Bradley Heights Apartments

A 236-Unit Apartment Development Puyallup, Washington

Bradley Heights SS LLC

PROJECT TEAM

Bradley Heights SS LLC Owner/Developer 614 Boylston Ave E

Seattle, WA 98102 (206) 557-7236

Architect: Milbrandt Architects, Inc., P.S. 25 Central Way, Suite 210

Kirkland, WA 98033 (425) 454-7130

Structural Engineer Solutions 4 Structure, Inc 11605 135th St Ct E

> (253) 268-2923 Azure Green Consultants

Puyallup, WA 98374

Civil Engineer 409 East Pioneer Puyallup, WA 98372 (253) 770-3144

Landscape Architect Nature By Design 1320 Alameda Avenue, Suite B

Fircrest, WA 98466 (253) 460-6067

Robison Engineering Inc. 19401 40th Avenue W, Suite 302

Lynnwood, WA 98036 (206) 364-3343

PROJECT INFORMATION

MEP Engineer

Site Address: 202 27th Ave SE, Puyallup, WA 98374

Construction of 236 wood framed apartment units in eight Project Description: stacked flat buildings along with a leasing amenity building.

7.785 acres (+/- 339,107 SQ. FT.)

Tax Parcel Number:1 419036006

Occupancy Type: All Apartment Buildings are R2 occupancy

All Apartment Buildings are Type V-B construction Type of Construction with NFPA 13R automatic sprinklers

Applicable Codes:

2018 International Building Code 2018 Uniform Plumbing Code 2018 Washington State Energy Code 2018 International Mechanical code 2018 International Fire Code 2022 National Electrical Code

ICC/ANSI A117.1-2009 Standard Washington State Amendments as modified and adopted by

the local jurisdiction.

RATED ASSEMBLIES

Rated assemblies shall be provided in accordance with IBC section 420

-		
Assembly	Fire Rating	Detail
Common walls separating dwelling units:	1-hour	4/D1
Exterior walls:	non-rated	1/D1
Interior bearing walls:	non-rated	2/D1
Interior non-bearing walls:	non-rated	2/D1
Corridor-to-unit walls:	1-hour	3/D1
Floor/ceiling:	1-hour	13/D1
Roof/ceiling:	1-hour	17/D1
Penetrations (firestopping)	Per situation	17/D8
		D9
Stair fire barrier wall:	1-hour @ 3-story 2-hour @ 4-story	3/D1 7/D1

Fire Alarm systems and smoke alarms shall be provided in accordance with IBC section 420.5 Refer to unit plan sheets for smoke detector locations and requirements.

GENERAL NOTES

- 1. Comply with 2018 IBC and all applicable codes and ordinances of the local jurisdiction and the State of Washington.
- 2. Do not scale drawings. 3. Verify all rough-in dimensions for equipment provided in this contract or by
- All rough-ins shall be approved and fireblocking shall be installed prior to
- 4. Verify size and location of and provide all openings through floors and walls, furring, anchors, inserts, rough bucks and backing for surface mounted items.
- 5. Provide furring as required to conceal mechanical and electrical work in all
- 6. All swinging doors not located by dimensions on plans, interior elevations, or
- details shall be 3" from face of stud to edge of rough openings or centered between room partitions as shown.
- 7. Plans are drawn assuming the following rough openings: Swinging doors: Nominal size +2". Bi-Fold doors: Nominal size +1-1/2". Bi-Pass doors: Nominal size +0". Windows: Nominal size +0".
- Sliding glass doors: Nominal size +0". 8. Fill where required with earth free from organic material. Compact fill in
- 12" lavers maximum. 9. "Finish Floor" refers to the top of concrete slab or top of wood floor
- 10. Exterior walls shall be 2x6 studs at 16" o.c. and interior walls shall be 2x4
- studs at 16" o.c., unless noted otherwise. 11. Unless otherwise noted, plan dimensions are to face of studs and face of
- concrete walls. 12. Refer to interior elevations for cabinet and counter lengths, dimensions, countertop materials and detail reference. Verify all existing dimensions
- 13. Provide caulking between sole plates and subfloor and between rim joists at
- both top plate and subfloor. 14. Hydrants shall be in service prior to start of framing.
- 15. Through penetrations and membrane penetrations of rated wall or floor/ceiling assembly will require firestopping per 2018 IBC Section 714. See detail sheets for diagram of specifics.
- 16. Shall be no asbestos used on this project. 17. All Tub-Shower valves installed shall conform to UPC 408.3 & ASSE 1016 or ASME A112.18.1
- 18. Milbrandt Architects is not responsible for construction means, methods, techniques or procedures, or for the safety precautions and programs in connection with the work, and is not responsible for the failure of any contractor or subcontractor to carry out the work in accordance with the various contract documents and or governing jurisdiction, regardless of what is shown on these drawings.

FEDERALLY DECLARED SAFE HARBOR

Declared Safe Harbor: HUD Fair Housing Accessibility Guidelines published on March 6, 1991 and the Supplemental Notice to Fair Housing Accessibility Guidelines: Questions and Answers about the Guidelines, published on June 28, 1994.

ACCESSIBILITY

Design is based on the 2018 IBC Chapter 11 which has been amended by the State of Washington, & 2009 ICC A117.1 Accessible & Useable Buildings & Facilities. None of the buildings are an elevator type building.

There are a total of 84 one-story dwelling units at ground level. All ground floor units are 1 or 2-bed unit designs. Provided total 84 accessible units: 12 Type A and 72 Type B units. Type A units meet the requirements for Type B units.

- The 12 Type A units are proportioned as follows (see Site Plan):
- (7) 1-Bed units (1 BR) in each of Buildings A, C, D, E, F & G- for a total of 7. • (5) 2-Bed units (2 BR) in Buildings A, D, E, F & G - for a total of 5.

Section 1106.2 IBC requires 2% of each proposed parking stall type to be accessible. Of the 354 total open stalls, 12 are accessible, including 5 van stalls. Each accessible open stall is indicated by the wheelchair symbol on the site plan and further designated by the detail symbols 10/A3.

VENTILATION NOTES

- 1. Design Criteria: 2018 International Mechanical Code with Washington State
- 2. System Type: Balanced whole house fan system with energy recovery
- ventilator 3. Use: Group R occupancy.
- 4. Specifics: See mechanical plans by others.

ENERGY NOTES

TOTAL PROVIDED

Chapter 4 using climate zone catagory 5 & marine 4 for

All residential units shall comply with the Requirements By Component Table 402.1.1 Including but not limited to the following: Associated Notes/Details **Showing Compliance** Window U-Factor See Insul. Notes on sheets U1,

U2, U3, U4, U5 Ceiling R-Value 13 / D1 Wood Frame Wall R-Value R-21 int. 1, 3, 4, 7 & 8 / D1 Floor R-Value N/A Slab R-Value & Depth R-10, 2ft 1, 3, 5 & 6/ D2

"int." (intermediate framing) denotes standard framing 16" o.c. with headers insulated with a min. of R-10 (see 6/D6) All units need to have a certificate posted within 3 feet of the electrical distribution panel listing the following information: R-values, U-values, duct air leakage test results, building envelope air

leakage test results, types and efficiencies of heating, cooling and service water heating equipment per R401.3 All insulation shall comply with table R402.4.1.1 WSEC

Hot water piping shall be insulated to a minimum of R-3 per R403.5.2 Water heaters in unheated spaces, or on concrete floors shall be placed on minimum of R-10 incompressible insulated surface per R403.5.5

Mechanical ventilation shall be provided per R403.6 A minimum of 90% of all permanently installed lamps in lighting fixtures shall be high-efficacy lamps per R404.1

5.0 CREDITS

See Insulation Notes on the Unit Plans, and Insulation and Energy Notes on sheet D7. /1/ Energy Credits used (see 2018 WSEC table 406.3 for all requirements): Fuel Normalization Credit System Type 0 0.0 CREDITS 0.5 CREDITS Option 1.1 Efficient Building Envelope 1.0 CREDITS Option 2.1 Air Leakage Control Option 3.4 Ductless Mini-Split Heat Pump System 2.0 CREDITS Option 7.1 Appliance Package 1.5 CREDITS



VICINITY MAP



Puyallup,

Bradley

Heights

Apartments

25 Central Way, Suite 210

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11063 REGISTERE

Timberlane **Partners**

Revisions No. Date Description

8-30-24 Owner Changes/

Initial Publish Date: Date Plotted:

Sheet No.:

Job No.: Drawn By: TMK/HDM/APT

2-18-25

FIRE SYSTEMS Buildings shall have an NFPA 13R sprinkler system installed throughout per 2018 IBC

Section 903.3.1.2 which shall include a notification appliance which is activated upon sprinkler flow. Any alarms, bells or lights required due to the design of the sprinkler system or integral with the sprinkler system shall be considered part of the sprinkler system. The sprinkler system design, therefore, needs to include any and all integrated alarms.

Plans and specifications for sprinklers shall be submitted to the city of Puyallup as a separate permit for review and approval before installation.

DESIGN LOADS See structural notes. Sheet S1.0

DEFERRED SUBMITTALS

Shop drawings and calculations are required for:

1. Firestopping details. Firestopping methods and materials shall be determined by the Contractor except where details or notes are indicated in these drawings. Firestopping locations are indicated in part by detail sheet D9. Contractor shall submit UL assembly details and product cuts of all relevant situations to the Architect for conformance to the building design. Upon the Architect's approval, they shall be submitted to the Building Official for approval. Firestopping shall not be installed without City approval.

SEPARATE PERMITS

The following required permits will be submitted separately:

1. Automatic Fire Sprinkler System (See fire systems note, this sheet). 2. Fire Alarm System.

Bradley Heights Apartments

Building BPuyallup, Washington

Bradley Heights SS LLC

Bradley Heights	Building Areas
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D9 Details

BE1 Building Envelope Details

All buildings are Type V-B construction; all occupancies are R-2; all have NFPA 13R sprinkler systems throughout.

a. Misc. Areas include SF of sprinkler riser rooms and basement storage rooms.

c. Base Area allowed is 7000SF per floor for Type V-B construction (Table 506.2). See area increase diagrams on sheet A4 for total area allowed.

Unit Area Summary

Unit		Unit SF	Patio/Deck SF	
1 Bed End	1BR/1BA	712	67	
1 Bed End Alt	1BR/1BA	625	78	
1 Bed Int	1BR/1BA	684	61	
1 Bed Int 2	1BR/1BA	684	71	
2 Bed	2BR/2BA	1019	66	
2 Bed Alt	2BR/2BA	1019	60	
2 Bed Alt (3rd Floor)	2BR/2BA	980	60	
2 Bed-2	2BR/2BA	1115	62	$\frac{1}{2}$
1-Bed-Int-Alt-1	1BR/1BA	634	74	
1-Bed-Int-Alt-2	1BR/1BA	634	86	
1-Bed-Int-Alt-3	1BŘ/1BŘ	795	57	
1-Bed-Int-Alt-4	1BR/1BA	795	59	\bigwedge_{1}

SINGLE EXITS Per IBC 1006.3.2 section 5, Individual single-story or multistory dwelling units shall be permitted to have a single exit or access to a single exit provided that the dwelling unit has a maximum occupant load of 20, is equipped throughout with an automatic sprinkler system in accordance with section 903.3.1.1 or 903.3.1.2, is provided with emergency escape and rescue openings in accordance with section 1030, and the common path of egress travel does not exceed 125'.

LIST OF DRAWINGS

Cover Sheet - Building Areas and Statistics

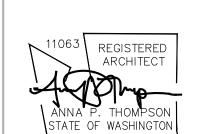
A Cover Sheet

A2 Site Plan

A3	Site Standards
A5	Grade Plane Calculations
В3	Building B - Building Floor Plans
U4 U5	2-Bed Unit - Basement & 1st Level Floor Plans 2-Bed Unit - 2nd & 3rd Level Floor Plans
U9	Interior Elevations - 2-Bed
>U11	Accessibility Standards
(U12	Stair 1 - Floor Plans
U13	Stair 2 - Floor Plans
∆ U14	Door Schedule
F3	Building B - Architectural Foundation Plan
R2	Building B - Roof Plan
E3	Building B - Exterior Elevations
E4	Building B - Building Sections
S1.0	Structural Notes - Building B
S1.1	Structural Notes & Tables - Building B
S1.2	Shear Wall Notes - Building B
S1.3	Shear Wall Notes - Building B
S2.3	Foundation Plans - Building B
S2.4	2nd & 3rd Floor Framing Plans - Building B
S2.5	Roof Framing Plan - Building B
S3.0	Details - Building B
S3.1	Details - Building B
S4.0	Details - Building B
S4.1	Details - Building B
S5.0	Details - Building B
S5.1	Details - Building B
D1	Details
D2	Details
D3	Details
D4	Details
D5	Details
D6	Details
D7_	Details
\triangle D8 $\stackrel{\checkmark}{}$	Details

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BE2 Building Envelope Details
BE3 Building Envelope Details
BE4 Building Envelope Details
BE5 Puilding Envelope Details
M0.0 Legend, General Notes & Drawing Index
M0.1 Project Notes
M0.2 Tables & Calculations
M0.3 Mechanical Schedules & WSEC Forms
M2.0 Building B - HVAC Plans
M3.0 HVAC Enlarged Plan
E0.00 Electrical Cover Sheet
E0.10 Power Site Plan
E0.11 Power Site Plan
E0.12 Lighting Site Plan
E0.13 Lighting Site Plan
E1.00 Basement Lighting Plan
E1.01 1st Floor Lighting Plan
E1.02 2nd & 3rd Floor Lighting Plan
E1.50 Lighting Notes
E3.00 Basement & 1st Floor Power Plans
E3.01 2nd & 3rd Floor Power Plans
E3.02 Roof Power Plan
E5.00 Unit Plan Notes
E5.01 Unit Electrical Plans
E5.02 Unit Electrical Plans
E6.00 One-Line Diagram & Notes
E6.01 Panel Schedule
POB.00 Plumbing - Legend, General Notes & Drawing Index
P0B.01 Plumbing Notes & Tables
P0B.02 Plumbing Calculations
P0B.03 Plumbing Schedules
P2B.00 Underslab Waste & Vent Plan
P2B.01 Basement Waste & Vent Plan
P2B.02 1st Floor Waste & Vent Plan
P2B.03 2nd Floor Waste & Vent Plan
P2B.04 3rd Floor Waste & Vent Plan
P2B.05 Roof Waste & Vent Plan
P3B.01 Basement Plumbing Supply Plan
P3B.02 1st Floor Plumbing Supply Plan
P3B.03 2nd Floor Plumbing Supply Plan
P3B.04 3rd Floor Plumbing Supply Plan
P7B.00 Details
P7B.01 Details
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Bradley Heights **Apartments**

Puyallup,

Timberlane Partners

Revisions No. Date Description 8-30-24 Owner Changes/
Permit Corrections

Initial Publish Date: Date Plotted:

Sheet No.:

12-20-24 Job No.: Drawn By: 23-06 TMK/HDM/APT

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Additional Conditions/Comments

CITY OF PUYALLUP

Front, rear, and side yard property lines shall be marked with string from surveying pins prior to footing

Zoning District: RM-Core

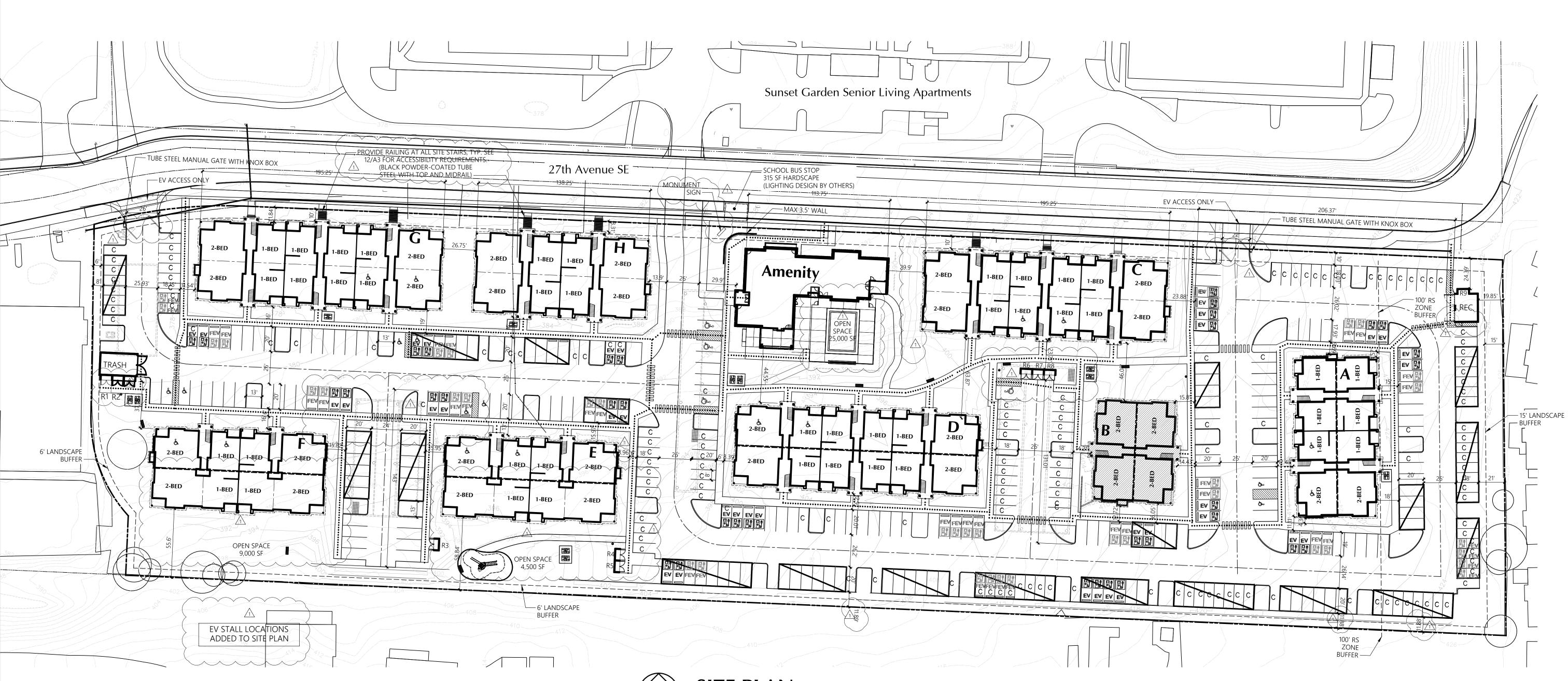
Staff: RNBrown

Date: 03/24/2025

Initial Publish Date:

Sheet No.:

Date Plotted: 2-11-25 Job No.: Drawn By: 23-06 APT/HDM



SITE PLAN

UNIT COUNT

TOTAL 236

EV STALL COUNT 🛆

Total Electric Vehicle

Total Furture Electric

Charging stations: **36 Stalls**

137 (58%)

99 (42%)

Vehicle Stall Infrastructure: 36 Stalls

1 BED

2 BED

236 UNITS

SITE INFORMATION

202 27th Ave SE, SITE ADDRESS: Puyallup, WA PARCEL #: 419036006

SITE AREA: 339,107 SF (7.785 Acres)

ZONE: RM-CORE NORTH/FRONT : 10 FT setback to buildings WEST/SIDE : 0 FT Building setback - 6 FT landscape buffer SOUTH/REAR : 0 FT Building setback - 6 FT landscape buffer SETBACKS:

BUILDING HEIGHT: 50' Max

DENSITY: Min 16 units per acre (125 units) no Max density

EAST/SIDE: 25 FT Building setback - 15 ft landscape buffer

LOT COVERAGE: Max 90%

LANDSCAPE AREA: Min 10% of net lot area (33,910 SF) 10% of net lot area (33,910 SF) OPEN SPACE:

38,500 SF provided

PRIVATE OPEN SPACE: 60 SF per ground floor unit

10' x 6' per upper story unit

PARKING: 1.5 PARKING SPACES PER UNIT Required Parking: 354 Stalls Provided Parking: 354 Stalls

EASEMENTS: no existing easements on site

PA	RKING	SUMMAR	Ϋ́		
Parking Stalls Required		354			
Standard Stalls		124			
Compact Stalls	41.5%	98			
Parallel Stalls		0			
Carport Stalls		118			
Attached Garage Stalls		0			
Detached Garage Stalls		0			
Accessible Standard Stalls		6			
Accessible Van Stalls		5			
Accessible Parallel Stalls		0			
Accessible Carport Stalls		1			
Accessible Garage Stalls		0			
Tandem Stalls		0			
Tandem Garage Stalls		0			
Subtotal		352	1.49	Stalls / D.U.	
Aprons		0			

Total Parking Stalls Provided

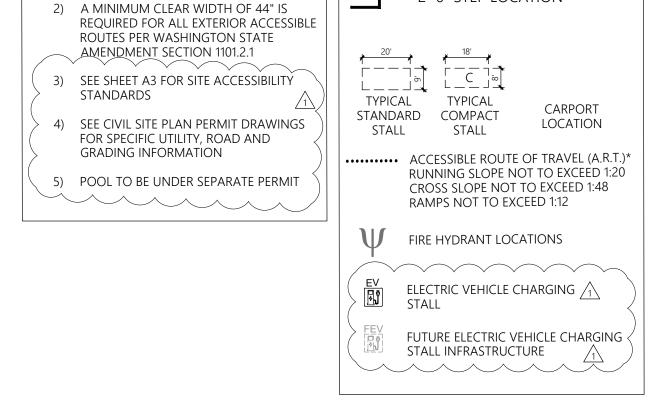
352 1.49 Stalls / D.U.

Provide at least 1 accessible parking space for each Type A unit per Washington State Building, Section 1106.2 and insure that the accessible parking spaces are on the shortest accessible route of travel per Washington State Building Code Section 1106.6. See accessible parking for buildings C and D as an example, there may be others.

(Construction Set, Sheet A2, Site Key)

(Construction Set, Sheet A2, Site Plan)

Provide a definition of "future electric vehicle charging stall infrastructure" as listed on the Site Key.



SITE NOTES

1) TYPICAL SIDEWALK WIDTH IS 6'

SITE KEY

2'-6" STEP LOCATION

UNOBSTRUCTED SIDE REACH

10"-24"

OBSTRUCTED SIDE HIGH REACH

OPERABLE PARTS

A 30"x48" CLEAR FLOOR SPACE SHALL BE PROVIDED AT ALL OPERABLE PARTS. ALL OPERABLE PARTS SHALL BE WITHIN ONE OR MORE OF THE REACH RANGES. OPERABLE PARTS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5.0 lbs MAX.



BUILDING BLOCKS CHAPTER 3

ACCESSIBLE ROUTE (PER IBC SECTION 1104)

AT LEAST ONE ACCESSIBLE ROUTE WITHIN THE SITE SHALL BE PROVIDED FROM PUBLIC Transportation Stops, accessible parking, accessible passenger loading zones, AND PUBLIC STREETS OR SIDEWALKS TO THE ACCESSIBLE BUILDING ENTRANCES SERVED. when a building or portion of a building is required to be accessible, at least ONE ACCESSIBLE ROUTE SHALL BE PROVIDED TO EACH PORTION OF THE BUILDING, TO ACCESSIBLE BUILDING ENTRANCES CONNECTING ACCESSIBLE WALKWAYS AND TO THE

ACCESSIBLE ROUTES SHALL COINCIDE WITH OR BE LOCATED IN THE SAME AREAS AS A GENERAL CIRCULATION PATH.

ACCESSIBLE ROUTES SHALL CONSIST OF ONE OR MORE OF THE FOLLOWING COMPONENTS: WALKING SURFACES WITH A SLOPE NOT STEEPER THAN 1:20, DOORS & DOORWAYS, RAMPS, CURB RAMPS EXCLUDING THE FLARED SIDES, ELEVATORS, AND PLATFORM LIFTS.

IF DOOR HAS BOTH

CLOSER AND LATCH

WALKING SURFACES

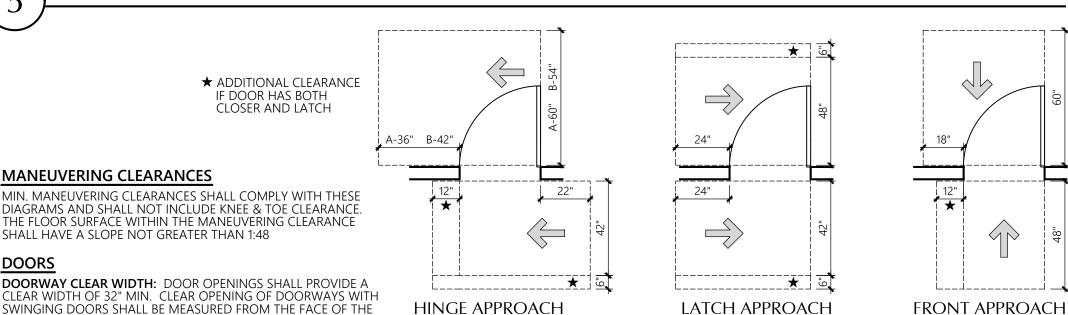
SLOPE: THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:20. THE CROSS SLOPE OF A WALKING SURFACE SHALL NOT BE STEEPER THAN 1:48.

CHANGES IN LEVEL: CHANGES IN LEVEL SHALL COMPLY WITH SECTION 303 (see detail 1 ACC sheets)

CLEAR WIDTH: THE WIDTH OF AN ACCESSIBLE ROUTE SHALL BE 36" MIN. THE CLEAR WIDTH SHALL BE PERMITTED TO BE REDUCED TO 32" MIN. FOR A LENGTH OF 24" MAX. PROVIDED THE REDUCED WIDTH SEGMENTS ARE SEPARATED BY SEGMENTS THAT ARE 48" MIN. IN LENGTH AND 36" MIN. IN WIDTH. FOR EXTERIOR ROUTES OF TRAVEL, THE CLEAR WIDTH PASSING SPACE: AN ACCESSIBLE ROUTE WITH A CLEAR WIDTH LESS THAN 60" SHALL

PROVIDE PASSING SPACES AT MAXIMUM INTERVALS OF 200 FEET. PASSING SPACES SHALL BE EITHER A 60"x60" MIN. SPACE, OR AN INTERSECTION OF WALKING SURFACES WITH A -SHAPED TURNING SPACE (See detail 1 ACC sheets), PROVIDED THE BASE AND ARMS OF THE T-SHAPED SPACE EXTEND 48" MIN. BEYOND THE INTERSECTION.

CESSIBLE ROUTE



DOORWAY CLEAR WIDTH: DOOR OPENINGS SHALL PROVIDE A CLEAR WIDTH OF 32" MIN. CLEAR OPENING OF DOORWAYS WITH SWINGING DOORS SHALL BE MEASURED FROM THE FACE OF THE DOOR TO THE STOP WITH THE DOOR OPEN 90°

THRESHOLDS: IF PROVIDED, THRESHOLDS SHALL BE ½" MAX. IN HEIGHT & SHALL COMPLY WITH SECTIONS 302 & 303. (See detail 1 ACC sheets) DOOR HARDWARE: HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERABLE PARTS ON SIRLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST TO OPERATE. OPERABLE PARTS OF SUCH HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE

CLOSING SPEED: DOORS WITH CLOSERS SHALL BE ADJUSTED SO THAT FROM A 90° OPEN POSITION, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12° FROM THE LATCH IS 5 SECONDS MIN.

AT LEAST AS WIDE -

LANDING

AS RAMP RUN

DOORS WITH A SPRING HINGE SHALL BE ADJUSTED SO THAT FROM A 70° OPEN POSITION THE TIME REQUIRED TO MOVE THE DOOR TO A CLOSED POSITION IS 1.5 SECONDS MIN. DOOR OPENING FORCE: HINGED, SLIDING OR FOLDING DOORS OTHER THAN FIRE DOORS SHALL HAVE AN OPENING FORCE AS FOLLOWS: INTERIOR DOORS: 5 lbs. MAX. EXTERIOR DOORS: 10 lbs. MAX.

DOORS

MANEUVERING CLEARANCES

SHALL HAVE A SLOPE NOT GREATER THAN 1:48

GENERAL: RAMP RUNS SHALL HAVE A RUNNING SLOPE GREATER THAN 1:20 AND NOT STEEPER THAN 1:12. THE MAX. CROSS SLOPE OF A RAMP SHALL BE 1:48. THE MAX. RISE FOR ANY RAMP RUN SHALL BE 30". LANDINGS SUBJECT TO WET CONDITIONS SHALL BE DESIGNED TO PREVENT THE ACCUMULATION OF WATER.

CHANGES IN LEVEL: CHANGES IN LEVEL SHALL COMPLY WITH SECTION 303 (See detail 1 ACC sheets)

CLEAR WIDTH: THE CLEAR WIDTH SHALL BE 36" MIN. FOR EXTERIOR ROUTES OF TRAVEL THE CLEAR WIDTH SHALL BE 44" MIN. THE HANDRAILS SHALL NOT PROJECT INTO THE REQUIRED 60" MIN. CLEAR WIDTH OF THE RAMP RUN.

RUN LEADING TO THE LANDING AND A MIN. CLEAR LENGTH OF 60". RAMPS THAT CHANGE DIRECTION AT THE LANDING SHALL BE SIZED TO PROVIDE A TURNING SPACE (See detail 1 ACC sheets) HANDRAILS: RAMP RUNS WITH A RISE GREATER THAN 6" SHALL HAVE HANDRAILS

EDGE PROTECTION: THE FLOOR SURFACE OF THE RAMP RUN OR LANDING SHALL EXTEND 12" BEYOND THE INSIDE FACE OF A RAILING OR THERE SHALL BE A 4" MIN. HEIGHT CURB OR A BARRIER AT THE EDGE OF THE RAMP OR LANDING CONSTRUCTED SO THAT IT PREVENTS THE PASSAGE OF A 4" DIAMETER SPHERE

BARRIER SHALL PREVENT -PASSAGE OF 4" SPHERE

____60" MIN. LANDINGS: RAMPS SHALL HAVE LANDINGS AT THE BOTTOM & TOP OF EACH RAMP RUN WITH A MAX. SLOPE OF 1.48. CLEAR WIDTH OF LANDINGS SHALL BE AS WIDE AS THE WIDEST RAMP 36" CLR.

RAMP RUN

EXTENDED SURFACE-AT SAME LEVEL AS RAMP SURFACE

FLOOR SURFACE RAMP EDGE PROTECTION

CHANGE IN

DIRECTION

RUN

EXTENDED

THE MIN. WIDTH OF CURB RAMPS SHALL BE 36". ALL ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE CURB RAMP SHALL NOT BE STEEPER THAN 1:20.

DETECTABLE WARNINGS SHALL CONTRACTOR OF CURB RAMP SHALL NOT BE STEEPER THAN 1:20. The Curb ramp shall have a max. Slope of 1:12 with a max. Cross slope of 1 :48. LANDINGS SUBJECT TO WET CONDITIONS SHALL BE DESIGNED TO PREVENT THE

ACCUMULATION OF WATER. A 36" MIN. LENGTH LANDING AT LEAST AS WIDE AS THE CURB RAMP SHALL BE PROVIDED AT THE TOP OF CURB RAMPS. CURB RAMPS SHALL BE LOCATED OR PROTECTED TO PREVENT THEIR OBSTRUCTION BY PARKED VEHICLES DETECTABLE WARNING (IF PROVIDED) CURB RAMP 1:12 MAX. SLOPE — Flared Sides 1:10 Max. Slope — CURB RAMP FLARES PAINTED IF ADJACENT CURB IS PAINTED

DETECTABLE WARNINGS

LANDING

DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJACENT SURFACES, EITHER DETECTABLE WARNING SURFACES IN INTERIOR LOCATIONS SHALL DIFFER FROM ADJOINING WALKING SURFACES IN RESILIENCY OR SOUND-ON-CANE CONTACT TRUNCATED DOMES SHALL BE ALIGNED IN A SQUARE PATTERN.

CENTER-TO-CENTER TOP DIAMETER 50% MIN. TO 65% MAX. OF THE -SPACING 1.6" MIN. BASE DIAMETER >TO 2.4" MAX. CHECK WITH LOCAL JURISDICTION ON WHERE DETECTABLE WARNINGS ARE REQUIRED. URRENTLY IBC & ANSI A117.1 ONLY DIAMETER REQUIRE DETECTABLE WARNINGS AT LIMITED & SPECIFIC LOCATIONS. .9" MIN.

CURB RAMPS AND DETECTABLE WARNINGS

ACCESSIBLE ROUTES **CHAPTER 4**

ACCESSIBLE PARKING SPACES

LOCATION: PER IBC SECTION 1106.6, ACCESSIBLE PARKING SPACES SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTE OF TRAVEL FROM ADJACENT PARKING TO AN ACCESSIBLE BUILDING ENTRANCE. WHERE PRACTICAL THE ACCESSIBLE ROUTE SHALL NOT CROSS LANES OF TRAFFIC. WHERE CROSSING TRAFFIC LANES IS NECESSARY, THE ROUTE SHALL BE DESIGNATED AND MARKED AS A CROSSWALK.

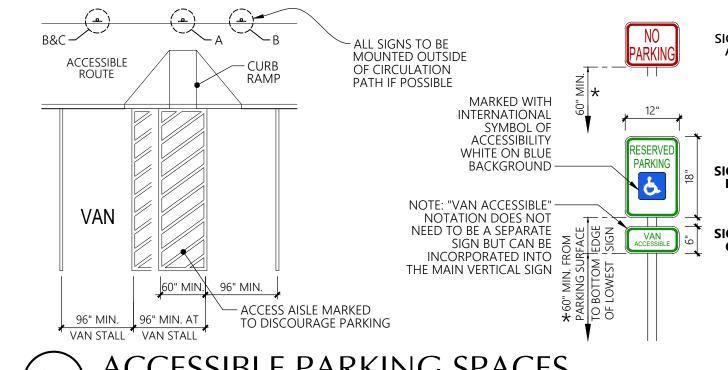
PARKING STALL SIZE: CAR AND VAN PARKING SPACES SHALL BE 96" MIN. WIDTH. ACCESS AISLES SERVING CAR PARKING SPACES SHALL BE 60" MIN. IN WIDTH. ACCESS AISLES SERVING VAN PARKING SPACES SHALL BE 96" MIN. IN WIDTH. ACCESS AISLE: CAR AND VAN PARKING SPACES SHALL HAVE AN ADJACENT ACCESS AISLE ON EITHER SIDE OF THE PARKING SPACE. THE ACCESS AISLES SHALL BE 60" MIN. IN WIDTH FOR CAR STALLS AND 96" MIN. IN WIDTH FOR VAN STALLS AND EXTEND THE FULL LENGTH OF AND AT THE SAME LEVEL AS THE PARKING SPACE THEY SERVE. ACCESS AISLES SHALL BE MARKED SO AS TO DISCOURAGE PARKING IN THEM

FLOOR SURFACES: PARKING STALLS & ADJACENT ACCESS AISLES SHALL HAVE A SURFACE SLOPE NOT GREATER THAN 1:48. VERTICAL CLEARANCE: ACCESSIBLE VAN PARKING STALLS, ACCESS AISLES SERVING THEM, & VEHICULAR ROUTES SERVING THE VAN SPACE SHALL HAVE A VERTICAL CLEARANCE OF 98" MIN.

IDENTIFICATION: ACCESSIBLE PARKING SPACES SHALL BE INDICATED BY A VERTICAL SIGN. SIGNS SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY THAT IS WHITE WITH A BLUE BACKGROUND. SIGNS IDENTIFYING VAN PARKING SPACES SHALL CONTAIN THE DESIGNATION "VAN ACCESSIBLE". A VERTICAL "NO PARKING" SIGN SHALL BE ERECTED AT THE HEAD OF EACH ACCESS AISLE LOCATED ADJACENT TO AN ACCESSIBLE PARKING SPACE. THESE SIGNS MAY INCLUDE ADDITIONAL LANGUAGE SUCH AS, BUT NOT LIMITED TO, AN INDICATION OF THE AMOUNT OF THE MONETARY PENALTY FOR PARKING IN THE SPACE WITHOUT A VALID PERMIT OR THE ACCESS AISLE. THESE SIGNS SHALL BE 60" MIN. ABOVE THE FLOOR OF THE PARKING SPACE MEASURED TO THE BOTTOM OF THE SIGN.

SIGN MOUNTING: SIGNS ARE TO BE MOUNTED COMPLETELY OUTSIDE OF CIRCULATION PATHS WHEREVER POSSIBLE WHERE MOUNTING IS NECESSARY WITHIN A PATH OF CIRCULATION, SIGNS SHALL MEET THE REQUIREMENTS OF IBC **SECTION 1003.3** FOR PROTRUDING OBJECTS AND POST-MOUNTED OBJECTS.

★ SIGNS MOUNTED ON POSTS WITHIN A CIRCULATION PATH SHALL BE INSTALLED WITH A VERTICAL CLEARANCE OF 80" MIN. FROM THE LOWEST POINT OF THE SIGN(S) TO THE WALKING SURFACE. IF A POST MOUNTED SIGN IS SIZED SUCH THAT IT PROTRUDES 4" MAX. FROM THE MOUNTING POST, THEN THE MOUNTING HEIGHT SHALL BE MOUNTED AT 60" MIN. ABOVE THE PARKING SURFACE SO AS TO NOT BE OBSTRUCTED BY ANY PARKED VEHICLES.

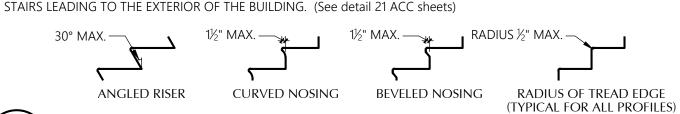


ACCESSIBLE PARKING SPACES

ACCESSIBLE STAIR REQUIREMENTS

ALL STEPS ON A FLIGHT OF STAIRS SHALL HAVE UNIFORM RISER HEIGHTS AND UNIFORM TREAD DEPTHS. RISERS SHALL BE 4" HIGH MIN. AND 7" HIGH MAX. TREADS SHALL BE 11" DEEP MIN. OPEN RISERS ARE NOT PERMITTED & TREADS SHALL HAVE A SLOPE NOT MORE THAN 1:48.

STAIR NOSINGS SHALL CONFORM TO THE DIAGRAMS SHOWN HERE AND THE LEADING 2" OF THE TREAD SHALL HAVE VISUAL CONTRAST OF DARK-ON-LIGHT OR LIGHT-ON-DARK FROM THE REMAINDER OF THE TREAD. STAIR TREADS & LANDINGS SUBJECT TO WET CONDITIONS SHALL BE DESIGNED TO PREVENT ACCUMULATION OF WATER. FLOOR IDENTIFICATION SIGNS SHALL BE LOCATED AT EACH FLOOR LANDING ADJACENT TO THE STAIRWELL DOOR LEADING INTO THE CORRIDOR. SIGNS SHALL BE IN RAISED CHARACTERS & BRAILLE. "EXIT" SIGNS SHALL BE LOCATED AT

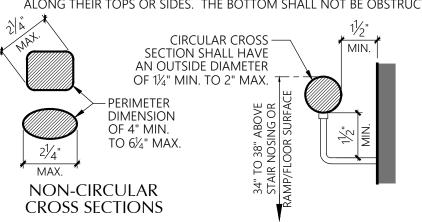


ACCESSIBLE STAIRS

HANDRAILS

HANDRAILS SHALL BE PROVIDED ON BOTH SIDES OF STAIRS & RAMPS. THEY SHALL BE CONTINUOUS FOR THE FULL LENGTH OF EACH STAIR FLIGHT OR RAMP RUN. INSIDE HANDRAILS ON SWITCHBACKS SHALL BE CONTINUOUS BETWEEN

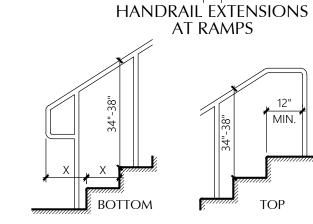
HANDRAIL GRIPPING SURFACES & ANY SURFACES ADJACENT TO THEM SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS & SHALL HAVE ROUNDED EDGES. THEY SHALL BE CONTINUOUS ALONG THEIR LENGTH AND SHALL NOT BE OBSTRUCTED ALONG THEIR TOPS OR SIDES. THE BOTTOM SHALL NOT BE OBSTRUCTED FOR MORE THAN 20% OF IT'S LENGTH



HANDRAIL EXTENSIONS EXTENSIONS SHALL EXTEND BEYOND AND IN THE SAME DIRECTION OF A STAIR FLIGHT OR RAMP RUN EXCEPT FOR THE INSIDE CONTINUOUS HANDRAIL AT SWITCHBACK STAIRS OR RAMPS HANDRAILS SHALL RETURN TO A WALL, GUARD OR THE LANDING

SURFACE, OR BE CONTINUOUS TO THE HANDRAIL OF AN ADJACENT

STAIR FLIGHT OR RAMP RUN. AT THE BOTTOM OF A STAIR FLIGHT THE HANDRAIL SHALL EXTEND AT THE SLOPE OF THE STAIR FLIGHT FOR A HORIZONTAL DISTANCE EQUAL TO ONE TREAD DEPTH BEYOND THE BOTTOM TREAD NOSING



HANDRAILS



HANDRAIL EXTENSIONS AT STAIRS

GENERAL SITE & BLDG. ELEMENTS CHAPTER 5

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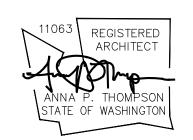
Timberlane **Partners**

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Sheet No.:



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Bradley Heights Apartments

Puyallup,

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No. Date Description

IBC SECTION 202 DEFINITIONS

BASEMENT. A STORY THAT IS NOT A STORY ABOVE GRADE PLANE (SEE "STORY ABOVE GRADE PLANE"). THIS DEFINITION OF "BASEMENT" DOES NOT APPLY TO THE PROVISIONS OF SECTION 1612 FOR FLOOD LOADS.

STORY ABOVE GRADE PLANE. ANY STORY HAVING ITS FINISHED FLOOR SURFACE ENTIRELY ABOVE GRADE PLANE, OR IN WHICH THE FINISHED SURFACE OF THE FLOOR NEXT ABOVE IS:

- 1. MORE THAN 6 FEET (1829 MM) ABOVE GRADE PLANE; OR
- MORE THAN 12 FEET (3658 MM) ABOVE THE FINISHED GROUND LEVEL AT ANY POINT

GRADE PLANE. A REFERENCE PLANE REPRESENTING THE AVERAGE OF FINISHED GROUND LEVEL ADJOINING THE BUILDING AT EXTERIOR WALLS. WHERE THE FINISHED GROUND LEVEL SLOPES AWAY FROM THE EXTERIOR WALLS, THE REFERENCE PLANE SHALL BE ESTABLISHED BY THE LOWEST POINTS WITHIN THE AREA BETWEEN THE BUILDING AND THE LOT LINE OR, WHERE THE LOT LINE IS MORE THAN 6 FEET (1829 MM) FROM THE BUILDING, BETWEEN THE BUILDING AND A POINT 6 FEET (1829 MM) FROM THE BUILDING.

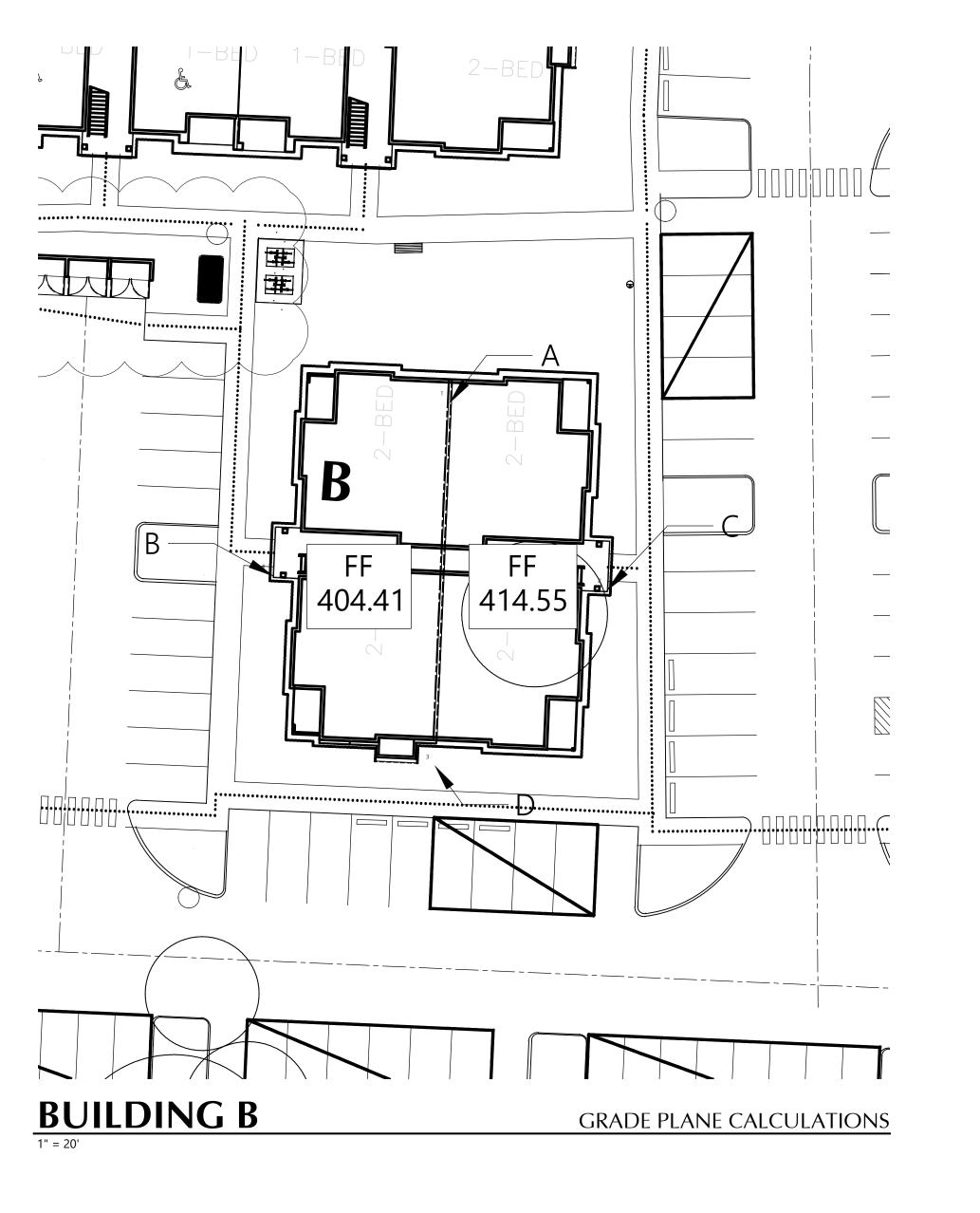
BUILDING B

AVERAGE GRADE ELEVATION AT EACH EXTERIOR WALL:

POINT A = 408.99 POINT B = 403.83 POINT C = 413.97 POINT D = 411.55 1638.34/4 = 409.60 AEG

FIRST FLOOR (FLOOR NEXT ABOVE GRADE PLANE) IS LESS THAN 6-FEET (ACTUAL 3.2 FEET) BELOW FIRST FLOOR FINISHED FLOOR ELEVATION OF 414.55.

BUILDING A QUALIFIES AS 3-STORY OVER BASEMENT



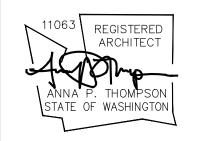
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Building B

Bradley Heights Apartments

> Puyallup, Wa

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B3

15 POUNDS TO OPEN DOOR TO FULL 90° FORCE MEASURED AT LATCH SIDE OF DOOR. THE DOOR CLOSER ON THE ENTRY DOOR

30 POUNDS TO SET DOOR IN MOTION

ACCESSIBILITY NOTES:

MEET THE ACCESSIBILITY REQUIREMENTS OF

'TYPE B' ACCESSIBLE UNITS AS REQUIRED

BY CHAPTER 11 OF THE 2018 IBC.

ACCESSIBILITY REQUIREMENTS.

WINDOWS).

ALL GROUND FLOOR UNITS IN THIS PROJECT MUST

INCLUDED IN THE ABOVE GROUND FLOOR UNITS

REQUIREMENTS OF 'TYPE A' ACCESSIBLE UNITS

AS REQUIRED BY CHAPTER 11 OF THE 2018 IBC.

LIGHTING CONTROLS, ELECTRICAL SWITCHES,

FOR DOORS AND WINDOWS, AND PLUMBING

FIXTURE CONTROLS SHALL BE OPERABLE WITH

GRASPING, PINCHING OR TWISTING OF THE WRIST

HARDWARE, SUCH ITEMS SHALL BE 15" MINIMUM

AND 44" MAXIMUM ABOVE THE FLOOR (48" FOR

ONE HAND AND SHALL NOT REQUIRE TIGHT

TO OPERATE. EXCEPT FOR OPERABLE DOOR

5% OF ALL UNITS NEED TO MEET THE ACCESSIBILITY

SEE BUILDING PLANS FOR LOCATION OF 'TYPE A' UNITS

SEE SHEET U9 FOR SPECIFIC ADAPTABILITY STANDARD

ENVIRONMENTAL CONTROLS, OPERATING HARDWARE

FOR BOTH 'TYPE A' AND 'TYPE B' ACCESSIBLE UNITS.

SEE INTERIOR ELEVATION SHEETS FOR ADDITIONAL

THE FORCE REQUIRED TO ACTIVATE ALL OTHER OPERABLE ITEMS LISTED ABOVE SHALL BE

*BIFOLD DOOR HARDWARE AT LAUNDRY TO BE

'FULL ACCESS HARDWARE'. THE 30"x48" CLEAR FLOOR

ON THE FLOOR PLAN.

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Apartments

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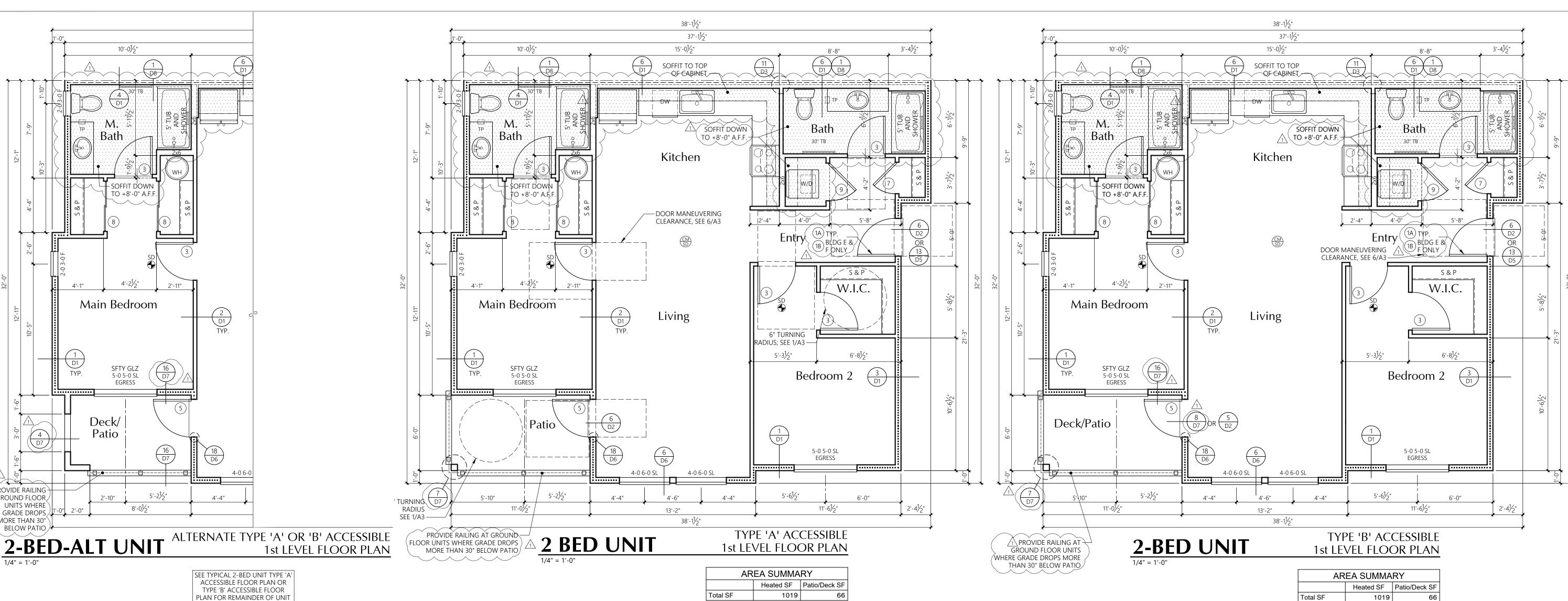
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Sheet No.:



______ Unit Plan Notes state that no plumbing shall be located in the 1" air gap. See plumbing plans

(Construction Set, Sheet U4-U5, Unit Plan Notes)

plumbing multiple penetrations are being made

within the 1" air gap. Coordinate drawings for

consistency and ease of construction.

Unit Plan Notes identify that R-13 insulation will be provided on 1 side U.N.O., but detail 4/D1states to insulate both sides U.N.O. Please clarify if the wall will be insulated on both sides or one side only.

(Construction Set, Sheet U4-U5, Unit Plan Notes)

2x6'S AT EXTERIOR WALLS FRAMING: 2x4'S AT INTERIOR WALLS

---- R-13 BATT INSULATION

3½" ACOUSTICAL INSULATION ONE SIDE OF PARTYWALL, U.N.O. LOCATION OF SOFFIT FOR VENT

SMOKE DETECTOR

CONCEALED SPACES SHALL BE FIRESTOPPED IN BOTH

DIRECTIONS AT 10'-0" ON CENTER AND AT FLOORS. TYPICAL.

FEET. THE MINIMUM CLEAR OPENING HEIGHT DIMENSION

THAN 44 INCHES MEASURED FROM THE FLOOR.

WITHIN 36 INCHES OF THE FINISHED FLOOR.

DIAMETER SPHERE WHERE SUCH OPENINGS ARE LOCATED

24" ARC OF EITHER VERTICAL EDGE SHALL BE SAFETY TYPE.

PROVIDE WATER RESISTANT GYPSUM WALLBOARD BEHIND TUB AND SHOWER ENCLOSURE MATERIALS TO A HEIGHT OF 70" MINIMUM ABOVE THE DRAIN INLET. NO PLUMBING SHALL BE LOCATED IN THE 1" AIR SPACE OF FIRE

PARTITIONS OR FIRE WALLS. ALL BEDROOM AND BATHROOM DOORS SHALL BE UNDERCUT

A MINIMUM OF 1/2" ABOVE THE ADJACENT FLOOR COVERING. THE FRONT DOOR SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR

EFFORT. IT MAY BE PROVIDED WITH A NIGHT LATCH, DEAD BOLT OR SECURITY CHAIN, PROVIDED SUCH DEVICES ARE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR TOOL, AND MOUNTED NOT TO EXCEED 48" ABOVE THE FINISHED FLOOR.

GYPSUM WALLBOARD SCHEDULE EXCEPT WHERE NOTED OTHERWISE, 5/8" TYPE 'X' GYPSUM WALLBOARD SHALL BE USED THROUGHOUT; ON INTERIOR NON-RATED WALLS, EXTERIOR WALLS, CORRIDOR WALLS, AND 1-HOUR AND 2-HOUR FIRE-RATED

STANDARD PLATE HEIGHT: 9'-1"

SEE ELEVATION SHEETS FOR

WINDOW HDR IS 8'-0" UNLESS NOTED OTHERWISE

AND ACCESSIBILITY REQUIREMENTS.

UNIT PLAN NOTES

UNLESS NOTED OTHERWISE. R-21 BATT INSULATION U.N.O.

ALL ESCAPE OR RESCUE WINDOWS FROM SLEEPING ROOMS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE SHALL BE 24". MINIMUM CLEAR OPENING WIDTH DIMENSION SHALL BE 20". EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE THE BOTTOM OF CLEAR OPENING NOT GREATER

WHERE THE OPENING OF THE SILL PORTION OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72 INCHES ABOVE THE FINISHED GRADE OR OTHER SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE AT A HEIGHT NOT LESS THAN 36 INCHES ABOVE THE FINISHED FLOOR SURFACE OF THE ROOM IN WHICH THE WINDOW IS LOCATED. OPERABLE SECTIONS OF WINDOWS SHALL NOT PERMIT OPENINGS THAT ALLOW PASSAGE OF A 4 INCH

ALL GLAZING SHALL CONFORM TO THE 2018 IBC, CHAPTER 24, SEC. 2406, SAFETY GLAZING. GLAZING IN ALL DOORS SHALL BE SAFETY TYPE AND ALL GLAZING WITHIN A

PROVIDE %" TYPE 'X' (MIN.) GYPSUM SHEATHING ON WALLS BEHIND TUB/SHOWERS TO SATISFY FIRE REQUIREMENTS AT PARTYWALL CONDITION. PROVIDE $^3\!4$ " PLYWOOD UNDER TUB IN PLACE OF THE GYPCRETE, SEE DETAIL 14/D1

RUNS. SOFFIT HEIGHT +8'-0" A.F.F. U.N.O. ON PLANS; SEE DETAIL 1/D8

CARBON MONOXIDE/SMOKE DETECTOR

FLOOR TO FLOOR HEIGHTS

SEE SHEET U9 FOR INTERIOR ELEVATIONS `

INSULATION

FOUNDATION PERIMETER - R-10 RIGID INSULATION TO A DEPTH OF 24" OR TO TOP OF FOOTING AT HEATED PERIMETER

Door Key references Sheet U13 update plan or sheet numbers as needed, as there is no Sheet

(Construction Set, Sheet U4-U5, Door Key)

(X) DOOR TAG. SEE SHEET U13 FOR SCHEDULE

DOOR KEY:

FIX = FIXED/PICTURE

SH = SINGLE HUNG

SL = SLIDER

WINDOW KEY:

SGD = SLIDING GLASS DOOR

EXTERIOR WALLS: FIBERGLASS BATTS OR BLANKETS 2x6 WALLS - R21 FLOORS OVER UNHEATED SPACES - R30

EXTENDS OVER THE WALL TOP PLATE AT THE EAVES EXTERIOR DOORS: MAIN ENTRY U=0.20

ALL OTHERS U=0.40

ATTICS AND ROOF ASSEMBLIES - R-49

FULL HEIGHT OF UNCOMPRESSED INSULATION

WINDOWS: MILGARD VINYL MODEL U-VALUE TYPE (VINYL) 6110 ARGON/LoE 0.24 or BETTER SLIDING FIXED 6310 ARGON/LoE 0.24 or BETTER SINGLE HUNG 6210 ARGON/LoE 0.24 or BETTER DBL. SLIDER 8125 ARGON/LoE 0.24 or BETTER

6610 ARGON/LoE 0.24 or BETTER NOTE: ALL CONCEALED OR EXPOSED INSULATION SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450

SHALL BE ADJUSTED TO CLOSE FROM AN OPEN POSITION OF 90° TO AN OPEN POSITION OF 12° IN NOT LESS THAN 5 SECONDS.

OPENING FORCE OF ALL SWINGING INTERIOR DOORS AND THE SLIDING GLASS DOOR SHALL NOT EXCEED 5 POUNDS APPLIED TO THE LATCH SIDE OF THE DOOR.

5 POUNDS.

_____ 30X48 SPACE IS REQUIRED AT EACH FIXTURE OR LOCATION SHOWN

2-BED-ALT UNIT ALT. 'A' OR 'B' ACCESSIBLE RASEAMENT DI ANI

4'-4"

4-0 6-0

PROVIDE RAILING + AT GROUND FLOOR

UNITS WHERE

BELOW PATIO

GRADE DROPS MORE THAN 30"

10'-0¹/₂"

Bath

SOFFIT DOWN

Main Bedroom

SFTY GLZ

5-0 5-0 SL

EGRESS

5'-21/2"

8'-01/2"

Deck/

Patio

\ \ \ \ \ PROVIDE RAILING

AT GROUND FLOOR

UNITS WHERE

MORE THAN 30"

BELOW PATIO

GRADE DROPS

TO +8'-0" A.F.F.

SEE TYPICAL 2-BED UNIT TYPE 'A" ACCESSIBLE FLOOR PLAN OR TYPE 'B' ACCESSIBLE FLOOR PLAN FOR REMAINDER OF UNIT



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TO A DEPTH OF 24" OR TO TOP OF FOOTING AT EXTERIOR WALLS: FIBERGLASS BATTS OR BLANKETS

2x6 WALLS - R21 FULL HEIGHT OF UNCOMPRESSED INSULATION

THE EAVES EXTERIOR DOORS: MAIN ENTRY U=0.20 ALL OTHERS U=0.40

WINDOWS: MILGARD VINYL TYPE (VINYL) MODEL U-VALUE 6110 ARGON/LoE 0.24 or BETTER SLIDING 6310 ARGON/LoE 0.24 or BETTER SINGLE HUNG 6210 ARGON/LoE 0.24 or BETTER

6610 ARGON/LoE 0.24 or BETTER INDEX OF NOT MORE THAN 450

DBL. SLIDER 8125 ARGON/LoE 0.24 or BETTER

38'-1¹/5" 37'-1¹/₅" 10'-01/5" 15'-01/2" 3'-4½" SOFFIT TO TOP OF CABINET — ______ Kitchen ------4'-0" CM SD BLDG E & W.I.C. Main Bedroom Living SFTY GLZ 5-0 5-0 SL Bedroom 2 **EGRESS** Deck AREA OF VAULTED 5-0 5-0 SL CEILING **EGRESS** 4-0 6-0 SL 4-0 6-0 SL 11'-6¹/5" 13'-2" 38'-1¹/5"

2-BED UNIT

Review and clarify instances where header

height will change as the header height is

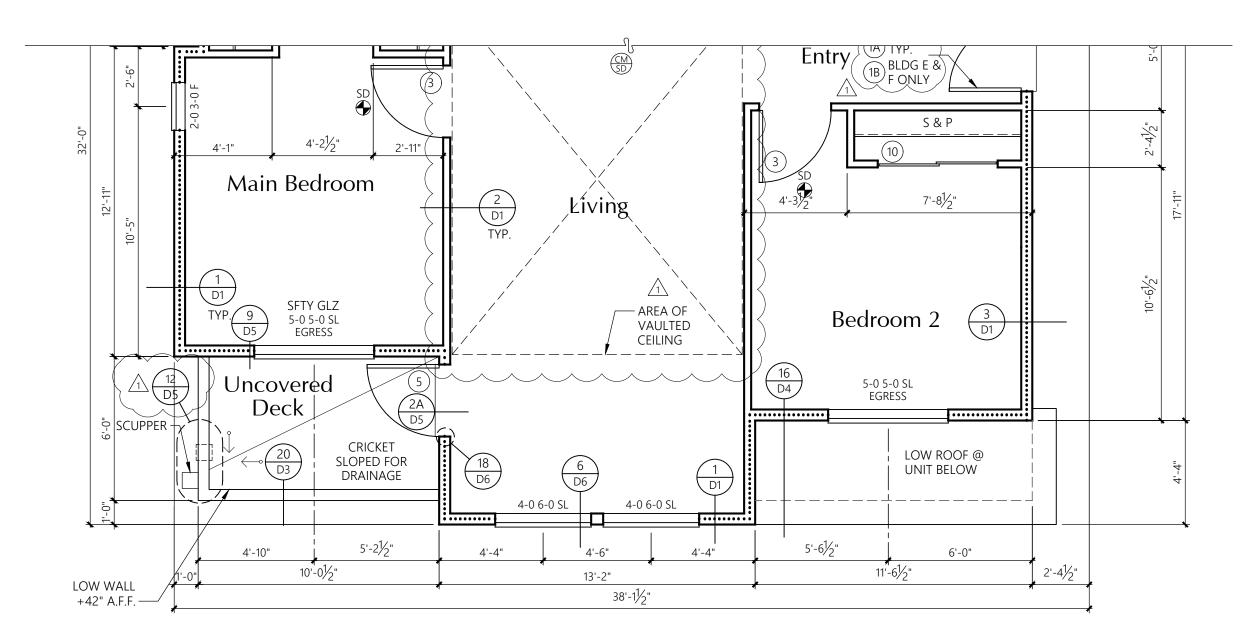
called out as 8' U.N.O. in Unit Plan Notes.

(Construction Set, Sheet U1-U5.1, Unit Plan

Example 2 Bed Unit on Sheet U4 has a furred down ceiling. Review other units for additional instances and adjust if necessary.

> NON-ACCESSIBLE 3rd LEVEL FLOOR PLAN

AREA SUMMARY Heated SF | Patio/Deck SF | Total SF 1019



2-BED-ALT UNIT

ALTERNATE 3rd LEVEL FLOOR PLAN

AR	EA SUMMA	RY						
	Heated SF	Patio/Deck SF						
Total SF 980 60								
* Side of exterior walls to which area was measured								



NON-ACCESSIBLE 2nd LEVEL FLOOR PLAN

AREA SUMMARY											
	Heated SF	Patio/Deck SF									
Total SF	1019	66									

UNIT PLAN NOTES

TO +8'-0" A.F.F

Main Bedroom

SFTY GLZ 5-0 5-0 SL EGRESS

Deck

(16A)

2x6'S AT EXTERIOR WALLS FRAMING: 2x4'S AT INTERIOR WALLS UNLESS NOTED OTHERWISE.

R-21 BATT INSULATION U.N.O. ---- R-13 BATT INSULATION 3½" ACOUSTICAL INSULATION ONE SIDE OF PARTYWALL, U.N.O.

LOCATION OF SOFFIT FOR VENT RUNS. SOFFIT HEIGHT +8'-0" A.F.F. U.N.O. ON PLANS; SEE DETAIL 1/D8

SMOKE DETECTOR

CONCEALED SPACES SHALL BE FIRESTOPPED IN BOTH DIRECTIONS AT 10'-0" ON CENTER AND AT FLOORS. TYPICAL.

CARBON MONOXIDE/SMOKE DETECTOR

ALL ESCAPE OR RESCUE WINDOWS FROM SLEEPING ROOMS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET. THE MINIMUM CLEAR OPENING HEIGHT DIMENSION SHALL BE 24". MINIMUM CLEAR OPENING WIDTH DIMENSION SHALL BE 20". EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE THE BOTTOM OF CLEAR OPENING NOT GREATER THAN 44 INCHES MEASURED FROM THE FLOOR.

WHERE THE OPENING OF THE SILL PORTION OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72 INCHES ABOVE THE FINISHED GRADE OR OTHER SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE AT A HEIGHT NOT LESS THAN 36 INCHES ABOVE THE FINISHED FLOOR SURFACE OF THE ROOM IN WHICH THE WINDOW IS LOCATED. OPERABLE SECTIONS OF WINDOWS SHALL NOT PERMIT OPENINGS THAT ALLOW PASSAGE OF A 4 INCH DIAMETER SPHERE WHERE SUCH OPENINGS ARE LOCATED WITHIN 36 INCHES OF THE FINISHED FLOOR.

ALL GLAZING SHALL CONFORM TO THE 2018 IBC, CHAPTER 24, SEC. 2406, SAFETY GLAZING. GLAZING IN ALL DOORS SHALL BE SAFETY TYPE AND ALL GLAZING WITHIN A 24" ARC OF EITHER VERTICAL EDGE SHALL BE SAFETY TYPE.

PROVIDE % " Type 'X' (MIN.) Gypsum sheathing on walls behind tub/showers to satisfy fire requirements at PARTYWALL CONDITION. PROVIDE $\frac{3}{4}$ " PLYWOOD UNDER TUB IN PLACE OF THE GYPCRETE, SEE DETAIL 14/D1 PROVIDE WATER RESISTANT GYPSUM WALLBOARD BEHIND TUB AND SHOWER ENCLOSURE MATERIALS TO A HEIGHT OF 70" MINIMUM ABOVE THE DRAIN INLET.

38'-11/5"

15'-01/2"

SOFFIT TO TOP

Kitchen

CM SD

Living

37'-1¹/5"

OF CABINET

SOFFIT DOWN $\stackrel{/1}{\sim}$ TO +8'-0" A.F.F. -

Entry/

BLDG E & FONLY

Bedroom 2

5-0 5-0 SL

11'-6¹/5"

EGRESS

W.I.C

6'-81/5"

6'-0"

NO PLUMBING SHALL BE LOCATED IN THE 1" AIR SPACE OF FIRE PARTITIONS OR FIRE WALLS.

ALL BEDROOM AND BATHROOM DOORS SHALL BE UNDERCUT A MINIMUM OF 1/2" ABOVE THE ADJACENT FLOOR COVERING.

4-0 6-0 SL

4-0 6-0 SL

13'-2"

38'-11/5"

THE FRONT DOOR SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. IT MAY BE PROVIDED WITH A NIGHT LATCH, DEAD BOLT OR SECURITY CHAIN, PROVIDED SUCH DEVICES ARE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR TOOL, AND MOUNTED NOT TO EXCEED 48" ABOVE THE FINISHED FLOOR.

GYPSUM WALLBOARD SCHEDULE CEPT WHERE NOTED OTHERWISE, 5/8" TYPE 'X' GYPSUM WALLBOARD SHALL BE USED THROUGHOUT; ON INTERIOR NON-RATED WALLS, EXTERIOR WALLS, CORRIDOR WALLS, AND 1-HOUR AND 2-HOUR FIRE-RATED

STANDARD PLATE HEIGHT: 9'-1" SEE ELEVATION SHEETS FOR FLOOR TO FLOOR HEIGHTS

WINDOW HDR IS 8'-0" UNLESS NOTED OTHERWISE

SEĚ SHĚET UŠ FOR INTEŘIOR ELEVĂTIONS AND ACCESSIBILITY REQUIREMENTS.

DOOR KEY: X DOOR TAG. SEE SHEET U13 FOR SCHEDULE

WINDOW KEY: FIX = FIXED/PICTURE SL = SLIDERSH = SINGLE HUNG SGD = SLIDING GLASS DOOR

INSULATION

FOUNDATION PERIMETER - R-10 RIGID INSULATION HEATED PERIMETER

FLOORS OVER UNHEATED SPACES - R30 ATTICS AND ROOF ASSEMBLIES - R-49 EXTENDS OVER THE WALL TOP PLATE AT

NOTE: ALL CONCEALED OR EXPOSED INSULATION SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED

Initial Publish Date: Date Plotted: 12-20-24

Job No.: Drawn By: 23-06 APT/HDM/TMK Sheet No.:

U5



*SEE SHEET U11

ACCESSIBILITY

STANDARDS

TYPE 'A' & 'B' & NON-ACCESSIBLE

SECONDARY BATHROOM PLAN

SECONDARY

2-BED & 2-BED-ALT

Initial Publish Date: Date Plotted: 12-20-24 Job No.: Drawn By: 23-06 APT/HDM/TMK Sheet No.: U9

DD 30x48 CLEAR FLOOR SPACE AT DISHWASHER.

(EE) 30x48 CLEAR FLOOR SPACE AT REFRIGERATOR.

(GG) 30x48 CLEAR FLOOR SPACE AT WASHER/DRYER

DD 30x48 CLEAR FLOOR SPACE AT DISHWASHER.

(EE) 30x48 CLEAR FLOOR SPACE AT REFRIGERATOR.

(FF) 30x48 CLEAR FLOOR SPACE AT WORK SURFACE.

GG 30x48 CLEAR FLOOR SPACE AT WASHER/DRYER

Puyallup,

Revisions

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11063 REGISTERER ARCHITEC

7

Bradley Heights Apartments

Puyallup,

Timberlane **Partners**

Revisions

No. Date Description 1 8-30-24 Owner Changes/ Permit Corrections

Initial Publish Date: Date Plotted:

12-20-24 Job No.: Drawn By: 23-06 APT/HDM/TMK Sheet No.:

CHAPTER 10 SECTION 1004

ALIGNED WITH NOTE: OPERABLE CONTROLS FOR ALL APPLIANCES EDGE OF TUB OF STORAGE AREA FIXTURES PROVIDED INCLUDING THOSE NOT DEPICTED OR SHOWER — HALL BE INSTALLED WITHIN | HERE (INCLUDING LINT SCREENS, DETERGENT ACCESSIBLE REACH RANGES. COMPARTMENTS, WATER/ICE DISPENSERS, RANGE MOUNTED ON WALL OR SANS SERIF -(15" MIN. - 48" MAX.) EXHAUST FANS ETC.) MUST BE WITHIN REACH TO 2" IN HEIGH RANGES PER ICC A117.1 SECTION 308. CONDITIONS ALLOW. MAX 9" LOCATION OF CONTROLS SHALL NOT TOP OF SHELF FROM EDGE OF TOILET require reaching across burners – OR TOWFI BAR BRAILLE TO BE FROM EDGE WHERE PROVIDED ALL UNITS SELECT LOCATIONS 'ALL OTHER **ALL UNITS** ALL OTHER UNITS TYPE A UNITS ALL UNITS WHERE PROVIDED ALL UNITS LAUNDRY RANGES & COOKTOPS REFRIGERATOR IN TYPE A UNITS LOCATIONS **TOILET PAPER ELECTRICAL CONTROLS** STORAGE TYPE A UNITS ONLY WALL FIXTURES **SHOWER ENTRY DOOR** TACTILE SIGNS SWITCHES, AND OUTLETS SHELVES COAT & BEDROOM CLOSETS DISPENSER IN BATHROOMS CURTAIN PEEPHOLES AT DOORS APPLIANCES & CONTROLS . ACCESSORY & FIXTURE MOUNTING HEIGHTS

CONNECTED TO THE WIRING OF THE PREMISES ELECTRIC SYSTEM, AND BE REQUIRED MANEUVERING CLEARANCE, DOOR MANEUVERING CLEARANCES PERMANENTLY INSTALLED. VISIBLE NOTIFICATION APPLIANCES

THE ACCESSIBLE LEVEL OF THE DWELLING UNIT.

IN GROUP R-2 OCCUPANCIES REQUIRED TO HAVE A FIRE ALARM SYSTEM, EACH STORY THAT CONTAINS DWELLING UNITS & SLEEPING UNITS SHALL BE PROVIDED WITH THE CAPABILITY TO SUPPORT VISIBLE ALARM NOTIFICATION APPLIANCES. Such capability shall accommodate wired or wireless equipment. The

FUTURE CAPABILITY SHALL INCLUDE ONE OF THE FOLLOWING:

The interconnection of the building fire alarm system with the unit smoke alarms. Replacement of audible appliances with combination audible/visible appliances. The future extension of the existing wiring from the unit smoke alarm location to required locations for visible appliances.

WASHING MACHINES AND CLOTHES DRYERS SHALL COMPLY WITH SECTION 611.

AT LEAST ONE TOILET AND BATHING FACILITY SHALL CONTAIN: ONE LAVATORY, ONE WATER CLOSET AND EITHER A BATHTUB OR SHOWER WITHIN THE UNIT

THAT MEETS THE REQUIREMENTS DETAILED FOR TYPE A FIXTURES (See details

23 thru 28 ACC sheets). THE ACCESSIBLE TOILET AND BATHING FIXTURES SHALL

BE IN A SINGLE TOILET/BATHING AREA SUCH THAT TRAVEL BETWEEN FIXTURES

ALL TOILET & BATHING FACILITIES WITHIN A TYPE A UNIT SHALL PROVIDE

REINFORCEMENT FOR THE **FUTURE INSTALLATION** OF GRAB BARS AT WATER

CLOSETS, BATHTUBS AND SHOWER SEATS. REINFORCEMENT IS NOT REQUIRED

IN A ROOM CONTAINING ONLY A LAVATORY AND A WATER CLOSET, PROVIDED

THE ROOM DOES NOT CONTAIN THE ONLY LAVATORY OR WATER CLOSET ON

ACCESSIBLE AUDIBLE AND VISIBLE ALARMS AND NOTIFICATION APPLIANCES

SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72 LISTED IN SECTION 105.2.2, BE POWERED BY A COMMERCIAL LIGHT AND POWER SOUCE, BE PERMANENTLY

DOES NOT REQUIRE TRAVEL THROUGH OTHER PARTS OF THE UNIT

(See detail 20 ACC sheets)

VISIBLE NOTIFICATION APPLIANCES, WHERE PROVIDED AS PART OF THE UNIT SMOKE DETECTION SYSTEM OR BUILDING FIRE ALARM SYSTEM, SHALL BE ACTIVATED UPON SMOKE DETECTION OR WITH ACTIVATION OF THE BUILDING FIRE ALARM. THE SAME VISIBLE NOTIFICATION APPLIANCE CAN BE USED FOR BOTH SMOKE DETECTION AND FIRE ALARM ACTIVATION, BUT SHALL NOT BE USED FOR ANY OTHER PURPOSE WITHIN THE UNIT.

UNIT PRIMARY ENTRANCE

THE ACCESSIBLE PRIMARY ENTRANCE SHALL BE ON AN ACCESSIBLE ROUTE FROM PUBLIC AND COMMON AREAS.

COMMUNICATION FEATURES SHALL BE PROVIDED AT THE UNIT PRIMARY INTRANCE. A HARD-WIRED ELECTRIC DOORBELL SHALL BE PROVIDED. A BUTTON OR SWITCH SHALL BE PROVIDED ON THE PUBLIC SIDE OF THE UNIT PRIMARY FNTRANCE WHERE A SYSTEM PERMITTING VOICE COMMUNICATION BETWEEN A VISITOR AND THE OCCUPANT OF THE UNIT IS PROVIDED AT A LOCATION OTHER THAN THE UNIT ENTRY DOOR, THE SYSTEM SHALL INCLUDE THE CAPABILITY OF SUPPORTING VOICE AND TTY COMMUNICATION WITH THE UNIT INTERFACE. A MEANS FOR VISUALLY IDENTIFYING A VISITOR WITHOUT OPENING THE UNIT ENTRY DOOR SHALL BE PROVIDED. PEEPHOLES, WHERE USED SHALL PROVIDE A MINIMUM 180-DEGREE RANGE OF VIEW. PEEPHOLES SHALL BE PLACED AT A

Reset buttons & shut-offs serving appliances, piping & plumbing fixtures. 8. Electrical panelboards shall not be required to comply with Section 309.4. ONLY WINDOWS REQUIRED TO BE OPERABLE FOR NATURAL VENTILATION OR TO PROVIDE AN EMERGENCY ESCAPE AND RESCUE OPENING NEED TO HAVE OPERABLE PARTS COMPLYING WITH SECTION 309. (See detail 4 ACC sheets)

IN GROUP R-2 OCCUPANCIES CONTAINING MORE THAN 10 DWELLING UNITS OR SLEEPING UNITS AT LEAST 5% BUT NOT LESS THAN ONE OF THE UNITS

TYPE A UNITS. EXISTING STRUCTURES ON A SITE SHALL NOT CONTRIBUTE TO THE TOTAL NUMBER OF UNITS ON A SITE. TYPE A UNITS SHALL BE

HALL BE A TYPE A UNIT. ALL UNITS ON THE SITE SHALL BE CONSIDERED TO DETERMINE THE TOTAL NUMBER OF UNITS AND THE REQUIRED NUMBER OF

DISPERSED AMONG THE VARIOUS CLASSES OF UNITS. THE NUMBER OF TYPE A UNITS IS PERMITTED TO BE REDUCED IN ACCORDANCE WITH CONDITIONS

LAUNDRY EQUIPMENT

TOILET AND BATHING FACILITIES

NUMBER OF TYPE A UNITS

ACCESSIBLE ROUTE

DEFINED IN SECTION 1107.7 OF THE IBC.

