in a separate tract or protect with a conservation easement
Dust	• Use best management practices to control dust

E. *Increasing Buffer Widths.* Buffer widths may be increased, on a case-by-case basis, as determined by the decision-maker. This determination must be supported by appropriate documentation showing that it is necessary to protect wetland functions and values. Documentation must include, but is not limited to, any of the following:

1. The wetland is used by a plant or animal species listed by the federal government or the state as endangered, threatened, candidate, sensitive, monitored, or documented priority species or habitats, or the wetland is essential or outstanding habitat for those species or has unusual nesting or resting sites such as heron rookeries or raptor nesting trees; or

2. The adjacent land has slopes greater than 15 percent and is susceptible to severe erosion, and erosion-control measures will not effectively prevent adverse wetland impacts; or
3. The adjacent land has minimal vegetative cover on slopes greater than 30 percent. In lieu of increasing the buffer width where existing buffer vegetation is inadequate to protect the wetland functions and values, development and implementation of a wetland buffer restoration/enhancement plan in accordance with AMC [19.70.245](#), Compensatory mitigation performance standards and requirements, may be substituted.

F. *Averaging Buffer Widths*. The decision-maker may allow averaging of wetland buffer widths on a case-by-case basis when the critical area report demonstrates that the following criteria are met:

1. There is not a feasible alternative to the site design that could be accomplished without buffer averaging;
2. The buffer averaging improves the functions or values of the wetland, either through preservation of total buffer area or enhancement of buffer areas including the creation of connectivity and corridors;
3. The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer;
4. The wetland contains variation in sensitivity due to existing physical characteristics or the character of the buffer varies in slope, soils, or vegetation, and the wetland would benefit from a wider buffer in places and would not be adversely impacted by a narrow buffer in other places;
5. The buffer width at its narrowest point is not reduced to less than 75 percent of the standard width, for Category I and II. For Category III and Category IV is no less than **75 percent** ~~unless for the purpose of creating connectivity and corridors, in which case no less than 50 percent.~~

G. *Measurement of Wetland Buffers*. All buffers must be measured perpendicular from the wetland boundary as surveyed in the field. The buffer for a wetland created, restored, or enhanced as a compensation for approved wetland alterations must be the same as the buffer required for the category of the created, restored, or enhanced wetland.

H. *Buffers on Mitigation Sites*. Buffer widths must be applied to mitigation sites consistent with the wetland ratings and buffer requirements of this chapter for subsequent development proposals based on expected category of the wetland once the mitigation actions are taken. Only fully vegetated buffers with predominantly native plants will be included in the new buffer area. Lawns, walkways, driveways, and other mowed or paved areas will not count towards the required buffer calculations.

I. *Buffer Maintenance*. Except as otherwise specified or allowed in accordance with this chapter, wetland buffers must be retained in an undisturbed or enhanced condition. In the case of compensatory mitigation sites, removal of invasive nonnative weeds is required for the duration of the mitigation bond.

J. *Buffer Impacts*. When buffer impacts occur, compensatory mitigation must be provided at a minimum ratio of one-to-one for the area impacted. The mitigation must occur on the same site when feasible or within the same wetland system preferably. The mitigation must ensure that the wetland functions and values are not diminished due to the buffer impacts.

K. *Stormwater Management Facilities*. Stormwater management facilities may be allowed in Category III and IV wetland buffers if they meet all of the criteria identified below:

1. The wetland is classified as a Category III or a Category IV wetland with a habitat score of three to five points or less; and
2. There will be “no net loss” of functions and values of the wetlands; and
3. The wetland does not contain a breeding population of any native amphibian species; and
4. The hydrologic functions of the wetland can be improved as outlined in questions 3, 4, and 5 of Chart 4 and questions 2, 3, and 4 of Chart 5 in the “Guide for Selecting Mitigation Sites Using a Watershed Approach” (available here: <http://www.ecy.wa.gov/biblio/0906032.html>); or the wetland is part of a priority restoration plan that achieves restoration goals identified in a shoreline master program or other local or regional watershed plan; and
5. The wetland lies in the natural routing of the runoff, and the discharge follows the natural routing; and
6. All regulations regarding stormwater and wetland management are followed, including but not limited to local and state wetland and stormwater codes, manuals, and permits; and
7. Modifications will require permits. Existing functions and values that are lost would have to be compensated/replaced through an approved mitigation plan.

L. *Setbacks From Buffers*. Buildings, structures, paving, and other hard surfacing must be set back a minimum distance of 10 feet from the edge of the wetland buffer, or edge of the wetland if no buffer is required, unless otherwise determined by the decision-maker that a smaller distance would meet the intent of this subsection. This setback is to avoid conflicts with tree branches and/or critical root zones of trees that are in the buffer or will be planted in the buffer. The following may be allowed in the building setback from the buffer if they do not cause damage to the critical root zone of trees in the buffer:

1. Landscaping;
2. Uncovered decks, roof eaves and overhangs, unroofed stairways and steps;
3. Pervious ground surfaces, such as driveways, patios, and parking may be allowed; provided, that it is engineered as a permeable pavement system as defined in this chapter. Such improvements may be subject to the requirements in AMC Chapter [19.76](#), Stormwater.

M. *Functionally Separated and Isolated Buffers*. Consistent with the definition of “buffer” in this chapter, areas that are functionally isolated and physically separated from a wetland due to existing, legally established roadways, railroads or other legally established structures or paved areas eight feet or more in width that occur between the area in question and the wetland must be considered physically isolated and functionally separated buffer. Once determined by the Director, based on a submitted critical area report, to be a physically separated and functionally isolated wetland buffer, development proposals are allowed in these areas. (Ord. 4015 § 2 (Att. A), 2022; Ord. 3064 § 2 (Att. A), 2021)

19.70.240 Critical area report additional requirements.

A. *Additional Report Contents for Wetlands*. In addition to the minimum report contents required per AMC [19.70.115](#), Critical area reports, wetland reports must also include:

1. For each wetland identified on site and off site within 300 feet of the project site provide: the wetland rating, including a description of and score for each function, per wetland ratings (AMC [19.70.215](#)) required buffers (AMC [19.70.235](#)); hydrogeomorphic classification; wetland acreage based on a professional survey from the field delineation (acreages for on-site portion and entire wetland area including off-site portions); Cowardin classification of vegetation communities; habitat elements; soil conditions based on site assessment and/or soil survey information; and to the extent possible, hydrologic information such as location and condition of inlets/outlets (if they can be legally accessed), estimated water depths within the wetland, and estimated hydroperiod patterns based on visual cues (e.g., algal mats, drift lines, flood debris, etc.). Provide acreage estimates, classifications, and ratings based on entire wetland complexes, not only the portion present on the proposed project site;
2. A discussion of the potential impacts to the wetland(s) associated with anticipated hydroperiod alterations from the project;
3. A description of the proposed actions, including an estimation of acreages of impacts to wetlands and buffers based on the field delineation and survey and an analysis of site development alternatives, including a no-development alternative;
4. An assessment of the probable cumulative impacts to the wetlands and buffers resulting from the proposed development;
5. A description of reasonable efforts made to apply mitigation sequencing pursuant to AMC [19.70.125](#), Mitigation requirements, to avoid, minimize, and mitigate impacts to critical areas and a discussion of measures, including avoidance, minimization, and compensation, proposed to preserve existing wetlands and restore any wetlands that were degraded prior to the current proposed land-use activity;
6. A conservation strategy for habitat and native vegetation that addresses methods to protect and enhance on-site habitat and wetland functions; and

7. An evaluation of the functions of the wetland and adjacent buffer. Include reference for the method used and data sheets.

B. *Additional Information.* When appropriate due to the proposed impacts or the project area conditions, the Director may also require the critical area report to include:

1. A request for consultation with the Washington State Department of Fish and Wildlife (DFW), Washington State Department of Ecology (Ecology), local Native American tribes, and/or other appropriate agency;
2. Copies of the Joint Aquatic Resource Permit Application (JARPA) and related approvals, such as a Hydraulic Project Approval (HPA) from the Washington Department of Fish and Wildlife (WDFW), when applicable to the project; and
3. Detailed surface and subsurface hydrologic features both on and adjacent to the site. (Ord. 3064 § 2 (Att. A), 2021)

19.70.245 Compensatory mitigation performance standards and requirements.

A. *Compensatory Mitigation Plan.* When a project involves wetland and/or buffer impacts, a compensatory mitigation plan must be included as part of the required critical area report. Compensatory wetland mitigation plans must meet the minimum requirements of AMC [19.70.125](#), Mitigation requirements, and demonstrate compliance with AMC [19.70.130](#), Mitigation plan requirements. Full guidance can be found in Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication No. 06-06-011b, March 2006, or as revised). The mitigation plan must meet the following additional standards:

1. Description of the existing wetland and buffer areas proposed to be impacted. Include acreage (or square footage), water regime, vegetation, soils, landscape position, surrounding land uses, and functions. Also describe impacts in terms of acreage by Cowardin classification, hydrogeomorphic classification, and wetland rating, based on wetland ratings (AMC [19.70.215\(B\)](#));
2. Description of the compensatory mitigation site, including location and rationale for selection. Include an assessment of existing conditions: acreage (or square footage) of wetlands and uplands, water regime, sources of water, vegetation, soils, landscape position, surrounding land uses, and functions. Estimate future conditions in this location if the compensation actions are not undertaken (i.e., how would this site progress through natural succession);
3. A description of the proposed actions for compensation of wetland and upland areas affected by the project. Include overall goals of the proposed mitigation, including a description of the targeted functions, hydrogeomorphic classification, categories of wetlands, and mitigation ratios applied (if ratio approach used);

4. A description of the proposed mitigation construction activities, construction/installation notes, and timing of activities;
5. A discussion of ongoing management practices that will protect wetlands after the project site has been developed, including proposed monitoring and maintenance programs (for remaining wetlands and compensatory mitigation wetlands);
6. Proof of establishment of notice on title for the wetlands and buffers on the project site, including the compensatory mitigation areas; and
7. The scaled plan sheets for the compensatory mitigation must contain, at a minimum:
 - a. An accurate depiction of the existing wetland and buffers, proposed areas of wetland and/or buffer impacts, location of proposed wetland and/or buffer compensation actions;
 - b. Existing topography, ground-proofed, at two-foot contour intervals in the zone of the proposed compensation actions if any grading activity is proposed to create the compensation area(s). Also existing cross-sections of on-site wetland areas that are proposed to be impacted and cross-section(s) (estimated one-foot intervals) for the proposed areas of wetland or buffer compensation;
 - c. Surface and subsurface hydrologic conditions, including an analysis of existing and proposed hydrologic regimes for enhanced, created, or restored compensatory mitigation areas. Also, illustrations of how data for existing hydrologic conditions were used to determine the estimates of future hydrologic conditions;
 - d. Conditions expected from the proposed actions on site, including future hydrogeomorphic types, vegetation community types by dominant species (wetland and upland), and future water regimes;
 - e. Required wetland buffers for existing wetlands and proposed compensation areas. Also, identify any zones where buffers are proposed to be reduced or enlarged outside of the standards identified in this chapter;
 - f. A plant schedule for the compensation area, including all species by proposed community type and water regime, size and type of plant material to be installed, spacing of plants, typical clustering patterns, typical plant installation details and notes, total number of each species by community type, timing of installation; and
 - g. Performance standards (measurable standards reflective of years post-installation) for upland and wetland communities, monitoring plan, contingency plan, and maintenance schedule, and actions. Standards for success must be established based on the performance standards identified and the functions and values being mitigated based on the guidance in Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication No. 06-06-011b, March 2006, or as revised).

B. *Requirements for Compensatory Mitigation.*

1. Compensatory mitigation for alterations to wetlands may be used only for impacts that cannot be avoided or minimized, except as otherwise exempted in AMC [19.70.230](#), Specific wetland category development standards, and must achieve equivalent or greater biologic functions. Compensatory mitigation plans must be consistent with Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication No. 06-06-011b, March 2006, or as revised).
2. Mitigation ratios must be consistent with subsection [\(J\)](#) of this section.
3. Mitigation requirements may also be determined using the credit/debit tool described in “Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Final Report March 2012” (Ecology Publication No. 10-06-011, March 2012, or as revised) consistent with subsection [\(H\)](#) of this section.

C. *Compensating for Lost or Impacted Wetland Functions.* Compensatory mitigation must address the functions and values affected by the proposed project, with an intention to achieve functional equivalency or improvement of functions and values. The goal for the compensatory mitigation must be to provide similar wetland functions and values as those lost, except when either:

1. The lost wetland provides minimal functions and values, and the proposed compensatory mitigation action(s) will provide equal or greater functions and values or will provide functions and values shown to be limited within a watershed through a formal Washington State watershed assessment plan or protocol; or
2. Out-of-kind replacement of wetland type or functions and values will best meet watershed goals formally identified by the city, such as replacement of historically diminished wetland types.

D. *Preference of Mitigation Actions.* Methods to achieve compensation for wetland functions and values must be approached in the following order of preference:

1. *Restoration.* The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former or degraded wetland. Restoration of wetlands includes reestablishment and rehabilitation.
 - a. *Reestablishment.* Returning natural or historic functions to a former wetland. Reestablishment results in a gain in wetland acres (and functions). Activities could include removing fill material, plugging ditches, or breaking drain tiles.
 - b. *Rehabilitation.* Repairing natural or historic functions of a degraded wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres. Activities could involve breaching a dike to reconnect wetlands to a floodplain or return tidal influence to a wetland.

2. *Creation.* Creation (establishment) of wetlands on disturbed upland sites, such as those with vegetative cover consisting primarily of nonnative species. This should be attempted only when there is an adequate source of water and it can be shown that the surface and subsurface hydrologic regime is conducive to the wetland community that is anticipated in the design.
3. *Enhancement.* Enhancement of significantly degraded wetlands in combination with restoration or creation. Enhancement alone will result in a loss of wetland acreage and is less effective at replacing the functions and values lost. Enhancement should be part of a mitigation package that includes replacing the impacted area and meeting appropriate ratio requirements.
4. *Preservation.* Preservation of high-quality, at-risk wetlands as compensation is generally acceptable when done in combination with restoration, creation, or enhancement; provided, that a minimum of one-to-one acreage replacement is provided by reestablishment or creation. Preservation of high-quality, at-risk wetlands and habitat may be considered as the sole means of compensation for wetland impacts when the following criteria are met:
 - a. Proposed wetland impacts will not have a significant adverse impact on habitat for listed fish, or other ESA-listed species;
 - b. There is no net loss of habitat functions within the watershed or basin;
 - c. Mitigation ratios for preservation as the sole means of mitigation must generally start at 20-to-one. Specific ratios should depend upon the significance of the preservation project and the quality of the wetland resources lost;
 - d. The impact area is small (generally less than one-half acre) and/or impacts are occurring to a low-functioning system (Category III or IV wetland); and
 - e. All preservation sites must include buffer areas adequate to protect the habitat and its functions from encroachment and degradation.
5. *Wetland Bank or Advanced Wetland Mitigation.* For future use since no current banks have a service area in Anacortes.

E. *Type and Location of Compensatory Mitigation.* Unless it is demonstrated that a higher level of ecological functioning would result from an alternative mitigation approach, compensatory mitigation for ecological functions should be either in-kind and on site, or in-kind and within the same stream reach, sub-basin, or drift cell (if estuarine wetlands are impacted). Compensatory mitigation actions must be conducted within the same sub-basin or on the site of the alteration, except when the following apply:

1. The conditions in subsection (B) of this section are met.
2. There are no reasonable opportunities on site or within the sub-basin (e.g., on-site options would require elimination of high-functioning upland habitat), or opportunities on site or within the sub-basin do

not have a high likelihood of success based on a determination of the capacity of the site to compensate for the impacts. Considerations should include:

- a. Anticipated replacement ratios for wetland mitigation;
- b. Buffer conditions and proposed widths;
- c. Available water to maintain anticipated hydrogeomorphic classes of wetlands when restored;
- d. Proposed flood storage capacity, and potential to mitigate riparian fish and wildlife impacts (such as connectivity);
- e. Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the impacted wetland;
- f. Off-site locations must be in the same sub-basin, unless watershed goals for water quality, flood storage or conveyance, habitat, or other wetland functions have been established by the city and strongly justify location of mitigation at another site; and
- g. The design for the compensatory mitigation project needs to be appropriate for its location (i.e., position in the landscape). Therefore, compensatory mitigation should not result in the creation, restoration, or enhancement of an atypical wetland. An atypical wetland refers to a compensation wetland (e.g., created or enhanced) that does not match the type of existing wetland that would be found in the geomorphic setting of the site (i.e., the water source(s) and hydroperiod proposed for the mitigation site are not typical for the geomorphic setting). Likewise, it should not provide exaggerated morphology or require a berm or other engineered structures to hold back water. For example, excavating a permanently inundated pond in an existing, seasonally saturated or inundated wetland is one example of an enhancement project that could result in an atypical wetland. Another example would be excavating depressions in an existing wetland on a slope, which would require the construction of berms to hold the water.

F. *Wetland Mitigation Banks*. Credits from a wetland mitigation bank certified under Chapter [173-700](#) WAC may be used to compensate for impacts located within the service area specified in the mitigation bank instrument, if:

1. The proposal would provide appropriate compensation for the proposed impacts;
2. The impact site is located in the service area of the bank;
3. The proposed use of credits is consistent with the terms and conditions of the certified mitigation bank instrument; and
4. Replacement ratios using bank credits are consistent with replacement ratios specified in the certified mitigation bank instrument.

G. *In-Lieu Fee Mitigation*. Credits from an approved in-lieu fee (ILF) program may be used when all of the following apply:

1. The decision-maker determines that it would provide environmentally appropriate compensation for the proposed impacts.
2. The proposed use of credits is consistent with the terms and conditions of the approved ILF program instrument.
3. Projects using ILF credits must have debits associated with the proposed impacts calculated by the applicant's qualified wetland professional using the credit assessment method specified in the approved instrument for the ILF program.
4. The impacts are located within the service area specified in the approved ILF instrument.

H. *Permittee-Responsible Mitigation*. This type of mitigation is defined in [33 CFR 332](#) as “an aquatic resource restoration, establishment, enhancement and/or preservation activity undertaken by the permittee (or an authorized agent or contractor) to provide compensatory mitigation for which the permittee retains full responsibility.” The permittee performs the mitigation either before the project impact occurs and before any project impact permit is issued (advance permittee-responsible mitigation) or at the same time as the project impact is occurring after the project impact permit is issued (concurrent permittee-responsible mitigation). The permittee is ultimately responsible for implementation and success of the mitigation. For advance mitigation, the permittee generates mitigation credits that may be used to compensate for future wetland or buffer impacts. Only the permittee may use the advance mitigation credits. Permittee-responsible mitigation may occur at the site of the permitted impacts or at an off-site location within the same watershed. Permittee-responsible mitigation must be used only if the applicant's qualified wetland professional demonstrates to the decision-maker's satisfaction that the proposed approach is ecologically preferable to use of a bank or ILF program, consistent with the criteria in this section.

I. *Alternative Mitigation Plan*. The decision-maker may approve an alternative wetland mitigation plan that is based on best available science. Proposed alternative mitigation plans must provide an equivalent or better level of protection of wetland functions and values than would be provided by the strict application of this chapter.

1. The following will be considered in the approval of an alternative mitigation plan:
 - a. The plan uses a watershed approach consistent with [Selecting Wetland Mitigation Sites Using a Watershed Approach \(Western Washington\)](#) (Ecology Publication No. 09-06-032, Olympia, WA, December 2009).
 - b. Creation or enhancement of a larger system of natural areas and open space is preferable to the preservation of many individual small habitat areas.

- c. Mitigation according to subsection (D) of this section is not feasible due to site constraints including but not limited to parcel size, stream type, wetland category, or geologically hazardous areas.
- d. There is a clear potential for success of the proposed compensation at the identified site.
- e. The plan must contain clear and measurable standards for achieving compliance with the specific provisions of the plan, consistent with AMC [19.70.130](#), Mitigation plan requirements.
- f. The plan must be reviewed and approved as part of the overall approval of the proposed use.
- g. A wetland of a different type may be justified based on regional needs or functions and values; the replacement ratios may not be reduced or eliminated unless the reduction results in a preferred environmental alternative.
- h. Mitigation guarantees must meet the minimum requirements as outlined in AMC [19.70.150](#), Financial guarantee requirements.
- i. Qualified professionals in each of the critical areas addressed must prepare the plan.
- j. The city may consult with agencies with expertise and jurisdiction over the critical areas during the review to assist with analysis and identification of appropriate performance measures that adequately safeguard critical areas.

J. *Wetland Mitigation Ratios.* The ratios below are based on the assumption that the rehabilitation or enhancement actions implemented represent the average degree of improvement possible for the site. Proposals to implement more effective rehabilitation or enhancement actions may result in a lower ratio, while less effective actions may result in a higher ratio. The distinction between rehabilitation and enhancement is not clear-cut. Instead, rehabilitation and enhancement actions span a continuum. Proposals that fall within the gray area between rehabilitation and enhancement will result in a ratio that lies between the ratios for rehabilitation and the ratios for enhancement.

Table 19.70.245 Wetland Mitigation Ratios

Category and Type of Wetland	Creation or Reestablishment	Rehabilitation Only	Re-Est or Creation (R/C) and Rehab (RH)	Re-Est or Creation (R/C) and Enhancement (E)	Enhancement Only
Category I Mature Forested	6:1	12:1	1:1 R/C & 10:1 RH	1:1 R/C & 20:1 E	24:1
Category I –	4:1	8:1	1:1 R/C &	1:1 R/C &	16:1

Category and Type of Wetland	Creation or Reestablishment	Rehabilitation Only	Re-Est or Creation (R/C) and Rehab (RH)	Re-Est or Creation (R/C) and Enhancement (E)	Enhancement Only
based on score for functions			6:1 RH	12:1 E	
Category I Natural Heritage Site	Not allowed	6:1 Rehabilitation of a Natural Heritage Site	Not allowed	Not allowed	Case-by-case
Category I Bog	Not allowed	6:1 Rehabilitation of a bog	Not allowed	Not allowed	Case-by-case
Category I Estuarine	Case-by-case	6:1 Rehabilitation of an estuarine wetland	Case-by-case	Case-by-case	Case-by-case
Category II	3:1	6:1	1:1 R/C & 4:1 RH	1:1 R/C & 8:1 E	12:1
Category III	2:1	4:1	1:1 R/C & 2:1 RH	1:1 R/C & 4:1 E	8:1
Category IV	1.5:1	3:1	1:1 R/C & 1:1 RH	1:1 R/C & 2:1 E	6:1

K. *Buffer Mitigation Ratios.* Impacts to buffers must be mitigated at a one-to-one ratio. Compensatory buffer mitigation must replace those buffer functions lost from development.

L. *Mitigation Performance Standards.* Wetland mitigation plans must be consistent with AMC [19.70.125](#), Mitigation requirements, and AMC [19.70.130](#), Mitigation plan requirements, and Wetland Mitigation in Washington State, Part 1: Agency Policies and Guidance (Version 1, Ecology Publication No. 06-06-011a), or as amended, and best available science.

M. *Minimum Standards.* The design standards in this section must be incorporated into mitigation plans submitted to the city for impacts to wetlands and/or wetland buffers. The following standards apply to any mitigation proposed within Category I, II, III and IV wetlands and their buffers. Modifications to these design standards consistent with the guidance in Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans (Version 1) (Ecology Publication No. 06-06-011b, March 2006, or as revised) may be considered for approval by the decision-maker as alternatives to the following standards:

1. Plants native to the region (not introduced, nonnative or exotic species) must be used.
2. Plant species selection must be consistent with the existing or projected hydrologic regime, including base water levels and stormwater event fluctuations.
3. Plant species selection must be consistent with the site environmental conditions such as slope, aspect, soils and exposure to sun, wind and rain.
4. Plants should be commercially available or available from local sources.
5. Native plant species high in food and cover value for fish and wildlife should be prioritized, as appropriate for the site.
6. Plant selection must be approved by a qualified professional.
7. The following standards apply to wetland design and construction:
 - a. For wetland creation sites, preliminary investigations of existing hydrology at the site must be completed to confirm that the site has adequate source hydrology (e.g., high groundwater, precipitation or riverine flooding) to support wetland conditions.
 - b. Water depth in areas of seasonal or occasional inundation must not exceed three feet (0.914 meters), unless the proposed mitigation is compensating for impacts to unvegetated/open water areas.
 - c. If creating or rehabilitating a slope wetland, the grade or slope within the wetland must not exceed six percent, unless otherwise approved by the decision-maker.
 - d. Slopes within the wetland contributing basin and the buffer zone must not be steeper than three-to-one (horizontal to vertical).
 - e. The wetland (excluding the buffer area) should not contain more than 20 percent unvegetated/open water areas as measured at the seasonal high water mark, unless the mitigation is compensating for vegetated.
 - f. Site soils must be free of contamination and/or hazardous materials, and must have adequate organic content and porosity to support the proposed native plant community.
 - g. Planting densities and placement of plants should be determined by a qualified professional and shown on the design plans.
8. The planting plan must be approved by the city.
9. Stockpiling soil and construction materials should be confined to upland areas and contract specifications should limit stockpiling of earthen materials to durations in accordance with city clearing and grading standards, unless otherwise approved by the city.

10. Planting instructions must be submitted which describe placement, diversity, and spacing of seeds, tubers, bulbs, rhizomes, sprigs, plugs, and transplanted stock.
11. Controlled release fertilizer (if required) must be used in upland areas only (buffers and other nonwetland areas) and must be installed into the planting hole only at the time of planting. No fertilizer must be applied to the ground surface.
12. An irrigation system must be installed or watering afforded by trucks or hoses to provide water for installed plants and seeded areas to supplement rainfall to ensure that plants receive approximately one-half inch of water per week during the dry season of the first two years after plant installation.
13. All construction specifications and methods must be approved by a qualified professional and the city.
14. Construction management provided must be provided by a qualified professional. Ongoing work on site must be inspected by the city. (Ord. 3064 § 2 (Att. A), 2021)

Article III. Fish and Wildlife Habitat Conservation Areas

19.70.310 Description and purpose.

A. Fish and wildlife habitat conservation areas are lands managed for maintaining populations of species in suitable habitats within their natural geographic distribution so that the habitat available is sufficient to support viable populations over the long term and isolated subpopulations are not created. In addition to their intrinsic value, certain species of fish and wildlife represent important historic, cultural, recreational and economic resources.

B. It is the purpose of this chapter to protect fish and wildlife populations and their associated habitats and provide special consideration to conservation or protection measures necessary to preserve or enhance anadromous species. (Ord. 3064 § 2 (Att. A), 2021)

19.70.315 Designation.

A. Fish and wildlife habitat conservation areas (FWHCAs) are designated as follows:

1. Critical saltwater habitats, which include all kelp beds, eelgrass beds, spawning and holding areas for forage fish, such as herring, smelt and sand lance; subsistence, commercial and recreational shellfish

beds; mudflats, intertidal habitats with vascular plants, and areas with which priority species have a primary association;

2. Naturally occurring ponds under 20 acres with submerged aquatic beds that provide fish or wildlife habitat as further defined in WAC [365-190-130\(4\)\(e\)](#);

3. **Riparian Corridors as defined in AMC 19.70.330 and** Waters of the state, including streams as classified in WAC [222-16-030](#), including but not limited to Whistle Creek, Happy Valley Stream, Ace of Hearts Creek, Beaver Brook, Cranberry Creek, Clyde Creek, Anaco Bourn, Morrison Run, Cedar Springs, Weaverling Rill, Miller Creek, Aqua Creek, Howard Creek, Summit Creek, and March's Run;

4. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;

5. Areas with which anadromous fish species have a primary association;

6. State natural area preserves, natural resource conservation areas, and state wildlife areas as established by Washington State Department of Natural Resources;

7. Areas of rare plant species and high-quality ecosystems as identified by the Washington State Department of Natural Resources through the Natural Heritage Program in Chapter [79.70](#) RCW;

8. State priority habitats and areas associated with state priority species defined and listed by the State Department of Fish and Wildlife in the Priority Habitats and Species List, Updated January 2019. Priority habitats and species known to be identified and mapped by WDFW

(<http://apps.wdfw.wa.gov/phsontheweb/>) in Anacortes include, but may not be limited to, the following:

- a. Biodiversity areas;
- b. Bald eagle habitat protected pursuant to the Federal Bald and Golden Eagle Protection Act;
- c. Chinook/fall chinook salmon;
- d. Coho salmon;
- e. Great blue heron nest sites and breeding areas;
- f. Osprey nest sites;
- g. Peregrine falcon nest sites and breeding areas;
- h. Purple martin breeding areas;
- i. Resident coastal cutthroat trout;
- j. Winter steelhead trout;
- k. Water fowl concentrations.

9. The following habitats and species of local importance have been designated by the city:
 - a. The Anacortes Community Forestlands.
 - b. The March Point Heronry.
 - c. The one and one-half acre “Park Reserve” at Cap Sante bounded by Third Street, East Park Drive, and Curtis Drive.
 - d. Ship Harbor Wetland.
 - e. Cannery Pond Wetland.
 - f. Category II wetlands within the watersheds of Little Cranberry Lake, Whistle Lake, and Hearth Lake and with seasonal surface water connections.
 - g. Smiley’s Bottom Wetland.

B. In addition to the FWHCAs identified in subsection [\(A\)\(9\)](#) of this section, additional habitats and species of local importance may be designated by the city using the following process:

1. *Designation Process.* The city may consider nominations for habitat areas and species to be designated as locally important on an annual basis as part of the annual comprehensive plan and development regulation update process, based on the following criteria:
 - a. Local populations of native species that are in danger of extirpation based on existing trends, likely to become endangered, or are vulnerable or declining;
 - b. The habitat represents either a high-quality native habitat, or the habitat has a high potential to recover to a suitable condition and which is of limited availability, is highly vulnerable to alteration, or provides landscape connectivity which contributes to the integrity of the surrounding landscape;
 - c. The species or habitat has recreation, commercial, game, tribal, or other intrinsic value;
 - d. Long-term persistence of a species is dependent on protection, maintenance, and/or restoration of the nominated habitat;
 - e. Protection by other county, state, or federal policies, laws, regulations, or nonregulatory tools is not adequate to prevent degradation of the species or habitat; and
 - f. Without protection, there is a likelihood that the species or habitat will be diminished.
2. The nomination must indicate whether specific habitat features are to be protected (for example, nest sites, breeding areas, and nurseries) or whether the habitat or ecosystem is being nominated in its entirety.

3. The nomination may include management strategies for the species or habitats, which must be supported by best available science. Where restoration of habitat is proposed, a specific plan for restoration must be provided.

C. All areas within the city meeting one or more of these criteria, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this chapter. (Ord. 3064 § 2 (Att. A), 2021)

19.70.320 Mapping.

A. *Mapping.* The approximate location and extent of some FWHCAs are shown in the data layers maintained in the city of Anacortes geographic information system (GIS). In addition, the following maps and inventories are hereby adopted by reference, as amended:

1. [Washington Department of Fish and Wildlife Priority Habitat and Species maps](#);
2. Washington Department of Natural Resources, [Official Water Type Reference maps](#);
3. Washington Department of Natural Resources [Puget Sound Intertidal Habitat Inventory maps](#);
4. Washington Department of Natural Resources [Shore Zone inventory](#);
5. Washington Department of Natural Resources [Natural Heritage Program mapping data](#);
6. Washington Department of Health Annual [Inventory of Shellfish Harvest Areas](#);
7. Anadromous and resident fish distribution maps contained in the habitat limiting factors reports published by the Washington Conservation Commission and others;
8. Washington Department of Natural Resources State Natural Area Preserves and Natural Resource Conservation Area maps; and
9. NOAA Northwest Region Critical Habitat Mapper or equivalent source:
<http://www.nmfs.noaa.gov/pr/species/criticalhabitat.htm>.

B. *Reference Only.* The maps and resources cited above are to be used as a guide for the city of Anacortes Planning, Community and Economic Development Department, project applicants, and/or property owners and may be continuously updated as new critical areas are identified. They are a reference and do not provide a final critical area designation. (Ord. 3064 § 2 (Att. A), 2021)

19.70.325 General development standards for all FWHCAs.

A. All new development activities and uses are prohibited from habitat conservation areas and their buffers **or Riparian Management Zones (RMZs) defined in AMC 19.70.330.B.1** except in accordance with this chapter unless within shoreline jurisdiction and hereby regulated by AMC Chapter [19.72](#), Shorelines. Alterations of FWHCAs or their buffers **RMZs** is prohibited except as otherwise allowed by this chapter and may occur only if the proposed alteration of the habitat and any associated mitigation proposed does not degrade the functions and values of the habitat.

B. *Exemptions.* Exemptions to this chapter are listed in the provisions established in AMC [19.70.040](#), Exempt activities.

C. *Approvals and the Best Available Science.* Any approval of alterations or impacts to an FWHCA area must be supported by the best available science as described in the required critical area report.

D. *Approvals of Activities May Be Conditioned.* The decision-maker may condition approvals of activities allowed within or adjacent to a fish and wildlife habitat conservation area as necessary to minimize or mitigate any potential adverse impacts. Conditions will be based on the best available science and may include, but are not limited to, the following:

1. Establishment of buffers/**RMZs** ;
2. Preservation of important vegetation and/or habitat features such as snags and downed wood specific to the priority wildlife species in the fish and wildlife habitat conservation area;
3. Limitation of access to the habitat area, including fencing to deter unauthorized access;
4. Seasonal restriction of construction activities;
5. Establishment of a duration and timetable for periodic review of mitigation activities; and
6. Requirement of a performance bond, when necessary, to ensure completion and success of proposed mitigation.

E. *Seasonal Restrictions.* When a species is more susceptible to adverse impacts during specific periods of the year, seasonal restrictions may apply. Larger buffers/**RMZs** may be required and activities may be further restricted during the specified season.

F. *Subdivisions.* The subdivision and short subdivision of land in FWHCAs and associated buffers/**RMZs** is subject to the following:

1. Land that is located wholly within an FWHCA or its buffer/**RMZs** may not be subdivided;

2. Land that is located partially within an FWHCA may be subdivided only if an accessible and contiguous portion of each new lot that meets the minimum lot size requirements for the zone is located outside of the FWHCA and its buffer/RMZ;
3. Access roads and utilities serving a proposed subdivision may be permitted within the FWHCA and associated buffers/RMZ only if the applicant's qualified professional(s) demonstrate, and the decision-maker determines, that no other feasible alternative exists, all unavoidable impacts are fully mitigated, and the use is consistent with this chapter;
4. This subsection does not authorize new access roads and utilities in FWHCAs and associated buffers/RMZs for existing subdivisions.

G. *Nonindigenous Species*. No plant, wildlife, or fish species not indigenous to Fidalgo Island may be introduced to an FWHCA unless authorized by a state or federal permit approval. (Ord. 3064 § 2 (Att. A), 2021)

19.70.330 Specific standards for streams— Riparian Corridors.

A. *Typing*. Stream Riparian Watercourse types must be classified according to WAC [222-16-030](#). Stream classifications must include the following:

1. Type F streams watercourses are those that provide fish habitat;
2. Type Np streams— watercourses are perennial waters that do not contain fish habitat; and
3. Type Ns streams watercourses are seasonal waters that do not contain fish habitat, but are physically connected by an above-ground channel system to Type F or Np waters.
4. In the case that available information on stream watercourse typing is unclear, stream watercourse typing will be performed by a qualified professional, provided by the applicant, using a site visit, mapping, and all available information.

B. Riparian corridors

1. Riparian corridors, consist of the riparian watercourse and the riparian management zone. The riparian watercourse is the watercourse of Type S, F, Np, and Ns waters defined in WAC 222-16-030 and 222-16-031 that have fish or wildlife habitat. Pipes, culverts, flow control facilities, water quality facilities, and stormwater conveyances are not regulated as riparian watercourses. The Riparian Management Zone (RMZ) is the area within no less than 100 feet of the riparian watercourse measured horizontally landward from the ordinary high water mark of the watercourse as surveyed in the field, or from the top of the bank if the ordinary high water mark cannot be determined. In watercourses with braided channels or alluvial fans, the ordinary high water mark shall be determined so as to include the entire stream feature. The riparian management zone may exceed 100 foot based on Section 19.70.330.B.3.

2. When a pipe or culvert connecting Type S, F, Np, and Ns waters per WAC 222-16-030 and 222-16-031 that have fish habitat downstream and upstream from the pipe or culvert is daylighted, the water formerly in the pipe or culvert will be regulated as a riparian watercourse, and the area adjacent to that watercourse will be regulated as a riparian management zone, as defined in subsection 19.70.330 B (1). This subsection 19.70.330 does not apply when the pipe or culvert is removed to provide a publicly owned facility designed primarily for water quality treatment, flow control, or stormwater conveyance.

3. Parcels proposed for development within a riparian corridor must provide a critical areas report prepared by a qualified professional describing the functions and values of the Riparian Management Zone (RMZ) and proposed RMZ based on the Washington Department of Fish and Wildlife (WDFW) Site Potential Tree Height (SPTH). In no case will the RMZ be less than 100 feet. WDFW Mapping tool:

<https://gispublic.dfw.wa.gov/arcgis/rest/services/SPTH/SitePotentialTreeHeightPublic/MapServer>

C. Development standards for parcels with riparian corridors

1. Application of standards and regulatory intent

a. The provisions of this subsection 19.70.330 apply to all development on parcels containing riparian corridors as defined in subsection 19.70.330.B (1).

b. It is the long term goal of the City to restore the City's riparian corridors and to protect salmon passage where scientifically justified. The City has determined that best available science supports protecting these riparian corridors as described in this section 19.70.330.

2. Riparian watercourse: Development is prohibited within or over the riparian watercourse, except as provided in this subsection 19.70.330 C. The Director may approve access over the riparian watercourse, if the applicant demonstrates that :

a. no other access is available;

b. the access is provided by a freestanding structure that maintains the natural channel and floodway of the riparian watercourse ;

c. the coverage of the riparian watercourse and disturbance of the riparian corridor and any other adjacent environmentally critical area or buffer are kept to a minimum; and

d. the material used to construct the access is durable and non-toxic to the maximum extent feasible. If using untreated wood is infeasible, wood treated with pentachlorophenol, creosote, chromate copper arsenate, or comparably toxic compounds is prohibited. Treated wood and other material shall be the least toxic and shall be applied and used according to National Oceanic and Atmospheric Administration Fisheries guidelines for using treated wood in or over aquatic environments.

e. In the riparian watercourse any action detrimental to habitat or actions affecting trees and vegetation, including but not limited to clearing or removal, is prohibited, except as provided in subsections 19.70.330. C. 2 (a).

3. Riparian Management Zone : The riparian management zone is defined in subsection 19.70.330.B.(1). Existing improved areas of public or private streets/driveways are excluded from the regulations for the riparian management zone.

a. Development is prohibited in the riparian management zone, except as follows:

1) To provide the minimum necessary access if no other access is available to development approved under subsections 19.70.330.C.2.(a) or 19.70.330.C.3.b.3.a.

2) Development allowed under subsections 19.70.330.C.3.c and 19.70.330.C.3.e.

3) On platted lots existing prior to adoption of Ordinance 4025 if the applicant demonstrates that:

a. The development is in the limited riparian development area, which is the area in the riparian management zone and more than 75 feet from the top of the riparian watercourse bank for Type F waters with anadromous fish present for any part of the year, more than 50 feet from the top of the riparian watercourse bank for Type F waters where anadromous fish are not present for any part of the year and more than 50 feet from the top of the riparian watercourse bank for Type Np and Ns waters;

b. The development complies with flow control and water quality requirements, regardless area of land disturbing activity or the size of the addition or replacement of impervious surface.
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c. Any development, including but not limited to coverage by impervious surface, does not exceed 35 percent of the total area of the limited riparian development area, and provided further that the maximum lot coverage does not exceed that allowed under Title 19, and except as provided in subsection 19.70.330.C.3.b.3.d.

d. When compliance with storm water flow control and water quality requirements is required solely based on subsection b , the director may approve a restoration plan in lieu of compliance with subsections 3b and 3c if the applicant demonstrates that the plan meets the following criteria:

i. The riparian watercourse and/or riparian management zone ecological function will be restored so that it prevents erosion, protects water quality, and provides diverse habitat: and

ii. The restoration results in greater protection of the riparian watercourse and riparian management zone than compliance with 3b and 3c.

4. In the riparian management zone any action detrimental to habitat and any action affecting trees and vegetation, including but not limited to clearing or removal, are prohibited, except as provided in subsection 19.70.330.C.3.b, 19.70.330.A.4.

5. The ecological functions of the riparian management corridor include tree and vegetation cover, preventing erosion and protecting water quality.

6. If the riparian management zone is degraded due to the lack of trees and vegetation, the presence of invasive or non-native species, and/or the presence of impervious surface or other

development, the applicant shall prepare and carry out a restoration plan that restores the ecological function of the riparian management zone to the extent commensurate with the impact of the development on the riparian management zone and according to mitigation standards pursuant to Section 19.70.125 and Section 19.70.130

7. If the development is authorized pursuant to 19.49.040 the Director shall require that the degraded portion of the riparian management area be restored by removing existing nonnative and invasive plant species, and replanting with native trees and vegetation, and providing a five-year monitoring and maintenance plan consistent with the requirements of Section 19.70.130.

8. Small project waiver

a. The Director may approve fences, rockeries, or similar features or temporary disturbance for installation of utility lines in a riparian management zone if no construction occurs over, in, or within 15 feet of a riparian watercourse or water body, and if the applicant demonstrates that the proposal meets the following criteria:

1) The feature is constructed on a lot that has been in existence as a legal building site consistent with Section 19.49.040 Non-Conforming Structures.

2) The feature:

i) Does not contain floor area;

ii) Does not remove trees or native vegetation;

iii) Does not block wildlife movement through the riparian management zone; and

iiii) Mitigates impacts to ecological functions.

b. The Director's decision requires:

i) The use of fencing with a highly durable protective barrier during the construction to protect the Riparian Management Zone.

ii) Mitigation pursuant to Section 19.70.125 and 19.70.130 to offset the area of both temporary and permanent development.

iii) Additional measures, as appropriate, to protect the remainder of the riparian corridor.

~~B. *Required Buffer Areas.* Protective riparian buffers must be required to preserve stream/riparian functions and values. The purpose of riparian buffers is to protect riparian functions that influence in-stream and near-stream habitat quality.~~

1. *Measurement of Stream Buffers.* Stream buffers are measured from the ordinary high water mark (OHWM), or the top of the bank if the OHWM cannot be determined. Buffers must be measured with rounded ends where streams enter or exit piped segments. Piped stream setbacks should be measured from the centerline of the pipe.

2. *Standard Stream Buffer Widths.* Buffer widths must reflect the sensitivity of the stream type, the risks associated with development and, in those circumstances permitted by these regulations, the type and intensity of human activity and site design proposed to be conducted on or near the stream area. The following standard buffers are established for streams:

Table 19.70.330 Stream Buffers

DNR Water Type (WAC 222-16-030)	Standard Buffer Width
Type F Streams that are known to be used by fish, or meet the physical criteria to be potentially used by fish.	50 feet
Type Np Streams that have year-round flow and do not meet the physical criteria of a Type F. This also includes streams that have been proven not to contain fish using methods described in Forest Practices Board Manual Section 13.	50 feet
Type Ns Streams that do not have surface flow during at least some portion of the year, and do not meet the physical criteria of a Type F stream.	50 feet
Piped Streams and Roadside Ditched Segments Those segments of streams, regardless of their type, that are fully enclosed in an underground pipe or culvert, or conveyed through a public roadside ditch as part of the city stormwater infrastructure.	10 feet

3. *Increased Stream Buffer Widths.* The stream buffer widths may be increased by the decision-maker as follows:

- a. When the qualified professional determines that the minimum width is insufficient to prevent habitat degradation and to protect the structure and functions of the habitat area as a result of a habitat assessment required pursuant to AMC [19.70.350](#), Critical area report additional requirements;
- b. When the frequently flooded area exceeds the minimum stream buffer width, the stream buffer must extend to the outer edge of the frequently flooded area;
- c. When a channel migration zone is present, the stream buffer must extend to the outer edge of the channel migration zone;

d. When the habitat area is in an area of high blowdown potential, the stream buffer width must be expanded an additional 50 feet on the windward side;

e. When the habitat area is within an erosion or landslide hazard area, or buffer, the stream buffer width must be the recommended distance, or the erosion or landslide hazard area or buffer, whichever is greater.

C. *Building Setbacks From Stream Buffers.* Buildings, structures, paving, and other hard surfacing must be set back a minimum distance of 10 feet from the edge of the stream buffer unless determined by the decision-maker that a smaller distance would meet the intent of this subsection. This setback is to avoid conflicts with tree branches and/or critical root zones of trees that are in the buffer or will be planted in the buffer. The following may be allowed in the building setback from the buffer if they do not cause damage to the critical root zone of trees in the buffer:

1. Landscaping;

2. Uncovered decks, roof eaves and overhangs, unroofed stairways and steps;

3. Pervious ground surfaces, such as driveways, patios, and parking may be allowed; provided, that they are engineered as a permeable pavement system as defined in AMC 19.12.020, Definitions. Such improvements may be subject to the requirements in AMC Chapter 19.76, Stormwater.

D. *Functionally Separated and Isolated Stream Buffers Riparian Management Zones.* Consistent with the definition of “buffers” Riparian Management Zone in this chapter, areas that are functionally isolated and physically separated from a stream riparian watercourse due to existing, legally established public roadways, railroads or other legally established structures or paved areas eight feet or more in width that occur between the area in question and the stream must be are considered physically isolated and functionally separated stream buffers riparian management zone. Once determined by the decision-maker, based on a submitted critical area report, to be a physically separated and functionally isolated stream buffer riparian management zone, development proposals are allowed in these areas.

E. *Additional Allowed Activities in Streams.* Activities, uses and alterations of streams are prohibited unless otherwise listed as exempt or allowed according to the provisions of AMC 19.70.040, 19.70.045, and 19.70.050. No alteration to a stream buffer may be permitted unless consistent with the provisions of this section and the specific standards for development outlined below.

1. *Stream Crossing.* Crossing of streams may be permitted and is required to be designed to allow fish passage based on state and federal fish passage criteria.

F E. *Piped Watercourses and Roadside Ditches.* It is recognized that within the urban environment many historical streams watercourses have been substantially modified to accommodate development. Many of the regulated and mapped streams watercourses within the city of Anacortes pass through natural reaches, modified reaches, piped reaches, and sometimes along manmade roadside ditches.

1. Development along piped watercourses and roadside ditched segments of regulated ~~streams~~ ~~riparian corridors~~ are subject to a 10-foot setback from the centerline of the ~~stream course~~ ~~watercourse~~ and are subject to the recording of a utility easement granted to the city for access and maintenance of the watercourse infrastructure.
2. The voluntary opening and restoration or rehabilitation of previously channelized, culverted, or piped ~~streams~~ ~~watercourses~~ is highly encouraged and may be approved by the decision-maker, when the following is demonstrated within a critical area report:
 - a. The restoration will result in a net gain in FWHCA functions, including an improvement in water quality and ecological functioning;
 - b. Opened channels must be designed to support fish and wildlife habitat and uninhibited fish access, unless demonstrated to be infeasible;
 - c. A reduction to the standard ~~buffer~~ ~~riparian management zone~~ is allowed to a minimum of 25 feet, or as recommended by a qualified professional in the critical area report. Measured from the ordinary high water mark (OHWM) and which includes habitat improvements, and measures to prevent erosion, landslide and water quality impacts;
 - d. The proposal will not significantly increase the threat of erosion, flooding, slope stability or other hazards on the site or on adjacent properties;
 - e. The proposal must demonstrate that ~~their~~ ~~the~~ conveyance will maintain the flow capacity and not create flooding elsewhere in the drainage basin.

G.F. ~~Stream Enhancement Measures~~ ~~Riparian Corridor Enhancement Measures~~. Only those enhancement measures deemed most applicable and/or appropriate for ~~stream channel or buffer~~ ~~riparian corridor~~ enhancement projects will be considered in a ~~buffer~~ ~~riparian corridor~~ modification proposal, and must be supported by best available science and a critical area report. These include, but are not limited to:

1. Removal of fish barriers to restore accessibility to fish;
2. Enhancement of fish habitat using log structures incorporated as part of a fish habitat enhancement plan;
3. Enhancement of fish and wildlife habitat structures that are likely to be used by wildlife, including wood duck houses, bat boxes, nesting platforms, snags, rootwads/stumps, birdhouses, and heron nesting areas;
4. Planting native vegetation within the buffer area, especially vegetation that would increase value for fish and wildlife, increase stream bank or slope stability, improve water quality, or provide aesthetic/recreational value; or

5. Creation of a surface channel where a ~~stream watercourse~~ was previously underground, in a culvert or pipe. Surface channels which are “daylighted” must be located within a ~~buffer~~ riparian management zone-area and must be designed with energy dissipating functions or channel roughness features such as meanders and rootwads to reduce future bank failures or nearby flooding;
6. Removal or modification of existing stream culverts (such as road crossings) to improve fish passage, stream habitat, and flow capacities; or
7. Upgrading of retention/detention facilities or other stormwater management facilities beyond required levels. (Ord. 4015 § 2 (Att. A), 2022; Ord. 3064 § 2 (Att. A), 2021)

19.70.335 Specific standards for other FWHCAs.

A. *Endangered, Threatened, and Sensitive Species.* Fish and wildlife habitat conservation areas or buffers with state or federally endangered, threatened, or sensitive species or anadromous fish species have a primary association are subject to the following:

1. No development is allowed within a fish and wildlife habitat conservation area or buffer with which state or federally endangered, threatened, or sensitive species have a primary association, except that which is provided for by a management plan established by the Washington Department of Fish and Wildlife or applicable state or federal agency.
2. Whenever activities are proposed adjacent to a fish and wildlife habitat conservation area with which state or federally endangered, threatened, or sensitive species have a primary association, such area must be protected through the application of protection measures in accordance with a critical area report prepared by a qualified professional and approved by the city. Approval for alteration of the fish and wildlife habitat conservation area or its buffer may not occur prior to consultation with the Washington Department of Fish and Wildlife for animal species, the Washington State Department of Natural Resources for plant species, and other appropriate federal or state agencies.

B. *Other Priority Habitats and Species.* Fish and wildlife habitat conservation areas or buffers with species that are not state or federally listed as endangered, threatened, or sensitive species, and are not anadromous fish species are subject to the following:

1. Development activities and uses that result in unavoidable impacts are prohibited except as otherwise allowed by this chapter and may occur in priority species habitat areas and associated buffers only if the proposed alteration of the habitat does not degrade the functions and values of the habitat in accordance with an approved critical area report with habitat assessment/management plan, and only if the proposed activity is the only reasonable alternative that will accomplish the applicant’s objectives. Full compensation for the loss of acreage and functions of habitat and buffer areas must be provided in compliance with the mitigation performance standards and requirements of these regulations.

C. *City-Designated Habitats and Species of Local Importance.*

1. *Anacortes Community Forest Lands.*

- a. *Purpose.* The Anacortes Community Forest Lands include three lakes and their watersheds, numerous wetlands, rock bluffs, old growth forests, grassy knolls, windswept hilltops, sheltered caves, and a variety of other habitats and microclimates that provide a unique and irreplaceable habitat for both imperiled and commonplace species. This land has been dedicated by the city for the preservation of forest lands and species, as described in the conservation easement documents, the ACFL comprehensive plan, and in AMC Title [12](#).
- b. *Recreation and Recreation-Related Facilities.* Construction of public recreation-related facilities such as trails, benches, interpretive displays, and viewing platforms may be allowed in fish and wildlife habitat conservation areas or buffers.
- c. Proposed alterations must be consistent with the adopted Anacortes Community Forest Lands comprehensive plan, as amended.
- d. *Noxious and Invasive Plants.* The Skagit County noxious weed ordinance and the ACFL invasive plant control program must be carefully considered in any adjacent development decision. Nonnative plants known to be invasive into the ACFL must be prohibited in landscaping plans of adjacent developments. Where such developments have CC&Rs, reference to this requirement must be included therein.
- e. *Right-of-Way Vacations.* In the case of street or alley vacations contiguous with an ACFL boundary, the half of the area vacated which is adjacent to the ACFL must be incorporated into the ACFL and subject to all ACFL-related requirements.
- f. *Private Access to ACFL.* No new accesses will be established to the ACFL without prior request for such access to the Parks and Recreation Department and the forest advisory board and approval by the City Council.
- g. *Burning.* No burn piles or outdoor fires must ever be left unattended while ignited and in the event sparks or flames come within 300 feet of the ACFL, the fire must immediately be brought under control or extinguished.
- h. *Boundary Identification.* City staff will work closely with property owners and developers to ensure that survey lines adjacent to the ACFL boundary are clearly and correctly marked before any timber and/or vegetation is removed from adjacent property. The forest manager will be involved in the final inspection of boundary lines.
- i. *ACFL Buffers.* City staff will work closely with builders to secure 30-foot ACFL buffers using all available incentives.

2. March Point Heronry:

- a. *Purpose.* Because Skagit County is home to the greatest concentration of nesting great blue heron in the Salish Sea, March Point being the largest, the city has identified the March Point Heronry as a habitat of local importance.
- b. Proposed development activities within 1,000 feet, or that are likely to impact the colony, must provide a critical areas assessment report and habitat management plan that follows at a minimum the guidelines provided by WDFW's Management Recommendations for Washington's Priority Species (March 2012) https://wdfw.wa.gov/publications/00026/abbreviated_great_blue_heron.pdf.
- c. Buffers will be implemented as described in the buffer section below.
- d. Colony protection is required for minimum 10 years after abandonment.

D. Required buffer for ~~nonstream~~ Non-Riparian Corridor FWHCAs:

1. *Marine FWHCAs Buffers.* Buffers for all designated fish and wildlife habitats or species within marine shorelines must be regulated by AMC Chapter [19.72](#) shoreline regulations and the shoreline master program.
2. *All Other ~~Nonstream~~ Non-Riparian Corridor-FWHCA Buffers.* Buffers from fish and wildlife habitat conservation areas must be established to protect the functions and values of the critical area from the impacts of proposed adjacent activities.
 - a. Buffer widths for fish and wildlife habitat areas must be based on consideration of the following factors: species-specific recommendations of the Washington State Department of Fish and Wildlife; recommendations contained in a habitat management plan submitted by a qualified professional; and the nature and intensity of land uses and activities occurring on the land adjacent to the site. Buffers must:
 - i. Consist of an undisturbed area of native vegetation, or areas identified for restoration, sufficient to protect the integrity, functions, and values of the affected habitat;
 - ii. Reflect the sensitivity of the habitat and the type and intensity of human activity proposed to be conducted nearby;
 - iii. Be consistent with the applicable species-specific management recommendations issued by the Washington Department of Fish and Wildlife.
 - b. Nesting bald eagles and bald eagle habitats must be protected consistent with the U.S. Fish and Wildlife Service (USFWS) national bald eagle management guidelines, or the state or federal regulations in place at the time of application. Whenever activities are proposed adjacent to a confirmed nest territory or communal roost, a bald eagle habitat management plan must be developed by a qualified professional. Activities are adjacent to managed bald eagle sites when they

are within 660 feet of a nest or within one-half mile (2,640 feet) of a shoreline foraging area.

Approval of the activity must not occur prior to consultation with the state or federal agency with authority on bald eagle pairs and their nest.

c. *Great Blue Heron Nesting and Breeding Areas.* Development near a verified heron breeding habitat including nesting colony areas, former nesting colonies:

- i. A year-round urban buffer of 197 feet,
- ii. For unusually loud activities that occur during breeding season (February through September) a seasonal buffer of 656 feet, and a blasting buffer of 1,320 feet,
- iii. For properties without an existing and approved management plan, a management plan developed by a qualified professional to follow, at a minimum, WDFW's Management Recommendations for Washington's Priority Species (March 2012) and that identifies the nesting and breeding site as well as pre-nesting staging area, and breeding season foraging habitat,
- iv. For the March Point colony, given the observed and documented sensitivity of this mega-colony to human intrusion and the fact that the colony is in a rare, isolated, but tight location, a year-round buffer of 984 feet. (Ord. 3064 § 2 (Att. A), 2021)

19.70.340 Stormwater management facilities.

Establishment of low-impact stormwater management facilities, such as stormwater dispersion outfalls and bioswales, may be allowed within fish and wildlife habitat conservation area buffers consistent with the adopted stormwater manual; provided, that:

- A. No other location is feasible; and
- B. There will be "no net loss" of functions and values of the fish and wildlife habitat conservation area; and
- C. The critical area lies in the natural routing of the runoff, and the discharge follows the natural routing; and
- D. Stormwater dispersion outfalls, bioswales, bioretention facilities, and other low-impact facilities consistent with the adopted stormwater manual may be allowed within the outer 25 percent of the buffer riparian management zone when determined by a qualified professional that the location of the facilities will enhance the buffer area riparian management zone and protect the stream watercourse; and
- E. Such facilities are designed consistent with the requirements of AMC Chapter 19.76. (Ord. 4015 § 2 (Att. A), 2022; Ord. 3064 § 2 (Att. A), 2021. Formerly 19.70.345)

19.70.350 Critical area report additional requirements.

A. *Additional Report Contents for FWHCAs.* In addition to the minimum report contents required per AMC [19.70.115](#), Critical area report, FWHCA reports must also include:

1. Documentation of any fieldwork performed on the site, including field data sheets for delineations, water typing and other habitat conservation area classification, baseline hydrologic data, site photos, etc.;
2. A description of the methodologies used to conduct the delineations, classifications, or impact analyses, including references;
3. A discussion of the potential impacts to the critical area or buffer associated with the proposed development including an assessment of cumulative impacts.

B. *Habitat Assessment/Management Plan.* A habitat assessment/management plan is an investigation of the project area to evaluate the potential presence or absence of designated critical fish or wildlife species or habitat. A critical area report for a fish and wildlife habitat conservation area must contain an assessment of habitats including the following site- and proposal-related information at a minimum:

1. Detailed description of vegetation on and adjacent to the project area and its associated buffer;
2. Identification of any species of local importance, priority species, or endangered, threatened, sensitive, or candidate species that have a primary association with habitat on or adjacent to the project area, and assessment of potential project impacts to the use of the site by the species;
3. A discussion of any federal, state, or local special management recommendations, including Washington Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the project area;
4. A detailed discussion of the direct and indirect potential impacts on habitat by the project, including potential impacts to water quality;
5. A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed land use activity and to be conducted in accordance with AMC [19.70.125](#), Mitigation requirements;
6. A discussion of ongoing management practices that will protect habitat after the project site has been developed, including proposed monitoring and maintenance programs.

C. *Additional Technical Information Requirements for Streams Riparian Corridors.* If no project impacts are anticipated and standard stream buffer riparian management zone widths are retained, a stream riparian corridor delineation report, general critical area report or other reports, alone or in combination, may be submitted as consistent with the specific requirements of this section. In addition to the general critical area report requirements for fish and wildlife habitat conservation areas provided in subsections (A) through (D) of

this section, technical information on **streams** **riparian corridors** must include the following information at a minimum:

1. A written assessment and accompanying maps of the stream and associated hydrologic features on and off site within 300 feet of the project area, including the following information at a minimum:
 - a. **Stream** **Riparian Corridor** survey showing the field delineated ordinary high water mark(s);
 - b. Standard **stream buffer** **riparian corridor** boundary as determined by AMC [19.70.330](#), Specific standards for **riparian corridors**;
 - ~~c.~~ **Boundary for proposed stream buffers—averaging, if applicable;**
 - ~~d.~~ **c.** Vegetative, faunal, and hydrologic characteristics;
 - ~~e.~~ **d.** Soil and substrate conditions; and
 - ~~f.~~ **e.** Topographic elevations, at two-foot contours;
2. A detailed description and functional assessment of the **stream** **riparian watercourse** channel and **stream buffer** **riparian management zone** under existing conditions pertaining to the protection of **stream**—**the riparian corridor** functions, fish habitat and, in particular, potential anadromous fisheries;
3. A habitat and native vegetation conservation strategy that addresses methods to protect and enhance on-site habitat and **stream** **riparian corridor** functions;
4. Proposed **buffer** **riparian corridor** enhancement, if needed, including a written assessment and accompanying maps and planting plans for **buffer** **riparian corridor** areas to be enhanced, including the following information at a minimum:
 - a. A description of existing **buffer** **riparian corridor** conditions;
 - b. A description of proposed **buffer** **riparian corridor** conditions and how proposed conditions will increase **buffer** **riparian corridor** functions in terms of **stream** **riparian corridor** and fish habitat protection;
 - c. Performance standards for measuring enhancement success through a monitoring period of at least five years;
 - d. Provisions for monitoring and submission of monitoring reports documenting **buffer** **riparian corridor** conditions, as compared to performance standards, for enhancement success; and
 - e. A discussion of ongoing management practices that will protect **stream** **riparian corridor** functions and habitat value through maintenance of vegetation density within the **stream** **riparian corridor** **buffer**.