CIRCULATION PATH. (See detail 5 ACC sheets)

TURNING SPACE & CLEAR FLOOR SPACE

NOT NEED TO HAVE A TURNING SPACE

DOORS AND DOORWAYS

OUTSIDE OF THE DOOR.

ARC OF THE DOOR SWING.

3. Floor receptacle outlets.

Controls mounted on ceiling fans.

4. HVAC diffusers.

ı MIN.

30x48 CLEAR

| FLOOR SPACE

OPERABLE PARTS

EXCEPTIONS:

WINDOWS

AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ALL SPACES AND

ELEMENTS THAT ARE PART OF THE UNIT. ACCESSIBLE ROUTES SHALL

COINCIDE WITH OR BE LOCATED IN THE SAME AREA AS THE GENERAL

SPACE EXCEPT FOR BATHROOMS THAT ARE NOT REQUIRED TO MEET

ALL ROOMS SERVED BY AN ACCESSIBLE ROUTE SHALL PROVIDE A TURNING

ACCESSIBILITY STANDARDS, OR CLOSETS OR PANTRIES THAT ARE 48" MAX

(See detail 1 ACC sheets)

THE PRIMARY ENTRANCE DOOR AND ALL DOORS INTENDED FOR USER PASSAGE, SHALL COMPLY WITH SECTION 404. (See detail 6 ACC sheets)

BALCONY DOORS: THRESHOLDS AT EXTERIOR SLIDING DOORS SHALL BE

PERMITTED TO BE 3/4" MAX. IN HEIGHT PROVIDED THEY ARE BEVELED WITH

WHERE EXTERIOR SPACE DIMENSIONS OF BALCONIES ARE LESS THAN THE

BATHROOM DOORS: BATHROOMS NOT REQUIRED TO BE ACCESSIBLE

BATHROOM DOORS MAY SWING INTO THE BATHROOM AND INTO THE

REQUIRED CLEAR FLOOR SPACE AT ANY FIXTURE WHEN A CLEAR FLOOR

SPACE OF AT LEAST 30"x48" IS PROVIDED WITHIN THE ROOM BEYOND THE

LIGHTING CONTROLS, ELECTRICAL PANELBOARDS, ELECTRICAL SWITCHES &

CONTROLS, OPERATING HARDWARE FOR OPERABLE WINDOWS, PLUMBING

2. Where two or more receptacle outlets are provided in a kitchen above a

6. Where redundant controls other than light switches are provided for a

single element, one control shall not be required to be accessible.

counter top that is uninterrupted by a sink or appliance, one receptacle

FIXTURE CONTROLS, AND USER CONTROLS FOR SECURITY OR INTERCOM

SYSTEMS SHALL COMPLY WITH SECTION 309. (See detail 4 ACC sheets)

RECEPTACLE OUTLETS, ENVIRONMENTAL CONTROLS, APPLIANCE

outlet shall not be required to comply with Section 309.

. Receptacle outlets serving a dedicated use.

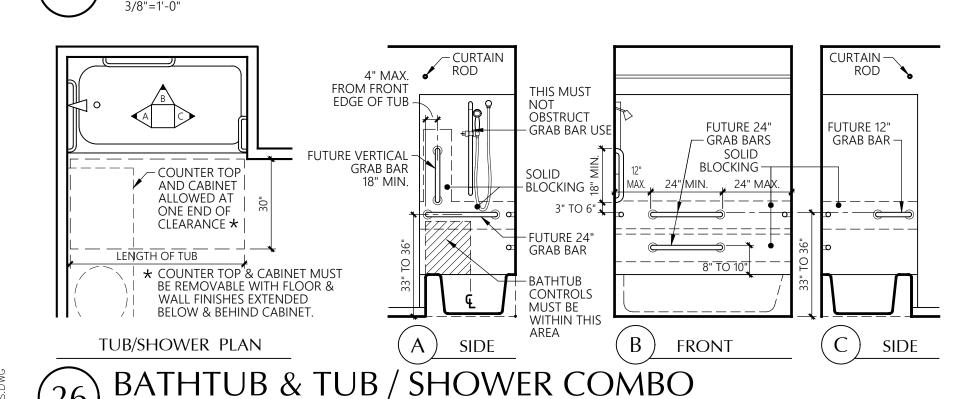
ONLY NEED TO PROVIDE DOOR MANEUVERING CLEARANCE ON THE

ARE NOT REQUIRED ON THE EXTERIOR SIDE OF THE DOOR.

NOTE: BALCONIES AND CORRIDORS ARE NOT ROOMS AND AS SUCH DO

STANDARD HEIGHT FOR BOTH STANDING PERSONS AND WHEELCHAIR USERS. GENERAL TYPE A UNIT NOTES MIRROR TOP OF COUNTER OR RIM OF FAUCET CONTROLS SHALL MEET THE - SINK WHICHEVER IS HIGHER REQUIREMENTS FOR OPERABLE PARTS. ★ CABINETRY PERMITTED UNDER COUNTER OR INSTALL BRACE THE LAVATORY PROVIDED IT IS WITHIN CARINFT - CANNOT | removable without need for INTERFERE W/ CABINET REMOVA THE LAVATORY. FLOOR FINISH PROVIDE KNEE & SHALL EXTEND UNDERNEATH TOE CLEARANCE AND THE WALLS BEHIND AND

— (See detail 2 ACC sheets) SURROUNDING THE CABINETRY FORWARD APPROACH SHALL BE FINISHED. -FINISHED END PANEL PLAN **FRONT NOTE:** ALL DIMENSIONS ARE MEASURED TO FACE OF FINISHED SURFACE REINFORCEMENT FOR FUTURE 36" GRAB ——— 54" MIN. A LAVATORY COMPLYING WITH WHERE REAR GRAR -BAR WOULD OVERLAP PERMITTED WITHIN L 42" GRAB BAR WITH A LAVATORY BLOCKING WATER CLOSET —— REINFORCEMENT FOR CLEAR FLOOR SPACE A 24" GRAB BAR BLOCKING FOR -CENTERED ON THE IF THE CLEAR FLOOR **FUTURE GRAB** OILET IS PERMISSIBLE SPACE IS INCREASED BARS AT SIDE TO 66" IN DEPTH AND REAR WALLS CONTROL ON **OPEN SIDE** AT WATER CLOSET PLAN B) SIDE **FRONT**



CONTROLS AND CURTAIN → 4" MAX. FROM SHOWER MUST B HAND SHOWER ROD FRONT FDGE MUST BE WITHIN OF SHOWER THIS AREA - VERTICAL PROVIDE GRAE GRAB BAI BAR ALONG 18" MIN. CONTROL WALL PROVIDE BLOCKING AS NECESSARY FOR ALL GRAB BARS SIDE (D) BACK WALL B) BACK WALL C) WALL STANDARD LAYOUT ALTERNATE LAYOUT OPTIONS TRANSFER SHOWER **ROLL-IN SHOWER CONTROL WALL OPTIONS** CONTROL WALL **ALIGN GRAB BAR END WITH** 6"MAX. BACK WALL FEDGE OF SEAT -BACK WALL 6", MAX 6" MAX. **NOTE**: INSIDE FINISHED DIMENSIONS ARE MEASURED AT THE **CENTER POINTS OF** OPPOSING SIDES OF SHOWER COMPARTMENT FOLD-UP 36" MIN. SEAT **LAVATORY CLEAR FLOOR SPACE** PERMITTED IN ALIGNED WITH CLEAR FLOOR CONTROL WALL ARFA OPPOSIT FOLDING OR FIXED Seat Wall 🛧 SEAT TO BE ★ COUNTER TOP & CABINET MUST BE INSTALLED OPPOSITE REMOVABLE WITH FLOOR & WALL FINISHES CONTROL WALL EXTENDED BELOW & BEHIND CABINET. **STANDARD ALTERNATE** TRANSFER TYPE SHOWER PLAN ROLL-IN TYPE SHOWER PLAN SHOWER COMPARTMENTS

WORK SURFACE

A SINK AT 34" MAX. HEIGHT WITH CLEAR FLOOR SPACE SHALL BE PROVIDED WITH KNEE AND TOE CLEARANCE. NOTE: THE KNEE & TOE CLEARANCE ONLY NEEDS TO APPLY TO ONE BOWL OF A MULTI-BOWL SINK. CABINETRY SHALL BE PERMITTED UNDER THE SINK PROVIDED IT IS

FOR A FORWARD APPROACH (NOT NECESSARILY CENTERED ON THE SINK) REMOVABLE AND THE FLOOR AN WALL FINISH IS EXTENDED UNDER AND BEHIND THE REMOVABLE CABINETS.

APPLIANCES DISHWASHER: A CLEAR FLOOR SPACE SHALL BE POSITIONED ADJACENT TO THE DISHWASHER DOOR SO THAT THE DOOR IN THE OPEN POSITION DOESN'T OBSTRUCT THE CLEAR FLOOR SPACE. COOKTOP: A CLEAR FLOOR SPACE SHALL BE PROVIDED FOR A PARALLEL APPROACH CENTERED ON THE APPLIANCE. THE LOCATION OF CONTROLS SHALL NOT REQUIRE REACHING ACROSS BURNERS. **OVEN:** A CLEAR FLOOR SPACE SHALL BE POSITIONED ADJACENT TO THE OVEN DOOR SUCH THAT THE DOOR IN THE OPEN POSITION DOES NOT OBSTRUCT THE CLEAR FLOOR SPACE. A COUNTERTOP SHALL BE LOCATED ADJACENT TO ONE SIDE OF THE OVEN. THE LOCATION OF CONTROLS SHALL NOT REQUIRE REACHING ACROSS BURNERS. REFRIGERATOR/FREEZER: A CLEAR FLOOR SPACE SHALL BE PROVIDED FOR A PARALLEL APPROACH OFFSET 24" MAX. FROM THE CENTERLINE OF THE APPLIANCE. COMBINATION REFRIGERATORS AND FREEZERS SHALL HAVE AT LEAST 50% OF THE FREEZER COMPARTMENT SHELVES INCLUDING THE BOTTOM OF THE FREEZER 54" MAX. ABOVE THE FLOOR

WHEN THE SHELVES ARE INSTALLED AT THE MAX. HEIGHT POSSIBLE IN THE COMPARTMENT. ADJUSTABLE COUNTERTOP ALTERNATIVE SINK AND COUNTER THAT IS ADJUSTABLE TO VARIABLE HEIGHTS 29" MIN. AND 36"

MAX. OR THAT CAN BE RELOCATED WITHIN THAT RANGE WITHOUT CUTTING THE COUNTER OR DAMAGING ADJACENT CABINETS, WALLS, DOORS AND STRUCTURAL

LINEAR KITCHEN GALLEY KITCHEN U-SHAPED KITCHEN AS AN ALTERNATIVE TO 34" HIGH COUNTERTOPS FOR WORK SURFACE AND SINK, A 📗 ★ NOTE: THE 30" WIDE CLEARANCE FOR FORWARD APPROACH AND KNEE CLEARANCE DOES NOT NEED TO BE CENTERED ON THE SINK. IF IT IS PROVIDED AT ONLY ONE BOWL OF A MULTI-BOWL SINK, ENSURE THE 30" CLEARANCE IS PROVIDED UNDER THE BOWL

AT LEAST ONE SECTION OF COUNTER SHALL PROVIDE A WORK SURFACE

30" MIN. IN LENGTH AND 34" MAX. IN HEIGHT. PROVIDE A CLEAR FLOOR

Cabinetry shall be permitted under the work surface provided it

IS REMOVABLE AND THE FLOOR AN WALL FINISH IS EXTENDED UNDER AND

CLEARANCE BETWEEN OPPOSING BASE CABINETS, COUNTER

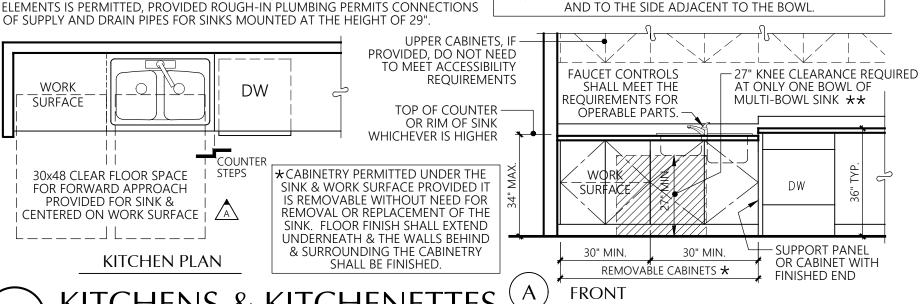
TOPS, APPLIANCES, OR WALLS IN KITCHEN WORK AREAS

HALL BE 40" MIN. OR 60" MIN. AT U-SHAPED KITCHENS

SPACE FOR A FORWARD APPROACH WITH KNEE AND TOE CLEARANCE.

MINIMUM CLEARANCES

BEHIND THE REMOVABLE CABINETS.



TYPE A DWELLING UNITS **CHAPTER 10 SECTION 1003**

YOU ARE PERMITTED TO HAVE ONE OF THE FOLLOWING: A RAISED / SUNKEN FLOOR AREA IN A LIVING, DINING OR SLEEPING ROOM OR A MEZZANINE THAT IS NOT ENCLOSED AND DOES NOT HAVE PLUMBING FIXTURES. CHANGES IN LEVEL

ACCESSIBLE ROUTE

MIN.

30x48 CLEAF

FLOOR SPACE

PARALLEL

APPROACH

LAVATORY

NUMBER OF TYPE B UNITS

UNIT PRIMARY ENTRANCE

ALLOWING REDUCTION OF TYPE B UNITS).

SAME REQUIREMENTS AS FOR TYPE A UNITS EXCEPT

THAT ONLY A SINGLE PEEPHOLE NEED BE PROVIDED

AT A STANDARD HEIGHT FOR STANDING PERSONS.

SAME REOUIREMENTS AS FOR TYPE A UNITS EXCEPT

SAME REQUIREMENTS AS FOR TYPE A UNITS EXCEPT WHERE EXTERIOR DECK, PATIO OR BALCONY SURFACE MATERIALS ARE IMPERVIOUS, TH IMPERVIOUS SURFACE SHALL BE 4" MAX. BELOW THE INTERIOR FLOOR LEVEL.

DOORS INTENDED FOR USER PASSAGE SHALL HAVE A CLEAR OPENING WIDTH OF 313/4" MIN. MEASURED BETWEEN THE FACE OF THE DOOR & THE STOP WITH THE DOOR OPENED 90°.

SAME REQUIREMENTS AS FOR TYPE A UNITS EXCEPT

BATHROOM DOORS: BATHROOM DOORS MAY SWING INTO THE REQUIRED CLEAR FLOOR SPACE AT ANY FIXTURE WHEN A CLEAR FLOOR SPACE OF AT LEAST 30"x48" IS PROVIDED WITHIN THE ROOM BEYOND THE ARC OF THE DOOR SWING.

IN GROUP R-2 OCCUPANCIES WHERE THERE ARE 4 OR MORE DWELLING UNITS OR SLEEPING UNITS INTENDED TO BE OCCUPIED AS A RESIDENCE IN A

UPPER STORIES OF A MULTISTORY BUILDING WITHOUT ELEVATOR SERVICE OR MULTI-STORY DWELLING UNITS (SEE IBC FOR SPECIFIC CONDITIONS

Plumbing fixture controls.

SINGLE STRUCTURE, EVERY DWELLING UNIT AND SLEEPING UNIT SHALL BE A TYPE B UNIT. THE NUMBER OF TYPE B UNITS IS PERMITTED TO BE REDUCED

IN ACCORDANCE WITH CONDITIONS DEFINED IN SECTION 1107.7 OF THE IBC. THIS REDUCTION OF TYPE B UNITS IS TYPICALLY FOR UNITS THAT ARE ON

. Controls or switches mounted on appliances.

SAME REQUIREMENTS AS FOR TYPE A UNITS EXCEPT FOR THESE ADDITIONAL EXCEPTIONS:

10. Within kitchens & bathrooms, lighting controls, electrical switches & receptacle outlets are permitted to be located over cabinets with countertops 36" max. in height & 25½" max. in depth. LAUNDRY EQUIPMENT

A 30"x48" CLEAR FLOOR SPACE SHALL BE PROVIDED. A PARALLEL APPROACH SHALL BE PROVIDED FOR TOP LOADING MACHINES. A FORWARD OR PARALLEL APPROACH SHALL BE PROVIDED FOR

FRONT LOADING MACHINES. **TOILET AND BATHING FACILITIES**

REINFORCEMENT FOR FUTURE GRAB BAR INSTALLATION SHALL BE PROVIDED FOR ALL TOILET & BATHING FACILITIES (Regardless of the option chosen for the fixture clearances). REINFORCEMENT SHALL BE THE SAME AS FOR TYPE A UNITS (See detail 23 ACC sheets) EXCEPT REINFORCEMENT IS NOT REQUIRED FOR SHOWER SEATS IN SHOWERS THAT ARE LARGER THAN 36"x36" AND REINFORCEMENT AT WATER CLOSETS CAN BE MODIFIED FOR ALTERNATE GRAB BAR CONFIGURATIONS DETAILED BELOW.

GRAB BAR ALTERNATIVES WHERE SPACE AT THE REAR WALL DOES NOT PERMIT A 36" GRAB BAR, REINFORCEMENT FOR FUTURE INSTALLMENT OF A 24" GRAB BAR IS PERMITTED CENTERED ON THE TOILET. WHERE SPACE AT THE SIDE WALL DOES NOT PERMIT A 42" GRAB BAR, REINFORCEMENT FOR FUTURE INSTALLMENT OF A 24" GRAB BAR IS PERMITTED SPACED 12" FROM THE REAR. WHERE A SIDE WALL IS NOT AVAILABLE, REINFORCEMENT SHALL BE PROVIDED FOR THE FUTURE INSTALLMENT OF A SWING-UP GRAB BAR AS SHOWN ON THE PLAN AT RIGHT.

24" GRAB BAR — GRAB BAR REINFORCING FOR ALTERNATE GRAB BAR CONFIGURATIONS

GENERAL **type b** unit notes

WITH TOILET AND BATHING AREAS WITHIN TYPE B UNITS EITHER ALL TOILET AND BATHING AREAS PROVIDED SHALL COMPLY WITH OPTION A OR ONE TOILET AND BATHING AREA SHALL COMPLY WITH OPTION B.

EVERY FIXTURE PROVIDED IN ALL TOILET AND BATHING AREAS SHALL COMPLY WITH THE REQUIREMENTS LISTED ONE OF EACH TYPE OF FIXTURE PROVIDED SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS AND BE LOCATED IN A SINGLE OPTION B TOILET/BATHING AREA.



COMMON OPTION A

WATER CLOSE

COMMON OPTION B BATHROOM CONFIGURATION **BATHROOM CONFIGURATION** FORWARD APPROACH WATER CLOSET AND LAVATORY OR OTHER PERMITTED IF REMOVABLE **OBSTRUCTION PERMITTED** LAVATORY PERMITTED CABINET IS PROVIDED AT ONE END OF TUB IN CLEAR FLOOR AREA

BATHTUB

(FRONT APPROACH) OPTION A FIXTURE REQUIREMENTS LAVATORY: SAME REQUIREMENTS AS FOR OPTION A EXCEPT THAT THE HEIGHT OF THE LAVATORY SHALL BE 34" MAX. ABOVE THE FLOOR. WATER CLOSET: SAME REQUIREMENTS AS FOR OPTION A BATHING FIXTURES: THE ACCESSIBLE BATHING FIXTURE SHALL BE A BATHTUB WITH A CLEARANCE OF 30"x48" ALIGNED WITH THE Control end of the tub or a shower compartment with the SAME REQUIREMENTS AS THE OPTION A SHOWER. OPTION B FIXTURE REQUIREMENTS

LAVATORY HEIGHT

BATHTUB

(SIDE APPROACH) BATHTUB

NOTE: NOTHING PERMITTEÏ

WITHIN FIXTURE CLEARANCE

CLEAR FLOOR -

WALL

SHOWER

SPACE ALIGNED

WITH CONTROL

TYPE B - TOILET & BATHING FIXTURES 1/4"=1'-0"

MINIMUM CLEARANCES CLEARANCE BETWEEN ALL OPPOSING BASE CABINETS, COUNTER TOPS, APPLIANCES, OR WALLS WITHIN KITCHEN WORK AREAS SHALL BE 40" MIN. OR 60" MIN. AT U-SHAPED KITCHENS. SEE MINIMUM CLEARANCE DIAGRAMS FOR TYPE A UNITS (Detail 28 ACC sheets).

SINK: A CLEAR FLOOR SPACE OF 30"x48" POSITIONED FOR A PARALLEL APPROACH SHALL BE PROVIDED CENTERED ON THE SINK BOWL. NOTE: ON A MULTI-BOWL SINK THE CLEAR FLOOR SPACE SHALL BE CENTERED ON THE WHOLE SINK PLUMBING FIXTURE **DISHWASHER:** A CLEAR FLOOR SPACE SHALL BE POSITIONED ADJACENT TO

THE DISHWASHER DOOR SUCH THAT THE DOOR IN THE OPEN POSITION DOES NOT OBSTRUCT THE CLEAR FLOOR SPACE. **COOKTOP:** A CLEAR FLOOR SPACE SHALL BE PROVIDED FOR A PARALLEL APPROACH CENTERED ON THE APPLIANCE.

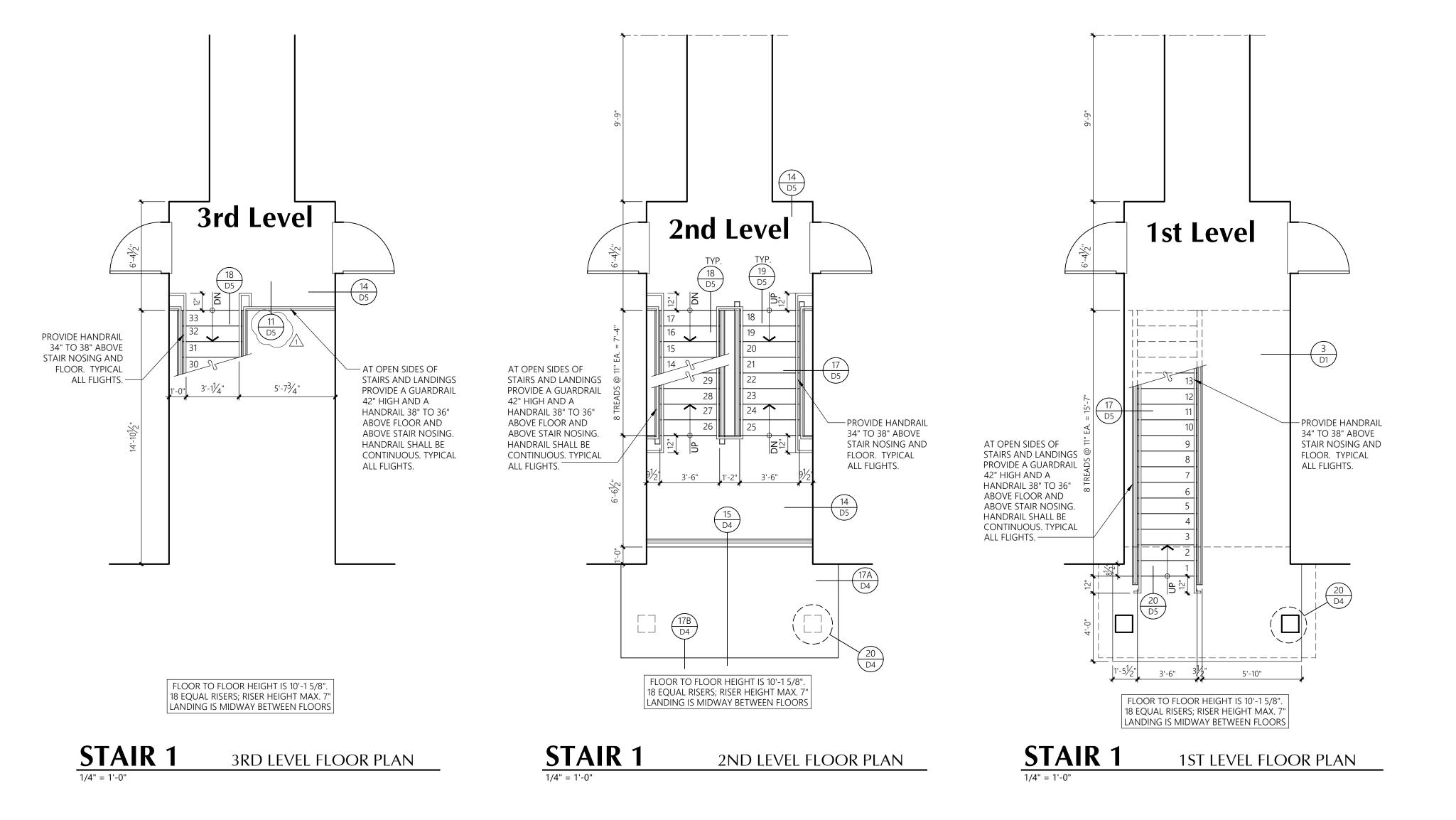
OVEN: A CLEAR FLOOR SPACE SHALL BE POSITIONED ADJACENT TO THE OVEN DOOR SUCH THAT THE DOOR IN THE OPEN POSITION DOES NOT OBSTRUCT THE CLEAR FLOOR SPACE. REFRIGERATOR/FREEZER: A CLEAR FLOOR SPACE SHALL BE PROVIDED FOR A PARALLEL APPROACH OFFSET 24" MAX. FROM THE CENTERLINE OF THE

trash compactor: A clear floor space positioned for a parallel OR FORWARD APPROACH SHALL BE PROVIDED.



TYPE B DWELLING UNITS

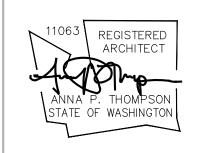
KITCHENS & KITCHENETTES



AILBRANDT ARCHITECTS

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Stalf I

Bradley Heights Apartments

> Puyallup, Wa

Timberlane Partners

Revisions

No. Date Description

8-30-24 Owner Changes/ Permit Corrections

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23-06 APT/HDM/TMK

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Puyallup,

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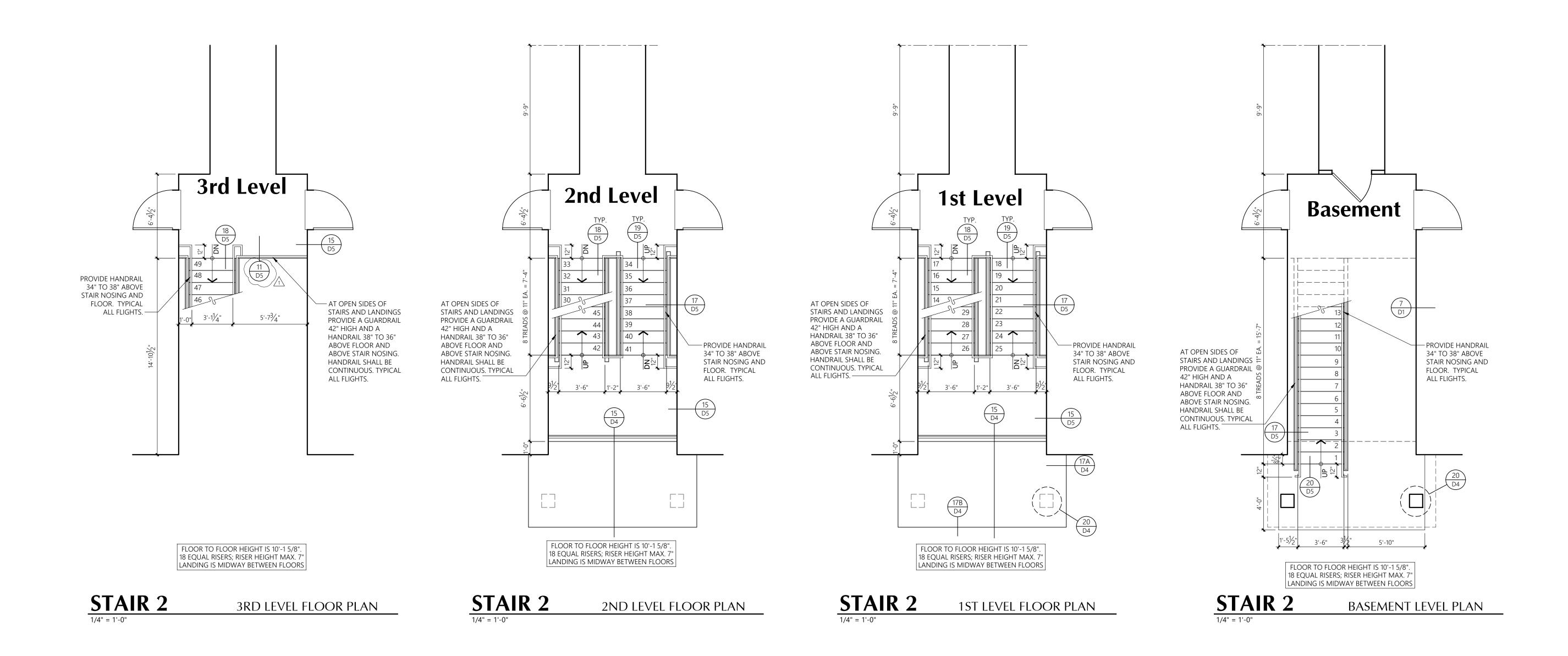
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Door Schedule - Units

Door No.	Туре	Size	Thickness	Construct	Finish	Fire Rating	Frame or Head/Jamb Remarks		Min. U	Max.	
							Construct.	Finish		Factor	SHGC
1A	2-Panel, SW	3'-0" x 8'-0"	1-3/4"	INSUL MTL	PP	20 min.	Wood	PP	Keylock, Dead Bolt w/Thumb, Self Closure/Smoke Seal, Flush Threshold, Weatherstrip, Ext. Grade Door, Peep Sight, Self Closing	0.24	-
1B	2-Panel, SW	3'-0" x 8'-0"	1-3/4"	INSUL MTL	PP	90 min.	MTL	PP	Keylock, Dead Bolt w/Thumb, Self Closure/Smoke Seal, Flush Threshold, Weatherstrip, Ext. Grade Door, Peep Sight, Self Closing	0.24	-
2	2-Panel, PKT	3'-0" x 6'-8"	1-3/8"	HCW	PP		Wood	PP	Privacy Lock @ Bath	-	-
3	2-Panel, SW	3'-0" x 6'-8"	1-3/8"	HCW	PP		Wood	PP	Privacy Lock @ Bath	-	-
4	Bot. Louver Dbl, SW	6'-0" x 6'-8"	1-3/8"	HCW	PP		Wood	PP		-	-
5	Full-Lite, SW	3'-0" x 8'-0"	1-3/4"	INSUL MTL	PP		Wood	PP	Keylock, Safety Glass, Flush Threshold, Weatherstrip, Ext. Grade Door	0.24	0.61
6	2-Panel, SW	2'-4" x 6'-8"	1-3/8"	HCW	PP		Wood	PP		-	-
7	2-Panel, SW	2'-6" x 6'-8"	1-3/8"	HCW	PP		Wood	PP		-	-
8	ВР	4'-0" x 6'-8"	1-3/8"	HCW	PP		GWB	PP		-	-
9	Bot. Louver, SW	3'-0" x 6'-8"	1-3/8"	HCW	PP		Wood	PP		-	-
10	ВР	5'-0" x 6'-8"	1-3/8"	HCW	PP		GWB	PP		-	_
11	2-Panel, SW	2'-0" x 6'-8"	1-3/8"	HCW	PP		Wood	PP		-	_
12	Flush, SW	3'-0" x 8'-0"	1-3/8"	MTL	PP	90 min.	Wood	PP	Lockable from outside, Ext. Grade Door	-	_
13	Flush, Dbl SW	6'-0" x 6'-8"	1-3/8"	INSUL MTL	PP		Wood	PP	Lockable from outside, Ext. Grade Door	0.24	_
14	Flush, SW	3'-0" x 8'-0"	1-3/8"	MTL	PP	20 min.	Wood	PP	Lockable from outside, Ext. Grade Door	_	_

DOOR KEY:

TYPE:

SCW = SOLID CORE WOOD

MTL = METAL

SW = SWING

DBL SW = DOUBLE SWING

SOHD = SECTIONAL OVERHEAD DOOR

PP = PRIME & PAINT

FF = FACTORY FINISH

Puyallup, Wa

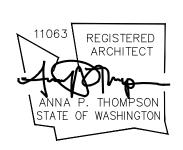
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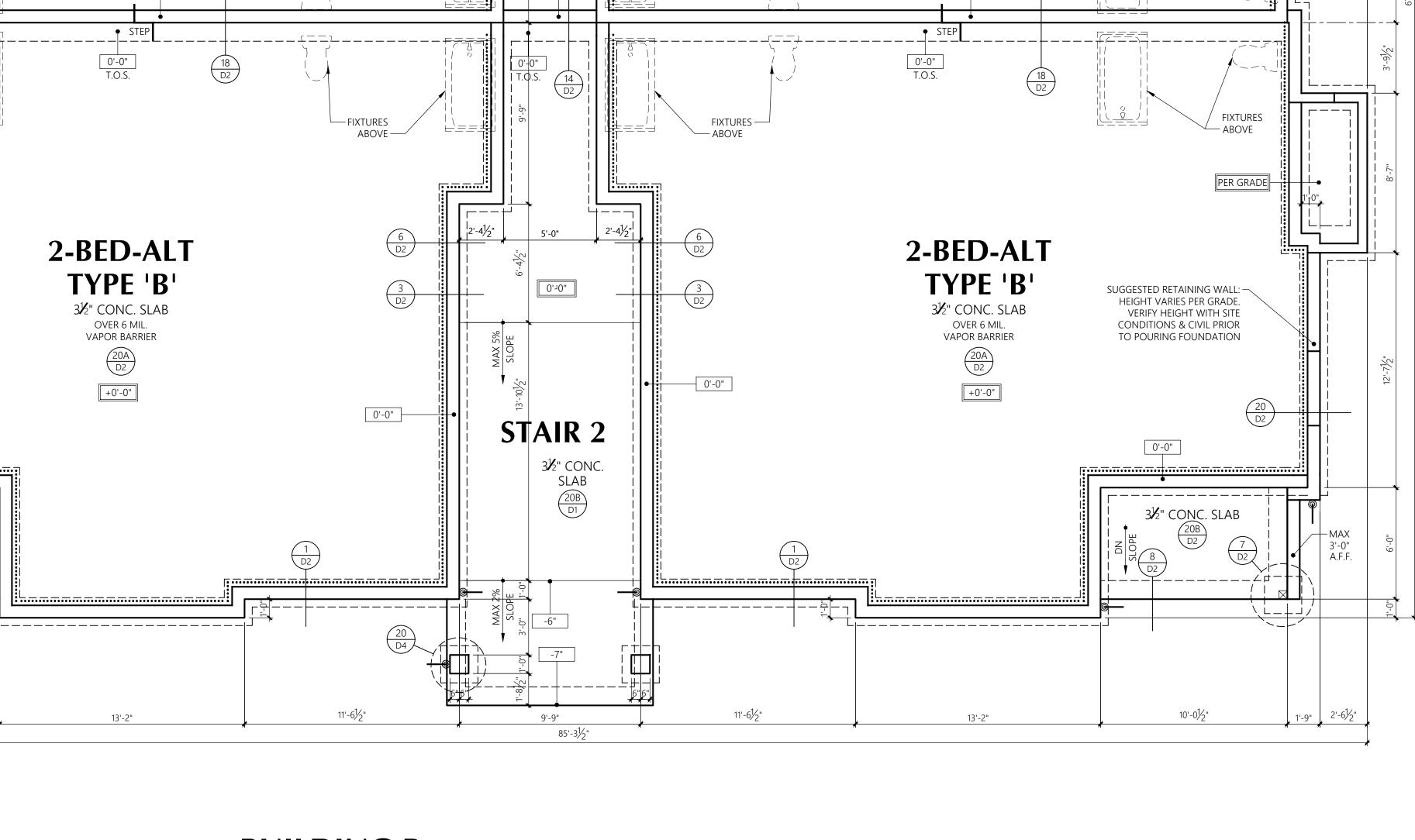
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F3



11'-6¹/2"

13'-2"

+10'-2 1/8"

2-BED

TYPE 'B'

VAPOR BARRIER

OVER 6 MIL.

3½" CONC. SLAB

+10'-2 1/8"

+10'-2 1/8"

+10'-2 1/8"

+9'-7 1/8"

9'-9"

+9'-8 1/8"

20B D1 3½" CONC.

SLAB

+10'-2 1/8"

+9'-11 1/8"

STAIR 1

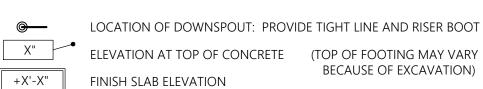
11'-6¹/2"

+10'-2 1/8"

FIXTURES

ABOVE —





ELEVATION AT TOP OF CONCRETE (TOP OF FOOTING MAY VARY BECAUSE OF EXCAVATION) FINISH SLAB ELEVATION

R-10 RIGID PERIMETER INSULATION

11'-01/2"

+10'-2 1/8"

FIXTURES

ABOVE —

FIXTURES ABOVE

- Suggested retaining wall: Height varies per grade. Verify Height with site Conditions & Civil Prior To Pouring Foundation

10'-01/2"

13'-2"

+10'-2 1/8"

2-BED

TYPE 'B'

VAPOR BARRIER

OVER 6 MIL.

3½" CONC. SLAB

+10'-2 1/8"

T.O.W. +10'-2 1/8"



Building

Bradley Heights Apartments

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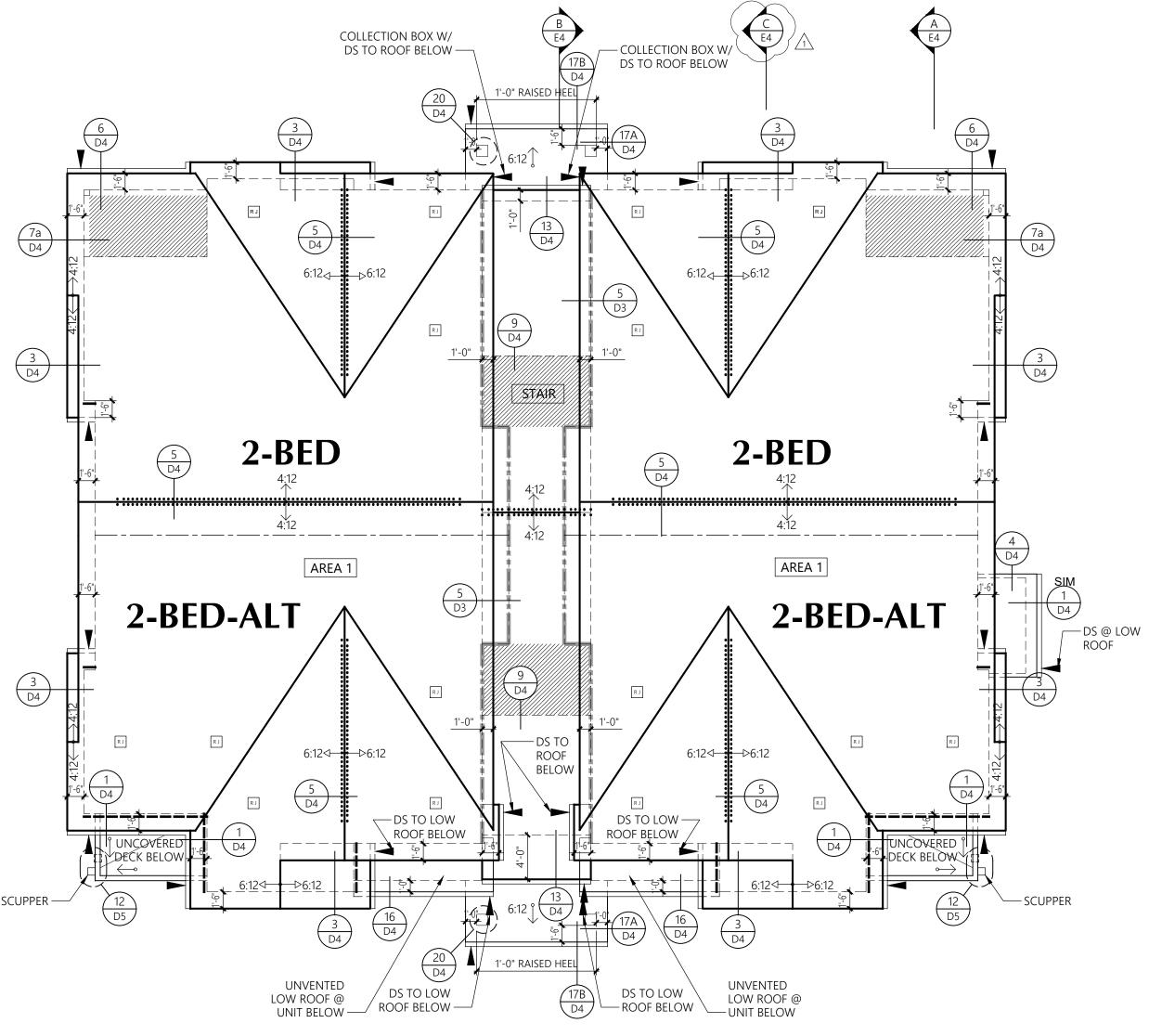
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R2



BUILDING B

1/8" = 1'-0"

ROOF PLAN

					ROOF	VENTIN	G CALCU	LATIONS	3					
Area Description	Attic Area (SF)		nting	Required Venting	Low Eave Vent (LF)	Low Jacks (Qty)	Vented Soffit (SF)	Ridge Vent (LF)		Ver	nting Provi	ded (SI)	* %	of req'd
Description	(31)	Ra	itio	(SI)	2.4	50.0	5.9	12.0	Lower	%	Upper	%	Total	%*
AREA 1	2,160	1/	300	1,037	20	8	58	64	790	51%	768	49%	1,558	150%
STAIR	462	1/	150	444	0	0	124	5	732	92%	60	8%	792	179%

Detail and show draftstops in attic as needed per Washington State Building Code, 708.4.2. Update the attic ventilation as needed based upon changes for draftstops.

(Construction Set, Sheet R2, Unit Plans)

ROOF LEGEND

ROOF JACK 50 SQ.IN. NET FREE AREA

 \longleftrightarrow 4:12 SLOPE INDICATOR U.N.O. ←→→ 6:12 SLOPE INDICATOR U.N.O. ---- BUILDING OUTLINE

——— EAVE VENTING 2.4 SQ.IN./LF. NET FREE AREA RIDGE VENTING 12 SQ.IN./LF. NET FREE AREA UNIT SEPARATION AND DRAFT STOPPING LOCATIONS AT ATTIC

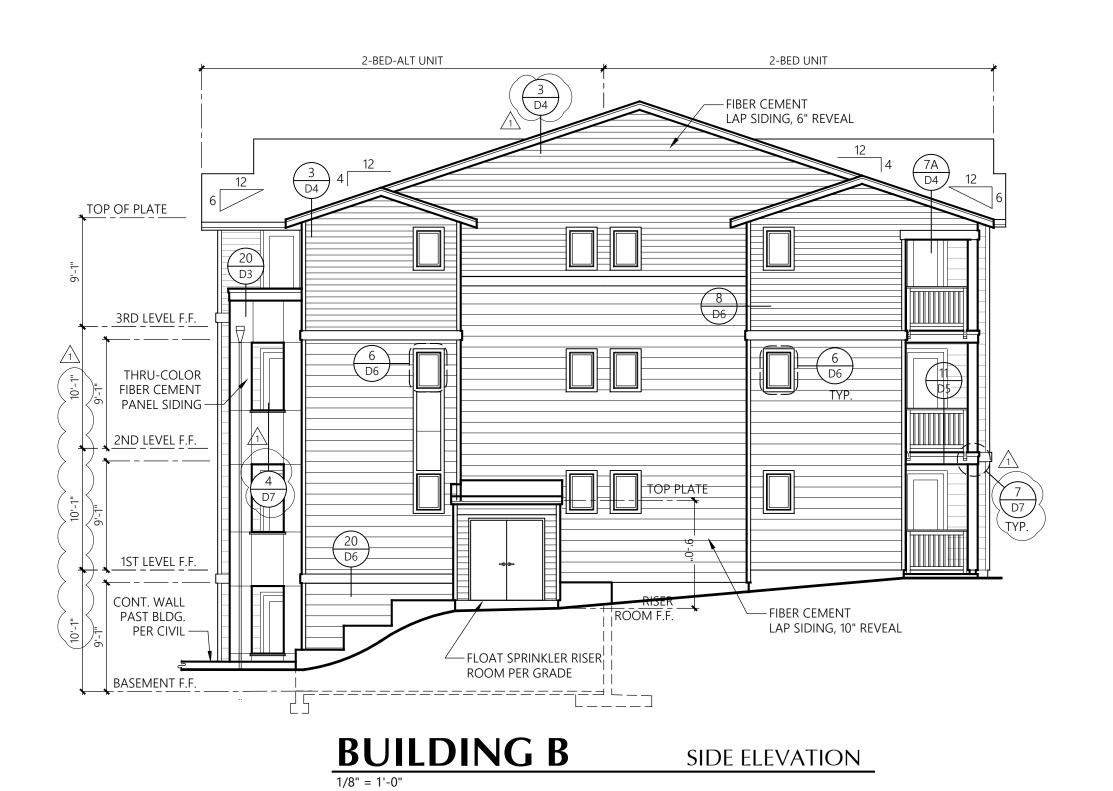
GUTTER (DOUBLE LINE)

DOWNSPOUT LOCATION VENTED FIBER CEMENT SOFFIT 5.9 SQ.IN./LF. NET FREE AREA



BUILDING B FRONT ELEVATION

WINDOW HDR HEIGHT
8'-0" A.F.F. UNO

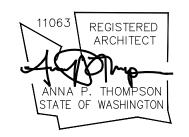




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Building B

Exterior Flevations

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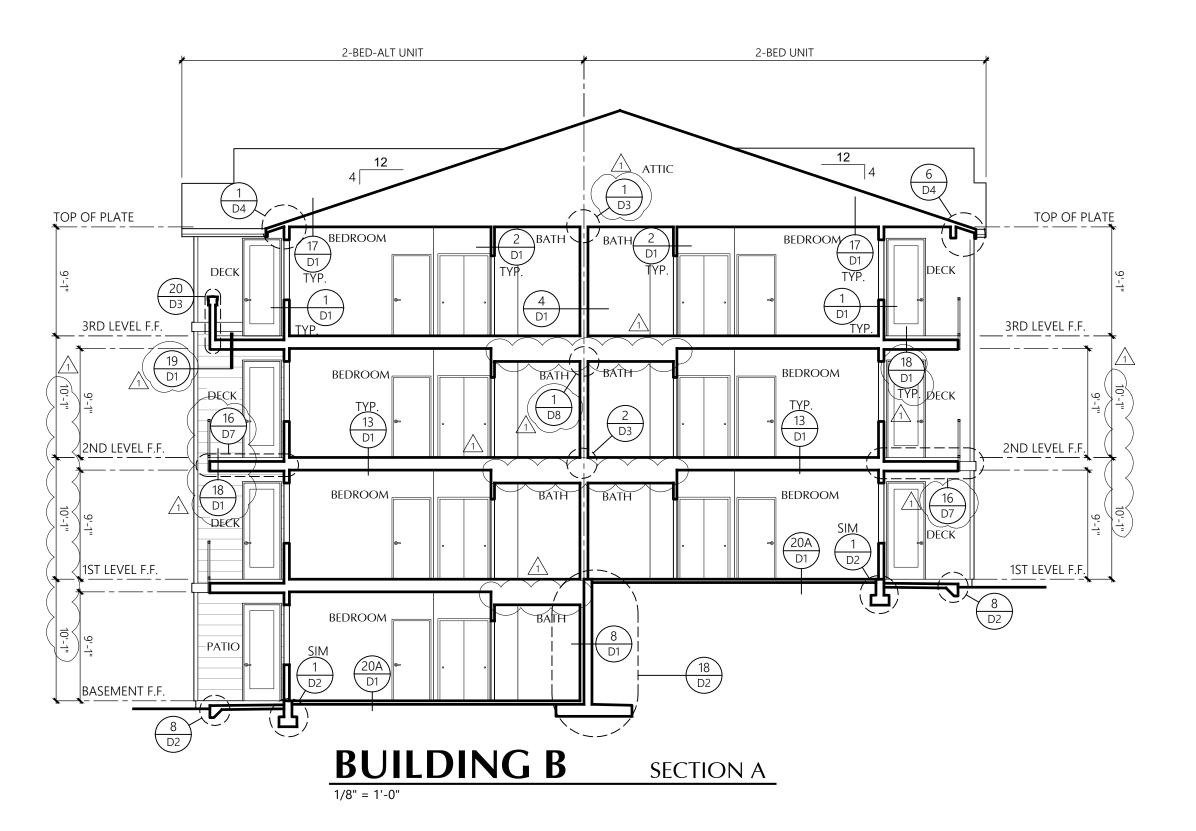
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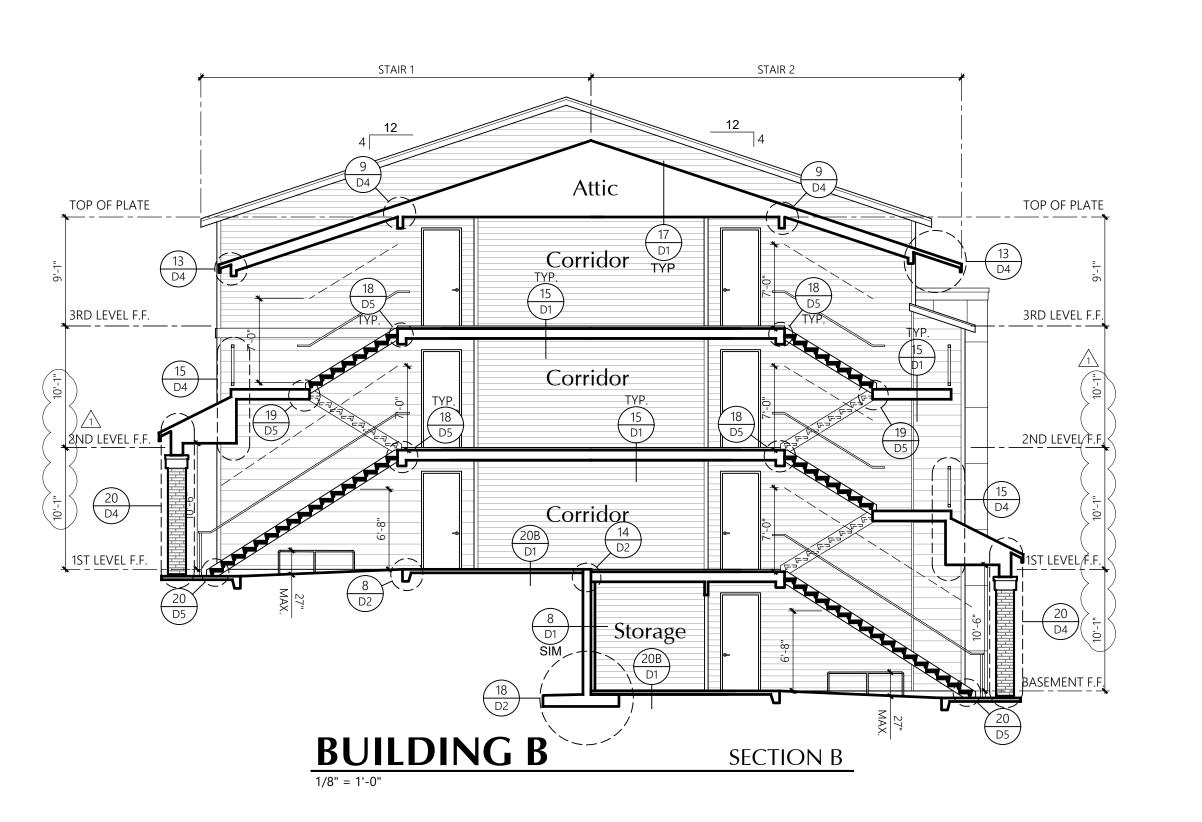
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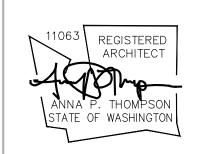
E3

CONTRACTOR NOTE

Studs shall be continuous from support at sole plate to a support at the top plate, per Washington State Building Code 2308.5.1







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E4

ALL METHODS, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE 2018 INTERNATIONAL BUILDING CODE (IBC), AS AMENDED AND ADOPTED BY THE STATE OF WASHINGTON; A.C.I. 318-14; A.I.S.C. 14TH EDITION; AWS D1.1-06; A.I.T.C. 2ND EDITION; NDS 2018 WITH 2018 WIND & SEISMIC PROVISIONS AND A.I.S.I 2012 EDITION

THE CONTRACTOR IS RESPONSIBLE FOR ALL BRACING AND SHORING DURING CONSTRUCTION.

1.2 DESIGN CRITERIA

A. VERTICAL LOADS

LIVE LOADS

ROOF (SNOW) Is = 1.0
FLOORS (RESIDENTIAL)
DECKS (RESIDENTIAL POST/BM SUPPORT
STAIRS/EXITS

DEAD LOADS

ROOF	22 PSF
FLOORS (RESIDENTIAL)	26 PSF
DECKS	47 PSF
BREEZEWAY	47 PSF

B. LATERAL LOADS:

LATERAL FORCES ARE TRANSMITTED BY DIAPHRAGM ACTION OF THE FLOORS TO SHEAR WALLS. LOADS ARE THEN TRANSFERRED TO THE FOOTINGS, WHERE ULTIMATE DISPLACEMENT IS RESISTED BY PASSIVE PRESSURE OF EARTH AND SLIDING FRICTION OF EARTH. OVERTURNING IS RESISTED BY THE DEAD LOAD OF THE STRUCTURE.

25 PSF

40 PSF

60 PSF

100 PSF

EXPOSURE B ELEVATION = 386 FEET BASIC WIND SPEED = 97 M.P.H. (3 SECOND GUST, ULTIMATE). IMPORTANCE FACTOR, Iw = 1.0SIMPLE DIAPHRAGM BUILDING, ENCLOSED Kzt = 1.0

SFISMIC:

IMPORTANCE FACTOR, IE = 1.0 OCCUPANCY CATEGORY II MAPPED SPECTRAL RESPONSE COEFFICIENTS, Ss = 1.263 AND S1 = 0.435

SPECTRAL RESPONSE COEFFICIENTS, SDs = 1.010 AND SD1 = 0.435 SEISMIC DESIGN CATEGORY = DSEISMIC RESPONSE COEFFICIENT Cs = 0.2021 (ULTIMATE STRENGTH) RESPONSE MODIFICATION FACTOR R = 6.5

1.3 SHOP DRAWINGS

SUBMIT SUFFICIENT COPIES OF SHOP DRAWINGS TO ARCHITECT/ENGINEER FOR THE FOLLOWING:

- REINFORCING STEEL (CONCRETE / MASONRY) CONCRETE / GROUT MIX DESIGNS (CONCRETE / MASONRY)
- COMPOSITE FLOOR/ROOF JOISTS P.E. ROOF/FLOOR TRUSSES

SOIL SITE CLASS = C

GLUE—LAMINATED MEMBERS

DO NOT FABRICATE PRIOR TO ARCHITECT'S/ENGINEER'S APPROVAL. ALL SHOP DRAWINGS SUBMITTED TO THE ENGINEER SHALL BEAR THE STAMPED APPROVAL OF THE CONTRACTOR. SHOP DRAWING APPROVAL BY ANDERSONCHASE STRUCTURAL ENGINEERS SHALL NOT IMPLY THAT THE PROJECT MAY BE BUILT FROM THE SHOP DRAWINGS. RATHER. THE PROJECT PLANS SHALL BE USED FOR CONSTRUCTION. ALL PERMANENT BRACING FOR TRUSSES SHALL BE DETAILED AND DESIGNED BY THE TRUSS SUPPLIER. CONTRACTOR SHALL REVIEW SHOP DRAWINGS AND STAMP INDICATING THIS PRIOR TO REVIEW BY ENGINEER OF RECORD.

2.0 SITE WORK

2.1 SOIL DATA (PER GEOTECHNICAL REPORT DATED FEBRUARY 10, 2022 PREPARED BY GEO RESOURCES #0419036006

FOR LOCATIONS SEE SOILS REPORT. SOIL BEARING @ CONT. SPREAD FOOTINGS = 2000 PSF. ACTIVE AND PASSIVE PRESSURES ARE 35 PCF AND 300 PCF RESPECTIVELY. WHERE GEOTECHNICAL REPORT HAS NOT BEEN PROVIDED, THE ABOVE VALUES ARE ASSUMED AND THESE VALUES SHALL BE FIELD VERIFIED.

2.2 EXCAVATION

EXCAVATE PER GEOTECH REPORT, PROOFROLL SUBGRADES TO ATLEAST 92% MDD PER ASTM D1557 TEST METHOD FOR FOOTINGS DOWN TO DEPTH SHOWN ON DRAWINGS OR TO FIRM UNDISTURBED MATERIAL. AREAS OVER-EXCAVATED SHALL BE BACKFILLED WITH LEAN CONCRETE (f'c = 2000 PSI), OR BE STRUCTURALLY FILLED PER SECTION 2.3 AND SHALL BE AT THE CONTRACTOR'S EXPENSE.

2.3 BACKFILL AND COMPACTION

BACKFILL SHALL NOT BE PLACED UNTIL AFTER THE REMOVAL OF ALL FORMS, SCREEDS, OTHER WOOD DEBRIS AND MATERIAL SUBJECT TO ROT OR CORROSION. USE ONLY MATERIALS APPROVED FOR BACKFILL. IN AREAS UNDER SLABS OR FOOTINGS, MATERIAL SHOULD BE GRANULAR IN NATURE, PLACED IN 6-INCH LIFTS AND COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO COMPACTION TEST, PROCEDURE T-180. THE FILL SHOULD BE LIMITED TO CLEAN, GRANULAR MATERIAL.

3.0 CONCRETE

3.1 GENERAL

NORMAL WEIGHT CONCRETE MEETING THE REQUIREMENTS OF ACI 301-05 ESTABLISH PROPORTIONS OF CEMENT, COARSE AND FINE AGGREGATES, WATER, AND ADMIXTURES TO PRODUCE THE PROPERTIES SPECIFIED FOR EACH CONCRETE MIX TYPE PER ACI-301 ON THE BASIS OF PREVIOUS FIELD EXPERIENCE OR TRIAL BATCHES. USE ADMIXTURES IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS. USE AMOUNTS OF WATER-REDUCING ADMIXTURE THAT WILL PERMIT PLACING WITHOUT SEGREGATION, HONEYCOMBING OR ROCK POCKETS. THE SLUMPS SPECIFIED ARE THE SLUMPS REQUIRED AT THE POINT OF PLACEMENT INTO THE STRUCTURE. USE INTERIOR MECHANICAL VIBRATORS WITH 7000 RPM MINIMUM FREQUENCY. DO NOT OVER-VIBRATE. DO NOT MOVE THE CONCRETE HORIZONTALLY USING THE VIBRATOR. CONCRETE SHALL BE POURED MONOLITHICALLY BETWEEN CONSTRUCTION OR CONTROL JOINTS. PROTECT ALL FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE HOT OR COLD TEMPERATURES FOR SEVEN DAYS AFTER POURING. PROVIDE ENGINEER WITH PROPOSED CONSTRUCTION OR CONTROL JOINT LOCATIONS FOR HIS APPROVAL, OR USE JOINTS AS SHOWN ON THE DRAWINGS. ALL REINFORCEMENT TIE WIRES AND FORM ANCHORS SHALL BE CUT OFF FLUSH WITH THE SURFACE; SURFACES WHERE EXPOSED SHALL BE SMOOTH AND FREE FROM IRREGULARITIES.

3.2 STRENGTH

DESIGN MIXES TO PROVIDE NORMAL WEIGHT CONCRETE WITH THE FOLLOWING PROPERTIES:

APPLICATION	W/C RATIO	DESIGN STRENGTH F'c (PSI)	F'c PER ACI
FOOTINGS	.45	2500	4500²
FOUNDATION WALLS	.45	2500	4500°
EXT. SLABS ON GRADE	.45	2500	4500°
INT. SLABS ON GRADE	.50	2500	3000

- 1. CONCRETE EXPOSED TO WEATHER FOR EXPOSURE CLASS F2 AND SLABS ON GRADE
- SHALL HAVE A MIN F'C PER TABLE AND HAVE 5% AIR ENTRAINMENT. 2. DESIGN STRENGTH F'c (USED IN DESIGN). F'c PER ACI TABLE 19.3.2.1 FOR F2
- 3. PER IBC 1705.3 SPECIAL INSPECTION STRENGTH TESTS NOT REQUIRED FOR CONCRETE f'c>2500 WHERE STRENGTH IS INCREASED FOR DURABILITY.

3.3 MATERIAL - CEMENT, WATER & AGGREGATES PER ACI 301

- A. CEMENT MUST CONFORM TO ASTM C-150, TYPE I OR TYPE II. ENGINEER'S APPROVAL IS REQUIRED FOR USE OF TYPE III CEMENT.
- B. WATER TO BE CLEAN AND POTABLE.
- C. COARSE AND FINE AGGREGATES TO CONFORM TO ASTM-C33.

3.4 MATERIALS

- A. WATER REDUCING ADMIXTURES: CONCRETE USING POZZOLITH ADMIXTURES TO PRODUCE FLOWABLE CONCRETE MAY BE USED WITH THE ENGINEER'S APPROVAL AND MUST CONFORM TO ASTM-C494, POZZOLITH POLYHEED, POZZOLITH 100XR, OR POZZUTECH 20. POZZOLITH SHALL BE INCORPORATED INTO ALL CONCRETE IN EXACT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ADMIXTURES AND DOSAGES WILL VARY DEPENDING ON CLIMATIC CONDITIONS AND THE CONTRACTOR'S JOBSITE REQUIREMENTS. MAXIMUM SLUMP FOR SUCH CONCRETE SHALL NOT EXCEED 8" WITH A MINIMUM OF 10 OUNCES OF POLYHEED PER 100 OUNCES OF CEMENT. USE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- B. AIR ENTRAINMENT: CONFORM TO ASTM-C260 AND ASTM-C494, MBVR OR MICRO-AIR BY MASTER BUILDER. NO AIR ENTRAINMENT IN COLUMNS WITHOUT PRIOR WRITTEN PERMISSION BY ENGINEER OF RECORD. ENTRAIN 5% +/- 1% AIR BY VOLUME IN ALL EXPOSED CONCRETE.
- C. OTHER ADMIXTURE: NO OTHER ADMIXTURES PERMITTED UNLESS PRIOR APPROVAL IS GIVEN BY THE ENGINEER. NO ADMIXTURES CONTAINING CHLORIDES ARE PERMITTED.

3.5 REINFORCING STEEL

DETAIL, FABRICATE AND PLACE PER ACI-315 AND ACI-318. SUPPORT REINFORCEMENT WITH APPROVED CHAIRS, SPACERS, OR TIES.

- A. STEEL REINFORCEMENT SHALL BE NEW, DEFORMED BILLET STEEL, MEETING ASTM STANDARD A-615, A-706 AT BOUNDARY ELEMENTS; GRADE 60 FOR #3 AND LARGER BARS UNLESS NOTED OTHERWISE ON THE PLANS. SHOP DRAWINGS SHALL BE MARKED ACCORDINGLY AND SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION. GRADE 60 REBARS SHALL NOT BE BENT IN FIELD AFTER CONCRETE PLACEMENT. ALL BEND SHALL BE PER ACI.
- B. REINFORCEMENT IN ALL WALLS, SLABS, AND FOOTINGS SHALL BE CONTINUOUS AROUND CORNERS OR CORNER BARS PROVIDED, BOTH VERTICAL AND HORIZONTAL.
- C. LAPS: ALL TENSION SPLICES ARE ACCORDING TO ACI 318, CLASS B AND ALL COMPRESSION SPLICES ARE 30 DIAMETERS FOR I'C GREATER THAN 3000 PSI AND ARE 40 DIAMETERS FOR I'C WHICH IS LESS THAN 3000 PSI, UNLESS NOTED OTHERWISE. SEE DETAIL 17/S3.0 FOR TYPICAL SPLICE AMOUNTS BASE ON BAR SIZE.
- D. TRIM REINFORCING: AROUND ALL OPENINGS SHALL BE A MINIMUM 1-#5 TOP AND BOTTOM, EXTENDING 2'-6" BEYOND OPENING AT EACH CORNER. SEE TYPICAL DETAILS.
- WELDING: TACK WELDING OF REBAR IS NOT PERMITTED UNLESS CALLED FOR AND APPROVED BY THE ENGINEER.
- MINIMUM REINFORCING: WHERE REINFORCEMENT IS NOT SHOWN ON THE DRAWINGS, THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) SHALL BE REFERRED TO FOR PROPER REINFORCEMENT.
- G. REBAR COVER: PROVIDE CONCRETE PROTECTION FOR REINFORCEMENT AS FOLLOWS:

ĺ	COVER	CONDITION
	3"	CONCRETE DEPOSITED AGAINST EARTH
	2"	CONCRETE DEPOSITED AGAINST FORMS BUT
		EXPOSED TO EARTH
	1-1/2"	MAIN REINFORCING IN BEAMS
	1-1/2"	TO TIES IN COLUMNS, AND TIED REBAR IN WALLS
	1-1/2"	FOR BARS IN SLABS ON GROUND
	3/4"	FOR BARS IN SLABS ON FORMS

- H. WELDED WIRE FABRIC: ASTM-A185 AND ASTM-A82
- I. DEFORMED BAR ANCHORS: ASTM-A496
- K. FIBREMESH: PROVIDE FIBREMESH STRANDS WITHIN CONCRETE PER THE MANUFACTURERS SPECIFICATION (1.5#/CU. YARD TYPICALLY) WHERE REQUIRED BY THE OWNER IN LIEU OF UTILIZING WÈLDËD WIRE FABRIC WITHIN SLABS ON GRADE.

3.6 EPOXY DOWELED REINFORCEMENT

- A. ALL REINFORCEMENT WHICH IS TO BE DOWELED INTO EXISTING CONCRETE SHALL BE INSTALLED USING THE SIMPSON SET-XP ADHESIVE ANCHORING SYSTEM PER ICC REPORT ESR-2508 OR APPROVED EQUAL. ADHESIVE ANCHORS SHALL BE INSTALLED PER THE MANUFACTURERS SPECIFICATIONS OR APPROVED EQUAL.
- B. EPOXY SHALL BE MIXED. APPLIED, AND CURED IN ACCORDANCE WITH THE MANUFACTURERS GUIDELINES. REINFORCEMENT AND CONCRETE SHALL BE CLEAN AND FREE OF IRREGULARITY. EPOXY SHALL NOT BE MIXED OR CURED IN AIR AND OR CONCRETE TEMPERATURES BELOW MINIMUM PER MANUFACTURER'S SPECIFICATIONS.
- C. EPOXY DOWELING OF REINFORCEMENT IN OVERHEAD APPLICATIONS SHALL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER OF RECORD.

4.0 METALS 4.1 WELDING

A. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 "STRUCTURAL WELDING CODE" & D1.3 "STRUCTURAL WELDING CODE - SHEET STEEL."

B. ALL WELDING SHALL BE DONE BY AWS/WABO (WASHINGTON STATE ASSOCIATION OF BUILDING OFFICIALS) CERTIFIED WELDERS. FOR ALL MOMENT FRAMES WELDERS SHALL HAVE ADDITIONAL CERTIFICATION SHOWING QUALIFIED IN ACCORDANCE WITH AWS D1.8, SECTION 5, WELDER QUALIFICATION, THE SUPPLEMENTAL WELDER QUALIFICATION FOR RESTRICTED ACCESS WELDING.

5.0 STRUCTURAL STEEL

ANGLES.

A. ALL DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO THE AISC "MANUAL OF STEEL CONSTRUCTION." STEEL SHALL CONFORM TO THE FOLLOWING, UNO:

> ALL STEEL, UNO ASTM A992. ASTM A572, GRADE 50, A447,

Fy = 50 KSI OR A588 Fy = 50 KSI ONLY WPRIOR APPROVAL OF ENGINEER OF RECORD.

ASTM A36, Fy = 36 ksi

CHANNELS, EMBEDMENTS ASTM A36, Fy = 36 ksi OR STEEL TYPES LISTED UNDER IN CONCRETE AND MISC. "ALL STEEL" METALS, UNO SQUARE AND RECTANGULAR ASTM A500, GRADE B, Fy = 46 ksi

STRUCTURAL TUBES STEEL PIPE DIAMETER LESS ASTM A53, TYPE E OR S, THAN OR EQUAL TO 12" NOM GRADE B, Fy = 35 ksi

B. ALL WORK SHALL BE IN ACCORDANCE WITH THE AISC SPECIFICATION. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER BEFORE COMMENCING FABRICATION. ALL STEEL ANCHORS AND TIES AND OTHER MEMBERS EMBEDDED IN CONCRETE OR MASONRY SHALL BE LEFT UNPAINTED. DIMENSIONAL TOLERANCE FOR BUILD-UP MEMBERS SHALL BE PER AWS D1.1. GENERAL NOTES FOR STEEL CONNECTIONS SHALL APPLY TO ALL STEEL CONNECTIONS, UNO.

C. STEEL BEAMS ARE EQUALLY SPACED BETWEEN DIMENSIONAL POINTS. MINIMUM CONNECTIONS SHALL BE A TWO-BOLT CONNECTION USING 7/8-INCH DIAMETER A325 BOLTS IN SINGLE SHEAR. OPTIONAL TO USE F1554 BOLTS WITH PRIOR APPROVAL OF ENGINEER OF RECORD. ALL HIGH-STRENGTH BOLTS SHALL BE INSTALLED, TIGHTENED AND INPSECTED IN ACCORDANCE WITH THE AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. THE CRITERIA FOR SLIP-CRITICAL CONNECTIONS SHALL APPLY TO ALL CONNECTIONS UNLESS SPECIFICALLY NOTED AS SNUG TIGHT ON THE STRUCTURAL DRAWINGS. WHERE CONNECTIONS ARE NOTED SNUG TIGHT THE CONTRACTOR MAY INSTALL PER CRITERIA FOR SNUG TIGHT BOLTS. SLIP CRITICAL CONNECTIONS SHALL USE LOAD INDICATOR WASHERS OR TENSION CONTROL BOLTS. ALL ASTM A307 BOLTS SHALL BE PROVIDED WITH LOCK WASHERS UNDER NUTS OR SELF-LOCKING NUTS. ALL

- D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERECTION AIDS THAT INCLUDE, BUT ARE NOT LIMITED TO: ERECTION ANGLES; LIFT HOLES, AND OTHER AIDS.
- E. METAL PROTECTION ALL MISCELLANEOUS STEEL AND HARDWARE EXPOSED TO VIEW OR IN UNHEATED PORTION OF BUILDING SHALL BE GALVANIZED PER ASTM A-123 WITH 1.25 OZ OF ZINC SPELTER PER SQUARE FOOT OF SURFACE AREA. ALL OTHER STEEL SURFACES TO BE SHOP PAINTED AFTER FABRICATION.
- F. ALL STEEL BEAM COPING SHALL CONFORM TO AISC STANDARD PRACTICE.

BOLT HOLES SHALL BE STANDARD SIZE, UNO.

G. GROUT FOR BEARING PLATES SHALL BE NON-SHRINK EMBECO BY MASTER BUILDERS, INC. OR APPROVED EQUAL.

ALL EXPOSED STRUCTURAL MATERIALS OR MATERIAL IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED (SEE SECTION 7.10).

6.0 LIGHT GAUGE STEEL

Structural Notes

7.0 CARPENTRY

7.1 ROUGH CARPENTRY

ALL 2x FRAMING LUMBER SHALL BE STUD GRADE HEM-FIR FOR STUDS AND STANDARD

OR BETTER FOR PLATES UNLESS OTHERWISE NOTED ON THE DRAWINGS OR BELOW. ALL 2" LUMBER SHALL BE KILN DRIED (KD) OR SURFACE DRIED (SD). EACH PIECE OF LUMBER SHALL BEAR THE STAMP OF THE WEST COAST LUMBER INSPECTION BUREAU (WCLIB) OR WESTERN WOOD PRODUCTS ASSOCIATION (WWPA) SHOWING GRADE MARK OR APPROVED EQUAL. OTHER MATERIALS SHALL BE AS SHOWN BELOW:

MEMBER	SPECIES
2x & 3x STUDS	STUD GRADE HEM FIR
2x JOISTS	#2 HEM FIR
4x HEADERS	#2 HEM FIR
6x HEADERS	#2 DOUGLAS FIR
4x COLUMNS	#2 HEM FIR
6x COLUMNS	#2 DOUGLAS FIR

ALL EXPOSED STRUCTURAL MATERIALS OR MATERIAL IN CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED (SEE SECTION 7.10).

7.3 PRE-ENGINEERED ROOF TRUSSES

ALL PREFABRICATED WOOD ROOF AND FLOOR TRUSSES SHALL BE DESIGNED BE OR UNDER THE DIRECT SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE STRUCTURE IS LOCATED. THE TRUSS SHOP DRAWINGS SHALL BEAR THE STAMP OF THAT ENGINEER. ALL NECESSARY BRIDGING, BLOCKING, PRE-NOTCHED PLATES, HANGERS, ETC. SHALL BE DETAILED OR SPECIFIED, AND FURNISHED BY THE MANUFACTURER. ALL PERMANENT BRACING FOR TRUSSES SHALL BE DETAILED AND DESIGNED BY THE TRUSS SUPPLIER. THE TRUSS MANUFACTURER SHALL VERIFY ALL SETBACKS, DIMENSIONS, AND BEARING POINTS PRIOR TO FABRICATION. MAXIMUM ALLOWABLE DEFLECTIONS SHALL BE AS FOLLOWS:

ROOF TOTAL LOAD SPAN/240 OR 1.5" ROOF LIVE LOAD SPAN/360 OR 1"

TRUSSES SHALL BE DESIGNED FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS AND SHALL BE FURNISHED AND INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S PUBLISHED SPECIFICATIONS. ADDITIONAL CONCENTRATED LOADS FROM MECHANICAL UNITS, AND MISCELLANEOUS EQUIPMENT, ETC. SHALL BE ACCOUNTED FOR/COORDINATED WITH THE SUB-CONTRACTORS. ARCHITECT AND TRUSS ENGINEER. ALTERATION OF THE TRUSS LAYOUT INDICATED ON THE PLANS MAY REQUIRE SUPPORTING STRUCTURAL AND FOUNDATION CHANGES, THEREFORE PRIOR APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER IS REQUIRED. TRUSSES SHALL NOT BE FIELD ALTERED PRIOR TO WRITTEN APPROVAL OF THE ENGINEER OF RECORD DESIGNING THE TRUSSES.

TRUSS CONNECTIONS TO NON-LOAD BEARING WALLS SHALL BE PER THE TYPICAL DETAILS. SLIDE CLIPS SHALL NOT BE USED UNLESS APPROVED BY THE ENGINEER.

7.4 CARPENTRY HARDWARE

- A. BOLTS SHALL BE ASTM A-307.
- B. WASHERS SHALL BE STANDARD CUT WASHERS OR MALLEABLE IRON WASHERS.
- C. ALL NAILS SHALL BE COMMON WIRE NAILS OR EQUIVALENT PNEUMATICALLY DRIVEN NAILS (P-NAILS), AMERICAN OR CANADIAN MANUFACTURER ONLY AS INDICATED BELOW. P-NAILS SHALL BE INSTALLED PER THE MANUFACTURERS GUIDELINES.

COMMON WIRE NAIL	PNEUMATIC NAIL	MINIMUM NAIL LENGTH	NAIL APPLICATION
16d COMMON	0.162" P-NAIL	3-1/2"	FRAMING
12d COMMON	0.148" P-NAIL	3-1/4"	FRAMING
N/A	0.131" P-NAIL	3"	FRAMING
10d COMMON	0.148" P-NAIL	2-1/2"	SHEATHING
8d COMMON	0.131" P-NAIL	2-1/2"	SHEATHING

- D. LAG SCREWS, SHEAR PLATES
- E. ANCHORS AND CONNECTORS SHALL BE SIMPSON, USP, OR OTHER ICBO APPROVED.
- F. HARDWARE EXPOSED TO WEATHER OR TO VIEW SHALL BE GALVANIZED OR PROTECTED WITH OTHER APPROVED MEANS OF CORROSION PROTECTION. FOR ADDITIONAL REQUIREMENTS REGARDING HARDWARE IN EXPOSED CONDITIONS SEE SECTION 7.10.

7.5 MINIMUM NAILING — PER IBC TABLE 2304.9.1. — SEE SHEET S1.1

7.6 ANCHOR BOLTS

FOUNDATION PLATE OR SILL BOLTING SHALL BE PER IBC CHAPTER 23. PER IBC 2308.6 & 2304.3.1 ALL FOUNDATION PLATES OR SILLS SHALL BE BOLTED TO CONCRETE OR MASONRY WITH MINIMUM 1/2" NOMINAL DIAMETER ANCHOR BOLTS EMBEDDED AT LEAST 7" AND SPACED NOT MORE THAN 6 FEET APART. THERE SHALL BE A MINIMUM OF TWO BOLTS PER PIECE WITH ONE BOLT LOCATED NOT MORE THAN 12 INCHES OR LESS THAN 4 INCHES FROM EACH FND OF FACH PIECE. 3" x 3" x 0.229" WASHERS ARE REQUIRED AT ALL ANCHOR BOLTS PER AF&PA SDPWS-2008 SECTION 4.3.6.4.3 THE PLATE WASHER ARE PERMITTED TO HAVE A DIAGONAL SLOT. FOR SHEAR WALL TYPES W3 AND GREATER THE PLATE WASHER MUST EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON SIDE(S) WITH SHEATHING.

7.7 PLYWOOD/OSB SHEATHING

EACH SHEET SHALL BEAR THE TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION. ALL GRADING AND INSTALLATION SHALL CONFORM TO MOST CURRENT VERSION OF PS2 FOR OSB. USE THICKNESS AND NAILING AS SHOWN ON THE DRAWINGS. SHEATHING SHALL HAVE EXPOSURE RATING AS APPROPRIATE PER THE CONTRACTOR'S CONSTRUCTION AND WEATHER CONDITIONS SPECIFIED BY CONTRACTOR. EXCEPT AS OTHERWISE SHOWN OR NOTED, PROVIDE 0.131" DIA P-NAILS OR 8d COMMON NAILS AT 6" ON CENTER @ SUPPORTED PANEL EDGES AND 0.131" DIA P-NAILS OR 8d COMMON NAILS AT 12" ON CENTER ON OTHER SUPPORTING MEMBERS FOR WALLS AND ROOFS. FOR FLOORS, USE THE SAME SPACING PATTERN AS STATED FOR WALLS OR ROOF EXCEPT USE 0.148" DIA P-NAILS OR 10d COMMON NAILS.