D. *Additional Technical Information for Heron Habitat.*

1. The report must identify the heron management area (HMA). An HMA consists of the nesting colony, year-round and seasonal buffer, foraging habitat, and, when present, a pre-nesting congregation area.
2. All survey activity such as nest tree identification and flagging should occur in the nonbreeding season (mid-September to mid-February), and preferably right after breeding season ends.
3. Identify the nesting colony's boundary. To do this, flag all nest trees at the colony's outer perimeter. Mark each of these trees on a map. If a nest tree's canopy overlaps the canopy of an adjacent tree, flag the adjacent tree and consider this to be a nest tree. The outermost nest trees will be used to map the nesting colony boundary.
4. Map outer perimeter of the 197-foot year-round buffer. Using the buffer radius, draw a circle around each peripheral nest tree.
5. Map seasonal buffer if any unusually loud activities will occur during breeding season (February through September). Measure the seasonal buffer starting at the outer edge of the year-round buffer.
6. Locate potential foraging habitat by mapping all waterbodies within a one-and-nine-tenths mile radius of the colony. The perimeter and shallow portions are especially important for foraging.

E. *Additional FWHCA Information.* When appropriate, due to the type of habitat or species present, or the project area conditions, the decision-maker may also require the critical area report to include:

1. A request for consultation with the Washington State Department of Fish and Wildlife (DFW), Washington Department of Ecology (Ecology), local Native American tribes or other appropriate agency;
2. Copies of the joint aquatic resource permit application (JARPA) and related approvals, such as a hydraulic project approval (HPA) from the WDFW, when applicable to the project; and
3. Detailed surface and subsurface hydrologic features both on and adjacent to the site. (Ord. 3064 § 2 (Att. A), 2021)

19.70.355 Mitigation performance standards and requirements.

Compensatory mitigation for FWHCAs must follow the plan requirements described under AMC [19.70.130](#), Mitigation plan requirements. (Ord. 3064 § 2 (Att. A), 2021)

Definitions

“Adjacent” means areas adjacent to critical areas must be considered to be within the jurisdiction of these requirements and regulations to support the intent of this title and ensure protection of the functions and values of critical areas. “Adjacent” must include lands within a distance equal to the required buffer for the critical area as determined by the provisions of this chapter.

“Anadromous fish” means fish that spawn and rear in freshwater and mature in the marine environment. While Pacific salmon die after their first spawning, adult char (bull trout) can live for many years, moving in and out of saltwater and spawning each year. The life history of Pacific salmon and char contains critical periods of time when these fish are more susceptible to environmental and physical damage than at other times. The life history of salmon, for example, contains the following stages: upstream migration of adults, spawning, inter-gravel incubation, rearing, smoltification (the time period needed for juveniles to adjust their body functions to live in the marine environment), downstream migration, and ocean rearing to adults.

“Aquifer” means a body of soil or rock that contains sufficient saturated material to conduct groundwater and yield usable quantities of groundwater to wells or springs.

“Averaging” means establishing the required buffer setback from a critical area, within the permitted parcel of land only, so that areas within the parcel determined to be more environmentally sensitive than others will have a larger buffer than the less sensitive areas. For every increase in setback for one area of the parcel, there will be an equal corresponding decrease in another area of the parcel. The total land area within the buffer must remain the same as if the buffer were a uniform width.

“Base flood” means a flood having a one percent chance of being equaled or exceeded in any given year, often referred to as the “100-year flood.”

“Base flood elevation” means the water surface elevation of the base flood in relation to the North American Vertical Datum of 1988. The Anacortes FIRMs still make reference to the 1929 National Geodetic Vertical Datum (NGVD). While using NAVD is acceptable, please recognize that surveyors and designers will need to convert the datum when preparing plans. FEMA elevation certificates require the use of the datum utilized on the FIRMs.

“Best available science” means current scientific information used in the process to designate, protect, or restore critical areas that is derived from a valid scientific process as defined by WAC [365-195-900](#) through [365-195-925](#). Sources of best available science are included in “Citations of Recommended Sources of Best Available Science for Designating and Protecting Critical Areas” published by the Washington State Department of Commerce.

“Best management practices (BMPs), critical areas” means physical or structural tools and/or management practices which, when used singularly or in combination, prevent or reduce adverse impacts to critical areas or their buffers.

“Buffer” is an area contiguous to a critical area that is required to protect the critical area and provide for the continued maintenance, functioning, and/or structural stability of a critical area.

“Critical aquifer recharge areas” are areas with a critical recharging effect on aquifers used for potable water, including areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water, or is susceptible to reduced recharge.

“Critical areas” means critical aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, geologically hazardous areas, streams, and wetlands, as defined in this chapter.

“Development” means any human-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

“Ditches” are artificial drainage features created through purposeful human action, such as irrigation and drainage ditches, grass-lined swales, and canals. Purposeful creation from uplands must be demonstrated through documentation, photographs, statements, and/or other evidence in order to be unregulated by this chapter.

“Enhancement” means an action which increases the functions and values of a stream, wetland, or other critical area or buffer.

“Erosion” means the process by which soil particles are mobilized and transported by natural agents such as wind, rain-splash, frost action or surface water flow.

“Erosion hazard areas” are those areas containing soils which, according to the United States Department of Agriculture Natural Resources Conservation Service Soil Survey Program, may experience significant erosion. Erosion hazard areas also include coastal erosion-prone areas and channel migration zones.

“Federal Emergency Management Agency (FEMA) floodway” means the channel of the stream and that portion of the adjoining floodplain which is necessary to contain and discharge the base flood flow without increasing the base flood elevation more than one foot.

“Fish and wildlife habitat conservation areas” are areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, and which, if altered, may reduce the likelihood that the species will persist over the long term. As defined in AMC [19.70.310](#).

“Floodplain” means the total area subject to inundation by the base flood.

“Floodway, zero rise” means the channel of a stream and that portion of the adjoining floodplain which is necessary to contain and discharge the base flood flow without any measurable increase in flood height. A measurable increase in base flood height means a calculated upward rise in the base flood elevation, equal to or greater than 0.01 foot, resulting from a comparison of existing conditions and changed conditions directly attributable to development in the floodplain. This definition is broader than that of the FEMA floodway, but

always includes the FEMA floodway. The boundaries of the 100-year floodplain, as shown on the current flood insurance study for the city of Anacortes, are considered the boundaries of the zero rise floodway unless otherwise delineated by a critical area study.

“Frequently flooded areas” are lands in the floodplain subject to at least a one percent or greater chance of flooding in any given year, or within areas subject to flooding due to high groundwater, high tides, with strong winds, sea level rise, and extreme weather events resulting from global climate change. These areas include, but are not limited to streams, rivers, lakes, coastal areas, wetlands, and areas where high groundwater forms ponds on the ground surface.

“Functions and values” means the beneficial services provided by critical areas to society, including, but not limited to, improving and maintaining water quality, providing fish and wildlife habitat, supporting terrestrial and aquatic food chains, reducing flooding and erosive flows, wave attenuation, historical or archaeological importance, educational opportunities, and recreation. These beneficial roles are not listed in order of priority.

“Geologically hazardous areas” means areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns.

“Groundwater” means water in a saturated zone or stratum beneath the surface of the land or below a surface water body.

“Habitats of local importance” designated as fish and wildlife habitat conservation areas include those areas found to be locally important by the city of Anacortes.

“Hazard tree” means any tree determined by an International Society of Arboriculture (ISA) certified arborist to be a hazard to people or property as a result of a risk assessment conducted according to ISA guiding principles.

“In-lieu-fee program” means an agreement between a regulatory agency (state, federal or local) and a single sponsor, generally a public natural resource agency or nonprofit organization. Under an in-lieu-fee agreement, the mitigation sponsor collects funds from an individual or a number of individuals who are required to conduct compensatory mitigation required under a wetland regulatory program. The sponsor may use the funds pooled from multiple permittees to create one or a number of sites under the authority of the agreement to satisfy the permittees’ required mitigation.

“Landslide” means an episodic downslope movement of a mass including, but not limited to, soil, rock or snow.

“Landslide hazard areas” are areas at risk of mass movement due to a combination of geologic, topographic, and hydrologic factors.

“Mine hazard areas” are those areas directly underlain by, adjacent to, or affected by mine workings such as adits, tunnels, drifts, or airshafts, and those areas probable to sink holes, gas releases, or subsidence due to mine workings.

“Mitigation” means avoiding, minimizing, or compensating for adverse critical areas impacts, using the sequential order of preference listed in AMC [19.70.125](#), Mitigation requirements.

“Monitoring” means evaluating the impacts of development proposals on biologic, hydrologic and geologic systems and assessing the performance of required mitigation through the collection and analysis of data for the purpose of understanding and documenting changes in natural ecosystems, functions and features including, but not limited to, gathering baseline data.

“Native growth protection area/easement” (NGPA/E) means an easement granted for the protection of native vegetation within a sensitive area or its associated buffer. The easement should be recorded on the appropriate documents of title and filed with the county records division.

“Native vegetation” means plant species that occur naturally in a particular region or environment and were present before European colonization.

“Normal appurtenances” means those structures secondary to a primary use that are common to and do not constitute a special privilege. Examples for residential uses include garages, decks, driveways, utilities, and fences.

“Noxious weed” means any plant which is highly destructive, competitive, or difficult to control by cultural or chemical practices, limited to those plants on the state noxious weed list contained in Chapter [16-750](#) WAC and those regulated by Skagit County.

“Primary association” means the fundamental link between a species and land or aquatic area where anadromous fish, endangered, threatened or sensitive species breed or feed.

“Repair” or “maintenance” means an activity that restores the character, scope, size, and design of a serviceable area, structure, or land use to its previously authorized and undamaged condition. Activities that change the character, size, or scope of a project beyond the original design and drain, dredge, fill, flood, or otherwise alter critical areas are not included in this definition.

Riparian Corridors are the riparian watercourse and the riparian management zone. The riparian watercourse of Type F, Np, and Ns waters defined in Wac 222-16-030 and 222-16-031 that have fish or wildlife habitat. Pipes, culverts, flow control facilities, water quality facilities, and storm water conveyances are not regulated as riparian watercourses.

Riparian Management Zone is the zone within 100 feet of the riparian watercourse measured horizontally landward from the ordinary high water mark of the watercourse as surveyed in the field, or from the top of the bank if the ordinary high water mark cannot be determined. In watercourses with braided channels or alluvial fans, the ordinary high water mark must be determined so as to include the entire watercourse feature.

“Restoration” means measures taken to restore an altered or damaged natural feature, including: (1) active steps taken to restore damaged wetlands, streams, protected habitat, or their buffers to the functioning condition that existed prior to an unauthorized alteration; and (2) actions performed to reestablish structural and functional characteristics of a critical area that have been lost by alteration, past management activities, or catastrophic events.

“Seismic hazard areas” are areas subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, soil liquefaction, debris flows, lahars, or tsunamis.

“Shoreline jurisdiction” means all marine waters along Puget Sound, streams and rivers with an annual mean flow of more than 20 cubic feet per second, lakes greater than 20 acres in size, shorelands adjacent to these water bodies, and associated wetlands.

“Significant tree” means a deciduous or evergreen tree greater than six inches in diameter at five feet above grade.

“Slope” means an inclined ground surface, the inclination of which is expressed as a ratio or percentage of vertical distance to horizontal distance by the following formula: $((\text{vertical distance} / \text{horizontal distance}) \times 100) = \% \text{ slope}$.

“Special flood hazard area” means the land in the floodplain that is subject to a one percent or greater chance of flooding in any given year. Designation on maps always includes the letters A or V.

“Species of local importance” are those species that are of local concern designated by the city due to their population status or their sensitivity to habitat manipulation.

“Stream” means an area where open surface water produces a defined channel or bed, not including irrigation ditches, canals, storm or surface water runoff devices, or other entirely artificial watercourses, unless they are used by salmonids or are used to convey a watercourse naturally occurring prior to construction. A channel or bed need not contain water year-round, provided there is evidence of at least intermittent flow during years of normal rainfall.

“Unavoidable impacts” means adverse impacts that remain after all appropriate and practicable avoidance and minimization have been achieved.

“Volcanic hazard areas” include areas subject to pyroclastic flows, lava flows, and inundation by debris flows, lahars, mudflows, or related flooding from volcanic activity.

“Wetland” or “wetlands” means those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. “Wetlands” generally include swamps, marshes, bogs, and similar areas. “Wetlands” do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands

created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. “Wetlands” include those artificial wetlands intentionally created from nonwetland areas to mitigate conversion of wetlands.

“Wetland mitigation bank” means a site where wetlands are restored, created, enhanced, or, in exceptional circumstances, preserved, expressly for the purpose of providing compensatory mitigation in advance of unavoidable impacts to wetlands or other aquatic resources that typically are unknown at the time of certification to compensate for future, permitted impacts to similar resources.

“Wetland mosaic” means an area with a concentration of multiple small wetlands, in which each patch of wetland is less than one acre; on average, patches are less than 100 feet from each other; and areas delineated as vegetated wetland are more than 50 percent of the total area of the entire mosaic, including uplands and open water. (Ord. 3064 § 2 (Att. A), 2021)

The Anacortes Municipal Code is current through Ordinance 4020, passed April 11, 2022.

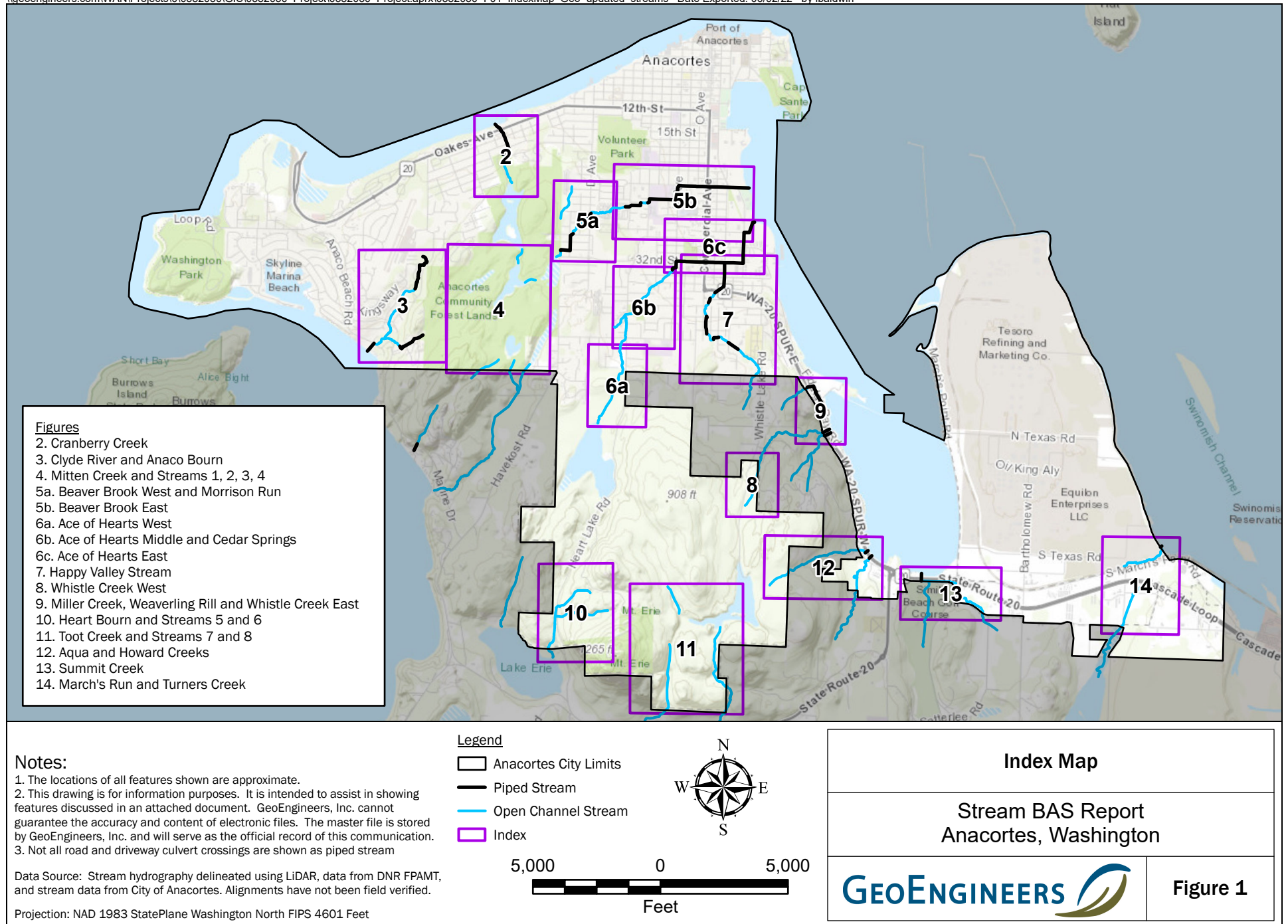
Disclaimer: The city attorney’s office has the official version of the Anacortes Municipal Code. Users should contact the city attorney’s office for ordinances passed subsequent to the ordinance cited here.

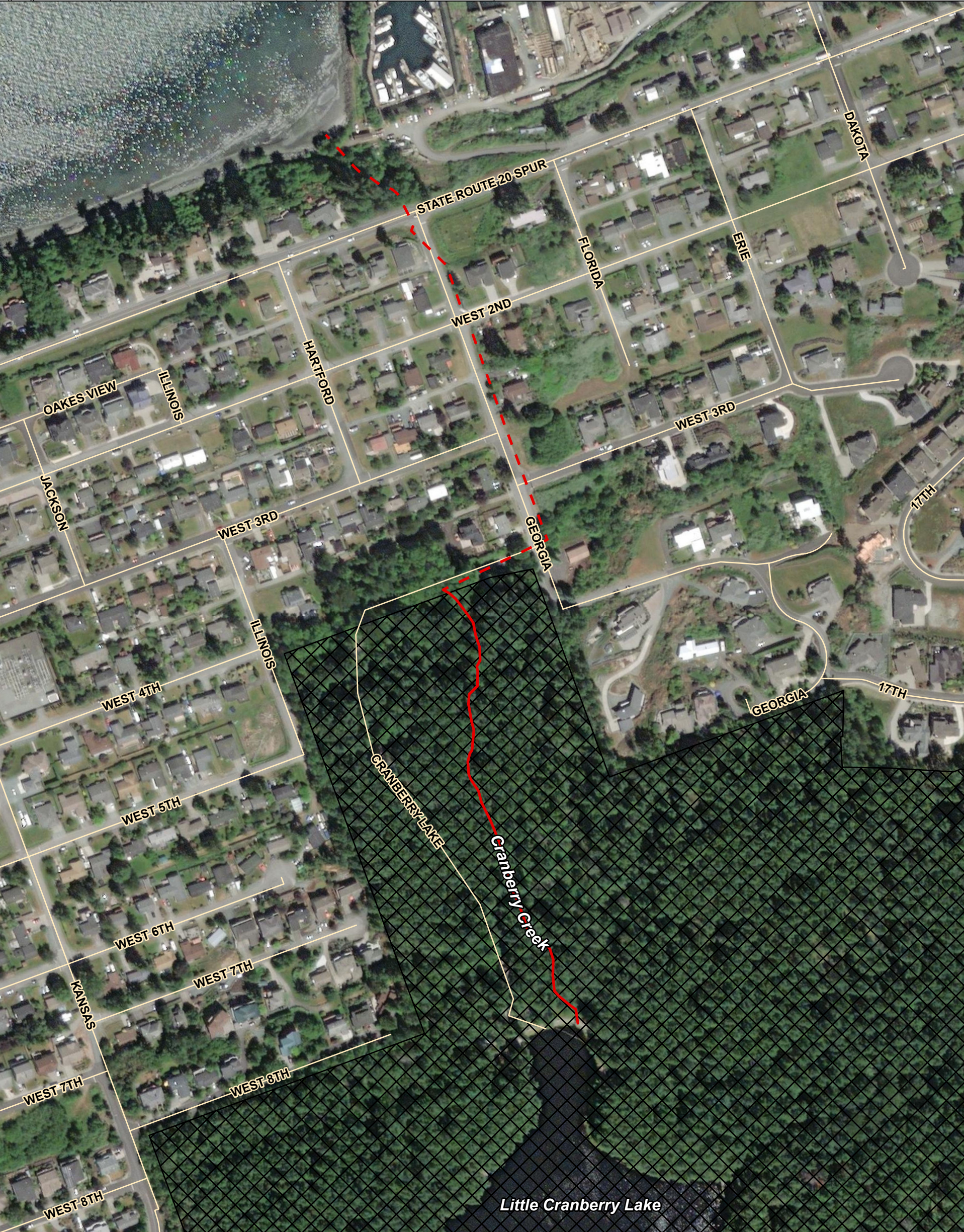
Note: This site does not support Internet Explorer. To view this site, Code Publishing Company recommends using one of the following browsers: Google Chrome, Firefox, or Safari.

[City Website: www.cityofanacortes.org](http://www.cityofanacortes.org)

City Telephone: (360) 293-1900

[Code Publishing Company](#)





Legend

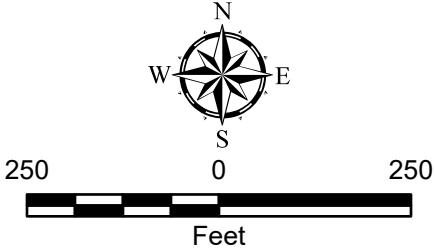
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- DNR Stream Type
 - Fish-Bearing
 - Fish-Bearing (Piped)
- Anacortes Community Forest Land

Notes:

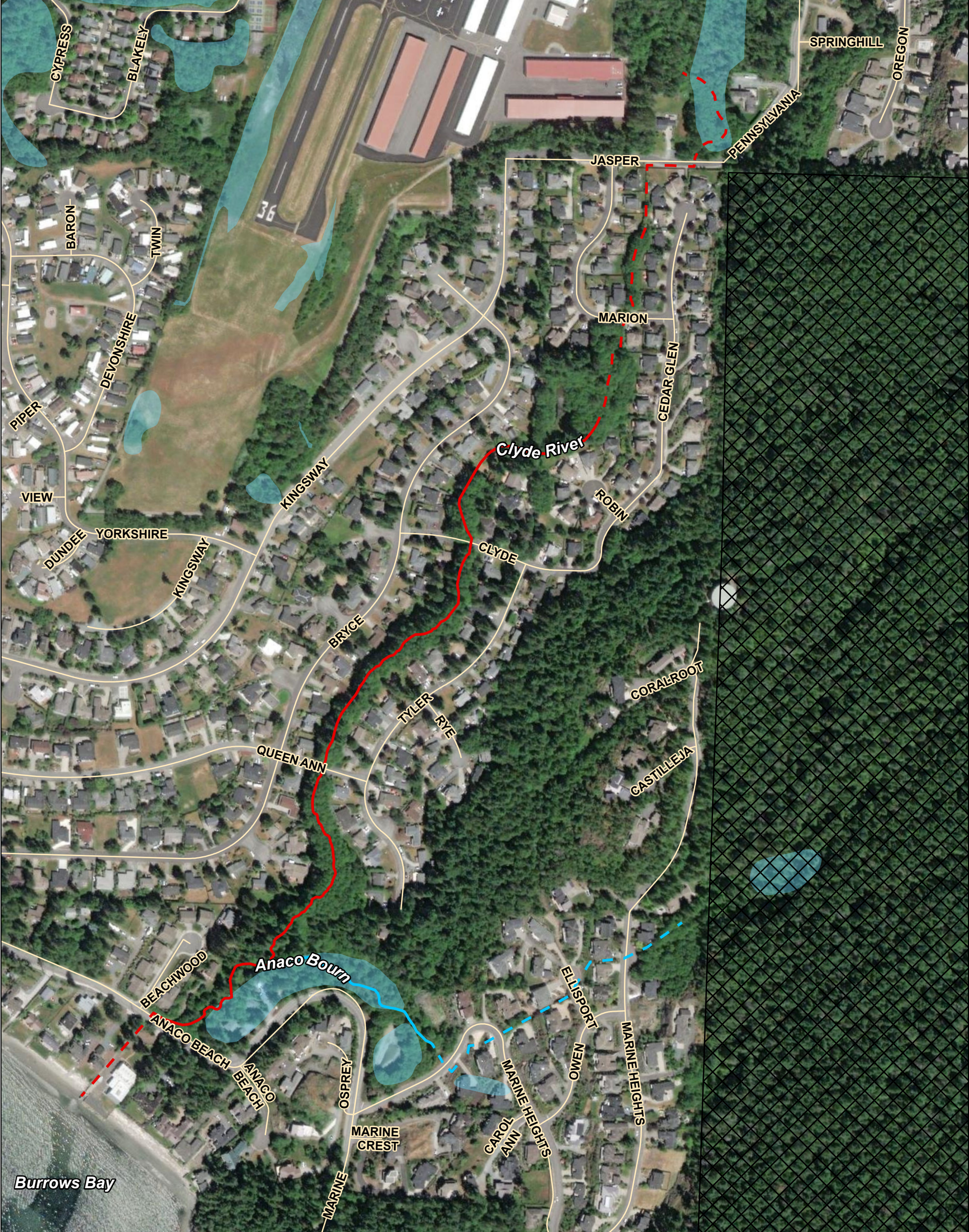
- The locations of all features shown are approximate.
- This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
- Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Cranberry Creek	
Stream BAS Report Anacortes, Washington	
GEOENGINEERS	Figure 2



Legend

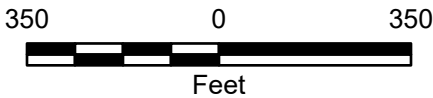
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|---|---|
|  Road |  Fish-Bearing (Piped) |
|  DNR Stream Type |  Unclassified (Piped) |
|  Fish-Bearing |  Anacortes Mapped Wetlands |
|  Unclassified |  Anacortes Community Forest Land |

Notes:

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Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Clyde River and Anaco Bourn

Stream BAS Report
Anacortes, Washington



Figure 3

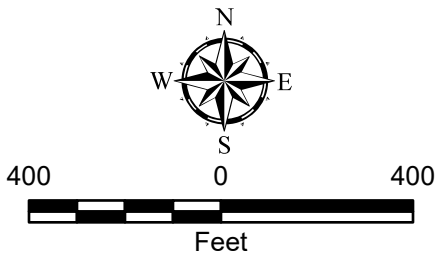


Legend

- | | |
|--------------------|-----------------------------------|
| — Road | ■ Anacortes Mapped Wetlands |
| DNR Stream Type | ■ Anacortes Community Forest Land |
| — Fish-Bearing | ■ Anacortes City Limits |
| — Non-Fish-Bearing | ■ Skagit County |
| — Unclassified | |

Notes:

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- Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

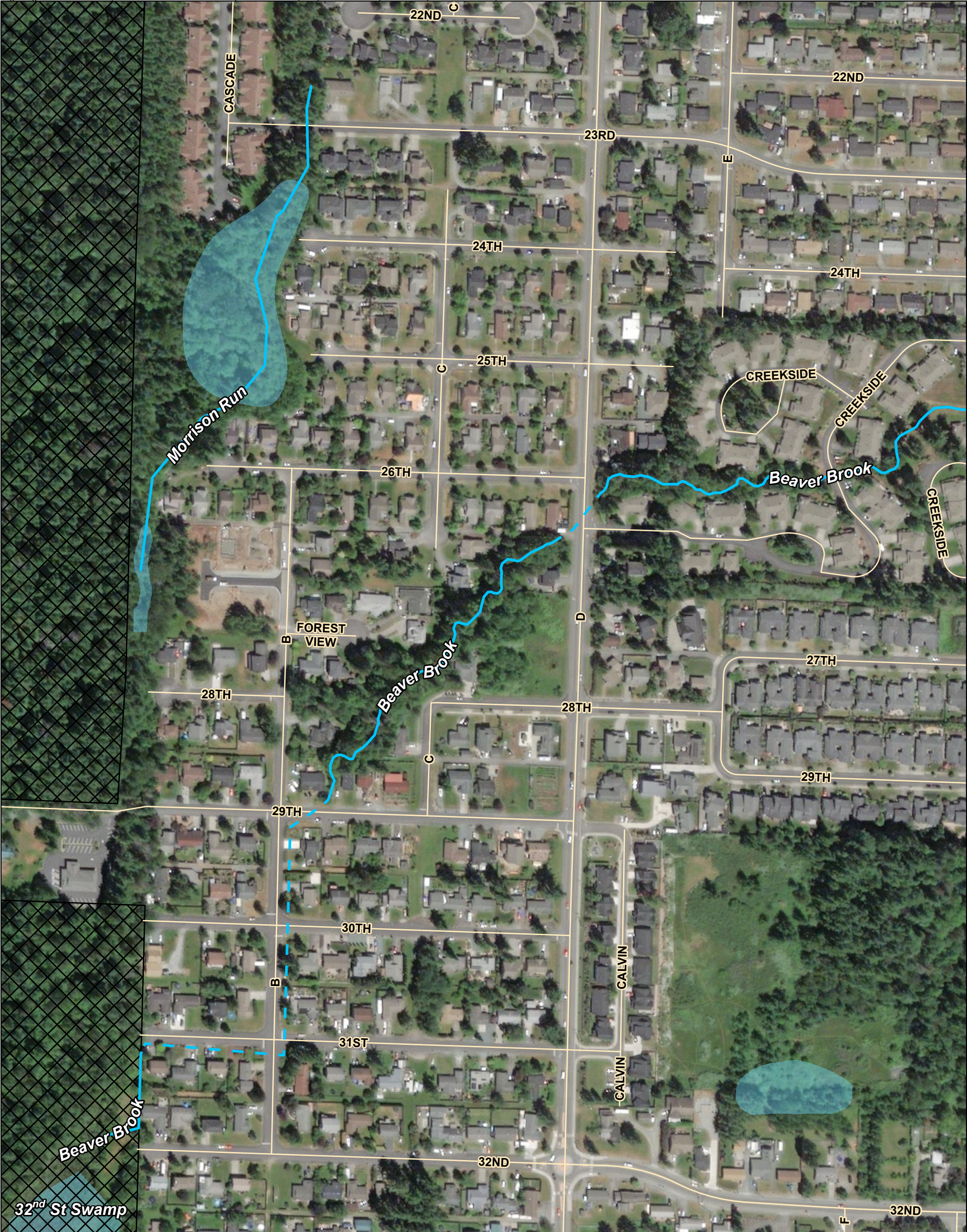


Mitten Creek and Streams 1, 2, 3, and 4

Stream BAS Report
Anacortes, Washington



Figure 4



Legend

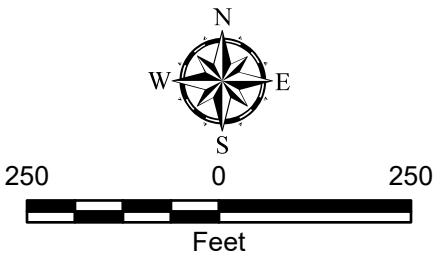
- Road
-
- Piped Stream Buffer (10-ft)

DNR Stream Type

Unclassified

Notes:

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- Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