NOTE: EQUIVALENT RATED PLYWOOD MAY BE USED IN LIEU OF OSB CALLED OUT. ALL THICKNESS AND GRADING SHALL CONFORM TO PS1 OR PS2. SHEATHING SHALL HAVE EXPOSURE RATING AS APPROPRIATE PER THE CONTRACTOR'S CONSTRUCTION AND WEATHER CONDITIONS SPECIFIED BY CONTRACTOR.

8d COMMON NAILS AT 6" O.C. AT SUPPORTED PANEL EDGES AND AT 12" O.C. AT FIELD TYPICAL UNLESS NOTED OTHERWISE ON PLAN. WHERE REQUIRED, USE PLY-CLIPS INSTALLED PER MANUFACTURER'S GUIDELINES AND APA GUIDELINES. FLOOR DIAPHRAGM: 3/4" TONGUE AND GROOVE OSB (MIN PANEL INDEX = 32/16), WITH 0.148" DIA P-NAILS OR 10d COMMON NAILS AT 6" O.C. AT SUPPORTED PANEL EDGES AND

AT 12" O.C. AT FIELD TYPICAL UNLESS NOTED OTHERWISE ON PLAN. SHEATHING SHALL BE

GLUE-NAILED TO FRAMING WITH APPROVED ADHESIVE PER THE ARCHITECT. FIELD NAILING SHALL BE 6" O.C. AT ALL INTERIOR SHEARWALL LOCATIONS INSTEAD OF TYPICAL 12" O.C.

ROOF DIAPHRAGM: 1/2" MIN OSB (MIN PANEL INDEX = 24/16), WITH 0.131" DIA P-NAILS OR

7.8 MANUFACTURED TIMBER BEAMS

A. GLULAMINATED TIMBER BEAMS (GLULAM BEAMS)

ALL STRUCTURAL GLUE-LAMINATED TIMBER, MATERIALS, MANUFACTURE AND QUALITY CONTROL SHALL BE IN CONFORMANCE WITH VOLUNTARY PRODUCT STANDARD P.S.56 "STRUCTURAL GLUED LAMINATED TIMBER". AND ALL MEMBERS SHALL BE MARKED WITH A QUALITY MARK THEREOF. ALL PLY LAYOUTS SHALL BE PER P.S. 56. CAMBERS ARE AS SHOWN ON THE DRAWINGS. ALL MEMBERS SHALL BE EITHER COMBINATION 24F-V4 (SIMPLE SPAN) OR 24F-V8 (CANTILEVERED OR CONTINUOUS SPAN) AS APPLICABLE. ALL MEMBERS SHALL BE ARCHITECTURAL APPEARANCE AND SHALL BE GLUED WITH WATERPROOF ADHESIVE PER P.S. 56. ARCHES SHALL BE COMBINATION 24F-V8 AND HAVE EXTERIOR GLUE, ARCHITECTURAL GRADE.

7.9 SHRINKAGE

WOOD MEMBERS WERE EVALUATED USING KILN DRIED (KD) OR SURFACE DRIED (SD) LUMBER (HEM-FIR WITH MOISTURE CONTENT = 19% OR LESS). THE FLOOR TO FLOOR COMPRESSION OF SUCH WOOD MEMBERS (PLATES AND JOISTS TOTALING 15.25") DUE TO A MOISTURE CONTENT CHANGE OF 10% WILL BE APPROXIMATELY 3/8 INCHES PER FLOOR. ADDITIONAL FLOOR TO FLOOR COMPRESSION OF WOOD STUDS DUE TO FULL COMPRESSIVE LOAD WILL BE APPROXIMATELY 1/32 INCHES PER FLOOR. ADDITIONAL COMPRESSION OF WOOD FRAMING MAY OCCUR DUE TO FRAMING TECHNIQUES AND LOCAL STRESS CONCENTRATIONS. ALL FULL BUILDING HEIGHT ELECTRICAL, MECHANICAL, AND PLUMBING SYSTEMS AS WELL AS EXTERIOR FINISHES SHOULD BE DESIGNED TO ACCOMMODATE THESE MOVEMENTS. USE OF WOOD STUDS, PLATES & JOISTS WHICH WILL HAVE MOISTURE CONTENT CHANGES GREATER THAN 10% WILL EXPERIENCE GREATER MOVEMENT. FLOOR ASSEMBLIES UTILIZING DEPTHS GREATER THAN THOSE ASSUMED ABOVE MAY EXPERIENCE GREATER MOVEMENTS. LOCALIZED HEADERS MAY EXPERIENCE SIMILAR SHRINKAGE AS DESCRIBED ABOVE.

7.10 PRESERVATIVE TREATMENT

A. PRESERVATIVE TREATMENTS

SEE ARCH FOR ALL PRESERVATIVE TREATED REQUIREMENTS AND FINISHES OF EXPOSED TIMBER MEMBERS AND AT EXTERIOR CONDITIONS.

ALL EXPOSED FRAMING LUMBER, PLYWOOD AND DECK MATERIALS SHALL BE PRESSURE TREATED PER AWPA SPECIFICATION P-5 OR OTHER APPROVED TREATMENT. ALL CUTTING AND BORING AFTER PRESSURE TREATMENT SHALL BE CARED FOR IN ACCORDANCE WITH AWPA SPECIFICATION M-4.

ACZA PRESERVATIVE TREATMENT SHALL NOT BE PERMITTED EXCEPT WHERE HARDWARE (INCLUDING NAILS) IN CONTACT WITH THE TREATED PRODUCT IS COMPOSED ENTIRELY OF STAINLESS STEEL MATERIAL. STAINLESS STEEL HARDWARE SUBSTITUTED FOR HDG PRODUCTS SHALL MEET OR EXCEED THE STRENGTH AND PERFORMANCE OF THE SUBSTITUTED HDG PRODUCT ORIGINALLY SPECIFIED.

B. GALVANIZATION OF HARDWARE (EXPOSED OR IN CONTACT WITH PRESERVATIVE TREATED WOOD)

PROTECTED ENVIRONMENT

ALL HARDWARE (HANGERS, NAILS, BOLTS, LAG SCREWS, FLASHING ETC ...) SHALL BE HOT-DIP GALVANIZED (HDG) TO A MINIMUM COATING LEVEL OF G185 (1.85 oz/ft2 OF ZINC) WHEN IN CONTACT WITH PRESERVATIVE TREATED WOOD CONTAINING PRODUCTS SUCH AS, BUT NOT LIMITED TO; CCA, ACQ, OR CBA. HDG PRODUCTS SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS AS APPLICABLE; ASTM A653, ASTM A123, AND ASTM A153. WHEN USING STAINLESS STEEL OR HOT-DIP GALVANIZED CONNECTORS, THE CONNECTORS AND FASTENERS SHALL BE OF THE SAME MATERIAL.

EXPOSED ENVIRONMENT

ALL HARDWARE (INCLUDING CONNECTORS) IN CONTACT WITH PRESSURE TREATED WOOD IN AN EXPOSED OR POTENTIAL TO BE EXPOSED ENVIRONMENT (HAVING POTENTIAL FOR WIND BLOWN RAIN TO REACH) SHALL BE STAINLESS STEEL.

8.0 MECHANICAL AND EPOXY FASTENERS

A. MECHANICAL FASTENERS (PRE-DRILLED ANCHORS)

- 1. TYPICAL MECHANICAL ANCHORS WHICH ARE INSTALLED IN CONCRETE SHALL BE AS MANUFACTURED BY THE SIMPSON, INC. AND SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURERS GUIDFLINES AND PER ICC REPORT ESR-1771 FOR WEDGE ANCHORS OR PER ICC REPORT ESR-2713 FOR SCREW TYPE ANCHORS OR APPROVED EQUALS.
- 2. SPECIAL CARE SHALL BE TAKEN DURING THE DRILLING / INSTALLATION OF FASTENERS WITHIN POST-TENSIONED CONCRETE. ANCHORS SHALL BE INSTALLED IN SUCH A MANNER SO AS NOT TO INTERFERE WITH / DAMAGE REINFORCEMENT.

B. EPOXY CONNECTIONS (PRE-DRILLED ANCHORS)

- 1. ADHESIVE ANCHORS SHALL BE OF THE SIZE AND LENGTH AS CALLED OUT ON THE PLANS USING THE SIMPSON SET-XP ADHESIVE ANCHORING SYSTEM PER ICC RFPORT ESR-2508 OR APPROVED EQUAL. ADHESIVE ANCHORS SHALL BE INSTALLED PER THE MANUFACTURERS SPECIFICATIONS.
- 2. ALL EPOXY ANCHORS OR FASTENERS REQUIRE SPECIAL INSPECTION.
- 3. ANCHORS SHALL BE INSTALLED IN SUCH A MANNER SO AS NOT TO INTERFERE WITH / DAMAGE REINFORCEMENT.

9.0 SPECIAL INSPECTIONS:

SPECIAL INSPECTIONS SHALL CONFORM TO SECTION 1704 OF THE 2018 IBC AND ARE REQUIRED DURING THE FOLLOWING:

- A. THE EXCAVATION OF FOOTINGS PRIOR TO CONCRETE PLACEMENT,
- B. THE TAKING OF CONCRETE TEST SPECIMENS. SEE PARAGRAPH 3.2, NOTE 4 FOR EXCEPTION WITH I'C GREATER THAN 2500 PSI.

C. THE PLACEMENT OF REINFORCING STEEL OF ALL STRUCTURAL FOOTINGS, COLUMNS,

WALLS, SLABS AND APPENDAGES, D. THE CONSTRUCTION OF THE LATERAL WOOD SYSTEM TO VERIFY APPROPRIATE ELEMENTS,

NAILING, HARDWARE & CONNECTIONS PRIOR TO FINAL APPROVAL. E. ALL EPOXY DOWELED APPLICATIONS.

PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE A SCHEDULE OF REQUIRED INSPECTIONS AND SHALL SUBMIT THIS SCHEDULE TO THE ARCHITECT AND ENGINEER FOR APPROVAL.

INSPECTION IS INSPECTION PERFORMED BY THE BUILDING OFFICIAL AT VARIOUS STAGES OF A PROJECT AS OUTLINED IN IBC SECTION 109 TO ENSURE COMPLIANCE TO THE BUILDING CODE. SPECIAL INSPECTION SHALL BE DONE BY AN INDEPENDENT 3RD PARTY INSPECTOR BY OWNER. WHERE IBC CHAPTER 17 (REF SECTION 1704) REQUIRES SPECIAL EXPERTISE TO ENSURE COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

STRUCTURAL OBSERVATION SHALL BE PERFORMED BY A REGISTERED DESIGN PROFESSIONAL FOR GENERAL CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AS DEFINED IN IBC SECTION 1702. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR INSPECTION AS REQUIRED BY IBC.

10.0 MISCELLANEOUS

VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO PROCEEDING. PROVIDE ERECTION BRACING AS NECESSARY UNTIL PERMANENT SUPPORT AND STIFFNESS ARE INSTALLED. REFER TO ARCHITECTURAL PLANS FOR WALL OPENING, ARCHITECTURAL TREATMENT AND DIMENSIONS NOT SHOWN. REFER TO MECHANICAL AND ELECTRICAL PLANS FOR SIZE AND LOCATION OF ALL OPENINGS FOR DUCTS, PIPES, CONDUITS, ETC., NOT SHOWN.

PROPERTY LINE

ROOF DRAIN

REFER TO ..

REINFORCED

ROUGH OPFNING

REQUIRED

SCHEDULE

SECTION

SHEET

SIMILAR

SQUARE

STAGGERED

STANDARD

STIFFENER

STRUCTURAL

TOP AND BOTTOM

UNLESS NOTED

OTHERWISE

TONGUE & GROOVE

STEEL

TREAD

THICK

TOP OF

VERIFY

WITH

VERTICAL

WITHOUT

PLATE

CENTERLINE

Revisions*

TYPICAL

STRUCTURAL

SOLIARE FOOT

SPECIFICATION

STAINLESS STEEL

ENGINEER OR RECOF

ROOM

PLYWD. PLYWOOD

P.L.

R.D.

RE:

REINF.

REQ'D.

RM

R.O.

SCHED.

SECT.

SER

SIM.

SPEC.

S.S.

STAGG.

STD.

STIFF

STL.

TR

STRUC.

T & B

T & G

THK.

TYP.

U.N.O.

VER

VERT.

W/

W/0

Abbreviations

FLOOR DRAIN

FOUNDATION

FINSH FLOOR

FOUNDATION

F.O.C. FACE OF CONCRETE

FULL SIZE

FOOTING

FURRING

GAUGE

GRADE

GYP. BD. GYPSUM BOARD

HEIGHT

HEATING, VENT AND

AIR CONDITIONING

INSIDE DIAMETER

INSULATION

INTERIOR

MAXIMUM

MINIMUM

METAL

NUMBER

NOT TO SCALE

ON CENTER

OVFRHEAD

OPENING

OPPOSITE

Sheet Index

PCT. PRE-CAST

MANUFACTURER

MISCELLANEOUS

MASONRY OPENING

OUTSIDE DIAMETER

JOINT

JOIST

GYPSUM

GALVINIZED

FOOT OR FEET

FACE OF BRICK

FINISH

FLOOR

FDN.

FLR.

FND.

F.O.B.

F.S.

FTG.

FURR.

GALV.

GYP.

INSUL.

JST.

MAX.

MFR.

MIN.

MISC.

M.O.

MTL.

N.T.S.

0.D.

OPG.

OPP.

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TOTAL NUMBER OF SHEETS

* LATEST INDIVIDUAL SHEET REVISION ISSUED

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ANCHOR BOL

AGGREGATE

ALTERNATE

BOARD

BUILDING

BLOCK

RFAM

ROTTOM

CONTROL JT

CONCRETE

MASONRY

CONCRETE

CONNECTION

CONTINUOUS

COMPONENTS

STRUCTURAL ENGR

PALTIMN

CONSTR. CONSTRUCTION

DEG. DEGREE

DET./DTL. DETAIL

DIAG. DIAGONAL

DIA. ø DIAMETER

EL. ELEV. ELEVATION

ELEV. ELEVATION

EQUIP. EQUIPMENT

EXT. EXTERIOR

DRAWING

FXISTING

EXPANSION JOINT

AND FINISH SYSTEM

E.I.F.S. EXTERIOR INSULATION

EACH

EQUAL

EACH WAY

EXPANSION

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Concrete Details

raming Details

raming Details

Framing Details

Framing Details

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CLEAR

BLK'G. BLOCKING

BTWN. BETWEEN

ARCHITECTURA

APPROX. APPROXIMATE

AGGR.

ALT.

ARCH.

BLDG.

BD.

BLK

BM.

BOT.

C.J.

CLR.

COL.

CONC.

CONN.

CONT.

DWG.

(E)

EQ.

EXP.

Sheet

S1.0

S2.7

S3.0

S4.0

S5.0

CSE

C.M.U.

-20 20

SUBMITTAL SET ONLY NOT FOR CONSTRUCTION THESE DRAWINGS ARE SUBJECT TO REVISIONS PENDING LOCAL JURISDICTIONAL REVIEW.

- Solutions (4) Structures A Structural Engineering Corporation

STRUCTURAL NOTES-TABLES

-	WIND	PRES	SURE	TABLI	E FOI	2
CO	MPON:	ENTS	& CI	LADDIN	G (A	SD)
		R	OOF SURFACES	1		
EFFECTIVE	POSI ⁻	TIVE PRESSURE			TIVE PRESSUR	E (PSF)
WIND AREA			Z	ONE ²		
	1	2	3	1	2	3
10 SF	7.80	7.80	7.80	-12.39	-21.56	-31.89
20 SF	7.04	7.04	7.04	-12.01	-19.65	-29.59
50 SF	6.27	6.27	6.27	-11.62	-17.74	-27.3
100 SF	5.51	5.51	5.51	-11.24	-15.83	-25.0
500 SF	5.51	5.51	5.51	-11.24	-15.83	-25.0
		W	ALL SURFACES			
EFFECTIVE	POSI ⁻	TIVE PRESSURE	(PSF)	NEGA	TIVE PRESSUR	E (PSF)
WIND AREA			Z	ONE ²		
	4		5	4		5
10 SF	12.18		12.18	-13.21		-16.31
20 SF	11.56		11.56			-15.07
50 SF	10.94		10.94			-13.83
100 SF	10.32		10.32	-11.36		-12.57
500 SF	9.08		9.08	-10.12		-10.12

NET WIND PRESSURES AT ROOF SURFACES = VALUE FROM TABLE ABOVE +2/3 DEAD LOAD (DEAD LOAD REDUCES NEGATIVE PRESSURE + ADDS TO POSITIVE PRESSURES) ZONES ARE DEFINED BY FIGURE 30.6-1 ASCE/SE1 07-10 FOR ROOF AND WALL ELEMENTS

2018 International Building Code — Statement of Special Inspection

	SOIL & FOUNDATIONS						
	MATERIAL/ TYPE	IBC CODE	REFERENCE	FRE	QUENCY APPLICA	BLE	
	INSPECTION	REFERENCE	STANDARD		TO THIS PROJECT	Τ	SCOPE OF SERVICE
1	INSPECTION	REFERENCE	STANDARD	CONT.	PERIODIC	REQUIRED	SCOPE OF SERVICE
	Site Preparation	Table 1705.6 Item 5	-	-	X	N/A	Inspection to determine that the site has been prepared in accordance with the approved soils or geotechnical report.
	Prepared Fill — During Fill Preparation	Table 1705.6 Item 4	I	X	-	YES	Inspection to determine that the materials being used and maximum lift thicknesses comply with the approved report as specified in Section 1804.2.
	Evaluation of in-place Density	Table 1705.6 Item 3	-		Х	YES	Tests to determine, at the approved frequency, that the in-place dry density of the compacted fill complies with the approved report.
	Footings and Foundations	1805.1 — 1805.9 Table 1705.6 Item 1	-	-	X	YES	Confirm soils suitable for the design allowable soil bearing pressure are present at bearing grade. Confirm the footing dimensions are as specified on the project plans.
	Foundation Depth	Table 1705.6 Table 1705.6 Item 2	-	-	X	YES	Confirm excavation are extended to proper depth and have reached proper materials.

2018 International Building Code - Statement of Special Inspection CONCRETE CONSTRUCTION

MATERIAL/ TYPE	IBC CODE	REFERENCE	FR	EQUENCY APPLICAL TO THIS PROJECT	BLE	SCOPE OF SERVICE
INSPECTION	REFERENCE	STANDARD	CONT.	PERIODIC	REQUIRED	
Materials	1705.3.1, Table 1705.3 Item 1	Applicable ASTM material spec.; AISC 360, Section A3.3	_	Х	YES	Manufacturer's Certificates of Compliance or Tests per Chapter 3 of ACI 318, per ASTM A 706, and per 1705.3.1
Installation of Reinforcing Steel	1910.4 Table 1705.3 Item 1	ACI 318:3.5; 7.1 – 7.7	-	X	YES	Inspection to confirm compliance with details shown on approved Construction Documents, Shop Drawings, ACI 318 and Code Section 1910.4
Welding of Reinforcing Steel	Table 1705.3 Item 2	AWS D1.4, ACI 318:3.5.2	-	-	N/A	Observation of reinforcing steel welding in accordance with Table 1705.2.2, Item 2, (see attached steel construction table).
Bolt Installation	1908.5, 1901.1 Table 1705.3 Item 3	ACI 318: 8.1.3, 21.2.8	X	-	YES	Observation of anchor bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased.
Formwork	Table 1705.3 Item 12	ACI 318:6.1.1	-	X	YES	Inspection for compliance with ACI 318, Section 6.1, 6.2, for shape, location and dimensions of concrete member being formed.
Concrete Strength	1910.10, Table 1705.3 Item 6	ASTM C 172, ASTM C 31, ACI 318:5.6, 5.8	1	Х	NO	Evaluation of Concrete strength in accordance with ACI 318, Section 5.6 and in accordance with the requirements of IBC 1905.6.
Concrete Mixes	1904.2, 1910.2, 1910.3 Table 1705.3 Item 5	ACI 318: 4, 5.2-5.4	ı	X	YES	Inspection for use of proper mix proportions and techniques, ACI 318, Chapter 4, Sections 5.2 — 5.4.
-	-		-	-	_	-
Concrete Sampling	1910.10 Table 1705.3 Item 6	ASTM C 172, ASTM C 31, ACI 318:5.6, 5.8	Х	-	МО	
Concrete Placement	1910.6, 1910.7, 1910.8, Table 1705.3 Item 7	ACI 318:5.9, 5.10	Х	-	YES	Inspection for proper application techniques; ACI 318, Sections 5.9 and 5.10
Curing Temperatures and Techniques	1910.9 Table 1705.3 Item 8	ACI 318: 5.11-5.13	ı	Х	NO	Inspection for maintenance of curing temperatures and techniques; ACI 318, Sections 5.11, 5.12 and 5.13.
Prestressed Concrete: Application Prestressing Forces	Table 1705.3 Item 9a	ACI 318: 18.20, ACI 18.18.4	X	-	NO	Field inspections of precast concrete members in accordance with ACI 318, Section 18.20.
Prestressed Concrete: Grouting of unbonded prestressing tendons in seismic—force—resisting system	Table 1705.3 Item 9b	ACI 318: 18.20, ACI 18.18.4	Х	-	NO	Field inspections of precast concrete members in accordance with ACI 318, Chapter 18.18.4.
Manufacture of Precast Concrete	1704.2.1	-	-	X	NO	Certificate from Independent Agency and current agreement for periodic (minimum 6 month intervals) in—plant quality assurance inspections.
Erection of Precast Concrete	Table 1705.3 Item 10	ACI 318: 16	-	Х	NO	Field inspections of precast concrete members in accordance with ACI 318, Chapter 16.
Post Tensioning	Table 1705.3 Item 11	ACI 318: 6.2	-	Х	NO	Verification of in—situ concrete strength, prior to stressing of tendons in post—tensioned concrete and prior to removal of shores and forms for beams and structural slabs in accordance with ACI 318, Section, 6.2.
Post Installed Anchors	1909.1, Table 1705.3 Item 11	ACI 318: 3.8.6, 8.1.3, 21.1.8	_	Х	YES	Verification of anchors post installed in hardened concrete members.

2018	International	Building	Code	_	Statement	of	Special	Inspection	
WAAD	CONCTRUCTA	ON							

WOOD CONSTRUCTION						
MATERIAL/ TYPE INSPECTION	IBC CODE REFERENCE	REFERENCE STANDARD		FREQUENCY APPLICABLE TO THIS PROJECT		SCOPE OF SERVICE
INSPECTION	REFERENCE	STANDAND	CONT.	PERIODIC	REQUIRED	
Fabrication — Inspection of Fabricator's Quality Control Procedures	1704.2.5	-	-	Χ	YES	Certificate from Independent Agency and current agreement for periodic (minimum 6 month intervals) in—plant quality assurance inspections.

2018 International Building Code — Statement of Special Inspection

MATERIAL/ TYPE INSPECTION	IBC CODE REFERENCE REFERENCE STANDARD		FREQUENCY APPLICABLE TO THIS PROJECT			SCOPE OF SERVICE
INSPECTION	REFERENCE	STANDARD	CONT.	PERIODIC	REQUIRED	
Structural Steel	1705.11.1	AISC 341	Х	_	N/A	Observation of structural welding in accordance with AISC Seismic. Not required for 5/16" single pass fillet welds or welding of metal deck.
Structural Wood: Inspection of field gluing operations of elements of the seismic force resisting system.	1705.11.2	-	Х	_	N/A	Inspection of field gluing operations of elements of the seismic force resisting system.
Structural Wood: Inspection of nailing, bolting, anchoring and other fastening components the seismic force resisting system, including drag struts, braces and hold—downs.	1705.11.2	-	-	X	YES	Inspection of nailing, bolting, anchoring and other fastening components within the seismic force resisting system, including drag struts, braces and hold—downs. Not required for nailing o.c. spacing greater that 4" o.c.
Cold-formed Steel Framing	1705.11.3	-	-	Х	NO	Inspection of welding operations of elements of the seismic force resisting system.
Cold—formed Steel Framing	1705.11.3	-	-	Х	NO	Inspection of screw attachments, bolting, anchoring and other fastening components within the seismic force resisting system, including struts, braces and hold—downs.

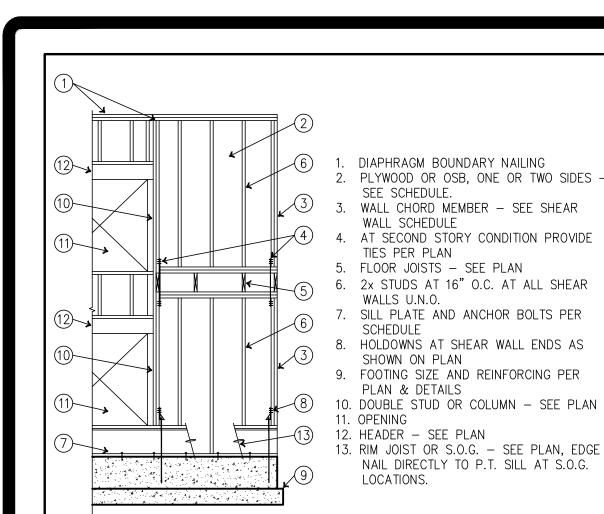
2018 International Building Code - Statement of Special Inspection

STRUCTURAL: OBSERVATIONS							
MATERIAL/ TYPE	MATERIAL/ TYPE IBC CODE REFERENCE STANDARD —		FREQUENCY APPLICABLE TO THIS PROJECT			SCOPE OF SERVICE	
INSPECTION			CONT.	PERIODIC	REQUIRED		
Strucutral Observations	1704.5	-	1	X		Structural observations to be preformed to observe general conformance to the construction documents.	

Special Inspection required per Chapter 17 of the 2018 IBC - SUBMIT REPORTS TO INSPECTORS WITH THE CITY OF PUYALLUP

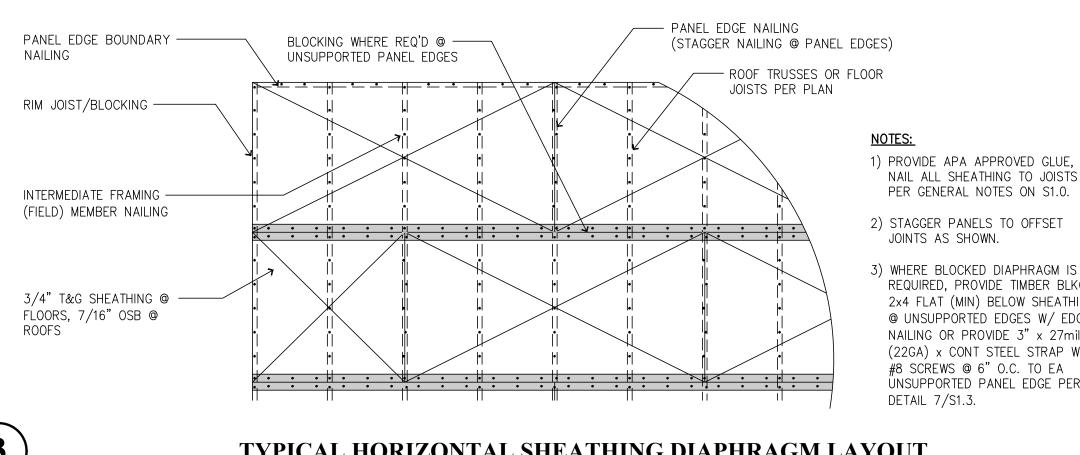


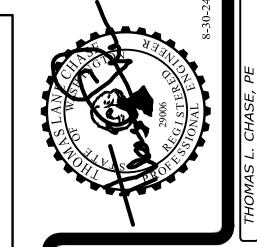
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THESE DRAWINGS ARE SUBJECT TO REVISIONS PENDING LOCAL JURISDICTIONAL REVIEW.



4'-0" MIN 1-1/2" 1-1/2" (12) 0.148"øx3" NAILS PER SPLICE └─ SPLICE SPLICE WHERE PLATE DISCONTINUITIES ARE CREATED BY BEAMS & PIPES, ETC. STRAP W/ (1)-SIMPSON CS16 x 28" W/ (13)-8d NAILS EA END AT EACH PLATE NOT ACHIEVING 4'-0" LAP UNLESS NOTED OTHERWISE TYPICAL TOP CHORD SPLICE

ADD'L COLLECTOR JOIST PER PLAN CS16x28 WITH (13)-10d -EA END (2) TOP PLATES — NOTE: CS16 MAY BE PLACED ALONG SIDE OF COLLECTOR JOIST AND CONT RIM AT FLOOR CONDITION AT CONTRACTORS OPTION. STRAP @ BEAM TO TOP PLATE

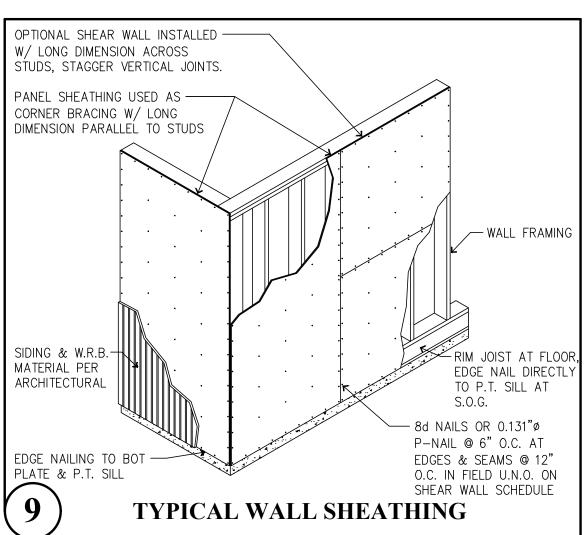




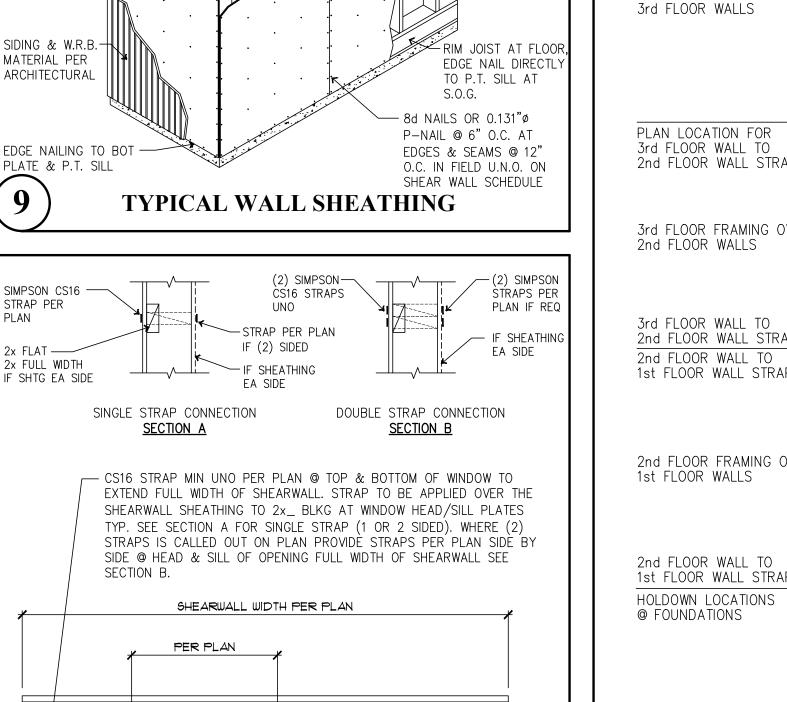
3) WHERE BLOCKED DIAPHRAGM IS REQUIRED, PROVIDE TIMBER BLKG 2x4 FLAT (MIN) BELOW SHEATHING @ UNSUPPORTED EDGES W/ EDGE NAILING OR PROVIDE 3" x 27mil (22GA) x CONT STEEL STRAP W/ #8 SCREWS @ 6" O.C. TO EA UNSUPPORTED PANEL EDGE PER

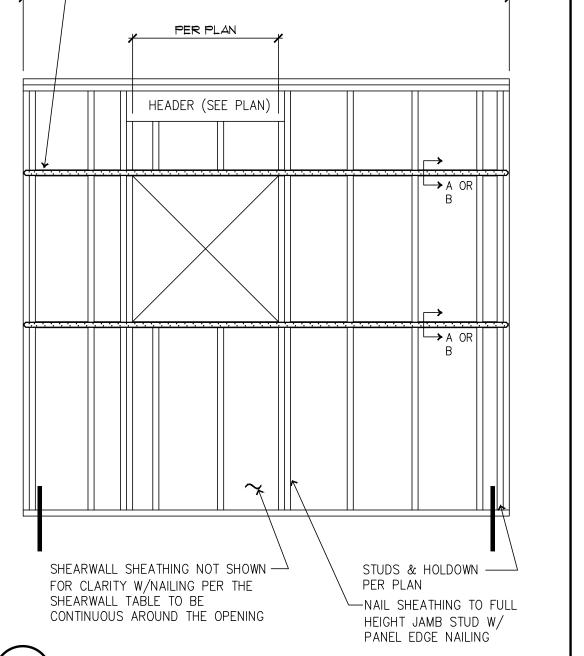
N.T.S.

TYPICAL HORIZONTAL SHEATHING DIAPHRAGM LAYOUT

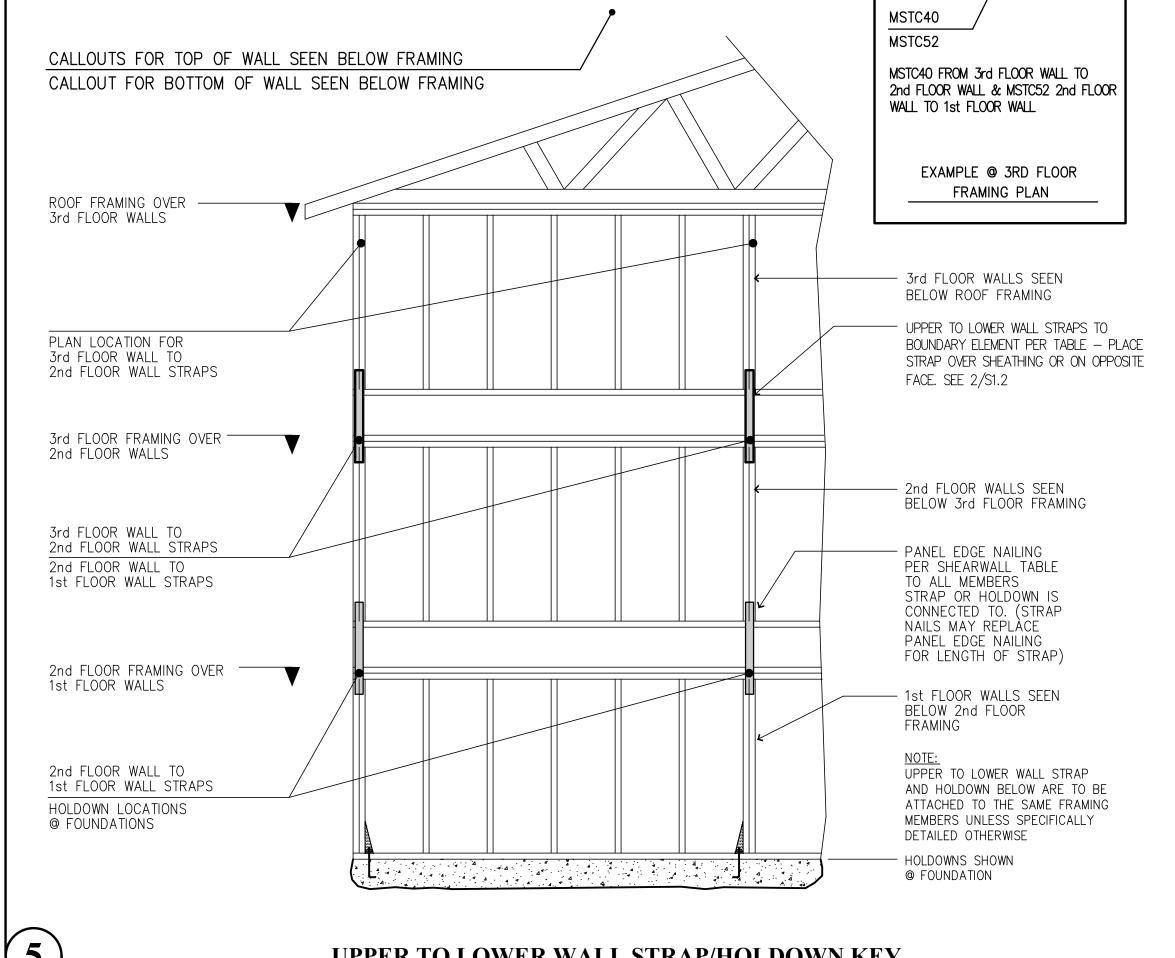


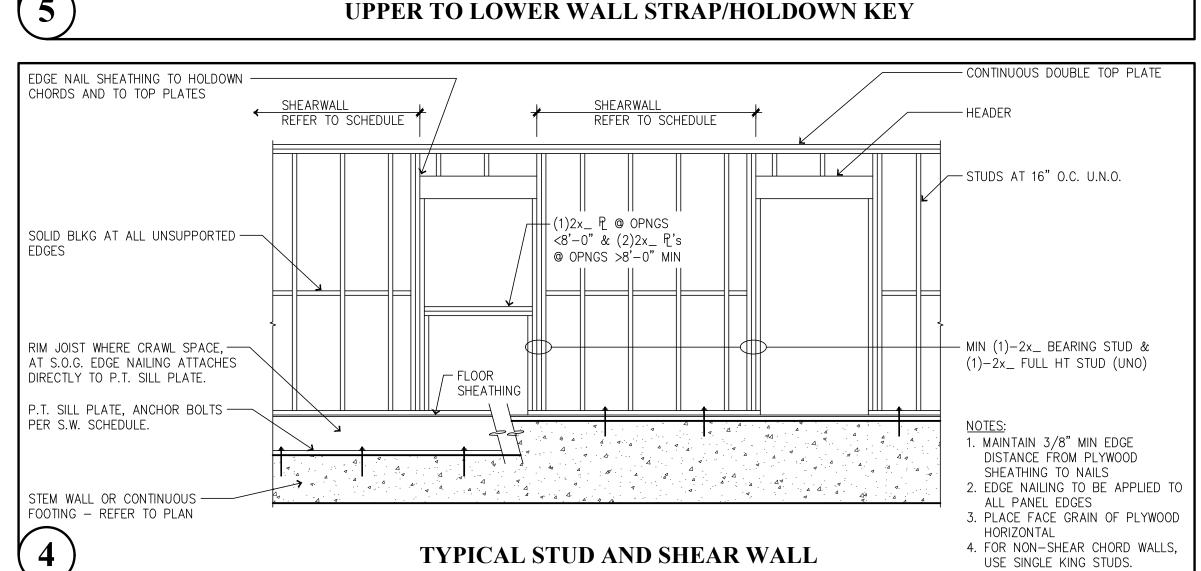
TYPICAL SHEAR WALL ELEVATION





SPECIAL SHEARWALL WITH OPENINGS





HOLDOWN TABLE												
MARK	BOUNDARY 2x4 WALL	Y ELEMENT 2x6 WALL	TOTAL FASTENERS	ANCHOR DIAMETER	ANCHOR EMBEDMENT	MIN EDGE DISTANCE WITHOUT ADD'L REINF						
MST37	4×4 #2 HF	4x6 #2 HF	(20) 16d	N/A	N/A	N/A						
MST48	4x4 #2 HF	4x6 #2 HF	(32) 16d	N/A	N/A	N/A						
(2)MST48	4x6 #2 HF	6x6 #2 DF	(46) 16d	N/A	N/A	N/A						
MST60	4x6 #2 HF	4x6 #2 HF	(64) 16d	N/A	N/A	N/A						
(2)MST60	4x6 #2 HF	6x6 #2 DF	PER MFR	N/A	N/A	N/A						
HDU2	4x4 #2 HF	4x6 #2 HF	PER MFR	5/8"	8"	4"						
HDU4	4x4 #2 HF	 4x6 #2 HF	PER MFR	5/8"	8"	4"						
HDU5	4x6 #2 HF	 4x6 #2 HF	PER MFR	5/8"	8"	8"						
HDU8	4x6 #2 DF	6x6 #2 DF	PER MFR	7/8"	12"	8"						
HDU11	4x6 #2 DF	6x6 #2 DF	PER MFR	1"	12"	12"						
HDU14	4x8 #2 DF	6x6 #2 DF	PER MFR	1"	12"	16"						

1) STRAP HOLDOWNS MAY BE APPLIED DIRECTLY TO BOUNDARY MEMBER ON OPPOSITE SIDE OF SHEATHING OR APPLIED DIRECTLY OVER PWD/OSB SHEATHING. DO NOT LOCATE STRAPS UNDER WOOD SHEATHING OF ANY TYPE OR OVER GYPSUM SHEATHING. (DO NOT INSTALL MSTC TYPE STRAPS OVER SHEATHING, SEE 4/S1.3)

2) NAIL SHEATHING PER SHEARWALL TABLE TO EACH BOUNDARY ELEMENT PER TABLE ABOVE. 3) ALIGN FLOOR TO FLOOR STRAPS WITH HOLDOWNS AT FOUNDATION, TYP. (SEE DETAIL 5/S1.2)

- 4) HOLDOWNS/STRAPS MUST BE ATTACHED TO FULL HEIGHT MEMBERS UNLESS NOTED OTHERWISE. BOUNDARY ELEMENTS ARE IN ADDITION TO TRIMMER/BEARING STUDS CALLED OUT ON PLAN. (SEE DETAILS 1,2 & 3/S1.3)
- 5) ANCHOR BOLTS SHALL BE CAST IN PLACE AND ALL ANCHORS EXCEPT HDU2 AND HDU4 REQUIRE ADDITIONAL REBAR IF EMBEDDED IN STEMWALLS OR IF MIN EDGE DISTANCE IS LESS THAN AS NOTED USE A STANDARD WASHER WITH A STANDARD NUT ON EACH SIDE AT BOTTOM OF ANCHOR. ADDITIONAL REINFORCEMENT SHALL BE PER DETAILS

6) THREADED RODS/ANCHORS ARE ASTM A307 OR ASTM F1554 U.N.O.

7) STRAPS/HOLDOWNS SHALL BE INSTALLED WITH THE FASTENERS SPECIFIED BY THE MANUFACTURER TO ACHIEVE THE MAXIMUM TABULATED LOAD & AS INDICATED IN THE

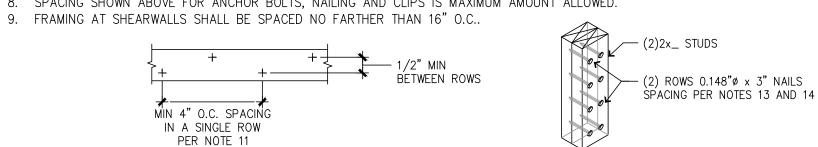
8) INSTALL HALF OF SPECIFIED FASTENERS EACH END OF STRAPS PER SIMPSON STRONGTIE.

9) SEE DETAIL 4/S1.3 FOR MSTC - HOLDOWN STRAPS FROM SHEARWALL TO BEAM & DETAIL 6/S1.3 FOR MSTC - HOLDOWN STRAPS @ END OF BEAM TO POST/COLUMN. (*) SYMBOL AT END OF MSTC STRAP CALLOUT (i.e. (2)MSTC48B3*) INDICATES STRAP IS INVERTED AND ATTACHES END OF BEAM TO POST BELOW PER

	SHEARWALL COMPONENT TABLE										
MARK	14 MARK	COMPONENTS	1/2" A.B. PL TO CONCRETE SPACING (IN)	5/8" A.B. PL TO CONCRETE SPACING (IN)	10d COMMON PL TO PL SPACING (IN)	SIMPSON A35 CLIP ANGLE SPACING (IN)	SIMPSON LTP4 CLIP ANGLE SPACING (IN)				
W1	W1P	7/16" PWD OR OSB, BLOCKED, W/ 8d NAILS @ 6" O.C. @ PANEL EDGES AND @ 12" O.C. @ FIELD.	47" O.C.	68" O.C.	8.1" O.C.	30" O.C.	29" O.C.				
W2	W2P	7/16" PWD OR OSB, BLOCKED, W/ 8d NAILS @ 4" O.C. @ PANEL EDGES AND @ 12" O.C. @ FIELD.	32" O.C.	47" O.C.	5.5" O.C.	20" O.C.	20" O.C.				
	W3P	7/16" PWD OR OSB, BLOCKED, W/ 8d NAILS @ 3" O.C. @ PANEL EDGES AND @ 12" O.C. @ FIELD. SEE NOTE 2	25" O.C.	36" O.C.	4.3" O.C.	16" O.C.	15" O.C.				
W4	W4P	7/16" PWD OR OSB, BLOCKED, W/ 8d NAILS @ 2" O.C. @ PANEL EDGES AND @ 12" O.C. @ FIELD. SEE NOTE 2	19" O.C.	28" O.C.	(2) ROWS 6.6" O.C. EA ROW	12" O.C.	12" O.C.				
W5	W5P	7/16" PWD OR OSB, BLOCKED, W/ 10d NAILS @ 2" O.C. @ PANEL EDGES AND @ 12" O.C. @ FIELD. SEE NOTE 2.	16" O.C.	23" O.C.	(2) ROWS 5.6" O.C. EA ROW	10" O.C.	10" O.C.				
W6	W7P	15/32" PWD OR OSB, (2) LAYERS (ONE EACH SIDE), BLOCKED, W/ 10d NAILS @ 3" O.C. @ PANEL EDGES AND @ 12" O.C. @ FIELD. SEE NOTE 2. 3 & 15	12" O.C.	18" O.C.	(2) ROWS 4.3" O.C. EA ROW	8" O.C.	8" O.C.				
	W7P	15/32" PWD OR OSB, (2) LAYERS (ONE EACH SIDE), BLOCKED, W/ 10d NAILS @ 2" O.C. @ PANEL EDGES AND @ 12" O.C. @ FIELD. SEE NOTE 2, 3, & 15	9" O.C.	14" O.C.	(2) ROWS 3" O.C. EA ROW STAGGERED	5" O.C.	5" O.C.				

- 1. ALL NAILING PER ANSI/AF & PA SDPWS 2018 TABLE 4.3A
- . USE 3x_ STUDS AT ALL ABUTTING PANEL EDGES. NAILS SHALL BE STAGGERED WHERE NAILS ARE SPACED AT 2" O.C. IF CALLOUT REQUIRES BLOCKING, SHEATHING MAY BE PLACED WITH THE LONGITUDINAL DIRECTION VERTICAL. STUDS AND PLATES WILL BE CONSIDERED TO ACT AS BLOCKING.
- 4. WALL SHEATHING CALLED OUT SHALL EXTEND FOR ENTIRE WALL LENGTH AT THAT ELEVATION AND SHALL BE CONTINUOUS AROUND OPENINGS TYPICALLY.
- 5. 8d NAILS ARE TO BE .131" AND 2-1/2" IN LENGTH. 10d NAILS ARE TO BE .148" AND A MINIMUM OF 3" IN LENGTH. 16d NAILS ARE TO BE .162" AND 3-1/4" IN LENGTH. NAILS SHALL BE INSTALLED SO AS TO NOT SPLIT THE TIMBER FRAMING.
- 6. SIMPSON A35 OR LTP4 CLIP ANGLES SHALL BE INSTALLED WITH THE APPROPRIATE FASTENERS PER THE MANUFACTURER'S SPECIFICATIONS
- 7. USE 3"x3"x0.229" PLATE WASHERS AT ALL ANCHOR BOLTS PER SECTION 4.3.6.4.3

8. SPACING SHOWN ABOVE FOR ANCHOR BOLTS, NAILING AND CLIPS IS MAXIMUM AMOUNT ALLOWED.



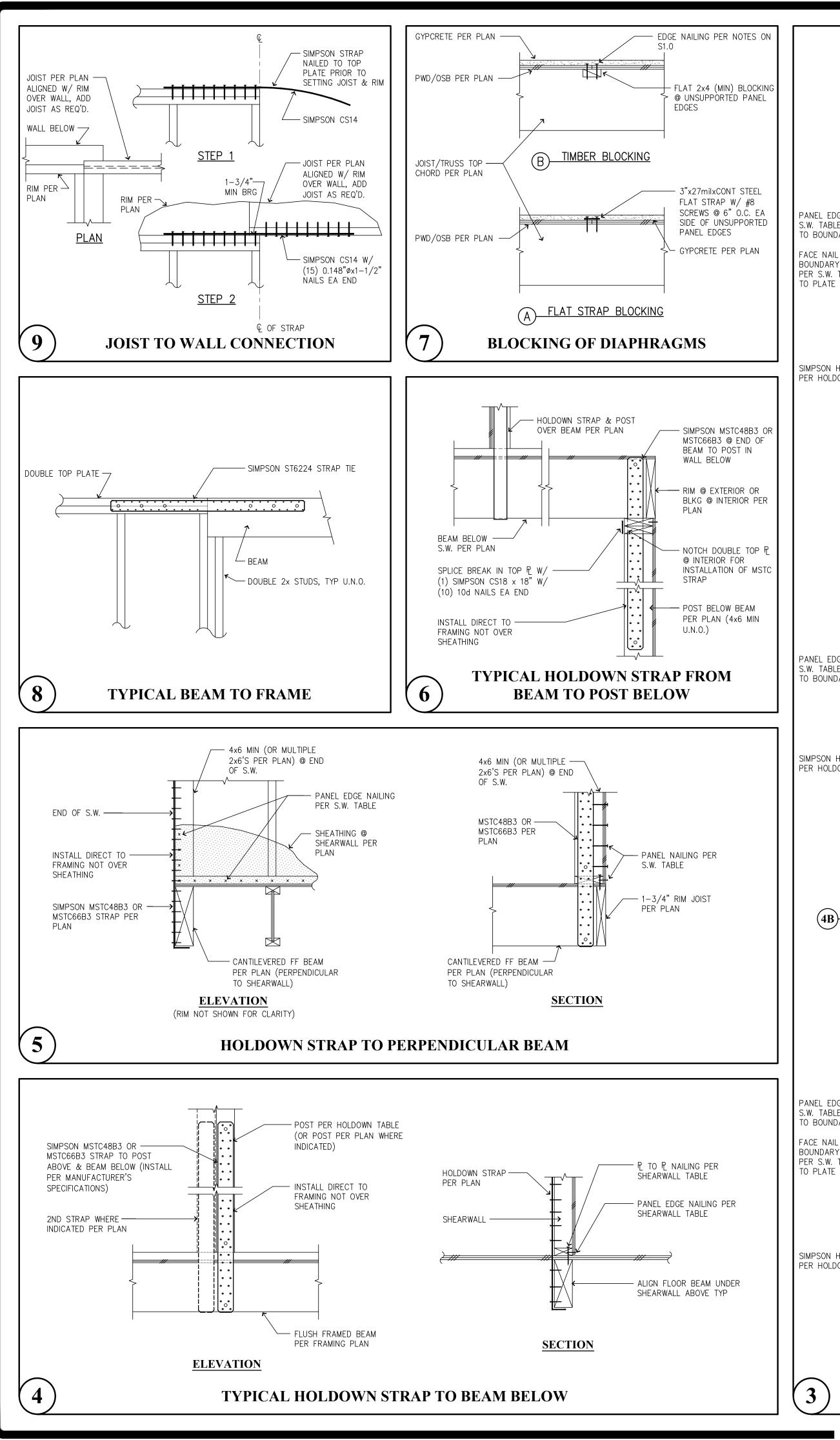
- 10. MINIMUM NAIL SPACING IN A SINGLE ROW SHALL BE 4 INCHES ON CENTER. USE (2) ROWS IF SPACING LESS THAN THIS. USE 2ND RIM BOARD, RIM JOIST OR BLOCKING WHERE THREE ROWS OF NAILING CALLED OUT.
- 11. EXTEND SHEATHING UP TO DOUBLE TOP PLATES AND INSTALL NAILS THROUGH SHEATHING INTO UPPER TOP PLATE PER TYPICAL DETAILS. NO PLATE TO PLATE NAILING REQUIRED IN DOUBLE TOP PLATES WITH THIS CONFIGURATION. 12. OPTIONAL TO USE (2) 2x's IN PLACE OF SINGLE 3x IN SHEARWALLS W3, W4 AND W5 W/ STITCH NAILING.
- 13. (2) ROWS OF 0.148" x 3" STITCH NAILING (2)2x_ STUDS TOGETHER @ 10" O.C. FOR W3 SHW, 8" O.C. FOR W4 SHW & 6" O.C. FOR W5 SHW PER SECTION 4.37 NOTE 4. 14. THE "W_P" INDICATES SHEAR WALL TYPE WITH OPENINGS. PROVIDE SHEATHING AROUND ALL OPENINGS AND ABOVE AND BELOW ALL OPENINGS. PROVIDE HORIZONTAL STRAPS & NAILING AT OPENINGS PER 8/S1.2

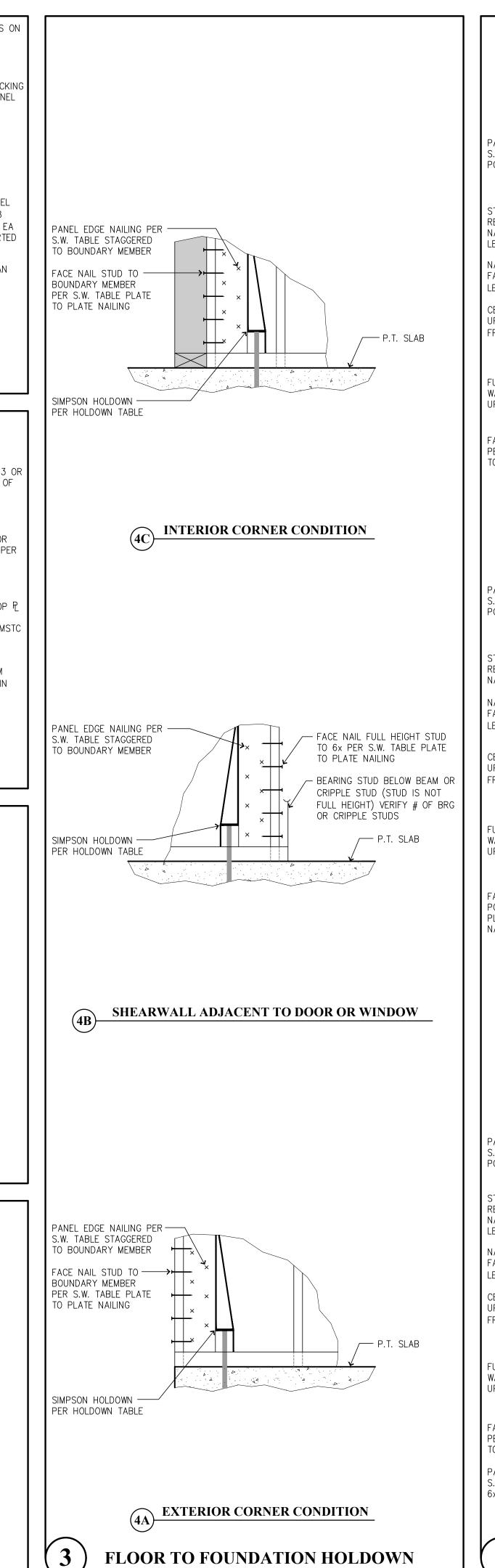
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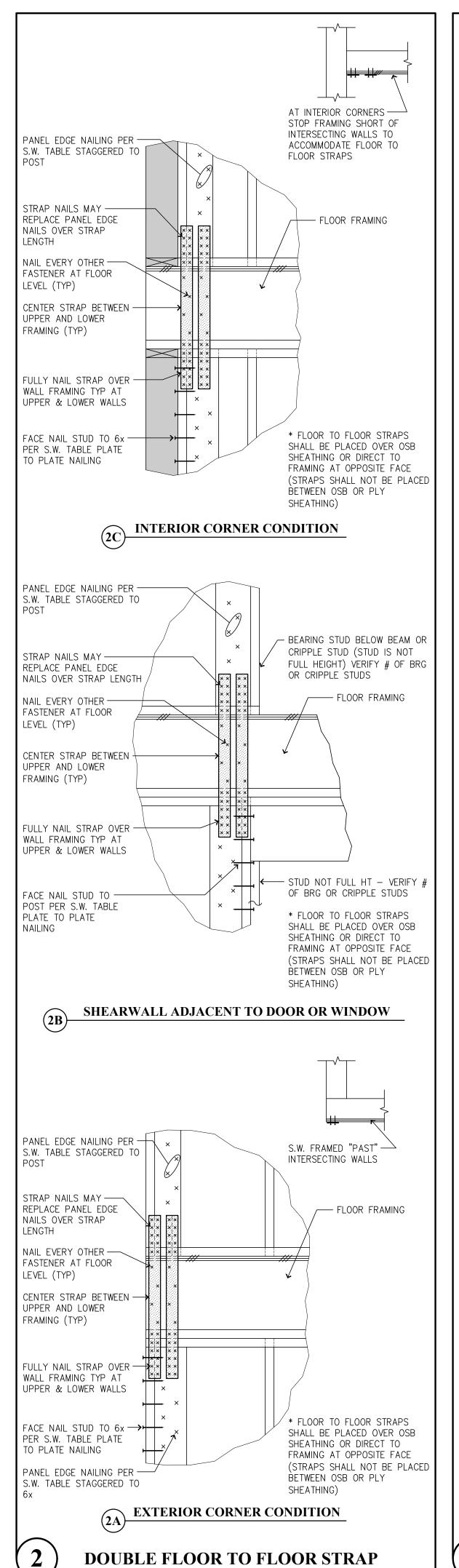
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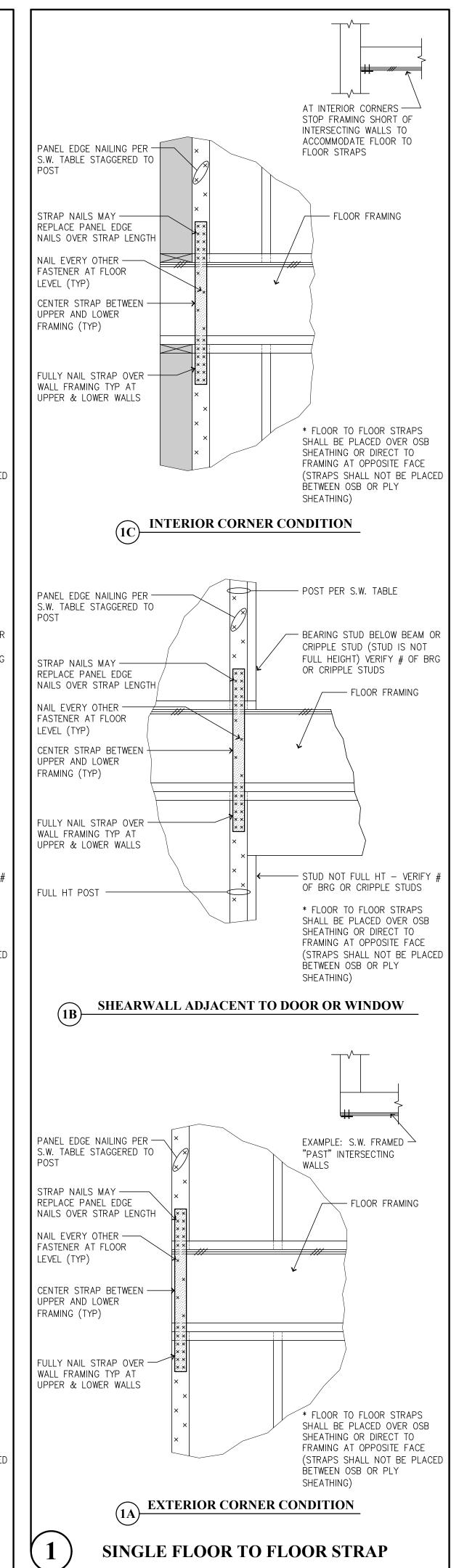
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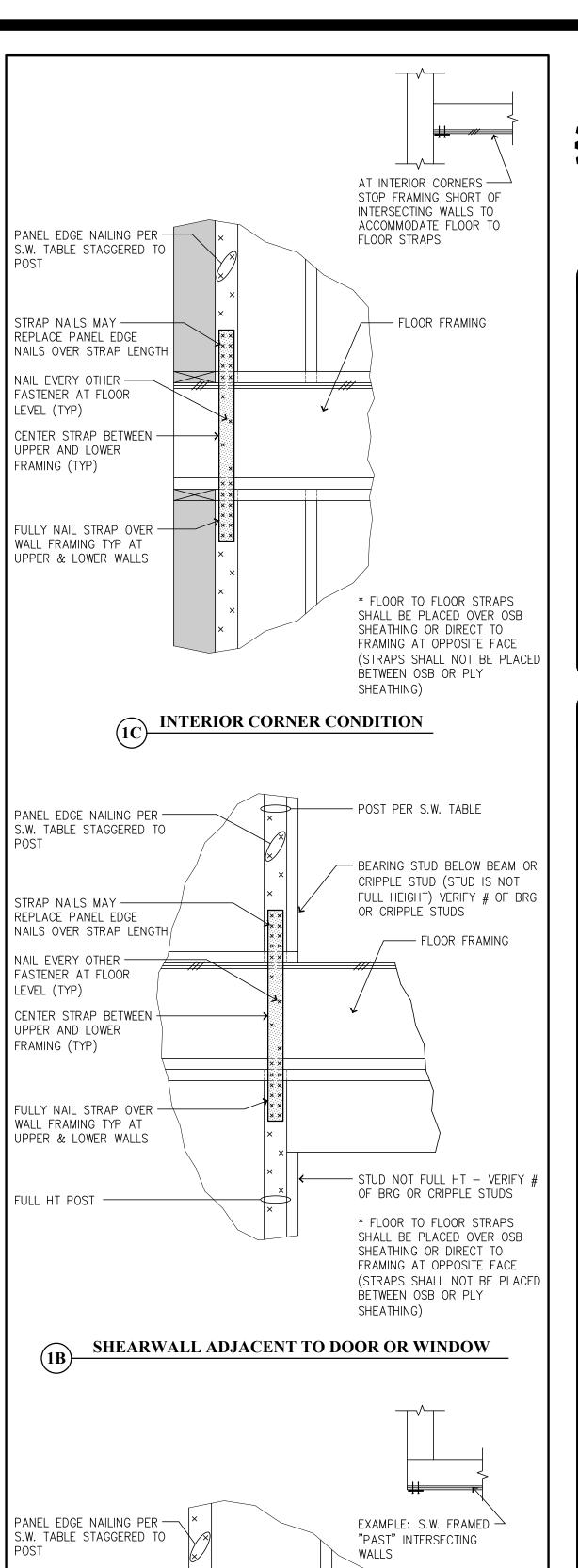
Solutions 4 Structures A Structural Engineering Corporation

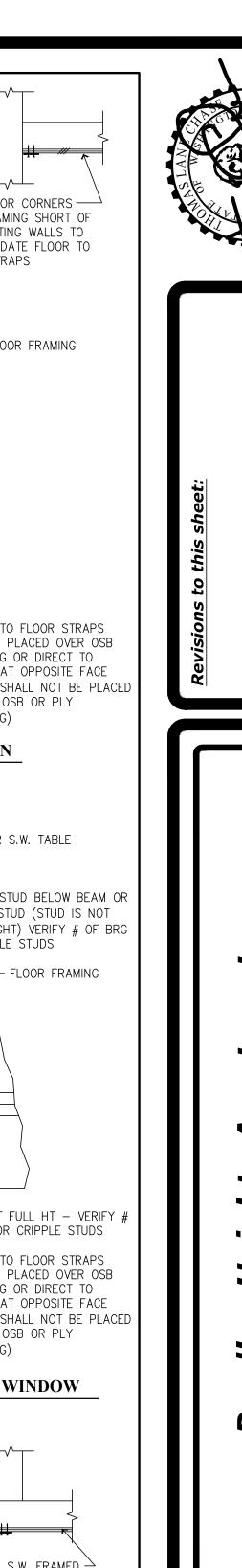


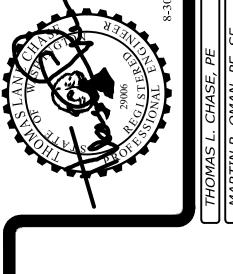












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- Solutions (4) Structures A Structural Engineering Corporation

FOR ALL UNITS TYPES SEE WALL STUD SCHEDULE FOR BEARING WALL STUD REQUIREMENTS. ALL OTHER NON-BEARING 2x4 & 2x6 WALLS ARE AT 16" O.C.

THE TRUSS AND JOIST MANUFACTURER SHALL VERIFY BEARING COMPATIBILITY (CRUSHING) WITH THE PLATE MATERIAL. TYPICALLY, COMPOSITE BEAMS SHALL BE FULLY BEARING ON 2x WALLS. I.E. BREAK RIM OR BLOCKING TO ALLOW FULL BEARING OVER PLATES.

PLACE LONG DIRECTION OF ALL OSB SHEETS PERPENDICULAR TO TRUSS/RAFTER OR JOIST DIRECTION, SEE DETAIL 3/S1.2. FLOOR SHEATHING IS TO BE CONTINUOUS FROM UNIT TO UNIT. TYPICAL NAILING AT FLOOR AND ROOF DIAPHRAGMS IS PROVIDED IN THE GENERAL STRUCTURAL NOTES ON SHEETS S1.0

W-DENOTES THE SHEARWALL TYPE, SEE THE SHEARWALL TABLE ON SHEET INDICATES SHEARWALL LOCATION, THE CALLOUTS ON THE SHEARWALL TABLE APPLY ONLY ALONG THE LENGTH OF WALL SHOWN SHADED. PROVIDE SOLID BLOCKING IN FLOOR SPACE BELOW PERPENDICULAR SHEARWALLS

<u>W_P</u> INDICATES SHEAR WALL TYPE WITH OPENINGS. PROVIDE SHEATHING AROUND ALL OPENINGS AND ABOVE AND BELOW ALL OPENINGS. PROVIDE HORIZONTAL STRAPS & NAILING AT OPENINGS PER 8/S1.2

THE DOUBLE TOP PLATE IS TO BE CONTINUOUS ALONG ALL EXTERIOR WALLS AND AT ALL WALL LINES CONTAINING SHEARWALLS. TYPICAL WALL TOP PLATE SPLICES SHALL BE PER DETAIL 7/S1.2 TYP.

WHERE COMPOSITE JOISTS AND BEAMS ARE USED AS DRAG STRUTS THE MANUFACTURER SHALL PROVIDE THE FRAMING MEMBERS WITH THE CAPACITY CALLED OUT ON THE PLANS.

TYPICAL FLOOR JOISTS SHALL BE 2x12 HF#2 MIN @ 16" O.C. TYP U.N.O. THE MANUFACTURER SHALL BE RESPONSIBLE FÖR ALL JOIST AND BEAM HANGERS, WEB STIFFENERS, SOLID BLOCKING, AND ADDITIONAL RIM OR JOIST MATERIAL T ACCOMMODATE FLUSH-FRAMED CONDITIONS (F.F.), CANTILEVERED CONDITIONS, CONCENTRATED BEARING LOADS AND NAILING FROM SHEARWALLS ABOVE AND

9. F.F. = FLUSH-FRAMED BEAM. VERIFY FLUSH OR DROPPED BEAM CONDITION

10. ALL BEAMS PER SCHEDULE U.N.O. ALL NON BEARING BEAMS SHALL BE A MIN OF (2)2x8 U.N.O. ALL OTHER BEAMS ARE AS MARKED ON PLANS.

. AT ALL BEAM BEARING/JAMB LOCATIONS, AT MINIMUM PROVIDE BEARING (TRIMMER) STUDS AND FULL HEIGHT (KING) STUDS PER THE JAMB STUD SCHEDULE FOR EACH BUILDING. IF NO CALLOUT, PROVIDE (1) 2X_ BEARING AND (1) 2X_ FULL HEIGHT STUD MINIMUM.

EXPOSED FRAMING SHALL BE PRESSURE TREATED (P.T.) VERTICAL & HORIZONTAL FRAMING @ WATERPROOFED WALKWAYS AND PRIVATE DECKS. ALL EXPOSED BEAM HANGERS SHALL BE POST HOT-DIPPED GALVANIZED AND HAVE CONCEALED FLANGES, VERIFY W/ ARCHITECT. SEE NOTE ON SHEET S1.0

. FOR TYPICAL HOLDOWN ASSEMBLIES SEE THE HOLDOWN TABLE ON 2/S1.2 AND DETAILS ON SHEET S3.0.

. SEE ARCHITECTURAL PLANS FOR STAIR FRAMING DETAILS & STAIR FRAMING DETAILS AND NOTES, CONTROL JOINTS IN CONCRETE FLOORING AND ROOF VENTILATION REQUIREMENTS AND DETAILS.

. SEE CIVIL AND ARCHITECTURAL PLANS FOR TOP OF WALL HEIGHTS AND ELEVATIONS. SEE ARCHITECTURAL PLANS FOR DIMENSIONS. WHERE DIMENSIONS ARE SHOWN ON THE STRUCTURAL PLANS, CONTRACTOR SHALL VERIFY COMPATIBILITY W/ ARCHITECTURAL PLANS. WHERE DISCREPANCY EXISTS, CONTRACTOR SHALL NOTIFY BOTH THE ENGINEER AND ARCHITECT FOR

WINDOW SUPPLIER TO VERIFY THAT WINDOW AND WINDOW FRAMES TRANSFER WIND LOADS EVENLY TO STRUCTURAL FRAMING ON ALL 4 SIDES OF WINDOW. PLANE OF ALL WINDOWS AND ALLOW FOR L/240 DEFLECTION (PERPENDICULAR) AT WINDOW MULLIONS.

17. SEE GENERAL STRUCTURAL NOTES ON S1.0 TO S1.3 FOR ADDITIONAL INFORMATION 18. LEGEND:

INDICATES BEAM / GIRDER TRUSS PER PLAN SEE FRAMING PLANS INDICATES HANGER PER MANUFACTURER INDICATES GIRDER TRUSS PER PLAN INDICATES JOIST / TRUSS BEARING @ WALL / BEAM INDICATES JOIST / TRUSS INTERMEDIATE BEARING @ WALL / BEAM

> INDICATES TYPICAL TOILET, BATHTUB & SHOWER LAYOUT. CONTRACTOR TO COORDINATE JOIST LAYOUT WITH FIXTURE LOCATIONS TO AVOID PLUMBING & FRAMING CONFLICTS.

INDICATES ROOF OVERFRAMING - SEE DETAILS 5/S5.0

PROVIDE WALL FIREBLOCKING @ DROPPED SOFFITS SHOWN ON ARCH.

PROVIDE WALL BLOCKING FOR ALL WALL MOUNTED EQUIPMENT (SUCH AS TOWEL

BARS, GRAB BARS, TOILET PAPER HOLDERS, DOOR STOPS, ETC.).

22. LFA INDICATES - LOAD FROM ABOVE

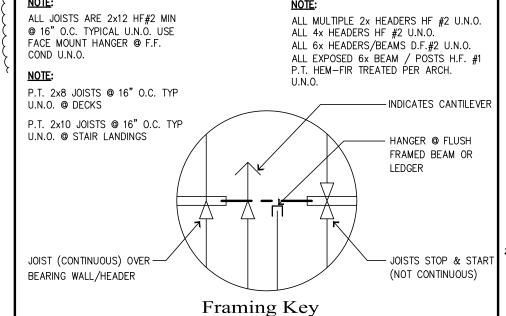
23. FF INDICATES FLUSH FRAMED BEAM

INDICATES STRAP HOLDOWN, SEE SHEET 2/S1.2 FOR HOLDOWN TABLE

& UPPER TO LOWER WALL STRAP/HOLDOWN KEY. 25. REFER TO ARCHITECTURAL DRAWINGS FOR ALL FLOOR ELEVATIONS.

SIMPSON STRONG TIE PRODUCTS ARE CALLED OUT ON THE DRAWINGS. HOWEVER, EITHER SIMPSON OR KC METALS PRODUCTS MAY BE USED PROVIDED IT HAS

SAME OR GREATER CAPACITY.



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## SEE SHEET S1.2 FOR SHEARWALL AND HOLDOWN TABLES

|      | Beam Schedule                        |
|------|--------------------------------------|
| MARK | BEAM SIZE                            |
| B1   | 4x8                                  |
| B2   | 4x10                                 |
| В3   | 6x10 DF #2                           |
| B4   | 3-1/8 x 10-1/2 GLB                   |
| B5   | P.T. 4x8                             |
| В6   | P.T. 4x10                            |
| В7   | P.T. 6x10 HF#1                       |
| B8   | P.T. 3-1/8 x 10-1/2 GLB              |
| В9   | P.T. 5-1/8 x 10-1/2 GLB              |
| B10  | 5-1/8x10-1/2 GLB OR 5-1/4x11-7/8 PSL |
| B11  | 4x12 OR 3-1/2x11-7/8 LSL             |
|      |                                      |

|--|

|                      | J   | amb | Stuc | l Sch | edul | e   |   |   |
|----------------------|-----|-----|------|-------|------|-----|---|---|
| TYPE                 | C1  | C2  | C3   | C4    | C5   | C6  | _ | - |
| ING/FULL HT<br>STUDS | 1/2 | 1/3 | 2/1  | 2/2   | 2/3  | 2/4 | - | ı |

NOTE: STUD SIZE SHOULD MATCH WALL SIZE PER PLAN.

|                  |                |                              | Stud Sc                      |                          |                          |
|------------------|----------------|------------------------------|------------------------------|--------------------------|--------------------------|
| FRAMING<br>LEVEL | 2x6 EXTERIOR   | 2x6 BRG INT @<br>SINGLE WALL | 2x6 BRG INT @<br>PARTY WALLS | 2x4 BRG @<br>Single Wall | 2x4 BRG @<br>PARTY WALLS |
| R00F             | 2x6 @ 16" O.C. | 2x6 @ 16" O.C.               | 2x6 @ 16" O.C.               | 2x4 HF#2 @ 16" O.C.      | 2x4 HF#2 @ 16" O.C.      |
| 3RD              | 2x6 @ 16" O.C. | 2x6 @ 16" O.C.               | 2x6 @ 16" O.C.               | 2x4 HF#2 @ 16" O.C.      | 2x4 HF#2 @ 16" O.C.      |
| 2ND              | 2x6 @ 16" O.C. | 2x6 @ 16" O.C.               | 2x6 @ 16" O.C.               | (2)2x4 HF#2 @ 16" O.C.   | 2x4 HF#2 @ 16" O.C.      |
| BASEMENT         | 2x6 @ 16" O.C. | 2x6 @ 12" O.C.               | 2x6 @ 16" O.C.               | (2)2x4 HF#2 @ 12" O.C.   | 2x4 HF#2 @ 16" O.C.      |

ALL STUD MATERIAL SHALL BE HEM FIR STUD GRADE OR BETTER UNLESS NOTED OTHERWISE AND PLATE MATERIAL SHALL BE HEM FIR STANDARD OR BETTER UNLESS NOTED OTHERWISE. THAT IS WALLS BELOW THE FRAMING LEVEL SHOWN. THIS SCHEDULE COVERS BUILDING UNITS 3 STORIES IN HEIGHT. FIRST, DETERMINE THE NUMBER OF STORIES FOR THE UNIT, SECOND, DETERMINE THE FRAMING LEVEL, THIRD, READ SCHEDULE HORIZONTALLY FOR THE WALL LOCATION.

#### **Foundation Notes**

TYPICAL DIMENSIONS ARE TO FACE OF WALL OR TO CENTERLINE OF COLUMN OR FOOTING. VERIFY ALL DIMENSIONS & ELEVATIONS WITH THE ARCHITECT.

PROVIDE FOOTING SUBSTRATE PREPARATION PER THE SOILS REPORT.

3. F-.- INDICATES ISOLATED FOOTING TYPICAL ISOLATED FTG SHALL BE CONSTRUCTED PER FOOTING SCHEDULE 5/S3.0.

EXTEND ALL CONTINUOUS FOOTINGS AT END WALLS 1'-0" MIN. BEYOND END OF ALL BEARING WALLS & SHEARWALLS. (TYPICAL) UNO

ALL EXTERIOR WALLS SHALL HAVE AN 8" STEMWALL AND A 18" WIDE x 8" DEEP FOOTING W/ STEEL REINFORCING 3" CLR. OF SOIL UNLESS NOTED OTHERWISE

ADD STRIP DRAINS AT FACE OF BUILDINGS WHEN WALKS SLOPE TOWARD BUILDING, CONNECT TO TIGHTLINE.

PROVIDE #4-24" x 24" CORNER BARS TO MATCH ALL HORIZONTAL REINFORCEMENT IN STEMWALLS AND FOOTINGS. (TYPICAL)

FLOOR SLABS - 4" CONC. SLAB ON GRADE 6x6 - W1.2xW1.2 WWF @ CENTER-LINE OR FIBER MESH PER MANUFACTURER OVER SUBSTRATE PER SOILS ENGINEER, USE WWF WHERE INDICATED. PROVIDE CONTROL JOINTS PER DETAIL 15/S3.0 AT THE DIRECTION OF THE ARCHITECT.

9. ENTRY SLABS - 4" CONC. SLAB (BROOM FINISH)

10. PATIO SLABS - 4" CONC. W/ THICKENED EDGES. SLOPE AWAY FROM BUILDING AT 1/4"/FT. SEE 3/S3.0

1. ALL THICKENED SLABS FOR BEARING WALLS AND PARTY WALLS SHALL BE 18" WIDE x 12" DEEP W/ (2) #4 BARS CONTINUOUS UNLESS NOTED OTHERWISE. DEEPEN LOCALLY AT HOLDOWNS TO OBTAIN EMBEDMENT DEPTH +3" MIN.

12. ALL THICKENED EDGE SLABS SHALL BE 8" WIDE x 8" DEEP W/ (1) #4 BAR CONTINUOUS (3" FROM BOTTOM) UNLESS NOTED OTHERWISE. SEE 3/S3.0.

13. <u>/W-\</u> DENOTES THE SHEARWALL TYPE, SEE THE SHEARWALL TABLE ON SHEET INDICATES SHEARWALL LOCATION, THE CALLOUTS ON THE SHEARWALL TABLE APPLY ONLY ALONG THE LENGTH OF WALL SHOWN SHADED. PROVIDE SOLID BLOCKING IN FLOOR SPACE BELOW PERPENDICULAR SHEARWALLS. W\_P\ INDICATES SHEAR WALL TYPE WITH OPENINGS. PROVIDE SHEATHING

AROUND ALL OPENINGS AND ABOVE AND BELOW ALL OPENINGS. PROVIDE HORIZONTAL STRAPS & NAILING AT OPENINGS PER 8/S1.2

INDICATES HOLDOWN, SEE 2/S1.2 FOR HOLDOWN TABLE & UPPER TO LOWER WALL STRAPS HOLDOWN/KEY.

15. VERIFY ALL TOP OF SLAB ELEVATIONS AND BUILDING STEPS WITH ARCH/CIVIL PLANS TYPICAL.

16. TYPICAL PERIMETER FOOTING SHALL BE LOCATED A MIN. 18" BELOW GRADE OR AS REQUIRED BY LOCAL JURISDICTION.

17. SEE DETAILS FOR TYPICAL STEMWALL/FOOTING & THICKENED SLAB CONSTRUCTION. 18. T.O.W. = TOP OF STEMWALL

T.O.F. = TOP OF FOOTINGT.O.S. = TOP OF SLAB

19. SEE THE GENERAL STRUCTURAL NOTES ON SHEET S1.0 FOR ADDITIONAL

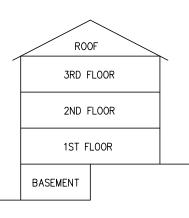
20. VERIFY WITH CIVIL GRADING PLAN FOR GARAGE SLAB ELEVATION @ GARAGE

21. DEEPEN FOOTINGS AS NECESSARY TO MAINTAIN MINIMUM COVER. COORDINATE WITH CIVIL GRADING PLAN FOR GRADE CONDITIONS.

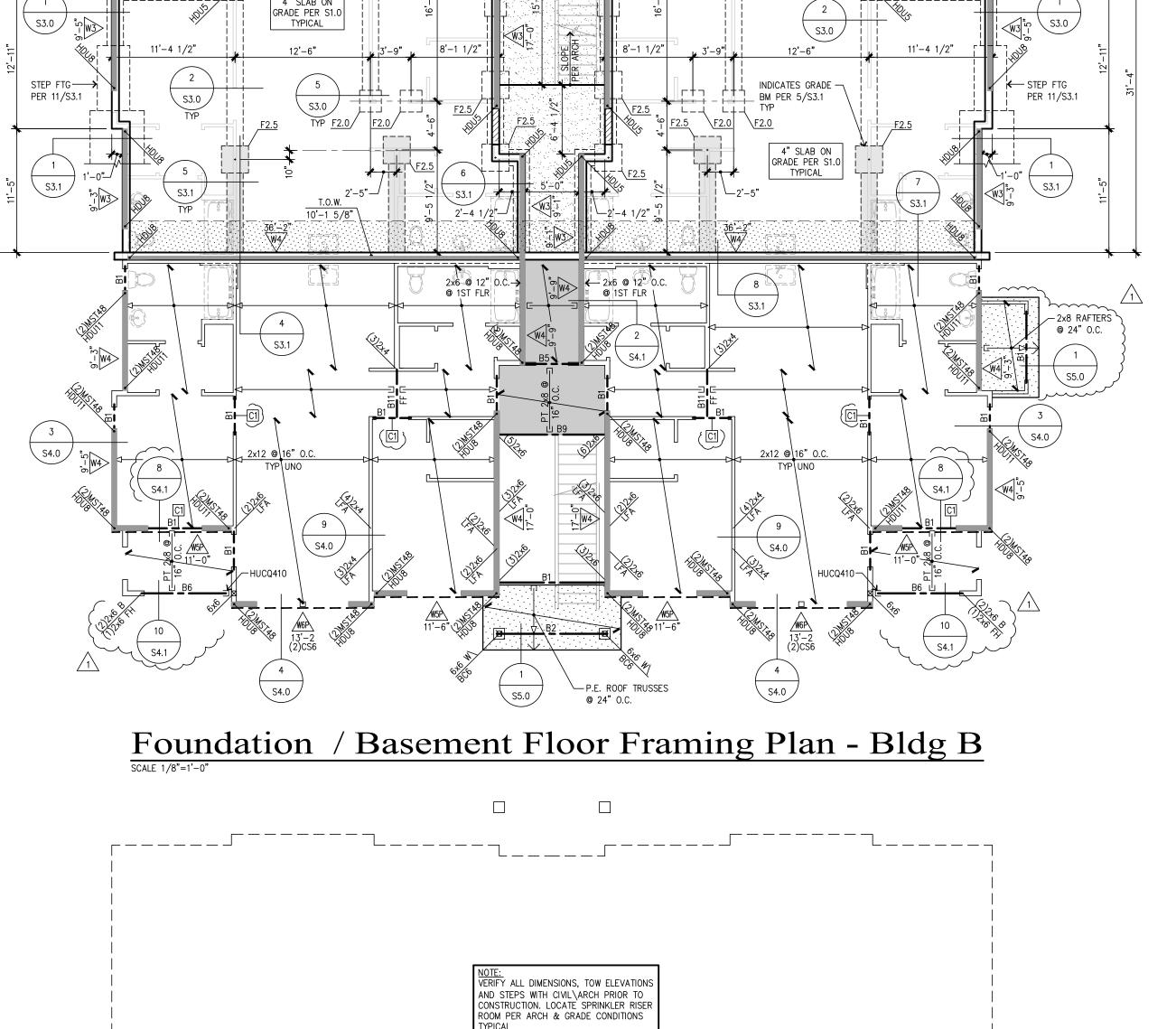
22. INDICATES DEPRESSED TOP OF STEMWALL AT DOORWAY. POUR SLAB OVER SEE 4/S3.0.

23. ALL INTERSECTING FOOTINGS / STEM WALLS SHALL HAVE CORNER BARS TO MATCH HORIZ REINFORCEMENT SEE 10/S3.0

| (            | Continu | ous Wall Footir | ng Schedule       |  |  |  |  |  |
|--------------|---------|-----------------|-------------------|--|--|--|--|--|
| REINFORCMENT |         |                 |                   |  |  |  |  |  |
| "W"          | "D"     | LONGITUDINAL    | TRANSVERSE        |  |  |  |  |  |
| 1'-6"        | 12"     | (2)-#4 BOT      | ı                 |  |  |  |  |  |
| 2'-0"        | 12"     | (3)-#4 BOT      | _                 |  |  |  |  |  |
| 3'-0"        | 14"     | (3)-#5 BOT      | #4 @ 18" O.C. BOT |  |  |  |  |  |



3/4 Bldg Split Key



11'-0 1/2"

TOS=10'-1 5/8"

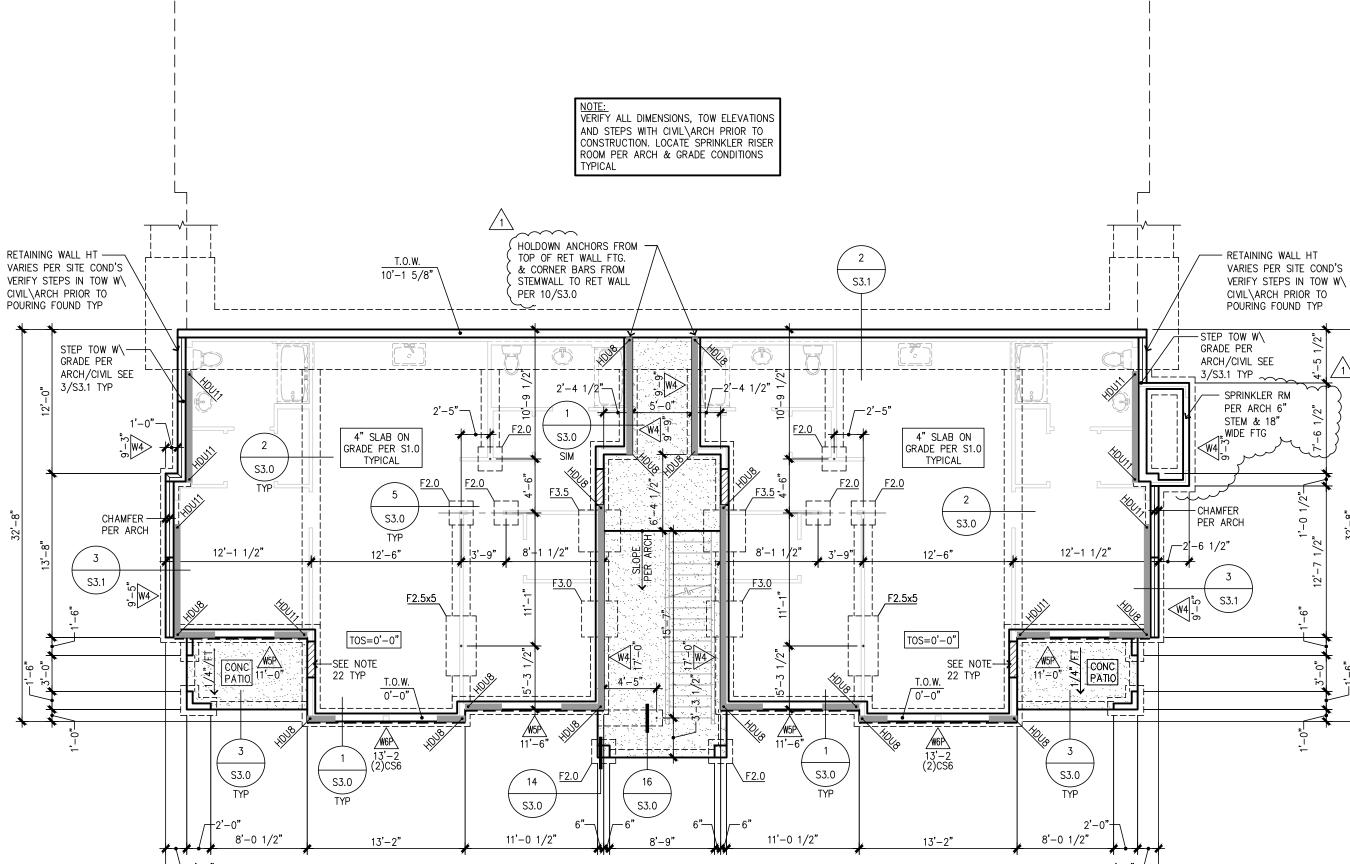
11'-0 1/2"

11'-0 1/2"

11'-0 1/2"

S3.0 /

√ S3.0 /



Foundation Plan Basement - Bldg B

CONSTRUCTION

SUBMITTAL SET ONLY NOT FOR

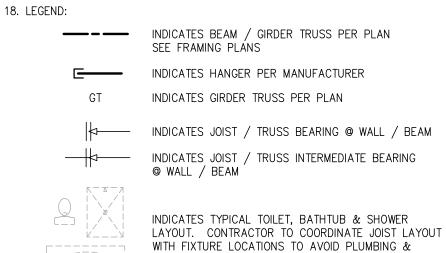
THESE DRAWINGS ARE SUBJECT TO REVISIONS PENDING LOCAL JURISDICTIONAL REVIEW.

- ROOF AND FLOOR JOIST LOCATIONS ARE SCHEMATICALLY SHOWN ON THE PLANS. IT IS NOT THE INTENT OF THE STRUCTURAL PLANS TO GRAPHICALLY LOCATE ALL FRAMING MEMBERS. THE ARCHITECT SHALL VERIFY THE COMPATIBILITY OF JOIST LAYOUT AND FRAMING W/ MECHANICAL, ELECTRICAL & PLUMBING AND ARCHITECTURAL PLANS. THE CONTRACTOR IS RESPONSIBLE FOR SPACING FRAMING MEMBERS AS NOTED ON THE PLANS AND GENERATING MEMBER LAYOUT FOR SHOP DRAWINGS AND QUANTITY TAKEOFFS.
- FOR ALL UNITS TYPES SEE WALL STUD SCHEDULE FOR BEARING WALL STUD REQUIREMENTS. ALL OTHER NON-BEARING 2x4 & 2x6 WALLS ARE AT 16" O.C.
- THE TRUSS AND JOIST MANUFACTURER SHALL VERIFY BEARING COMPATIBILITY (CRUSHING) WITH THE PLATE MATERIAL. TYPICALLY, COMPOSITE BEAMS SHALL BE FULLY BEARING ON 2x\_ WALLS. I.E. BREAK RIM OR BLOCKING TO ALLOW

FULL BEARING OVER PLATES.

- PLACE LONG DIRECTION OF ALL OSB SHEETS PERPENDICULAR TO TRUSS/RAFTER OR JOIST DIRECTION, SEE DETAIL 3/S1.2. FLOOR SHEATHING IS TO BE CONTINUOUS FROM UNIT TO UNIT. TYPICAL NAILING AT FLOOR AND ROOF DIAPHRAGMS IS PROVIDED IN THE GENERAL STRUCTURAL NOTES ON SHEETS \$1.0
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- <u>W\_P</u> INDICATES SHEAR WALL TYPE WITH OPENINGS. PROVIDE SHEATHING AROUND ALL OPENINGS AND ABOVE AND BELOW ALL OPENINGS. PROVIDE HORIZONTAL STRAPS & NAILING AT OPENINGS PER 8/S1.2
- THE DOUBLE TOP PLATE IS TO BE CONTINUOUS ALONG ALL EXTERIOR WALLS AND AT ALL WALL LINES CONTAINING SHEARWALLS. TYPICAL WALL TOP PLATE SPLICES SHALL BE PER DETAIL 7/S1.2 TYP.
- WHERE COMPOSITE JOISTS AND BEAMS ARE USED AS DRAG STRUTS THE MANUFACTURER SHALL PROVIDE THE FRAMING MEMBERS WITH THE CAPACITY CALLED OUT ON THE PLANS.
- TYPICAL FLOOR JOISTS SHALL BE 2x12 HF#2 MIN @ 16" O.C. TYP U.N.O. THE MANUFACTURER SHALL BE RESPONSIBLE FÖR ALL JOIST AND BEAM HANGERS, WEB STIFFENERS, SOLID BLOCKING, AND ADDITIONAL RIM OR JOIST MATERIAL TO ACCOMMODATE FLUSH-FRAMED CONDITIONS (F.F.), CANTILEVERED CONDITIONS, CONCENTRATED BEARING LOADS AND NAILING FROM SHEARWALLS ABOVE AND
- 9. F.F. = FLUSH-FRAMED BEAM. VERIFY FLUSH OR DROPPED BEAM CONDITION
- 10. ALL BEAMS PER SCHEDULE U.N.O. ALL NON BEARING BEAMS SHALL BE A MIN OF (2)2x8 U.N.O. ALL OTHER BEAMS ARE AS MARKED ON PLANS.
- . AT ALL BEAM BEARING/JAMB LOCATIONS, AT MINIMUM PROVIDE BEARING (TRIMMER) STUDS AND FULL HEIGHT (KING) STUDS PER THE JAMB STUD SCHEDULE FOR EACH BUILDING. IF NO CALLOUT, PROVIDE (1) 2X\_ BEARING AND (1) 2X\_ FULL HEIGHT STUD MINIMUM.
- EXPOSED FRAMING SHALL BE PRESSURE TREATED (P.T.) VERTICAL & HORIZONTAL FRAMING @ WATERPROOFED WALKWAYS AND PRIVATE DECKS. ALL EXPOSED BEAM HANGERS SHALL BE POST HOT-DIPPED GALVANIZED AND HAVE CONCEALED FLANGES, VERIFY W/ ARCHITECT. SEE NOTE ON SHEET S1.0
- 3. FOR TYPICAL HOLDOWN ASSEMBLIES SEE THE HOLDOWN TABLE ON 2/S1.2 AND DETAILS ON SHEET S3.0.
- E. SEE ARCHITECTURAL PLANS FOR STAIR FRAMING DETAILS & STAIR FRAMING DETAILS AND NOTES, CONTROL JOINTS IN CONCRETE FLOORING AND ROOF VENTILATION REQUIREMENTS AND DETAILS.
- 15. SEE CIVIL AND ARCHITECTURAL PLANS FOR TOP OF WALL HEIGHTS AND ELEVATIONS. SEE ARCHITECTURAL PLANS FOR DIMENSIONS. WHERE DIMENSIONS ARE SHOWN ON THE STRUCTURAL PLANS, CONTRACTOR SHALL VERIFY COMPATIBILITY W/ ARCHITECTURAL PLANS. WHERE DISCREPANCY EXISTS, CONTRACTOR SHALL NOTIFY BOTH THE ENGINEER AND ARCHITECT FOR
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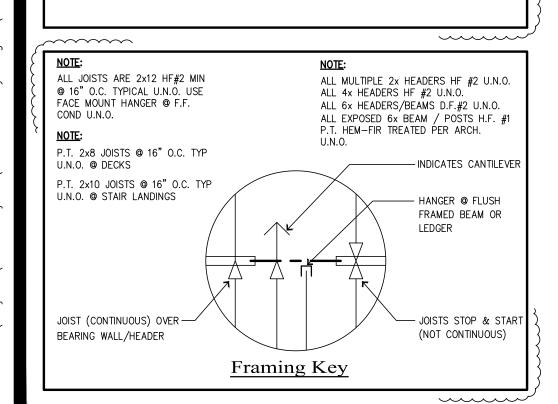
17. SEE GENERAL STRUCTURAL NOTES ON S1.0 TO S1.3 FOR ADDITIONAL INFORMATION



INDICATES ROOF OVERFRAMING - SEE DETAILS 5/S5.0

FRAMING CONFLICTS.

- PROVIDE WALL FIREBLOCKING @ DROPPED SOFFITS SHOWN ON ARCH.
- PROVIDE WALL BLOCKING FOR ALL WALL MOUNTED EQUIPMENT (SUCH AS TOWEL BARS, GRAB BARS, TOILET PAPER HOLDERS, DOOR STOPS, ETC.).
- 22. LFA INDICATES LOAD FROM ABOVE
- 23. FF INDICATES FLUSH FRAMED BEAM
- INDICATES STRAP HOLDOWN, SEE SHEET 2/S1.2 FOR HOLDOWN TABLE % UPPER TO LOWER WALL STRAP/HOLDOWN KEY.
- 25. REFER TO ARCHITECTURAL DRAWINGS FOR ALL FLOOR ELEVATIONS.
- . SIMPSON STRONG TIE PRODUCTS ARE CALLED OUT ON THE DRAWINGS. HOWEVER, EITHER SIMPSON OR KC METALS PRODUCTS MAY BE USED PROVIDED IT HAS



### SEE SHEET S1.2 FOR SHEARWALL AND HOLDOWN TABLES

|      | Beam Schedule                        |
|------|--------------------------------------|
| MARK | BEAM SIZE                            |
| B1   | 4x8                                  |
| B2   | 4x10                                 |
| В3   | 6x10 DF #2                           |
| B4   | 3−1/8 x 10−1/2 GLB                   |
| B5   | P.T. 4x8                             |
| В6   | P.T. 4x10                            |
| В7   | P.T. 6x10 HF#1                       |
| B8   | P.T. 3-1/8 x 10-1/2 GLB              |
| В9   | P.T. 5-1/8 x 10-1/2 GLB              |
| B10  | 5-1/8x10-1/2 GLB OR 5-1/4x11-7/8 PSL |
| B11  | 4x12 OR 3-1/2x11-7/8 LSL             |
|      |                                      |

| ~~~~ |
|------|

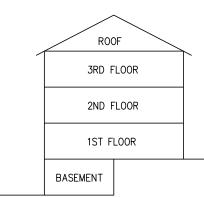
| Jamb Stud Schedule       |     |     |     |     |     |     |   |   |
|--------------------------|-----|-----|-----|-----|-----|-----|---|---|
| TYPE                     | C1  | C2  | C3  | C4  | C5  | C6  | _ | _ |
| BEARING/FULL HT<br>STUDS | 1/2 | 1/3 | 2/1 | 2/2 | 2/3 | 2/4 | - | _ |

NOTE: STUD SIZE SHOULD MATCH WALL SIZE PER PLAN.

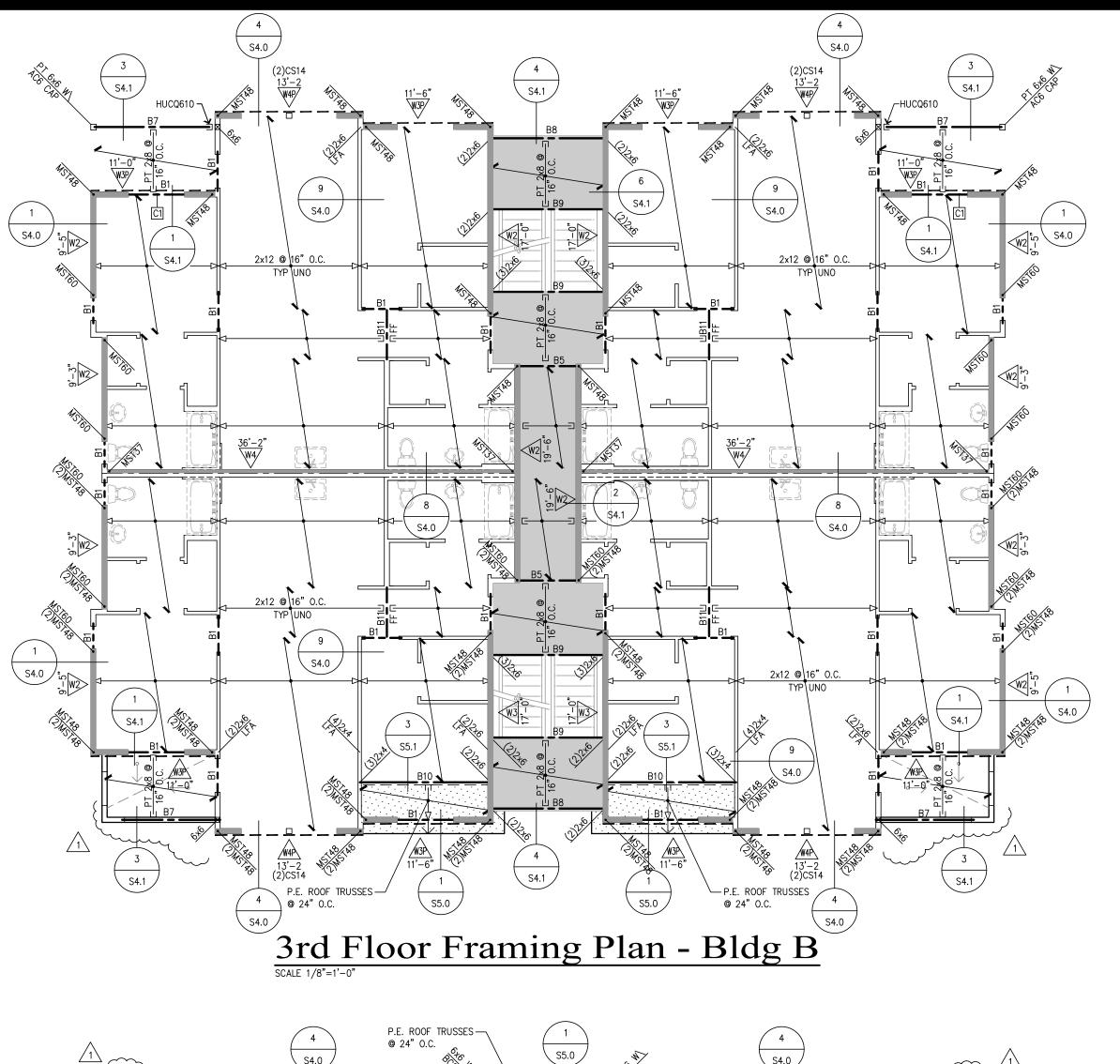
HORIZONTALLY FOR THE WALL LOCATION.

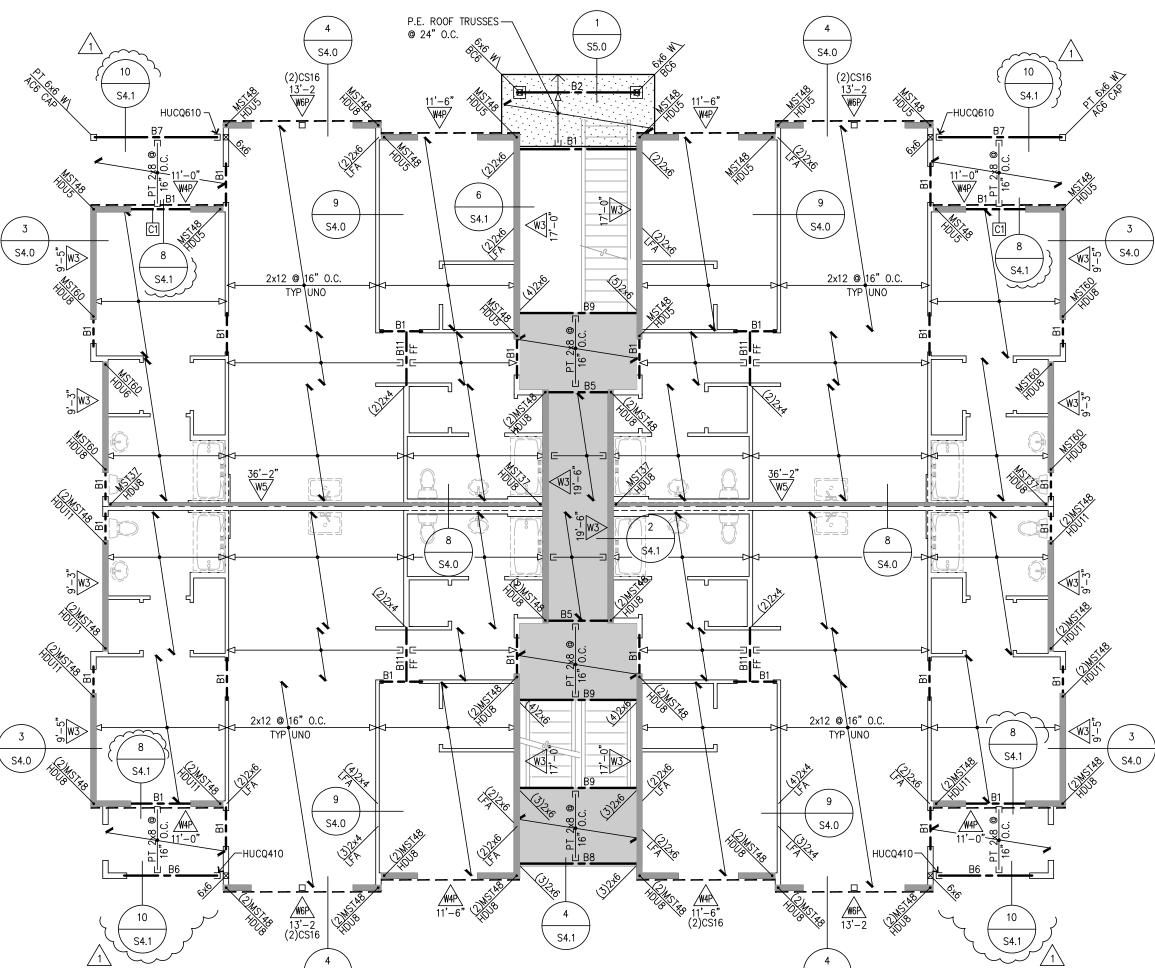
|                  |                | Wall                         | Stud Sc                      | hedule                          |                          |
|------------------|----------------|------------------------------|------------------------------|---------------------------------|--------------------------|
| FRAMING<br>LEVEL | 2x6 EXTERIOR   | 2x6 BRG INT @<br>SINGLE WALL | 2x6 BRG INT @<br>PARTY WALLS | 2x4 BRG <b>©</b><br>Single Wall | 2x4 BRG @<br>PARTY WALLS |
| ROOF             | 2x6 @ 16" O.C. | 2x6 @ 16" O.C.               | 2x6 @ 16" O.C.               | 2x4 HF#2 @ 16" O.C.             | 2x4 HF#2 @ 16" 0.0       |
| 3RD              | 2x6 @ 16" O.C. | 2x6 @ 16" O.C.               | 2x6 @ 16" O.C.               | 2x4 HF#2 @ 16" O.C.             | 2x4 HF#2 @ 16" O.0       |
| 2ND              | 2x6 @ 16" O.C. | 2x6 @ 16" O.C.               | 2x6 @ 16" O.C.               | (2)2x4 HF#2 @ 16" O.C.          | 2x4 HF#2 @ 16" O.0       |
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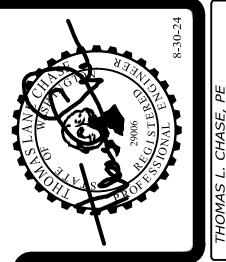


3/4 Bldg Split Key





2nd Floor Framing Plan - Bldg B



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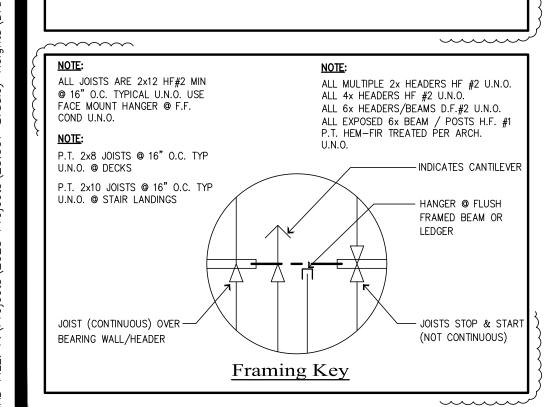
17. SEE GENERAL STRUCTURAL NOTES ON \$1.0 TO \$1.3 FOR ADDITIONAL INFORMATION 18. LEGEND:

INDICATES BEAM / GIRDER TRUSS PER PLAN SEE FRAMING PLANS INDICATES HANGER PER MANUFACTURER INDICATES GIRDER TRUSS PER PLAN INDICATES JOIST / TRUSS BEARING @ WALL / BEAM INDICATES JOIST / TRUSS INTERMEDIATE BEARING @ WALL / BEAM

INDICATES TYPICAL TOILET, BATHTUB & SHOWER LAYOUT. CONTRACTOR TO COORDINATE JOIST LAYOUT WITH FIXTURE LOCATIONS TO AVOID PLUMBING & FRAMING CONFLICTS.

INDICATES ROOF OVERFRAMING - SEE DETAILS 5/S5.0

- PROVIDE WALL FIREBLOCKING @ DROPPED SOFFITS SHOWN ON ARCH.
- PROVIDE WALL BLOCKING FOR ALL WALL MOUNTED EQUIPMENT (SUCH AS TOWEL BARS, GRAB BARS, TOILET PAPER HOLDERS, DOOR STOPS, ETC.).
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## SEE SHEET S1.2 FOR SHEARWALL AND HOLDOWN TABLES

|      | Beam Schedule                        |  |  |  |  |  |
|------|--------------------------------------|--|--|--|--|--|
| MARK | BEAM SIZE                            |  |  |  |  |  |
| B1   | 4x8                                  |  |  |  |  |  |
| B2   | 4x10                                 |  |  |  |  |  |
| В3   | 6x10 DF #2                           |  |  |  |  |  |
| B4   | 3-1/8 x 10-1/2 GLB                   |  |  |  |  |  |
| B5   | P.T. 4x8                             |  |  |  |  |  |
| В6   | P.T. 4x10                            |  |  |  |  |  |
| В7   | P.T. 6x10 HF#1                       |  |  |  |  |  |
| В8   | P.T. 3-1/8 x 10-1/2 GLB              |  |  |  |  |  |
| В9   | P.T. 5-1/8 x 10-1/2 GLB              |  |  |  |  |  |
| B10  | 5-1/8x10-1/2 GLB OR 5-1/4x11-7/8 PSL |  |  |  |  |  |
| B11  | 4x12 OR 3-1/2x11-7/8 LSL             |  |  |  |  |  |
|      |                                      |  |  |  |  |  |

| Jamb Stud Schedule     |     |     |     |     |     |     |   |   |  |
|------------------------|-----|-----|-----|-----|-----|-----|---|---|--|
| TYPE                   | C1  | C2  | C3  | C4  | C5  | C6  | - | 1 |  |
| ARING/FULL HT<br>STUDS | 1/2 | 1/3 | 2/1 | 2/2 | 2/3 | 2/4 | - | - |  |

NOTE: STUD SIZE SHOULD MATCH WALL SIZE PER PLAN.

| Wall Stud Schedule |                |                              |                              |                          |                          |
|--------------------|----------------|------------------------------|------------------------------|--------------------------|--------------------------|
| FRAMING<br>LEVEL   | 2x6 EXTERIOR   | 2x6 BRG INT @<br>SINGLE WALL | 2x6 BRG INT @<br>PARTY WALLS | 2x4 BRG @<br>SINGLE WALL | 2x4 BRG ©<br>PARTY WALLS |
| ROOF               | 2x6 @ 16" O.C. | 2x6 @ 16" O.C.               | 2x6 @ 16" O.C.               | 2x4 HF#2 @ 16" O.C.      | 2x4 HF#2 @ 16" 0.        |
| 3RD                | 2x6 @ 16" O.C. | 2x6 @ 16" O.C.               | 2x6 @ 16" O.C.               | 2x4 HF#2 @ 16" O.C.      | 2x4 HF#2 @ 16" 0.        |
| 2ND                | 2x6 @ 16" O.C. | 2x6 @ 16" O.C.               | 2x6 @ 16" O.C.               | (2)2x4 HF#2 @ 16" O.C.   | 2x4 HF#2 @ 16" 0.        |
| BASEMENT           | 2x6 @ 16" O.C. | 2x6 @ 12" O.C.               | 2x6 @ 16" O.C.               | (2)2x4 HF#2 @ 12" O.C.   | 2x4 HF#2 @ 16" 0.        |

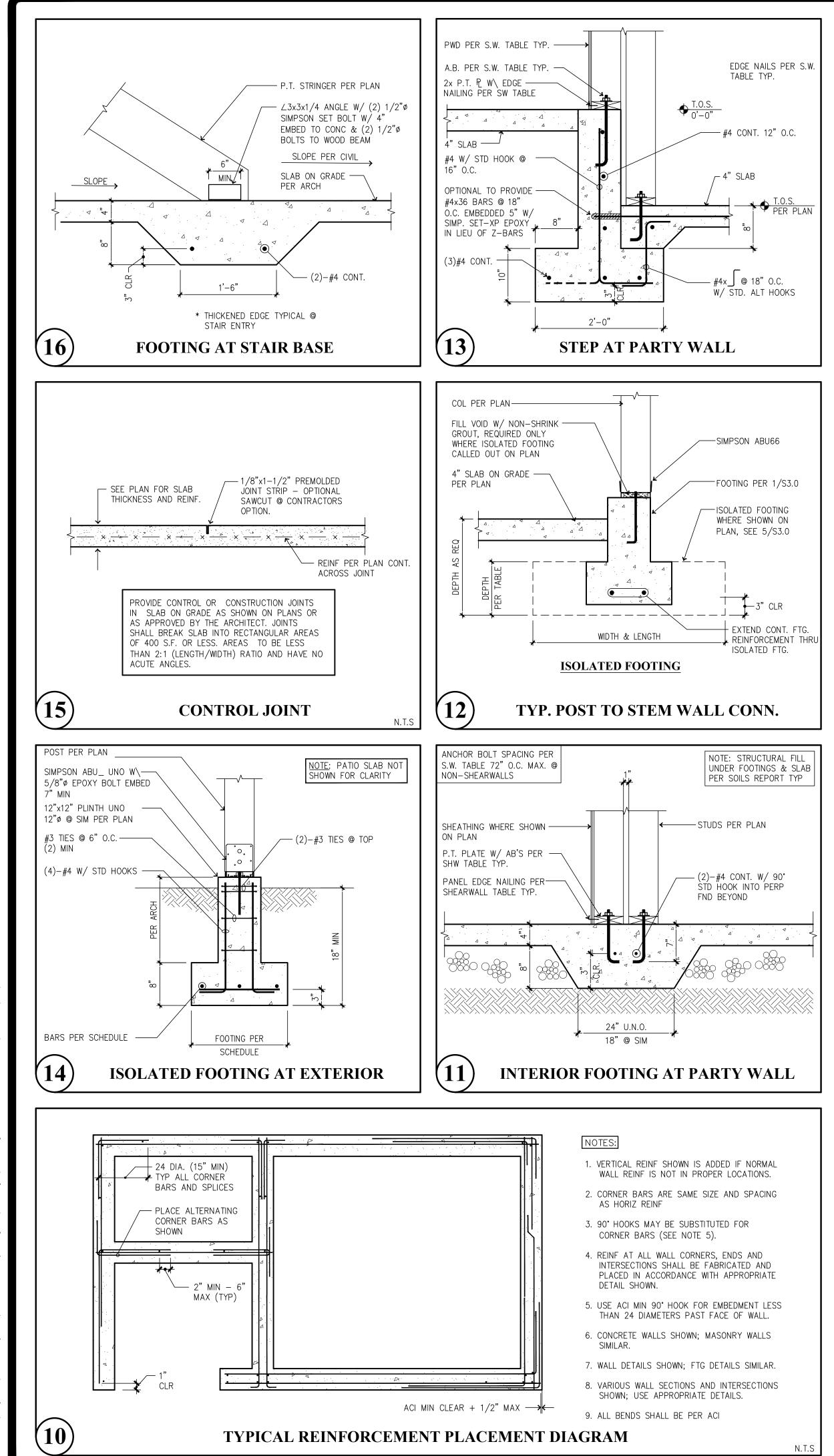
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- THIS SCHEDULE COVERS BUILDING UNITS 3 STORIES IN HEIGHT. FIRST, DETERMINE THE NUMBER OF STORIES FOR THE UNIT, SECOND, DETERMINE THE FRAMING LEVEL, THIRD, READ SCHEDULE HORIZONTALLY FOR THE WALL LOCATION.

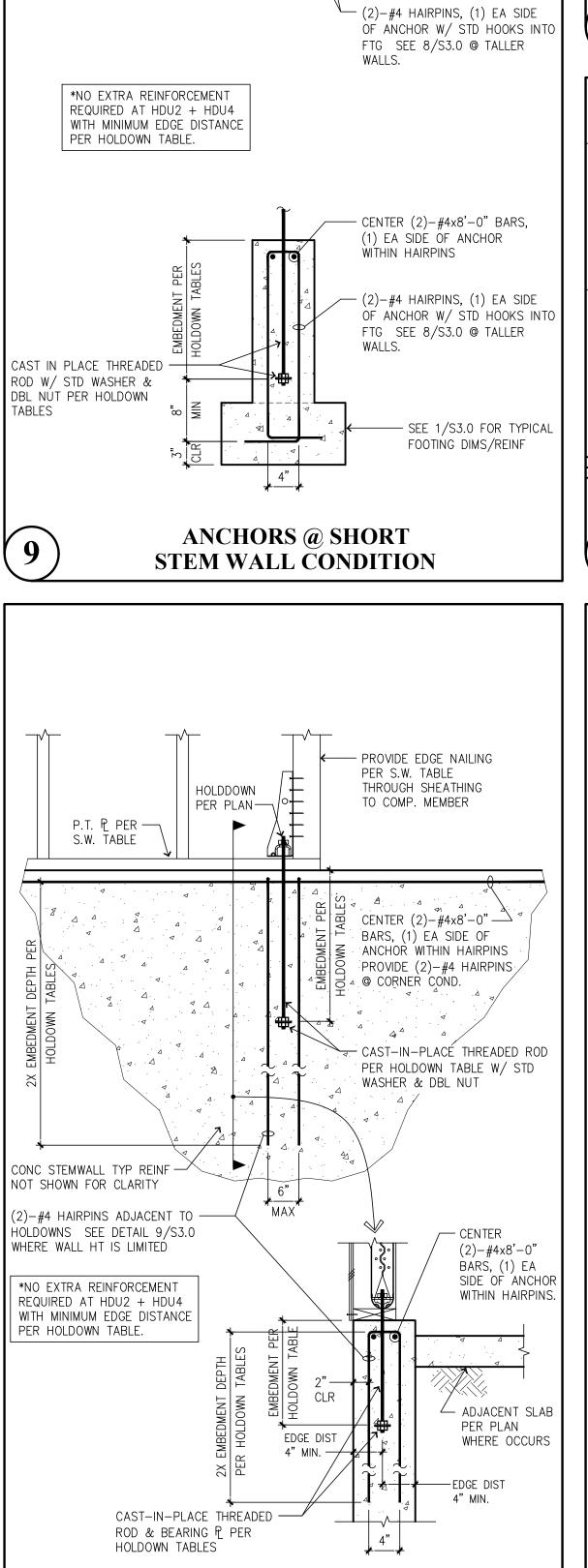
- INDICATES OVER FRAMING STRAP PER-STRAP PER \ 8/S5.0 8/S5.0 WIP S5.0 S5.0

Roof Framing Plan - Bldg B

SCALE 1/8"=1'-0"

SUBMITTAL SET ONLY NOT FOR CONSTRUCTION THESE DRAWINGS ARE SUBJECT TO REVISIONS PENDING LOCAL JURISDICTIONAL REVIEW.





ANCHORS @ TALL

STEMWALL CONDITION

CAST IN PLACE THREADED  $-\!-\!$ 

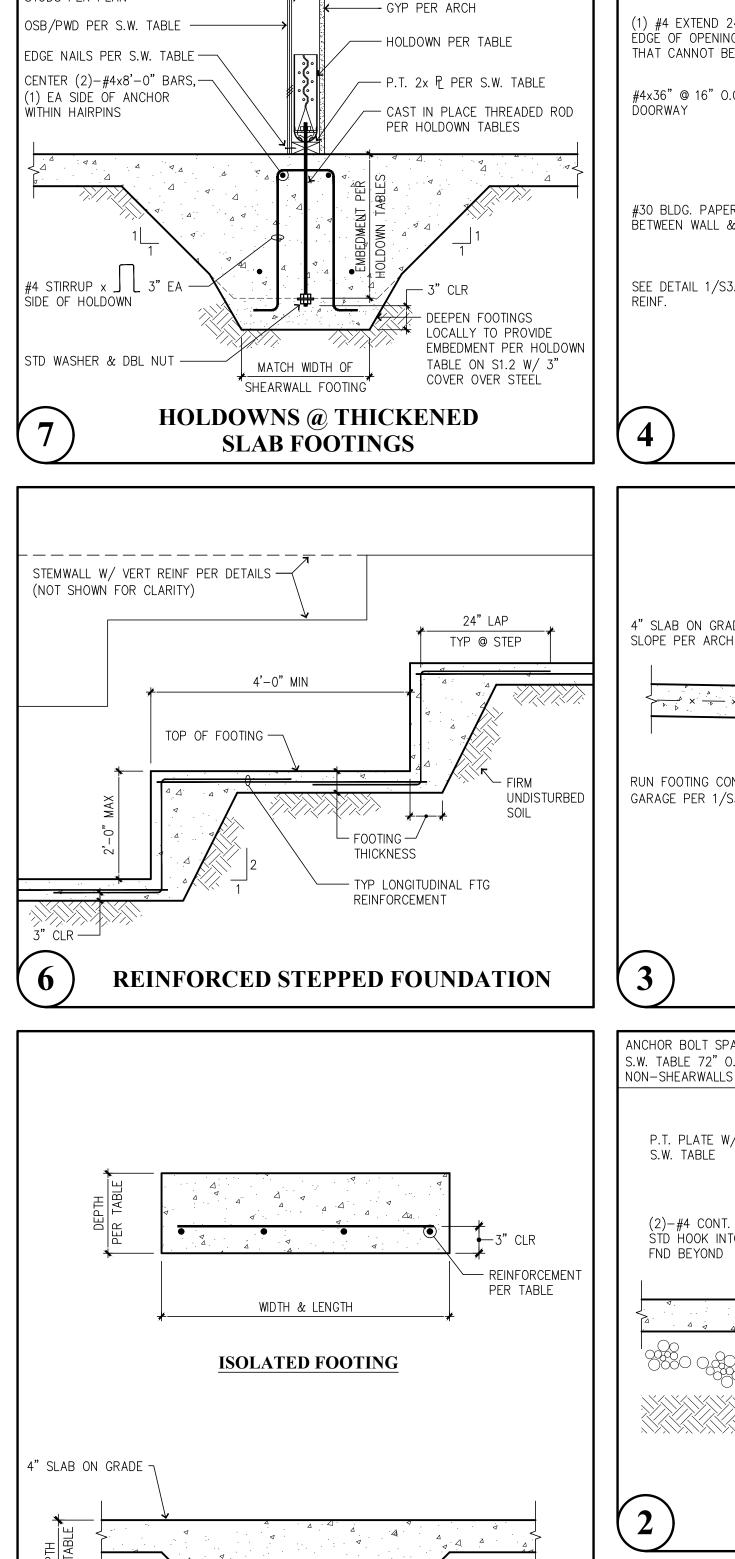
ROD W/ STD WASHER & DBL

NUT PÉR HOLDOWN TABLE

SEE 1/S3.0 -

FOR TYP FTG

DIMS/REINF



STUDS PER PLAN ----

— CENTER (2)—#4x8'—0"

BARS, (1) EA SIDE OF

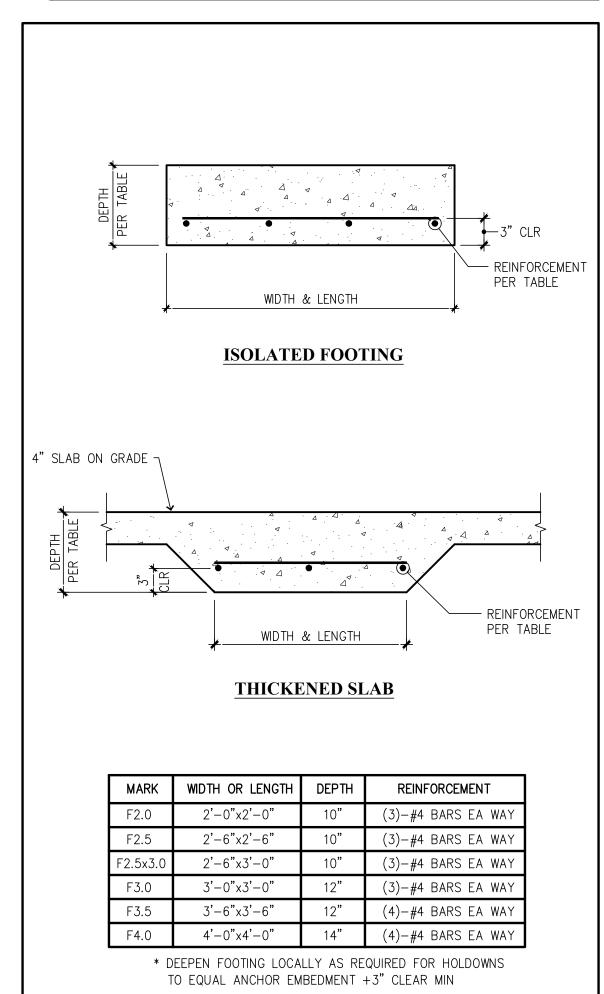
- STEP FOOTING DOWN @

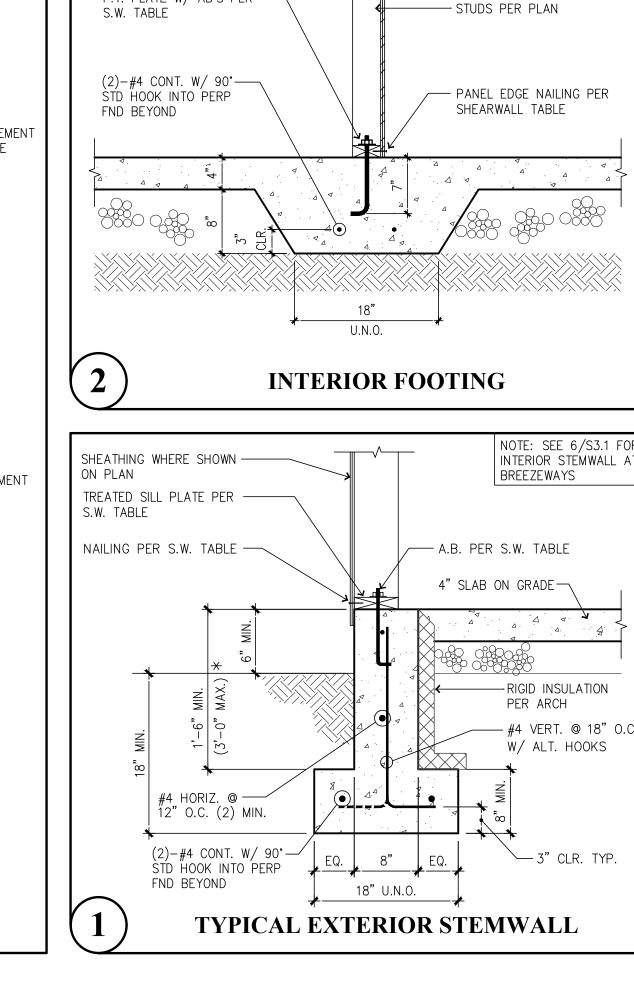
HOLDOWNS PER 6/S3.0

DIMS NOTED

WHERE REQ'D TO MAINTAIN

ANCHOR WITHIN HAIRPINS





(1) #4 EXTEND 24" PAST EA. —

EDGE OF OPENING HOOK BARS

THAT CANNOT BE EXTENDED

#4×36" @ 16" O.C. @ ——

#30 BLDG. PAPER -

BETWEEN WALL & SLAB

SEE DETAIL 1/S3.0 FOR

4" SLAB ON GRADE ---

RUN FOOTING CONT @-

ANCHOR BOLT SPACING PER

S.W. TABLE 72" O.C. MAX. @

P.T. PLATE W/ AB'S PER —

GARAGE PER 1/S3.0

SLOPE PER ARCH

**SECTION** @ **DOORWAY** 

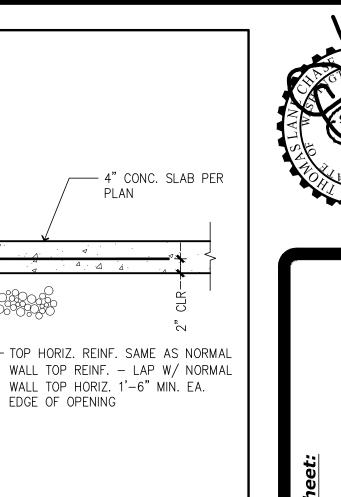
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THICKENED SLAB EDGE

- (1)-#4 CONT

- #4 BAR CONTINUOUS

DOORWAY



Heights
202 27th Av

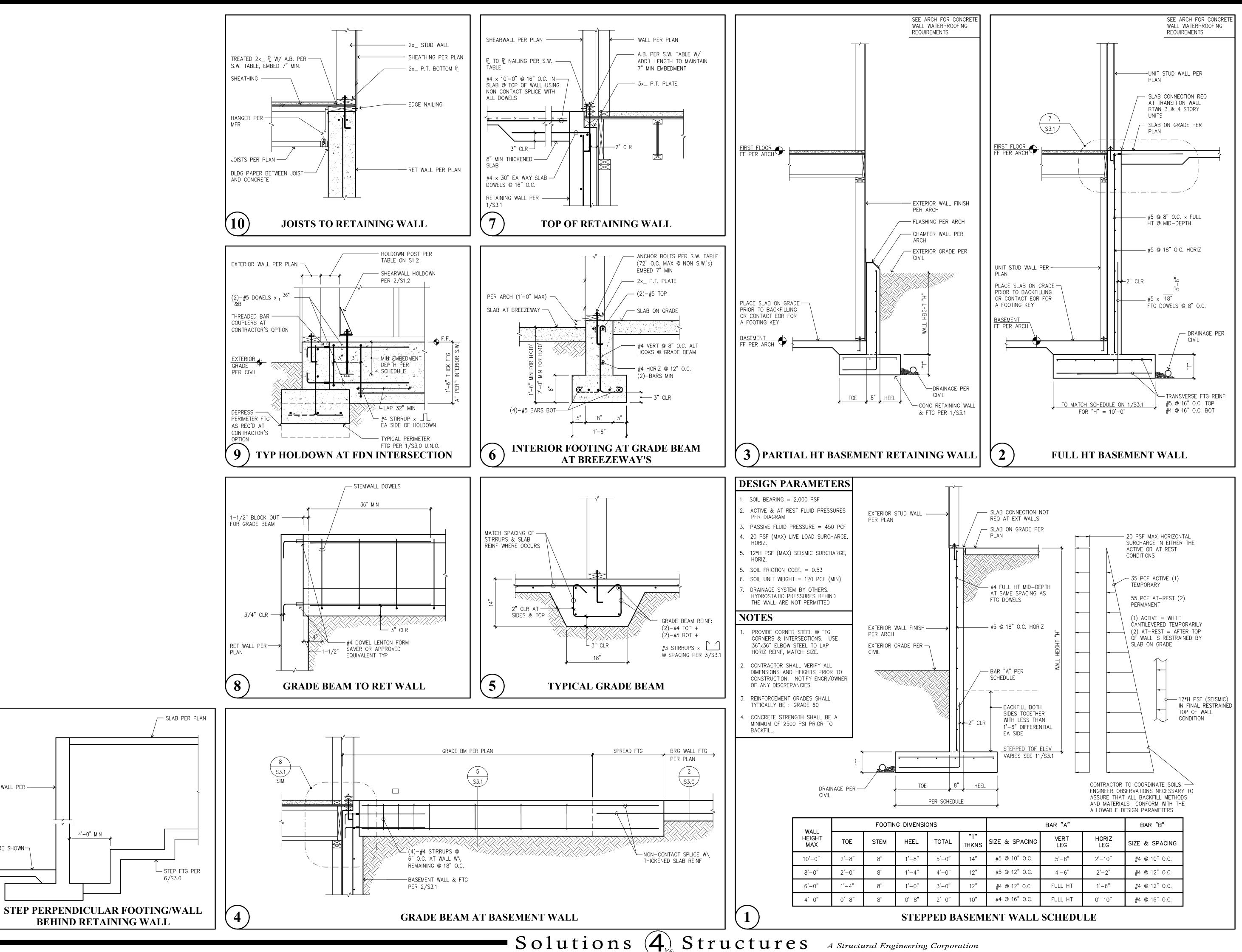
 $\overline{\phantom{a}}$ 

RSO

SUBMITTAL SET ONLY NOT FOR CONSTRUCTION THESE DRAWINGS ARE SUBJECT TO REVISIONS PENDING LOCAL JURISDICTIONAL REVIEW.

Solutions (4). Structures A Structural Engineering Corporation

FOOTING SCHEDULE



RETAINING WALL PER ---

SLAB WHERE SHOWN -

ON PLAN

4'-0" MIN

CONSTRUCTION

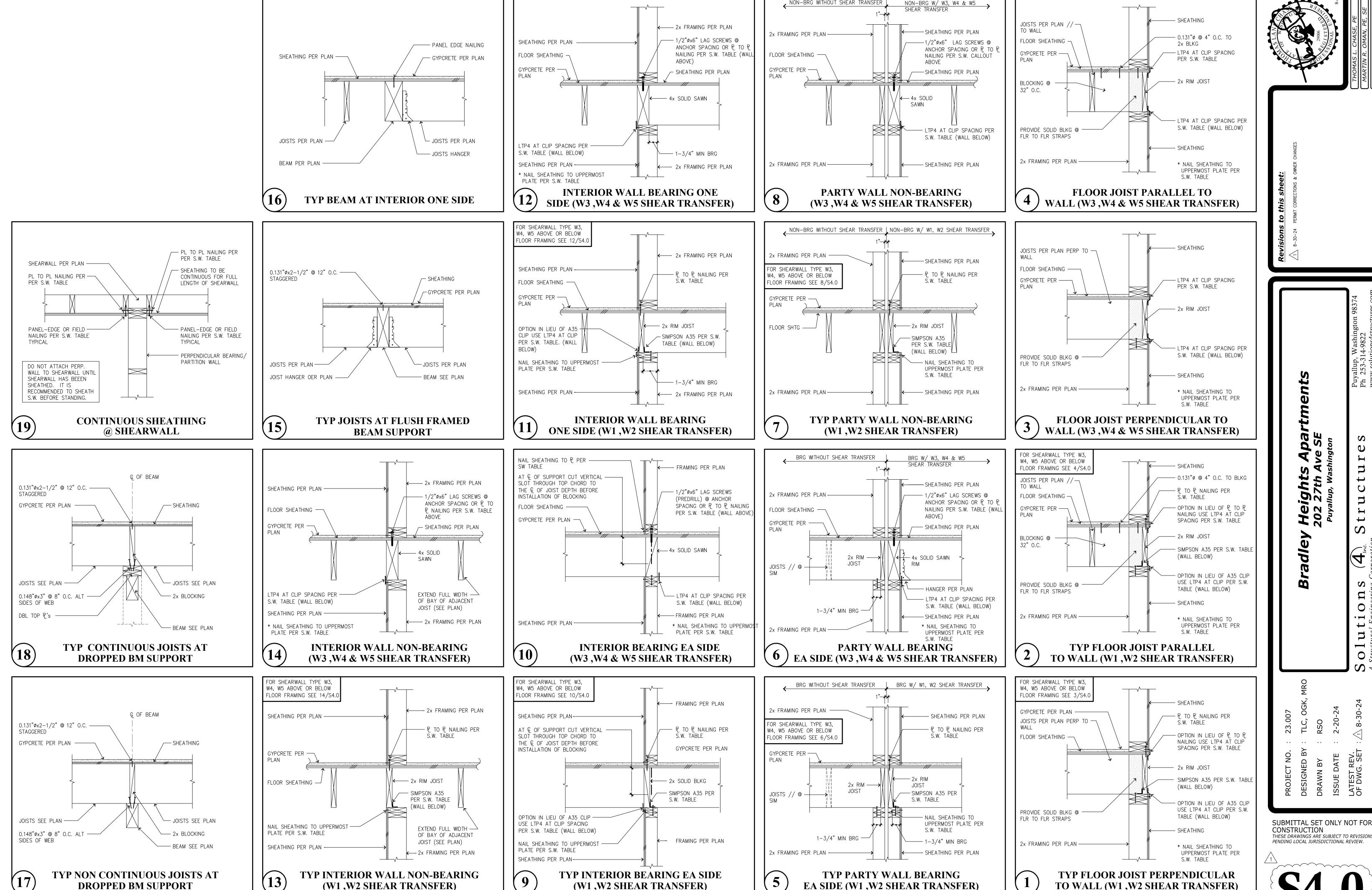
RSO

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01



(W1, W2 SHEAR TRANSFER)

**DROPPED BM SUPPORT** 

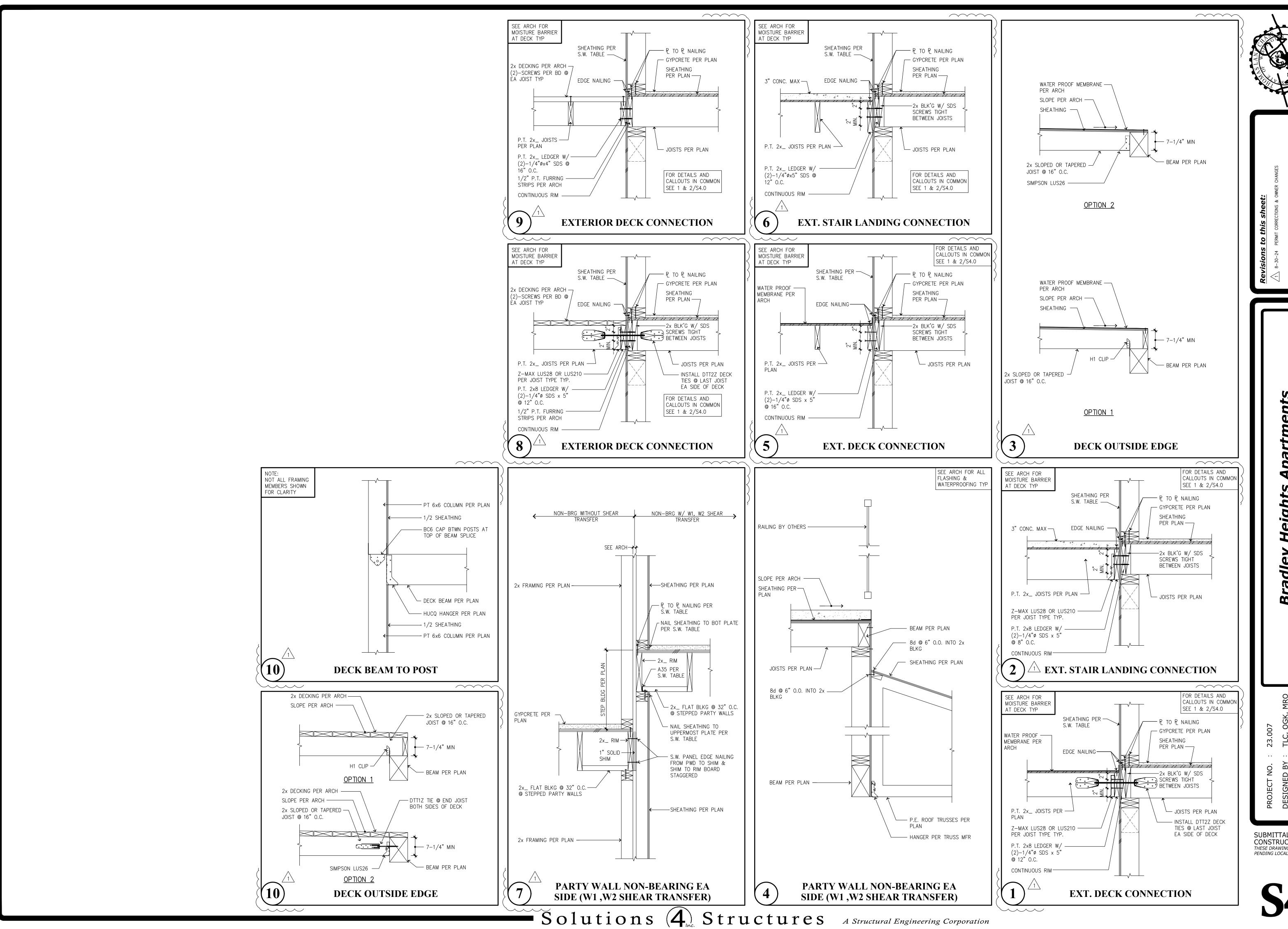
(W1, W2 SHEAR TRANSFER)

NON-BRG WITHOUT SHEAR TRANSFER

Solutions (4) Structures A Structural Engineering Corporation

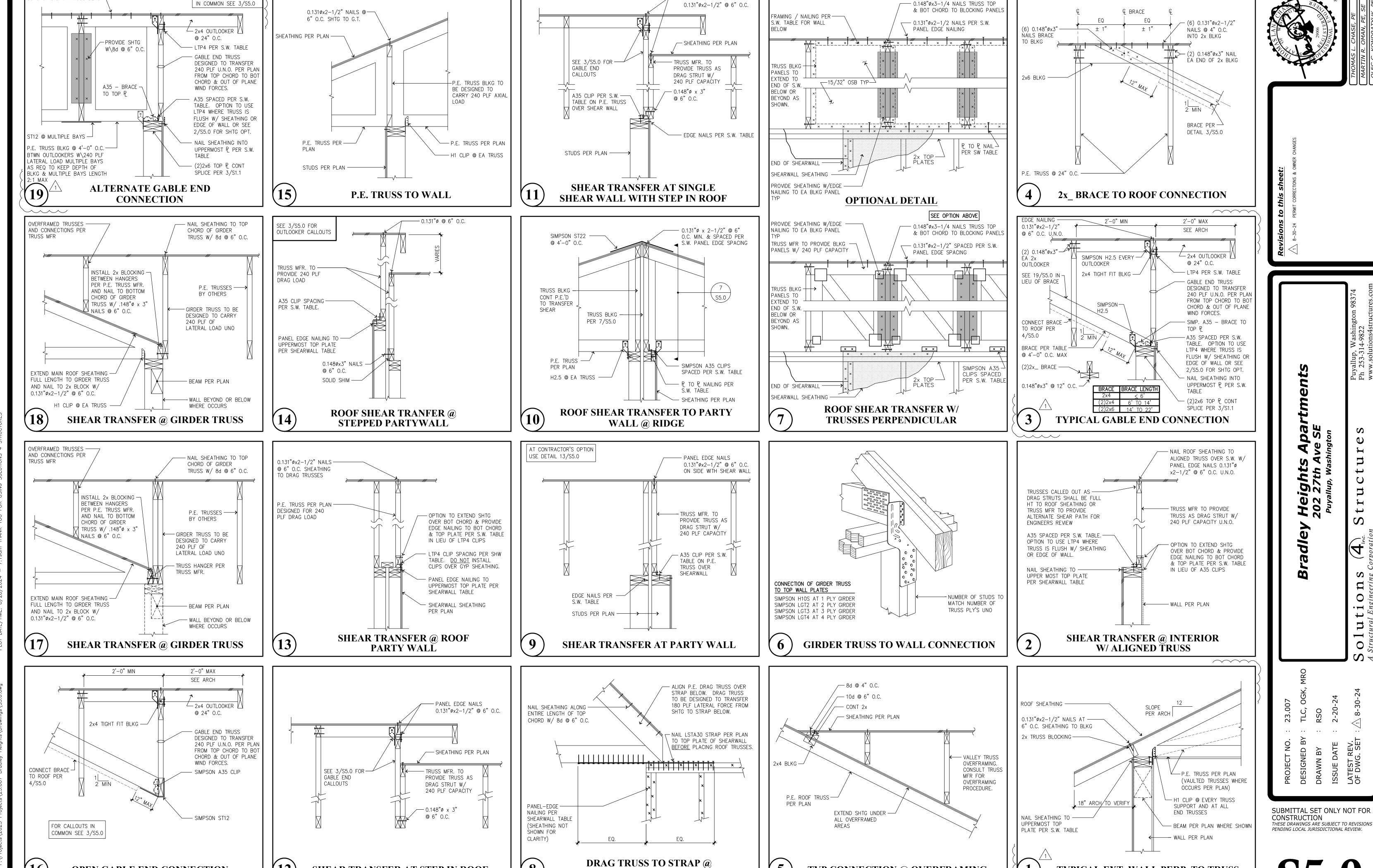
EA SIDE (W1, W2 SHEAR TRANSFER)

TO WALL (W1, W2 SHEAR TRANSFER)



01 RSO

SUBMITTAL SET ONLY NOT FOR CONSTRUCTION THESE DRAWINGS ARE SUBJECT TO REVISIONS PENDING LOCAL JURISDICTIONAL REVIEW.



SHEARWALL TOP PLATE

TYP CONNECTION @ OVERFRAMING

- Solutions (4) Structures A Structural Engineering Corporation

- PANEL EDGE NAILS

FOR DETAILS & CALLOUT

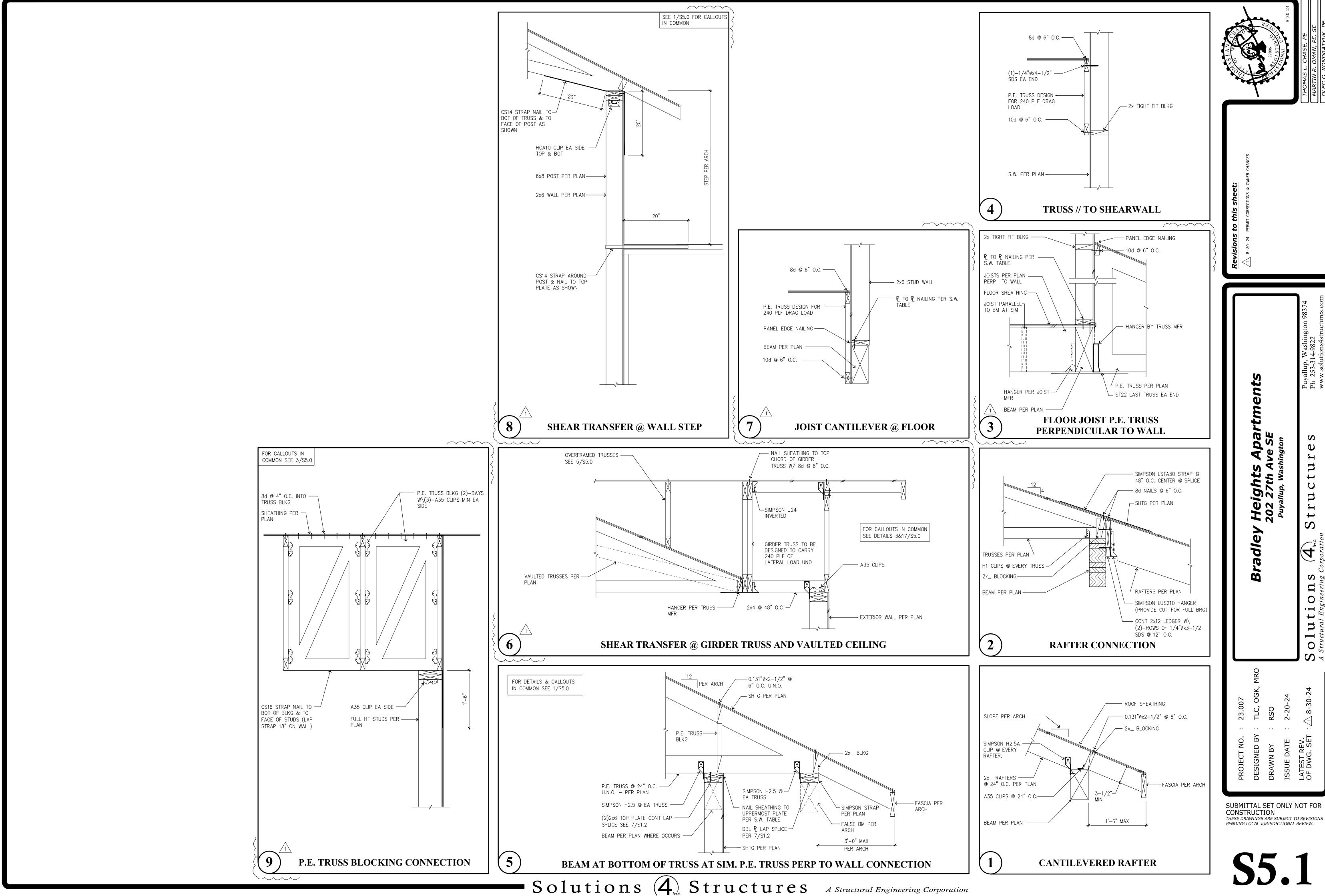
**OPEN GABLE END CONNECTION** 

SHEAR TRANSFER AT STEP IN ROOF

d @ 6"O.C. IN TRUSS BLKG-

**S5.0** 

TYPICAL EXT. WALL PERP. TO TRUSS



olu



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. 11063 \ REGISTERE'

**Bradley** Heights **Apartments** 

Puyallup,

Timberlane **Partners** 

Revisions No. Date Description

1 8-30-24 Owner Changes/ Permit Corrections FIN.#1: (1) LAYERS %" TYPE 'X' GWB FIN.#2: %" TYPE 'X' GWB O/ SHEAR PANEL OVER 2x4 STUDS AT 16" O.C. TYP. EACH SIDE OF DOUBLE 2x4 WALL ON SEPARATE PLATES W/ 1" AIR SPACE

TO THE NEAREST CORNER BEFORE TRANSITION Sound STC 59 STC (W-28-69)

Using IBC Section 722, Tables 722.6.2(1) and 722.6.2(2), \( \frac{5}{8} \) Type 'X' GWB (40 min.) and studs at 16" o.c. (20 min.) provide 60 minutes of protection

DETAIL SIMILAR WHERE UNIT SEPARATION WALL CONTINUES DOWN TO GARAGES

**EXTERIOR SIDING** 

PER STRUCTURAL

**EXTERIOR SHEATHING -**

1 TYVEK COMMERCIAL W.R.B. —

INTERIOR

NOTE: SHEAR DIAPHRAGM

%" GWB OVER 2x STUDS AT 16" OC. ─

CORRIDOR

MAY OCCUR ON EITHER

SIDE OF THE WALL OR

ON BOTH SIDES.

SEE ELEVATIONS -

EXTERIOR

Thermal insulation

NHERE (ND)(CATED ON PLANS)

 $-\frac{5}{8}$ " Type 'X' GWB OVER 2x6 STUDS AT 16" O.C.

TYPICAL EXTERIOR WALL

 $^{-}\%$ " GWB OVER 2x STUDS AT 16" OC

TYP. INTERIOR WALL

GWB INSTALLED OVER SHEAR PANEL

AT SHEAR WALLS‡, SEE SHEAR PLANS -

CONTINUE SHEAR PANEL

INSULATION

between studs. 3" mineral or glass fiber insulation in stud space.

TO THE NEAREST CORNER

PROVIDE PVA WALL PRIMER (with perm rating not exceeding 1.0)

2X6 STUDS AT EXTERIOR

WALL U.N.O. ON PLANS

−%" GWB OVER SHEAR PANELS

WHERE INDICATED

ON SHEAR PLANS

%" TYPE 'X' GWB OVER 2x STUDS AT 16" O.C.

OVER W.R.B

── 5/4" TYPE 'X' GWB OVER RESILIENT CHANNELS AT

24" O.C. OVER 2x STUDS AT 16" O.C.

1-HR GA File No. WP3243 50-54 STC Sound

Resilient channels 24" o.c. attached at right angles to ONE SIDE of 2x4\* wood studs 24" o.c. with 11/4"

OPPOSITE SIDE - One layer \( \frac{5}{8} \)" Type X gypsum wallboard or or gypsum veneer base applied parallel

or at right angles to studs with 6d cement coated nails 1%" long, 0.0915" shank, 1%4" heads, 7" o.c. Vertical joints staggered 24" on opposite sides. (LOAD-BEARING)

\* Per general note 16 greater stud sizes are permitted than those specified.

(see plans for actual stud size)

‡ At shear walls, increase fastener length by the thickness of the shear panel

TYP. 1-HR CORRIDOR WALL

Type S drywall screws. One layer \( \frac{5}{8} \) Type X gypsum wallboard or gypsum veneer base applied at right angles to channels with 1" Type S drywall screws 8" o.c. with vertical joints located midway

PLAN

PLAN

PLAN

AS CLASS II VAPOR RETARDER ON INSIDE FACE OF GWB

Initial Publish Date: Date Plotted: 2-11-25 Drawn By:

Job No.: 23-06 APT/HDM Sheet No.:

1 HR. UL L514 SYSTEM 9 Finish Flooring - Floor Topping Mixture\* - Min. 3/4 in. thickness of floor topping mixture having

SECTION

GWB OVER 1/2"

CHANNELS AT

RESILIENT

24" OC —

INSULATION

a minimum compressive strength of 1500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design. Formulated Materials LLC - Types FR-25, FR-30 and SiteMix Vapor Barrier - (Optional) Commercial asphalt saturated felt 0.030 in. thick. Sub-flooring - 15/32 in thick plywood min grade "C-D" of Sheathing. Face grain of plywood to be perpendicular to joists with joints staggered. Alternate Floor Mat Material\* - (Optional) Floor mat material nominal 2-9.5 mm thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

Formulated Materials LLC - Types M1, M2, M3, Elite, Duo, R1 and R2 2. Wood Joists - Min. 2 by 10, spaced 16 in. OC, firestopped 3. Cross Bridging - 1 by 3 in. or min. 2x10 solid blocking 5. Resilient Channels - Formed of 25 MSG galv steel, spaced 24 in. OC perpendicular to joists. Channels overlapped at splices 4 in. and fastened to each joist with 1 1/4 in. long furring channel screw.

6B. Gypsum Board\* - Nom.5%" in. thick, 4 ft wide, installed with long dimension

perpendicular to resilient channels and the side edges of the board located between joists. Fastened to resilient channels with 1 in. long Type S bugle head screws spaced 8 in. OC. End joints of wallboard similarly fastened to additional pieces of resilient channel to extend a min of 3 in. beyond ends of butt joint. Screw located 3/4 in min distance from sides and 1/2 in. min from ends of wallboard sheets. 7. Finish System - Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire

3½" THICK GLASS FIBER INSULATION 5/8" TYPE 'X' GWB SOUND TEST USED GENERIC CUSHIONED OVER 1/2" RESILIENT VINYL AND CARPET W/ PAD CHANNELS AT 24" OC ALTERNATIVES TO THE SPEC'D MANUFACTURES BELOW ALLOWED. SOUND 60 STC R-TL 81-16 CARPET & PAD - ASCEND BY DWELLINGS 55 IIC R-IN 81-1 CUSHIONED VINYL MOHAWK VESSEL PAD

1" GYPCRETE (1 1/4" GYPCRETE AT CARPET) OVER

15/32" MIN. PLYWOOD SUBFLOOR OVER

1/4" SOUND MAT OVER

2X12 AT 16" O.C. -

VINYL PLANK

VINYL PLANK - CYRUS BY MSI

**SECTION** 

\*TEST WAS DONE WITHOUT GLASS FIBER INSULATION. ADDITION WILL INCREASE THE IIC VALUE.

56 IIC R-IN 81-6 CARPET & PAD\*

TYPICAL FLOOR

surface of gypsum board.

VENTED FIBER CEMENT SOFFIT O/ FURR STRIPS

SPRINKLER PROTECTION EXTENDS TO THE

SECTIONS 705.2.2 & 705.2.3 WHERE

AT DECK/CORRIDOR

**SECTION** 

3/4" PLYWOOD FINISH FLOOR O/ 1/4" ISO-STEP FLOOR UNDERLAYMENT O/ 3/4" PLYWOOD SUB FLOOR — 1 HR. GA File No. FC5538 1/2" type X gypsum wallboard or veneer base applied at right angles to resilient furring channels 24" o.c. with 1" Type S drywall screws 8" o.c. at ends and 12" o.c. at intermediate furring channels. Gypsum board end joints located midway between continuous channels and attached to additional

pieces of channel 64" long with screws 8" o.c. Resilient channels applied at right angles to 2 x 10 wood joists 16" o.c. with 6d coated nails 1\%" long, .085 shank, 1/4" heads, two per joist. Wood joists supporting %" interior plywood with exterior glue subfloor and \( \frac{3}{8} \)" particle board, 1.5 psf. 3\( \frac{1}{2} \)" glass fiber insulation batts, .7 pcf, friction fit in joist cavities supported alternately every 12" by wire rods and resilient channels.

SOUND 51 STC TL 03-061a 61 IIC (BASED ON ENGINEERING ANALYSIS OF TL 03-027 WITH THE ADDITION OF  $\frac{1}{4}$ " ISO-STEP UNDERLAYMENT (42 IIC + 19 IIC))

FLOOR BENEATH TUB

3" CONCRETE SELF-ADHERED W/ BROOM FINISH WATERPROOFING OVER 3/4" EXTERIOR MEMBRANE GRADE PLYWOOD CORRIDOR CEILING MUST MEET CLASS FRAMING PER STRUCTURAL C FLAME SPREAD

WATERPROOF DECK FLOOR

FLOOR AT CORRIDOR/LANDING

FIBER CEMENT VENTED

SOFFIT BOARD

4" CONCRETE SLAB O/ 10 MIL VAPOR BARRIER O/ 3.5" CONCRETE SLAB O/ 4" FREE DRAINING MATERIAL O/ 4" FREE DRAINING MATERIAL O/ COMPACTED FILL COMPACTED FILL **EXTERIOR CORRIDORS** LIVING UNITS

INSULATION

AT UNIT

AT 24" O.C. PROVIDE PVA WALL PRIMER (with

perm rating not exceeding 1.0) AS CLASS II

VAPOR RETARDER ON INSIDÉ FACE OF GWB

Ceiling provides one hour fire resistance protection for trusses.