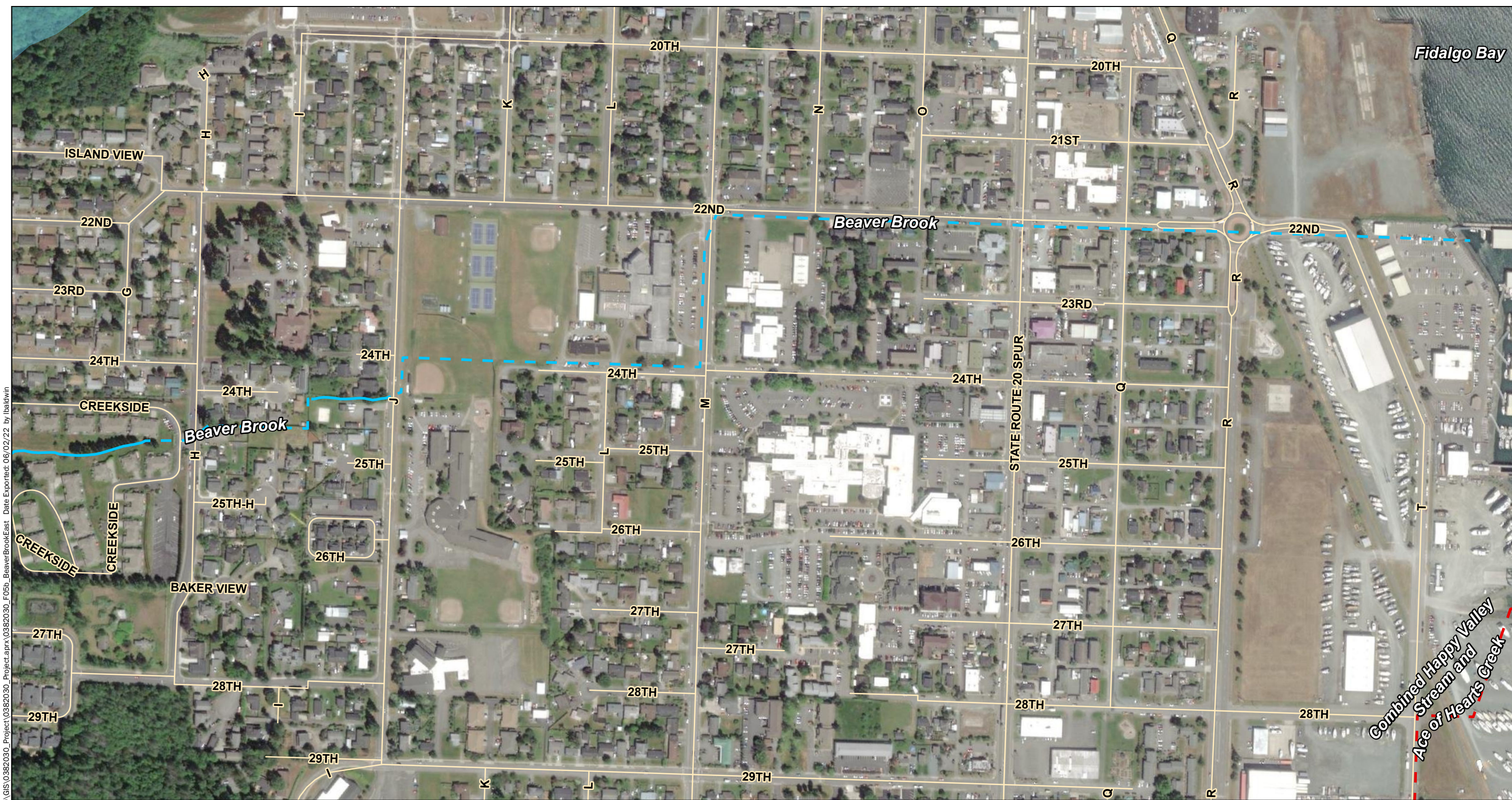


Beaver Brook West and Morrison Run

Stream BAS Report
Anacortes, Washington

GEOENGINEERS

Figure 5a



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Notes:

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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

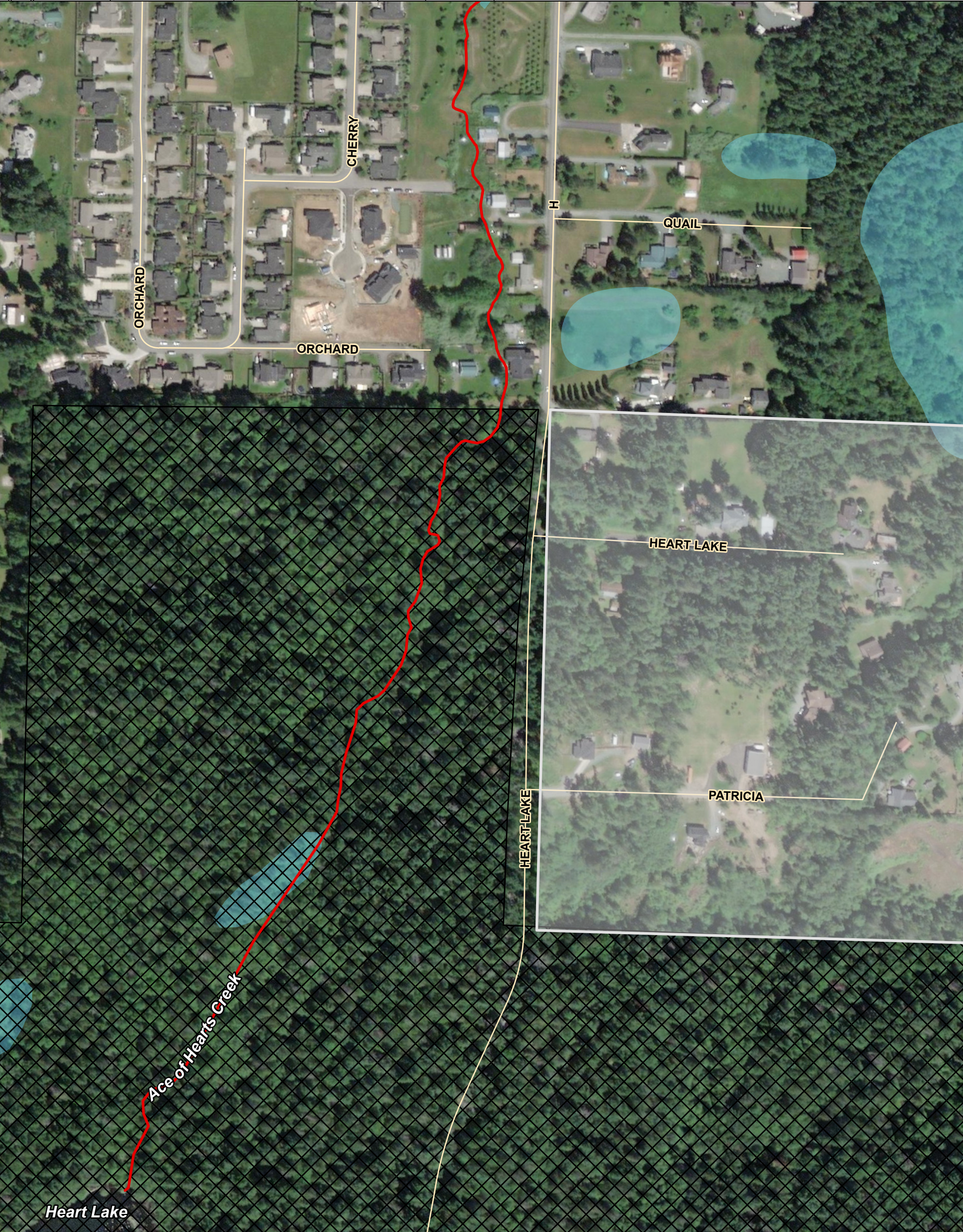
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Road	Fish-Bearing (Piped)
DNR Stream Type	Unclassified (Piped)
Unclassified	Anacortes Mapped Wetlands

350 0 350

Feet

Beaver Brook East	
Stream BAS Report Anacortes, Washington	
	Figure 5b



Legend

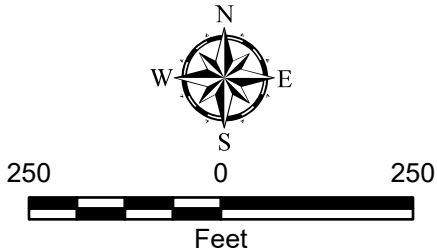
- Road
-
- DNR Stream Type

Notes:

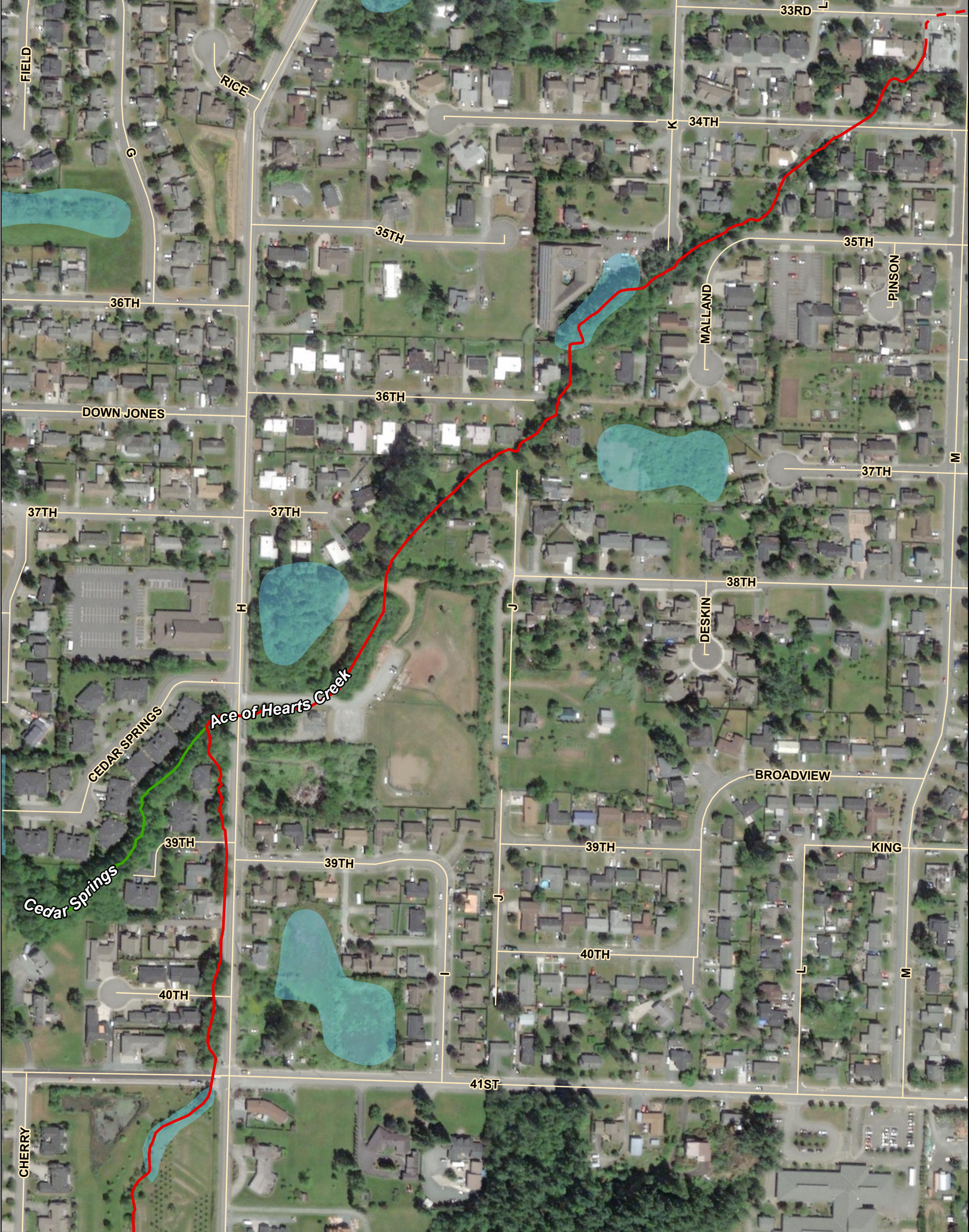
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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Ace of Hearts West	
Stream BAS Report Anacortes, Washington	
	Figure 6a



Legend

Road

DNR Stream Type

Fish-Bearing

Non-Fish-Bearing

Fish-Bearing (Piped)

Anacortes Mapped Wetlands

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Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Ace of Hearts Middle and Cedar Springs

Stream BAS Report
Anacortes, Washington

GEOENGINEERS

Figure 6b

Page 277 of 351



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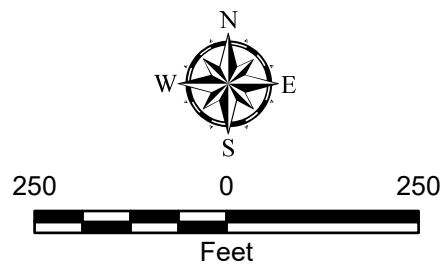
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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Legend

	Road		Fish-Bearing (Piped)
	DNR Stream Type		Unclassified (Piped)
	Fish-Bearing		



Ace of Hearts East	
Stream BAS Report Anacortes, Washington	
	Figure 6c



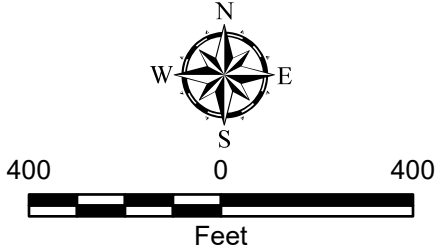
Legend

- | | |
|------------------------|---------------------------|
| — Road | — Unclassified (Piped) |
| DNR Stream Type | Anacortes Mapped Wetlands |
| — Unclassified | Anacortes City Limits |
| — Fish-Bearing (Piped) | Skagit County |

Notes:

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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Happy Valley Stream	
Stream BAS Report Anacortes, Washington	
	Figure 7



Legend

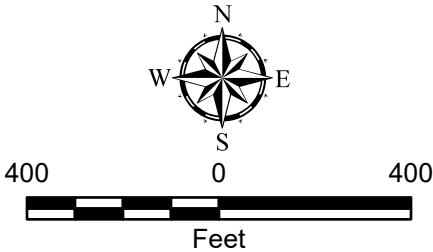
- | | |
|--------------------|---------------------------------|
| — Road | Anacortes Community Forest Land |
| DNR Stream Type | Anacortes City Limits |
| — Non-Fish-Bearing | Skagit County |
| — Unclassified | |

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Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Whistle Creek West	
Stream BAS Report Anacortes, Washington	
	Figure 8

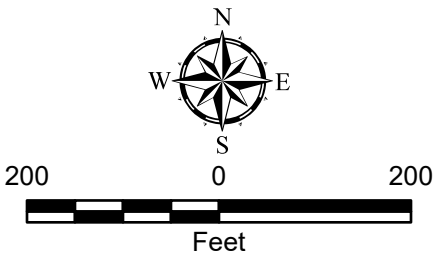


Legend

- | | |
|------------------------|-----------------------------|
| — Road | — Unclassified (Piped) |
| DNR Stream Type | — Anacortes Mapped Wetlands |
| — Fish-Bearing | — Anacortes City Limits |
| — Unclassified | — Skagit County |
| — Fish-Bearing (Piped) | |

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Not all road and driveway culvert crossings are shown as piped stream
Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Miller Creek, Weaverling Rill, and Whistle Creek East

Stream BAS Report
Anacortes, Washington



Figure 9



Legend

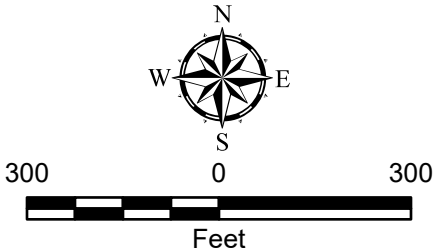
- | | |
|--------------------|-----------------------------------|
| — Road | ⊠ Anacortes Community Forest Land |
| DNR Stream Type | □ Anacortes City Limits |
| — Fish-Bearing | □ Skagit County |
| — Non-Fish-Bearing | |

Notes:

1. The locations of all features shown are approximate.
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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Heart Bourn and Streams 5 and 6

Stream BAS Report
Anacortes, Washington



Figure 10



Legend

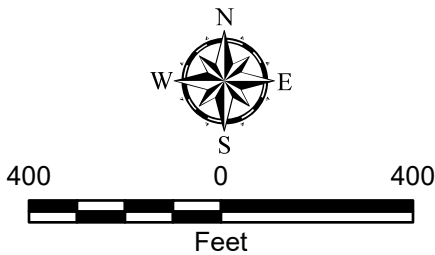
- | | |
|-----------------|-----------------------------------|
| — Road | ■ Anacortes Mapped Wetlands |
| DNR Stream Type | ■ Anacortes Community Forest Land |
| — Fish-Bearing | ■ Anacortes City Limits |
| — Unclassified | ■ Skagit County |

Notes:

1. The locations of all features shown are approximate.
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3. Not all road and driveway culvert crossings are shown as piped stream
4. Toot Creek and Stream 8 drain to Lake Campbell

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

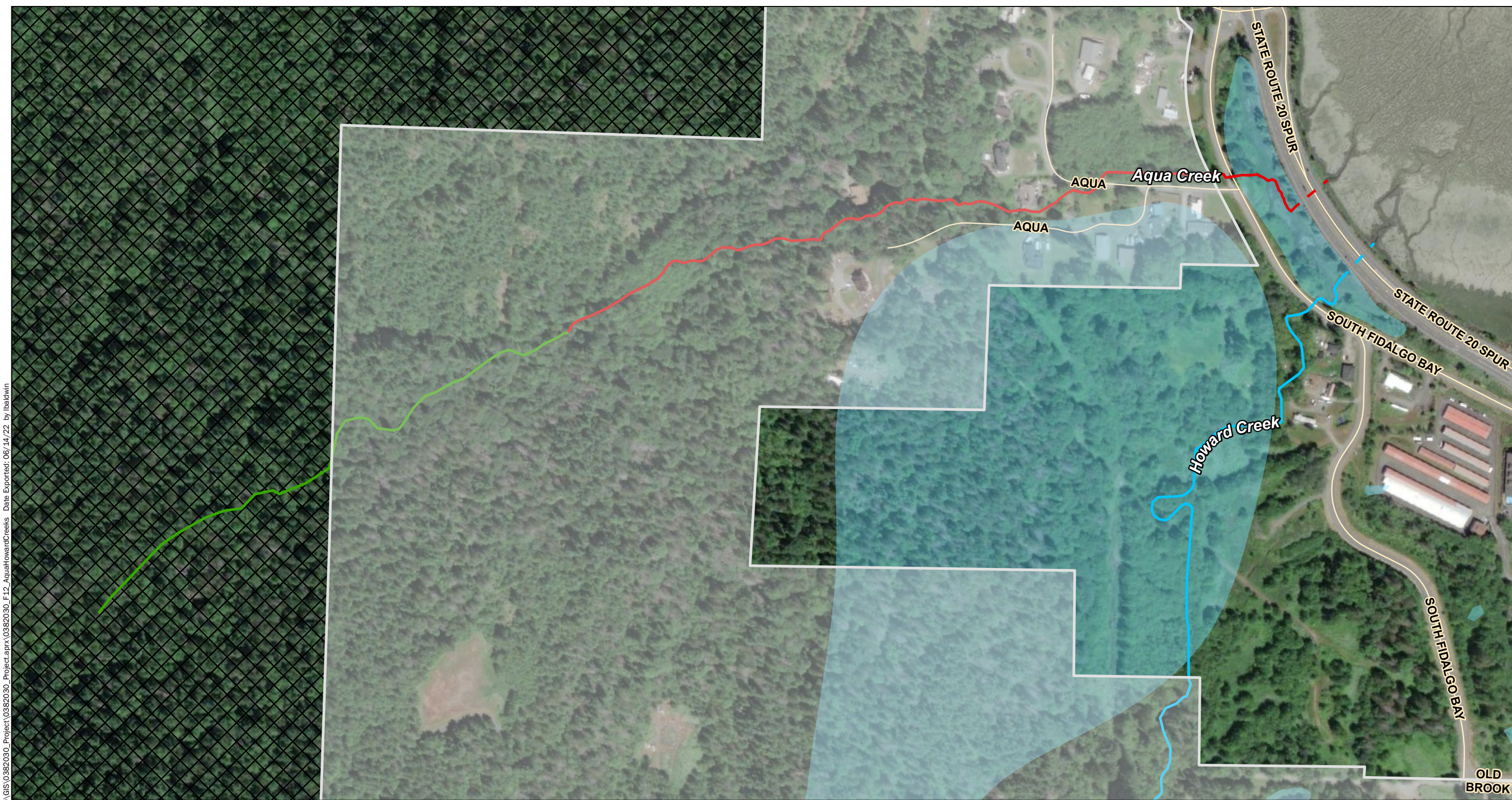


Toot Creek and Streams 7 and 8

Stream BAS Report
Anacortes, Washington



Figure 11

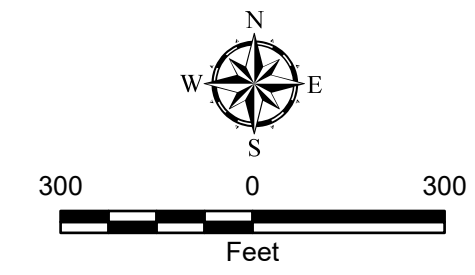


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Notes:
 1. The locations of all features shown are approximate.
 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
 3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
 Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

- Legend**
- Road
 - DNR Stream Type**
 - Fish-Bearing
 - Non-Fish-Bearing
 - Unclassified
 - - Fish-Bearing (Piped)
 - - Unclassified (Piped)
 - Anacortes Mapped Wetlands
 - Anacortes Community Forest Land
 - Anacortes City Limits
 - Skagit County



Aqua and Howard Creeks	
Stream BAS Report Anacortes, Washington	
	Figure 12

\\geoengineers.com\WAW\Projects\0382030\GIS\0382030_Project\0382030_F13_SummitCreek Date Exported: 06/14/22 by lbaldwin



Notes:

1. The locations of all features shown are approximate.

2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

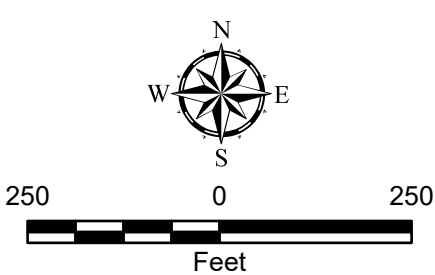
3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Legend

Road	Fish-Bearing (Piped)
DNR Stream Type	Anacortes Mapped Wetlands
Fish-Bearing (Uncertain Hydrography)	Anacortes City Limits
Fish-Bearing	Skagit County



Summit Creek	
Stream BAS Report Anacortes, Washington	
	Figure 13

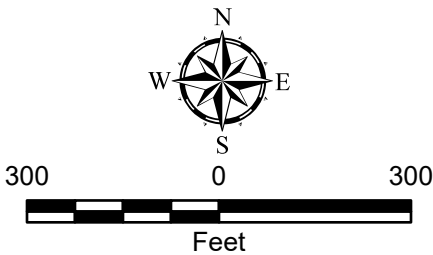


Legend

- | | |
|------------------------|-----------------------------|
| — Road | — Non-Fish-Bearing |
| FPAMT_Type | — Unclassified |
| — Unclassified (Piped) | — Anacortes Mapped Wetlands |
| DNR Stream Type | — Anacortes City Limits |
| — Fish-Bearing | — Skagit County |

Notes:

1. The locations of all features shown are approximate.
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 3. Not all road and driveway culvert crossings are shown as piped stream
 4. Turners Creek drains southwest to Turners Bay
- Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
- Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



March's Run and Turners Creek

Stream BAS Report
Anacortes, Washington



Figure 14

Ordinance No. 4025

An Ordinance Amending the Critical Area Regulations Contained in Anacortes Municipal Code Chapter 19.70, 19.70.235.F.5 and Article III, Fish and Wildlife Conservation Areas, to address Riparian Corridors

Whereas, on July 18, 2016, the City Council adopted Ordinance 2982 adopting a new Comprehensive Plan pursuant to the City's periodic Growth Management Act Comprehensive Plan amendment and update process; and

Whereas, the Anacortes Comprehensive Plan provides guidance for amending the Anacortes Municipal Code (AMC) development regulations and official zoning map to implement its land use, housing, economic development, transportation, environment and conservation, and other goals and policies; and

Whereas, the proposed amendments to the development regulations and official zoning map were initiated by the City in accordance with the requirements of the Growth Management Act and AMC 19.16.030(B), subsequent to the adoption of the 2016 Comprehensive Plan; and

Whereas, the City Council adopted Ordinance 3040 adopting new Development Regulations July 22, 2019; and

Whereas, the City Council adopted Ordinance 3064 updating the Critical Areas Regulations July 26, 2021; and

Whereas, the City Council desires to amend certain sections of the Critical Area regulations as depicted in attachment A;

Whereas, the amendments to the Critical Areas regulations are in the best interest of the City Of Anacortes residents; and

Whereas, the amendments to the Critical Area Regulations set forth herein have been processed, reviewed, considered, and adopted in material compliance with all applicable state and local procedural requirements, standards and requirements, standards, and criteria, including but not limited to the requirements of Chapter 36.70A RCW.

Whereas, a public comment opportunity was provided for certain changes to Critical Area Regulations Chapter 19.70 , 19.70.235.F.5, and Article III Fish and Wildlife Conservation Areas, 19.70.330 at the **date** Planning Commission meeting ; and

Whereas, the City Council considered the Planning Commission recommendation at a meeting on **date**

Now, therefore, the City Council of the City of Anacortes does ordain as follows:

Section 1. Findings. The above recitals are hereby adopted by reference as legislative findings in support of this ordinance. The City Council further enters the following findings:

Section 2. Development Regulation Amendments Adopted. The Anacortes Municipal Code Chapter 19.70 is amended as described in Attachment A.

Section 3. Transmittal to State. Pursuant to RCW 36.70A.106, a copy of this ordinance shall be submitted to the State Department of Commerce.

Section 4. Severability. If any section, sentence, clause, phrase, or word of this ordinance should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality thereof shall not affect the validity or constitutionality of any other section, subsection, sentence, clause, phrase, or word of this ordinance.

Section 5. Effective Date. Consistent with RCW 35A.12.130, this ordinance takes effect 5 days after publication.

Section 6. PASSED and APPROVED this ____ day of _____, 2022.

CITY OF ANACORTES:

Matt Miller, Mayor

Attest:

Steve Hoglund, City Clerk-Treasurer

Approved as to Form:

Darcy James Swetnam, City Attorney

**Revised Stream Buffer Best Available
Scient Review and Buffer
Recommendations**

City of Anacortes
Anacortes, Washington

for

**City of Anacortes, Planning, Community &
Economic Development Department**

June 29, 2022

**Revised Stream Buffer Best Available
Science Review and Buffer
Recommendations**

City of Anacortes
Anacortes, Washington

for

**City of Anacortes, Planning, Community &
Economic Development Department**

June 29, 2022



554 West Bakerview Road
Bellingham, Washington, 98226
360.647.1510

Revised Stream Buffer Best Available Science Review and Buffer Recommendations

City of Anacortes Anacortes, Washington

File No. 0382-030-04

June 29, 2022

Prepared for:

City of Anacortes
Planning, Community & Economic Development Department
P.O. Box 547
Anacortes, Washington 98221

Attention: Don Measamer

Prepared by:

GeoEngineers, Inc.
554 West Bakerview Road
Bellingham, Washington 98226
360.647.1510



Lydia Baldwin, MS, PWS
Biologist



Fiona M. McNair, MRM, PWS
Associate Biologist

FMM:LRB:mls

cc: Libby Grage (pdf)
City of Anacortes

Disclaimer: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

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1.0 INTRODUCTION

The City of Anacortes (City) adopted an updated Comprehensive Plan in 2016 and as required by the Growth Management Act (GMA, Chapter 36.70A Revised Code of Washington [RCW]) and subsequently conducted a Critical Areas Ordinance (CAO) review and update from early 2019 through the middle of 2021. In the fall of 2019, GeoEngineers, Inc. (GeoEngineers) conducted a Best Available Science (BAS) review for stream buffers and presented a discussion and conclusions related to potential updates to Fish and Wildlife Habitat Conservation Areas (FWHCAs) regulations specific to the 15 streams named in the Anacortes Municipal Code (AMC) 17.70.540(7)(a) (GeoEngineers, 2019). The updated CAO (Chapter 19.70 Critical Areas) was adopted on July 26, 2021.

An appeal to the Growth Management Hearings Board (Western Region State of Washington) was filed by Ian Munce and Evergreen Islands on November 23, 2021 to request "...that the Board declare the provisions cited above [buffer widths, buffer averaging, and buffer reductions and stream relocation provisions] noncompliant with the GMA and invalid and that it remand the Update to City for revisions consistent with that decision and to conduct the applicable SEPA review." In response to this appeal, the city is in the process of updating their CAO regulations specific to streams. The City requested that GeoEngineers prepare an updated BAS review for stream buffers to assist the city is revising the updated CAO regulations specific to streams.

The City first adopted a CAO in 1992. Before the 2021 adopted update, the last major update to the critical areas regulations was completed in 2005. The GMA (Washington Administrative Code [WAC] 365-195-485) requires the use of "best available science (BAS) in developing policies and development regulations to protect the functions and values of critical areas." This updated report summarizes the results of our BAS review for stream buffers conducted in 2019 and presents an updated current literature review, and presents discussion and conclusions related to potential updates to FWHCAs regulations as they related to stream buffers in AMC 19.70.

Our services for this review are described in our scope and fee estimate dated May 13, 2022. Our services were authorized by the city on May 16, 2022. The services were completed in collaboration with the city planning staff.

2.0 PURPOSE AND BACKGROUND

The purpose of this report is to provide an updated technical evaluation, discussion and recommendations to City of Anacortes staff for purposes of updating the related portions of the CAO with regard to current BAS for the Fish and Wildlife Habitat Conservation Areas (FWHCAs) regulations specific to streams. The main consideration for updating the streams portion of the FWHCAs critical areas code is to consider regulated buffer width options for streams located within Anacortes city limits (Figures 1 to 14). Stream buffers or riparian management areas need to provide adequate protection of stream functions consistent with BAS while recognizing the existing surrounding land uses, development, and other characteristics of the urban environment.

According to the Washington State Office of Community Development (OCD), BAS is defined as scientific information applicable to the critical area prepared by local, state, or federal natural resource agencies, or qualified scientific professionals, that is consistent with criteria established in WAC 365-195-900 through

WAC 365-195-925. The applicability of BAS and even particular critical area regulations are unique to each city and county depending on many factors including but not limited to location; geography; hydrologic, geologic and hydrogeologic conditions; and type of water bodies. GeoEngineers completed our BAS review in accordance with the criteria specified in the above referenced WAC sections while considering our understanding of the applicable attributes for the City.

BAS must be involved in developing the policies and regulations related to the critical area; however, local jurisdictions also have the opportunity and responsibility to include context where proposed development regulations consider relevant mitigation strategies for impacts to critical areas. These considerations are generally incorporated into critical area regulations by:

- using BAS in developing policies and development regulations to protect functions and values of critical areas, while recognizing the agency also has a responsibility to protect lives and property within the regulatory framework;
- requiring a valid scientific process to evaluate the effects of the policies and regulations, and consider how a valid scientific process can be incorporated in submittals related to the critical areas when assessing possible impacts to critical areas from proposed development activities; and
- incorporating non-science-based decisions with discussion of supporting information, rationale and potential risks to functions and values of critical areas.

3.0 BAS REVIEW FOR FISH AND WILDLIFE HABITAT CONSERVATION AREAS – STREAMS

3.1. Code Review and Comparison

WAC 365-190-030 defines Fish and Wildlife Habitat Conservation Areas as follows:

“(6)(a) “Fish and wildlife habitat conservation areas” are areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, and which, if altered, may reduce the likelihood that the species will persist over the long term. These areas may include, but are not limited to, rare or vulnerable ecological systems, communities, and habitat or habitat elements including seasonal ranges, breeding habitat, winter range, and movement corridors; and areas with high relative population density or species richness. Counties and cities may also designate locally important habitats and species.

(b) “Habitats of local importance” designated as fish and wildlife habitat conservation areas include those areas found to be locally important by counties and cities.

(c) “Fish and wildlife habitat conservation areas” does not include such artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of, and are maintained by, a port district or an irrigation district or company.”

The Washington State Department of Commerce and the GMA provide guidance for jurisdictions to consider the designation of appropriate fish and wildlife habitat conservation areas, including waters of the state (Washington State Department of Commerce, 2018).

WAC 365-190-130(2) mandates that “Fish and wildlife habitat conservation areas that must be considered for classification and designation include:”...“(f) Waters of the state;” and, WAC 365-190-130(4)(f) mandates that sources and methods of classifying and designating waters of the state include:

“(i) Waters of the state are defined in RCW 90.48.020 and include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and water courses in Washington. Stream types are classified in Title 222 WAC, the forest practices regulations. Counties and cities may use the classification system established in WAC 222-16-030 to classify waters of the state. Counties and cities using the water types defined in WAC 222-16-030 or 222-16-031 (interim) should not rely solely on Washington state department of natural resources maps of these stream types for purposes of regulating land uses or establishing stream buffers.

(ii) Counties and cities that use the stream typing system developed by the department of natural resources should develop a process to verify actual stream conditions, identify flow alterations, and locate fish passage barriers by conducting a field visit. Field verification of all intermittent or non-fish bearing streams should occur during the wet season months of October to March or as determined locally.

(iii) Counties and cities may consider the following factors when classifying waters of the state as fish and wildlife habitat conservation areas:

- (A) Species present which are endangered, threatened or sensitive, and other species of concern;
- (B) Species present which are sensitive to habitat manipulation (e.g., priority habitats and species program);
- (C) Historic presence of species of local importance;
- (D) Existing surrounding land uses that are incompatible with salmonid habitat;
- (E) Presence and size of riparian ecosystems;
- (F) Existing water rights; and
- (G) The intermittent nature of some waters of the state.”

In addition, the Washington State Department of Commerce suggests considering the following principles in classification and designation of FWHCAs (Washington State Department of Commerce, 2018):

- Creating a system of fish and wildlife habitat with connections between larger habitat blocks and open spaces, integrating with open space corridor planning where appropriate;
- The level of human activity in such areas, including presence of roads and level of recreation type (passive or active recreation may be appropriate for certain areas and habitats);
- Protecting riparian ecosystems, including salmonid habitat, which also include marine shoreline areas;
- Evaluating land uses surrounding ponds and fish and wildlife habitat areas that may negatively impact these areas, or conversely that may contribute positively to their function;
- Establishing buffer zones around these areas to separate incompatible uses from the habitat areas;
- Considering the potential for restoring lost and impaired salmonid habitat;
- Considering the potential for designating areas important for local and ecoregional biodiversity; and

- Establishing or enhancing non-regulatory approaches in addition to regulatory methods to protect fish and wildlife habitat conservation areas.

The City of Anacortes' recently updated critical areas regulations include the following designation of streams, defined in AMC 19.70.315(A) as:

“3. Waters of the State, including **streams** as classified in WAC 222- 16- 030, including but not limited to Whistle Creek, Happy Valley Stream, Ace of Hearts Creek, Beaver Brook, Cranberry Creek, Clyde Creek, Anaco Bourn, Morrison Run, Cedar Springs, Weaverling Rill, Miller Creek, Aqua Creek, Howard Creek, Summit Creek, and March' s Run;”

And:

“4. Lakes, ponds, **streams, and rivers** planted with game fish by a governmental or tribal entity;”

And:

“5. Areas with which anadromous fish species have a primary association;”

The following stream buffers are stipulated per AMC 19.70.330(B):

- Type F streams: 50 feet
- Type Np streams: 50 feet
- Type Ns streams: 50 feet
- Piped Streams and Roadside Ditched Segments: 10 feet

For Type F streams (fish-bearing streams per WAC 222-16-030 Water typing system) and both Type 2 and Type 3 streams (Interim water typing system WAC 222-16-031, streams with high, moderate and slight fish, wildlife, or human use), other jurisdictions generally stipulate riparian buffers of 100 to 150 feet (Watershed Company, 2007). City of Bellingham designates minimum and maximum buffers for specific fish-bearing streams (Type F) within city limits (e.g., Padden Creek, Connelly Creek and Baker Creek) ranging from 75 feet to 200 feet, with buffers varying by stream reach for Padden Creek (Bellingham Municipal Code [BMC] Table 16.55.500(A)). For all other Type F streams the City of Bellingham designates buffers from 75 feet (minimum) to 150 feet (maximum) (BMC Table 16.55.500(A)). City of Mount Vernon designates a 150-foot buffer for fish bearing streams (Type F), a 50-foot buffer for perennial non-fish bearing streams (Type Np), and a 35-foot buffer for seasonal/ephemeral non-fish bearing streams (Type Np), and all stream types are subject to a minimum 15-foot minimum building setback beyond the buffer (Mount Vernon Municipal Code [MVMC] Table 15.40.080(B)). City of Burlington designates a 200-foot buffer for Type 1 and 2 streams, a 100-foot buffer for Type 3 streams, and a 50-foot buffer for Type 4 and 5 streams (Burlington Municipal Code [BMC] 14.15.380(B)). King County designates a 165-foot buffer for fish bearing streams (Type F) in rural areas (in a basin or shoreline designated as "high" on the Basin and Shoreline Conditions Map) and a 115-foot buffer for Type F streams within the urban growth area (King County Code [KCC] 21A.24.358(B)). The City of Seattle *Regulations for Environmentally Critical Areas* (Seattle Municipal Code [SMC] 25.09) regulate and restrict development within a *riparian management area* defined as “...the area within 100 feet of the riparian watercourse measured horizontally landward from the ordinary high water mark [OHWM] of the watercourse as surveyed in the field, or from the top of

the bank if the ordinary high water mark cannot be determined. In watercourses with braided channels or alluvial fans, the OHWM shall be determined so as to include the entire stream feature. SMC 25.09.012(D)(5)" Within the riparian management area, development is allowed within the limited *riparian development area*, defined as the area within the riparian management area and more than 75 feet from the OHWM for Type F waters with anadromous fish presence, or within the riparian management area and more than 50 feet from the OHWM for Type F waters without anadromous fish presence and for Type Np and Ns waters (SMC 25.09.200(3)(B)).

3.2. Summary of Existing Stream Functions

Table 3-1 below provides a summary of headwaters, general alignment and channel condition, buffer condition and documented fish use for 27 mapped streams in Anacortes. These streams are documented by the City of Anacortes, the Washington Department of Natural Resources (DNR) Forest Practices Application Mapping Tool (FPAMT) (DNR 2022), the Northwest Indian Fisheries Commission (NWIFC) Statewide Washington Integrated Fish Distribution (SWIFD) map (NWIFC 2022), the Washington Department of Fish and Wildlife (WDFW) Fish Passage and Diversion Screening Inventory Database (WDFW 2022a), and the WDFW Priority Habitat and Species (PHS) Interactive map viewer (WDFW 2022b).

Figures 1 through 14 depict these 27 streams. The stream alignments shown in Figures 1 through 14 are based on the above-referenced sources as well as publicly available Lidar and aerial photographs. A field-based ground truthing to confirm the stream alignments was not performed as part of the mapping exercise.

TABLE 3-1. ANACORTES STREAM SUMMARY INFORMATION

#	Stream Name	Figure #	Headwaters	General Description	Buffer Condition	Agency Mapping and Mapped Fish Use ¹
1	Ace of Hearts Creek	6a, 6b, and 6c	Heart Lake located within Anacortes Community Forest Lands (ACFL)	A combination of wetland, ditched stream, and natural channel that varies throughout its course. This stream is conveyed into the city stormwater system at 33 rd Street, a distance of 5,000 feet before draining into Fidalgo Bay. Cedar Springs confluence with Ace of Hearts Creek is located just upstream of Ace of Hearts Rotary Park (off leash area) near H Avenue and Cedar Springs Lane.	Shrub and forest sections generally have 25-foot buffers, with some limited areas of 50-foot buffer. Invasive species are common in buffer areas. Buffers consist of approximately 1,400 feet of open orchard fields and residential yards from 41 st Street north to Orchard Place. Portion of stream within the ACFL has a 250- to 1,000-foot forested buffer.	FPAMT and SWIFD map the stream as fish-bearing (F) No mapped fish use in PHS or SWIFD
2	Anaco Bourn	3	Forested wetland within ACFL	A stream that begins in a forested wetland in the ACFL. It is conveyed into a culvert through the Marine Heights development and enters Clyde Creek north of Anaco Beach Road. Wetlands periodically occur adjacent to this stream.	First approximately 700 feet has a young forest buffer ranging from 25 to 100 feet. Upper portion through residential neighborhood (approximately 850 feet) has 10 to 25-foot buffers with landscaping and lawn. Headwaters are a forested wetland within ACFL.	Not mapped by SWIFD, PHS or FPAMT
3	Aqua Creek	8 and 12	Forested area to the northeast of Whistle Lake within ACFL	A channelized wetland that flows into Fidalgo Bay. Fidalgo Bay and tidal flushing extends to the west side of SR-20 at the confluence of Aqua Creek.	Young forest ranging in width from greater than 250 feet to 50 feet or less. Buffers include residential yards in the lower watershed.	The first approximately 2,000 feet upstream from Hwy 20 is mapped as fish-bearing (F) by SWIFD/FPAMT and non-fish bearing (N) upstream of that. No mapped fish use in PHS or SWIFD.
4	Beaver Brook	5a and 5b	Headwaters are a large, inundated wetland within ACFL known as the “32 nd Street Swamp”	From the 32 nd Street Swamp, at the western terminus of 32 nd Street, Beaver Brook flows for approximately 1,500 feet along ditches to a natural channel (for approx. 2,000 feet) within a narrow and forested buffer (25 to 35 feet) and then flows through a series of ditches and pipes for approx. 1,500 before draining into the city’s stormwater system along approx. 4,700 feet of pipe before draining into Puget Sound at the end of 22 nd Street.	Buffer along ditched section between 33 rd St and 29 th Street is generally forested on the west side (ACFL) and urban yards on the east side. Buffer upstream and downstream of D Avenue is a mostly narrow (25 feet) forested buffer with a mixture of cedar, Douglas fir, red alder and willow. Buffers along ditched sections are generally grass with some patches of native and non- trees and shrubs.	Not Mapped by FPAMT, SWIFD or PHS
5	Cedar Springs	6b	Artesian well and City-mapped wetland near the headwaters, southwest of Cedar Springs Lane	An approximately 700-foot channel, consisting of a combination of wetlands and stream channel that flows into Ace of Hearts Creek. Much of the flow is from an artesian well.	50-foot forested buffer adjacent to residential neighborhoods. Headwaters are hay fields.	Not mapped by SWIFD, PHS or FPAMT No mapped fish use in PHS or SWIFD
6	Clyde Creek	3	Wetland north of Jaspar Way	Clyde Creek begins as a wetland north of Jaspar Way, is conveyed through ditches and swales as wetlands, and is then channeled through a housing development in open swales and culverts where it picks up lawn and roadside runoff. It then flows into a ditch along Anaco Beach Road and then is culverted into Burrows Bay. Clyde Creek has increased flow during storm events.	Forested sections are approximately 10- to 15-foot wide on either side of the creek (at the ground surface) with a wider canopy above. Vegetation in the forested buffer consists of Douglas fir and western red cedar forest with some red alder and big leaf maple, with sword fern and Oregon grape understory. Salmonberry dominates closer to the creek.	SWIFD maps Clyde Creek as having “modeled presence” / being gradient accessible for Fall chinook salmon, coho, winter steelhead, and pink salmon (odd year). FPAMT and SWIFD map the stream as fish-bearing (F) up to a point approximately 300 feet upstream of Clyde Way, above which the stream is mapped as non-fish-bearing (N).
7	Cranberry Creek	2	Cranberry Lake within ACFL	Stream is the regulated outlet of Cranberry Lake. The stream flows within a gorge, 10-20 feet deep, within a wooded riparian corridor that is part of ACFL. The channel is conveyed into a roadside ditch near West 4th Street and the gravel access road to Cranberry Lake. It is then conveyed, via approximately 1,500 feet of stormwater pipe, into Guemes Channel. (east along the gravel access road, north along Georgia Ave, under Hwy 20 and out into Guemes Channel)	150 to 250 feet+ of forested buffer along the approximately 1,300-foot section of open channel immediately downstream of Cranberry Lake Vegetation in the forested buffer consists of western hemlock and western red cedar forest with some red alder and big leaf maple, with sword fern and Oregon grape understory. Salmonberry dominates closer to the creek.	SWIFD maps the documented presence of resident Coastal Cutthroat Trout in Cranberry Creek. FPAMT and SWIFD map the stream as fish-bearing (F)
8	Happy Valley Stream	7 and 6c	In Skagit County north of Haddon Road within a shrub and forest wetland complex	A combination of wetland, ditched stream, and natural stream channel. It is also conveyed into the city stormwater system after crossing under Hwy 20 at R Avenue, a distance of 4,000 feet before draining into Fidalgo Bay.	25 to 50 foot sections of forested and shrub buffer areas in the middle and upper watershed and mowed lawns and open fields. Piped section is urban and mostly impervious.	Not mapped by SWIFD, PHS or FPAMT WDFW fish passage online map viewer maps fish passage barrier culverts and dams along the alignment of Happy Valley Stream.

#	Stream Name	Figure #	Headwaters	General Description	Buffer Condition	Agency Mapping and Mapped Fish Use ¹
9	Heart Bourn	10	Forested lands with the ACFL located north of Lake Erie.	Heart Bourn flows south along Heart Lake Road and discharges into Lake Erie in Skagit County.	Second growth mixed forested lands within the ACFL. Deciduous forest near the mouth along Lake Erie.	Mapped by SWIFD/FPAMT as fish-bearing (F) No fish distribution mapped by SWIFD or PHS.
10	Howard Creek	12	Wetland complex south and west of S Fidalgo Bay Road	Howard Creek is a large wetland complex with an outlet.	Young forest and shrub.	Not Mapped by SWIFD, PHS or FPAMT No fish distribution mapped by SWIFD or PHS.
11	March's Run	14	Wetlands north of South March Point Road and the BNSF railroad	March's Run is a ditched wetland and turns into a natural channel near the confluence of a shallow estuarine portion of Padilla Bay west of South March Point Road. March's Run, as ditches wetland, is mapped by the City as a stormwater system occurring on both the south and north side of the railroad tracks. The northern portion of March's Run is a channeled drainage that collects runoff from the ditches alongside of the road and the railroad.	Disturbed fields and Himalayan blackberry	Not Mapped by SWIFD, PHS or FPAMT No fish distribution mapped by SWIFD or PHS
12	Miller Creek	8 and 9	A rural residential area west of Hwy 20 accessed via San Juan Hill Road	Miller Creek is similar to Weaverling Rill that is culverted under SR-20 and is difficult to determine where it enters Fidalgo Bay. This stream also requires additional fieldwork to determine the source of hydrology.	Young forest with some open field areas in the upper watershed.	The first approximately 500 feet is mapped as fish-bearing (F) on FPAMT/SWIFD and non-fish bearing (N) above that. No fish distribution mapped by SWIFD or PHS.
13	Mitten Creek	4	Mitten Lake	Mitten Creek flows south out of Mitten Lake (within the ACFL) for approximately 500 feet before passing into Skagit County. In Skagit County, Mitten Creek flows through forested and wetland areas then passing under Marine Drive and South Del Mar Lane before discharging into Burrows Bay.	Approximately 500 linear feet of headwaters channel located within the Cranberry Lake ACFL lands has second growth forested buffers. Within Skagit County buffers consist of mixed young forest, open fields and wetlands. Near the mouth, Mitten Creek passes through a residential community.	FPAMT and SWIFD map Mitten Creek as Fish-Bearing. A tributary of Mitten Creek that originates from an Anacortes-mapped wetland near Fir Crest Boulevard (Stream 4) is mapped as non-fish-bearing by FPAMT and SWIFD. SWIFD does not show Mitten Creek as having any salmonid fish distribution.
14	Morrison Run	5a	Channelized wetland located north of Beaver Brook and east of Cranberry Lake between 28 th and 23 rd Streets	Morrison Run is a wetland that has been channelized in select locations that enter into the city stormwater system.	Forested area immediately east of the Cranberry Lake ACFL	Not Mapped by SWIFD, PHS or FPAMT Wetlands are not mapped by NWI ²
15	Summit Creek	13	A rural residential area west of Thompson Road	Summit Creek begins within rural residential area west of Thompson Road, is conveyed through a series of ditches over to Saterlee Road where it flows through a series of man-made and natural wetlands, then flows through an open ditch on the south side of SR-20 west of Christiansen Road, under Hwy 20 then ditched until it drains into Fidalgo Bay. A drainage channel through the golf course has a confluence with Summit Creek at Hwy 20.	Rural residential fields and lawns.	Both Summit Creek and its tributary that drains through the golf course are mapped as fish-bearing (F) by SWIFD/FPAMT. The headwaters of Summit Creek and the golf course tributary (in Skagit County) are mapped as non-fish-bearing (N) by SWIFD/FPAMT. WDFW fish passage online map viewer maps a fish passage barrier (culvert under Christianson Road). No fish distribution mapped by SWIFD or PHS
16	Toot Creek	11	Whistle Lake	Toot Creek flows south from Whistle Lake through the ACFL and Skagit County, under Campbell Lake Road, and into Campbell Lake. Stream centerline and headwaters need to be field verified.	Forested area within ACFL.	SWIFD maps the lower portion of Toot Creek as having "modeled presence" (gradient accessible) for Fall chinook salmon, coho salmon, winter steelhead, and pink salmon (odd year). The first approximately 3,220 feet is mapped as fish-bearing (F) on FPAMT and not classified above that.

#	Stream Name	Figure #	Headwaters	General Description	Buffer Condition	Agency Mapping and Mapped Fish Use ¹
17	Turner's Creek	14	Wetland located between SR 20 and Padilla Heights Road	Turner's Creek flow southwest through industrial use and undeveloped areas, under Reservation Road and into Turners Bay.	Young forest and cleared industrial use areas.	SWIFD/FPAMT mapped as fish-bearing (F) south/downstream of Padilla Heights Road and non-fish bearing (N) north/upstream of that. SWIFD maps the lower portion of Turner's Creek as having "modeled presence" (gradient accessible) for fall chum salmon, fall chinook salmon, winter steelhead, and pink salmon (odd year). SWIFD shows documented presence of Coho and Resident Coastal Cutthroat Trout within the lower portion of Turner's Creek.
18	Weaverling Rill	9	Forested area west of Hwy 20. Fields near headwaters appear wet on aerial photographs	Flows through a forested area west of Hwy 20 and is conveyed under SR-20 into a ditch that is piped under Fidalgo Bay Road and out into Fidalgo Bay.	West of Hwy 20 and between Hwy 20 and Fidalgo Bay Road buffer consists of young forest ranging in width from greater than 250 feet to 50 feet or less. Piped sections consist of parking lots and open fields.	Mapped as fish-bearing (F) on FPAMT/SWIFD No fish distribution mapped by SWIFD or PHS.
19	Whistle Creek	8 and 9	Wetlands in the vicinity of Whistle Lake	Stream originates in wetlands north of Whistle Lake within the ACFL, parallels Whistle Lake Road in the upper watershed.	Young forest ranging in width from greater than 250 feet to 50 feet or less. Whistle Lake Road is within the buffer in the upper watershed.	Not Mapped by SWIFD, PHS or FPAMT. No fish distribution mapped by SWIFD or PHS.
20	Stream 1	4	Big Beaver Pond	Stream originates at Big Beaver Pond within the ACFL and flows approximately 630 feet into Little Cranberry Lake. Stream centerline and headwaters need to be field verified.	Forested area within ACFL.	Mapped as fish-bearing (F) by FPAMT/SWIFD No fish distribution mapped by SWIFD or PHS.
21	Stream 2	4	Big Beaver Pond	Stream originates at Big Beaver Pond within the ACFL and flows approximately 450 feet into the 32 nd Street Swamp. Stream centerline and headwaters need to be field verified.	Forested area within ACFL.	Mapped as fish-bearing (F) by FPAMT/SWIFD No fish distribution mapped by SWIFD or PHS.
22	Stream 3	4	Forested areas within ACFL and Skagit County	Stream appears to flow northeast from forested areas in Skagit County into Mitten Lake. Stream centerline and headwaters need to be field verified.	Forested area within ACFL.	Not Mapped by SWIFD, PHS or FPAMT.
23	Stream 4	4	Unnamed wetland within ACFL	Stream flows southwest from an unnamed wetland on the eastern border of the ACFL approximately 930 feet into Mitten Creek. Stream centerline and headwaters need to be field verified.	Forested area between the eastern boundary of the ACFL and residential areas.	Mapped as non-fish-bearing (N) on FPAMT No fish distribution mapped by SWIFD or PHS.
24	Stream 5	10	Forested areas within ACFL north of Lake Erie	Stream flows southwest from forested area in the ACFL, under Heart Lake Road and into Heart Bourn. Stream centerline and headwaters need to be field verified.	Second growth mixed forested area within ACFL	SWIFD/FPAMT mapped as non-fish-bearing (N) No fish distribution mapped by SWIFD or PHS.
25	Stream 6	10	Forested areas within ACFL north of Lake Erie	Stream flows west from forested area in the ACFL, under Heart Lake Road and into Heart Bourn. Stream centerline and headwaters need to be field verified.	Second growth mixed forested area within ACFL	SWIFD/FPAMT mapped as non-fish-bearing (N) No fish distribution mapped by SWIFD or PHS.
26	Stream 7	11	Forested areas within ACFL	Stream appears to flow southeast from forested area in the ACFL and into Whistle Lake/a wetland at the western edge of Whistle Lake. Stream centerline and headwaters need to be field verified.	Forested area within ACFL	SWIFD/FPAMT mapped as fish-bearing (F) No fish distribution mapped by SWIFD or PHS.
27	Stream 8	11	Forested areas within ACFL	Stream flows south from forested areas in the ACFL, into Skagit County, under Campbell Lake Road and into Campbell Lake. Stream centerline and headwaters need to be field verified.	Forested area within ACFL	Mapped as fish-bearing (F) on FPAMT Documented presence of Coastal Cutthroat Trout mapped by SWIFD.

Note:

¹ Priority Habitats and Species (WDFW 2022b), SWIFD (NWIFC 2022) and FPAMT (DNR 2022). PHS reports are the up to date source for fish use.

² NWI is the National Wetlands Inventory (USFWS 2022)

ACFL = Anacortes Community Forest Lands

3.3. BAS Literature Review

The buffer size necessary to provide a particular level of function depends on the functions of the stream, the stream's relative sensitivity (as influenced by hydrology and other factors), the characteristics of the buffer, the intensity of adjacent land use, and watershed characteristics. A multi-function buffer should be sized to meet all of the functions identified as being locally important.

In addition to their essential role as fish and wildlife habitats, riparian areas provide other significant benefits to humans in the form of a variety of ecosystem goods and services such as: provisioning food and water; decreasing flood flows; nutrient cycling, sediment and pollutant filtering; carbon sequestration; and recreational, spiritual, and other nonmaterial benefits (Naiman and Bilby 1998; NRC 2002). The literature review below focuses on the water quality protection functions (nutrient cycling, sediment and pollutant filtering) and fish and wildlife habitat functions of riparian buffers.

3.3.1. Buffers: Water Quality Protection

Buffers protect the water quality of streams by preventing the buffer area itself from serving as a source of pollution and by reducing harmful inputs through processing pollutants and absorbing heat. Urbanization can increase the amount of sediments and contaminants in surface runoff, cause changes in hydrology (rates and amounts of surface and groundwater contributions), increase the severity of water fluctuations in streams during storm events, and affect hydrology by changing the rate and nature of (more frequent rapid high flows and lower sustained low flows) (ELI, 2008; May, 1997a). Vegetated buffers with deep permeable soils absorb and slow down surface flows and impede the formation of channelized flows, allowing for infiltration before runoff reaches the stream channel and improving removal of sediments and nutrients (ELI, 2008).

Water quality benefits to streams and other waters of the state vary with the size of the buffer, and also vary with flow patterns, type of vegetation, slope, soils, adjacent and surrounding land use, pollutant type and dose, and patterns of precipitation (Adamus, 2007; Wenger, 1999; Sheldon et al., 2005). Buffers with both forested and grassy vegetation have been shown to be most effective at removing both sediments and nutrients. Buffer effectiveness can be reduced over time if sediments and/or nutrients are added too quickly or in chronically high concentrations, and by actions that remove vegetation or compact or erode soils, which can lead to the formation of rills and gullies (ELI, 2008).

3.3.1.1. Removal of Sediments and Pollutants

Many researchers have found that the majority of sediment removal occurs within the first 15 to 30 feet, but that buffers of 30 to 100 feet will remove sediments more consistently (Dillaha et al., 1988, 1989; Magette et al., 1989; Schoonover et al., 2006; Sheldon et al., 2005). The effectiveness of buffers to remove sediment decreases as slopes increase and as sediment loads increase (Wenger, 1999; Sheldon et al., 2005). From their review of the literature, Sheldon et al. (2005) concluded that coarser sediments are likely removed effectively in the first 16 to 66 feet of a buffer, while removal of finer particles may require buffers of 66 feet or larger. Locations with high sediment loads and steep slopes may also require wider buffers, as sediment removal efficiency decreases as slope increases (Wenger, 1999; Sheldon et al., 2005). The ability of buffers to remove sediments and nutrients can degrade over time, if rates of sediment and contaminant inputs is too fast or in high enough concentrations that soil voids fill up with sediments and/or soil binding sites reach capacity (Cooke, 1992). Channelized flow in the form of rills, gullies, ditches, subsurface pipes, and other types of highly focused flows does not allow for contact with buffer vegetation and often is not sufficiently slowed to allow sediment removal, reducing or eliminating the pollution filtering

capability of the buffer. Wenger (1999) found that the use of level spreaders, grass filter strips, and other structural techniques also can encourage sheet flow through buffers. Welsch (1991) recommended planting a grass strip 20 feet (6.1 meters) wide at the outer edge of a forested riparian buffer to help disperse concentrated flow into sheet flow.

Phosphorus is carried to waterways in both dissolved and particulate form. Much of the phosphorus entering buffers is attached to sediments and thus buffer effectiveness at removing sediments can be a surrogate for much of the phosphorus removal function (Wenger, 1999). Therefore, like sediment removal, much of the phosphorous removal may occur within the first 15 to 30 feet of a buffer, but more consistent phosphorus removal may occur within buffers of 30 to 100 feet (Dillaha et al., 1988, 1989; Emmons & Olivier Resources, 2001; Kuusemets and Mander, 1999; Lowrance and Sheridan, 2005; Syverson, 2005). Buffers can become saturated with phosphorous and are not effective at long term phosphorous storage, but they can regulate rates of phosphorous release and prevent large pulses from reaching streams and wetlands (Wenger, 1999). Removal of plant biomass (haymaking, mowing, grazing) from portions of the buffer, can permanently remove some phosphorus from the system (Wenger, 1999).

Waschbusch et al. (1999) reported that lawns and streets were the largest sources of total phosphorus, dissolved phosphorus, and total suspended solids (TSS) in a basin study, with a combined contribution of 80 percent of the phosphorus load. Lawns had the highest concentrations and load rates of both dissolved and total phosphorus, contributing from 56 to 70 percent of total phosphorus. Streets were the next largest contributor of phosphorus, while parking lots and roofs were the lowest contributors. Pitt et al. (2005) found that lawns and landscape areas were the largest sources of dissolved phosphorus with streets and driveways the next highest source. Barr (2005) identified the following major contributing sources of phosphorus loadings in a Minnesota watershed: streets 41 percent; lawns 17 percent; pet waste 5.1 percent; and fertilizers 1.4 percent. Matthews et al. (2007) identified lawn fertilizers as almost always being the single largest source of phosphorus in urban soils. There are conflicting study results as to the relative phosphorus loading contributions from fertilizers compared to lawn clippings; however, the literature is in general agreement that lawns are a major source of phosphorus (Waschbusch et al. 1999, Pitt et al. 2005, Barr 2005, Matthews et al. 2007).

Subsurface flows of nitrates dissolved in groundwater is the primary route of nitrogen transport through buffers, with secondary transport occurring via particulates. Primary removal processes are conversion of nitrate to nitrogen gas via denitrifying bacteria, and removal by uptake into plants. Wetlands and riparian areas remove nitrogen from surface water and shallow groundwater through three primary means: (1) denitrification which involves anaerobic bacteria converting nitrate (NO_3^-) or nitrite (NO_2^-) into nitrogen gas (N_2) or nitrous oxide gas (N_2O) (known as “degassing”); (2) settling out particulate matter and incorporating it into the soil/sediment; and (3) nitrate uptake by plants into their tissues (Howard-Williams, 1985). Nitrogen removal in riparian areas is primarily through denitrification and plant uptake with nitrates being removed from seasonally high groundwater near the surface (Groffman et al., 1992). Removal of nitrates from groundwater via uptake by plants occurs in riparian zones where groundwater comes into contact with the root zones of plants (Hill, 1996). In a study of eight streams in southern Ontario, Canada, 90 percent of the nitrate in groundwater (varying in concentration from 0.15 to 44.7 mg/L) was removed across 50-foot-wide stream buffers in areas where the confining layer was close to the surface (within 3 to 6 feet of the surface) (Philippe et al., 2004). In addition to nitrate removal within riparian buffers, removal of ambient nitrates was also documented within streams in the Catskill Mountains

of New York (Burns, 1998). Both denitrification and uptake of nitrates by photosynthetic organisms (photoautotrophs) was observed occurring in these streams (Burns, 1998).