- (2) LAYERS %" TYPE 'X' GWB ATTACHED TO UNDERSIDE OF MANUFACTURED ROOF TRUSSES ALLOWED TO BE NON-RATED PER IBC

1-HR GA File No. RC 2602

with  $1\frac{1}{4}$ " Type W or S drywall screws 24" o.c. **Face** layer  $\frac{5}{8}$ " type X gypsum wallboard or gypsum veneer base applied at right angles to trusses with  $\frac{1}{8}$ " Type W or S drywall screws 12" o.c. at

joints and intermediate trusses and 1½" Type G drywall screws 12" o.c. placed 2" back on either side of end joints. Joints offset 24" from base layer joints. Wood trusses supporting ½" wood

TYPICAL 1-HR ROOF/CEILING

structural panels applied at right angles to trusses with 8d nails. Appropriate roof covering.

SPACE DECKING -

P.T. FRAMING

P.T. FRAMING

PER STRUCTURAL

ASSEMBLY ALLOWED TO BE NON-RATED PER OSSC SECTIONS 705.2.2 AND 705.2.3

WITH FIRE SPRINKLERS PROTECTING DECK

WATERPROOF MEMBRANE (60 MIL

VINYL DECK MEMBRANE, GRAY

DURADECK OR SIMILAR) OVER

1/2" & 3/4" EXT. GRADE PLYWOOD —

FRAMING PER

STRUCTURAL —

\_\_\_\_\_

- VENTED FIBER

**CEMENT SOFFIT** 

WATERPROOF MEMBRANE (60 MIL

VINYL DECK MEMBRANE, GRAY

1/2" & 3/4" EXT. GRADE PLYWOOD —

DURADECK OR SIMILAR) OVER

- VENTED FIBER

**CEMENT SOFFIT** 

SPACE DECKING -

PER STRUCTURAL

Base layer %" type X gypsum wallboard applied at right angles to wood roof trusses 24" o.c.

& PATIOS yp. slab-on-grade **SECTION** 

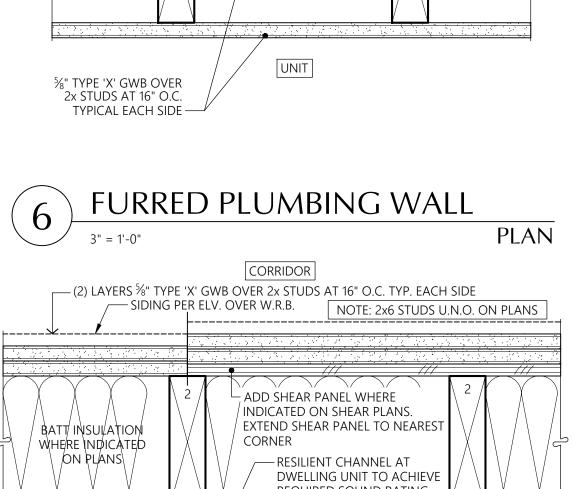
△ CONC. RETAINING WALL < (SEE STRUCT. FOR SIZE & REINF.) SPACE -EXTERIOR SHEATHING PER STRUCTURAL 5/8" TYPE 'X' GWB; PROVIDE PVA WALL -R-21 HIGH DENSITY INTERIOR PRIMER (with perm rating not exceeding INSULATION 1.0) AS CLASS II VAPOR RETARDER ON INSIDE FACE OF GWB — CONCRETE WALL SHALL BE DRY TO THE TOUCH AND NO SPRAY-ON OR SHEET-TYPE CAVITY SHALL BE CLEAN OF VAPOR BARRIER AT INTERIOR SIDE. DEBRIS BEFORE INSTALLING PAINT W/ LATEX PAINT ONLY. INSULATION AND GWB.

EARTH SIDE

- WATERPROOFING

CONCRETE WALL @ EXTERIOR WALL PLAN

EARTH SIDE - WATERPROOFING SYSTEM △ CONC. RETAINING WALL < PROVIDE VERTICAL AND HORIZONTAL (SEE STRUCT. FOR SIZE & REINF.) DRAFTSTOPS AT 10'-0" MAX. O.C. FIBERGLASS INSUL. FIRMLY ATTACHED -R-21 HIGH DENSITY SPACE INSULATION 5/8" TYPE 'X' GWB; PROVIDE PVA WALL **INTERIOR** PRIMER (with perm rating not exceeding 1.0) AS CLASS II VAPOR RETARDER ON INSIDE FACE OF GWB — CONCRETE WALL SHALL BE DRY TO THE TOUCH AND NO SPRAY-ON OR SHEET-TYPE CAVITY SHALL BE CLEAN OF VAPOR BARRIER AT INTERIOR SIDE. DEBRIS BEFORE INSTALLING PAINT W/ LATEX PAINT ONLY. INSULATION AND GWB.



COMMON OR CORRIDOR WALL

REQUIRED SOUND RATING 2-HR GA File No. WP4136 STC 50 (TL-93-103) Base layer ½" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to

each side of 2 x 4 wood studs 16" o.c. with 1 1/4" Type W drywall screws 12" o.c. Face layer 1/8" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to each side with 1 1/8" Type W drywall screws 12" o.c. and offset 6" from screws in base layer. Joints staggered 16" each layer and side. At shear walls, increase fastener length by the thickness of the shear panel. Add resilient channel and 3" insulation to achieve sound rating

TYP. 2-HR FIRE BARRIER WALI AT EXIT CORRIDOR PLAN

BASEMENT RETAINING WALL

PLAN 1-1/2" = 1'-0"

UNIT

1-HR Using Calculated Fire Resistance Method

TYP. 1-HR COMMON WALL SEPARATING DWELLING UNITS

PLAN

At shear walls, increase fastener length

by the thickness of the shear panel

PROVIDE HORIZONTAL FIREBLOCKING

AT 10'-0" MAX. O.C. USING FIBERGLASS

(NO INSULATION AT SIMILAR COND.)

CONTINUE EITHER FIN.#1 OR FIN.#2

INSUL. FIRMLY ATTACHED

 $-3\frac{1}{2}$ " Insulation both sides

EXTERIOR

- P.T. PLATE

SLOPE GRADE

AWAY FROM

4" FTG. DRAIN

**SECTION** 

**SECTION** 

EXT. STAIR

— %" TYPE 'X'
EXTERIOR GYP.
— SIDING SEE
ELEVATIONS
— FLASHING

D1

ー½" EXPANSION

**SECTION** 

BUILDING



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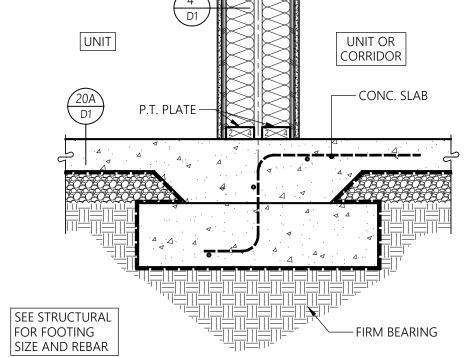
etails 



# **Timberlane**

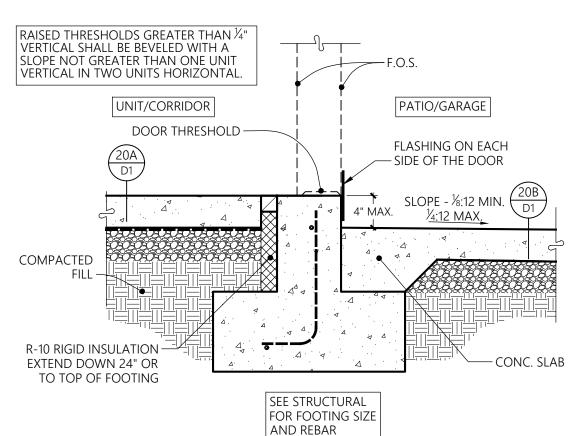


8-30-24 Owner Changes/ Permit Corrections



TYP. STAIR WALL FOOTING



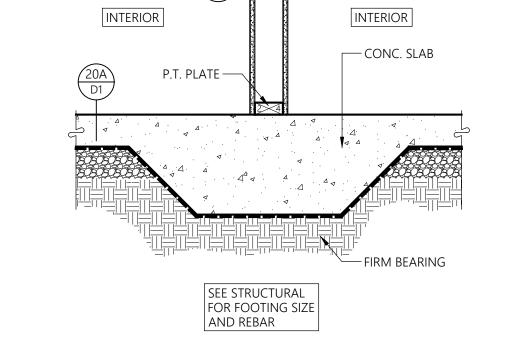


SWING DOOR THRESHOLD AT PATIO OR GARAGE

SECTION

THRESHOLD SHALL NOT EXCEED ½" IN HEIGHT. VERTICAL RISES GREATER THAN 1/4" SHALL BE BEVELED AT 2:1 MAX. SEE DETAIL 4/D5 PATIO / GARAGE/ EXTERIOR UNIT/INTERIOR FLASHING ON EACH DOOR THRESHOLD -- SIDE OF THE DOOR -½" EXPANSION JOINT, SLOPE -1/8:12 MIN. (-1/4:12 MAX. COMPACTED

CONC. SLAB R-10 RIGID INSULATION -EXTEND DOWN 24" OR TO TOP OF FOOTING SEE STRUCTURAL FOR FOOTING SIZE AND REBAR



INTERIOR WALL FOOTING

SEE UNIT

LOCATION THIN

PLANS FOR

%" TYPE 'X' GWB ─ RESILIENT CHANNEL -

UNIT

RIGID INSULATION

DOWN 24" OR TO

TYP. EXTERIOR WALL FOOTING

INTERIOR

SEE STRUCTURAL

AND REBAR

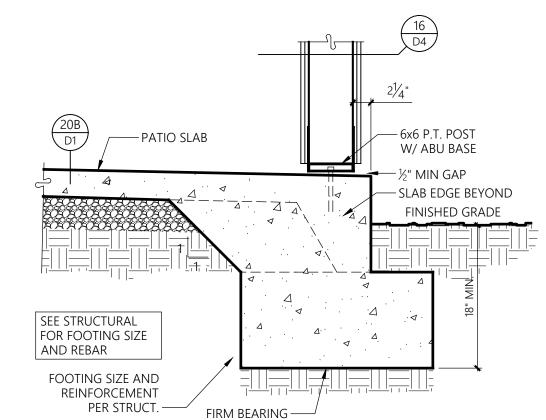
FOR FOOTING SIZE

R-10 RIGID INSULATION -EXTEND DOWN 24" OR

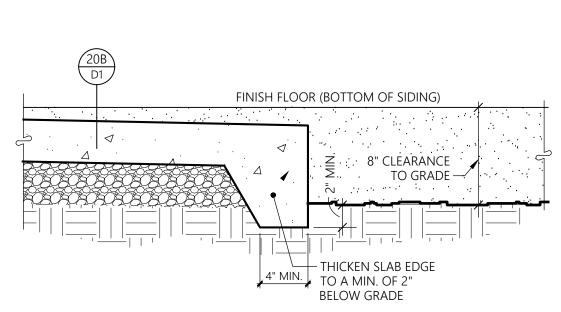
TO TOP OF FOOTING

SWING DOOR THRESHOLD AT ACCESSIBLE ENTRANCE

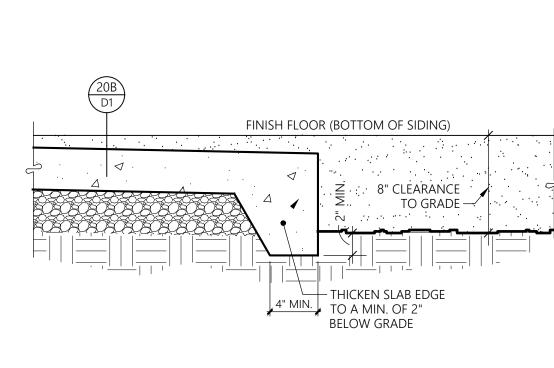
**SECTION** 



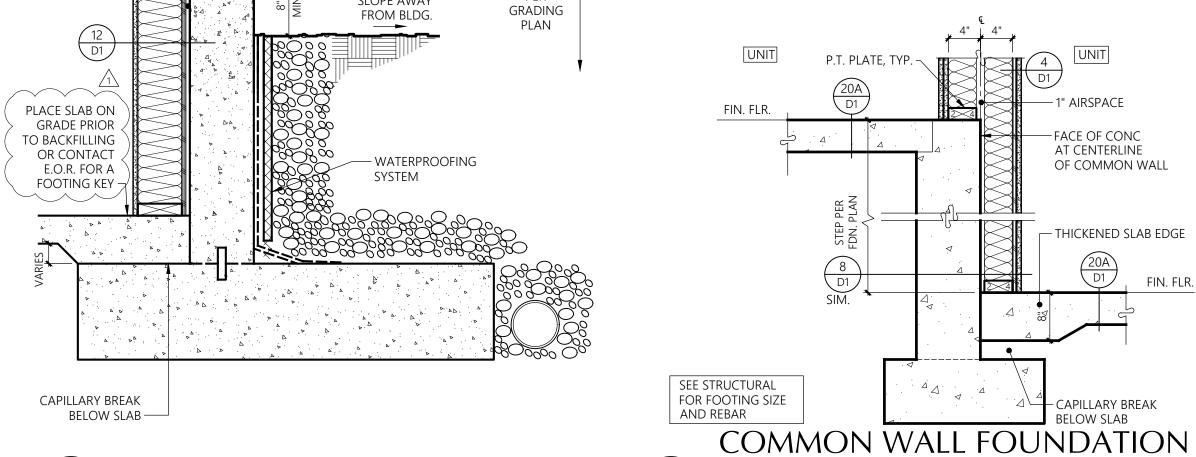












HEIGHT

PER





THE INSTALLATION OF ANY

INSTRUCTIONS.

CORRIDOR / SLAB FLASHING

WATERPROOFING DECK SYSTEM

SHALL BE PER MANUFACTURERS

- WATER PROOFING

TOP ANGLE FLASHING

LAP OVER VERTICAL

FLASHING 6" MIN. -FLASHING OVER DAMPPROOFING,

FIBERBOARD AND RAIN SCREEN

- DAMPPROOFING

– "TUFF-N-DRY"

**FIBERBOARD** 

-RAIN SCREEN

THE INSTALLATION OF ANY

-P.T. FRAMING & SPACING PER

STRUCTURAL

EXTERIOR

CORRIDOR

INSTRUCTIONS.

EXTERIOR

CORRIDOR

CORRIDOR / SLAB TRANSITION

WATERPROOFING DECK SYSTEM

SHALL BE PER MANUFACTURERS

TYP. FLOOR D1 AT CORRIDOR/STAIR

**SECTION** 

**SECTION** 

-FACE OF CONC

AT CENTERLINE

OF COMMON WALL

THICKENED SLAB EDGE

- CAPILLARY BREAK

SECTION

UNIT -TO- UNIT AT STEP

MEMBRANE

SEE I SHEETS

UNIT

UNIT

- WATERSTOP STRIP

REQUIRED AT COLD

JOINT (2 PART POUR)

FOR RETAINING WALL

3/4" FIBER BOARD

**EXPANSION JOINT -**

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

WATERPROOFING

FACE OF CONCRETE WALL AND

UNIT

SLAB-ON-GRADE -

DAMPPROOFING COATING

BACKFILL WITH 1½" WASHED

DRAIN ROCK LEAVING CLEAN

WATERPROOFING TO FULLY

COVER FORM BRACKETS

RAIN SCREEN PRODUCT

OVER TOP OF FOOTING,

RUN PAST FOOTING EDGE—

(POUNDED FLAT)

LET CURE 1 DAY -

SLOPE TOP OF FOOTING TO DRAIN

CONTINUOS 6" PERFORATED

DRAIN PIPE AS SPECIFIED

BY SOILS REPORT.

¾" AIR SPACE

CAPILLARY BREAK

BASEMENT RETAINING WALL

— SIDING PER ELEVATIONS

EXTERIOR SHEATHING

-8" CONCRETE WALL W/ ¾" SLOPED TOP

BELOW SLAB -

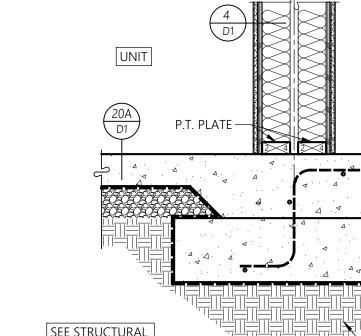
APPLIED ON ACCEPTABLE

SURFACE

TO THE TOP -

CENTERLINE OF PARTY WALL -

TOP OF FOOTING. -SEE STRUCTURAL FOR FOOTING SIZE AND REBAR SECTION



Initial Publish Date: Date Plotted: Job No.: Drawn By: 23-06 APT/HDM

> Sheet No.: **D2**

12-20-24



½" GYP. SHEATHING OR ¾" WOOD

PARALLEL TRUSS

CONDITION

- Typical floor ( D1

BETWEEN UNITS

- RIM JOISTS

- BLOCKING PER STRUC. AND

FRAMING PLANS

BEARING

SITUATION

FLOOR FRAMING

— FIRE-SAFING INSUL.

AS FIREBLOCK, TYP

COMMON

COMMON WALL AT STEPPED FLOOR

PER PLANS

**SECTION** 

NON-BEARING

SITUATION

**SECTION** 

**SECTION** 

UNIT SEP. WALL AT ROOF TRUSSES

STRUC. PANEL OR PARTICLE

—BOARD OVER GABLE TRUSS

WHERE DRAFT- STOPPING INDICATED ON ROOF PLAN

VERTICAL ROOF TRUSS

PROVIDE FIREBLOCKING AT FLOORS AND CEILINGS USING FIBERGLASS

INSULATION FIRMLY ATTACHED

PERPENDICULAR

TRUSS CONDITION

FRAMING

PER PLANS -

FIREBLOCKING -

SITUATION

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

3½" ACOUST. BATT INSUL. -

FLOOR FRAMING

PER PLANS

UNIT SEPAR. AT FLOOR

**SECTION** 

PLAN

MEMBER BEYOND -

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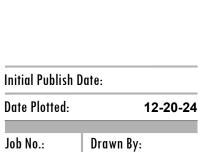
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11063 REGISTEREI

**Bradley** Heights

**Timberlane** 

Revisions



**D3** 

APT/HDM

**SECTION** 

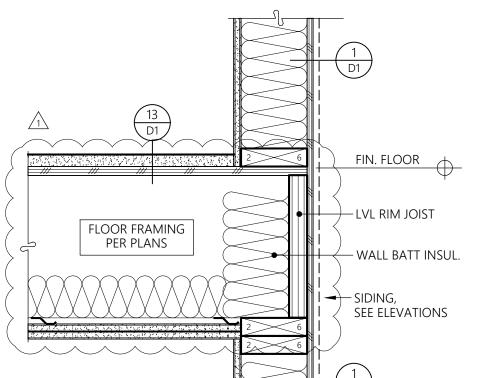




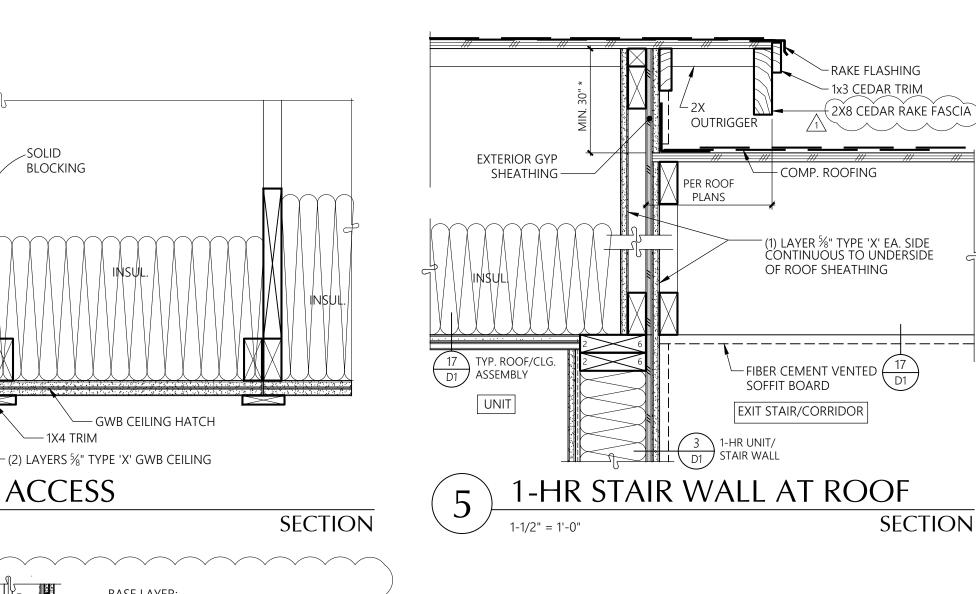
**Apartments** Puyallup,

**Partners** 

No. Date Description 1 8-30-24 Owner Changes/ **Permit Corrections** 



EXTERIOR WALL AT FLOOR



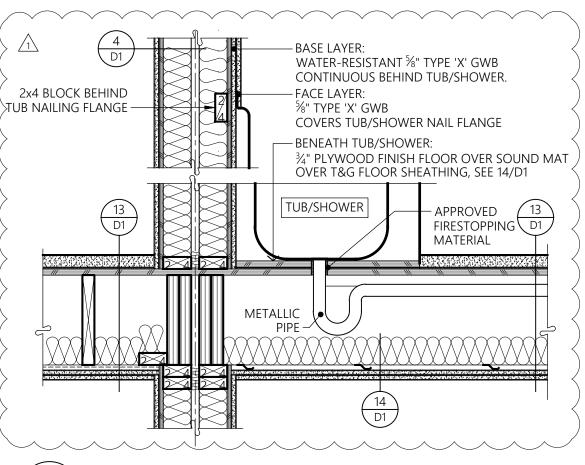
UNIT

DIFFERENT SHEAR PANEL

CONFIGURATION MAY BE

REQUIRED. SEE SHEAR PLANS.

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



PROVIDE A MINIMUM

ROOF TRUSS—

OF 30" HEADROOM

CLEARANCE

GYP. CONTINUOUS

EA. SIDE

-EXTERIOR

Wall cap at uncovered decks

STEPPED COMMON WALL

AT WATERPROOF DECK

SHEATHING

- SIDING PER ELEV.

HR. SEPARATION

NO INSULATION

19 D1

DECK

**SECTION** 

\_\_\_\_\_\_

EXTERIOR

NØ INSUL.

DECK

- FULL HEIGHT

STRUCTURAL;

DECK EDGE OF

1-BED-INT-1

SIDING PER

ELEV. OVER

(1) LAYER

- EXTERIOR

SHEATHING

5⁄8" TYPE 'X'

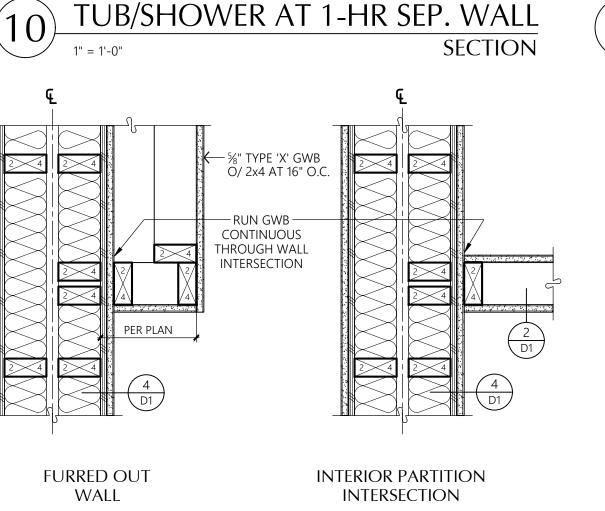
EXTERIOR GYP

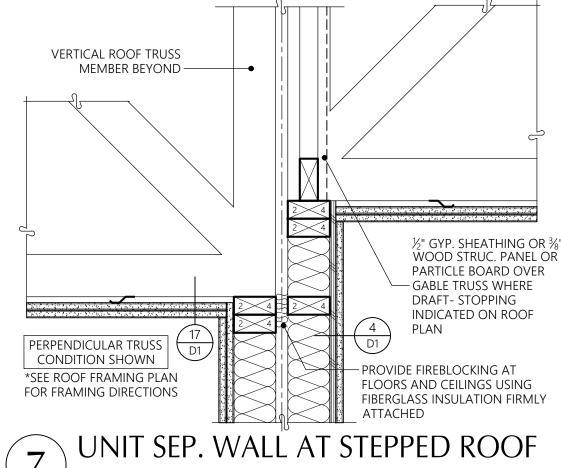
W.R.B

SEE 18C/D7

POST PER

OVER W.R.B.





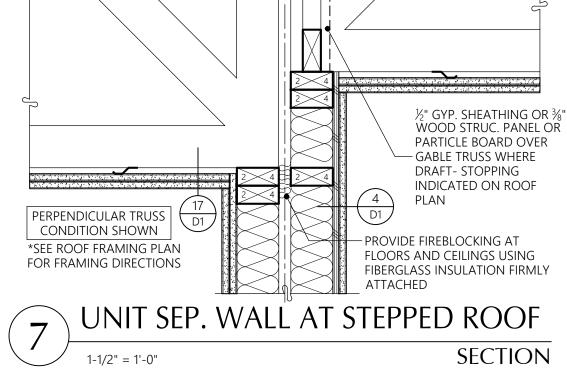
— SOLID STUD GROUPINGS

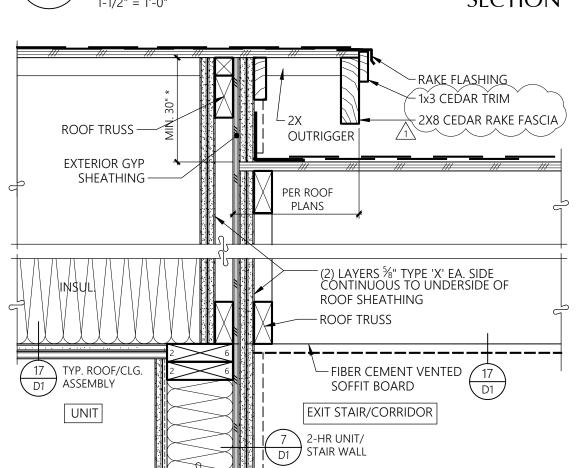
TO EXTERIOR FACE

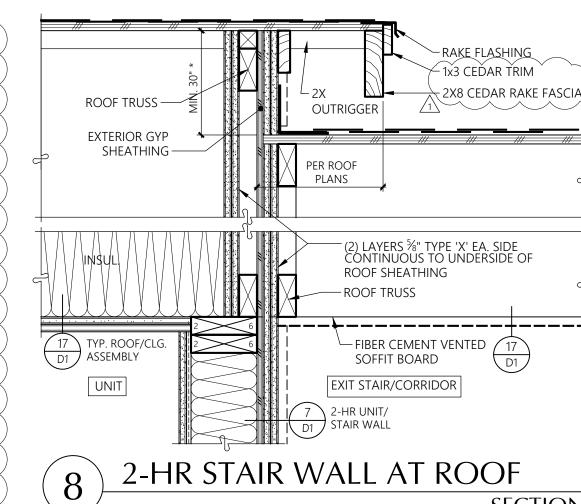
EXTERIOR

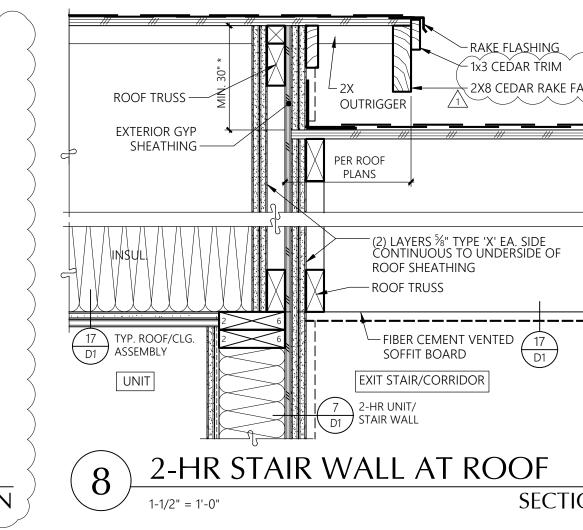
UNIT SEP. WALL AT EXT. WALL

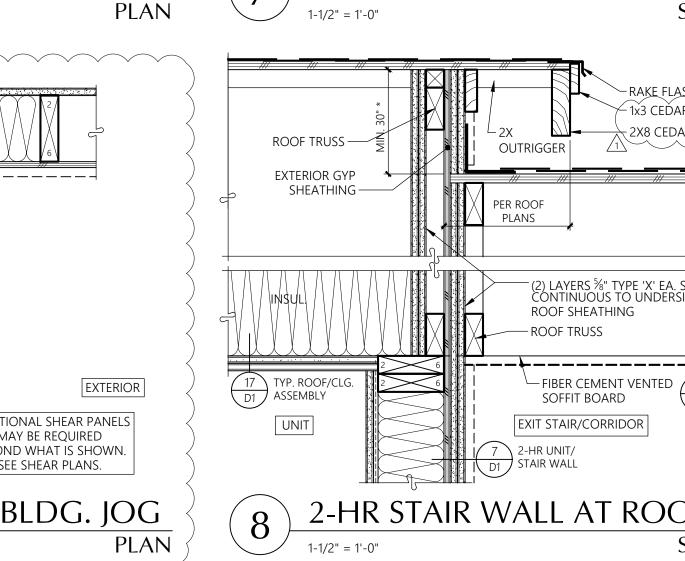
EXTEND 1-HR FIRE RATING

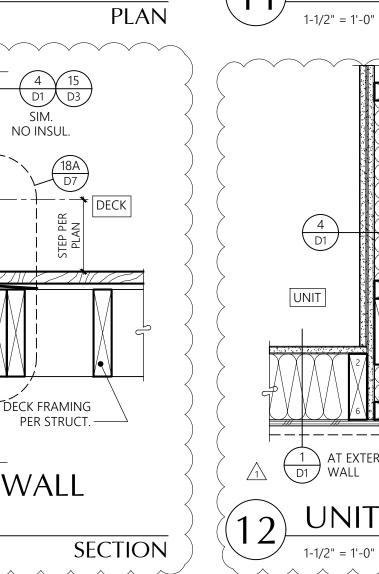


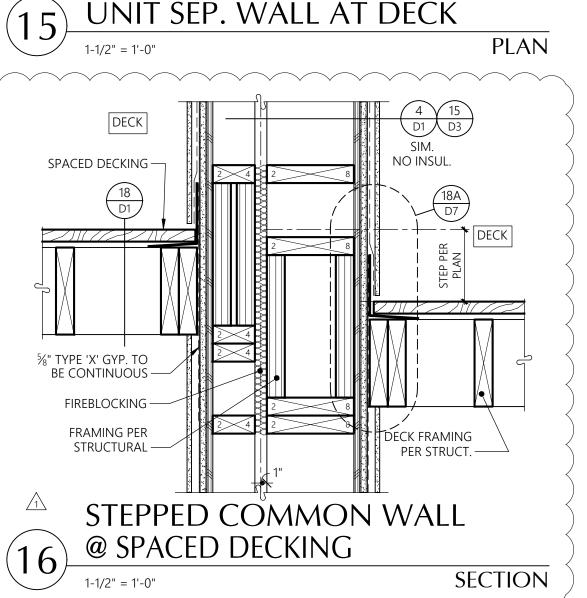












DECK SHEATHING

 $\frac{1}{2}$  (1) Layer 5/8 typ 'X' gyp. cont.

1 to underside of roof or

SIDING PER ELEV,

OVER W.R.B.

SHEATHING

PLYWOOD

P.T. PLATE —

FRAMED

WALL -

EXTERIOR

P.T. PLATE

PROVIDE 2X6\_

**VERTICAL TRUSS** 

CHORDS AT RATED

CORRIDOR WALL.

**ROOF SHEATING-**

2X6 FRAMING @ 16" O.C

BETWEEN ATTIC TRUSSES

TO ALLOW CONTINUOUS

RATED ASSEMBLY/DRAF

STOP TO UNDERSIDE OF

**CONDITION WITH** 

CONTINUOUS

TRUSS AT EXIT

CORRIDOR.

UNIT

FLASHING CAP-

WRAP W.R.B. OVER

TOP OF WALL -

3" RQUND ALUMINUM

OR PVC VENT PAINTED

OF WALL

SHEATHING

VENTED FIBER

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

dement soffit ─ STRUCTURAL -

LOW WALL @

METAL FLASHING -

FO MATCH CEMENT PANEL.

LOCATE ON THE INSIDE FACE

SIDING (PER ELEVATIONS) OVER W.R.B. OVER PLYWOOD

LAP W.R.B. OVER FLASHING-

PROVIDE CRICKET ON TOP

OF PLYWOOD SHEATHING SLOPED FOR DRAINAGE 19/D1-

2x10 CEDAR TRIM -

PERPENDICULAR

PREVIOUS 18/D3

DETAIL MOVED TO

12/D5

COLUMN

PLAN

POST

SECTION AT ENGAGED

COLUMN BASE

ATTIC

**FURRED COLUMN** 

PLĂN

SECTION

FRAMING PER

WATERPROOF DECK EDGE

**ATTIC SEPARATION @ CONT. PERP.** 

RUSS @ RATED CORRIDOR WALL

-FULL HEIGHT P.T. POST PER /

STRUCTURAL;

SEE 18D/D7

SIDING OVER

**GWB OVER** 

SHEATHING

- P.T. POST PER STRUCTURE

PLYWOOD

PAST SILL

PLINTH. SEE

**FOUNDATION** 

GWB TO BE SHAPED AROUND

TOP AND BOTTOM TRUSS

CONTINUOUS 1-HR. FIRE

FIRE CAULK\* AT JOINT OF

TRUSS AND GWB AT ALL

TRUSS PENETRATIONS, TYP.

\*NOTE: ENSURE PROPER DEPTH/INSTALLATION OF

FIRE CAULKING PER

MANUFACTURER'S

recommendations for

A MIN. 1HR FIRE RATING.

- VENTED SOFFIT

- (1) LAYER %" TYPE 'X' GYP. CONT. TO UNDERSIDE OF ROOF SHEATHING

PLAN/SECTION

Naterproof membrané

TO EXTEND UP WALL

SIDING PER ELEV.

-LAP W.R.B OVER FLASHING

- METAL BASE TRIM;

— WALL BEYOND

INSTALL PER MANUF.

**SECTION** 

OVER W.R.B. OVER

PLYWOOD SHEATHING

SURFACE

CORRIDOR

CHORD TO PROVIDE

RATING.

— CONCRETE

PLAN

2" OVERHANG OF

SIDING/FURRING

- ⅓"P.T.

**OVER EXTERIOR** 

WRAP W.R.B.

WALL -

LAP W.R.B.

OVER

OVER TOP OF

IDING PER ELEV.

OVER W.R.B. -

**EXTERIOR** 

DECK FLASHING -

WATER PROOF MEMBRANE TO

EXTEND UP WALL SURFACE -

— PT 2x JOISTS. -

SEE FRAMING

%" TYPE 'X' GYP. TO

BE CONTINUOUS TO

SIDING PER ELEV.

DIFFERENT SHEAR

PANEL

MAY BE REQUIRED.

SEE SHEAR PLANS.

FULL HEIGHT

POST PER

STRUCT.;

SEE 18C/D7

FOR BEAM

TO POST

DETAIL

DECK EDGE OF

CONFIGURATION

OVER W.R.B. -

**--------**

— FULL HEIGHT

@ MAX 16" O.C. –

EXTERIOR

DECK

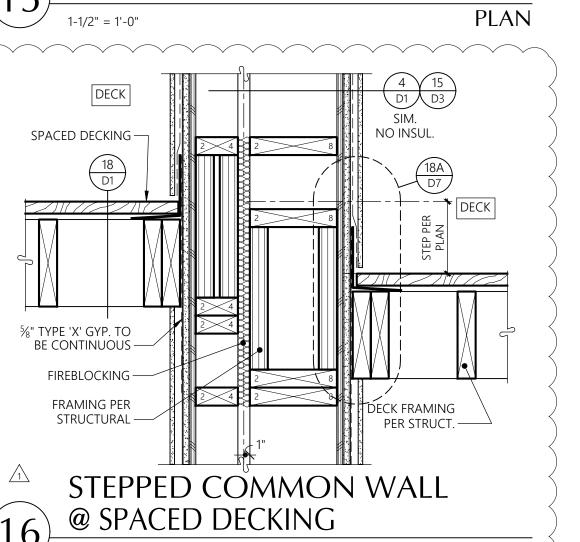
MIN. 2X4 FRAMING 1

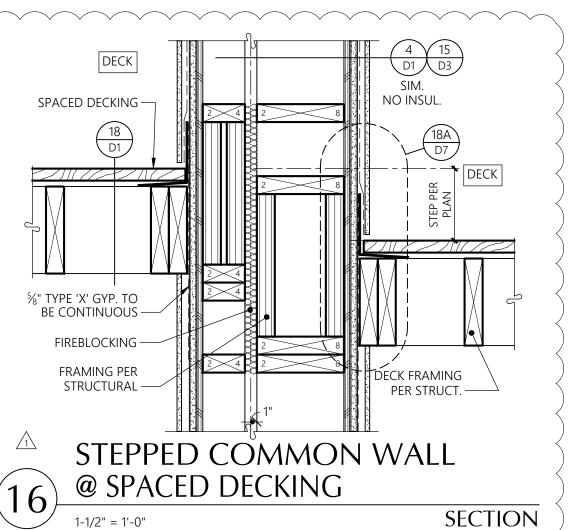
SHEATHING —

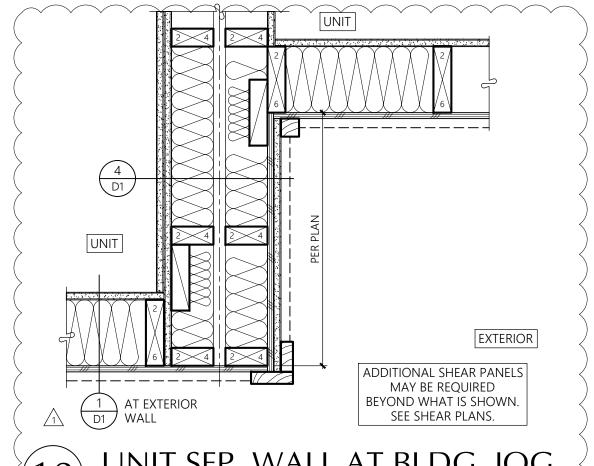
UNDERSIDE OF DECK

PLANS FOR SIZE

METAL FLASHING —





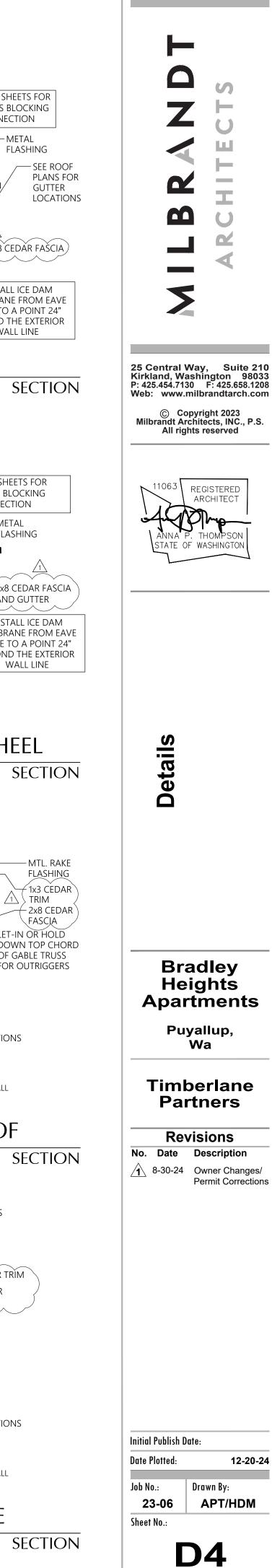


UNIT SEP. WALL AT BLDG. JOG

SECTION

Sheet No.:

23-06



ARCHITEC1

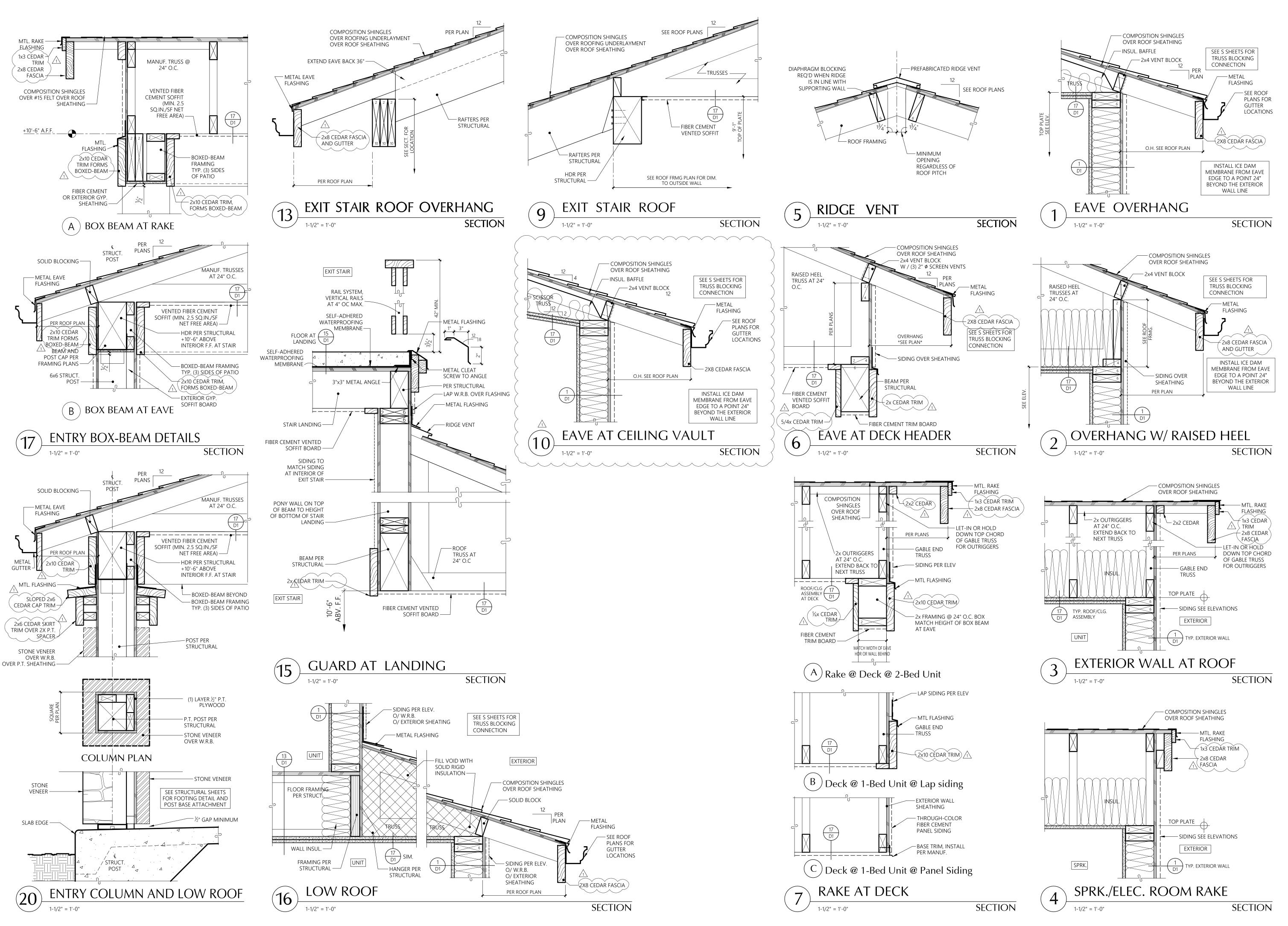
Wa

**Permit Corrections** 

12-20-24

Drawn By:

APT/HDM





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11063 \ REGISTEREF ARCHITEC1

**Bradley** Heights **Apartments** 

**Timberlane** 

**Partners** 

Puyallup,

Wa

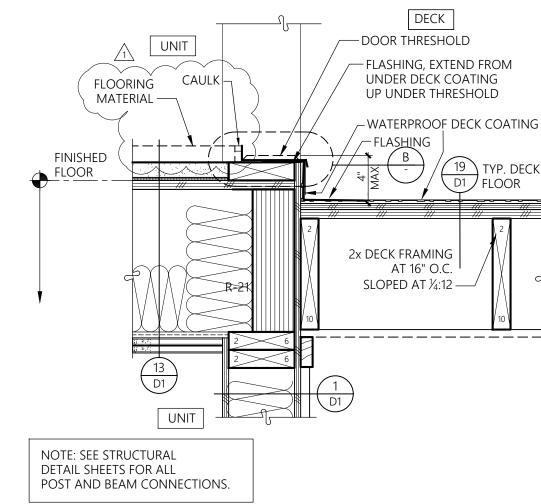
Revisions No. Date Description

8-30-24 Owner Changes/

Permit Corrections

Initial Publish Date: Date Plotted: 2-11-25 Job No.: Drawn By: 23-06 APT/HDM

Sheet No.: **D5** 





PORTION OF

DETAIL REMOVED

– SOLID FILL WITH

(MIN. R-38)

NOTE: CONDITION ONLY OCCURS

B) RAIL AT WALL

AT 3/4 SPLIT BUILDINGS

RIGID INSULATION

FRAMING PER

STRUCTURAL —

EXTERIOR

INSULATION

— ROOF

TRUSSES @

24" O.C.

24 GA. STAINLESS

**FULLY SOLDERED** 

OR INTERSECTIONS

WHICH ARE NOT

EXTEND FLASHING

DECK AND 1" OUT

- SEE DETAIL ABOVE

FULL LENGTH OF

OVER GUTTER

STEEL FLASHING

OR WELDED AT

**ALL JOINTS** 

FOLDED.

RAILING

- 1x6 TRIM

P.T. JOISTS PER

STRUCTURAL

— FIBER CEMENT VENTED

DECK

\_\_\_\_ 2X DECK JOISTS —

FRAMING PER

STRUCTURAL

SOFFIT BOARD

NOTE: WATERPROOF DECKS ONLY

 $\stackrel{1}{\sim}$  OCCUR AT  $\frac{3}{4}$  SPLIT BUILDINGS 

SLOPE DECK

MIN. 1/4 : 12

– P.T. LEDGER

WATERPROOF DECK @ WALL

DECK

SLOPE DECK

1/4 : 12

<u></u>P.T.

LEDGER

DECK OVER UNIT BELOW

FACE MOUNT

UNIT

NOTE: SEE STRUCTURAL

DETAIL SHEETS FOR ALL

1x4 CEDAR

AND BOTTOM —

POST AND BEAM

CONNECTIONS.

HORIZONTAL BRACE, EA.

NOTE: CONNECTION OF

RAILING TO DECK SHALL

BE WITH THRU-BOLT

TYPE CONNECTION AT FRAMED DECKS

SIDE OF PICKET, TOP

– SOLID FILL WITH

(MIN. R-38) —

DECK

— 2x6 CEDAR CAP,

- 2x2 CEDAR | NOTE: ALL

RAIL SYSTEM PASSAGE OF A

PICKETS @ OPENINGS IN

GUARD SIZED

ALLOW THE

4" Ø SPHERE

PREFAB METAL RAILING

ALTERNATE TO BE INSTALLED PER MANUFACTURER AND

STRUCTURAL REQUIREMENTS

LINE OF GUTTER —

FASCIA

LINE OF 2x10 -

TO NOT

PAINTED

5¼" O.C.,

PAINTED

OPENING

LESS THAN 4"

— 4X4 POSTS THRU

**BOLTED TO FASCIA** 

PER STRUCTURAL

BETWEEN

RAILS

+ NEOPRENE

TYPICAL GUARD RAILING

| WASHER FOR

**WATERPROOFING** 

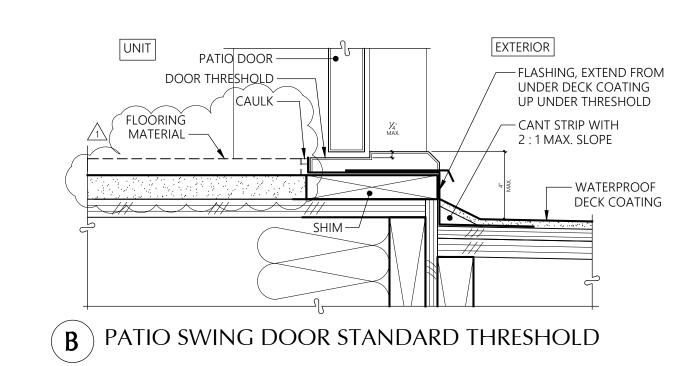
(B) SECTION B

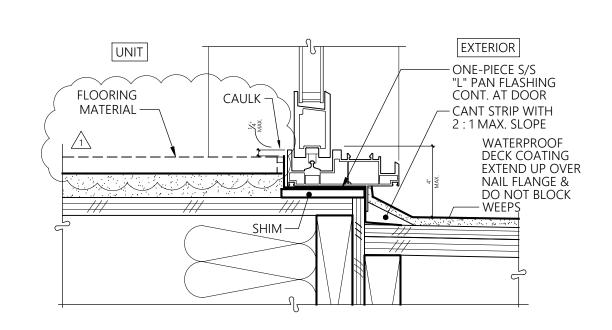
RIGID INSULATION

FLOOR

**SECTION** 

# ( **A** ) PATIO SWING DOOR STANDARD THRESHOLD





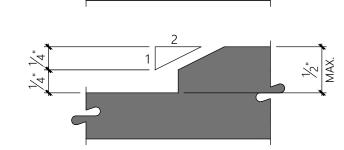




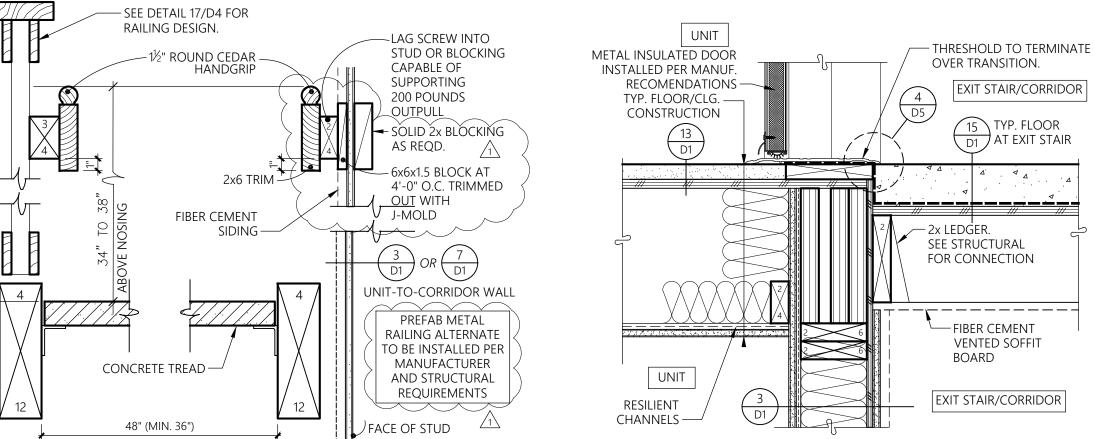


CHANGES IN LEVEL CHANGES IN LEVLE OF 1/4" MAX. SHALL BE PERMITTED TO BE VERTICAL AND WITHOUT EDGE TREATMENT.

CHANGES IN LEVEL BETWEEN 1/4" AND 1/2" MAX. SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2



DOOR CHANGES IN LEVEL **SECTION** 



STAIR



T-BAR. CUT AROUND

STRUCTURAL BRACKETS —

**CONNECTIONS PER** 

4X12 P.T.

STRINGER -

PRECAST

CONC. TREADS

STRUCTURAL

CONNECTIONS

PER STRUCTURAL

STRIP VENT PERP.

**UPPER FLOOR STAIR DETAIL** 

DEPTH, TYP.

TO JOISTS

STAIR

FIBER CEMENT

CONNECTIONS PER STRUCTURAL

WATERPROOF MEMBRANE —

ALL EXTERIOR

TRIM TO BE 5/4

FIBER CEMENT

U.N.O.

UPPER FLOOR STAIR DETAIL

PRECAST

CONC. TREADS

— T-BAR ∧

EXTERIOR

- BEAM PER STRUCTURAL

SEE STAIR FRAMING PLANS

MEMBRANE

− WATERPROOF (15 \ FLOOR AT

— BEAM PER STRUCTURAL SEE STAIR FRAMING PLANS

CORRIDOR

D1 CORRIODR

−STRIP VENT

` 4x12 P.T.

STRINGER

ALL EXTERIOR

TRIM TO BE

FIBER CEMENT

U.N.O.

**SECTION** 

- PRECAST CONC.

− 4X12 P.T.

**SECTION** 

STRINGER

TREADS

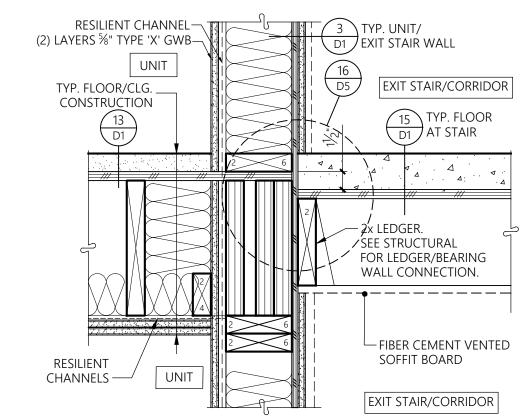
TOP OF CONCRETE SLAB

**CONNECTIONS PER** 

THICKENED SLAB

STRUCTURAL

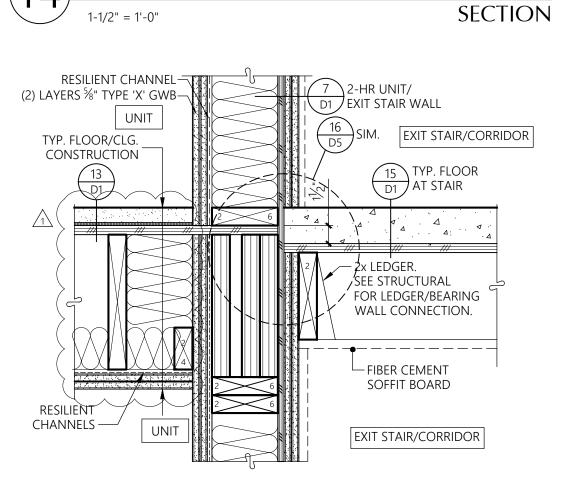
PERP. TO JOISTS



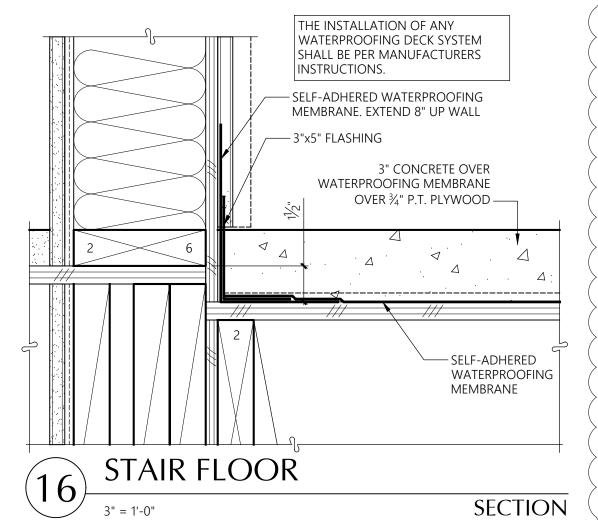
ENTRY DOOR THRESHOLD

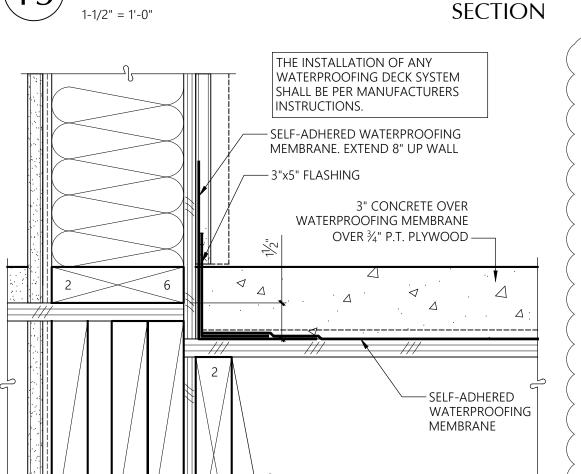
1-1/2" = 1'-0"

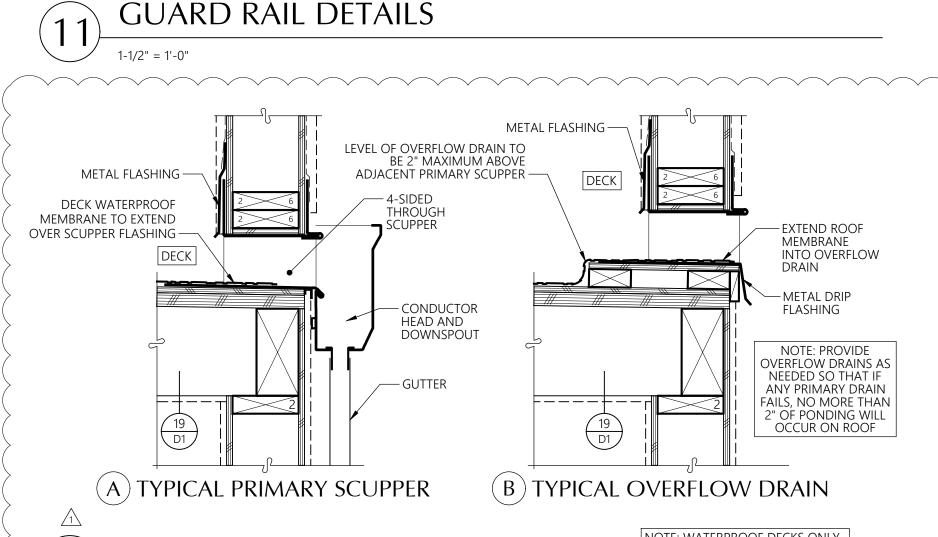






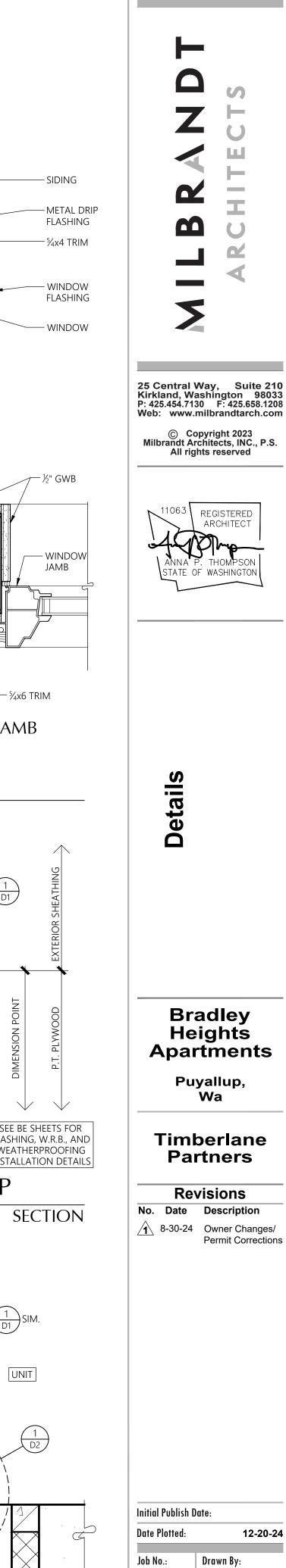






OCCUR AT ¾ SPLIT BUILDINGS

**SECTION** 



Wa

Permit Corrections

12-20-24

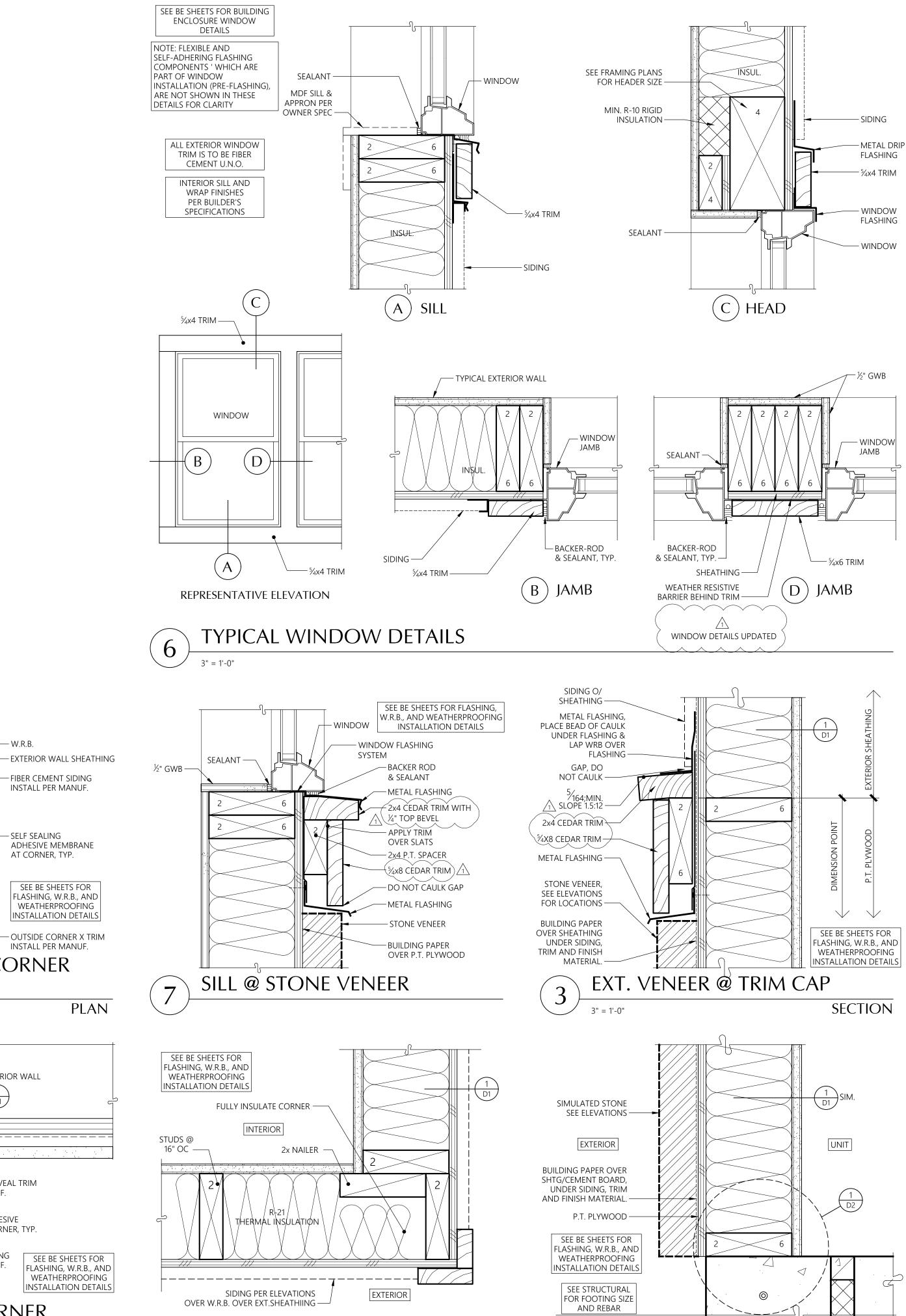
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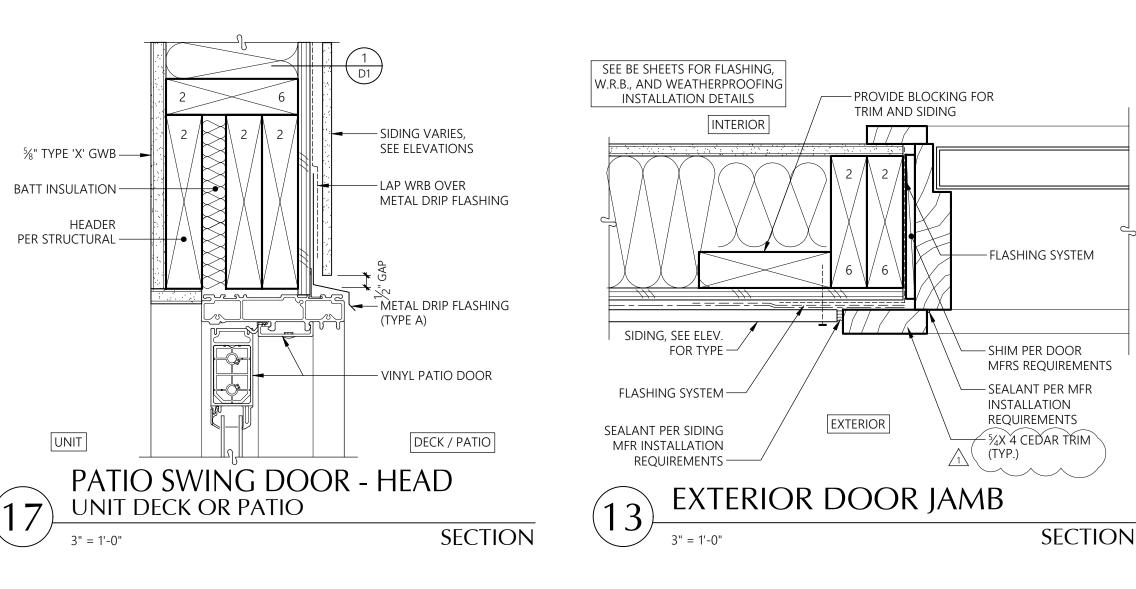
**D6** 

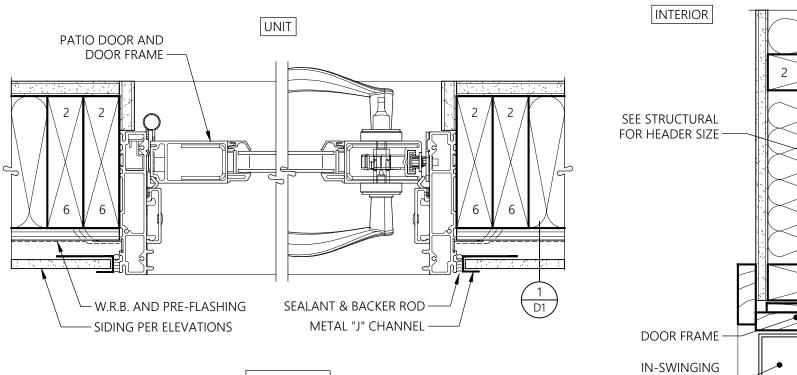
APT/HDM

23-06

Sheet No.:







— 
¼ X 3 VERTICAL

**∽** W.R.B.

PLAN

EXTERIOR

WALL

— EXTERIOR WALL

SHEATHING

- FIBER CEMENT

PANEL SIDING

CEDAR TRIM



-LEAVE APPROPRIATE

VERTICAL SIDING TRANSITION

LAP W.R.B. OVER (PRE-FLASH)

AND METAL FLASHING —

SIDING PER ELEV -

26 GAUGE METAL

- SEE ELEVATIONS FOR ALIGNMENT

OF BELLY BAND

2x10 BELLY BAND

INSTALL W.R.B. UNDER

SEAMS. -

BELLY BAND (PRE-FLASH), SLIP

W.R.B. UP UNDER PRE-FLASH;

TYP. 4" MIN. LAP; SEAL/TAPE ALL

SEE ELEVATIONS FOR LOCAITONS —

PROVIDE APPROPRIATE GAP AND SEALANT -

SIDING PER ELEV, INSTALL PER MANUF. -

**BELLY BAND** 

FLASHING —

GAP, DO NOT CAULK -

GAP AND CAULK

TYP.

**EXTERIOR** 

WALL

1 D1

FIBER CEMENT

LAP SIDING

INSTALL PER

MANUF. –

SEE BE SHEETS FOR

WEATHERPROOFING

TOP OF FLASHING

SEE BE SHEETS FOR

FLASHING, W.R.B., AND

WEATHERPROOFING

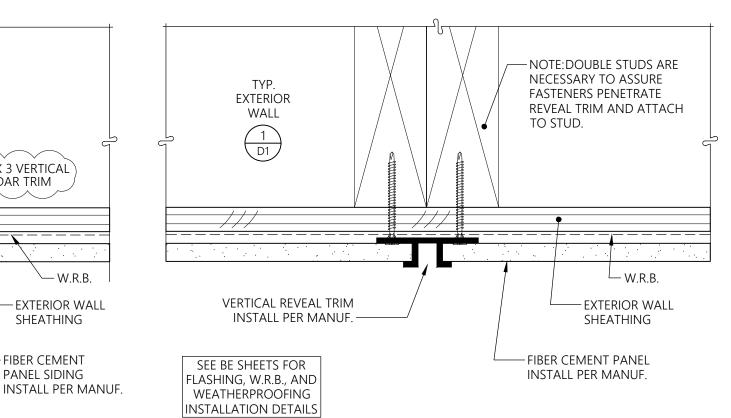
INSTALLATION DETAILS

100 DEGREES —

FLASHING, W.R.B., AND

INSTALLATION DETAILS

DECK / PATIO



EXTERIOR DOOR HEAD

DOOR -

EXTERIOR

SEE BE SHEETS FOR

FLASHING, W.R.B., AND WEATHERPROOFING INSTALLATION DETAILS

- SIDING - SEE ELEVATIONS

FOR TYPE

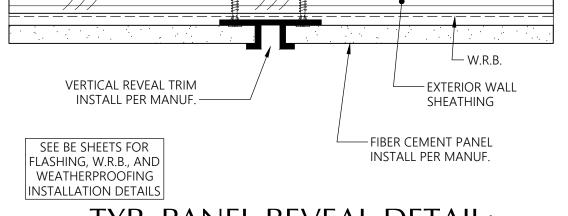
 $^{-1}4$ " MIN. GAP

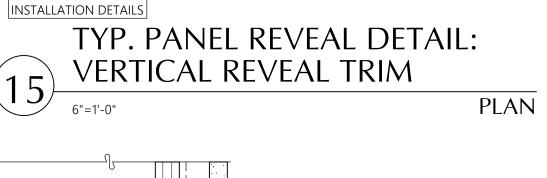
←¼X4 CEDAR TRIM )

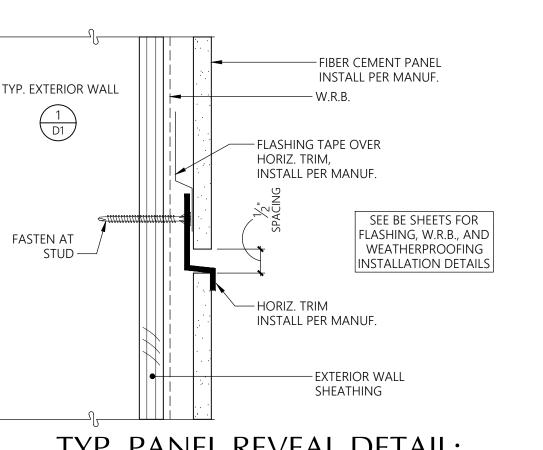
- SEALANT PER DOOR MFR

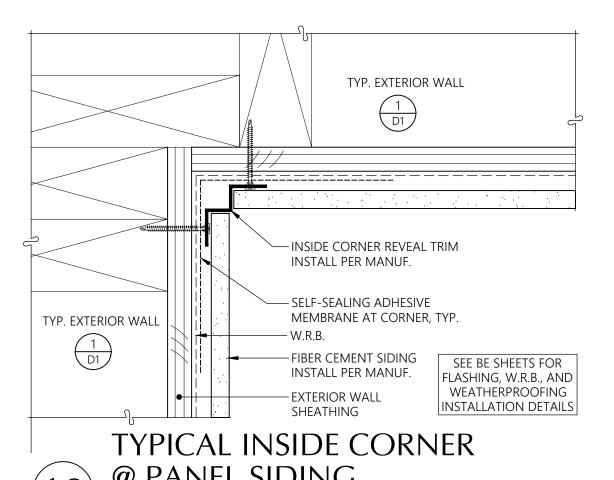
INSTALLATION REQUIREMENTS

**SECTION** 









TYPICAL OUTSIDE CORNER

@ PANEL SIDING

— W.R.B.

FIBER CEMENT SIDING

— SELF SEALING

INSTALL PER MANUF.

ADHESIVE MEMBRANE

SEE BE SHEETS FOR

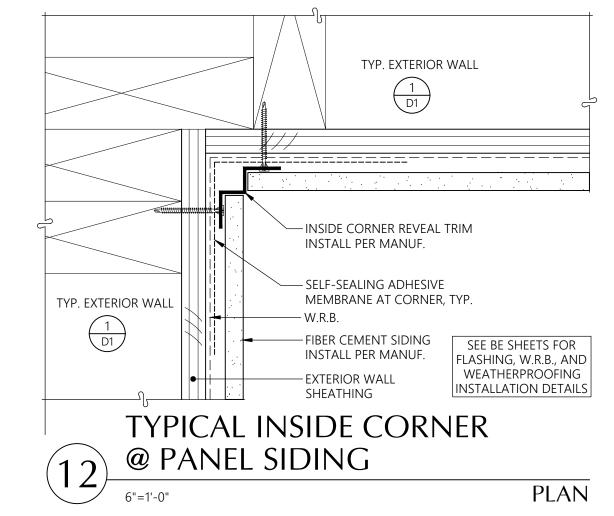
FLASHING, W.R.B., AND

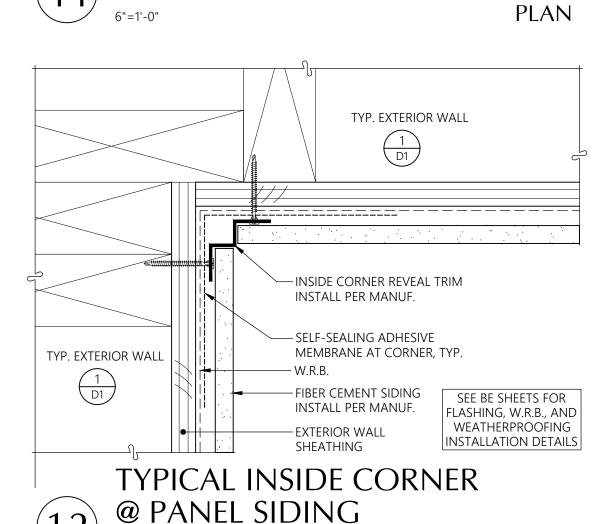
WEATHERPROOFING

**INSTALLATION DETAILS** 

INSTALL PER MANUF.

AT CORNER, TYP.



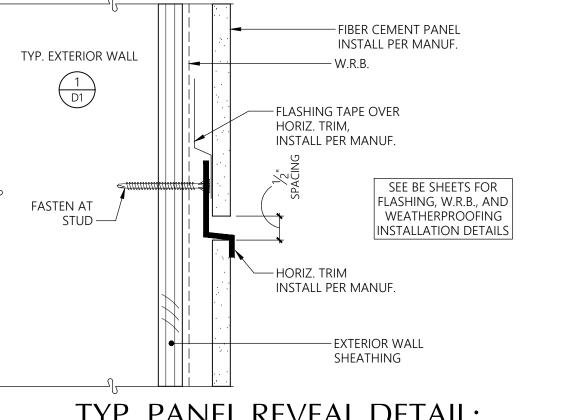


TYP.