From a comprehensive review and synthesis of the literature pertaining to the nitrogen removal function of riparian buffers, Mayer et al. (2005) concluded that narrow buffers, of approximately 3 to 50 feet, can be effective at removing nitrogen, but wider buffers, of greater than approximately 160 feet, more consistently remove greater amounts of nitrogen. In buffers of approximately 10 feet, 90 feet, and 370 feet wide, Mayer et al. (2005) suggested 50 percent, 75 percent, and 90 percent nitrogen removal efficiencies respectively, via both surface and subsurface flow, depending on nitrate loading rates and buffer characteristics. Wenger (1999), after reviewing the same literature, concluded that a minimum of 50 feet is necessary for effective nitrogen removal, with wet organic soils performing the best, and that 100-foot buffers or greater would provide more areas for denitrification and more nitrogen removal.

In order for effective microbial denitrification and plant uptake of nitrogen, soils must have high levels of organic carbon, be saturated, and have anoxic or low oxygen conditions, and the root zone of riparian vegetation must have extended contact with groundwater (Groffman et al., 1992). When these soil conditions are maintained, removal of subsurface nitrate is highest (Correll, 1997; Wenger, 1999). These soil and root zone criteria may be more important than width in determining the effectiveness of the buffer (Mayer et al., 2005). For example, Vidon and Hill (2004) found that 50-foot buffers were effective at removing 90 percent of the nitrate at locations with loamy soils, but the buffer width required for 90 percent nitrate removal at locations with sand and cobble sediments (low organic matter) ranged from approximately 80 to 580 feet. To maintain nitrogen removal effectiveness of buffers over time, removal of leaf litter or ground cover, soil compaction, gullying, and increases in impervious surfaces should be minimized (Mayer et al., 2005).

A few studies have evaluated effective buffer widths for removing potentially toxic compounds, fecal coliform and other pathogenic microorganisms. Urban buffers were found to generally be good at removing hydrocarbons and metals from surface runoff (Herson-Jones et al., 1995, as cited in Wenger, 1999). Potentially toxic compounds, such as pesticides and metals, may also be partially removed through filtration of sediments by the buffer (Sheldon et al., 2005), and temporarily, through vegetative uptake (Gallagher and Kibby, 1980). A 30-foot buffer treated with poultry manure removed 34 to 74 percent of the fecal coliform, however, the primary contact standard was still exceeded in the resulting runoff (Coyne et al., 1995).

3.3.1.2. Shade, Temperature and Dissolved Oxygen

Factors that influence water temperature include overhead cover, shade, groundwater and surface inputs, relative humidity, ambient air temperature, wind, substrate and channel dimensions (Adams and Sullivan, 1989; Mohseni and Stefan, 1999). Shading and wind reduction provided by riparian vegetation influences water quality by maintaining cooler temperatures. Water temperature can affect species distribution, metabolism and survival, and cooler temperatures help maintain sediment-pollutant bonds and increase the water's dissolved oxygen capacity (McMillan, 2000). Stream temperatures have been observed to significantly increase after the loss of riparian forest cover (Brown and Krygier, 1970; Beschta et al., 1987). The Washington Department of Ecology modeled the effects of riparian buffer width on effective shade and stream temperature (Cristea and Janisch, 2007). They found that for streams with a 10-foot channel width, that a 50-foot buffer produced 73 to 86 percent effective shade. Assumptions built into the model included: north-south orientation, vegetation cover right at the bankfull edge, no channel incision, no topographic shade, 80-foot tall buffer vegetation and 85 percent canopy cover.

The temperature of stream water and the factors affecting it have been the focus of studies for many years because of the importance of temperature in governing in-stream processes such as decomposition of organic matter, metabolism, and oxygen solubility as well as the effects of temperature on stream biota (Johnson, 2004). There is conflicting information in the peer-reviewed literature about the relative ranking of factors affecting stream temperature (Johnson, 2004). Johnson (2004) found that as hyporheic flow declines, stream temperature buffering declines, and daily minimum and maximum temperatures may increase.

3.3.2. Buffers: In-Stream and Wildlife Habitat

Riparian zones provide many functions for fish and wildlife including, maintaining in-stream habitat, serving as a source of organic matter and woody debris, providing habitat for water-dependent species that rely on adjacent uplands as a critical part of their life history, screening for adjacent human disturbance, and serving as wildlife corridors (Environmental Law Institute, 2008). Riparian zones play a critical role of providing both transition zone wildlife habitat and in-stream habitat for aquatic life. Wildlife habitat value is determined by the ability of a buffer to provide structural complexity, connectivity with other habitats, food and water, and a moist and moderate microclimate (Knutson and Naef, 1997). The ability of a buffer to provide in-stream habitat is determined by the ability of a buffer to produce and provide inputs of small and large organic debris into the stream. Although riparian ecosystems constitute a small portion of the surface landscape, approximately 85 percent of Washington's wildlife species are known to use riparian areas associated with rivers and streams (Knutson and Naef 1997).

3.3.2.1. Wildlife Habitat

The appropriate buffer size for providing habitat functions depends on:

- resident species and their life-history characteristics,
- condition of the stream and the stream buffer,
- intensity of surrounding land use, and
- functions the buffer is providing/can provide

Many buffer studies in the literature make conclusions on appropriate buffer sizes for wildlife habitat based on how far individuals range from a stream or wetland for breeding or other life-cycle needs. A review of the science by the Environmental Law Institute (2008) found that effective buffer sizes for wildlife protection can range from 33 feet to more than 5,000 feet, depending on the species. Most studies report a range of 200 to 300 feet necessary to provide essential habitat for most wildlife species (Keller et al., 1993). However, it has been noted that even a narrow buffer will enhance the habitat of most species (Wenger, 1999). Specific information on ranges for birds, mammals, reptiles, and amphibians have been developed in the literature:

- Birds: from 49 to over 5,000 feet (Environmental Law Institute, 2008, Fischer, 2000)
- Mammals: between 98 and 600 feet (Environmental Law Institute, 2008)
- Reptiles & Amphibians: between 164 and 951 feet (Semlitsch and Bodie, 2003)

Buffers can protect aquatic life and wildlife from light, noise, domestic pets, and human presence (Castelle, et al. 1992). The intensity of adjacent land uses is directly related to the level of human disturbance in a

buffer, and buffer effectiveness can decline over time from continued disturbance (Cooke, 1992). Buffers of at least 50 feet are likely necessary to maintain buffer effectiveness over time (Cooke, 1992). Amphibian species richness was observed to decline with increasing urban land use and road density (Rubbo and Kiesecker, 2005; Houlahan and Findlay, 2003). Buffers with greater structural complexity generally support more species (Shirley, 2004); however, buffers with less complexity can be more favorable to a specific, locally rare species. Native vegetation is more likely to be effective at conserving native wildlife (Wenger, 1999). Parkyn et al. (2000, as cited in Parkyn 2004) suggest that a buffer of 33 to 66 feet is necessary for sustaining a community of native vegetation.

3.3.2.2. In-stream Habitat

The composition, structure, and functions of riparian and aquatic ecosystems have a primary connection with wood (Quinn et al. 2020). Instream large wood increases hydraulic complexity, (i.e., wider range of flow velocities), which causes streambed scour, pool formation, channel migration and sediment deposition, all resulting in a greater diversity of aquatic habitat types (Quinn et al. 2020).

Vegetation (especially woody vegetation) has mechanical and hydrologic effects on bank stability, and these effects can be stabilizing or destabilizing. In general, the net effect of vegetation is stabilizing. Bank stability (dynamic stability) is one of five key ecological functions of riparian areas (Quinn et al. 2020). Simple models suggest that in an old-growth riparian forest, the full contribution of root strength to streambank stability is provided by trees within approximately 33 feet of the streambank.

Large woody debris (LWD) influences the development of geomorphic structures, especially in headwater streams, compared to downstream channels (Gregory et al., 1991). Small streams and headwater streams rarely transport LWD (and other debris) so that as the debris builds up, the consequent obstructions formed alter hydrology and geomorphology (Knutson and Naef, 1997). Larger streams have increased capacity to transport large wood downstream. The influence of instream large wood on stream and rivers is a function of wood size relative to channel size. For example, up to 80 percent of pools in small streams can be associated with wood (Montgomery et al. 1995) with the frequency of wood-associated pools decreasing with increasing stream size (Bilby and Ward 1989, 1991; Montgomery et al. 1995). LWD lengthens water residence time in streams (Naiman and Décamps, 1997) and captures and retains small organic debris and provides a substrate for microbial life and algae, thus supplying a food base for macroinvertebrates (Bolton and Shellberg, 2001). Woody debris and the entrapped smaller branches, limbs, leaves and other material significantly reduce flow conveyance (Dudley et al., 1998).

Studies on LWD recruitment conducted for timber managed forest lands generally recommend buffer widths of from one to two site potential tree heights (SPTHs) (Spence et al., 1996; Kondolf et al., 1996; Forest Ecosystem Management Assessment Team, 1993). Site potential tree height is defined as the average maximum height that a tree can attain, given site conditions. For smaller streams, ephemeral streams and streams on private land, buffers of one SPTH were generally recommended (Spence et al., 1996; Kondolf et al., 1996; Forest Ecosystem Management Assessment Team, 1993). In an unmanaged natural riparian area, 100 percent of a site's large wood recruitment potential comes from a distance of approximately 85 to 230 feet from the stream channel, depending on site productivity class. This does not account for additional wood recruitment through landslides, debris flows, or extreme channel migration.

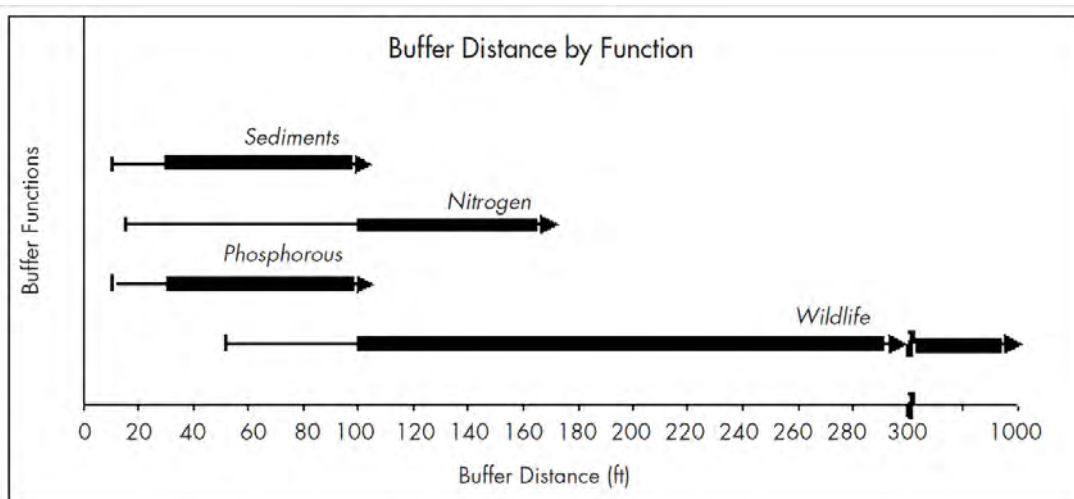
Based on WDFW's Site-potential Tree Height and Riparian Management Zone Values online map tool, SPTHs in Anacortes range from 91 to 231 feet (WDFW 2022c). SPTHs in Anacortes are based on 200-year-old projected heights for Douglas fir (*Pseudotsuga menziesii*) and red alder (*Alnus rubra*)

combined with Natural Resources Conservation Service (NRCS) soil productivity data. Douglas fir SPTHs in Anacortes range from 91 to 231 feet, with the most common SPTHs being from 165 to 189 feet. Red alder SPTHs in Anacortes range from 100 to 105 feet (WDFW 2022c).

3.4. Buffer BAS Summary

The literature on buffers generally suggests that a 50-foot buffer is the minimum required to provide a basic level of functions. As discussed above, 50-foot buffers can provide a high level of function for sediment and phosphorus removal but generally provide moderate to low levels of function for wildlife habitat and nitrogen removal. Figure 1 below (from Environmental Law Institute, 2008) provides a visual summary of buffer function provided by width of buffer.

BUFFER DISTANCE BY FUNCTION (ENVIRONMENTAL LAW INSTITUTE, 2008)



*Effective buffer distance for water quality and wildlife protection functions. The thin arrow represents the range of potentially effective buffer distances for each function as suggested in the science literature. The thick bar represents the buffer distances that may **most** effectively accomplish each function (30 - > 100 feet for sediment and phosphorous removal; 100 - > 160 feet for nitrogen removal; and 100 - > 300 feet for wildlife protection. Depending on the species and the habitat characteristics, effective buffer distances for wildlife protection may be either small or large.*

Although simplified generalizations can be made from the literature about level of function by buffer width, the actual function provided by a buffer depends on many site-specific factors including the following:

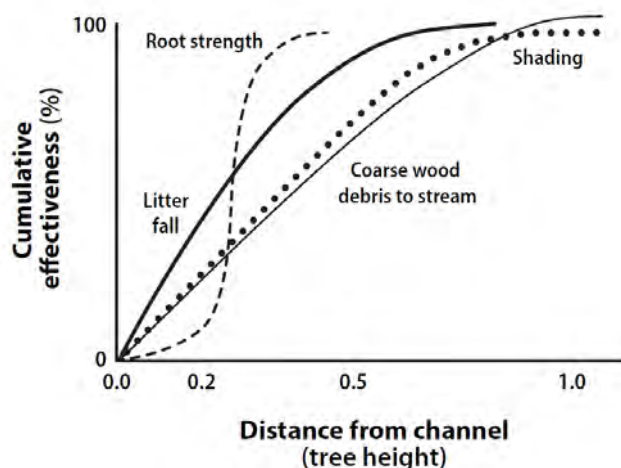
- Structural complexity (e.g., tree, shrubs and herbaceous canopy layers; snags; downed wood; canopy openings, conifers and hardwoods)
- Connectivity with other habitats
- Availability of food and water for wildlife (e.g., rotten wood for insect prey, berries, nuts)
- Moist and moderate microclimate (e.g., shade, canopy closure, wind protection)
- Buffer trees tall enough to provide inputs of small and large organic debris into the stream
- Organic content of soil
- Slope

- Riparian vegetation root zone has extended contact with groundwater (nitrogen removal)
- Grass filter strips combined with forest buffer (disperses channelized flow into sheet flow and encourages sedimentation)

A smaller buffer can provide more sediment, phosphorus and nitrogen removal, and more in-stream and wildlife habitat if it has more of the elements listed above.

FEMAT's (1993) curves are conceptual models describing how the cumulative effectiveness of four fundamental riparian ecosystem functions changes with distance from the stream channel (see chart below). The four functions in the FEMAT model are litter fall (i.e., input of detrital nutrients), stream shading, root strength (i.e., streambank stability) and coarse woody debris to stream (i.e., large wood recruitment). FEMAT (1993) also included the pollution removal function (i.e., water quality) but did not create a curve for it. The curves convey two central points: first that the four riparian ecosystem functions occur within one SPTH, and secondly that the marginal return for each function decreases as distance from the stream channel increases. In other words, the FEMAT curves show that areas closer to the stream provide more of each function per unit width than areas farther from the stream.

FEMAT CURVES: CUMULATIVE EFFECTIVENESS OF RIPARIAN ECOSYSTEM FUNCTIONS AND PROCESSES VS DISTANCE FROM CHANNEL (FEMAT, 1993) – FIGURE FROM QUINN ET AL. 2020



The “FEMAT Curves” (FEMAT 1993) are generalized conceptual models describing some riparian ecosystem functions and processes as the distance from a stream channel increases. “Tree height” in the figure above is based on the average maximum height of the tallest dominant trees (200 years old or greater) and is referred to as site-potential tree height (SPTH).

Although some riparian functions, such as pollution removal, are not strongly associated with tree height. Several key riparian functions are, including large wood recruitment, stream shading and litter fall. The FEMAT curves can thus be used to help estimate the amount of function provided by riparian areas of different widths for those functions that are strongly associated with tree height. Based on the FEMAT curves, a buffer with a width equivalent to half the SPTH will be providing the vast majority of the root strength and litter fall functions and from 70 to 75 percent of the coarse wood recruitment and shading functions. With SPTHs in Anacortes ranging from 91 to 231 feet with the most common SPTHs being from

165 to 189 feet (WDFW 2022c), a riparian buffer in Anacortes that ranges from 85 to 95 feet (50 percent of the SPTH) will provide most of the root strength and litter fall functions and from 70 to 75 percent of the course wood recruitment and shading functions.

3.5. BAS Evaluation of Existing Ordinance, Conclusions and Recommendations

As discussed in Section 3.4, a 50-foot riparian buffer is the minimum required to provide a basic level of functions and a riparian buffer that is at least 50 percent of the SPTH will provide most of the root strength and litter fall functions and more than 70 percent of the course wood recruitment and shading functions. Riparian functions can be improved by adding/incorporating the following into the buffer:

- Diverse native vegetation (especially woody vegetation) including multiple canopy layers, berries and nuts, snags, and downed wood.
- Grass filter strips along the edges of buffers, or other low impact development (LID) structures that encourage sheet flow and infiltration.
- Buffer management that includes removing invasive plant species, decompacting and amending top soils with organic matter, and retaining leaf litter, replacing native plants if dead or damaged.

In addition, adjacent surface water management and land use planning will influence how much of the area is impervious and how much surface water infiltrates to recharge local groundwater.

Existing conditions of the 27 mapped streams in Anacortes are summarized in Table 3-1. With the exception of portions of the streams located within ACFL, and forested portions of Weaverling, Whistle, Turner's, Morrison Run, Miller, Howard and Aqua Creeks, the majority of riparian buffer zones for Anacortes streams consist of narrow (15 to 25 feet) buffers with varying stages of riparian vegetation development. Many areas are mowed lawns, fields, pastures or orchards, while others have narrow bands of young native trees and shrubs and some invasive plants (e.g., Himalayan blackberry [*Rubus armeniacus*], English ivy [*Hedera helix*] and reedcanary grass [*Phalaris arundinacea*]). The headwaters of many of the streams are located within high quality forested ACFL lands, but downstream of ACFL lands the riparian zones are generally narrow and do not connect with other habitat areas such as natural preserves or parks of an acre or larger. This fact, combined with the adjacent high intensity residential land use, means that Anacortes riparian zones are unlikely to support diverse assemblages of wildlife that have large life-cycle ranges and require extensive wildlife corridors such as large mammals, reptiles and amphibians. Forested portions of the riparian corridors have the potential to offer some root strength, litter fall, course wood recruitment and shading functions and the potential to support species of song birds and small mammals. Portions of the riparian corridors with grass and herbaceous cover also provide some water quality improvement and habitat value.

Stormwater from adjacent neighborhoods is generally collected into catch basins and piped directly into streams and, therefore, stream buffers are not given the opportunity to provide sediment and phosphorus removal from surface waters. Improvements to surface water management could allow for more infiltration techniques that would provide better treatment and allow for more infiltration/recharge of ground water in the highly urbanized environment. Currently, surface waters are receiving basic levels of treatment and the City inspects all catch basins and inlets owned or operated by the City every 2 years and annually inspects all municipally owned or operated permanent stormwater treatment and flow control best management practices/facilities. Going forward, the City has adopted provisions in the development code regarding

techniques for LID that make it the preferred and commonly-used approach to site development, in order to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations.

Within residential neighborhoods, many sections of stream channels have been ditched and piped. In addition, the mouths of many of the creeks have been extensively piped including Cranberry Creek, Happy Valley Creek, Beaver Brook and Ace of Hearts, with lower piped sections ranging from 1,600 to 5,000 feet in length before discharging into Puget Sound. These streams currently do not have the ability to support anadromous fish although their hydrology and channel dimensions may meet characteristics determined to support fish use. All other remaining Anacortes creeks have mouths with shorter piped or ditched sections, some of which are partial or full passage barriers. Some of these streams may have the ability to support anadromous fish and some may have hydrology and channel dimensions that meet characteristics determined to support fish use.

Most streams in Anacortes do not have documented salmonid use; however, some streams have been modeled as gradient accessible for anadromous salmonids and some have documented salmonid use (NWIFC 2022). SWIFD maps Clyde Creek, Toot Creek and Turner's Creek as having modeled presence/being gradient accessible for anadromous salmonids. SWIFD shows documented presence of Coho and Resident Coastal Cutthroat Trout within the lower portion of Turner's Creek. SWIFD maps Cranberry Creek and Stream 8 as having documented presence of Coastal Cutthroat Trout (NWIFC 2022). It is the long-term goal of the City to restore the City's riparian corridors and to protect salmon passage where scientifically justified. Through buffer restoration, buffer mitigation and stream daylighting, the functions of Anacortes streams and their associated riparian areas will continue to improve.

AMC 19.70.330(B) currently stipulates 50-foot buffers for Type F, Type Np and Type Ns streams and 10-foot buffers for piped streams and roadside ditched segments of stream.

AMC 19.70.125 (Mitigation requirements) stipulates that:

“Mitigation must be sufficient to restore impacted functions and values, or compensate for the impacted functions and values of the critical area and to prevent risk from a hazard posed to a critical area by the proposed activity.”

AMC 19.70.125 requires that an applicant must demonstrate that mitigation sequencing has occurred during design and planning in the following order avoid, minimize, rectify, reduce, compensation and monitor.

AMC 19.70.325(A) stipulates that:

“Alterations of FWHCA' s or their buffers is prohibited except as otherwise allowed by this chapter and may occur only if the proposed alteration of the habitat and any associated mitigation proposed does not degrade the functions and values of the habitat.”

AMC 19.70.325(C) stipulates that:

“Any approval of alterations or impacts to a FWHCA area must be supported by the best available science as described in the required Critical Area Report.”

AMC 19.70.330(B) lists the required stream buffers and AMC 19.70.330(C) describes allowances for the reduction of buffer widths on a case- by-case basis when the critical areas report demonstrates the following criteria are met:

1. There is no feasible alternative to the site design that could be accomplished without buffer reduction;
2. The total buffer width is not reduced to less than 35 feet in stretches of natural stream channel with intact native vegetation within the buffer, and the buffer reduction does not reduce the functions or values of the stream or buffer;
3. The total buffer width is not reduced to less than 25 feet in stretches of modified stream channel with little to no intact native vegetation within the buffer, and the buffer reduction plan must include an enhancement plan to increase the functions or values of the stream or buffer.
4. A buffer enhancement plan is proposed to improve the overall function of the buffer.

3.5.1. Summary of Recommendations

Recently updated science and management recommendations for riparian ecosystems (Quinn et al. 2020 and Rentz et al. 2020) provide information and policy recommendations for maintaining riparian functions thought to be important to fish and wildlife and their habitats including stream morphology, large wood and water quality (stream temperature, pollutant removal and nutrient dynamics. As discussed in Section 3.4 FEMAT curves convey that four riparian ecosystem functions (root strength, litter fall, course wood recruitment and shading) occur within one SPTH and that riparian areas closer to the stream provide more of each function per unit width than areas farther from the stream. Section 3.4 discusses that a 50-foot riparian buffer is the minimum required to provide a basic level of functions and that a riparian buffer that is at least 50 percent of the SPTH will provide most of the root strength and litter fall functions and more than 70 percent of the course wood recruitment and shading functions.

We recommend that Anacortes adopt stream protection provisions based on Riparian Management Zones (RMZs), to be determined by the project proponent, and based on the WDFW Priority Habitats and Species Site Potential Tree Height (SPTH) (WDFW 2022c). As summarized in Section 3.4, with SPTHs in Anacortes ranging from 91 to 231 feet with the most common SPTHs being from 165 to 189 feet (WDFW 2022c), a riparian buffer in Anacortes that ranges from 85 to 95 feet (50 percent of the SPTH) will provide most of the root strength and litter fall functions and from 70 to 75 percent of the course wood recruitment and shading functions. Therefore, we recommend the RMZ be no less than 100 feet.

Other local jurisdictions (e.g., City of Seattle) who have adopted the RMZ approach for stream protection provisions, have allowed for limited development within the RMZ (for lots existing prior to adoption of the ordinance) by defining a Riparian Development Area as an area in the RMZ and more than a set distance from the top of the riparian watercourse. The Riparian Development Area should be located farther from the watercourse for Type F waters with anadromous fish presence, and the Riparian Development Area should not be closer than 50 feet from the top of the riparian watercourse.

All impacts that occur within the RMZ should be mitigated for by increasing functions within the RMZ to result in no net loss of functions and values. In addition to those stream enhancement measures listed in AMC 19. 70. 330(H), RMZ enhancement actions should focus on improving root strength, litter fall, course wood recruitment and shading functions by increasing cover of native woody vegetation (especially trees) and installing wood into stream channels. Additionally, RMZ enhancement actions should focus on water

quality improvement functions through actions such as increasing organic content of soils, increasing cover of native woody vegetation, and establishing grassy filter strips between areas of impervious surface or mowed lawns.

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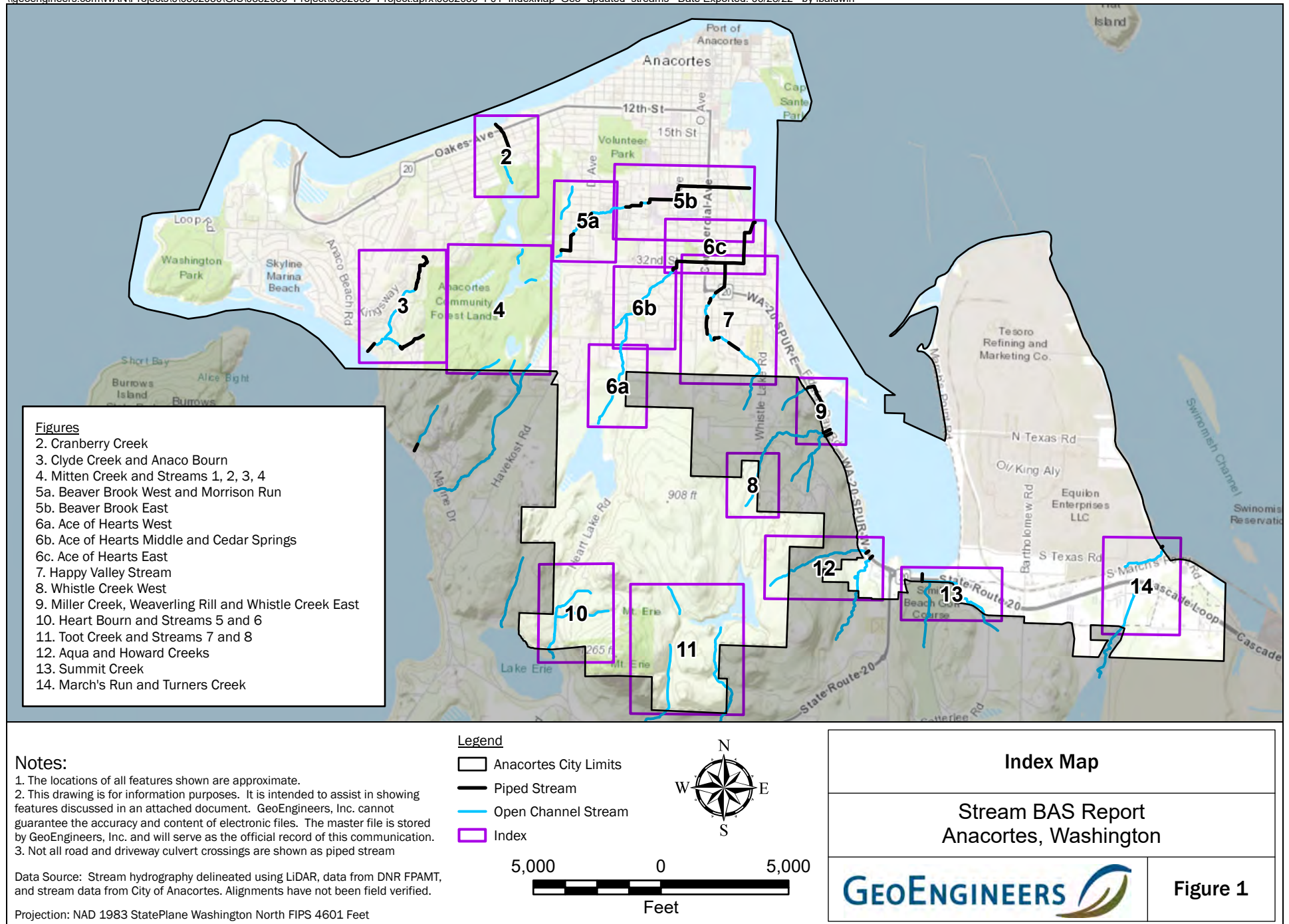
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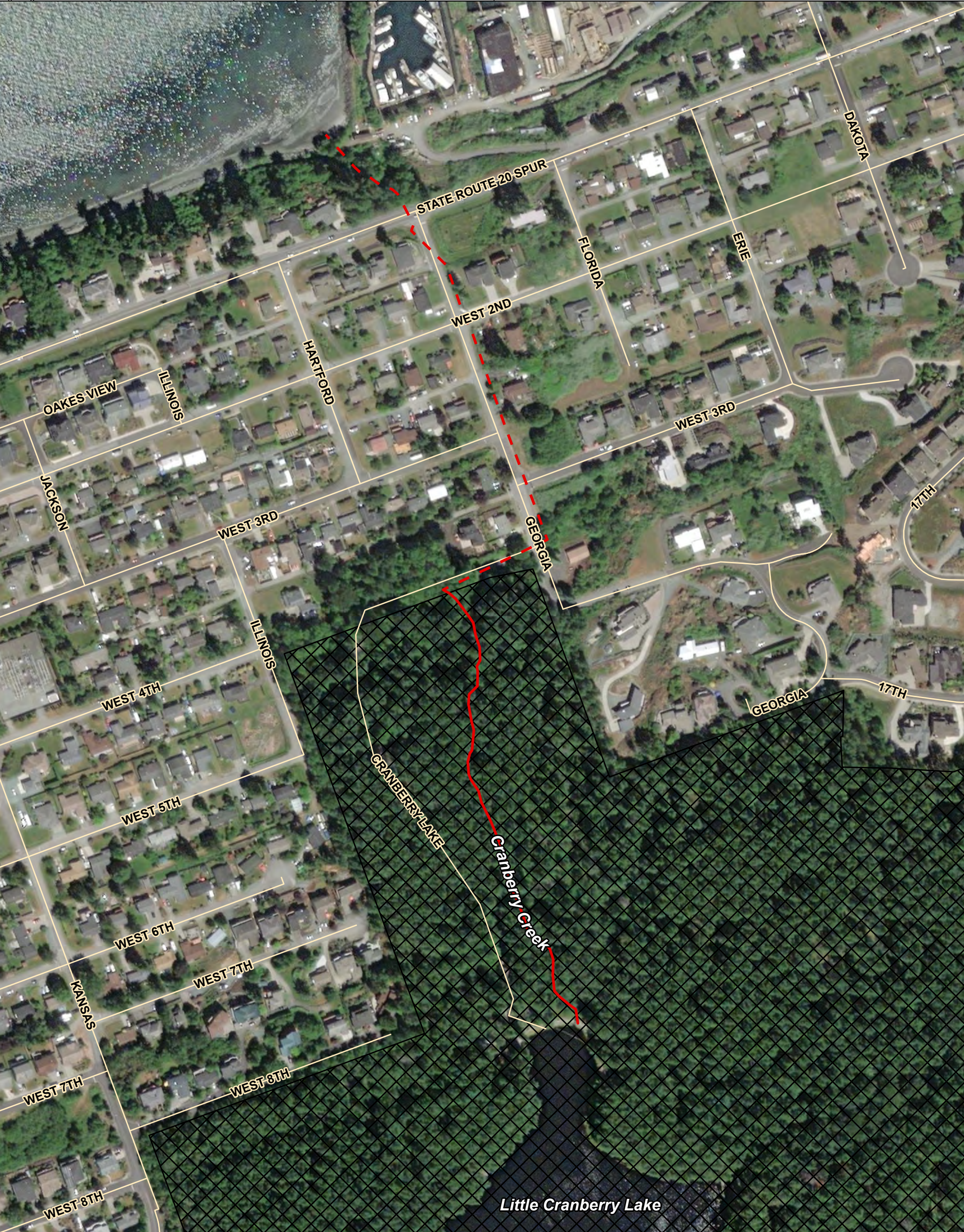
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Legend