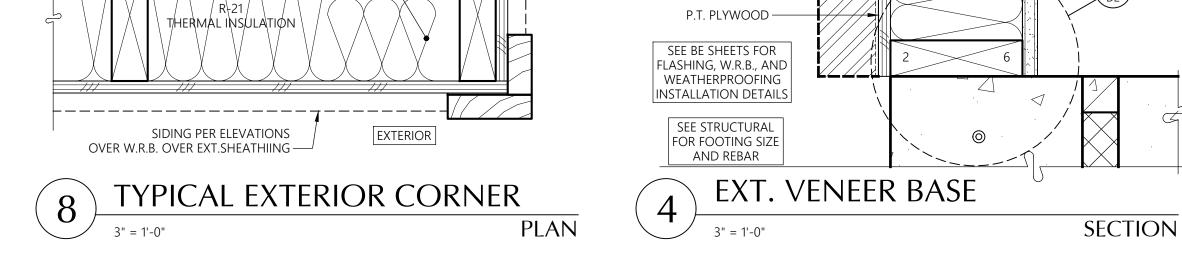
**EXTERIOR** 

WALL

1 D1



TYP. PANEL REVEAL DETAIL: HORIZONTAL REVEAL TRIM **SECTION** 



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**Bradley** Heights **Apartments** 

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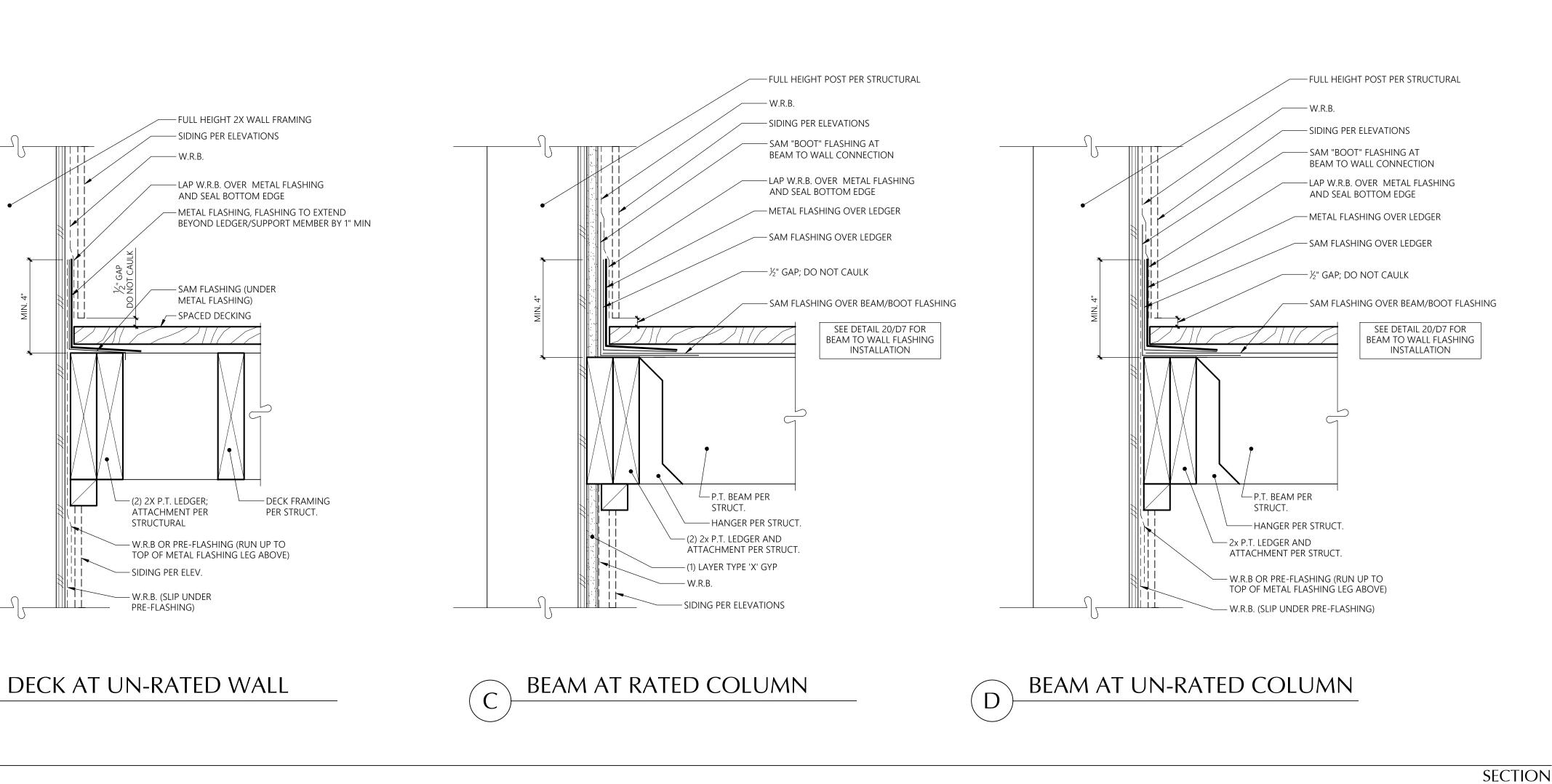
Revisions No. Date Description

8-30-24 Owner Changes/ Permit Corrections

Initial Publish Date: Date Plotted: Job No.: Drawn By:

SECTION

12-20-24 23-06 APT/HDM Sheet No.:



TO BE CEDAR

– 2x6 CEDAR CAP,

- 2x2 CEDAR PICKETS

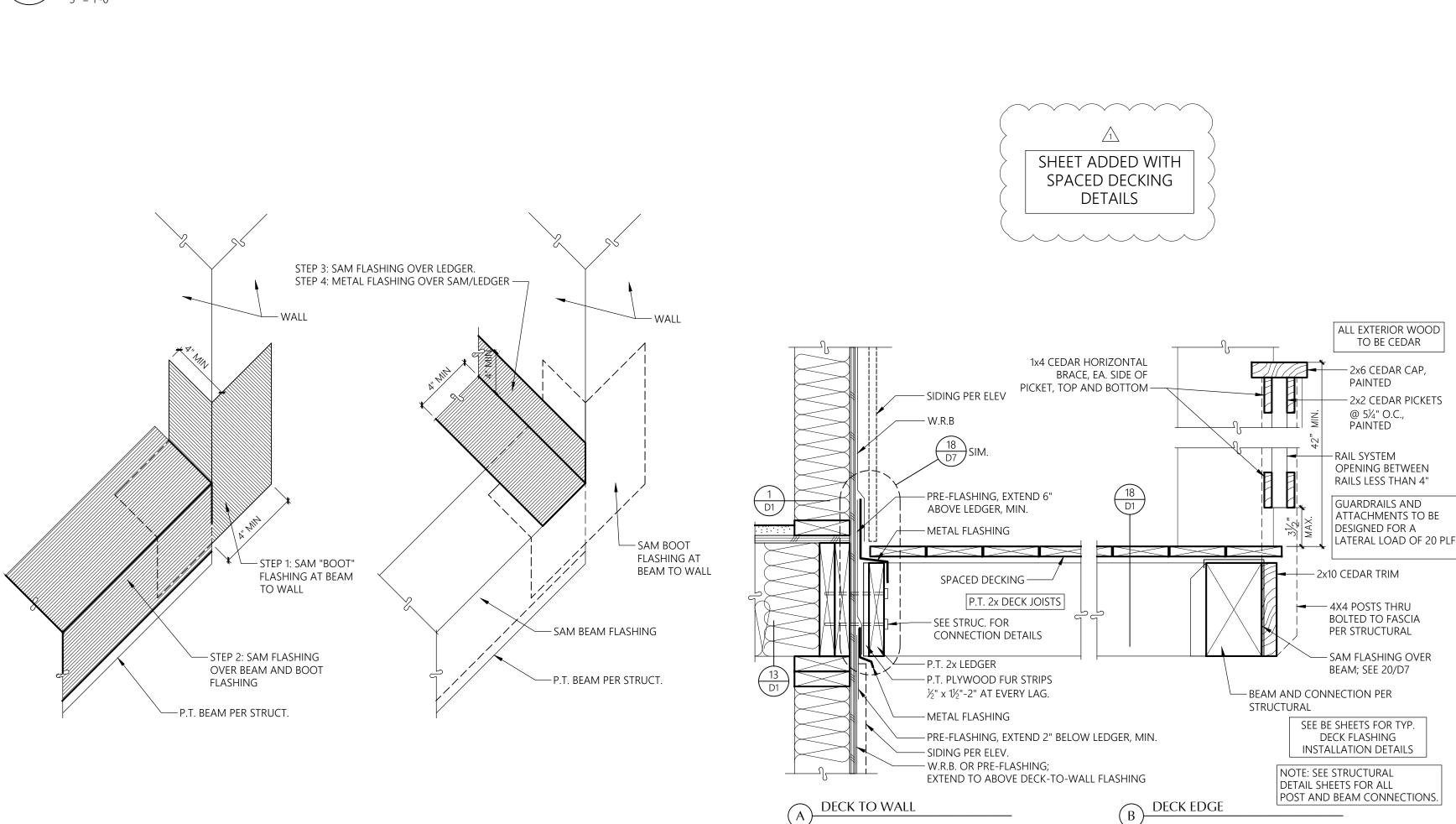
SECTION

PAINTED

@ 5¼" O.C.,

PAINTED

TYP. SPACED DECKING DETAILS



— FULL HEIGHT RATED COMMON WALL

- LAP W.R.B. OVER METAL FLASHING

- METAL FLASHING, FLASHING TO EXTEND

BEYOND LEDGER/SUPPORT MEMBER BY 1"

- DECK FRAMING

PER STRUCT.

- SIDING PER ELEVATIONS

- SAM FLASHING (UNDER METAL FLASHING)

- SPACED DECKING

(2) 2X P.T. LEDGER;

ATTACHMENT PER

— (1) LAYER TYPE 'X' GYP

— SIDING PER ELEVATIONS

STRUCTURAL

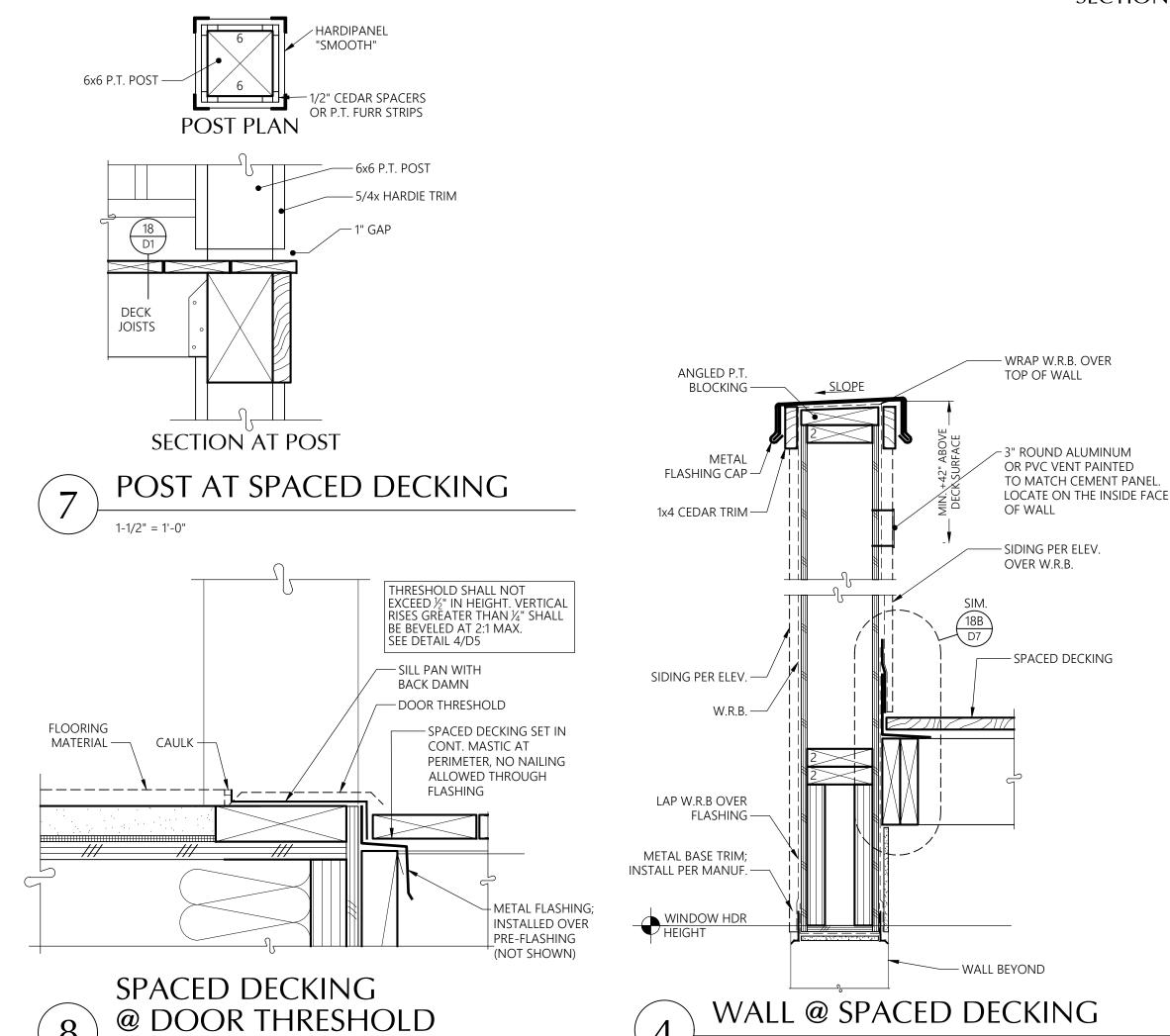
— W.R.B.

DECK AT RATED WALL

SPACED DECKING TO WALL

BEAM TO WALL FLASHING

- CL OF UNIT SEPARATION



THE PURPOSE OF THIS DETAIL IS TO INDICATE TYPES OF LOCATIONS OF WALL, CEILING AND FLOOR PENETRATIONS THAT NEED TO BE FIRESTOPPED IN ACCORDANCE WITH 706, 708, 711, 713, 714 AND 717 OF THE 2018 INTERNATIONAL BUILDING CODE. THE THICK LINES IN THE DETAIL INDICATE A PENETRATION BY A PIPE, CONDUIT, VENT, ETC., WHETHER PLASTIC (COMBUSTIBLE) OR

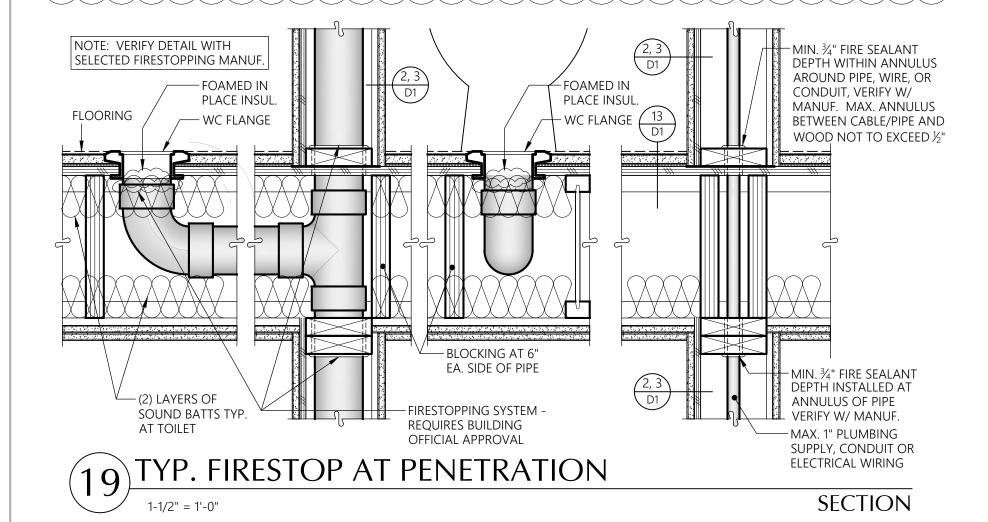
NON-COMBUSTIBLE.
IN GENERAL THESE PENETRATIONS (OR THE ANNULAR SPACE AROUND THEM) WOULD COMPROMISE THE INTEGRITY OF THE FIRE-RATED ASSEMBLY UNLESS IT WERE CLOSED OFF AND PROTECTED DURING A FIRE. COMMON WALLS BETWEEN UNITS ARE FIRE-RATED WALLS. UNRATED WALLS WITHIN UNITS (EVEN THOUGH THEY MAY HAVE RATED WALLBOARD) NEED NOT BE PROTECTED. HOWEVER, PENETRATION OF THE TOP AND BOTTOM PLATES OF UNRATED WALLS INTO

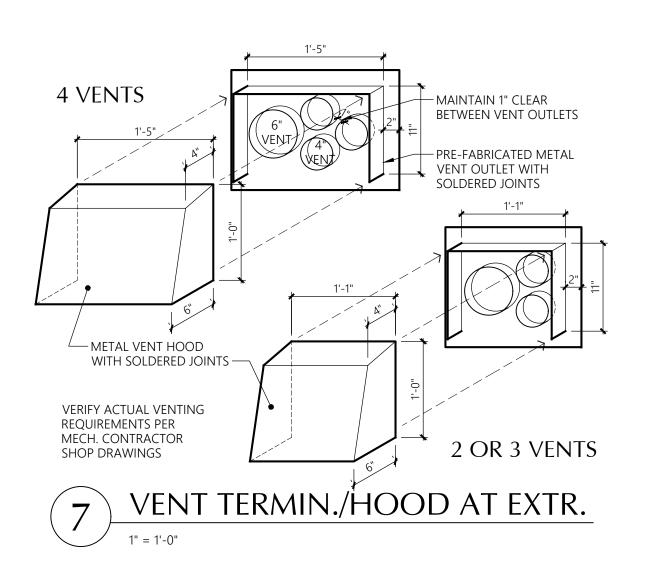
FIRESTOPPED.
THE CONTRACTOR SHALL DETERMINE FIRESTOPPING
FOR EACH SITUATION, AND TESTED ASSEMBLIES
SHALL BE SUBMITTED TO THE ARCHITECT AND THE
CITY IN ACCORDANCE WITH THE "DEFERRED
SUBMITTALS" SECTION ON THE COVER SHEET.

THE RATED FLOOR ASSEMBLY NEEDS TO BE

PENETRATION LOCATIONS FOR FIRESTOPPING

DETAIL 18/D8 REMOVED



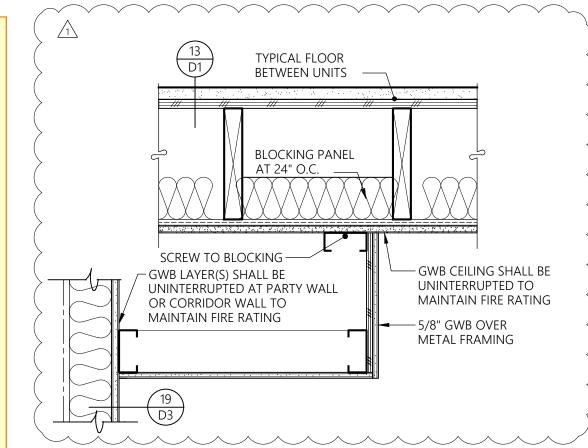




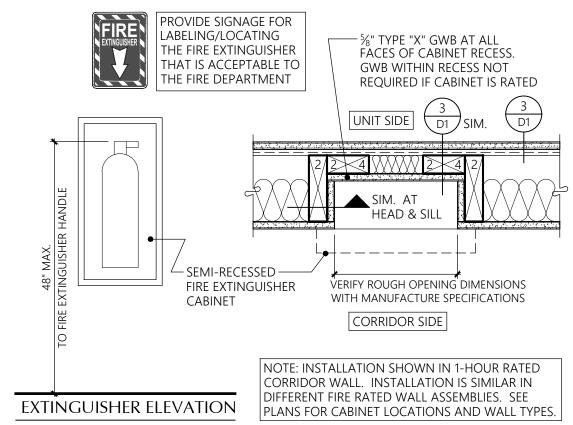
Ceiling at 1-hr wall appears to have sheathing being used to create a positive connection between the metal framing that is attached to the ceiling and metal framing at the bottom of the soffit. Identify the minimum sheathing material needed, also identify minimum faster for field and edge of sheathing. Identify minimum metal framing requirements to include type, minimum fasteners for positive connection.

Detail 1 for the Furred

(Construction Set, Sheet D8, Detail 1)









#### INSULATION AND ENERGY NOTES

#### Insulation - General

All insulation materials shall be installed according to the manufacturer's instructions to achieve proper densities, and maintain uniform R-values. Substantial contact of the insulation with the surface being insulated is required.

Where required, insulation shall be installed with clearances according to manufacturer's specifications. Insulation shall be installed so that required ventilation is unobstructed. For blown or poured loose fill insulation clearances shall be maintained through installation of a permanent retainer.

#### Slab on Grade

R-10 slab on grade insulation shall be installed inside the foundation wall.

#### Insulated Floors

Floor insulation shall be installed in a permanent manner in substantial contact with the surface being insulated. Insulation supports shall be installed so spacing is no more than twenty-four inches on center.

Floors separating conditioned space from unconditioned space shall have a vapor barrier installed. Vapor barrier shall be installed on the warm side of the insulation. The vapor barrier shall have a one perm dry cup rating or less (i.e. four mil. polyethylene or kraft faced material). The floor sheathing may be used as the vapor barrier if rated (and so stamped) at one perm (max.) Otherwise place vapor barrier on top of joists before placing sheathing.

#### Exterior Walls

All wall insulation shall fill the entire cavity. Exterior wall cavities isolated during framing shall be fully insulated to the levels of the surrounding walls. All faced insulation shall be face stapled to avoid compression.

Walls separating conditioned space from unconditioned space shall have a vapor barrier installed. Faced batt insulation shall be face stapled. Vapor barrier shall be installed on the warm side of the insulation.

#### Air Leakage

These air leakage notes apply to those locations separating outdoor ambient conditions from interior spaces that are heated or mechanically cooled.

Exterior joints around windows and door frames, between wall cavities and window or door frames, openings between walls and foundation, between walls and roof and wall panels; openings at penetrations of utility services through walls, floors and roof; and all other openings in the building envelope shall be sealed, caulked, gasketed, or weatherstripped to limit air leakage in a manner approved by the building official.

## Doors All exterior doors or doors serving as access to an enclosed

perimeter when in a closed position.

The thermal transfer characteristics of insulated doors shall be determined per NFRC 100-91.

unheated area shall be weatherstripped to limit leakage around their

#### Windows:

Glazing U-values shall be determined in accordance with NERC 100-91

NFRC 100-91.

Windows and SGD shall be double glazed vinyl type with the U-values indicated on the unit plans.

Windows shall be furnished with outdoor air inlets as indicated on the Unit Electrical plans. Inlets shall have a controllable and secure opening and be capable of a total opening area of not less than four (4) square inches and tested by a nationally recognized standard or approved agency and located to avoid drafts. Inlets shall be screened or otherwise protected from entry by insects, leaves, or other material.

#### Roof/Ceilings:

Roof/Ceiling insulation: Open-Blown or poured loose fill insulation may be used in attic spaces where the slope of the ceiling is more than 4 in 12 and there is at least 44 inches of clear distance from the top of the bottom chord of the truss or ceiling joist to the underside of the sheathing. When eave vents are installed, baffling of the vent openings shall be provided so as to deflect the incoming air above the surface of the insulation. Baffles shall be rigid material, resistant to wind driven moisture. When feasible, the baffles shall be installed from the top of the outside of the exterior wall, extending inward, to a point six inches vertically above the height of noncompressed insulation, and twelve inches vertically above loose fill insulation. Baffles shall be in place at the time of framing inspection.

Where the ventilation space above the insulation is less than an average of twelve inches roof ceiling assemblies shall be provided with a vapor barrier having a 0.5 perm cup rating or less. Faced batt insulation where used as a vapor barrier shall be face stapled.

Vapor barriers shall not be required in roof/ceiling assemblies where the ventilation space above the insulation averages twelve inches or greater.

Vapor barriers shall be installed on the warm side of the

vapor barriers shall be installed on the warm side of the sulation.

# MILBRANDI ARCHITECTS

25 Central Way, Suite 210 Kirkland, Washington 98033 P: 425.454.7130 F: 425.658.1208 Web: www.milbrandtarch.com

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**Details** 

#### Bradley Heights Apartments

Wa

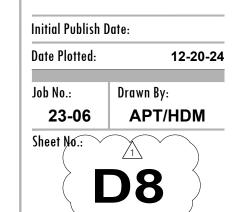
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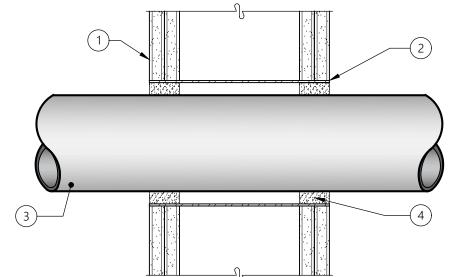
#### Timberlane Partners

Revisions

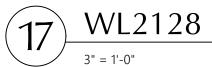
No. Date Description

8-30-24 Owner Changes/ Permit Corrections

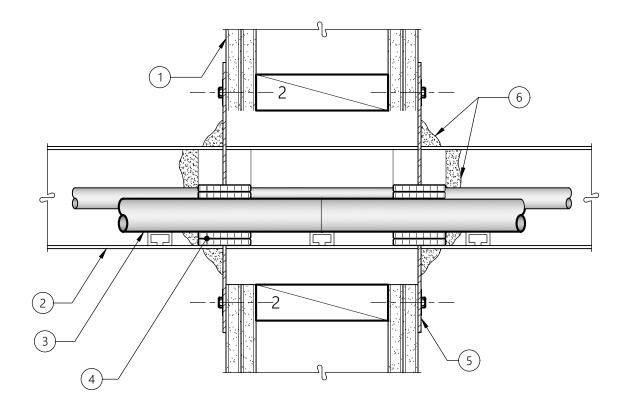




- (1) TYP. FIRE RATED WALL ASSEMBLY, SEE SHEET DI FOR DETAILS
- 2 METALLIC SLEEVE OPTIONAL SEE MANUFACTURER INFORMATION FOR ACCEPTABLE METALLIC SLEEVES
- (3) ONE NONMETALLIC PIPE WITHIN FIRESTOP SYSTEM. PIPE MAY BE INSTALLED AT AN ANGLE NOT GREATER THAN 45 DEGREES FROM PERPENDICULAR. PIPE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF THE WALL ASSEMBLY. THE SPACE BETWEEN THE PIPE AND PERIPHERY OF THE OPENING SHALL BE MIN.  $\frac{1}{4}$ " TO MAX  $\frac{1}{16}$ ". SEE MANUFACTURER INFORMATION FOR ACCEPTABLE PIPE TYPES AND SIZES.
- (4) FOR 1 HR F RATING, MIN. 5/8" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF THE WALL. FOR 2 HOUR F RATING, MIN 1-1/4" THICKNESS OF FILL MATERIAL APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. HILTI FS-ONE OR FS-ONE MAX INTMESCENT SEALANT



**SECTION** 



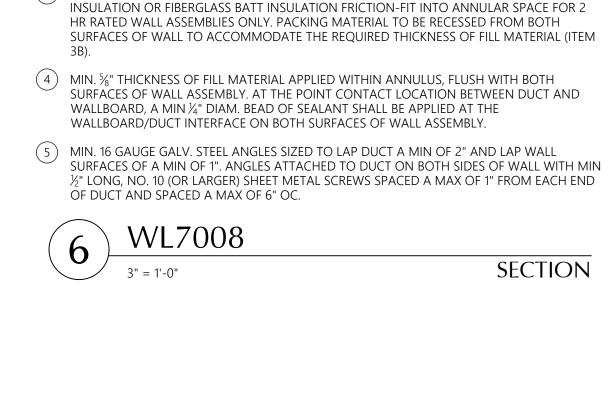
- (1) TYP. FIRE RATED WALL ASSEMBLY, SEE SHEET D1 FOR DETAILS
- ( 2 ) MAX 24" WIDE BY MAX 4" DEEP OPEN LADDER STEEL OR ALUMINUM CABLE TRAY. CABLE TRAY TO CONSIST OF CHANNEL-SHAPED SIDE-RAILS WITH BOXED CHANNEL RUNGS SPACED 9" O.C. CABLE TRAY CENTERED IN FRAMED OPENING AND RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.
- (3) AGGREGATE CROSS-SECTIONAL AREA OF CABLES IN CABLE TRAY NOT TO EXCEED 32% OF THE CROSS-SECTIONAL AREA OF THE CABLE TRAY BASED ON A MAX 3" CABLE LOADING DEPTH WITHIN THE CABLE TRAY, ACCEPTABLE TYPES AND SIZES OF CABLE AS NOTED BY
- (4) RIGID ALUMINUM FOIL-FACED SHEET WITH GALV. STEEL SHEET BACKER. SHEETS CUT TO TIGHTLY FOLLOW THE CONTOURS OF THE CABLES AROUND THE ENTIRE PERIMETER OF THE CABLE TRAY AND CABLE FILL. SHEETS CUT TO LAP A MIN. OF 2" ON THE WALL ON ALL SIDES OF THE OPENING ON BOTH SIDES OF THE WALL.
- (5) MIN. 2" WIDE STRIP OF MIN 0.020" THICK (26 GAUGE) GALV. STEEL CENTERED OVER ENTIRE LENGTH OF EACH BUTTED SEAM OR SLIT MADE IN THE INTUMESCENT SHEET. INSTALL PER
- (6) ONE LAYER OF  $\frac{1}{2}$ " x  $\frac{1}{16}$ " ADHESIVE BACKED GRAPHITE INTUMESCENT SEAL POSITIONED UNDER INTUMESCENT SHEET AROUND ENTIRE PERIMETER OF THROUGH OPENING OR MIN.  $\chi$ " DIAM. CONTINUOUS BEAD OF CAULK OR PUTTY APPLIED TO EDGE OF INTUMESCENT SHEET AT ITS INTERFACE WITH SURFACE OF FLOOR OR WALL AROUND ENTIRE PERIMETER OF THROUGH OPENING. CAULK APPLIED TO FILL ALL INTERSTICES BETWEEN CABLES AND BETWEEN CABLES AND WRAP STRIP (ITEM 4). CAULK DEPTH TO BE MIN. 2" WITHIN CONFINES OF WRAP STRIP ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. GENEROUS APPLICATION OF CAULK TO BE APPLIED AROUND THE BASE OF THE CABLE TRAY SIDE-RAILS AND CONTOUR APPLIED WRAP STRIPS AT THEIR EGRESS FROM THE INTUMESCENT SHEET ON BOTH SIDES OF THE WALL ASSEMBLY. CAULK ALSO APPLIED TO COVER ALL EXPOSED EDGES OF WRAP STRIPS TO A MIN. THICKNESS OF 1/8"

SEE MANUF. INFORMATION FOR USE OF PUTTY AS CAULKING ALTERNATIVE.



ASSOCIATED

**SECTION** 



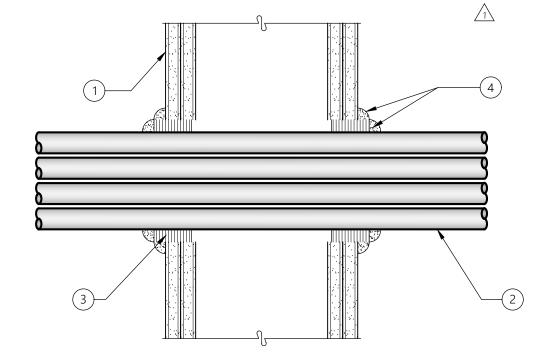
( 2 ) NOM. 36" x 30" (OR SMALLER) NO. 24 GAUGE (OR HEAVIER) GALV. STEEL DUCT TO BE

ANNULAR SPACE OF MIN 0" TO MAX 2" IS REQUIRED WITHIN THE FIRESTOP SYSTEM.

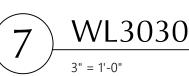
(3) PACKING MATERIAL (OPTIONAL) – POLYETHYLENE BACKER ROD, MINERAL WOOL BATT

INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. AN

(1) TYP. FIRE RATED WALL ASSEMBLY, SEE SHEET D1 FOR DETAILS

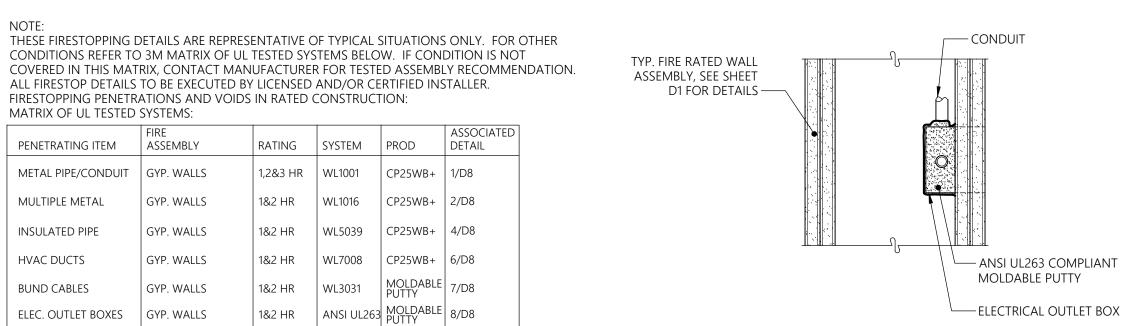


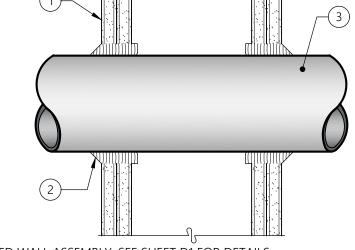
- (1) TYP. FIRE RATED WALL ASSEMBLY, SEE SHEET D1 FOR DETAILS
- ( 2 ) CABLES MAX 4 IN. DIAM TIGHT BUNDLE OF CABLES CENTERED IN CIRCULAR CUTOUTS IN GWB AND RIGIDLY SUPPORTED ON BOTH SIDES OF THE WALL ASSEMBLY. SEE MANUFACTURER INFORMATION FOR ACCEPTABLE TYPES AND SIZES CABLES.
- (3) WRAP STRIP NOM ¼" THICK INTUMESCENT MATERIAL FACED ON ONE SIDE WITH ALUMINUM FOIL, SUPPLIED IN NOM 2 IN. WIDE STRIP TIGHTLY WRAPPED AROUND CABLE BUNDLE (FOIL SIDE OUT) WITH SEEM BUTTED. WRAP STRIP SECURELY BOUND WITH STEEL WIRE TIE AND SLID INTO ANGULAR SPACE APPROX. 1-1/4" SUCH THAT APPROX 3/4" OF THE WRAP WIDTH PROTRUDES FROM WALL SURFACE ON EACH SIDE OF ASSEMBLY
- MIN. ½" THICKNESS DIAM OF MOLDABLE PUTTY APPLIED TO THE WRAP STIP/WALL INTERFACE AND TO THE EXPOSED EDGE OF WRAP STRIP APPROX 3/4" FROM WALL SURFACE ON EITHER SIDE OF ASSEMBLY. PUTTY TO BE FORCED INTO INTERSTICES OF CABLE BUNDLE TO MAX EXTENT POSSIBLE WITHIN CONFINES OF THE WRAP STRIP EACH SIDE OF ASSEMBLY



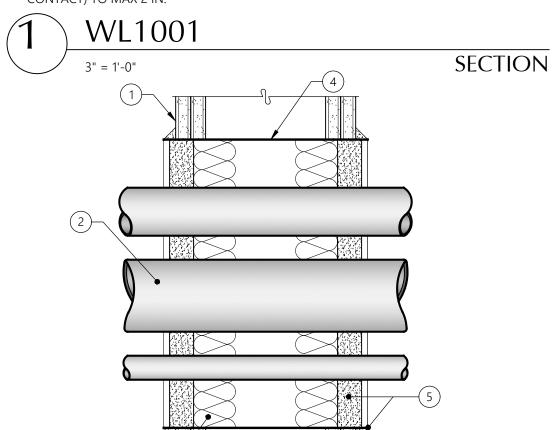
**SECTION** 

SECTION





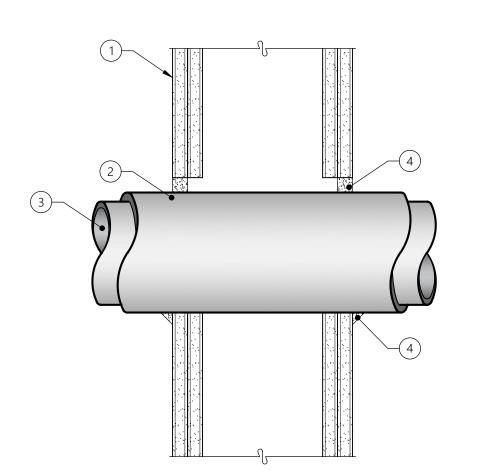
- (1) TYP. FIRE RATED WALL ASSEMBLY, SEE SHEET D1 FOR DETAILS
- (2) MIN. 5/8", 11/4", 17/8" THICKNESS OF CAULK FOR 1, 2, 3 HOUR, RESPECTIVELY, APPLIED WITHIN ANNULUS, FLUSH WITH BOTH SURFACES OF WALL. MIN ¼" DIA. BEAD OF CAULK APPLIED TO GYPSUM BOARD/PENETRANT INTERFACE AT POINT CONTACT LOCATION ON BOTH SIDES OF WALL.
- (3) METALLIC PIPE, CONDUIT OR TUBING INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. ANNULAR SPACE BETWEEN PIPE, CONDUIT OR TUBING AND PERIPHERY OF OPENING SHALL BE MIN OF 0 IN. (POINT CONTACT) TO MAX 2 IN.



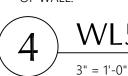
- (1) TYP. FIRE RATED WALL ASSEMBLY, SEE SHEET D1 FOR DETAILS
- (2) NOM 3 IN. DIAM (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, STEEL CONDUIT OR STEEL ELECTRICAL METALLIC TUBING. MULTIPLE PIPES AND/OR CONDUIT PERMITTED IN SLEEVED OPENING PROVIDED A MIN SEPARATION OF 1/4" IS MAINTAINED BETWEEN PIPES OR
- MIN. 1" THICKNESS OF RIGID GLASS FIBER INSULATION OR MINERAL WOOL BATT (3) INSULATION FIRMLY PACKED INTO STEEL SLEEVE ON BOTH SIDES OF WALL ASSEMBLY AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED MIN. %" FROM SURFACE OF WALL ON BOTH SIDES OF WALL ASSEMBLY.
- 4 NO 28 GALIGE GALV SHEET STEEL FORMED INTO MAX 12 IN DIA OR MAX 12 IN BY 9 IN SLEEVE WITH NOM 2 IN. OVERLAP AT SEAM. LENGTH OF SLEEVE TO BE APPROX. 1 IN. GREATER THAN OVERALL THICKNESS OF WALL ASSEMBLY, SUCH THAT, WHEN INSTALLED, THE ENDS OF THE SLEEVE WILL PROJECT APPROX. 1/2 IN. BEYOND THE SURFACE OF THE WALL ON BOTH SIDES OF THE WALL ASSEMBLY.
- (5) CAULK OR SEALANT APPLIED TO FILL THE STEEL SLEEVE TO A MIN. DEPTH OF 1" ON BOTH SIDES OF WALL ASSEMBLY. A NOM. ½" DIA. CONTINUOUS BEAD OF CAULK SHALL BE APPLIED AROUND THE CIRCUMFERENCE OF THE STEEL SLEEVE AT ITS EGRESS FROM THE GYPSUM WALLBOARD LAYERS ON BOTH SIDES OF THE WALL ASSEMBLY.

WL1016

**SECTION** 



- (1) TYP. FIRE RATED WALL ASSEMBLY, SEE SHEET D1 FOR DETAILS
- ( 2 ) NOM. ½" TO 2" THICK HOLLOW CYLINDRICAL HEAVY DENSITY (MIN 3.5 PCF) GLASS FIBER UNITS FOR 1 HR RATED ASSEMBLIES, NOM ½" TO 1½" THICK CYLINDRICAL HEAVY DENSITY GLASS FIBER UNITS FOR 2 HR RATED ASSEMBLIES, JACKETED ON THE OUTSIDE WITH AN ALL SERVICE JACKET. THE ANNULAR SPACE BETWEEN THE INSULATED PIPE AND THE EDGE OF THE THROUGH OPENING SHALL BE MIN 0" TO MAX. 11/4"
- (3) ONE METALLIC PIPE OR TUBE TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. PIPE TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL
- (4) MIN. %" THICKNESS OF CAULK APPLIED WITHIN ANNULAR SPACE FLUSH WITH EACH SURFACE OF WALL. A MIN. ½" DIAM. BEAD OF CAULK SHALL BE APPLIED TO THE PIPE INSULATION/ WALLBOARD INTERFACE AT THE POINT CONTACT LOCATION ON BOTH SIDES OF WALL.



WL5039

**SECTION** 

**Bradley** Heights **Apartments** 

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Revisions No. Date Description

/1\ 8-30-24 Owner Changes/ Permit Corrections

Initial Publish Date:

Date Plotted: 12-20-24 Job No.: Drawn By: 23-06 APT/HDM

Sheet No.:

MULTIPLE METAL

PENETRATING ITEM | ASSEMBLY RATING SYSTEM PROD DETAIL METAL PIPE/CONDUIT GYP. WALLS 1,2&3 HR | WL1001 | CP25WB+ | 1/D8 GYP. WALLS INSULATED PIPE CP25WB+ 4/D8 GYP. WALLS 1&2 HR WL5039 HVAC DUCTS GYP. WALLS 1&2 HR WL7008 CP25WB+ 6/D8 BUND CABLES GYP. WALLS 1&2 HR WL3031 ANSI UL263 MOLDABLE 8/D8 ELEC. OUTLET BOXES GYP. WALLS 1&2 HR CABLE TRAYS GYP. WALLS 1&2 HR WL4004

THESE FIRESTOPPING DETAILS ARE REPRESENTATIVE OF TYPICAL SITUATIONS ONLY. FOR OTHER

CONDITIONS REFER TO 3M MATRIX OF UL TESTED SYSTEMS BELOW. IF CONDITION IS NOT

ALL FIRESTOP DETAILS TO BE EXECUTED BY LICENSED AND/OR CERTIFIED INSTALLER.

Update details call outs to reflect correct

(Construction Set, Sheet D9, Detail 12,

FIRESTOPPING PENETRATIONS AND VOIDS IN RATED CONSTRUCTION:

details and detail sheets in matrix.

Matrix of UL Tested)

MATRIX OF UL TESTED SYSTEMS:

MATRIX OF UL TESTED SYSTEMS FOR FIRESTOPPING

NOTE: ALL DETAILS ON THIS SHEET ARE RECOMMENDED FIRE RATED PENETRATION DETAILS BASED ON PRODUCTS LISTED IN 12/D9. OTHER PRODUCTS MEETING THE SAME LEVEL OF ASSEMBLY SHALL BE DEEMED ACCEPTABLE.

-WOOD FRAMING

**Timberlane** 

No. Date Description

followed when installing specific materials.

compatible with all material with which each component comes in contact

with.

Multiple detail call outs need to be corrected on this sheet, as the call outs do not exist.

MIN. 12" WIDE APPROVED

PRE-FLASING AT JAMBS

MIN. 12" WIDE APPROVED

PRE-FLASHING AT JAMBS —

MIN. 12" WIDE SILL FLASHING

INSTALL METAL COLLAR

PER MANUFACTURER

OVER A CONTINUOUS

THE SILL ——

PLACE CONTINUOUS

BEAD OF \*SEALANT

OR INSIDE OF NAIL

COLLAR. —

APPROVED

OVER PRE-FLASHING

TOP AND SIDES, OVER

SLOTS PRIOR TO SETTING

TUCK BUILDING PAPER

UP UNDER APPROVED

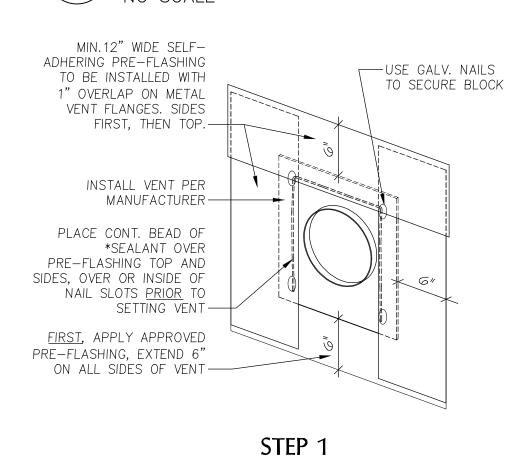
PRE-FLASHING ----

DIRECT VENT F.P.

BEAD OF \*SEALANT AT

(Construction Set, Sheets BE1 and BE3 and BE4)

OVERLAP AT BUILDING PAPER INSTALLATION



12" WIDE WRAP

AT INSIDE AND

OUTSIDE CORNERS

LAP NEXT COURSE OF BUILDING PAPER OVER TOP AND SIDES OF SELF—ADHEARING PRE-FLASHING ----INSTALL 2x2 WHITE WOOD ON TOP AND SIDES OVER BUILDING PAPER — CONT. BEAD OF \*SEALANT -12" WIDE SILL FLASHING OVER A CONT. BEAD OF \*SEALANT AT THE SILL-TUCK BUILDING PAPER UP UNDER APPROVED PRE-FLASHING -STEP 2

WALL

SEE DETAIL 7/15 FOR

INFORMATION.

ADDITIONAL BÉLLYBAND

INSTALL 60 MIN. GRADE D

WEATHERBOARD FASHION

BUILDING PAPER

воттом.

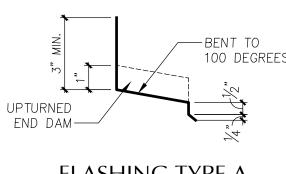
STARTING FROM THE

" OVERLAP AT ALL

HORIZONTAL JOINTS

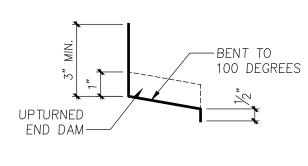
AIR VENT (8" OR LARGER)

NOTE FOR ALL STYLES: UP-TURNED END DAMS TO BE USED AT EVERY TERMINATION POINT AT ALL LOCATIONS



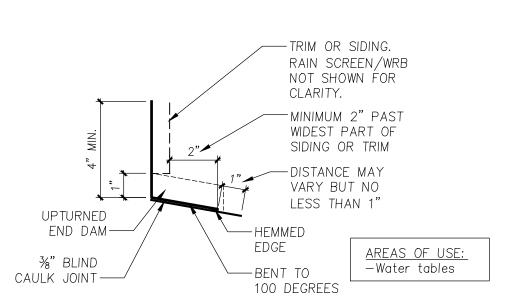
AREAS OF USE: -Bellybands -Windows -All exterior doors -Garage wraps -Non-vinyl penetration blocks

FLASHING TYPE A



AREAS OF USE: -Column base shoe -Anywhere  $\frac{1}{4}$ " kick-out would not be acceptable or at locations where kick-out could be dangerous for homeowners.

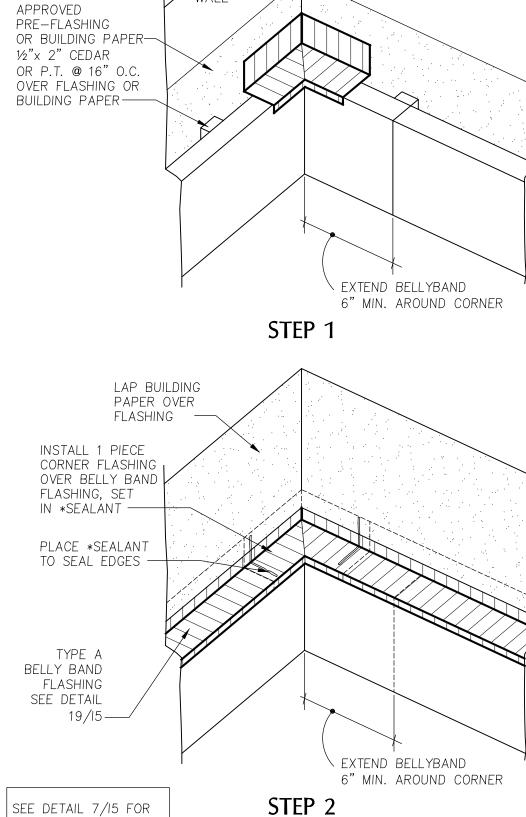
FLASHING TYPE B



FLASHING TYPE C

HEAD FLASHING TYPES

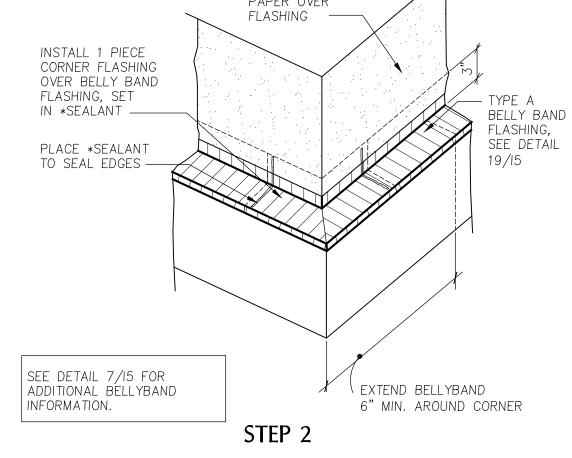
**SECTION** 



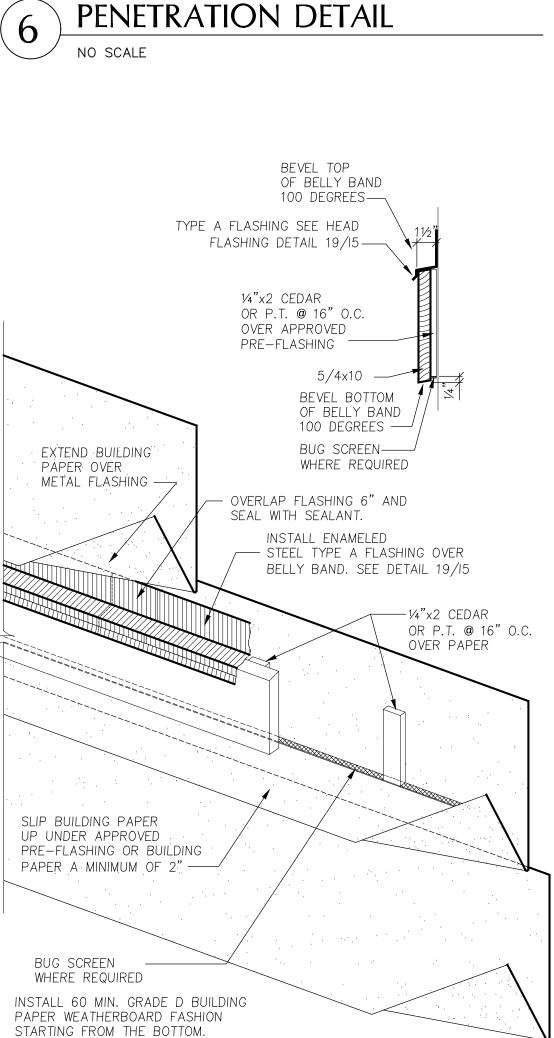
BELLYBAND FLASHING

WALL

PRE-FLASHING
OR BUILDING PAPER — WALL WALL ½"x 2" CEDAR OR P.T. @ 16" O.C. OVER FLASHING -EXTEND BELLYBAND STEP ' 6" MIN. AROUND CORNER LAP BUILDING PAPER OVER FLASHING INSTALL 1 PIECE CORNER FLASHING OVER BELLY BAND FLASHING, SET IN \*SEALÁNT PLACE \*SEALANT TO SEAL EDGES -SEE DETAIL 7/15 FOR



BELLYBAND FLASHING



**BELLY BAND** 

TOP OF FLASHING AT 100 DEGREES

PLACE PRE PRIMED OR NON-PRIMED

CEDAR WOOD BLOCK OVER APPROVED

PRE-FLASHING, EXTEND 6" BEYOND

BLOCK ON ALL SIDES.

ENAMELED

LAP NEXT COURSE OF PAPER OVER FLASHING AND~ DOWN SIDES OF

BLOCK.

— USE GALV. NAILS

TO SECURE BLOCK

PLACE CONTINUOUS BEAD OF \*SEALANT OVER PRE-FLASHING TOP AND SIDES

PRIOR TO SETTING BLOCK.

ADD UPTURNED DAMS

EXCEPT FOR HOSE BIBS

WHICH HAVE DOWN TURN

INSTALL ENAMELED STEEL

TYPE A, DRIP FLASHING

OVER ALL WOOD BLOCKS.

SEE HEAD FLASHING

LAP NEXT COURSE

FLASHING AND DOWN

SIDES OF BLOCK. CUT

PAPER TIGHT TO BOCK .-

APPROVED PRE-FLASHING -

TUCK BUILDING PAPER UP UNDER

ATTACH BLOCK WITH HOT-DIPPED

\*SEALANT ON TOP AND SIDES -

GALVANIZED SCREWS OR DECK SCREWS-

OF PAPER OVER

DETAIL 19/15.

WITH CAULK END DAMS

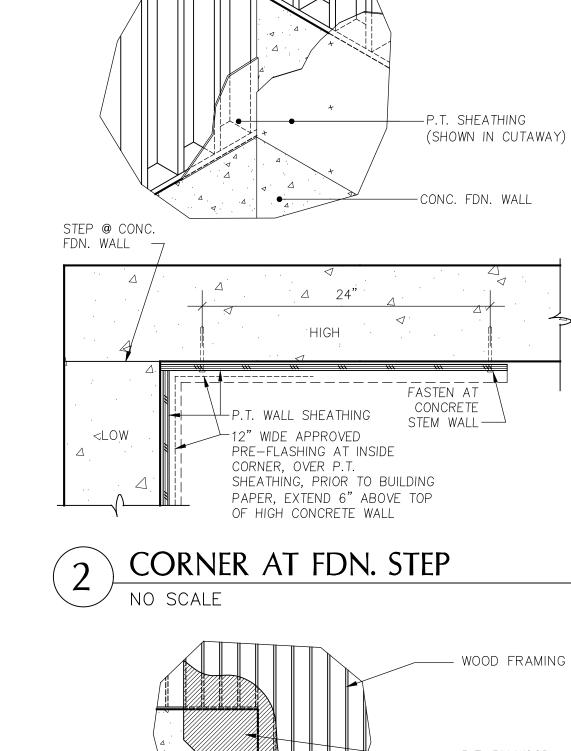
NO SCALE

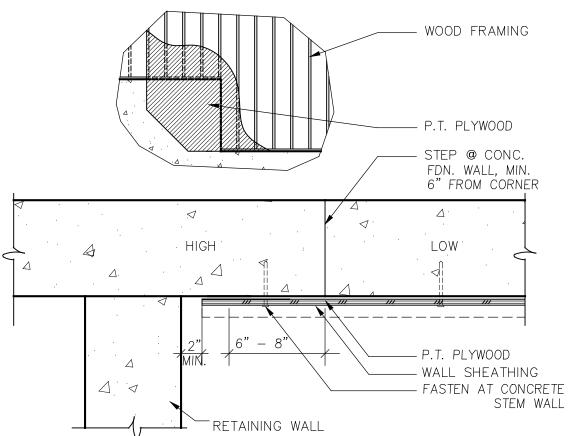
UP UNDER APPROVED

PRE-FLASHING

VENT PENETRATION

STEEL DRIP FLASHING OVER ALL WOOD BLOCKS







**BE-Sheet Disclaimer** The details in the BE-Sheets are intended to meet or exceed all

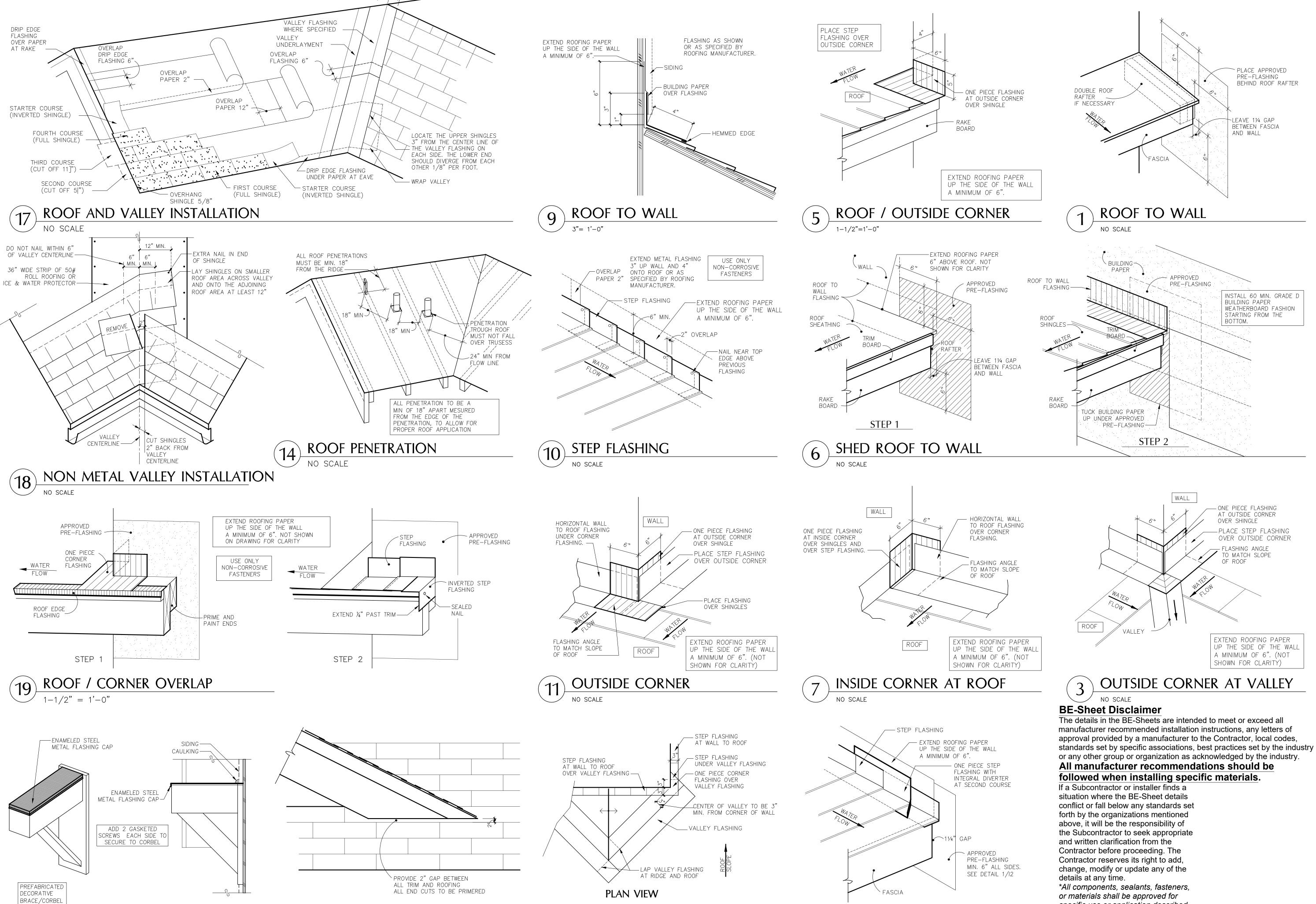
manufacturer recommended installation instructions, any letters of approval provided by a manufacturer to the Contractor, local codes, standards set by specific associations, best practices set by the industry or any other group or organization as acknowledged by the industry. All manufacturer recommendations should be

If a Subcontractor or installer finds a situation where the BE-Sheet details conflict or fall below any standards set forth by the organizations mentioned above, it will be the responsibility of the Subcontractor to seek appropriate and written clarification from the Contractor before proceeding. The Contractor reserves its right to add, change, modify or update any of the details at any time. \*All components, sealants, fasteners, or materials shall be approved for specific use or application described by the designs, and shall be

Initial Publish Date: Date Plotted: 12-20-24

Job No.: Drawn By: 23-06 REW/DJV Sheet No.:

BE1



CRICKET DETAIL

DECORATIVE CORBEL/BRACE

ROOF SEPARATION

Kirkland, Washington 98033 P: 425.454.7130 F: 425.658.1208

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uilding  $\mathbf{\Omega}$ 

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specific use or application described by the designs, and shall be compatible with all material with which each component comes in contact with.

ROOF DIVERTER

Initial Publish Date: Date Plotted: 12-20-24

Job No.: Drawn By: 23-06 REW/DJV Sheet No.:

BE2

-MIN. 12" WIDE

PRE-FLASHING

USE H.D OR S.S.

MANUFACTURER'S

SPECIFICATIONS

STEP 5

WHITE WOOD

JAMB TRIM <

**BE-Sheet Disclaimer** 

If a Subcontractor or installer finds a

situation where the BE-Sheet details

forth by the organizations mentioned

above, it will be the responsibility of

and written clarification from the

details at any time.

Contractor before proceeding. The

Contractor reserves its right to add,

change, modify or update any of the

\*All components, sealants, fasteners,

specific use or application described

compatible with all material with which

or materials shall be approved for

each component comes in contact

by the designs, and shall be

the Subcontractor to seek appropriate

conflict or fall below any standards set

11 GARAGE DOOR JAMB

The details in the BE-Sheets are intended to meet or exceed all

manufacturer recommended installation instructions, any letters of

approval provided by a manufacturer to the Contractor, local codes,

or any other group or organization as acknowledged by the industry.

All manufacturer recommendations should be

followed when installing specific materials.

standards set by specific associations, best practices set by the industry

ROOFING NAILS WITH

MIN. 1¼" PENETRATION

INTO STUDS OR PER

APPROVED



ij

APPROVED PRE-FLASHING

(EXTEND A MIN. OF 6"

PAST EDGE OF TRIM)

CONCRETE

STEM WALL

─INSTALL APPROVED PRE-FLASHING

PRIOR TO INSTALLING WOOD TRIM

AGAINST CONCRETE STEM WALL

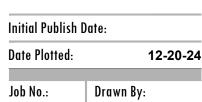
#### **Bradley** Heights **Apartments**

Puyallup,

#### **Timberlane Partners**

Revisions No. Date Description

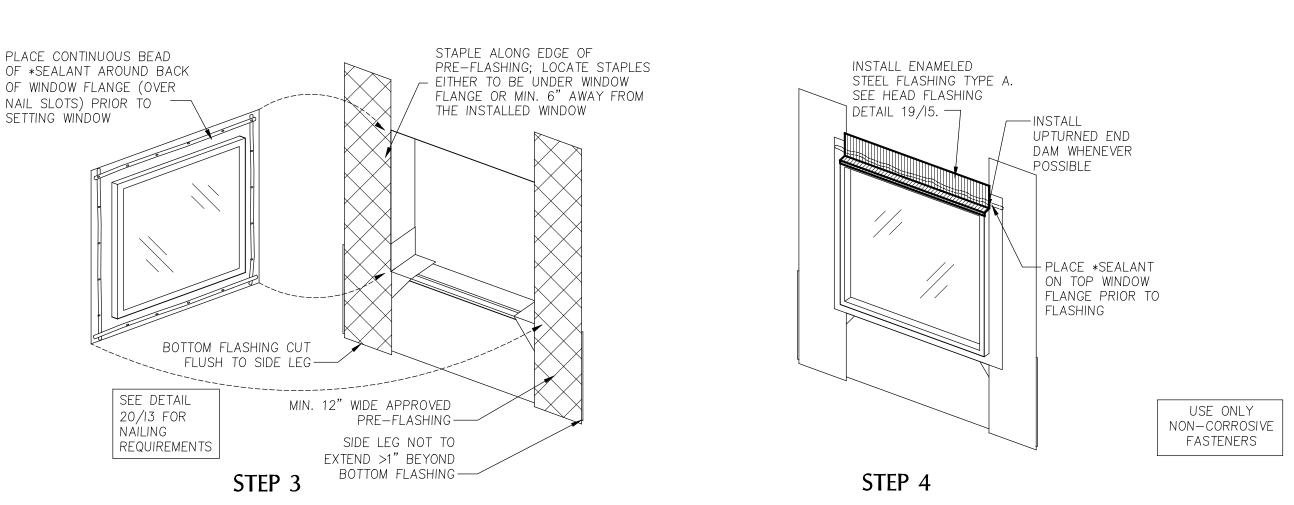


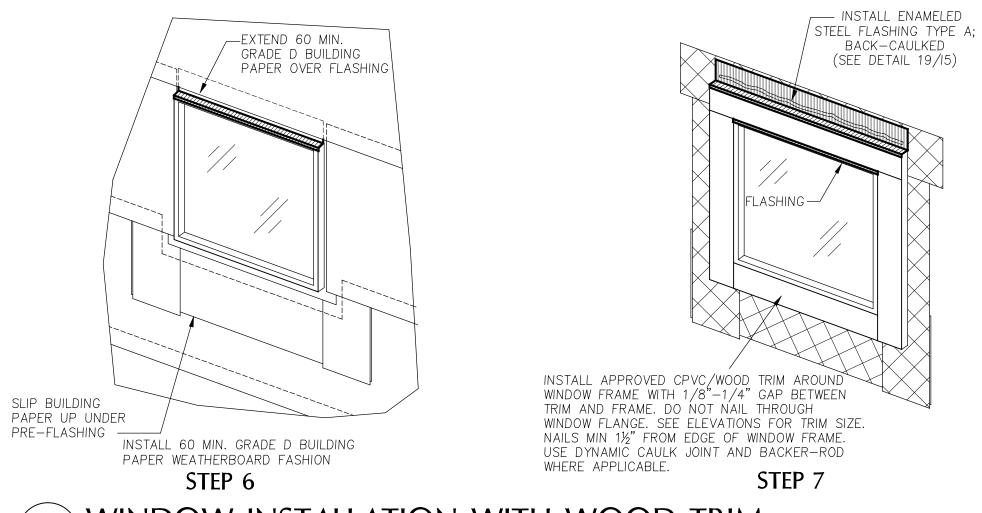


23-06 REW/DJV

Sheet No.:

BE3





SET CORNER SHIELD IN CONT. BEAD OF

SEALANT —

INSTALL CORNER

SHIELD PER MFR

INSTALLATION

INSTRUCTIONS —

STEP 2

- EXTEND BUILDING PAPER OVER FLASHING FLASHING — SLIP BUILDING PAPER UP UNDER PRE-FLASHING STEP 8

Update detail numbers as needed. There are two details labeled as 17. (Construction Set, Sheet BE3)

## WINDOW INSTALLATION WITH WOOD TRIM

APPLY CONT. BEAD

WALL AND SURFACE

OF WINDOW OPENING-

─1/2" GAP BETWĖEN SHIM AND JAMB, BOTH SIDES CUT PAPER

AND LAP 2"

11/4 WIDE CONT.

SLIP BUILDING

NO SCALE

USE ONLY

NON-CORROSIVE

**FASTENERS** 

DECK TO

APPLY DECK

BASE COAT

PRIOR TO

DOOR PAN

SETTING

\*DO NOT PLACE SEALANT

BEHIND SILL FLANGE -

LAP DOOR PAN OVER

DECK TO WALL FLASHING.

WALL, FLASHING

SHIM OVER FLASHING ----

MIN. 12" WIDE SILL FLASHING OVER A CONTINUOUS BEAD OF \*SEALANT AT

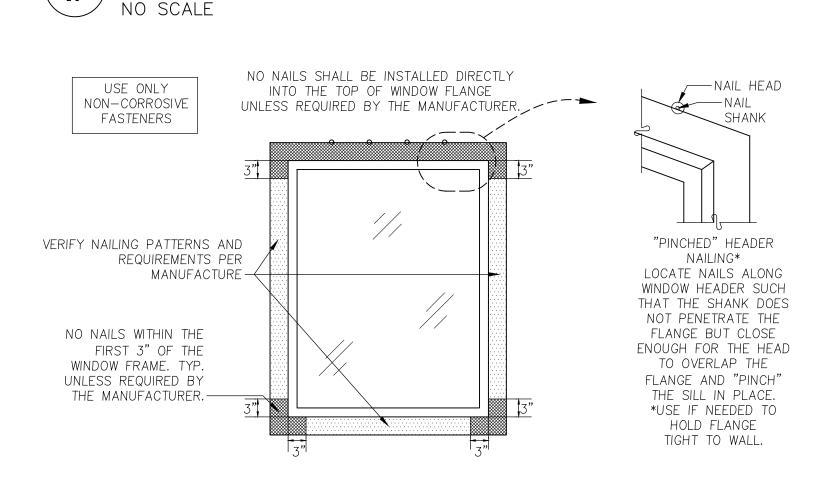
THE SILL, UNDER WINDOW FLANGE ——

LEAVE UNATTACHED AT BOTTOM

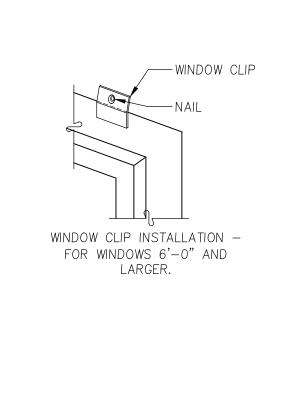
EDGE SO THE BUILDING PAPER

CAN BE INSTALLED UNDERNEATH.

OF SEALANT TO



TYPICAL WINDOW FLANGE NAILING



TRIM CORNER

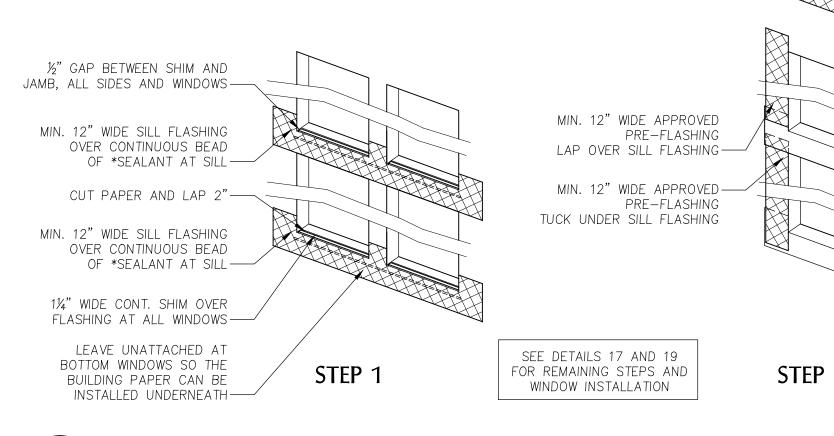
AS NEEDED

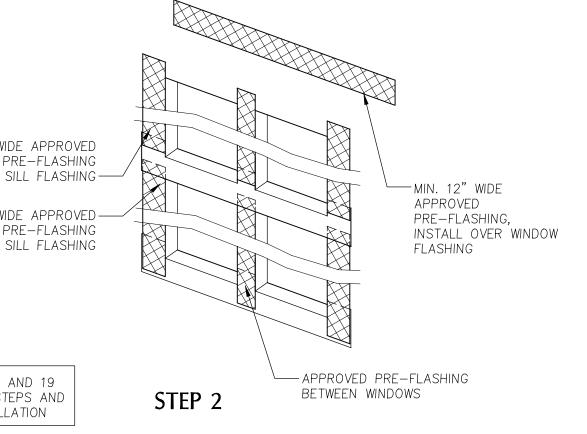
+ FASTENERS

PER MFR

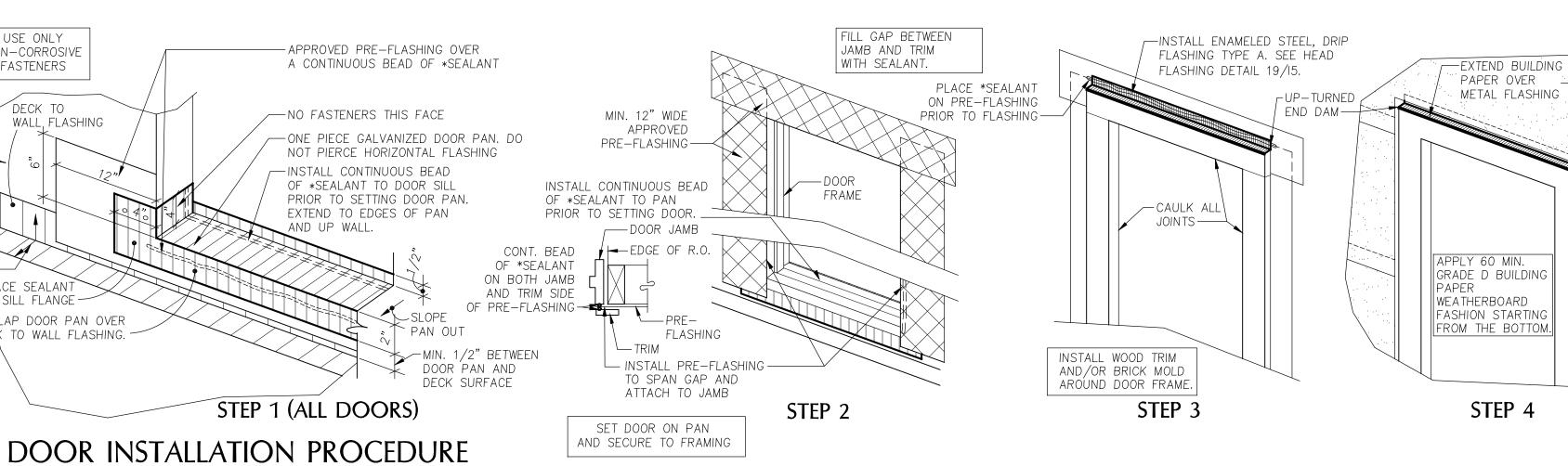
BEAD OF

\*SEALANT





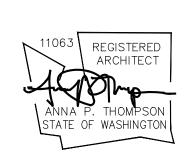
## **MULTI-WINDOW**



-EXTEND BUILDING PAPER OVER \_\_\_

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etails

SECTION

**Bradley** Heights

Building

Puyallup,

**Apartments** 

**Timberlane Partners** 

Revisions No. Date Description

**BE-Sheet Disclaimer** 

The details in the BE-Sheets are intended to meet or exceed all manufacturer recommended installation instructions, any letters of approval provided by a manufacturer to the Contractor, local codes, standards set by specific associations, best practices set by the industry or any other group or organization as acknowledged by the industry.

All manufacturer recommendations should be

followed when installing specific materials.

If a Subcontractor or installer finds a situation where the BE-Sheet details conflict or fall below any standards set forth by the organizations mentioned above, it will be the responsibility of the Subcontractor to seek appropriate and written clarification from the Contractor before proceeding. The Contractor reserves its right to add, change, modify or update any of the details at any time. \*All components, sealants, fasteners, or materials shall be approved for specific use or application described by the designs, and shall be compatible with all material with which each component comes in contact

-BUILDING PAPER PRE-FLASHING, EXTEND 6" ABOVE LEDGER, MIN. - METAL Z-FLASHING, TYPE B, SEE DETAIL 19/BE5 P.T. 2x JOISTS - SEE STRUC. FOR CONNECTION DETAILS — P.T. 2x LEDGER — P.T. PLYWOOD FUR STRIPS  $\frac{1}{2}$ " x  $\frac{1}{2}$ "-2" AT EVERY LAG. — TYPE A FLASHING SEE DETAIL 19/BE5 — PRE-FLASHING, EXTEND 2" BELOW LEDGER, MIN. — BUILDING PAPER OR PRE-FLASHING; EXTEND TO ABOVE DECK-TO-WALL FLASHING DECK TO WALL FLASHING

SPACED DECKING

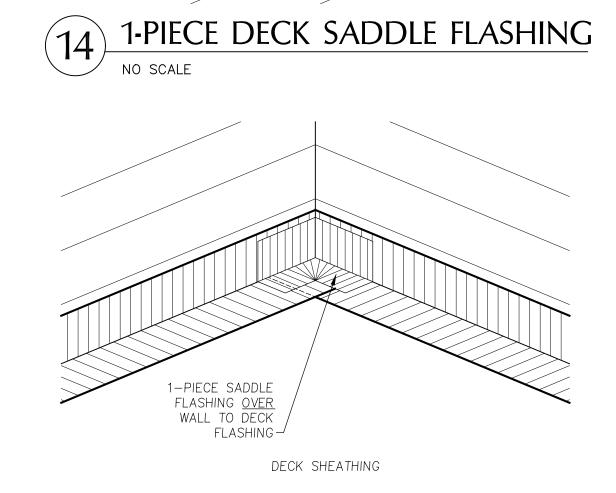
1-1/2" = 1'-0"

SIDING — METAL FLASHING BUILDING PAPER, LAP OVER MEMBRANE -DECK EDGE FLASHING, PER METAL CLEAT WP MEMBRANE MANUF. -SCREW TO ANGLE — 3"x3" METAL ANGLE

CLEAN AND PREPARE SURFACES

INSTRUCTIONS FOR BEST PRACTICES.

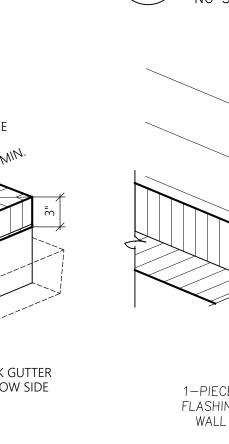
PRIOR TO COATING, REFER TO MANUFACTURER'S INSTALLATION

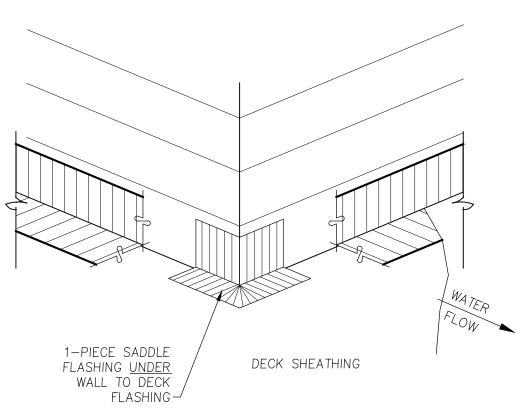


DECK SHEATHING

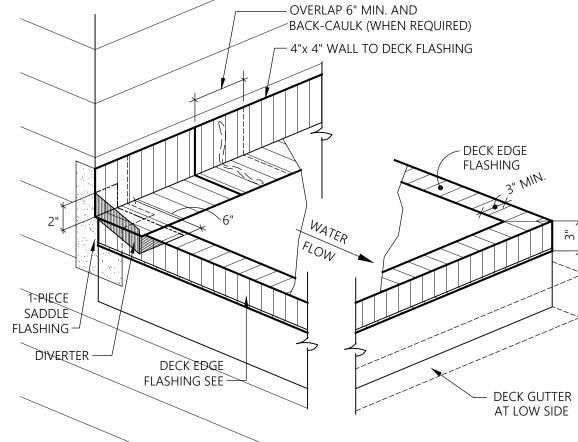
1-PIECE SADDLE FLASHING







16 DECK FLASHING - OUTSIDE CORNER



DECK DETAILS

23-06 REW/DJV Sheet No.:

Initial Publish Date:

Date Plotted:

Job No.:

BE4

Drawn By:

12-20-24

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**Bradley** Heights **Apartments** 

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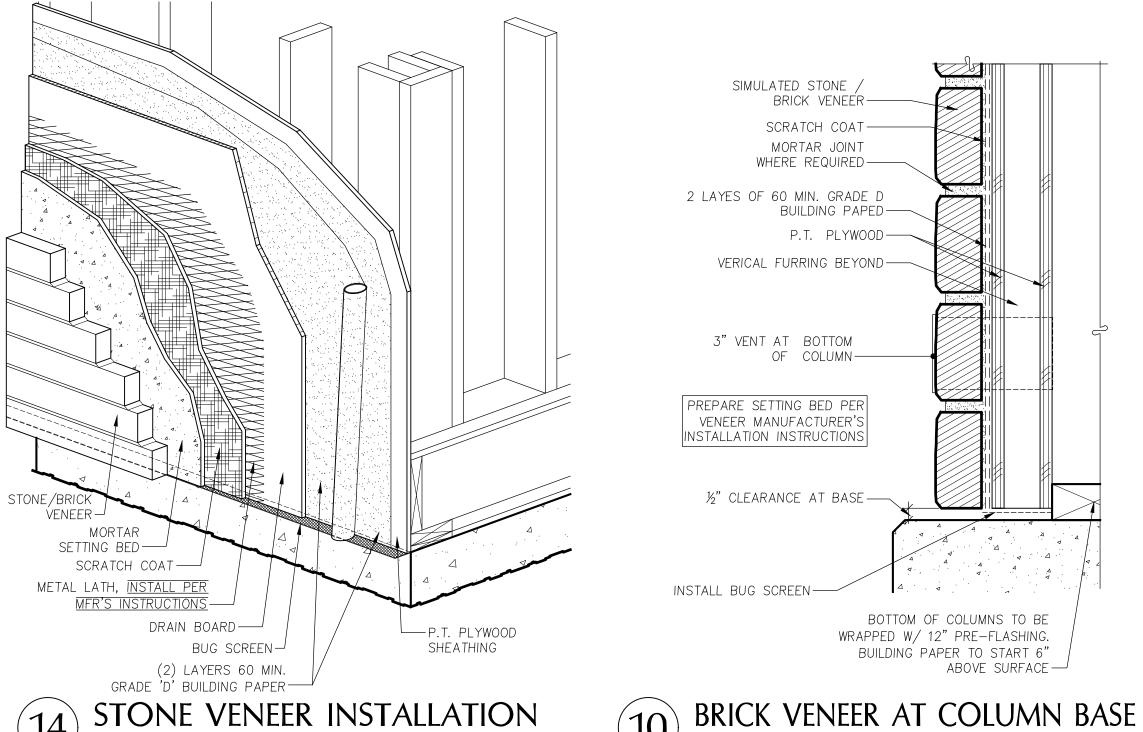
Revisions No. Date Description

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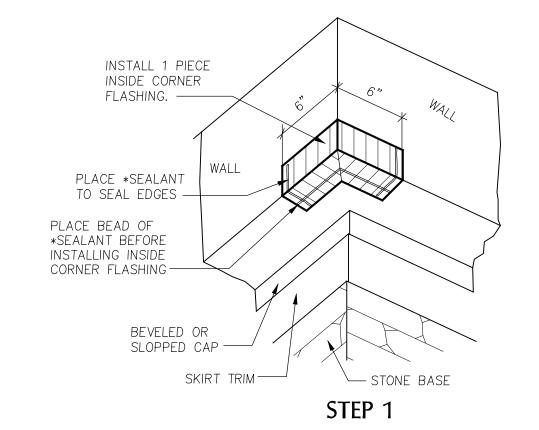
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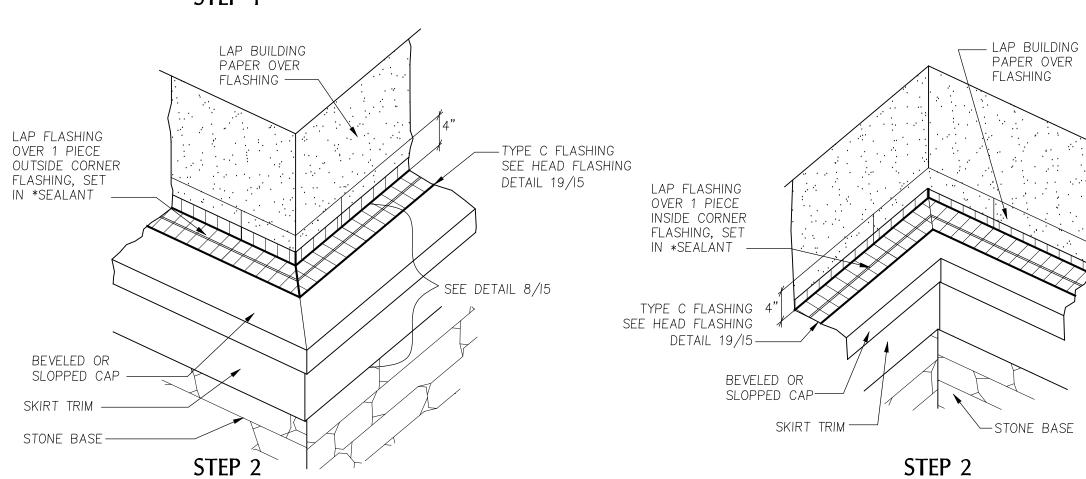


STONE VENEER INSTALLATION

INSTALL 1 PIECE OUTSIDE CORNER FLASHING. PLACE \*SEALANT TO SEAL EDGES PLACE BEAD OF \*SEALANT BEFORE INSTALLING OUTSIDE CORNER FLASHING -BEVELED OR SLOPPED CAP SKIRT TRIM-PLYWOOD TO BE PRESSURE-TREATED STONE BASE-USE ONLY STEP 1 NON-CORROSIVE **FASTENERS** LAP FLASHING OVER 1 PIECE



INSIDE CORNER



**OUTSIDE CORNER** 

STONE TRIM FLASHING (WATER TABLE TRIM)

BOTTOM OF COLUMNS TO BE

BUILDING PAPER TO START 6"

ABOVE SURFACE—

**SECTION** 

WRAPPED W/ 12" PRE-FLASHING.

STONE WATERTABLE ON FRAMING

NOTE: COMPONENT SPACING EXAGGERATED FOR CLARITY

PLYWOOD TO BE PRESSURE-TREATED

USE ONLY NON-CORROSIVE

FASTENERS

DETAIL 19/15-

'D' BLDG PAPER-

2" MIN.

SIMULATED STONE -

DRAIN BOARD.-

TYPICAL WATERTABLE TRIM

— EXTERIOR

SHEATHING

P.T. PLYWOOD

WOOD BLOCK AND TRIM

USE ONLY

NON-CORROSIVE

**FASTENERS** 

EXTEND 1" PAST TOP OF CONCRETE

GRADE OR

OVER 2 LAYERS

OF BUILDING PAPER

MORTAR SETTING BED -

COMBED SCRATCH COAT -

K-LATH: ATTACH PER MANUF.

MORTAR JOINT WHERE REQUIRED-

INSTALLATION INSTRUCTIONS -

BEVELED OR

BUILDING PAPER

OVER METAL FLASHING-

METAL FLASHING TYPE C

(SEE HEAD FLASHING

SLOPED WOOD/CPVC CAP-

WOOD BLOCK AND TRIM OVER (2) LAYERS 60 MIN. GRADE

PREPARE SETTING BED PER VENEER MANUFACTURER'S

INSTALLATION INSTRUCTIONS

BUILDING PAPER OVER METAL

METAL FLASHING TYPE C

(SEE HEAD FLASHING

SLOPED WOOD/CPVC

SIMULATED STONE /

MORTAR SETTING BED-

VENEER MANUFACTURER'S

COMBED SCRATCH COAT -

K-LATH: ATTACH PER

MANUF. INSTALLATION

(2) LAYERS 60 MIN.

INSTALL BUG SCREEN.

GRADE 'D' BUILDING PAPER-

INSTRUCTIONS -

DRAIN BOARD

INSTALLATION INSTRUCTIONS

PREPARE SETTING BED PER

BRICK VENEER

MORTAR JOINT

WHERE REQUIRED

FLASHING -

DETAIL 19/I5)—

BEVELED OR

STONE ON FRAMING (FULL-HEIGHT) SECTION

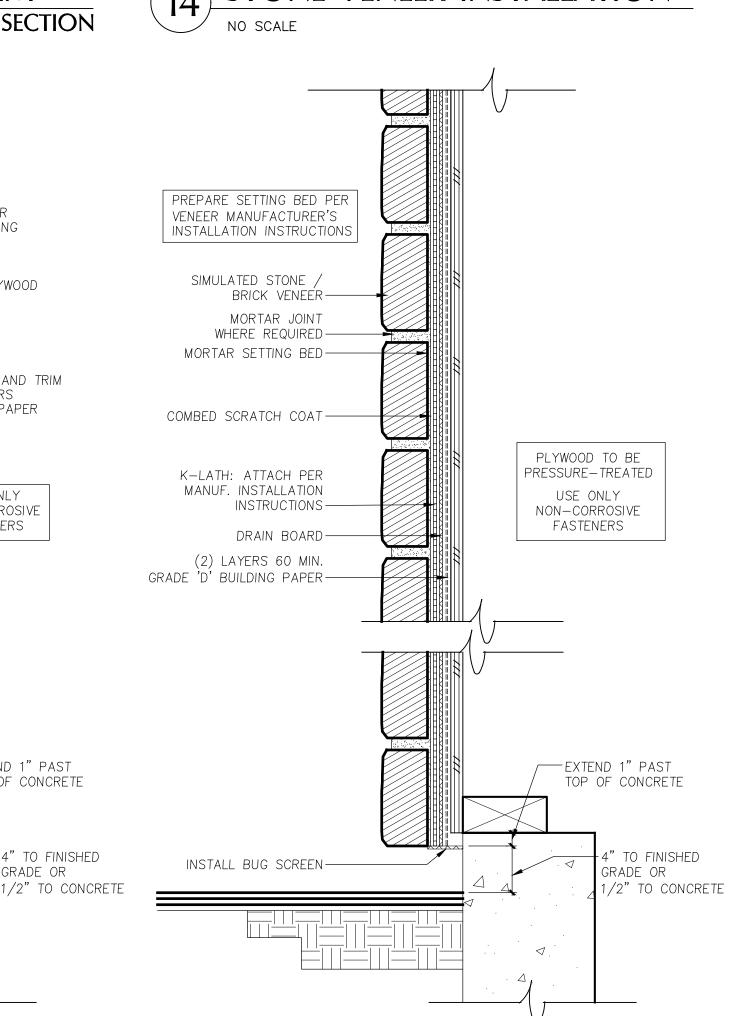
NO SCALE

Initial Publish Date: Date Plotted: Job No.: Drawn By:

23-06 REW/DJV Sheet No.:

BE5

12-20-24



## **GENERAL NOTES**

#### GENERAL NOTES - MECHANICAL

- REFERENCE TO RELATED WORK: "REF" INDICATIONS DENOTE WORK COVERED ELSEWHERE (ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL, LANDSCAPE, OR KITCHEN), OR ITEM BASED ON A SPECIFIC MANUFACTURER'S DIMENSIONS (VERIFY).
- ELECTRICAL CHARACTERISTICS: REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS (VOLTAGES, ETC. OF MECHANICAL EQUIPMENT, UNLESS OTHERWISE INDICATED.
- CODES: COMPLETE INSTALLATION OF THE MECHANICAL SYSTEM SHALL BE PER THE APPLICABLE BUILDING MECHANICAL, ENERGY, PLUMBING, FIRE, AND HEALTH CODES AND REGULATIONS AS ADOPTED BY THE LOCAL AHJ.
- PREPARE AND SUBMIT FOR REVIEW A SHOP DRAWING BASED ON FINAL STRUCTURAL SHOP DRAWINGS FOR LOCATING AND ROUTING ALL DUCTWORK, DAMPERS, EQUIPMENT, PIPING, ETC. A. COORDINATE FLOOR AND BEAM PENETRATIONS WITH
- STRUCTURAL B. COORDINATE FINAL LOCATION AND ROUTING WITH CEILING, LIGHTS, WALLS, FIRE SPRINKLER PIPING, AND
- OTHER TRADES WORK C. INCLUDE ADDITIONAL OFFSETS, ELBOWS, ROUTING, EQUIVALENT DUCT SIZING EXCHANGE, RELOCATING, ETC. AS REQUIRED FOR A COMPLETE OPERATING MECHANICAL
- D. PROVIDE SHOP DRAWINGS AT NO ADDITIONAL COST TO THE OWNER.
- MECHANICAL CONTRACTOR SHALL LOCATE AND COORDINATE EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITHIN THE STRUCTURE.
- ACCESS DOORS: COORDINATE WITH ARCHITECT AND LOCATE ALL ACCESS DOORS ON SHOP DRAWINGS PRIOR TO BEGINNING OF CONSTRUCTION. ACCESS DOORS IN FIRE RATED STRUCTURE SHALL BE FIRE RATED. VERIFY ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO BIDDING.
- RATED PENETRATION: DUCT PENETRATIONS THROUGH RATED ENCLOSURES SHALL BE FIRE/SMOKE DAMPERED PER THE LATEST EDITION OF THE UNDERWRITERS LABORATORIES(UL) FIRE RESISTANCE WITH HOURLY RATINGS FOR THROUGH-PENETRATION FIRE STOPS SYSTEM VOLUME #2, OR SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S UL LISTINGS (3M OR EQUIVALENT). DETERMINE REQUIREMENTS WITH GENERAL CONTRACTOR PRIOR TO BID.
- EXHAUST OUTLETS: SOURCE-SPECIFIC FANS SHALL BE VENTED TO OUTDOORS WITH A MINIMUM 3' CLEARANCE BETWEEN VENT OUTLETS AND BUILDING OPENINGS, AND 10' MINIMUM BETWEEN VENT OUTLETS AND MECHANICAL AIR
- ROOF PENETRATIONS: SEE ARCHITECTURAL DRAWINGS FOR ROOF CAP. ROOF CURB. ROOF DRAIN. AND VTR DETAILS.
- 10. EXPOSED PIPING: PROVIDE CHROME PLATING FOR EXPOSED PIPING IN FINISHED ROOMS.
- 11. PENETRATIONS: PROVIDE ESCUTCHEON PLATES FOR EXPOSED PIPING PENETRATIONS AND SHEET METAL FLASHING FOR EXPOSED DUCTWORK PENETRATIONS.
- 12. SHAFT AND PLENUM CONNECTIONS: SEAL CONNECTIONS TO AIR SHAFTS AIRTIGHT. PROVIDE AIRTIGHT SEAL AROUND PENETRATIONS IN AIR PLENUMS.
- 13. LIGHT FIXTURE CLEARANCE: COORDINATE LOCATIONS OF MECHANICAL WORK TO PROVIDE CLEARANCES OVER LIGHTING FIXTURES FOR REMOVAL AND REPLACEMENT.
- 14. MOTORS: COMPLY WITH ENERGY CODE ENFORCED BY AHJ FOR MINIMUM EFFICIENCIES UNDER FULL LOAD.
- 15. ACCESS CLEARANCES FOR MAINTENANCE AND REPLACEMENT: VERIFY PHYSICAL DIMENSIONS OF EQUIPMENT TO ENSURE THAT ACCESS CLEARANCES CAN BE MET. COORDINATE LOCATIONS OF MECHANICAL WORK AND WORK OF OTHER TRADES TO PROVIDE ACCESS CLEARANCES FOR SERVICE AND MAINTENANCE.

#### COORDINATION REQUIREMENTS

- PIPING: COORDINATE WITH STRUCTURAL FOR EXACT LOCATION OF ALL STRUCTURAL FRAMING AND FOOTINGS AND FINALIZE THE EXACT ROUTING OF ALL PIPES WITH STRUCTURAL AND AT THE SITE PRIOR AND DURING THE CONSTRUCTION.
- DUCTWORK: LOCATE AND COORDINATE THE EXACT LOCATION OF DUCTWORK WITH STRUCTURAL PLANS AND WITH THE GENERAL CONTRACTOR PRIOR TO INSTALLATION OF ANY STRUCTURE OR EQUIPMENT. COORDINATE WITH FRAMING CONTRACTOR TO ASSURE JOIST SPACES LINE UP WHEN DUCTWORK MUST PASS THROUGH DIFFERENT JOIST SPACES.
- ADJUSTMENTS: ALL EQUIPMENT, MOTORS, FANS GAS BURNERS, IGNITION DEVICES, DRIVES, ETC. SHALL BE ADJUSTED AND BALANCED TO OPERATE AT SPECIFIED RATINGS AS REQUIRED FOR THIS PROJECT SITE AND ACCOUNTING FOR ELEVATION ABOVE SEA LEVEL.
- APPROVALS: MECHANICAL AND PLUMBING EQUIPMENT SHALL BE APPROVED FOR INSTALLATION IN THE PROJECT LOCATION AND SHALL HAVE ALL CERTIFICATIONS AND RATINGS TO MEET ALL ENERGY, POLLUTION, ENVIRONMENTAL, SEISMIC, ETC. CODES AND REGULATIONS. THE CONTRACTOR SHALL COORDINATE WITH HIS MANUFACTURE SUPPLIERS AND SHALL INCLUDE ALL COSTS REQUIRED TO MEET THESE REQUIREMENTS IN HIS BID.
- FIRE PROTECTION: CONTRACTOR SHALL PROVIDE A FULLY DESIGNED FIRE PROTECTION SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA AND LOCAL CODES. PROVIDE DESIGN, PERMITS, MATERIALS, INSTALLATION, TESTING AND ALL OTHER FOR A FULLY OPERATIONAL SYSTEM. LOCATION OF ALL PIPING TO BE COORDINATED WITH OTHER TRADES.

#### PIPING NOTES

- 1. DISASSEMBLY PROVISIONS: PROVIDE UNIONS OR FLANGES AT PIPING CONNECTIONS TO EQUIPMENT. COILS. TRAPS. CONTROL VALVES, AND OTHER COMPONENTS TO ALLOW DISASSEMBLY FOR MAINTENANCE.
- REDUCERS: PROVIDE AS REQUIRED FROM LINE PIPE SIZE TO EQUIPMENT, TRAP, COIL, AND CONTROL VALVE CONNECTION SIZES.
- 3. OFFSETS: PROVIDE FOR BRANCH LINES TO EQUIPMENT.
- DIELECTRIC UNIONS: PROVIDE AT CONNECTIONS OF DISSIMILAR PIPE.
- REFRIGERANT PIPING: PROVIDE SIZING & INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- CONDENSATE DRAIN: PROVIDE A P-TRAP FOR EACH HVAC UNIT CONDENSATE PAN WITH PLUG TEES FOR CLEANING. CONDENSATE DRAINS SHALL BE DISCHARGED TO AN INDIRECT WASTE OR OUTSIDE.

#### INSULATION/LINING NOTES

- 1. ENERGY CODE: AS A MINIMUM. COMPLY WITH THICKNESSES AND TYPES LISTED IN ENERGY CODE ENFORCED BY AHJ.
- EXTENT OF INTERNAL DUCT LINING: A. GRILLE AND DIFFUSER BOXES AND BOOTS. . TRANSFER DUCTS.
- C. THE FIRST 10 FEET OF SUPPLY AND RETURN DUCTWORK FROM THE AIR HANDLER. EXTENT OF EXTERNAL DUCT INSULATION:

MECHANICAL ROOMS, ELECTRICAL ROOMS, AND

A. SUPPLY AND RETURN AIR IN UNCONDITIONED SPACES.

- EQUIPMENT ROOMS NOT SPECIFIED TO BE INTERNALLY B. SUPPLY AIR ABOVE CEILINGS OR EXPOSED NOT SPECIFIED TO BE INTERNALLY LINED.
- MISCELLANEOUS DUCT FITTINGS (CONICAL TAKEOFFS, ETC.): WRAP WITH INSULATION FOR CONDENSATION CONTROL.

#### <u>PLAN NOTES</u>

1. DUCTWORK SHALL BE METALLIC DUCTWORK

C. OUTDOOR AIR INTAKE.

- 2. TEST AND BALANCE WORK SHALL BE PERFORMED BY AN INDEPENDENT TEST AND BALANCE AGENCY. PROVIDE (3) COPIES OF TEST AND BALANCE REPORT TO OWNER.
- 3. COORDINATE DUCTWORK WITH MISCELLANEOUS OBSTRUCTIONS IN CEILING SPACE.
- 4. RESTROOM EXHAUST SHALL BE A MINIMUM OF 10' FROM ANY MECHANICAL OUTSIDE AIR INTAKES.
- 5. ROUTE DUCTWORK UNDERNEATH JOISTS UON.
- 6. TRANSITION DUCT UNDER BEAMS AND DUCTS. FIELD VERIFY AVAILABLE CEILING CAVITY DIMENSIONS.
- 7. COORDINATE MOUNTING HEIGHT OF DIFFUSERS WITH ARCHITECTURAL PLANS.

#### SHEET METAL NOTES

- REFERENCE: SMACNA HVAC DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE, CURRENT EDITION.
- 2. CLEARANCE: COORDINATE DUCTWORK WITH MISCELLANEOUS OBSTRUCTIONS IN CEILING SPACE.
- ROUND ELBOWS AND OFFSETS: FULL RADIUS (R/D = 1.5), 5-PIECE SEGMENTED OR STAMPED. REFER TO SMACNA HVAC FIG 2-7, 3-3. DO NOT USE ANGLED OFFSET (TYPE 1). MITERED OFFSET (TYPE 2) MAY BE USED UP TO 30 DEGREE OFFSET ANGLE.
- ROUND TEES AND LATERALS: CONICAL TEE PER SMACNA HVAC FIG 3-5; DO NOT USE STRAIGHT TEE; DO NOT USE CONICAL SADDLE TAP FOR EXPOSED DUCTWORK IN FINISHED SPACES. 90-DEGREE TEE WITH OVAL TO ROUND TAP, LATERAL, AND 45-DEGREE RECTANGULAR LEAD-IN PER SMACNA HVAC FIG 3-4.
- 5. RECTANGULAR ELBOWS AND OFFSETS: FULL RADIUS WHERE SPACE PERMITS, R/W = 1.5; OTHERWISE USE SQUARE CORNER ELBOW WITH TURNING VANES.
- RECTANGULAR DIVIDED FLOW FITTINGS: USE GENERALLY, EXCEPT BRANCHES TO TERMINALS; SMACNA HVAC FIG 2-5, TYPES 1, 2, 4A, AND 4B. DO NOT USE TYPE 3.
- TURNING VANES: H.E.P. MANUFACTURER OR APPROVED HIGH EFFICIENCY PROFILE AIRFOIL TYPE FOR RECTANGULAR SQUARE THROAT ELBOWS. ACOUSTICAL TYPE FOR RETURN AIR MITERED ELBOWS.
- 8. TAKEOFFS TO OPENINGS: CONICAL TYPE WITH VOLUME DAMPER FOR ROUND DUCT BRANCHES PER SMACNA HVAC FIG 2-6, MINIMUM INLET DIAMETER 2 INCHES LARGER THAN DUCT SIZE. 45 DEGREE ENTRY FITTING FOR RECTANGULAR DUCT BRANCHES PER SMACNA HVAC FIG 2-6.
- FLEXIBLE CONNECTIONS: PROVIDE AT EACH DUCT CONNECTION TO FANS, PACKAGED HVAC EQUIPMENT, EXTERNALLY ISOLATED AIR HANDLING UNITS, FAN COIL UNITS, AND SIMILAR EQUIPMENT. EXCEPTION: EQUIPMENT IN CORRIDOR CEILING SPACES WHERE FIRE RATING IS REQUIRED.
- 10. ALL DUCT WORK SHALL BE CLASSIFIED FOR LOW PRESSURE SYSTEMS PER IMC SECTION 603.
- 11. ALL DUCTS AND JOINTS SHALL BE SEALED PER IMC SECTION 603.

#### HVAC NOTES

1. ATTACHMENTS: AIR DISTRIBUTION OUTLETS AND LOUVERS

#### SHALL HAVE ALL REQUIRED ACCESSORIES AND ATTACHMENTS FOR A COMPLETE CONNECTION TO THE SPECIFIC TYPE OF STRUCTURE THAT THEY ARE BEING ATTACHED TO. THIS INCLUDES, BUT IS NOT LIMITED TO EXTERIOR BRICKS, GWB WALLS, GWB CEILING, ETC.

- DUCTWORK: DUCTWORK SHALL BE SMOOTH SHEET METAL (CLASS-1). DUCTWORK THROUGH FIRE RATED STRUCTURE AND FLOOR SHALL BE MIN. 26 GA. STEEL. MAXIMUM LENGTH OF FLEXIBLE DUCTS SHALL BE 5'-0". UNLESS OTHERWISE NOTED ON DRAWINGS. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS.
- SEISMIC: PROVIDE SEISMIC RESTRAINTS FOR MECHANICAL EQUIPMENT, PIPING, AND DUCTWORK PER SMACNA AND LOCAL REGULATIONS.
- FILTER CLEARANCE: PROVIDE ADEQUATE CLEARANCE FOR CHANGING AIR FILTERS
- DUCTWORK AND PIPING OUTSIDE OF MECHANICAL ROOMS SHALL BE CONCEALED, COORDINATE WITH THE GENERAL CONTRACTOR TO FUR-OUT AS REQUIRED.
- FIRE RATINGS: RATED FLOOR/CEILING JOINT SPACES HAVING DUCTWORK INSIDE THEM SHALL BE FIRE/SMOKE PROTECTED TO MAINTAIN THE 1-HOUR FLOOR/CEILING RATING PER LOCAL JURISDICTIONS. EXHAUST DUCTWORK PENETRATING THE 1-HOUR ROOF/CEILING OR FLOOR/CEILING ASSEMBLY SHALL HAVE ACCESSIBLE CEILING FIRE DAMPERS. ALTERNATIVELY, THE EXHAUST DUCTWORK SHALL BE ROUTED INSIDE A RATED SHAFT TO PROTECT THE CEILING/ROOF RATING PER THE LOCAL JURISDICTIONS
- 7. FIRESTOP: PIPE, DUCT AND CONDUIT PENETRATIONS THROUGH RATED ASSEMBLIES SHALL BE FIRE AND SMOKE STOPPED PER CODE.
- DUCTWORK: DUCTWORK SHALL BE SMOOTH SHEET METAL (CLASS-1). DUCTWORK THROUGH FIRE RATED STRUCTURE AND FLOOR SHALL BE MIN. 26 GA. STEEL. MAXIMUM LENGTH OF FLEXIBLE DUCTS SHALL BE 5'-0" UNLESS OTHERWISE NOTED ON DRAWINGS. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS.
- VOLUME DAMPERS: PROVIDE AN ACCESSIBLE MANUAL VOLUME DAMPER FOR EACH SUPPLY, RETURN, OSA AND EXHAUST OPENING, LOCATED AS FAR UPSTREAM AS POSSIBLE FROM THE OPENING. PROVIDE A MANUAL VOLUME DAMPER FOR BRANCH MAINS SERVING MORE THAN ONE OPENING. VOLUME DAMPERS IN NON-ACCESSIBLE CEILING SHALL HAVE A CONTROL ARM EXTENDED TO AN ACCESSIBLE LOCATION. PROVIDE "YOUNG" REGULATOR OR EQUAL. EXACT LOCATION OF CONTROL DEVICES VISIBLE IN FINISHED SPACES SHALL BE COORDINATED WITH THE
- 10. CORRIDOR THERMOSTAT: PROVIDE TAMPERPROOF THERMOSTATS IN CORRIDORS. DO NOT PROVIDE PLASTIC GUARDS TO MAKE THE THERMOSTATS TAMPERPROOF PROVIDE BLANK SECURABLE THERMOSTAT COVERS.

#### APPLICABLE CODE

#### **BUILDING CODE:**

- 2018 WASHINGTON STATE ENERGY CODE-RESIDENTIAL BY WASHINGTON ADMINSTRATIVE CODE CHAP 51-50 (WSEC)
- 2018 INTERNATIONAL RESIDENTIAL CODE WITH ADMINISTRATIVE CODE CHAP 51-51 (WSRC)
- 2018 INTERNATIONAL MECHANICAL CODE WITH ADMINISTRATIVE CODE CHAP 51-52 (WSMC)

DRAWINGS ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS

FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.

#### PRE-CON MEETING NOTES

CONTRACTORS SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH THE ENGINEER FOR THE PURPOSE OF REVIEWING THE WORK PRIOR TO ORDERING ANY EQUIPMENT OR PERFORMING ANY WORK. THE MEETING SHALL BE LOCATED AT THE PROJECT SITE ON A DATE AND TIME TO BE MUTUALLY AGREED. THE MEETING WILL BE A WORKING SESSION. THE MEETING WILL BE FACILITATED BY THE ENGINEER AND THE AGENDA WILL INCLUDE A DETAILED REVIEW OF THE PLANS AND SPECIFICATIONS, CROSS CHECK WITH OTHER TRADES FOR COORDINATION ISSUES, REVIEW OF PROPOSED PRODUCTS, REVIEW OF PLANNED MEANS AND METHODS.AND ON-SITE INVESTIGATION OF FIELD CONDITIONS RELATIVE TO EXISTING CONDITIONS THAT COULD AFFECT THE WORK. PERSONS ATTENDING THE MEETING SHALL BE KNOWLEDGEABLE OF THE PROJECT AND SHALL BE THE SPECIFIC PERSONS INTENDED TO CONTINUE WITH THE PROJECT THROUGH TO COMPLETION. IF REQUIRED, REVISED PLANS WILL BE ISSUED THROUG OFFICIAL CHANNELS. CHANGES IN THE BID PRICE WILL BE DISCUSSED. BUT NO CHANGE ORDERS WILL BE ISSUED UNLESS PROCESSED THOUGH OFFICIAL CHANNELS. IT SHALL BE UNDERSTOOD THAT THE ENGINEER HAS NO AUTHORITY TO ISSUE CHANGE

THE FOLLOWING TRADES SHALL BE REPRESENTED FOR THE MINIMUM TIME INDICATED:

MECHANICAL SHEET METAL 4 HOURS 4 HOURS PLUMBING/PIPING ELECTRICAL 4 HOURS SPRINKLER 2 HOURS GENERAL CONTRACTOR ALL SESSIONS

## **ANNOTATIONS**

18x12

DOWN

UP

 $\searrow$ 

UP

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AIR CONDITIONING UNIT ABOVE FINISHED FLOOR AUTHORITY HAVING JURISDICTION AIR HANDLING UNIT BDD BACKDRAFT DAMPER BHP BRAKE HORSEPOWER BTUH BRITISH THERMAL UNIT PER HOUR COMMON CAP CAPACITY CC COOLING COIL CD CFILING DIFFUSER CFM CUBIC FEET PER MINUTE CLG CEILING, COOLING CO CLEANOUT COMB COMBUSTION CONT CONTINUE. CONTROL CONTR CONTRACTOR COP COEFFICIENT OF PERFORMANCE CHILLED WATER SUPPLY CWS CHILLED WATER RETURN CWR DIAMETER DB DRY BULB. DECIBEL DEG DEGREE DIM DIMENSION DISCH DISCHARGE DN DOWN EXHAUST AIR ENTERING AIR TEMPERATURE EER ENERGY EFFICIENCY RATIO EXHAUST FAN EFFICIENCY EXHAUST GRILLE. ENGINE **GENERATOR** ELEC ELECTRIC EQUIV **EQUIVALENT** ESP EXTERNAL STATIC PRESSURE EXH **EXHAUST** EXT EXTERIOR. EXTERNAL **FAHRENHEIT** FD FIRE DAMPER FCU FAN COIL UNIT FLR FLOOR FPM FEET PER MINUTE FPS FEET PER SECOND FSD FIRE/SMOKE DAMPER GRD GRILLES, REGISTERS, AND DIFFUSERS GWB GYPSUM WALLBOARD HORIZ HORIZONTAL HORSEPOWER, HEAT PUMP HRU HEAT RECOVERY UNIT HEATING, VENTILATING, AND AIR HVAC CONDITIONING HEATING AND VENTILATION UNIT HIGH WALL RETURN, HOT WATER HWR RETURN HIGH WALL SUPPLY, HOT WATER HWS SUPPLY HEAT EXCHANGER ΗX ID INDIRECT DRAIN, INSIDE DIAMETER

ΚW KILOWATT

LONG, LENGTH POUND LOW WALL RETURN LWR LOW WALL SUPPLY LWS THOUSAND BTU PER HOUR MBH MECH MECHANICAL MINIMUM CIRCUIT AMPACITY MCA

MAXIMUM OVER CURRENT MOCP PROTECTION MTD MOUNTED OSA OUTDOOR AIR OBD OPPOSED BLADE DAMPER OUTSIDE DIMENSION OR DIAMETER OD

OPNG OPENING PD PRESSURE DROP POINT OF CONNECTION POC PRV PRESSURE REDUCING VALVE PSIG POUNDS PER SQUARE INCH GAUGE RA RETURN AIR REF REFERENCE RF RELIEF FAN

RG RETURN GRILLE REVOLUTIONS PER MINUTE RPM SUPPLY AIR SCH SCHEDULE

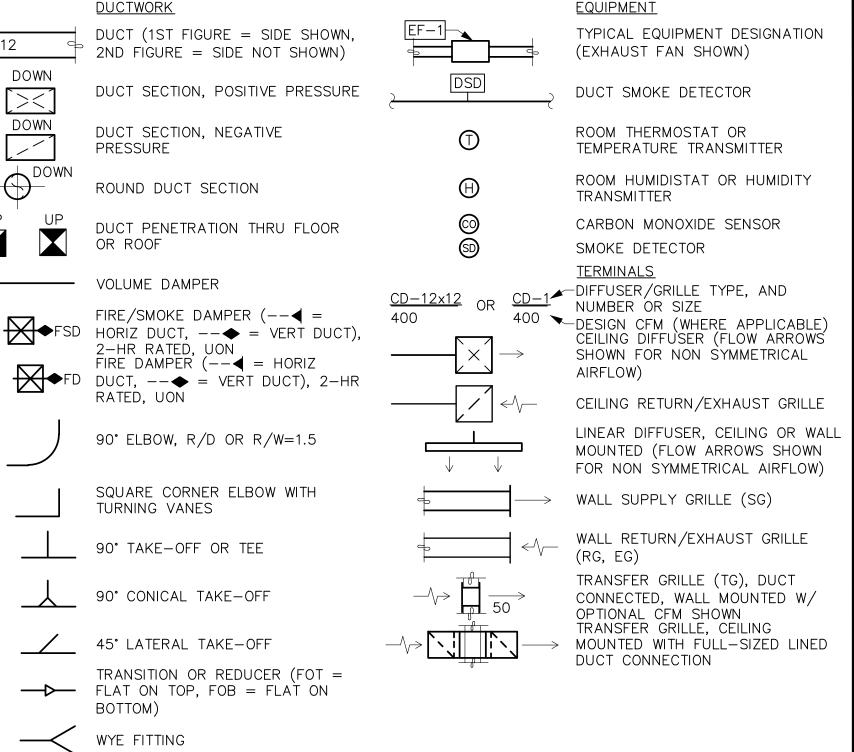
SUPPLY FAN, SQUARE FOOT SENS SENSIBLE SUPPLY GRILLE SMACNA SHEET METAL AND AIR

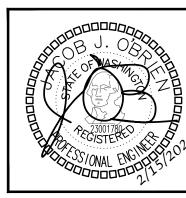
CONDITIONING CONTRACTORS NATIONAL ASSOCIATION SCREENED OPENING STATIC PRESSURE SS STAINLESS STEEL, SANITARY SFWFR

SQUARE TRANSFER GRILLE TYP TYPICAL UNIT HEATER UH UON UNLESS OTHERWISE NOTED

VENT VENTILATION, VENTILATOR VTR VENT THRU ROOF WASTE, WATT, WIDE WET BULB (TEMPERATURE)

## **SYMBOLS**







## **DRAWING INDEX**

90° RECTANGULAR TAKE-OFF WITH

90° DIVERGING RECTANGULAR TEE,

EITHER RADIUS OR TURNING VANES

CONNECTION, EITHER RADIUS OR

PARALLEL FLOW BRANCH

ROUND DUCT INDICATOR

TURNING VANES

FLEXIBLE DUCT

45° TAPER

| Sheet List Table         |                                        |                          |                       |  |  |  |  |  |
|--------------------------|----------------------------------------|--------------------------|-----------------------|--|--|--|--|--|
| Sheet Number Sheet Title |                                        | PERMIT SET<br>02/15/2024 | BID SET<br>09/04/2024 |  |  |  |  |  |
| M0.0                     | LEGEND, GENERAL NOTES, & DRAWING INDEX | X                        | Х                     |  |  |  |  |  |
| M0.1                     | PROJECT NOTES & CALCULATIONS           | X                        | Х                     |  |  |  |  |  |
| M0.2                     | DETAILS                                | Х                        | Х                     |  |  |  |  |  |
| M0.3                     | MECHANICAL SCHEDULE & WSEC FORMS       | Х                        | Х                     |  |  |  |  |  |
| M2.0                     | HVAC PLAN - FLOOR PLANS                | X                        | Х                     |  |  |  |  |  |
| M3.0                     | HVAC ENLARGED PLANS                    | X                        | Х                     |  |  |  |  |  |

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02/15/2024

LEGEND, GENERAL NOTES, & DRAWING INDEX

## **ENERGY CODE NOTES**

#### WASHINGTON STATE ENERGY CODE

1. HVAC THERMOSTATS SHALL BE SET TO MAINTAIN A MINIMUM DEADBAND OF 5°F IN AREAS SERVED AS REQUIRED PER **WSEC** C403.2.4.2.

#### 2. PER WSEC, ALL DUCTS SHALL BE INSULATED AS FOLLOWS:

|                               | 1                           | DUCT INSULATION SCHEDULE                                                                                                                                                                                                                                                                  |                         |                                |
|-------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------------|
| CODE                          | DUCT SYSTEM                 | DUCT LOCATION AND USE (1)(2)(3)                                                                                                                                                                                                                                                           | MATERIAL                | R-VALUE<br>(MIN.<br>INSTALLED) |
|                               |                             | >= 2800 CFM INSIDE CONDITION SPACE AND UPSTREAM OF AUTOMATIC SHUTOFF DAMPER                                                                                                                                                                                                               | MINERAL-WOOL<br>BLANKET | 16.0                           |
| WSEC TABLE OUTSIDE AIR (4)    | OUTSIDE AIR (4)             | >= 2800 CFM INSIDE CONDITION SPACE AND DOWNSTREAM OF AUTOMATIC SHUTOFF DAMPER TO HVAC UNIT UNIT OR ROOM                                                                                                                                                                                   | MINERAL-WOOL<br>BLANKET | 8.0                            |
|                               |                             | < 2800 CFM INSIDE CONDITION SPACE                                                                                                                                                                                                                                                         | MINERAL-WOOL<br>BLANKET | 7.0                            |
|                               |                             | OUTSIDE THE BUILDING (OUTDOOR AND EXPOSED TO WEATHER) WHICH INCLUDE ATTICS ABOVE INSULATION CEILINGS, PARKING GARAGE AND CRAWL SPACE                                                                                                                                                      | MINERAL-WOOL<br>BLANKET | 8.0                            |
|                               | SUPPLY AIR & RETURN AIR (4) | <b>,</b>                                                                                                                                                                                                                                                                                  |                         | 6.0                            |
|                               |                             | UNCONDITIONED SPACE WHERE THE DUCT CONVEYS AIR THAT IS WITHIN 15°F OF THE AIR TEMPERATURE OF THE SURROUNDING UNCONDITIONED SPACE (5)                                                                                                                                                      | MINERAL-WOOL<br>BLANKET | 3.3                            |
|                               |                             | WHERE LOCATED IN THE BUILDING ENVELOPE ASSEMBLY                                                                                                                                                                                                                                           | MINERAL-WOOL<br>BLANKET | 16.0                           |
| <b>WSEC</b> TABLE C403.10.1.2 |                             | WITHIN CONDITIONED SPACE WHERE SUPPLY DUCT CONVEYS AIR <55°F OR >105°F                                                                                                                                                                                                                    | MINERAL-WOOL<br>BLANKET | 3.3                            |
|                               |                             | WITHIN CONDITIONED SPACE THAT THE DUCT DIRECTLY SERVES WHERE SUPPLY DUCT CONVEYS AIR <55°F OR >105°F                                                                                                                                                                                      | MINERAL-WOOL<br>BLANKET | 0.0                            |
|                               |                             | WITHIN CONDITIONED SPACE WHERE SUPPLY DUCT CONVEYS AIR >55°F OR <105°F                                                                                                                                                                                                                    | MINERAL-WOOL<br>BLANKET | 0.0                            |
|                               | RETURN OR<br>EXHAUST AIR    | WITHIN CONDITION SPACE, DOWNSTREAM OF AN ENERGY RECOVERY MEDIA, UPSTREAM OF AUTOMATIC SHUTOFF DAMPER                                                                                                                                                                                      | MINERAL-WOOL<br>BLANKET | 8.0                            |
|                               | RELIEF OR<br>EXHAUST AIR    | CONDITION SPACE AND DOWNSTREAM OF AN AUTOMATIC SHUTOFF DAMPER                                                                                                                                                                                                                             | MINERAL-WOOL<br>BLANKET | 16                             |
|                               |                             | NOTES (1) DUCT INSULATION SHALL COMPLY WITH WSEC (2) INSULATION SHALL HAVE A MAXIMUM FLAME SPREAD INDEX OF 25 INDEX OF 50 PER WSEC 604.3 (3) EXTERAL DUCT INSULATION IS IDENTIFIABLE PER WSEC 604.7 (4) VAPOR RETARDER IS INSTALLED ON SUPPLY AND OUTSIDE AIR DUCTON CONTROL FOR DUCTWORK |                         |                                |

3. MOTORIZED DAMPERS: PER **WSEC** C403.7.8.1 PROVIDE MOTORIZED DAMPERS ON ALL OUTSIDE AIR INTAKES, EXHAUST OUTLETS AND RELIEF OUTLETS SERVING CONDITIONED SPACES WHICH CLOSE AUTOMATICALLY WHEN THE SYSTEM IS OFF. RETURN AIR DAMPERS SHALL BE EQUIPPED WITH MOTORIZED DAMPERS. SEE **WSEC** C402.4.5.2 FOR EXCEPTIONS AND ADDITIONAL REQUIREMENTS.

#### RESIDENTIAL ENERGY CODE

- 1. WHOLE-HOUSE FAN EFFICACY PER TABLE R403.6.1.
- 2. EQUIPMENT AND APPLIANCE SIZING PER R403.7, HEATING AND COOLING EQUIPMENT AND APPLIANCES SHALL BE SIZED IN ACCORDANCE WITH ACCA MANUAL S OR OTHER APPROVED SIZING METHODOLOGIES BASED ON BUILDING LOADS CALCULATED IN ACCORDANCE WITH ACCA MANUAL J OR OTHER APPROVED HEATING AND COOLING CALCULATION METHODOLOGIES
- 3. ELECTRIC RESISTANCE ZONE PER R403.7.1, ELECTRIC ZONAL HEATING AS PRIMARY HEAT SOURCE SHALL INSTALL DUCTLESS MINI—SPLIT HEAT PUMP IN THE LARGEST ZONE IN THE DWELLING UNLESS TOTAL INSTALLED HEATING CAPACITY OF 2 KW PER DWELLING OR LESS.
- 4. PROVIDED ONE THERMOSTAT FOR EACH HEATING AND COOLING SYSTEM PER R403.1
- 5. PER R403.3.6, SUPPLY AND RETURN DUCTS IN CEILING INSULATION SHALL HAVE MIN R-8 INSULATION ALL AROUND. THE SUM OF THE CEILING INSULATION OF THE TOP AND BELOW OF THE DUCT SHALL BE MIN R-19, EXCLUDING THE R-VALUE OF THE DUCT INSULATION
- 6. MECHANICAL SYSTEM PIPING CARRYING FLUIDS ABOVE 105F OR BELOW 55F SHALL BE INSULATED WITH MIN R-6 PER R403.4. INSULATION SHALL BE PROTECTED FROM DAMAGE AND SHALL PROVIDE SHIELDING FROM SOLAR RADIATION. ADHESIVE TAPE SHALL NOT BE PERMITTED.

## WHOLE HOUSE VENTILATION NOTES

EACH DWELLING UNIT OR SLEEPING UNIT SHALL BE EQUIPPED WITH A WHOLE—HOUSE MECHANICAL VENTILATION SYSTEM THAT COMPLIES WITH SECTIONS 403.4.1 THROUGH 403.4.6. EACH DWELLING UNIT OR SLEEPING UNIT SHALL BE EQUIPPED WITH LOCAL EXHAUST COMPLYING WITH SECTION 403.4.7. ALL OCCUPIED SPACES, INCLUDING PUBLIC CORRIDORS, OTHER THAN GROUP R DWELLING UNITS AND/OR SLEEPING UNITS, THAT SUPPORT THESE GROUP R OCCUPANCIES, SHALL MEET THE VENTILATION REQUIREMENTS OF SECTION 402 OR THE MECHANICAL VENTILATION REQUIREMENTS OF SECTIONS 403.1 THROUGH 403.3.

THE WHOLE HOUSE VENTILATION SYSTEM SHALL CONSIST OF ONE OR MORE SUPPLY FANS, ONE OR MORE EXHAUST FANS, OR AN ERV/HRV WITH INTEGRAL FANS; AND THE ASSOCIATED DUCTS AND CONTROLS. LOCAL EXHAUST FANS SHALL BE PERMITTED TO SERVE AS PART OF THE WHOLE—HOUSE VENTILATION SYSTEM WHEN PROVIDED WITH THE PROPER CONTROLS IN ACCORDANCE WITH SECTION 403.4.5. THE SYSTEMS SHALL BE DESIGNED AND INSTALLED TO SUPPLY AND EXHAUST THE MINIMUM OUTDOOR AIRFLOW RATES PER SECTION 403.4.2 AS CORRECTED BY THE BALANCED AND/OR DISTRIBUTED WHOLE—HOUSE VENTILATION SYSTEM COEFFICIENTS IN ACCORDANCE WITH SECTION 403.4.3 WHERE APPLICABLE.

THE DWELLING UNIT WHOLE-HOUSE MECHANICAL VENTILATION MINIMUM OUTDOOR AIRFLOW RATE SHALL BE DETERMINED IN ACCORDANCE WITH EQUATION 4-10 OR TABLE 403.4.2.

RESIDENTIAL DWELLING AND SLEEPING UNITS IN GROUP R-2 OCCUPANCIES SYSTEM SHALL INCLUDE SUPPLY AND EXHAUST FANS AND BE A BALANCED WHOLE—HOUSE VENTILATION SYSTEM IN ACCORDANCE WITH SECTION 403.4.6.3. THE SYSTEM SHALL INCLUDE A HEAT OR ENERGY RECOVERY VENTILATIOR WITH A SENSIBLE HEAT RECOVERY EFFECTIVENESS AS PRESCRIBED IN SECTION C403.3.6 OF THE WASHINGTON STATE ENERGY CODE. THE WHOLE—HOUSE VENTILATION RATE DETERMINED IN ACCORDANCE WITH SECTION 403.4. THE WHOLE—HOUSE SUPPLY FAN SHALL PROVIDE DUCTED OUTDOOR VENTILATION AIR TO EACH HABITABLE SPACE WITHIN THE RESIDENTIAL UNIT.

CONTROLS FOR THE WHOLE-HOUSE VENTILATION SYSTEM SHALL COMPLY WITH THE FOLLOWING:

- 1. THE WHOLE—HOUSE VENTILATION SYSTEM SHALL BE CONTROLLED WITH MANUAL SWITCHES, TIMERS OR OTHER MEANS THAT PROVIDE FOR AUTOMATIC OPERATION OF THE VENTILATION SYSTEM THAT HAVE READY ACCESS FOR THE
- 2. THE WHOLE—HOUSE MECHANICAL VENTILATION SYSTEM SHALL BE PROVIDED WITH CONTROLS THAT ENABLE MANUAL OVERRIDE OFF OF THE SYSTEM BY THE OCCUPANT DURING PERIODS OF POOR OUTDOOR AIR QUALITY. CONTROLS SHALL INCLUDE PERMANENT TEXT OR A SYMBOL INDICATING THEIR FUNCTION. RECOMMENDED CONTROL PERMANENT LABELING TO INCLUDE TEXT SIMILAR TO THE FOLLOWING; "LEAVE ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR."
- MANUAL CONTROLS SHALL HAVE READY ACCESS FOR THE OCCUPANT.
  3. WHOLE—HOUSE VENTILATION SYSTEMS SHALL BE CONFIGURED TO OPERATE CONTINUOUSLY EXCEPT WHERE INTERMITTENT OFF CONTROLS ARE PROVIDED IN ACCORDANCE WITH SECTION 403.4.6.5 AND ALLOWED BY SECTION 403.4.4.2.

WHOLE HOUSE VENTILATION SUPPLY AND EXHAUST FANS SPECIFIED IN THIS SECTION SHALL HAVE A MINIMUM EFFICACY AS PRESCRIBED IN THE WASHINGTON STATE ENERGY CODE. THE FANS SHALL BE RATED FOR SOUND AT A MAXIMUM OF 1.0 SONE AT DESIGN AIRFLOW AND STATIC PRESSURE CONDITIONS. DESIGN AND INSTALLATION OF THE SYSTEM OR EQUIPMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH MANUFACTURERS' INSTALLATION INSTRUCTIONS

A BALANCED WHOLE HOUSE VENTILATION SYSTEM SHALL INCLUDE BOTH SUPPLY AND EXHAUST FANS. THE SUPPLY AND EXHAUST FANS SHALL HAVE AIRFLOW THAT IS WITHIN 10 PERCENT OF EACH OTHER. THE TESTED AND BALANCED TOTAL MECHANICAL EXHAUST AIRFLOW RATE IS WITHIN 10 PERCENT OR 5 CFM, WHICHEVER IS GREATER, OF THE TOTAL MECHANICAL SUPPLY AIRFLOW RATE. THE FLOW RATE TEST RESULTS SHALL BE SUBMITTED AND POSTED IN ACCORDANCE WITH SECTION 403.4.6.6. THE EXHAUST FAN SHALL MEET THE REQUIREMENTS OF SECTION 403.4.6.3. FOR R-2 DWELLING AND SLEEPING UNITS, THE SYSTEM IS REQUIRED TO HAVE BALANCED WHOLE—HOUSE VENTILATION WHERE THE NOT DISTRIBUTED SYSTEM COEFFICIENT FROM TABLE 403.4.3 IS UTILIZED TO CORRECT THE WHOLE—HOUSE MECHANICAL VENTILATION RATE. THE SYSTEM SHALL BE DESIGNED AND BALANCED TO MEET THE PRESSURE EQUALIZATION REQUIREMENTS OF SECTION 501.4. INTERMITTENT DRYER EXHAUST, INTERMITTENT RANGE HOOD EXHAUST, AND INTERMITTENT TOILET ROOM EXHAUST AIRFLOW CALCULATION.

#### FACTORY-BUILT INTAKE/EXHAUST COMBINATION TERMINATIONS

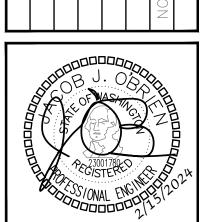
PER 2018 IMC 401.4.3, ITEM 3, EXCEPTION, SEPARATION IS NOT REQUIRED BETWEEN INTAKE AIR OPENINGS AND LIVING SPACE RELIEF AIR EXHAUST AIR OPENINGS OF AN INDIVIDUAL DWELLING UNIT OR SLEEPING UNIT, NOT TO INCLUDE COMMON AREAS OUTSIDE OF THE DWELLING OR SLEEPING UNIT, WHERE A FACTORY—BUILT INTAKE/EXHAUST COMBINATION TERMINATION FITTING, LISTED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, IS USED TO SEPARATE THE AIR STREAMS. A MINIMUM OF 5 FEET HORIZONTAL SEPARATION BETWEEN OTHER ENVIRONMENTAL AIR EXHAUST OUTLETS AND OTHER DWELLING OR SLEEPING UNIT FACTORY—BUILT INTAKE/EXHAUST COMBINATION TERMINATION FITTINGS SHALL BE MAINTAINED.

## **CALCULATIONS**

| RESIDENTIAL VENTILATION CALCULATIONS |                                     |                            |                           |                       |                     |                            |                                              |                                              |
|--------------------------------------|-------------------------------------|----------------------------|---------------------------|-----------------------|---------------------|----------------------------|----------------------------------------------|----------------------------------------------|
|                                      |                                     |                            | 2018                      | MC CRITERIA (1)       | VENTILATION QUALITY | MINIMUM WHOLE HOUSE        | TOTAL CFM PROVIDED                           |                                              |
| UNIT TYPE                            | UNIT SQUARE FOOTAGE                 | NUMBER OF BEDROOMS         | FLOOR AREA, SQFT          | NUMBER OF<br>BEDROOMS | REQUIRED CFM (2)    | ADJUSTMENT COEFFICIENT (3) | MINIMUM WHOLE HOUSE<br>VENTILATION RATE, CFM | TOTAL CFM PROVIDED BY WHOLE HOUSE FAN SYSTEM |
| 1 BEDROOM                            | 660                                 | 1                          | 500 - 1,000               | 1                     | 30                  | 1.5                        | 45                                           | 55                                           |
| 2 BEDROOM                            | 1000                                | 2                          | 500 - 1,000 2 35 1.5 53 5 |                       |                     |                            |                                              |                                              |
| NOTE:                                | (1) VENTILATION CRITERIA IS PER THE | . 2018 WA RESIDENTIAL CODE | SECTION M1505.4.3         |                       |                     |                            |                                              | -                                            |

(2) MINIMUM OSA FOR CONTINUOUSLY OPERATING FAN(S).

(3) ADJUSTMENT COEFFICIENT IS PER 2018 WRC, TABLE M1505.4.3(2) FOR A NOT BALANCED, AND NOT DISTRIBUTED WHOLE HOUSE VENTILATION SYSTEM.





DESIGNED: ABE
CHECKED: ABE
APPROVED: JOB

HEIGHT APARTMENTS - BUILDING AVE SE 9, WA 98374

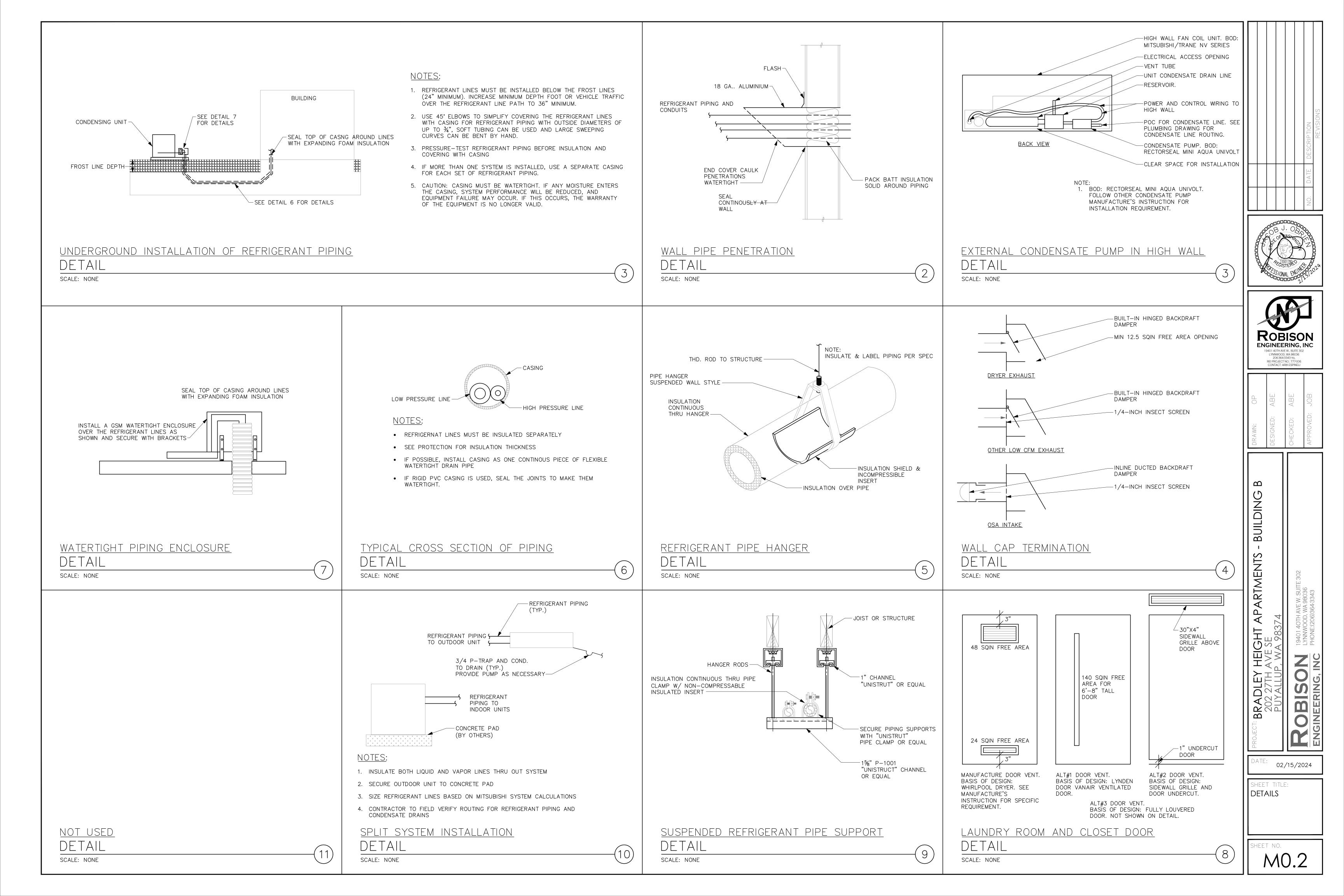
ROBISON WA

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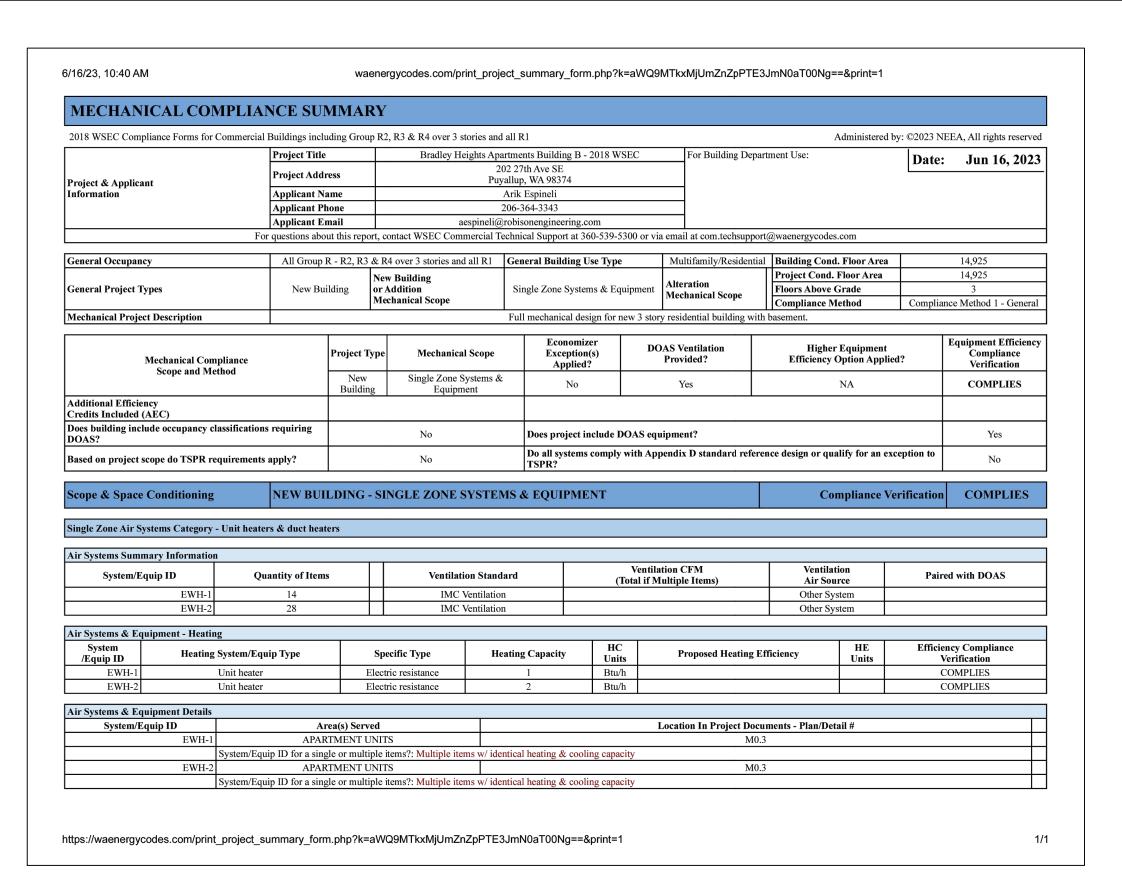
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PROJECT
NOTES &
CALCULATIONS

MO.1



## **WSEC FORMS**



## MECHANICAL SCHEDULES

|           | ELECTRIC HEATERS     |                     |         |            |                     |  |  |  |  |
|-----------|----------------------|---------------------|---------|------------|---------------------|--|--|--|--|
| EQUID NO  | EQUIP NO. SERVICE MO | MOUNTING/ DISCHARGE | HEATING | ELECTRICAL | BASIS OF DESIGN (3) |  |  |  |  |
| EQUIF NO. |                      | MOUNTING/ DISCHARGE | KW      | VOLTAGE    | BASIS OF DESIGN (3) |  |  |  |  |
| EWH-1     | APARTMENT UNIT       | WALL                | 1.0     | 208V/1P    | (1)(2)              |  |  |  |  |
| EWH-2     | APARTMENT UNIT       | WALL                | 1.5     | 208V/1P    | (1)(2)              |  |  |  |  |

NOTES: (1) BROAN, KING, CADET OR EQUIVALENT.

(2) PROVIDE REMOTE THERMOSTAT. COORDINATE FINAL LOCATION WITH ELECTRICAL DRAWINGS.

(3) ALL ELECTRIC HEATERS TO BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.

|            | FAN SCHEDULE |                 |                     |               |            |     |             |             |                          |
|------------|--------------|-----------------|---------------------|---------------|------------|-----|-------------|-------------|--------------------------|
| EQUIP NO.  | SERVICE      | TYPE            | AIRFLOW, ESP. IN WG |               | ELECTRICAL |     | - OPERATION | WEIGHT, LBS | BASIS OF DESIGN          |
| LQUII IVO. | SERVICE      | 1111 E          | CFM                 | LSI . IIN VVO | VOLTAGE    | HP  | OFERATION   | WEIGHT, EDS | (1)(2)(3)                |
| BEF-1      | RESTROOM     | CEILING MOUNTED | 55/80               | 0.5           | 115V/1P    | FHP | CONTINUOUS  | 10          | GREENHECK SP-AP0511W (4) |
| BEF-2      | RESTROOM     | CEILING MOUNTED | 50                  | 0.5           | 115V/1P    | FHP | (2)         | 10          | GREENHECK SP-AP0511W     |

NOTES: (1) PROVIDE BACKDRAFT DAMPERS ON EXHAUST FANS.

(2) 1.0 SONES MAXIMUM.

(3) VIBRATION ISOLATION: FANS < 125 LBS RUBBER ISOLATORS, FANS > 125 LBS SPRING ISOLATORS

FAN SHALL BE 2-SPEED: 35 CFM CONTINUOUS LOW SETTING AND 80 CFM HIGH SPEED ACTIVATED BY INTEGRAL OCCUPANCY SENSOR ON GRILLE.

|           | SPLIT SYSTEM HEAT PUMP SCHEDULE - INDOOR UNIT |           |              |                |         |     |                 |                    |        |
|-----------|-----------------------------------------------|-----------|--------------|----------------|---------|-----|-----------------|--------------------|--------|
|           | MOUNTING/                                     |           | FA           | FAN ELECTRICAL |         |     | BASIS OF DESIGN | CONNECTED OUTDOOR  |        |
| EQUIP NO. | EQUIP NO. SERVICE                             |           | AIRFLOW, CFM | ESP. IN WG     | VOLTAGE | MCA | МОСР            | (1)(2)(4)          | UNIT   |
| FCU-1-X   | RES. UNIT                                     | HIGH WALL | 473          | N/A            | (3)     | (3) | (3)             | DAIKIN FTXB12BXVJU | HP-1-X |
| FCU-2-X   | RES. UNIT                                     | HIGH WALL | 716          | N/A            | (3)     | (3) | (3)             | DAIKIN FTXB18BXVJU | HP-2-X |

TES: (1) INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.

(2) PROVIDE MANUFACTURER'S OPTIONAL CONDENSATE PUMP WITH RESERVOIR AND SENSOR.

(3) INDOOR UNIT POWERED FROM OUTDOOR UNIT.

(4) "X" DENOTES THE UNIT BEING SERVED.

|           | SPLIT SYSTEM HEAT PUMP SCHEDULE - OUTDOOR UNIT                                                                                    |     |        |      |                            |     |         |       |    |    |                   |       |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------|-----|--------|------|----------------------------|-----|---------|-------|----|----|-------------------|-------|
| EQUIP NO. | SERVICE CAPACITY, TOTAL COOLING CAPACITY, BTUH SEER2 TOTAL HEATING CAPACITY, BTUH HSPF2 ELECTRICAL WEIGHT, LBS (1)(2)(3)(4)(5)(6) |     |        |      | CONNECTED FAN<br>COIL UNIT |     |         |       |    |    |                   |       |
| HP-1-X    | RES. UNIT                                                                                                                         | 1.0 | 11,000 | 18.0 | 11,300                     | 9.0 | 208V/1P | 12.40 | 15 | 62 | DAIKIN RXB12BXVJU | FCU-1 |
| HP-2-X    | RES. UNIT                                                                                                                         | 1.5 | 18,000 | 18.0 | 17,900                     | 8.5 | 208V/1P | 16.55 | 20 | 97 | DAIKIN RXB18BXVJU | FCU-1 |

NOTES: (1) INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.

(2) ARI LISTED WITH ALL STANDARD FEATURES, INSTALLATION ACCESSORIES AND COMPRESSOR SHORT CYCLING PROTECTION. FILTER DRIVER, REFRIGERANT LINE FILTER, LIQUID SOLENOID

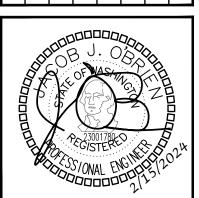
VALVE, AND SAFETY PRESSURE SWITCHES. INSTALL REFRIGERANT TUBING AND LENGTH IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

(3) PROVIDE ALL REQUIRED ACCESSORIES FOR LOW-AMBIENT.

(4) ROUTING OF REFRIGERANT LINES FROM INDOOR TO OUTDOOR UNITS NOT SHOWN ON PLANS. CONTRACTOR TO FIELD COORDINATE ROUTING.

(5) REFRIGERANT SHALL BE R-410

(6) "X" DENOTES THE UNIT BEING SERVED.





DESIGNED: ABE
CHECKED: ABE
APPROVED: JOB

HEIGHT APARTMENTS - BUILDING AVE SE 9, WA 98374

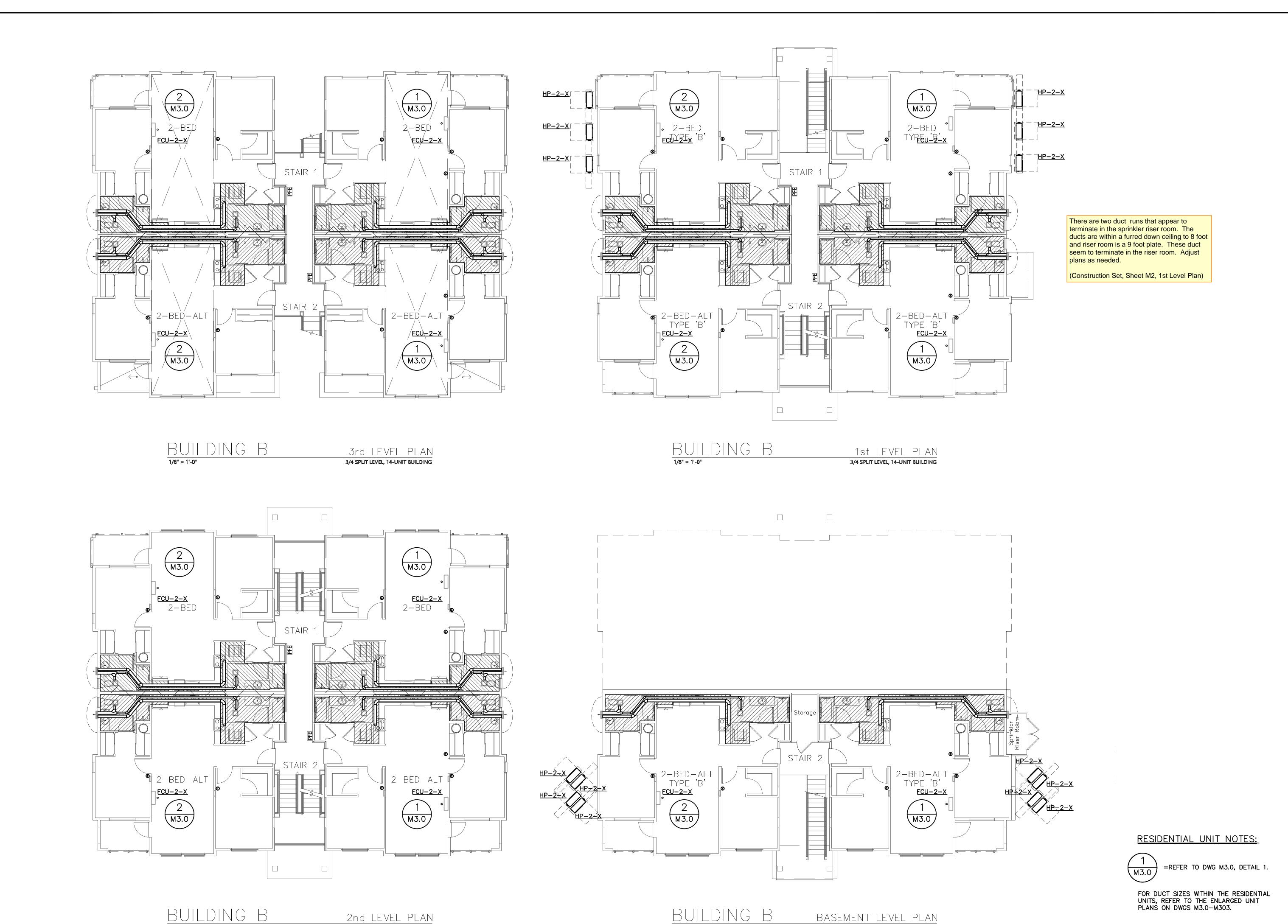
BRADLEY

ROBISON ENGINEERING, INC

TE: 02/15/2024

SHEET TITLE:
MECHANICAL
SCHEDULE &
WSEC FORMS

MO.3



3/4 SPLIT LEVEL, 14-UNIT BUILDING

3/4 SPLIT LEVEL, 14-UNIT BUILDING

PROJECT: BRADLEY HEIGHT APARTMENTS 202 27TH AVE SE
PUYALLUP, WA 98374

ROBISON
LYNNWOOD, WA 98036
PHONE:(206)364-3343

ROBISON ENGINEERING, INC

> 206-364-3343 TEL REI PROJECT NO.: 777-006 CONTACT: ARIK ESPINELI

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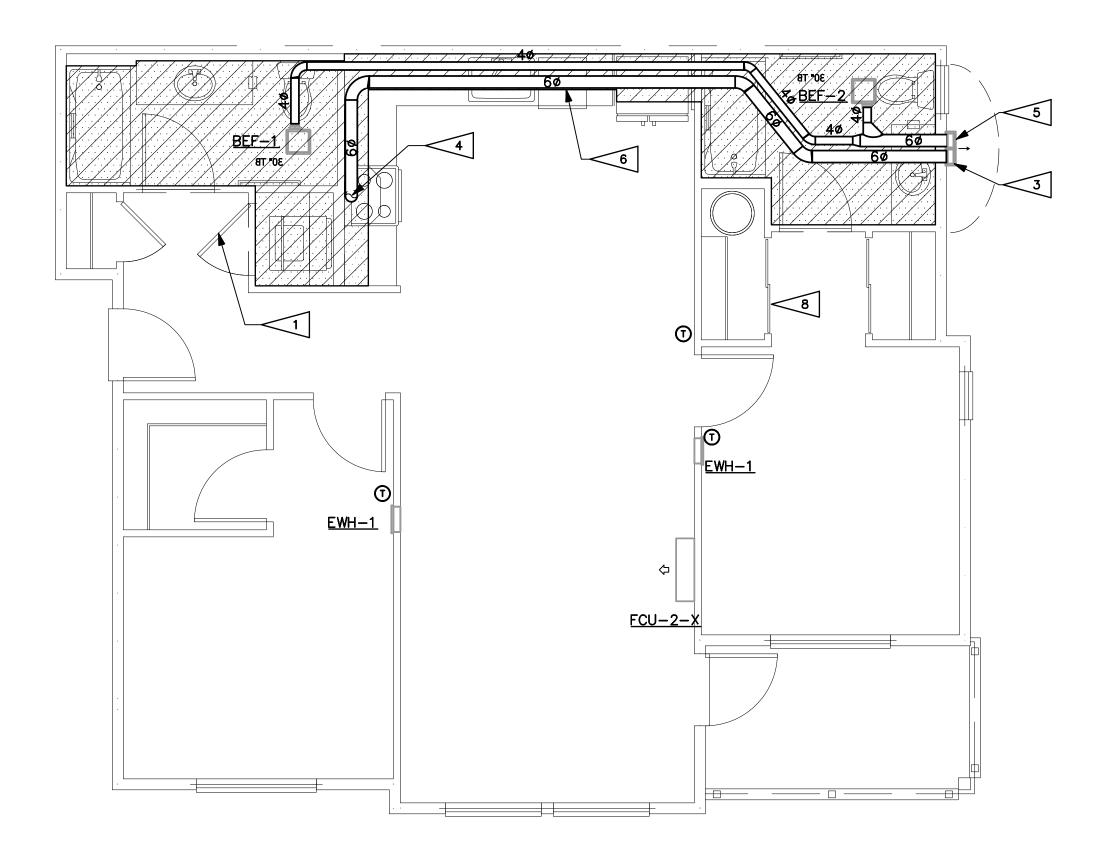
- BUILDING

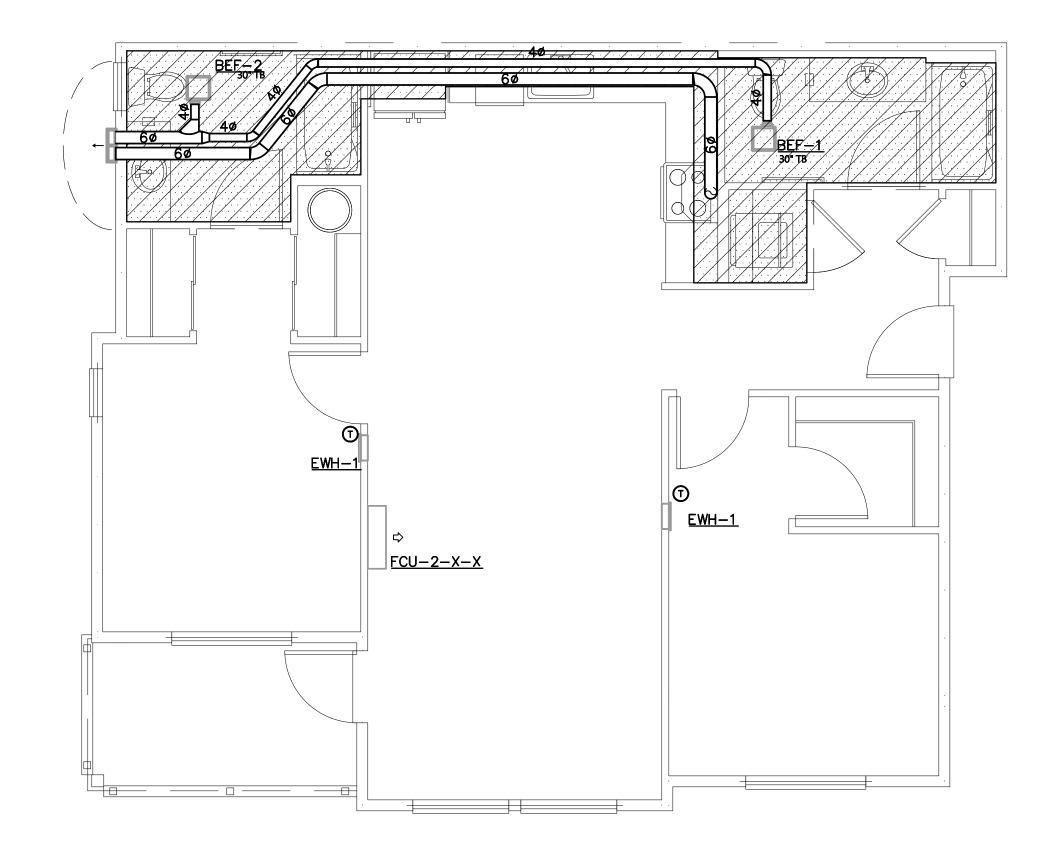
O2/15/2024

SHEET TITLE:
HVAC PLAN FLOOR PLANS

SHEET NO.

M2.0





#### HVAC ENLARGED PLANS

2-BED-ALT-MIRROR

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

(M3.0)

HVAC ENLARGED PLANS

2-BED-ALT SCALE: 1/4" = 1'-0"

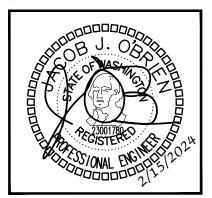
(M3.0)

#### GENERAL NOTES:

- 1. ENVIRONMENTAL EXHAUST TERMINATIONS: MAINTAIN 3 FOOT SEPARATION FROM PROPERTY LINES AND OPERABLE OPENINGS INTO BUILDING, 10 FEET FROM MECHANICAL AIR INTAKES.
- 2. MOUNT REMOTE THERMOSTATS 48" AFF. PER WSEC C403.4.9, AT LEAST ONE THERMOSTAT SHALL BE PROGRAMMABLE ON A 5-2 SCHEDULE.
- 3. UNDERCUT ALL BATHROOM DOORS BY MINIMUM 1/2" TO ALLOW TRANSFER OF MAKEUP AIR FOR BATHROOM EXHAUST.
- 4. ELECTRIC WALL HEATERS SHALL BE RECESSED IN WALL UNLESS FIRE RATED OR EXTERIOR WALL. FOR HEATERS MOUNTED ON SUCH WALL, PROVIDE SURFACE-MOUNT WALL CAN.
- 5. PROVIDE ACCESSIBLE MANUAL VOLUME DAMPERS AT BRANCHES OR OPPOSED-BLADE DAMPERS AT GRILLES FOR AIR BALANCING PER VOLUME DAMPERS NOTE ON SHEET MO.OO.

#### FLAG NOTES: #

- 1. CLOSETS CONTAINING DRYERS SHALL BE PROVIDED WITH LOUVERED DOOR OR 100 SQ. IN FREE-AREA OPENING ABOVE DOOR. OPENING PROVIDES PATH FOR EXHAUST AIR DURING WASHER OPERATION PER WSMC TABLE 403.3.1.1 NOTE (i) AND MAKEUP AIR DURING DRYER OPERATION PER 504.6.
- 2. 40 POC TO DRYER. PROVIDE METAL DRYER BOX WHERE DUCT IS ROUTED IN 2x6 FRAMED WALL. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS AND WSMC 7. 80 POC FOR HEAT PUMP WATER HEATER EXHAUST. 504.8.4.1 FOR THE MAXIMUM ALLOWED LENGTH OF THE DRYER VENT. PROVIDE PERMANENT PLACARD OF TYPE PLAC34 SHOWING NET EQUIVALENT LENGTH. DUCT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
- 3. 4" DRYER EXHAUST TERMINATION WALL CAP. PROVIDE BACKDRAFT DAMPER AT TERMINATION. DO NOT INSTALL SCREENS ON DRYER EXHAUST TERMINATIONS. CLEARANCES PER GENERAL NOTE 1.
- 4. POC TO DOMESTIC KITCHEN RANGE HOOD. SEE PLANS FOR SIZE. DUCT SHALL REMAIN SEPARATE FROM OTHER EXHAUST SYSTEMS UP TO TERMINATION.
- 5. DOMESTIC KITCHEN RANGE HOOD EXHAUST TERMINATION WALL CAP WITH SCREEN. PROVIDE BACKDRAFT DAMPER AT TERMINATION. CLEARANCES PER GENERAL NOTE 1.
- 6. LOWERED SOFFIT FOR MECHANICAL EQUIPMENT.
- 8. CLOSETS CONTAINING WATER HEATERS SHALL BE PROVIDED WITH MINIMUM 3/4" UNDERCUT.