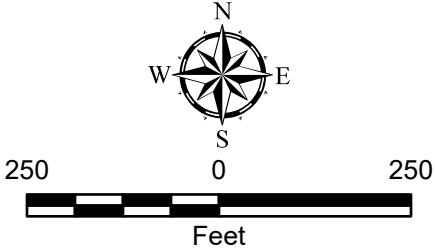
- Road
- DNR Stream Type
 - Fish-Bearing
 - - Fish-Bearing (Piped)
- ⊠ Anacortes Community Forest Land

Notes:

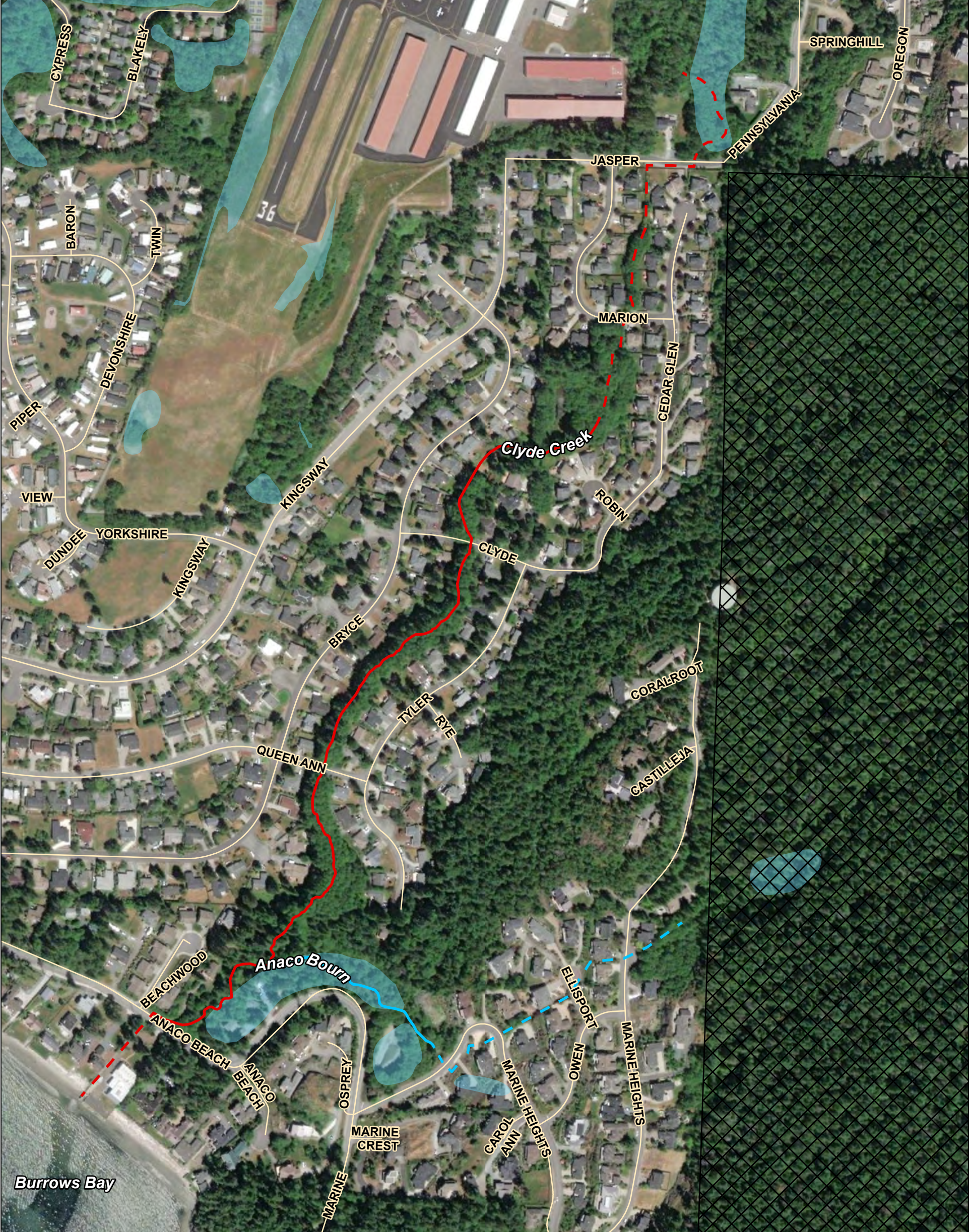
- The locations of all features shown are approximate.
- This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
- Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Cranberry Creek	
Stream BAS Report Anacortes, Washington	
GEOENGINEERS	Figure 2



Legend

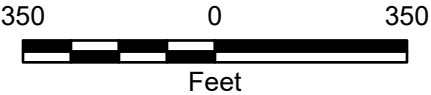
- | | |
|-----------------|-----------------------------------|
| — Road | — Fish-Bearing (Piped) |
| DNR Stream Type | — Unclassified (Piped) |
| — Fish-Bearing | — Anacortes Mapped Wetlands |
| — Unclassified | — Anacortes Community Forest Land |

Notes:

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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

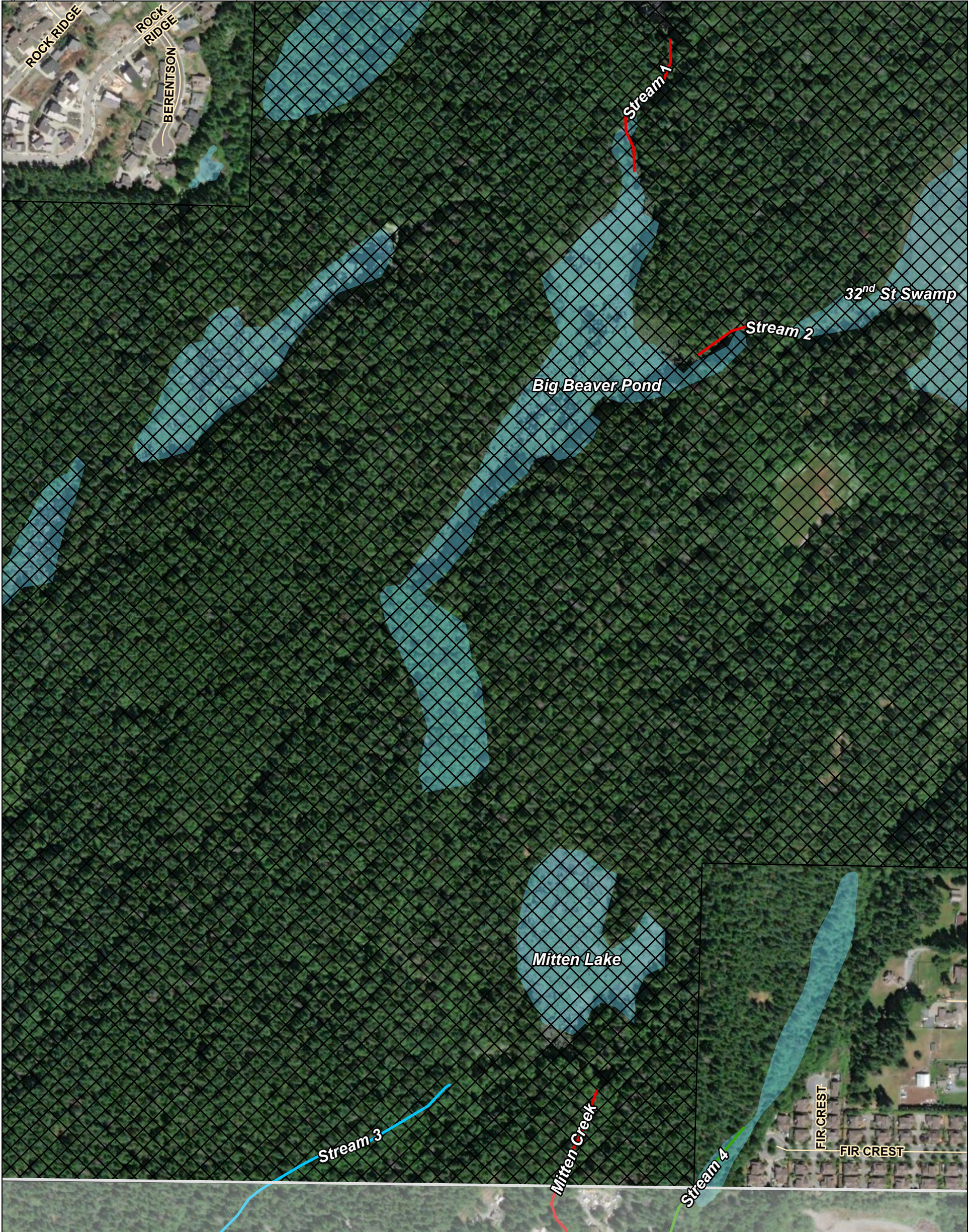


Clyde Creek and Anaco Bourn

Stream BAS Report
Anacortes, Washington



Figure 3

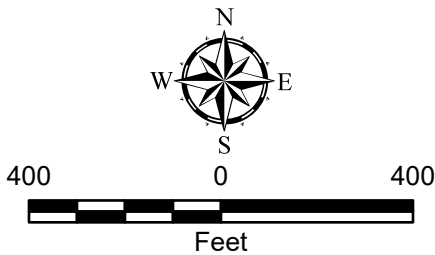


Legend

- | | |
|--------------------|-----------------------------------|
| — Road | ■ Anacortes Mapped Wetlands |
| DNR Stream Type | ■ Anacortes Community Forest Land |
| — Fish-Bearing | ■ Anacortes City Limits |
| — Non-Fish-Bearing | ■ Skagit County |
| — Unclassified | |

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 3. Not all road and driveway culvert crossings are shown as piped stream
- Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
- Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

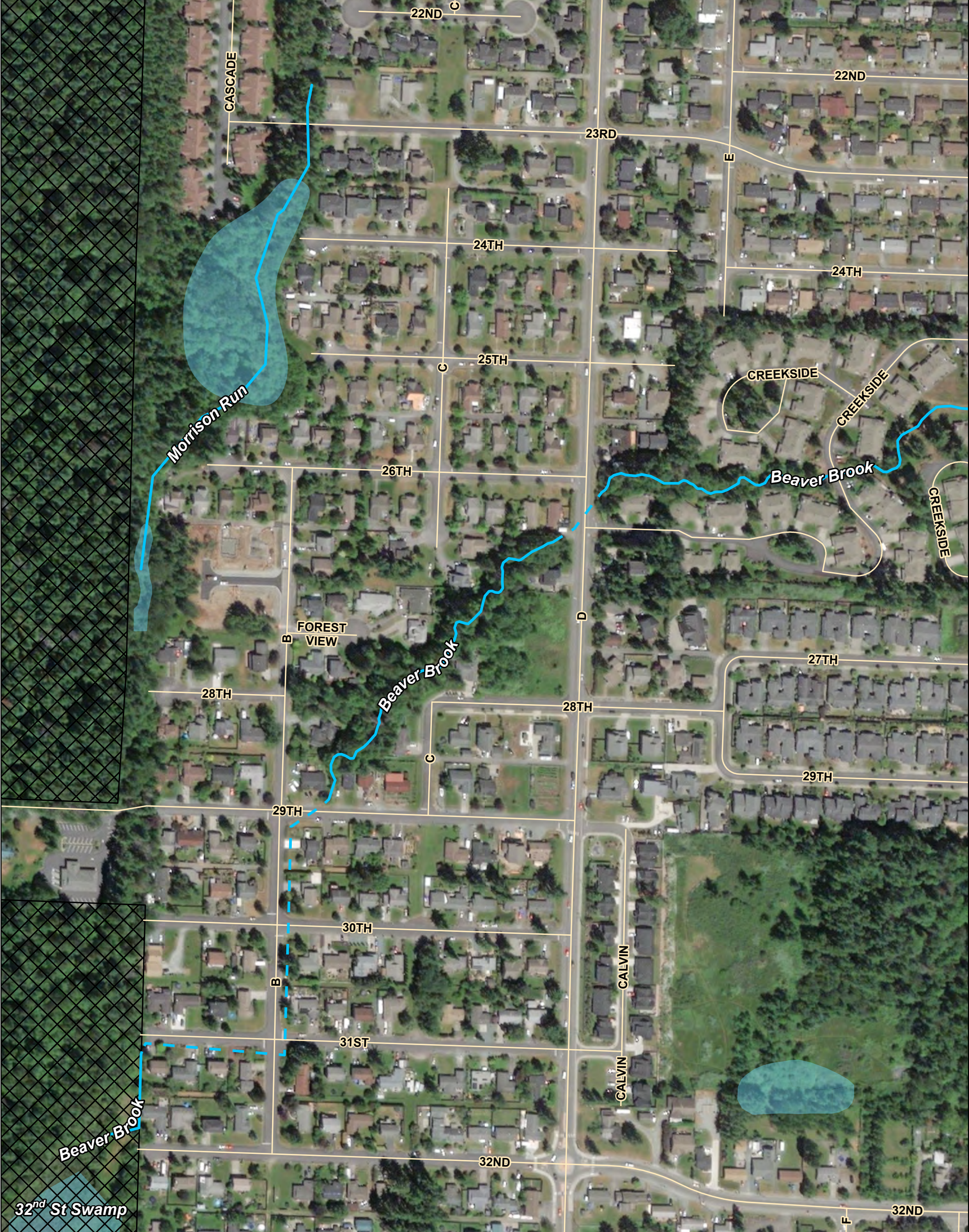


Mitten Creek and Streams 1, 2, 3, and 4

Stream BAS Report
Anacortes, Washington



Figure 4

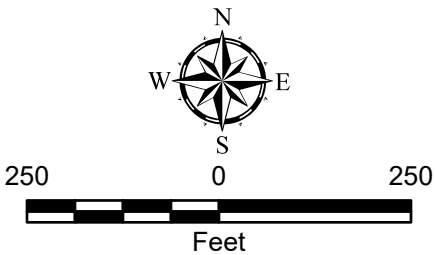


Legend

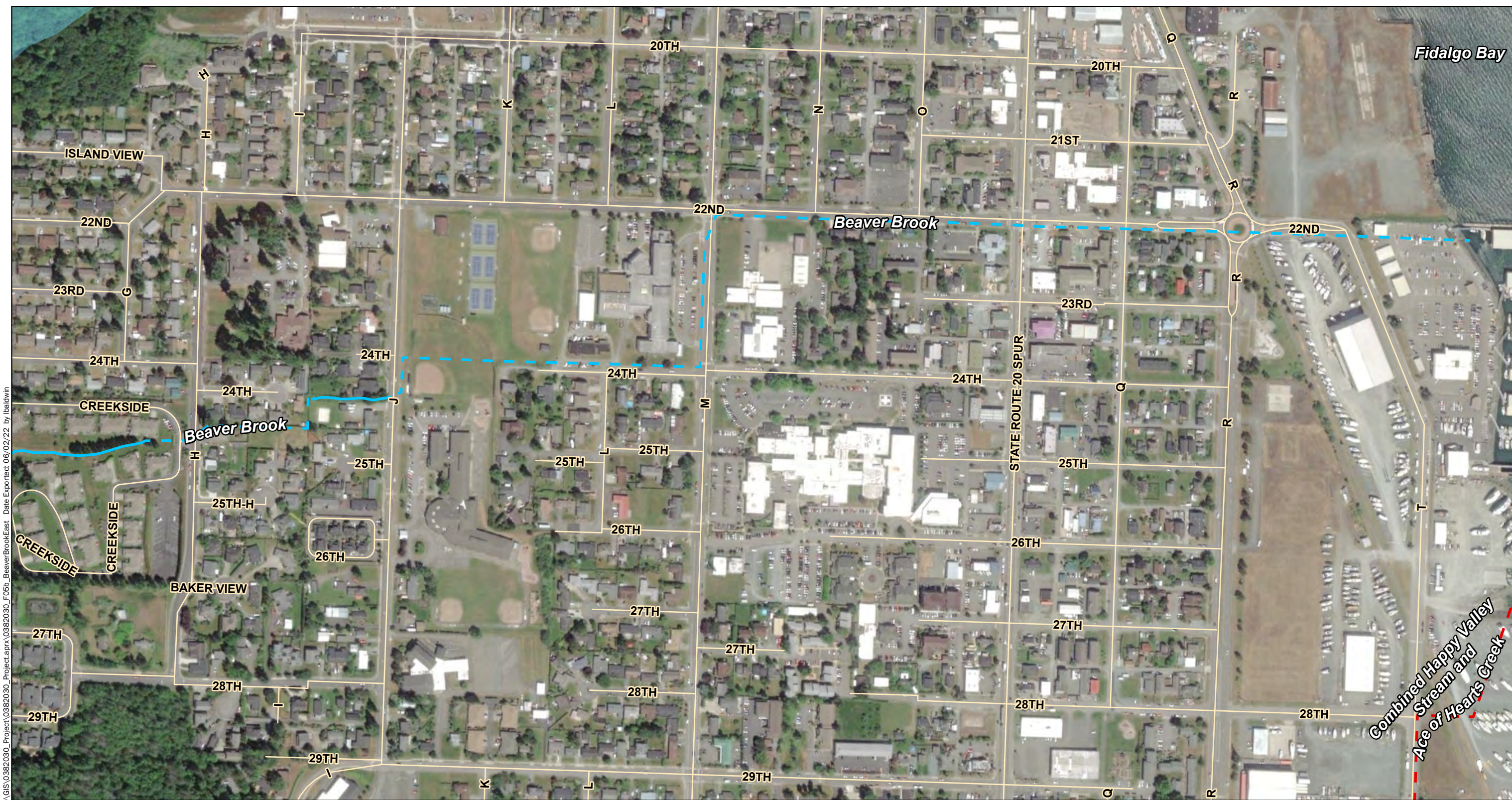
- Road
- Piped Stream Buffer (10-ft)
- DNR Stream Type
- Unclassified
- Unclassified (Piped)
- Anacortes Mapped Wetlands
- Anacortes Community Forest Land

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 - Not all road and driveway culvert crossings are shown as piped stream
- Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
- Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



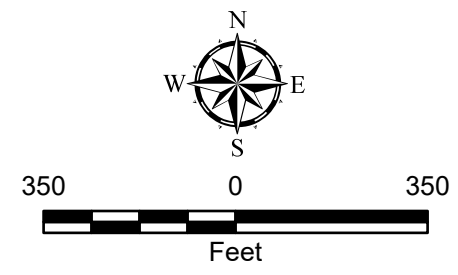
Beaver Brook West and Morrison Run	
Stream BAS Report Anacortes, Washington	
GEOENGINEERS	Figure 5a



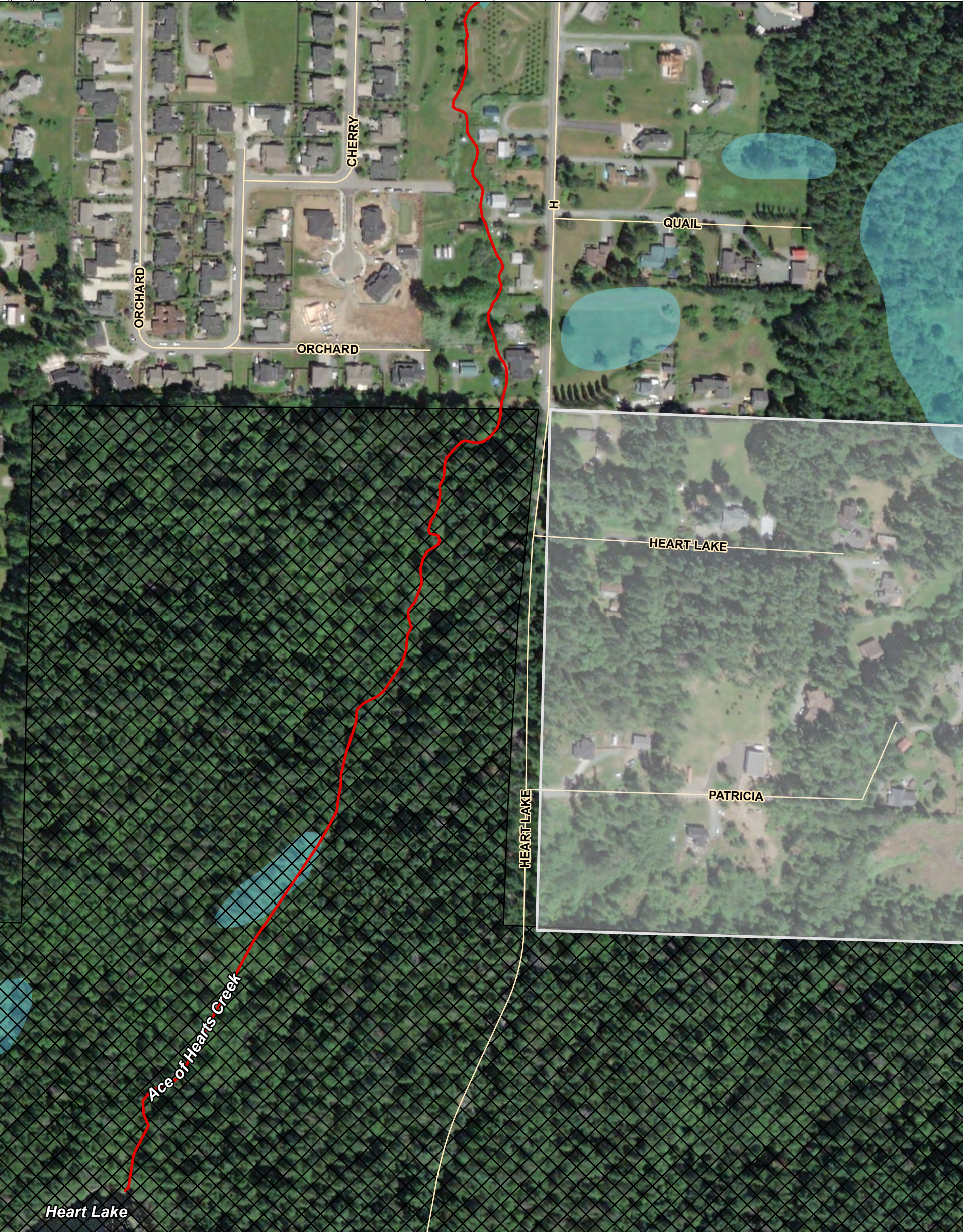
\\geoengineers.com\WAN\Projects\0\0382030\GIS\0382030_Project\0382030_F050_BeaverBrookEast Date Exported: 06/02/22 by lbaldwin

- Legend**
- Road
 - DNR Stream Type
 - Unclassified
 - Fish-Bearing (Piped)
 - Unclassified (Piped)
 - Anacortes Mapped Wetlands

Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.



Beaver Brook East	
Stream BAS Report Anacortes, Washington	
	Figure 5b



Legend

- Road

DNR Stream Type

Fish-Bearing

Anacortes Mapped Wetlands
- Anacortes Community Forest Land

Anacortes City Limits

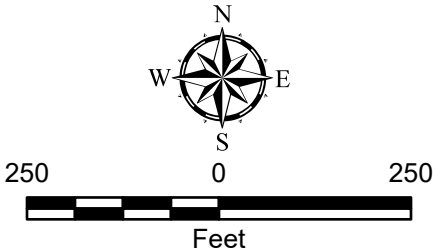
Skagit County

Notes:

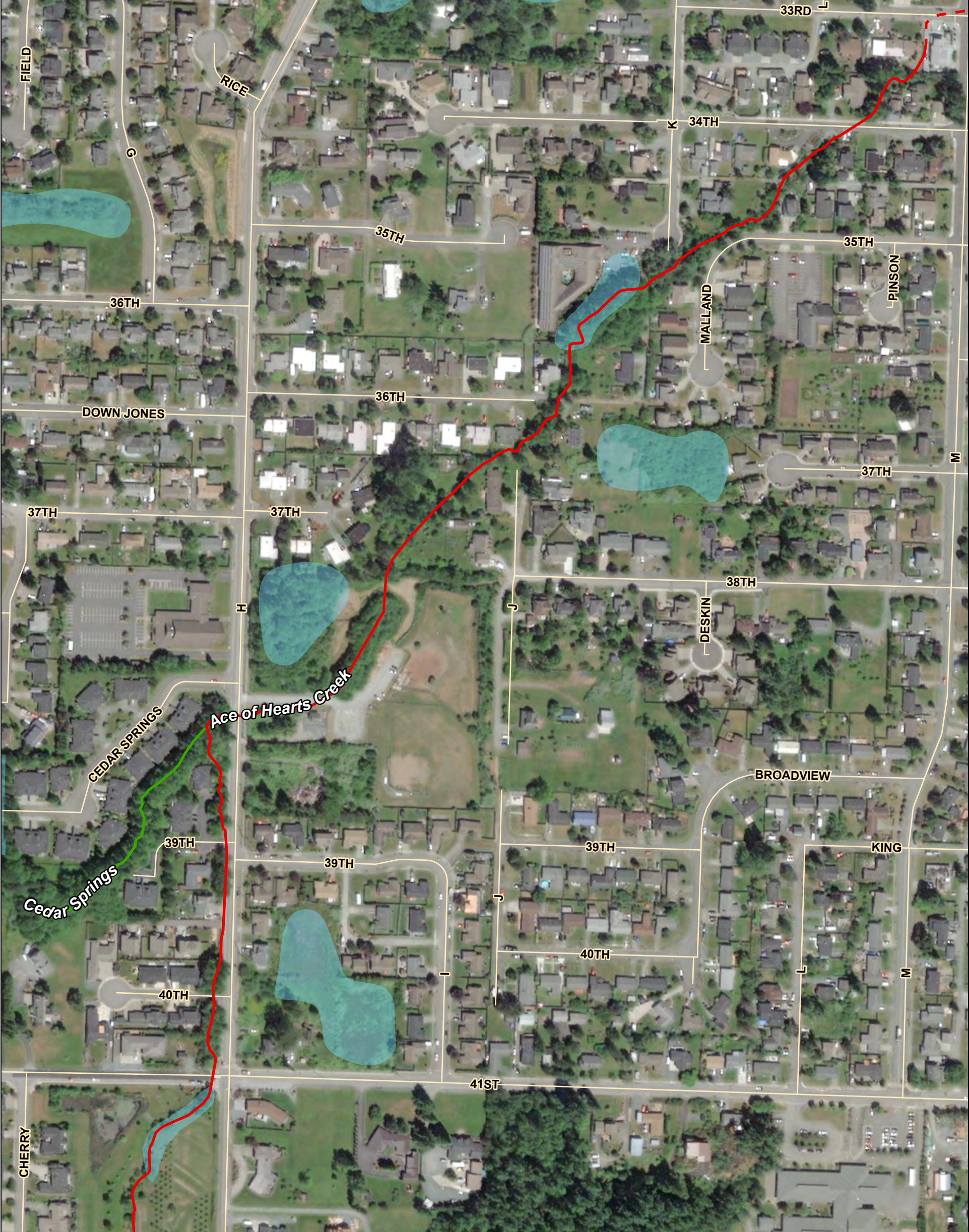
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2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

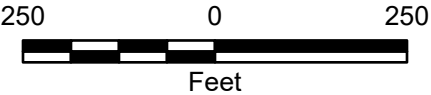


Ace of Hearts West	
Stream BAS Report Anacortes, Washington	
	Figure 6a



Legend

- Road
- Non-Fish-Bearing
- DNR Stream Type
- Fish-Bearing (Piped)
- Fish-Bearing
- Anacortes Mapped Wetlands



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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LIDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

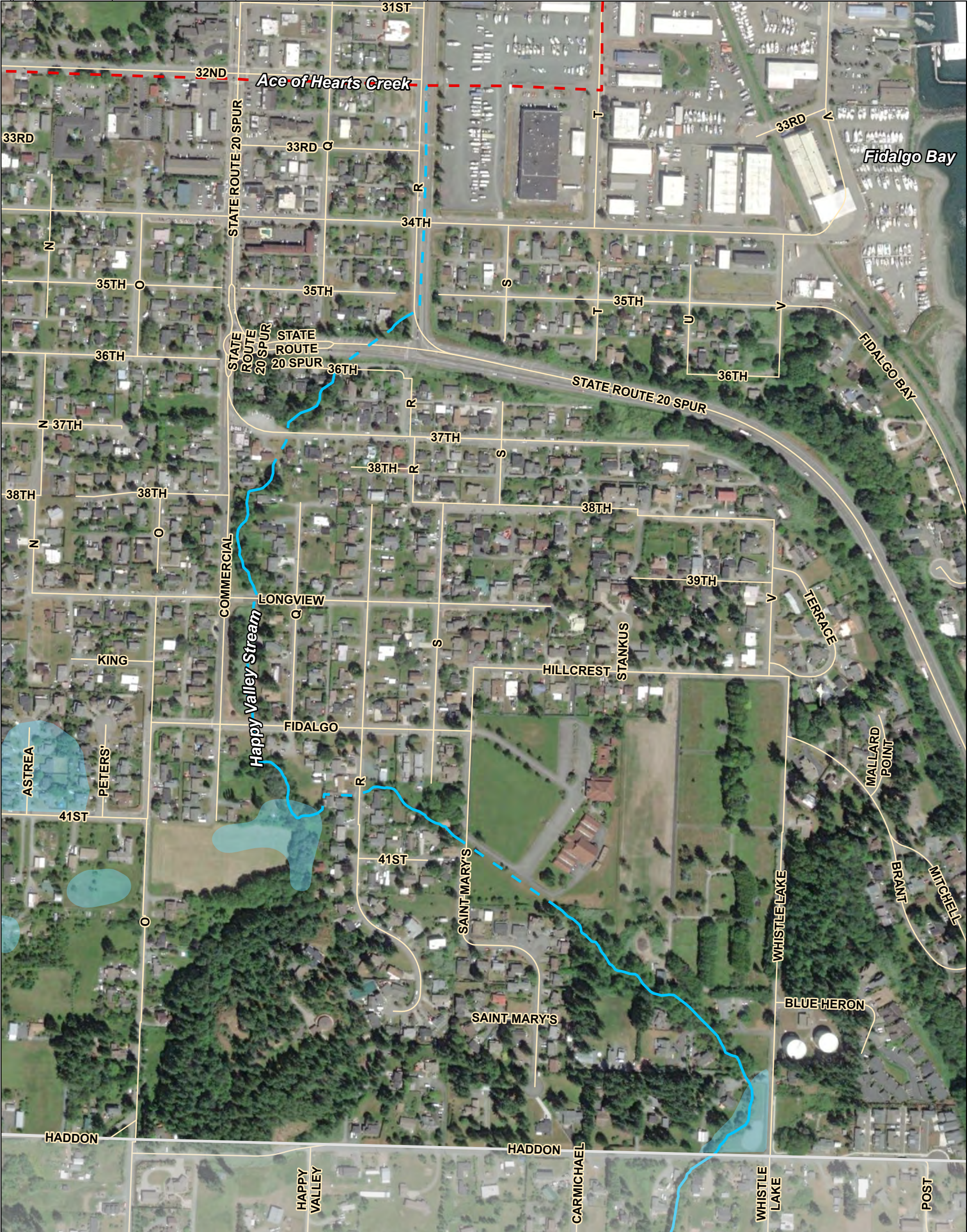
Ace of Hearts Middle and Cedar Springs

Stream BAS Report
Anacortes, Washington



Figure 6b





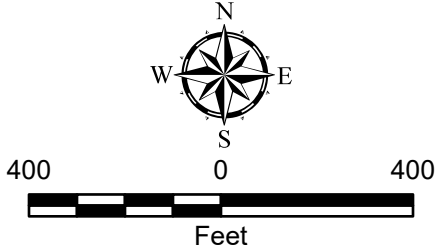
Legend

- | | |
|------------------------|---------------------------|
| — Road | — Unclassified (Piped) |
| DNR Stream Type | Anacortes Mapped Wetlands |
| — Unclassified | Anacortes City Limits |
| — Fish-Bearing (Piped) | Skagit County |

Notes:

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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Happy Valley Stream	
Stream BAS Report Anacortes, Washington	
GEOENGINEERS 	Figure 7



Legend

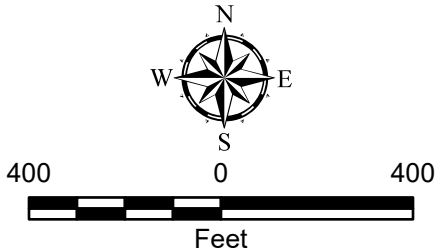
- | | |
|--------------------|---------------------------------|
| — Road | Anacortes Community Forest Land |
| DNR Stream Type | Anacortes City Limits |
| — Non-Fish-Bearing | Skagit County |
| — Unclassified | |

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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Whistle Creek West	
Stream BAS Report Anacortes, Washington	
	Figure 8

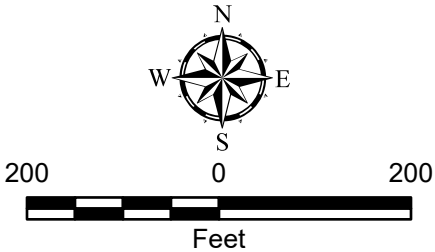


Legend

- | | |
|--------------------------|-------------------------------|
| — Road | — — Unclassified (Piped) |
| DNR Stream Type | — — Anacortes Mapped Wetlands |
| — Fish-Bearing | — — Anacortes City Limits |
| — Unclassified | — — Skagit County |
| — — Fish-Bearing (Piped) | |

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3. Not all road and driveway culvert crossings are shown as piped stream
Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Miller Creek, Weaverling Rill, and Whistle Creek East

Stream BAS Report
Anacortes, Washington



Figure 9



Legend

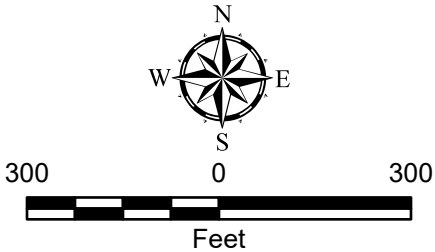
- | | |
|--------------------|-----------------------------------|
| — Road | ⊠ Anacortes Community Forest Land |
| DNR Stream Type | □ Anacortes City Limits |
| — Fish-Bearing | □ Skagit County |
| — Non-Fish-Bearing | |

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3. Not all road and driveway culvert crossings are shown as piped stream

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



Heart Bourn and Streams 5 and 6

Stream BAS Report
Anacortes, Washington



Figure 10



Legend

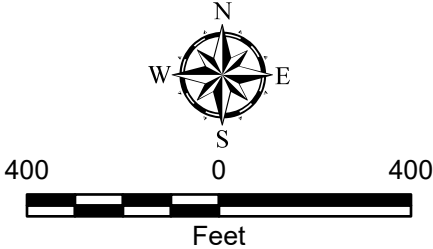
- | | |
|-----------------|-----------------------------------|
| — Road | ■ Anacortes Mapped Wetlands |
| DNR Stream Type | ■ Anacortes Community Forest Land |
| — Fish-Bearing | ■ Anacortes City Limits |
| — Unclassified | ■ Skagit County |

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3. Not all road and driveway culvert crossings are shown as piped stream
4. Toot Creek and Stream 8 drain to Lake Campbell

Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



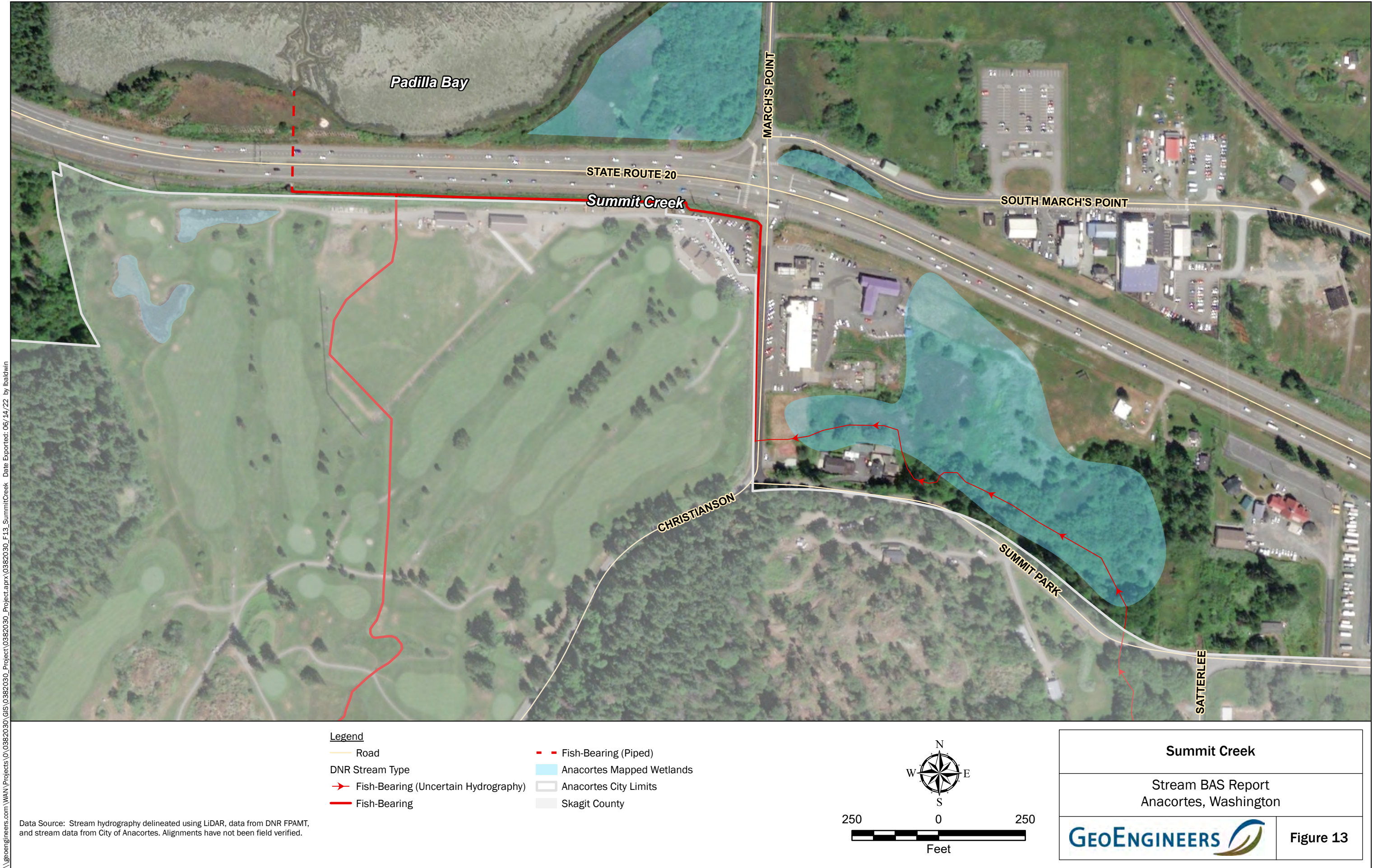
Toot Creek and Streams 7 and 8

Stream BAS Report
Anacortes, Washington



Figure 11

\\geoengineers.com\WAV\Projects\0382030\GIS\0382030_Project\0382030_F13_SummitCreek Date Exported: 06/14/22 by lbaldwin



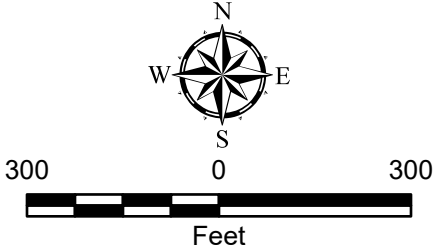


Legend

- | | |
|------------------------|-----------------------------|
| — Road | — Non-Fish-Bearing |
| FPAMT_Type | — Unclassified |
| — Unclassified (Piped) | — Anacortes Mapped Wetlands |
| DNR Stream Type | — Anacortes City Limits |
| — Fish-Bearing | — Skagit County |

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 3. Not all road and driveway culvert crossings are shown as piped stream
 4. Turners Creek drains southwest to Turners Bay
- Data Source: Stream hydrography delineated using LiDAR, data from DNR FPAMT, and stream data from City of Anacortes. Alignments have not been field verified.
- Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet



March's Run and Turners Creek

Stream BAS Report
Anacortes, Washington



Figure 14



Determination of Non-Significance (DNS)

Proposal: Ordinance 4025 amending Anacortes Municipal Code Chapter 19.70, Critical Areas, Article III, *Fish and Wildlife Habitat Conservation Areas* regarding stream buffers to comply with the Growth Management Hearings Board Final Decision and Order concerning Case No. 21-2-0002c and amending AMC Ch. 19.70, Article II *Wetlands* regarding buffer width averaging.

The draft amendments are available for review at:

<https://www.anacorteswa.gov/198/Anacortes-Municipal-Code-Updates>

Applicant /Proponent: City of Anacortes

Location of Proposal: City limits of the City of Anacortes

Lead Agency: City of Anacortes, Planning, Community, & Economic Development Department

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(C). This decision was made after review of a completed environmental checklist and other information of file with the lead agency. This information is available to the public on request.

This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below. Comments regarding this DNS must be submitted by July 15, 2022, at 5:00 PM.

Responsible Official: Don Measamer

Position and Title: Director of Planning, Community & Economic Development

Phone/Email: 360-299-1942; don@CityofAnacortes.org

Address: P.O. Box 547, Anacortes, WA 98221

Don Measamer, Director

Date of Issuance: July 1, 2022

Appeals of this environmental determination may be made per the procedures outlined in AMC 18.04 and Ch. 19.20 by July 20, 2022, at 5:00 PM. Additional information regarding the appeal process may be obtained from the City of Anacortes PCED Department, 360-299-1984.



SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants: [\[help\]](#)

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals: [\[help\]](#)

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the [SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS \(part D\)](#). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. BACKGROUND [\[help\]](#)

1. Name of proposed project, if applicable: [\[help\]](#)

Anacortes Riparian Corridors development regulation amendments

2. Name of applicant: [\[help\]](#)

Anacortes Planning, Community, and Economic Development Department.

3. Address and phone number of applicant and contact person: [\[help\]](#)

Don Measamer, Director, 360.299.1942, 904 6th St, Anacortes, WA 98221

4. Date checklist prepared: [\[help\]](#)

July 1, 2022

5. Agency requesting checklist: [\[help\]](#)

City of Anacortes Planning, Community & Economic Development Department

6. Proposed timing or schedule (including phasing, if applicable): [\[help\]](#)

**Planning Commission Public Hearing – 7/20/22
City Council Review and Adoption – August 2022**

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. [\[help\]](#)

No.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal. [\[help\]](#)

**Revised Stream Buffer Best Available Science Review and Buffer
Recommendations, June 29, 2022, GeoEngineers**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. [\[help\]](#)

This is a non-project action that affects multiple parcels in the City of Anacortes.

10. List any government approvals or permits that will be needed for your proposal, if known. [\[help\]](#)

The City of Anacortes City Council must approve the changes to the development regulations.

11. Give brief, complete description of your proposal, including the proposed uses and the size

of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.) [\[help\]](#)

The proposal is to amend the Anacortes Municipal Code Chapter 19.70 Critical Areas regarding stream buffers to comply with the Growth Management Hearings Board Final Decision and Order concerning Case No. 21-2-0002c. Amendment to AMC Ch. 19.70, Article II Wetlands regarding buffer width averaging is also proposed.

The proposed amendments would establish riparian corridor and stream protection provisions based on Riparian Management Zones and WDFW Priority Habitats and Species Site Potential Tree Height. The provisions include definitions, development standards for land within riparian corridors, including for new development and for existing platted lots, and critical area report requirements. The amendments also would revise AMC 19.70.235(F)(5) to limit allowed wetland buffer width reduction in buffer width averaging proposals to no more than 75% of the standard wetland buffer width.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. [\[help\]](#)

The update is a citywide non-project action.

B. ENVIRONMENTAL ELEMENTS [\[help\]](#)

1. Earth

a. General description of the site [\[help\]](#)

(circle one): Flat, rolling, hilly, steep slopes, mountainous,
other _____

N/A, this is a non-project action. The City of Anacortes includes a variety of terrain, including flat, rolling, hilly, and steep slope areas.

b. What is the steepest slope on the site (approximate percent slope)? [\[help\]](#)

N/A, this is a non-project action.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils. [\[help\]](#)

Soils within the city include Bellingham silt loam, Bow gravelly loam, Bow-Urban land

complex, Catla gravelly fine sandy loam, Clallam gravelly loam, Coveland gravelly loam, Coveland-Bow complex, Dystric Xerochrepts, Fidalgo-Lithic Xerochrepts Rock outcrop complex, Guemes very stony loam, Guemes very gravelly loam, sandy substratum, Hydraquents, tidal, Keystone loamy sand, Laconner very gravelly loamy sand, Lithic Haploxerolls – Rock outcrop complex, Mukilteo muck, Norma silt loam, Pits, Swinomish gravelly loam, Swinomish-Fidalgo0Rock outcrop complex, Tacoma silt, Tacoma silt loam, Terric Medisaprists, Whistle-Fidalgo-Rock outcrop complex, and Xerorthents.

There are no known agricultural lands of long-term commercial significance; the proposal is a non-project action and will not result in removing any soils.

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. [\[help\]](#)

N/A, this is a non-project action. Geologically hazardous areas within the City include steep slopes, landslide and erosion hazards, and seismic hazards (liquefaction prone areas). These hazard areas are concentrated along the northern portion of Anacortes near Guemes Channel and Burrows Bay near in Washington Park. Liquefaction prone areas are located in areas of modified shorelines near Skyline and the eastern part of the city along Fidalgo Bay.

- e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill. [\[help\]](#)

N/A, this is a non-project action, which does not include any filing, excavation, or grading. Under the SMP, clearing and grading activities within shoreline jurisdiction are permitted only as part of an allowed use or an ecological restoration or enhancement plan.

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. [\[help\]](#)

N/A, this is a non-project action, which does not include any clearing or construction. Erosion control would be addressed on a project level basis through the City's stormwater design requirements, the clearing and grading code, and other provisions of the SMP.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? [\[help\]](#)

N/A, this is a non-project action.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: [\[help\]](#)

N/A, this is a non-project action. When future site-specific projects are submitted, any erosion-related impacts created during clearing and construction activities will be mitigated in compliance with the Ecology 2019 Stormwater Management Manual for Western Washington. This requires any erosion-related impacts created during clearing and construction activities to be addressed according to a Temporary Erosion Sedimentation Control Plan (TESC), which is a standard part of engineering review and approval.

2. Air

- a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known. [\[help\]](#)

N/A, this is a non-project action which would not result in emissions to the air.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. [\[help\]](#)

N/A, this is a non-project action, which would not be affected by any sources of emissions or odors.

- c. Proposed measures to reduce or control emissions or other impacts to air, if any: [\[help\]](#)

N/A, this is a non-project action and there would be no emissions or other impacts to the air, therefore, no measures are proposed.

3. Water

- a. Surface Water: [\[help\]](#)

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. [\[help\]](#)

N/A, this is a non-project action. Anacortes is surrounded on three sides by marine shorelines including Guemes Channel, Burrows Bay, Fidalgo Bay, and a portion of Padilla Bay, with lakes including Little Cranberry, Heart, Whistle, and a portion of Lake Erie.

There are multiple streams located within city limits including Whistle Creek, Happy Valley Stream, Ace of Hearts Creek, Beaver Brook, Cranberry Creek, Clyde Creek, Anaco Bourn, Morrison Run, Cedar Springs, Weaverling Rill, Miller Creek, Aqua Creek, Howard Creek, Summit Creek, and March's Run.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans. [\[help\]](#)

N/A, this is a non-project action that will not result in any work within 200 feet of the above described waters.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material. [\[help\]](#)

N/A, this is a non-project action, which does not include filling or dredging surface water or wetlands.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. [\[help\]](#)

N/A, this is a non-project action, which would not require surface water withdrawals or diversions.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

[\[help\]](#)

N/A, this is a non-project action. The 100 year flood plain is mapped for the City of Anacortes on Federal Emergency Management Agency (FEMA) flood insurance rate maps (FIRM).

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge. [\[help\]](#)

N/A, this is a non-project action, which would not discharge any waste materials to surface waters.

b. Ground Water:

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known. [\[help\]](#)

N/A, this is a non-project action, which would not withdraw groundwater.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve. [\[help\]](#)

N/A, this is a non-project action, which would not discharge any waste material into the ground from septic tanks or other sources.

c. Water runoff (including stormwater):

- 1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. [\[help\]](#)

N/A, this is a non-project action, which will not result in runoff.

- 2) Could waste materials enter ground or surface waters? If so, generally describe. [\[help\]](#)

N/A, this is a non-project action, which will not cause waste materials to enter ground or surface waters.

- 3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

N/A, this is a non-project action, which would not alter or otherwise affect drainage patterns.

- d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

N/A, this is a non-project action. When site-specific projects are submitted, any water-related impacts created during clearing and construction activities will be mitigated in compliance with the Ecology 2019 Stormwater Management Manual for Western Washington.

4. Plants [\[help\]](#)

- a. Check the types of vegetation found on the site: [\[help\]](#)

☐ deciduous tree: alder, maple, aspen, other
☐ evergreen tree: fir, cedar, pine, other
☐ shrubs
☐ grass
☐ pasture
☐ crop or grain
☐ Orchards, vineyards or other permanent crops.
☐ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
☐ water plants: water lily, eelgrass, milfoil, other
☐ other types of vegetation

N/A, this is a non-project action. However, a variety of vegetation can be found in Anacortes, including deciduous and evergreen trees, shrubs, grass, herbs, pasture, wet soil plants and water plants.

- b. What kind and amount of vegetation will be removed or altered? [\[help\]](#)

N/A, this is a non-project action. When a specific application is submitted, the kind and amount of vegetation to be removed or altered will depend on City requirements, which would be reflected in an approved landscape plan

- c. List threatened and endangered species known to be on or near the site. [\[help\]](#)

NA, this is a non-project action. Various species of rare plants, listed by the Washington Natural Heritage Program, may occur within the city.

- d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: [\[help\]](#)

N/A, this is a non-project action and no landscaping is proposed to be done.

- e. List all noxious weeds and invasive species known to be on or near the site.

NA, this is a non-project action.

5. Animals

- a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include: [\[help\]](#)

birds: hawk, heron, eagle, songbirds, other:

mammals: deer, bear, elk, beaver, other:

fish: bass, salmon, trout, herring, shellfish, other _____

N/A, this is a non-project action. A variety of birds, mammals, and fish are known to have habitat within the City.

- b. List any threatened and endangered species known to be on or near the site. [\[help\]](#)

N/A, this is a non-project action. Bull trout, Puget Sound Chinook, Puget Sound Steelhead, Southern Resident Killer Whale, Yelloweye Rockfish, Bocaccio Rockfish and Marbled Murrelet are known to occur along the marine shoreline.

- c. Is the site part of a migration route? If so, explain. [\[help\]](#)

Anacortes is located within the Pacific Flyway migration route utilized by waterfowl migrating north into Alaska and northern Canada.

- d. Proposed measures to preserve or enhance wildlife, if any: [\[help\]](#)

N/A, this is a non-project action.

- e. List any invasive animal species known to be on or near the site.

N/A, this is a non-project action.

6. Energy and natural resources

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc. [\[help\]](#)

N/A this is a non-project proposal that will not use any sources of energy.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. [\[help\]](#)

N/A this is a non-project proposal that will not result in any solar energy impacts.

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any: [\[help\]](#)

N/A this is a non-project proposal.

7. Environmental health

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe. [\[help\]](#)

N/A this is a non-project proposal.

- 1) Describe any known or possible contamination at the site from present or past uses.

N/A this is a non-project proposal.

- 2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

N/A this is a non-project proposal.

- 3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

N/A this is a non-project proposal and there is no associated construction.

- 4) Describe special emergency services that might be required.

N/A this is a non-project proposal and no emergency services are required.

- 5) Proposed measures to reduce or control environmental health hazards, if any:

N/A, this is a non-project proposal and no measures are necessary to reduce or control environmental health hazards.

b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)? [\[help\]](#)

N/A, this is a non-project action, which would not be affected by any noise in the area.

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site. [\[help\]](#)

N/A, this is a non-project action, which would not result in any noise.

- 3) Proposed measures to reduce or control noise impacts, if any: [\[help\]](#)

N/A, this is a non-project action and no measures are needed to reduce or control impacts.

8. Land and shoreline use

N/A, this is a non-project action. Answers provided below are intended to give a general description of conditions within the city.

- a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe. [\[help\]](#)

Land uses include residential, recreational, industrial, multi-family, public institutional uses, and vacant land. The proposal is a non-project action and does not propose changes to current land uses.

- b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use? [\[help\]](#)

N/A, this is a non-project action. There are no working farmlands or working forest lands in the City.

- c. Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

N/A, this is a non-project action. There are no working farmlands or working forest lands in the shoreline jurisdiction area.

- d. Describe any structures on the site. [\[help\]](#)

N/A, this is a non-project action. Much of the city is modified and contains commercial, residential, industrial, and recreational structures.

- e. Will any structures be demolished? If so, what? [\[help\]](#)

N/A, this is a non-project action.

- f. What is the current zoning classification of the site? [\[help\]](#)

The City contains a variety of residential, mixed use, and industrial zone categories.

- g. What is the current comprehensive plan designation of the site? [\[help\]](#)

The City contains a variety of Comprehensive plan land use designations.

- h. If applicable, what is the current shoreline master program designation of the site? [\[help\]](#)

SMP Designations include Aquatic, Conservancy, Natural, Shoreline Residential, Urban

Maritime, and Urban.

- i. Has any part of the site been classified as a critical area by the city or county? If so, specify. [\[help\]](#)

N/A, this is a non-project action. There are sites throughout the city that have been designated as critical areas.

- j. Approximately how many people would reside or work in the completed project? [\[help\]](#)

N/A, this is a non-project action.

- k. Approximately how many people would the completed project displace? [\[help\]](#)

N/A, this is a non-project action that would not displace any people.

- l. Proposed measures to avoid or reduce displacement impacts, if any: [\[help\]](#)

N/A, this is a non-project action and no measures to avoid or reduce displacement impacts are necessary.

- L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any: [\[help\]](#)

N/A, this is a non-project action.

- m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

N/A, this is a non-project action, and no measures are necessary to reduce or control impacts to agricultural and forest lands of long-term commercial significance

9. Housing

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing. [\[help\]](#)

N/A, this is a non-project action that will not result in any housing development.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing. [\[help\]](#)

N/A, this is a non-project action that will not eliminate any housing units.

- c. Proposed measures to reduce or control housing impacts, if any: [\[help\]](#)

N/A, this is a non-project action.

10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed? [\[help\]](#)

N/A, this is a non-project action.

- b. What views in the immediate vicinity would be altered or obstructed? [\[help\]](#)

N/A, this is a non-project action.

- c. Proposed measures to reduce or control aesthetic impacts, if any: [\[help\]](#)

N/A, this is a non-project action.

11. Light and glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur? [\[help\]](#)

N/A, this is a non-project action.

- b. Could light or glare from the finished project be a safety hazard or interfere with views? [\[help\]](#)

N/A, this is a non-project action.

- c. What existing off-site sources of light or glare may affect your proposal? [\[help\]](#)

N/A, this is a non-project action.

- d. Proposed measures to reduce or control light and glare impacts, if any: [\[help\]](#)

N/A, this is a non-project action.

12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity? [\[help\]](#)

This is a non-project action. The city contains many designated and informal recreational opportunities.

- b. Would the proposed project displace any existing recreational uses? If so, describe. [\[help\]](#)

This is a non-project action. As such, the project will not displace any existing recreational uses.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: [\[help\]](#)

This is a non-project action. As such, no measures to reduce or control impacts on recreation

will be needed.

13. Historic and cultural preservation

- a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe. [\[help\]](#)

N/A, this is a non-project action.

- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources. [\[help\]](#)

N/A, this is a non-project proposal. However, historically, Native American families including those of the Samish and Swinomish Tribes have made residence on Fidalgo Island. As such, there may be evidence, artifacts, or areas of cultural importance within the City.

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc. [\[help\]](#)

N/A, this is a non-project action, which would not result in impacts to cultural and historic resources.

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

This is a non-project action that will not result in impacts to cultural and historic resources.

14. Transportation

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any. [\[help\]](#)

N/A this is a non-project action.

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop? [\[help\]](#)

N/A this is a non-project action.

- c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate? [\[help\]](#)

N/A, this is a non-project action, which would not add or eliminate any parking spaces.

- d. Will the proposal require any new or improvements to existing roads, streets, pedestrian,

bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private). [\[help\]](#)

N/A, this is a non-project action, therefore, there would be no need for any new or improved roads, streets, pedestrian, bicycle or state transportation facilities.

- e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. [\[help\]](#)

N/A, this is a non-project action. Various forms of water, rail, and air transportation occur throughout the city.

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates? [\[help\]](#)

N/A, this is a non-project action, which would not generate any additional vehicular trips per day.

- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

N/A, this is a non-project action, and will not affect movement of agricultural or forest products.

- h. Proposed measures to reduce or control transportation impacts, if any: [\[help\]](#)

N/A, this is a non-project action and there is no need for any measures to reduce or control transportation impacts.

15. Public services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe. [\[help\]](#)

N/A, this is a non-project action, which would not result in the need for increased public services, such as fire protection, police protection, public transit, health care, and schools.

- b. Proposed measures to reduce or control direct impacts on public services, if any. [\[help\]](#)

N/A, this is a non-project action and there is no need to reduce or control impacts on public services.

16. Utilities

N/A this is a non-project action. None of the questions in this section apply.

- a. Circle utilities currently available at the site: [\[help\]](#)
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system,
other _____

N/A, this is a non-project action.

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed. [\[help\]](#)

N/A, this is a non-project action.

C. SIGNATURE [\[HELP\]](#)

I certify (or declare) under penalty of perjury under laws of the State of Washington that the above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make a decision.

Signature:  _____

Name of signee Libby Grage

Position and Agency/Organization Planning Manager, City of Anacortes

Date Submitted: July 1, 2022

D. SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

1. **How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?**

The proposed amendments are not anticipated to increase any of the above.

Future development proposals that occur under the proposed amendments are not anticipated to result in increased discharge to water because they would continue to be subject to then-current stormwater management requirements, including water quality treatment and flow control. Development allowed under the proposed amendments on existing developed lots may result in a decrease of untreated and uncontrolled discharge to streams through requirements to improve on-site stormwater management and provide buffer enhancement, thereby potentially improving water quality.

Proposed measures to avoid or reduce such increases are:

None proposed.

2. **How would the proposal be likely to affect plants, animals, fish, or marine life?**

The proposal is anticipated to increase protections for plants, animals, fish and marine life over existing through requirements that development proposals establish a riparian management zone within which alteration is prohibited, or limited in cases of existing development, with improved stormwater management and RMZ enhancement requirements.

Proposed measures to protect or conserve plants, animals, fish, or marine life are:

None proposed.

3. How would the proposal be likely to deplete energy or natural resources?

The proposal would result in no direct, indirect, or cumulative adverse impacts relating to depletion of energy or natural resources.

Proposed measures to protect or conserve energy and natural resources are:

None proposed.

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

The proposal is anticipated to increase protections for environmentally sensitive areas.

Proposed measures to protect such resources or to avoid or reduce impacts are:

None proposed.

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

The proposal will affect future land use by limiting development near streams and within riparian areas. Existing land uses within areas affected by this proposal would be allowed to continue and add limited new development under specific limited circumstances, while ensuring no net loss of functions and values of FWHCAs.

Proposed measures to avoid or reduce shoreline and land use impacts are:

None proposed.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

The proposed amendments would not increase demand on transportation or public services and utilities.

Proposed measures to reduce or respond to such demand(s) are:

None proposed.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

This non-project proposal is intended to comply with the Growth Management Hearings Board Final Decision and Order concerning case No. 21-2-0002c with regard to stream buffers and has been developed in consultation with Washington Department of Fish and Wildlife. No conflicts with local, state, or federal laws or requirements are anticipated.