BUILDING Y HEIGHT APARTMENTS -H AVE SE JP, WA 98374

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BRADLEY 202 27TH / PUYALLUP

02/15/2024

PLANS

|                                       |                 | SYMBOLS                                                                                                                                             |                                                                     | ABBREVIATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>GENER</u>                          | <u>AL</u>       | LIGHT LINE INDICATES NON-ELECTRICAL OR BACKGROUND (THIS IS NOT CONTRACTUAL DEFINITION OF WORK) HEAVY LINE INDICATES NEW WORK (THIS IS NOT           | A<br>AC<br>AFF<br>AIC<br>AL                                         | AMPERE ALTERNATING CURRENT, ABOVE COUNTER ABOVE FINISHED FLOOR AMPS INTERRUPTING CAPACITY ALUMINUM AMPERE                                                                                                                                                                                                                                                                                                                                                                                                         | GENERAL  1. PROVIDE ELECTRICAL INSTALLATION IN AC ELECTRICAL CODE, LOCAL CODES, ORDINA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| DETAIL IDENTI                         | <u>FICATION</u> | CONTRACTUAL DEFINITION OF WORK)                                                                                                                     | AMP<br>AWG<br>BKR                                                   | AMPERE AMERICAN WIRE GAUGE BREAKER BRUNDING                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | COMPANIES FURNISHING SERVICES TO INST                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| SYMBO                                 | <u>L</u>        | NAME<br>FLAG NOTE                                                                                                                                   | BLDG<br>C<br>CKT                                                    | BUILDING<br>COIL or CONDUIT<br>CIRCUIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | ELECTRICAL SYSTEMS. THE ELECTRICAL DOT NECESSARILY SHOW EVERY CONDUIT, FOR A COMPLETE INSTALLATION.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1                                     |                 | FLAG NOTE  REVISION NOTE                                                                                                                            | CO<br>CT<br>Cu                                                      | CONDUIT/RACEWAY ONLY<br>CURRENT TRANSFORMER<br>COPPER                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3. THE CONTRACTOR SHALL VISIT THE SITE I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                       |                 | REVISION DEFINITION, AREA ENCIRCLED CONTAINS DRAWING CHANGES MADE SUBSEQUENT TO PREVIOUS ISSUE                                                      | CW<br>D<br>DED                                                      | COOL WHITE<br>DIMMER<br>DEDICATED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | BE BROUGHT TO THE ATTENTION OF THE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4                                     |                 |                                                                                                                                                     | EC<br>EF                                                            | ELECTRICAL CONTRACTOR<br>EXHAUST FAN                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4. "REF" INDICATIONS DENOTE WORK COVERE STRUCTURAL, OR MECHANICAL).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                       |                 |                                                                                                                                                     | ELEC<br>EMT<br>EQUIP<br>EXIST<br>FAA                                | ELECTRICAL ELECTRICAL METALLIC TUBING EQUIPMENT EXISTING FIRE ALARM ANNUNCIATOR                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5. REFERENCE ARCHITECTURAL DRAWING FOR QUESTIONS CONCERNING THE LOCATION O DIRECTED TO THE ARCHITECT. FAILURE TO NO WAY RESULT IN ADDITIONAL COMPENS CONTRACTOR.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <u>SWITCH</u><br>\$a                  | <u>ES</u>       | SWITCH, SINGLE POLE; WITH SWITCHING SUBSCRIPT                                                                                                       | FACP<br>FLUOR<br>GC<br>GFCI                                         | FIRE ALARM CONTROL PANEL FLUORESCENT GENERAL CONRACTOR GROUND FAULT CIRCUIT INTERRUPTER                                                                                                                                                                                                                                                                                                                                                                                                                           | 6. WHEREVER THE WORD "PROVIDE" IS USED COMPLETE AND READY FOR USE."                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| \$0s<br><b>D</b>                      |                 | OCCUPANCY SENSOR SWITCH SWITCH, SINGLE POLE; WITH SWITCHING SUBSCRIPT "D" INDICATES WALLBOX DIMMER                                                  | GND<br>GRS                                                          | GROUND<br>GALVANIZED RIGID STEEL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 7. COORDINATE LOCATION OF ELECTRICAL WI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>⊚</b><br>\$⊤                       |                 | CEILING MOUNTED OCCUPANCY SENSOR SWITCH, TIMER.                                                                                                     | HID<br>HP<br>IG                                                     | HIGH INTENSITY DISCHARGE<br>HORSEPOWER<br>ISOLATED GROUND                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 8. REFER TO EQUIPMENT DRAWINGS FOR MED LOCATION, ETC.) OF MECHANICAL EQUIPME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>\$</b> 3                           |                 | SWITCH, THREE WAY.                                                                                                                                  | KCMIL<br>KVA<br>KW<br>LTG                                           | THOUSAND CIRCULAR MILLS KILOVOLT AMPERES KILOWATT LIGHTING                                                                                                                                                                                                                                                                                                                                                                                                                                                        | COORDINATE INSTALLATION AND LOCATION CONTRACTOR. VERIFY ALL FUSE RATINGS, PRIOR TO INSTALLATION.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                       |                 |                                                                                                                                                     | LV<br>MFR<br>MIN                                                    | LOW VOLTAGE<br>MANUFACTURER<br>MINIMUM                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | MATERIALS AND METHODS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| receptai<br><b>Φ</b>                  | <u>CLES</u>     | SINGLE RECEPTACLE                                                                                                                                   | MLO<br>N<br>NEC                                                     | MAIN LUGS ONLY<br>NEUTRAL<br>NATIONAL ELECTRICAL CODE (NFPA-70)                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1. PROVIDE RACEWAY AND WIRING ROUTED OF WHERE POSSIBLE. WHERE RACEWAY CANN INSTALLED PER PROJECT MANAGER'S DIRE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Ф<br>Ф<br>©°                          |                 | DUPLEX RECEPTACLE: WALL MOUNTED, +18" AFF                                                                                                           | NEMA                                                                | NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | INSTALLED IN NEAT SYMMETRICAL LINES F<br>BUILDING COLUMNS AND ROOF LINES. CON                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| $\Theta$                              |                 | CONTROLLED AND NON CONTROLLED DUPLEX RECEPTACLE (SPLIT WIRED RECEPTACLE)  DUPLEX RECEPTACLE — ABOVE COUNTER                                         | NTS<br>PNL<br>POC                                                   | NOT TO SCALE<br>PANEL<br>POINT OF CONNECTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | SUPPORTS WHEREVER POSSIBLE.  2. EXPOSED CONDUIT ROUTING: CONDUITS N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| ♥ GFCI<br>◆ GFCI                      |                 | DUPLEX GFCI ABOVE COUNTER  DUPLEX GFCI                                                                                                              | PT<br>PVC<br>PWR                                                    | POTENTIAL TRANSFORMER POLYVINYL CLORIDE POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | MECHANICAL AND ELECTRICAL ROOMS ONI<br>SECURED A MINIMUM OF 6" ABOVE FLOOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Ф</b> +42<br><b>Ф</b>              | "               | DUPLEX RECEPTACLE, WITH HEIGHT ABOVE FINISHED FLOOR INDICATED CEILING MOUNTED DUPLEX RECEPTACLE                                                     | QTY<br>RECEPT<br>REF                                                | QUANTITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3. OUTDOOR EXPOSED CONDUIT ROUTING: COND |
| © <b>⊕</b> .                          |                 | DOUBLE DUPLEX RECEPTACLE: WALL MOUNTED, +18" AFF FLOOR BOX ONE DUPLEX RECEPTACLE                                                                    | RI<br>RM                                                            | ROUGH-IN<br>ROOM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CONNECTIONS AND FITTINGS.  4. CLEARANCES: VERIFY PHYSICAL DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                       |                 | FLOOR BOX ONE DUPLEX RECEPTACLE + ONE DATA                                                                                                          | RO<br>SHT<br>SPEC                                                   | RACEWAY ONLY<br>SHEET<br>SPECIFICATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ACCESS CLEARANCES CAN BE MET.  5. CONNECTIONS: PROVIDE GRS, METALLIC I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                       |                 | FLOOR BOX ONE DUPLEX RECEPTACLE + ONE DATA + ONE VOICE  SPECIAL PURPOSE RECEPTACLE, AS NOTED                                                        | SW<br>SWBD<br>SWGR                                                  | SWITCH<br>SWITCHBOARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | FOR CONNECTIONS TO MOTORS OR MOTOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| MISCELLAN                             | <u>EOUS</u>     | JUNCTION BOX: 4SQ MOUNTED                                                                                                                           | TYP<br>UG                                                           | SWITCHGEAR<br>TYPICAL<br>UNDERGROUND                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6. WIRING: PROVIDE MINIMUM #12 AWG WIRE MINIMUM IS TO BE 1/2". FLEXIBLE COND THROUGHOUT THE BUILDING.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| •                                     |                 | JUNCTION BOX: 4SQ WALL MOUNTED  JUNCTION BOX: 4SQ TRACK                                                                                             | UL<br>UON<br>V                                                      | UNDERWRITERS LABORATORIES UNLESS OTHERWISE NOTED VOLTS                                                                                                                                                                                                                                                                                                                                                                                                                                                            | THROUGHTON THE BOLESHVO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| ©                                     |                 | CONNECTION FOR LIGHTED MIRROR COORDINATE LOCATION AND ELEVATION WITH ARCHITECT PRIOR TO ROUGH—IN                                                    | W<br>WW<br>WP                                                       | WATTS<br>WARM WHITE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| T                                     |                 | THERMOSTAT                                                                                                                                          | W/<br>W/<br>W/O                                                     | WEATHERPROOF<br>WITH<br>WITHOUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SIGNAL/COMMU                          | INICATION       |                                                                                                                                                     | XFMR<br>XFR<br>Z                                                    | TRANSFORMER<br>TRANSFER<br>IMPEDANCE OR ZONE                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| ▽<br>▼<br>□                           |                 | DATA OUTLET: WALL MOUNTED @ +18" AFF U.O.N. TELEPHONE/DATA OUTLET: WALL MOUNTED @ +18" AFF U.O.N. TELEVISION OUTLET: WALL MOUNTED @ +18" AFF U.O.N. |                                                                     | GENERAL REQU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | IREMENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <u>POWER</u><br><b>△</b>              |                 | PANELBOARD                                                                                                                                          | 1.                                                                  | DRAWINGS ARE DIAGRAMMATIC, SHOWING THE GEQUIPMENT REQUIRED.                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ENERAL LOCATION, TYPE, LAYOUT, AND                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| ☐<br>WP                               |                 | NON-FUSED DISCONNECT SWITCH (WP = NEMA 3R WHERE APPROPRIATE )                                                                                       | 3.                                                                  | THE DRAWINGS SHALL NOT BE SCALED FOR EXPRESER TO ARCHITECTURAL DRAWINGS FOR DIME                                                                                                                                                                                                                                                                                                                                                                                                                                  | NSIONS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| ď                                     |                 | FUSED DISCONNECT SWITCH                                                                                                                             |                                                                     | REFER TO MANUFACTURER'S STANDARD INSTALL AND INSTALLATION REQUIREMENTS. PROVIDE CONNECTIONS, ACCESSORIES, OFFSETS                                                                                                                                                                                                                                                                                                                                                                                                 | ·                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Ø</b> MAU-                         | -1,5HP,480,3    | MOTOR CONNECTION (EQUIPMENT NAME, HORSEPOWER, VOLTAGE, AND PHASE INDICATED)                                                                         |                                                                     | SYSTEM.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>⊘</b> EF−1                         | ,12KVA,208,1    | EQUIPMENT CONNECTION (EQUIPMENT NAME, LOAD, VOLTAGE, AND PHASE INDICATED)                                                                           |                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| T M                                   |                 | TRANSFORMER, DRY TYPE, SHOWN TO SCALE  KW METER AND BASE                                                                                            |                                                                     | CONTRACTOR SUBSTI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | TUTIONS & REVISIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|                                       | FACP            | FIRE ALARM SYSTEM CONTROL PANEL                                                                                                                     |                                                                     | PLEASE SUBMIT PROPOSALS FOR SUBSTITUTIONS OR ORDERING MATERIAL OR DOING WORK. FOR EQUIPMENT THAT IS SCHEDULED BY MANUFACTU                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                       | P               | FIRE ALARM SYSTEM CONTROL PANEL  FIRE ALARM SYSTEM PULL STATION                                                                                     |                                                                     | MANUFACTURER'S PUBLISHED DATA AND/OR SPECIFIC SPECIFICATION. ENGINEERING COSTS FOR REVISING MEP PLANS SHAL                                                                                                                                                                                                                                                                                                                                                                                                        | CATION FOR THAT ITEM ARE CONSIDERED PART OF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                       |                 | FIRE ALARM SYSTEM STROBE/SPEAKER  FIRE ALARM PHOTOELECTRIC SMOKE DETECTOR AND SPEAKER.                                                              |                                                                     | SUBSTITUTION PROPOSAL.  CONTRACTOR TO COORDINATE WITH ENGINEER AND COSTS. CONTRACTOR SHALL BE RESPONSIBLE FOR CO                                                                                                                                                                                                                                                                                                                                                                                                  | ETERMINE ASSOCIATED DESIGN AND PERMITTING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| PART OF THE ~ DESIGN/BUILD FIRE ALARM | <b>31</b>       | FIRE ALARM COMBINATION PHOTOELECTRIC SMOKE DETECTOR, CARBON MONOXIDE DETECTOR, AND SPEAKER, GUESTROOM.                                              |                                                                     | PRE-CON MEETIN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | IG NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| SYSTEM                                | ©<br>  ⊙        | CARBON MONOXIDE DETECTOR.                                                                                                                           | PUR                                                                 | ITRACTORS SHALL ATTEND A PRE-CONSTRUCTION POSE OF REVIEWING THE WORK PRIOR TO ORDERI                                                                                                                                                                                                                                                                                                                                                                                                                              | NG ANY EQUIPMENT OR PERFORMING ANY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                       | DSD DSD         | ELECTRO-MAGNETIC DOOR HOLDER  DUCT SMOKE DETECTOR                                                                                                   | MUT<br>BY<br>SPE<br>PRC<br>FIEL<br>ATT<br>SPE<br>REQ<br>PRIC<br>OFF | RK. THE MEETING SHALL BE LOCATED AT THE PROTUBLLY AGREED. THE MEETING WILL BE A WORKING THE ENGINEER AND THE AGENDA WILL INCLUDE A CIFICATIONS, CROSS CHECK WITH OTHER TRADES POSED PRODUCTS, REVIEW OF PLANNED MEANS AND CONDITIONS RELATIVE TO EXISTING CONDITIONS ENDING THE MEETING SHALL BE KNOWLEDGEABLE CIFIC PERSONS INTENDED TO CONTINUE WITH THE PUIRED, REVISED PLANS WILL BE ISSUED THROUGH THE WILL BE DISCUSSED, BUT NO CHANGE ORDERS ICIAL CHANNELS. IT SHALL BE UNDERSTOOD THAT JE CHANGE ORDERS. | DETAILED REVIEW OF THE PLANS AND FOR COORDINATION ISSUES, REVIEW OF THAT COULD AFFECT THE WORK. PERSONS OF THE PROJECT AND SHALL BE THE PROJECT THROUGH TO COMPLETION. IF OFFICIAL CHANNELS. CHANGES IN THE BID WILL BE ISSUED UNLESS PROCESSED THOUGH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                       |                 |                                                                                                                                                     | MEC<br>PLU                                                          | CHANICAL SHEET METAL 4 HOURS IMBING/PIPING 4 HOURS                                                                                                                                                                                                                                                                                                                                                                                                                                                                | R THE MINIMUM TIME INDICATED:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                       |                 |                                                                                                                                                     |                                                                     | CTRICÁL 4 HOURS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

#### **GENERAL**

- PROVIDE ELECTRICAL INSTALLATION IN ACCORDANCE WITH THE GOVERNING ELECTRICAL CODE, LOCAL CODES, ORDINANCES AND REQUIREMENTS OF UTILITY COMPANIES FURNISHING SERVICES TO INSTALLATION.
- PROVIDE ALL WORK AND ITEMS NECESSARY FOR COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEMS. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY SHOW EVERY CONDUIT, BOX, CONDUCTOR OR SIMILAR ITEMS
- FOR A COMPLETE INSTALLATION. 3. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND DETERMINE
- BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING. 4. "REF" INDICATIONS DENOTE WORK COVERED ELSEWHERE (ARCHITECTURAL,
- 5. REFERENCE ARCHITECTURAL DRAWING FOR EXACT LOCATION OF DEVICES. QUESTIONS CONCERNING THE LOCATION OF DEVICES AND EQUIPMENT SHALL BE DIRECTED TO THE ARCHITECT. FAILURE TO COORDINATE REQUIREMENTS SHALL IN NO WAY RESULT IN ADDITIONAL COMPENSATION BEING PROVIDED TO THE
- 6. WHEREVER THE WORD "PROVIDE" IS USED, IT MEANS, "FURNISH AND INSTALL COMPLETE AND READY FOR USE."
- 7. COORDINATE LOCATION OF ELECTRICAL WITH OTHER TRADES.
- 8. REFER TO EQUIPMENT DRAWINGS FOR MECHANICAL CHARACTERISTICS (SIZE, LOCATION, ETC.) OF MECHANICAL EQUIPMENT, UNLESS OTHERWISE INDICATED. COORDINATE INSTALLATION AND LOCATION OF ALL EQUIPMENT WITH MECHANICAL CONTRACTOR. VERIFY ALL FUSE RATINGS, WIRE SIZES AND DISCONNECT SIZES PRIOR TO INSTALLATION.

#### MATERIALS AND METHODS

- PROVIDE RACEWAY AND WIRING ROUTED CONCEALED WITHIN BUILDING STRUCTURE WHERE POSSIBLE. WHERE RACEWAY CANNOT BE CONCEALED, IT SHALL BE INSTALLED PER PROJECT MANAGER'S DIRECTION. ALL CONDUIT SHALL BE INSTALLED IN NEAT SYMMETRICAL LINES HORIZONTAL OR PERPENDICULAR TO BUILDING COLUMNS AND ROOF LINES. CONDUITS SHALL BE GROUPED ON COMMON SUPPORTS WHEREVER POSSIBLE.
- 2. EXPOSED CONDUIT ROUTING: CONDUITS MAY BE ROUTED EXPOSED IN MECHANICAL AND ELECTRICAL ROOMS ONLY. EXPOSED CONDUITS SHALL BE SECURED A MINIMUM OF 6" ABOVE FLOOR.
- 3. OUTDOOR EXPOSED CONDUIT ROUTING: CONDUITS ROUTED ON ROOF OR EXPOSED TO WEATHER SHALL BE GRC, PVC OR LIQUID-TIGHT FLEX. PROVIDE WATER-TIGHT CONNECTIONS AND FITTINGS.

MINIMUM IS TO BE 1/2". FLEXIBLE CONDUIT AND FLEXIBLE CABLE IS PERMISSIBLE

ACCESS CLEARANCES CAN BE MET. 5. CONNECTIONS: PROVIDE GRS, METALLIC FLEX, OR LIQUIDTITE FLEX CONDUITS

4. CLEARANCES: VERIFY PHYSICAL DIMENSIONS OF EQUIPMENT TO ENSURE THAT

FOR CONNECTIONS TO MOTORS OR MOTORIZED EQUIPMENT. 6. WIRING: PROVIDE MINIMUM #12 AWG WIRE SIZE. IF CONDUIT IS TO BE USED 7. WIRING: PROVIDE MINIMUM #10 AWG COPPER CONDUCTOR SIZE IN 120V BRANCH CIRCUIT RUNS OVER 75' IN LENGTH.

#### SITE ELECTRICAL

GENERAL NOTES

- 1. TRENCHING: COORDINATE ALL TRENCHING WORK WITH OTHER UTILITY LOCATIONS AND DRAINAGE TRENCHES.
- 2. UNDERGROUND CONDUITS: PROVIDE PVC, SCHEDULE 40, 3/4" MINIMUM. PROVIDE GRC CONDUIT TRANSITION ELBOW WHEN TURNING UP TO ABOVE GRADE.
- CONDITIONS WHICH MAY AFFECT BID. ANY ITEMS NOT FULLY UNDERSTOOD SHALL 3. DIRECT-BURIED CONDUITS: CONDUIT FOR BRANCH CIRCUITS OUTSIDE BUILDINGS NOT BENEATH DRIVEWAYS OR PARKING AREAS SHALL BE DIRECTLY BURIED WITHOUT CONCRETE ENCASEMENT. THE DEPTH TO THE TOP OF BURIED CONDUITS SHALL BE 36". PROVIDE MARKER TAPE 12" BELOW GRADE.
  - 4. BELOW SLAB: CONDUIT ROUTED BELOW ON-GRADE FLOOR SLABS SHALL BE INSTALLED PRIOR TO FLOOR SLAB POUR. ROUTE CONDUITS BELOW SLAB AS STRAIGHT AS POSSIBLE TO MINIMIZE BENDS.
  - 5. ALL CONDUITS PENETRATING THE BUILDING ENVELOPE BELOW GRADE SHALL FOLLOW WATERPROOFING REQUIREMENTS IN THE ARCHITECTURAL DRAWINGS.

#### <u>NEUTRALS</u>

- 1. AT CONTRACTORS OPTION, NEUTRALS MAY BE SHARED ON COMBINED HOMERUNS UNLESS THE CIRCUIT HAS A GFCI BREAKER, AN ISOLATED GROUND, OR IS FROM A PANEL WITH TVSS PROTECTION. ANY NEUTRAL DOWNSTREAM FROM A DIMMER SHALL BE DEDICATED TO THE DIMMED LOAD.
- NEUTRAL WIRES SHOWN FOR TWO AND THREE POLE MECHANICAL AND KITCHEN EQUIPMENT MAY BE OMITTED UPON VERIFICATION THAT THEY ARE NOT REQUIRED EITHER FOR OPERATION OR CONTROL CIRCUITS PER MANUFACTURER'S SPECIFICATIONS.

#### <u>LIGHTING</u>

PROVIDE LIGHT FIXTURES WITH PROPER FITTING FLANGES, MOUNTING SUPPORTS, AND ACCESSORY ITEMS, UL LISTED FOR CONDITIONS OF USE.

#### LOW VOLTAGE LIGHTING

- 1. PROVIDE LOW VOLTAGE TRANSFORMERS IN NEARBY ACCESSIBLE CEILING SPACE.
- 2. PROVIDE LOW VOLTAGE CONDUCTORS SIZED PER MANUFACTURER'S GUIDELINES MINIMIZE VOLTAGE DROP.

#### LIGHTING CONTROL

- THE MAXIMUM LIGHTING POWER THAT MAY BE CONTROLLED FROM A SINGLE SWITCH OR AUTOMATIC CONTROL SHALL NOT EXCEED THAT WHICH IS PROVIDED BY A TWENTY AMPERE CIRCUIT LOADED TO NOT MORE THAN EIGHTY PERCENT. A MASTER CONTROL MAY BE INSTALLED PROVIDED THE INDIVIDUAL SWITCHES RETAIN THEIR CAPABILITY TO FUNCTION INDEPENDENTLY.
- 2. EMERGENCY FIXTURES: EMERGENCY BATTERY/CHARGER SHALL BE CONNECTED TO AN UNSWITCHED LEG OF THE DESIGNATED CIRCUIT.

INCLUDED IN SET

### DRAWING INDEX

| DWG                              | DESCRIPTION                                                                                                                                                                        | DD SET<br>04/10/23             | PERMIT REVIE<br>SET<br>10/06/23 | PERMIT SET<br>02/15/24    | PROGRESS SI<br>08/16/2024 | OWNER<br>CHANGES/PER<br>CORRECTION<br>08/30/24 |  |                   |  |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------|---------------------------|---------------------------|------------------------------------------------|--|-------------------|--|
| E0.00                            | LEGEND, GENERAL NOTES, DRAWING INDEX                                                                                                                                               | X                              | X                               | X                         | X                         | X                                              |  |                   |  |
| E0.01                            | PROJECT NOTES                                                                                                                                                                      | X                              | X                               | X                         | X                         | X                                              |  |                   |  |
|                                  |                                                                                                                                                                                    |                                |                                 |                           |                           |                                                |  |                   |  |
| E0.10                            | SITE POWER PLAN - EAST                                                                                                                                                             | X                              | Χ                               | Χ                         | X                         | Χ                                              |  |                   |  |
| E0.11                            | SITE LIGHTING PLAN — EAST                                                                                                                                                          | X                              | X                               | X                         | <u> </u>                  | X                                              |  |                   |  |
| E1.00<br>E1.01<br>E1.02<br>E1.50 | LIGHTING & PHOTOMETRIC PLAN—BASEMENT LIGHTING & PHOTOMETRIC PLAN—1ST FLOOR LIGHTING PLAN — 2ND & 3RD FLOOR LIGHTING NOTES & LUMINAIRE SCHEDULES  POWER PLAN — BASEMENT & 1ST FLOOR | X<br>X<br>X<br>X               | X                               | X                         | X<br>X<br>X<br>X          | X<br>X<br>X<br>X                               |  |                   |  |
| E3.01<br>E3.02                   | POWER PLAN — 2ND & 3RD FLOOR<br>POWER PLAN — ROOF                                                                                                                                  | $+\stackrel{\checkmark}{\vee}$ | $\frac{1}{\lambda}$             | $\frac{\lambda}{\lambda}$ | $\frac{1}{\sqrt{2}}$      | X                                              |  | $\rightarrow$     |  |
|                                  | I OTILIN I LAIN MOOI                                                                                                                                                               |                                |                                 |                           |                           | /\                                             |  |                   |  |
| E5.00                            | UNIT PLANS NOTES                                                                                                                                                                   | X                              | X                               | X                         | X                         | X                                              |  |                   |  |
| E5.01<br>E5.02                   | UNIT PLANS & SCHEDULES UNIT PLANS & SCHEDULES                                                                                                                                      | X                              | X                               | X                         | X                         | X                                              |  | $\longrightarrow$ |  |
| 25.02                            | ONT TEAMS & SCHEDOLES                                                                                                                                                              | <del>  ^</del>                 |                                 |                           | <del>  ^</del>            |                                                |  | $\rightarrow$     |  |
| E6.00                            | ONE-LINE DIAGRAM & NOTES                                                                                                                                                           | X                              | X                               | X                         | X                         | X                                              |  |                   |  |
| E6.00                            | PANELS SCHEDULES                                                                                                                                                                   | X                              | Χ                               | Χ                         | X                         | X                                              |  |                   |  |

## OR SUBSTITUTIONS & REVISIONS

- ALS FOR SUBSTITUTIONS OR REVISIONS FOR REVIEW AND APPROVAL PRIOR TO DOING WORK.
- SCHEDULED BY MANUFACTURER'S NAME AND CATALOG DESIGNATIONS, THE SHED DATA AND/OR SPECIFICATION FOR THAT ITEM ARE CONSIDERED PART OF
  - REVISING MEP PLANS SHALL BE ADDRESSED IN THE COST ANALYSIS OF THE
- NATE WITH ENGINEER AND DETERMINE ASSOCIATED DESIGN AND PERMITTING ALL BE RESPONSIBLE FOR OTHER COSTS ASSOCIATED WITH UNFORESEEN ISSUES TUTIONS OR REVISIONS.

#### CON MEETING NOTES

4 HOURS 4 HOURS 4 HOURS ELECTRICAL SPRINKLER 2 HOURS GENERAL CONTRACTOR ALL SESSIONS Separate Electrical Permit is required with the Washington State Department of Labor & Industries.

https://lni.wa.gov/licensing-permits/electrical/ electrical-permits-fees-and-inspections

or call for Licensing Information: 1-800-647-0982

08/30/2

19401 40TH AVE W., SUITE 302 LYNNWOOD, WA 98036 206-364-3343 TEL REI PROJECT NO.: 1219-001

ROBISON

ENGINEERING, INC

08/30/24

SHEET TITLE: LEGEND, GENERAL NOTES, DRAWING INDEX

## **APPLICABLE CODES**

THE FOLLOWING PROJECT DESIGN IS BASED ON THE FOLLOWING CODES:

-2020 NATIONAL ELECTRICAL CODE (NEC)

-2018 WASHINGTON STATE ENERGY CODE (WSEC)

-2018 INTERNATIONAL BUILDING CODE (IBC) & WASHINGTON STATE AMENDMENTS -2018 INTERNATIONAL FIRE CODE (IFC) & WASHINGTON STATE AMENDMENTS

-2018 INTERNATIONAL MECHANICAL CODE (IMC) & WASHINGTON STATE AMENDMENTS

-2018 UNIFORM PLUMBING CODE (UPC) & WASHINGTON STATE AMENDMENTS

## VIBRATION AND ACOUSTICAL ISOLATION

THE FOLLOWING MEASURES SHALL BE TAKEN TO MINIMIZE VIBRATION AND NOISE TRANSMISSION FROM MECHANICAL AND ELECTRICAL EQUIPMENT TO THE INTERIOR SPACES:

TRANSFORMERS:

A) PROVIDE FLEXIBLE CONDUIT OR MC CABLE AT EQUIPMENT CONNECTION

B) MOUNT TRANSFORMERS ON NEOPRENE GROMMET ISOLATORS.

#### SUBDUCT EXHAUST FANS:

A) PROVIDE FLEXIBLE CONDUIT OR MC CABLE AT EQUIPMENT CONNECTION.

ENCLOSED GARAGE EXHAUST FANS:

A) PROVIDE FLEXIBLE CONDUIT OR MC CABLE AT EQUIPMENT CONNECTION.

#### ROOFTOP AIR HANDLERS:

A) PROVIDE FLEXIBLE CONDUIT OR MC CABLE AT EQUIPMENT CONNECTION.

#### FAN COIL UNITS:

A) PROVIDE FLEXIBLE CONDUIT OR MC CABLE AT EQUIPMENT CONNECTION.

#### ROOF MOUNTED CONDENSERS:

A) PROVIDE FLEXIBLE CONDUIT OR MC CABLE AT EQUIPMENT CONNECTION.

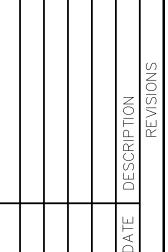
FLEXIBLE CONDUIT OR MC CABLE CONNECTIONS FOR VIBRATION ISOLATION SHALL BE A MINIMUM OF TWO FEET LONG.

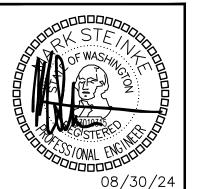
## TEMPERATURE LIMITATION OF CONDUCTORS

ADDITIONAL ADJUSTMENTS FOR CONDUITS EXPOSED TO SUNLIGHT ON OR ABOVE ROOFTOPS SHALL BE FACTORED PER NEC TABLE 310.15(B)(2)(C)

## CONDUIT & CONDUCTOR FIRE RATING

- 1. CONDUIT FOR ELECTRICAL CONDUCTORS BY THE FACP OR FIRE ALARM SYSTEM SHALL BE IN 2 HOUR RATED ENCLOSURES OR ENCASED IN 2-INCH OF CONCRETE AND RATED CABLE ASSEMBLIES, OR BE CONDUCTORS IN 2 HOUR-RATED RACEWAYS PER NFPA 72.
- 2. THE EQUIPMENT AND CONTROL WIRING SHALL BE ENCLOSED BY FIRE BARRIERS CONSTRUCTED IN ACCORDANCE WITH IBC SECTION 707 OR HORIZONTAL ASSEMBLIES CONSTRUCTED IN ACCORDANCE WITH IBC SECTION 711, OR USING A 2 HR RATED CABLE SYSTEM OR ENCLOSED WITHIN 2" OF CONCRETE.
- 3. FIRE ALARM WIRING SHALL COMPLY WITH IBC 907.6.1. WIRING SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 70.
- 4. RACEWAYS FOR THE DEDICATED BRANCH CIRCUIT(S) REQUIRED FOR PRIMARY POWER TO THE FIRE ALARM CONTROL PANEL (FACP) SHALL BE IN 2 HOUR RATED ENCLOSURES OR ENCASED IN 2—INCH OF CONCRETE AND RATED CABLE ASSEMBLIES, OR BE CONDUCTORS IN 2 HOUR—RATED RACEWAYS PER IBC 907 AND NFPA 72 SECTION 10.6.11.3.1.3







DESIGNED: MHS
CHECKED: PSR
APPROVED: JAY

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CHECK

APARIMENIS BUILL
STH ST SE PUYALLU

9401 40TH AVE W. SUITE 302 YNNWOOD, WA 98036 HONE:(206)364-3343

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TE: 08/30/24

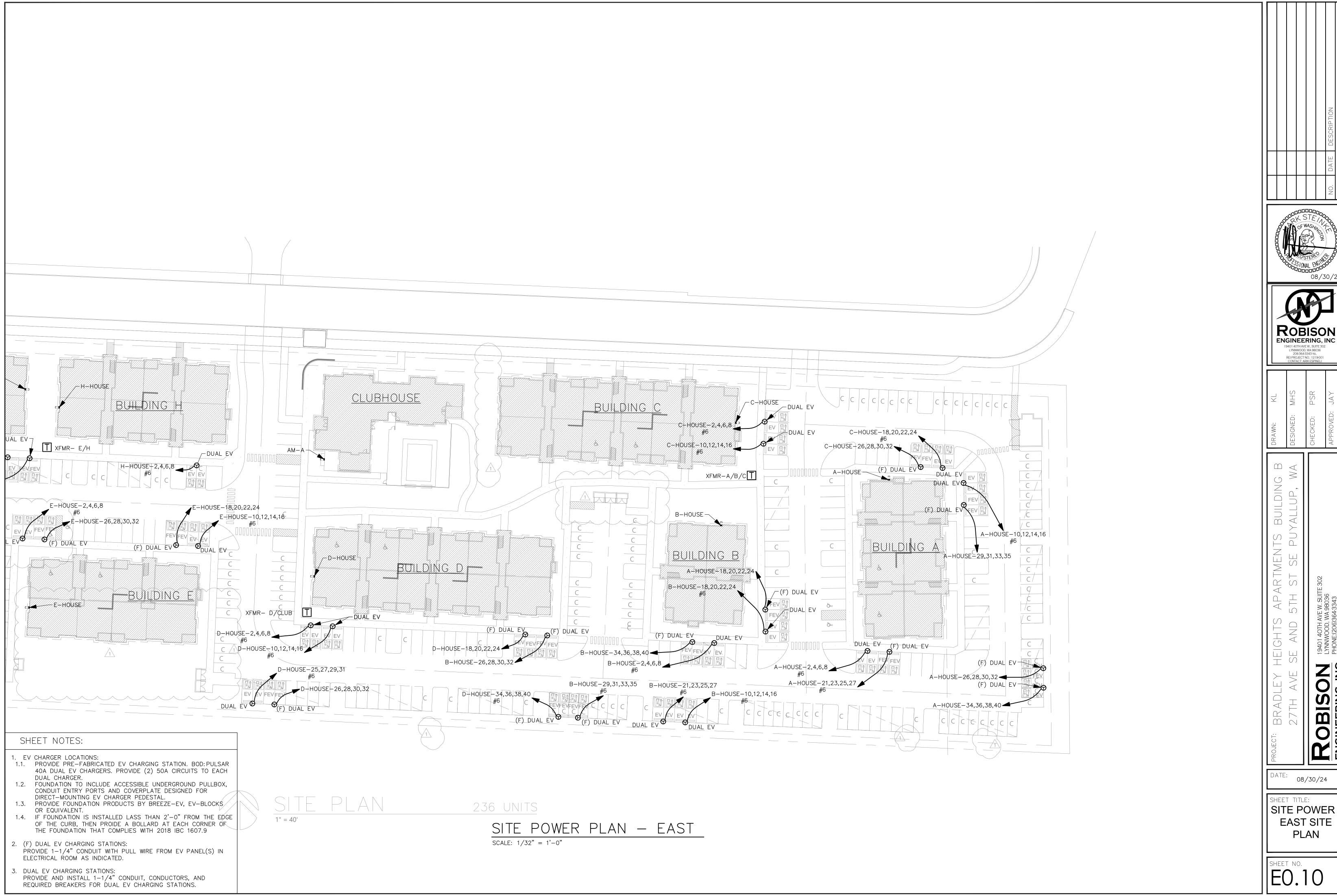
SHEET TITLE:

LEGEND, GENERAL

NOTES, DRAWING

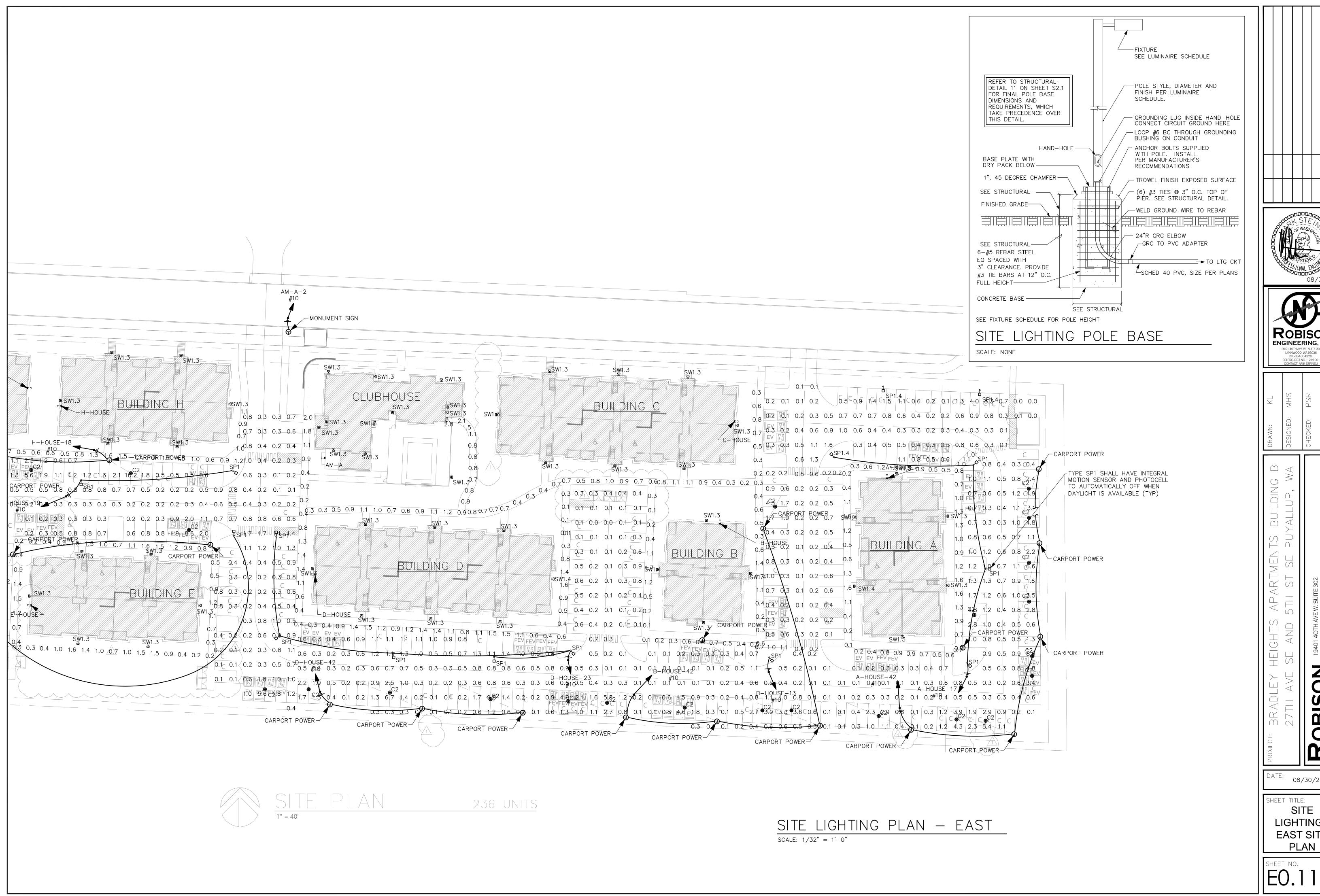
INDEX

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08/30/24

COPYRIGHT 2023, ROBISON ENGINEERING, INC.
KLYSAK F:\777-006 DHI MEADOWDALE APARTMENTS\DWG\FLAT E0.10 SITE PLAN.DWG 05-09-2023 10:47

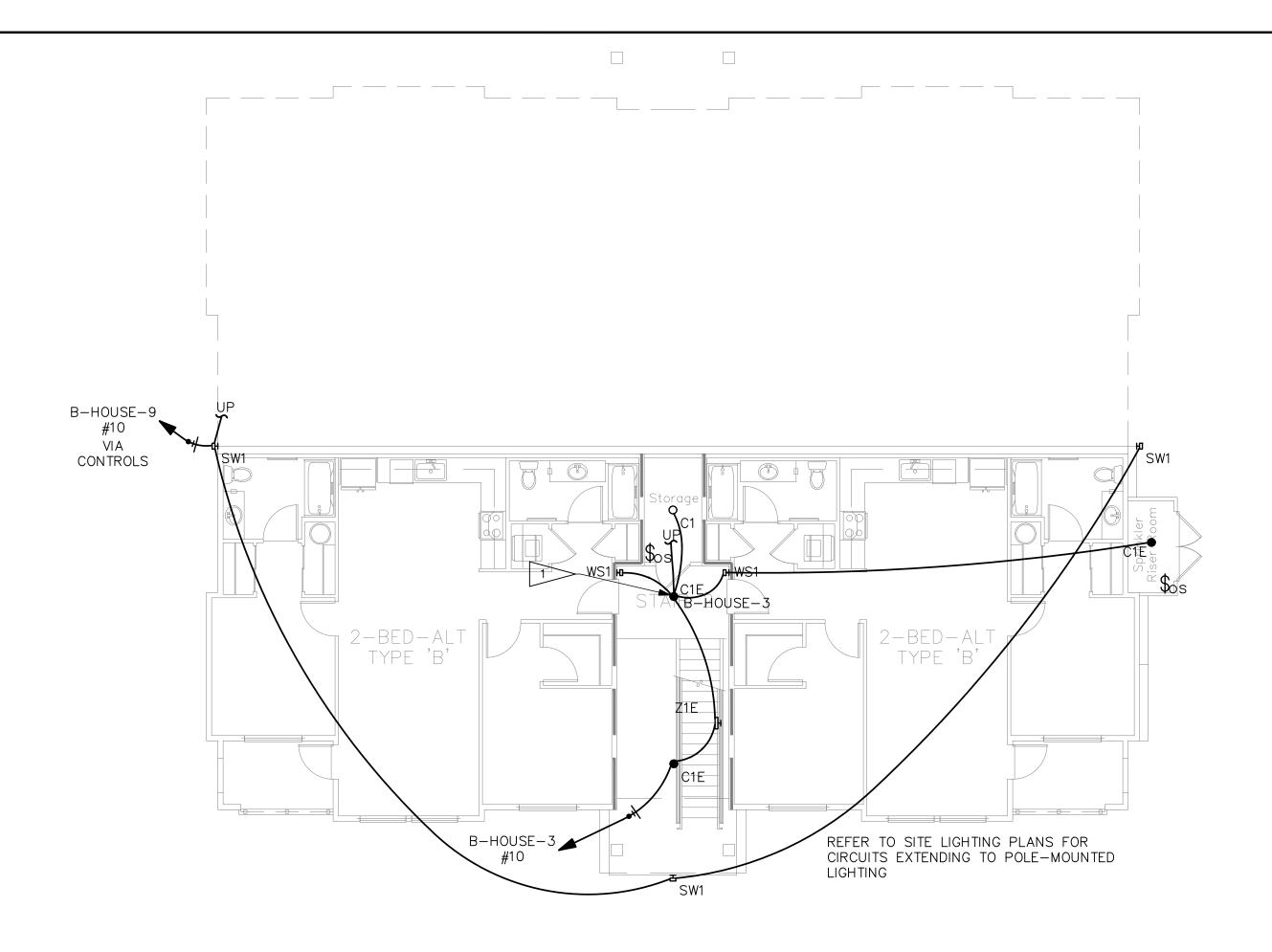


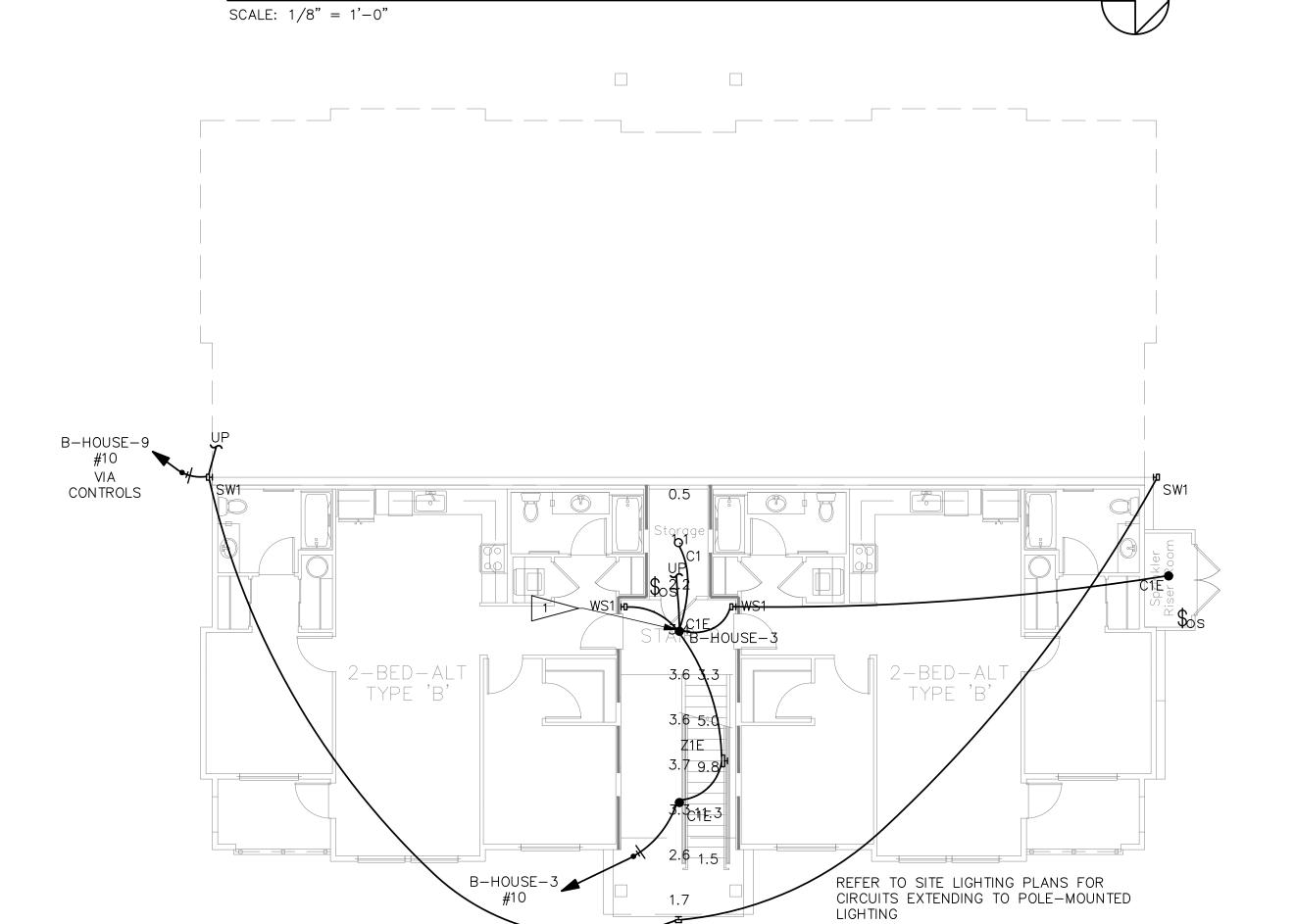
ROBISON **ENGINEERING, INC** LYNNWOOD, WA 98036 206-364-3343 TEL REI PROJECT NO.: 1219-001

08/30/24

SITE LIGHTING -EAST SITE

SHEET NO. |E0.1|





PHOTOMETRIC PLAN - BASEMENT

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

LIGHTING PLAN - BASEMENT

#### GENERAL NOTES

- 1. EMERGENCY EGRESS LIGHTING: EMERGENCY LUMINAIRES WITH 90 MINUTE BATTERY BACKUP.
- REFER TO SERIES E500 DRAWINGS FOR TYPICAL UNIT PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
- 3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

#### #> FLAG NOTES <#

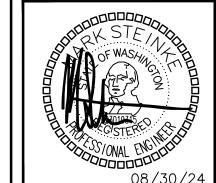
- 1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL
- 2. EXIT SIGNS: PROVIDE UNSWITCHED HOT.

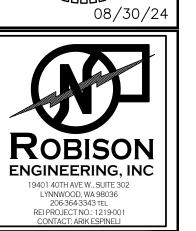
| Egress Pho<br>Schedule  | tometric |
|-------------------------|----------|
| AVERAGE<br>FOOT-CANDLES | 3.95     |
| MAXIMUM                 | 6.5      |

| AVERAGE<br>FOOT-CANDLES        | 3.95 |
|--------------------------------|------|
| MAXIMUM<br>FOOT-CANDLES        | 6.5  |
| MINIMUM<br>FOOT-CANDLES        | 1.6  |
| MINIMUM TO MAXIMUM<br>FC RATIO | 0.25 |
| MAXIMUM TO MINIMUM<br>FC RATIO | 4.03 |
| AVERAGE TO MINIMUM<br>FC RATIO | 2.43 |
|                                |      |

## Egress Stairs Photometric Schedule

| rnoiomeiri                     | c screaue |
|--------------------------------|-----------|
| AVERAGE<br>FOOT-CANDLES        | 6.18      |
| MAXIMUM<br>FOOT-CANDLES        | 11.3      |
| MINIMUM<br>FOOT-CANDLES        | 1.5       |
| MINIMUM TO MAXIMUM<br>FC RATIO | 0.13      |
| MAXIMUM TO MINIMUM<br>FC RATIO | 7.74      |
| AVERAGE TO MINIMUM<br>FC RATIO | 4.22      |





| M<br>M<br>M<br>M | PSR      | JAY       |
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| DESIGNED:        | CHECKED: | APPROVED: |

UYALLUP, WA

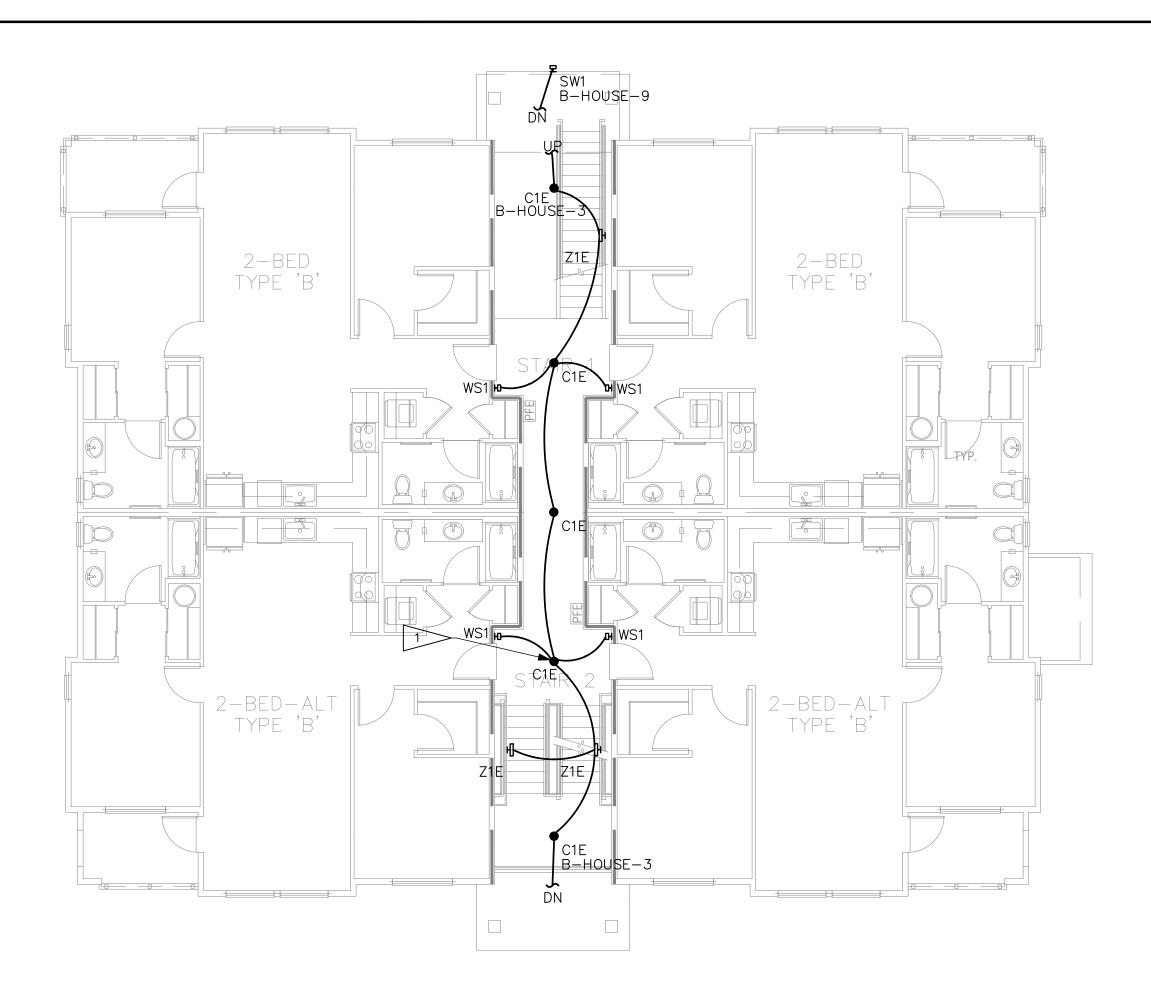
401 40TH AVE W. SUITE 302 NNWOOD, WA 98036 HONE:(206)364-3343

OBISON 19401

ATE: 08/30/24

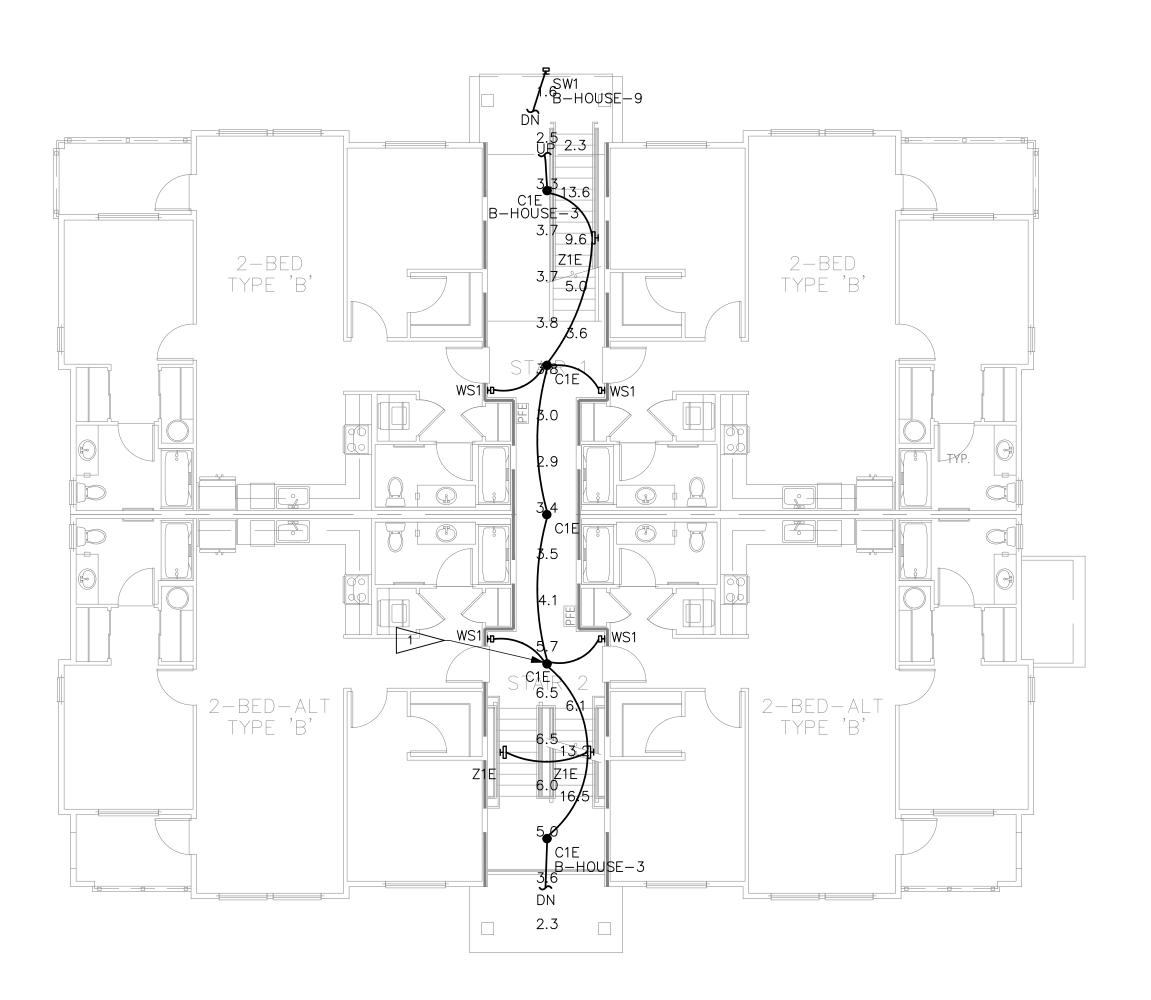
SHEET TITLE:
LIGHTING &
PHOTOMETRIC
PLAN BASEMENT

SHEET NO.



## LIGHTING PLAN — 1ST FLOOR SCALE: 1/8" = 1'-0"





PHOTOMETRIC PLAN — 1ST FLOOR

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



#### GENERAL NOTES

- 1. EMERGENCY EGRESS LIGHTING: EMERGENCY LUMINAIRES WITH 90 MINUTE BATTERY BACKUP.
- REFER TO SERIES E500 DRAWINGS FOR TYPICAL UNIT PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
- 3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

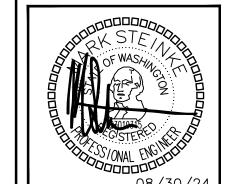
#### #> FLAG NOTES <#

- 1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL
- 2. EXIT SIGNS: PROVIDE UNSWITCHED HOT.

| Egress Pho<br>Schedule         | tometric |
|--------------------------------|----------|
| AVERAGE<br>FOOT-CANDLES        | 3.95     |
| MAXIMUM<br>FOOT-CANDLES        | 6.5      |
| MINIMUM<br>FOOT-CANDLES        | 1.6      |
| MINIMUM TO MAXIMUM<br>FC RATIO | 0.25     |
| MAXIMUM TO MINIMUM<br>FC RATIO | 4.03     |
| AVERAGE TO MINIMUM<br>FC RATIO | 2.43     |

| Egress Sta<br>Photometri       | irs #1<br>c Schedule |
|--------------------------------|----------------------|
| AVERAGE<br>FOOT-CANDLES        | 11.93                |
| MAXIMUM<br>FOOT-CANDLES        | 16.5                 |
| MINIMUM<br>FOOT-CANDLES        | 6.1                  |
| MINIMUM TO MAXIMUM<br>FC RATIO | 0.37                 |
| MAXIMUM TO MINIMUM<br>FC RATIO | 2.71                 |
| AVERAGE TO MINIMUM<br>FC RATIO | 1.96                 |

| Egress Sta<br>Photometri       | irs #2<br>c Schedule |
|--------------------------------|----------------------|
| AVERAGE<br>FOOT-CANDLES        | 6.81                 |
| MAXIMUM<br>FOOT-CANDLES        | 13.6                 |
| MINIMUM<br>FOOT-CANDLES        | 2.3                  |
| MINIMUM TO MAXIMUM FC RATIO    | 0.17                 |
| MAXIMUM TO MINIMUM<br>FC RATIO | 5.84                 |
| AVERAGE TO MINIMUM<br>FC RATIO | 2.94                 |





| DESIGNED:<br>CHECKED:<br>APPROVEI | DESIGNED: | MHS       | PSR      | ): JAY      |  |
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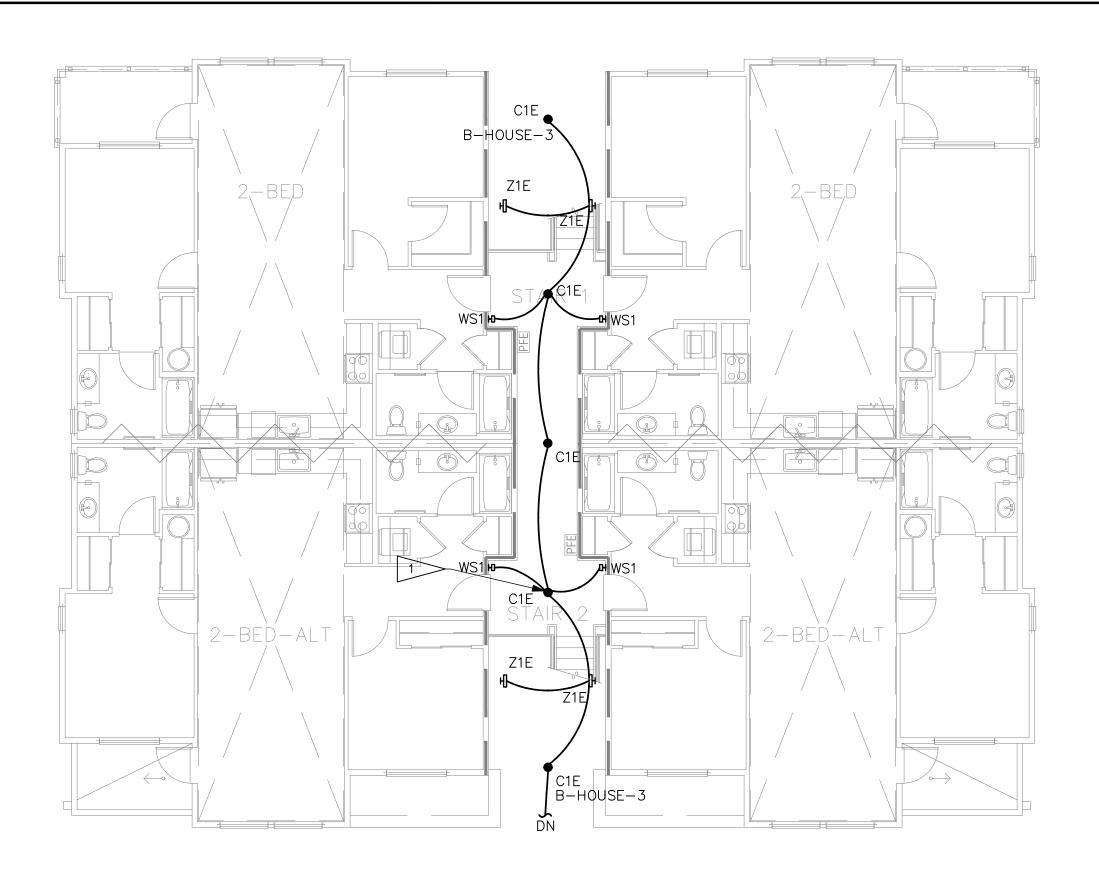
SE AND 5TH ST SE PUYALLUP
19401 40TH AVE W. SUITE 302
LYNNWOOD, WA 98036

Robison

ATE: 08/30/24

SHEET TITLE:
LIGHTING &
PHOTOMETRIC
PLAN - 1ST
FLOOR

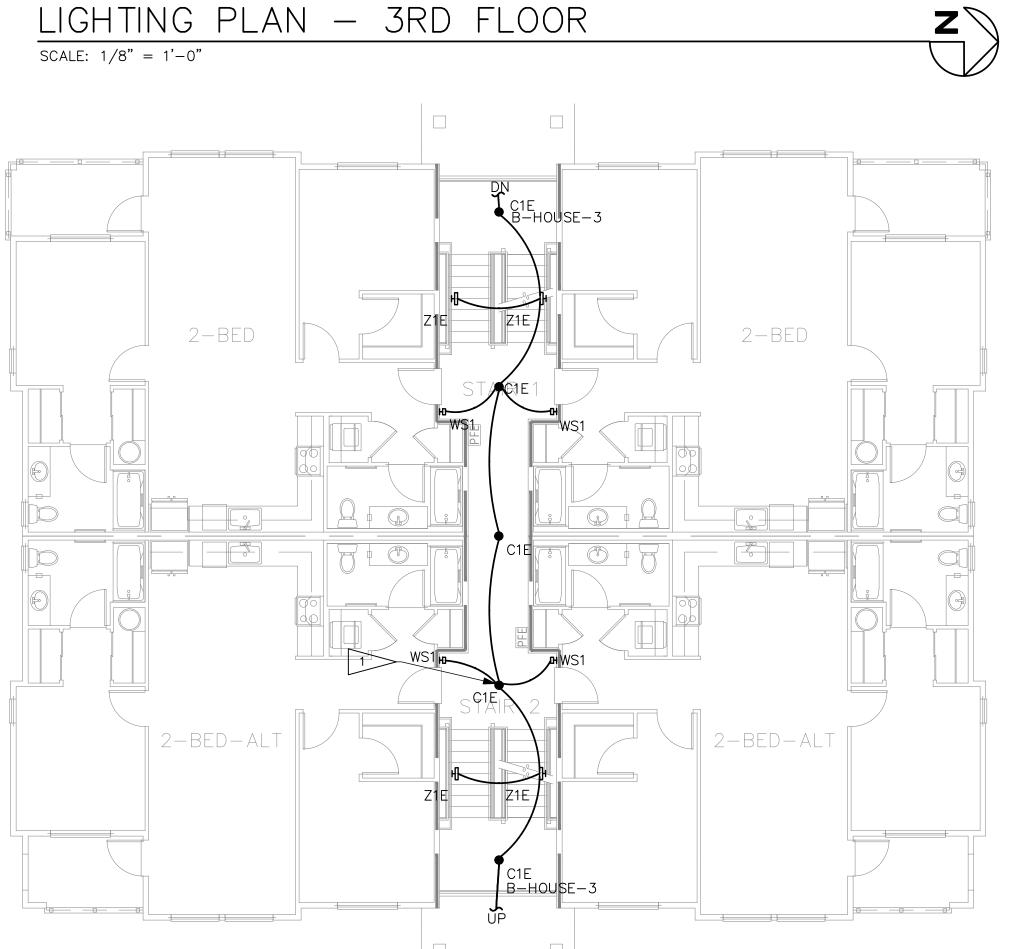
SHEET NO.



RIII DINO R

LIGHTING PLAN - 2ND FLOOR

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



GENERAL NOTES

- 1. EMERGENCY EGRESS LIGHTING: EMERGENCY LUMINAIRES WITH 90 MINUTE BATTERY BACKUP.
- REFER TO SERIES E500 DRAWINGS FOR TYPICAL UNIT PLANS SHOWING ELECTRICAL AND LIGHTING LAYOUT.
- 3. SEE SHEET E1.50 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

#### #> FLAG NOTES <#

- 1. CIRCUIT STAIRS VERTICALLY. LUMINAIRE(S) IN STAIRWELL
- 2. EXIT SIGNS: PROVIDE UNSWITCHED HOT.

|  |  | DESCRIPTION |   |
|--|--|-------------|---|
|  |  | DATE        |   |
|  |  | NO.         |   |
|  |  |             | _ |





| S H M     | T<br>X   | JAY       |
|-----------|----------|-----------|
| DESIGNED: | CHECKED: | APPROVED: |

AFARIMENIS BUILDING STH ST SE PUYALLUP, W, W.Suite 302

19401 4OTH AVE W. SUITE 30; LYNNWOOD, WA 98036

ROBISON ENGINEERING, INC

DATE: 08/30/2

LIGHTING
PLAN - 2ND &
3RD FLOOR

SHEET NO. E1.02

| EXTE    | EXTERIOR LUMINAIRE SCHEDULE |                     |                                                                   |                                                  |          |                      |            |             |         |
|---------|-----------------------------|---------------------|-------------------------------------------------------------------|--------------------------------------------------|----------|----------------------|------------|-------------|---------|
| CALLOUT | SYMBOL                      | MOUNTING            | DESCRIPTION                                                       | MODEL                                            | VOLTAGE  | TYPE                 | CRI / CCT  | LAMPING     | WATTAGE |
| SP1     | <b>○</b>                    | 16' POLE            | POLE LIGHT — PARKING & DRIVE AISLE<br>— COMFORT OPTICS — B2 U0 G2 | GARDCO: P20 C A02 830 T1S AR1 120<br>BL30-MW PCB | MULTIPLE | INTEGRAL<br>CONTROLS | 80 / 3000K | (1) 36W LED | 36      |
| SW1     | ю                           | SURFACE —<br>12'AFF | WALL SCONCE - AREA LIGHT - B1 U0<br>G1                            | GARDCO: GWM A06 830 T3M 120 MW30 PCB             | 120      | INTEGRAL<br>CONTROLS | 80 / 3000K | (1) 16W LED | 16      |

CONTRACTOR TO FURNISH AND INSTALL ALL FIXTURES.

LUMINAIRE SCHEDULE IS BOD ONLY. CONTRACTOR TO SUBMIT FIXTURE MODEL OR EQUIVALENT. CONTRACTOR TO COORDINATE FIXTURE FINISHES WITH ARCHITECT/OWNER. 3. FIXTURE CATALOG NUMBERS DO NOT NECESSARILY DENOTE SPECIFIC MOUNTING ACCESSORIES. CONTRACTOR TO PROVIDE ALL NECESSARY ACCESSORIES TO SUCCESSFULLY COMPLETE THE

4. 'BUG' RATING ON EXTERIOR FIXTURES INDICATES 'BACKLIGHT', 'UPLIGHT', AND 'GLARE' AS STANDARDS IN CLASSIFYING OUTDOOR LIGHT FIXTURES.

| CALLOUT | SYMBOL    | MOUNTING | DESCRIPTION                                                                               | MODEL                                            | VOLTAGE  | TYPE             | CRI / CCT          | LAMPING          | WATTAGE |
|---------|-----------|----------|-------------------------------------------------------------------------------------------|--------------------------------------------------|----------|------------------|--------------------|------------------|---------|
| B1      |           | SURFACE  | 4' NARROW WRAP — BOH                                                                      | DAY-BRITE CFI: FSW440L835 UNV DIM                | 120      | 0-10V<br>DIMMING | 80 / 3000K         | (1) 31.4W<br>LED | 31.4    |
| C1E     | •         | SURFACE  | 4" SURFACE DOWNLIGHT                                                                      | DMF: DRDH N JO 70S EM / DRD5S 4 R<br>07 9 30 EM  | 120      | 0-10V<br>DIMMING | 90 / 3000K         | (1) 9W LED       | 9       |
| D1      | ٥         | RECESSED | RECESSED DOWNLIGHT — SLOPED CEILING                                                       | DMF: DRD4M 10 9 30 FL X 0 / DRDH N<br>JS 1004    | 120      | 0-10V<br>DIMMING | 90 / 3000K         | (1) 12W LED      | 12      |
| P1      | ٥         | PENDANT  | STEM MOUNT DOWNLIGHT — SLOPED<br>CEILING — 4' STEM                                        | DMF: DCR T4 S X A 30 FL 0 00 30 XX O 00 [FINISH] | 120      | 0-10V<br>DIMMING | 90 / 3000K         | (1) 40W LED      | 40      |
| WS1     | ю         | SURFACE  | WALL SCONCE - EM BATTERY BACKUP                                                           | TBD                                              | 120      | TBD DIMMING      | TBD / TBD          | (1) 5W LED       | 5       |
| X1      | ⊗         | SURFACE  | EXIT SIGN — EMERGENCY BATTERY<br>BACKUP — HATCH INDICATES LIT FACE                        | LSI: EMS WB SERIES (OR EQUAL)                    | MULTIPLE | EM               | EM / EM            | (1) 5W EM        | 5       |
| X2      | <b>\$</b> | SURFACE  | COMBO EXIT SIGN                                                                           | LSI: CEC (OR EQUAL)                              | MULTIPLE | EM               | EM / EM            | (1) 5W EM        | 5       |
| X3      |           | SURFACE  | EMERGENCY LIGHT — EMERGENCY<br>BATTERY BACKUP<br>DAMP LOCATION RATED — MAX 35'<br>SPACING | LITHONIA: ELM2LF (OR EQUAL)                      | 120      | ЕМ               | EM / EM            | (1) 5W EM        | 5       |
| X4      | H         | WALL     | EXTERIOR EMERGENCY LIGHT —<br>EMERGENCY ON ONLY — MAX SPACING<br>35'                      | NORA LIGHTING: NE-902LED                         | 120      | ЕМ               | 35' MAX<br>SPACING | (1) 5W LED       | 5       |
| Z1E     | н         | WALL     | WALL PACK                                                                                 | LITHONIA: WPX1 LED P1 30K MVOLT                  | 120      | EM               | 70 / 3000K         | (1) 11W LED      | 11      |

CONTRACTOR TO FURNISH AND INSTALL ALL FIXTURES.

LUMINAIRE SCHEDULE IS BOD ONLY. CONTRACTOR TO SUBMIT FIXTURE MODEL OR EQUIVALENT. CONTRACTOR TO COORDINATE FIXTURE FINISHES WITH ARCHITECT/OWNER. FIXTURE CATALOG NUMBERS DO NOT NECESSARILY DENOTE SPECIFIC MOUNTING ACCESSORIES. CONTRACTOR TO PROVIDE ALL NECESSARY ACCESSORIES TO SUCCESSFULLY COMPLETE THE INSTALLATION.

|                        | LIGHTI                                                              | NG CONTROLS LEGEND                                                                                                                                                                                                                                                                  |
|------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SYMBOL                 | CONTROL TYPE                                                        | CONTROL FUNCTION                                                                                                                                                                                                                                                                    |
| \$ \$ \$               | TOGGLE SWITCH                                                       | MANUAL ON/OFF LIGHTING CONTROL. SUBSCRIPT INDICATES WHICH FIXTURES ARE TO BE CONTROLLED BY WHICH SWITCH (WSEC C405.2.3). SUBSCRIPT 'k' INDICATES TAMPER RESISTANT KEYED SWITCH FOR USE BY AUTHORIZED PERSONNEL ONLY.                                                                |
| <b>D Ö</b>             | DIMMER SWITCH                                                       | MANUAL MULTI-LEVEL LIGHTING CONTROL. SWITCH SHALL ALSO HAVE MANUAL ON/OFF FUNCTIONALITY. SUBSCRIPT INDICATES WHICH FIXTURES ARE TO BE CONTROLLED BY WHICH DIMMER. (C405.2.3)                                                                                                        |
| vs vs<br>os os<br>\$ D | TOGGLE/DIMMER<br>SWITCH WITH<br>OCCUPANCY SENSOR                    | SWITCHES LABELED 'os' OR 'vs' SHALL TURN OFF ALL CONNECTED LUMINAIRES WITHIN 20 MINUTES OF SPACE BEING VACANT. (C405.2.1.1)                                                                                                                                                         |
| CS-01                  | CONTROL STATION;<br>SEE LIGHTING<br>CONTROL ZONE TABLE<br>ON PLANS. | MANUAL LOCAL LIGHTING CONTROL (C405.2.1.1). CONTROL STATION SHALL HAVE CAPACITY TO CONTROL MULTIPLE ZONES AND MULTIPLE SCENES AS NEEDED. SUBSCRIPT CORRESPONDS TO 'LIGHTING CONTROLS' TABLE ON PLANS.                                                                               |
| <u>(</u> S)            | SURFACE MOUNTED<br>OCCUPANCY SENSOR                                 | AUTOMATIC LIGHTING CONTROL SHALL TURN OFF ALL CONNECTED LUMINAIRES WITHIN 20 MINUTES OF SPACE BEING VACANT. (C404.2.1.1)                                                                                                                                                            |
| ax<br>PS               | MULTIZONE<br>PHOTOSENSOR                                            | AUTOMATIC LIGHTING CONTROL SHALL AUTOMATICALLY ADJUST THE LIGHT OUTPUT OF ALL CONNECTED LUMINAIRES BASED ON THE DAYLIGHT LEVEL IN THE PRIMARY AND SECONDARY ZONES (C405.2.4). SUBSCRIPT INDICATES WHICH FIXTURES ARE TO BE CONTROLLED BY ZONE; 'x' INDICATES MULTIPLE ZONE CONTROL. |

#### GENERAL LIGHTING NOTES

- LIGHTING CONTROLS SHALL BE INSTALLED WHICH MEET ALL REQUIREMENTS OF LOCAL ENERGY CODES.
- 2. EMERGENCY LIGHT FIXTURES: IN ADDITION TO SWITCH-LEG, PROVIDE UNSWITCHED HOT TO SERVE INTERNAL BATTERY AND CHARGER.
- 3. LOCATIONS OF OCCUPANCY SENSORS, PHOTO SENSORS, DIMMERS, AND SWITCHES ARE DIAGRAMMATIC. CONTRACTOR TO COORDINATE QUANTITIES AND OPTIMAL LOCATIONS WITH LIGHTING CONTROL MANUFACTURER AND ARCH/OWNER.
- AUTOMATIC LIGHTING SHUT-OFF CONTROLS SHALL BE PROVIDED BY LOCAL OCCUPANCY SENSORS UNLESS OTHERWISE NOTED. PUBLIC SPACES ARE ACTIVE 24/7 AND THEREFORE EXEMPT FROM AUTOMATIC LIGHTING SHUT-OFF REQUIREMENTS FOR SECURITY. (WSEC C405.2)
- 5. DAYLIGHT ZONES ARE SHOWN ON PLANS AS DEFINED BY WASHINGTON STATE ENERGY CODE (WSEC) C405.2.4.2. SIDELIGHT DAYLIGHT ZONES ARE REFERRED TO AS 'PRIMARY' AND 'SECONDARY' ON PLANS AND DENOTED BY DASHED LINES.
- 6. FOR CUSTOM FF&E FIXTURES, IT IS THE MANUFACTURER'S RESPONSIBILITY TO FURNISH PRODUCTS WHICH ARE COMPLIANT WITH ALL REQUIREMENTS OF LOCAL ENERGY CODES, AS WELL AS MATCH THE ELECTRICAL SPECIFICATIONS PROVIDED IN THE LUMINAIRE SCHEDULES. PROVIDE SUBMITTAL SHOP DRAWINGS WITHIN 30 DAYS OF RECEIVING FIXTURE ORDER. SUBMITTALS SHALL CLEARLY INDICATE LAMPING AND MAXIMUM WATTAGE RATING OF LAMP SOCKETS. NON-COMPLIANT FIXTURES REJECTED BY ELECTRICAL INSPECTOR SHALL BE RETURNED TO THE MANUFACTURER FOR REWORKING AND/OR RE-LABELING.
- 7. ALL FIXTURES SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
- 8. CONTRACTOR SHALL BE RESPONSIBLE TO ORDER ALL NECESSARY HARDWARE, ELECTRICAL CABLE, TIMERS, TRANSFORMERS, ETC., AS REQUIRED FOR COMPLETION OF INSTALLATION OF A FULLY FUNCTIONING SYSTEM.
- 9. CONTRACTOR SHALL BE RESPONSIBLE FOR EQUIPPING ALL FIXTURES WITH THE EXACT LAMPS SPECIFIED IN THE FIXTURE SCHEDULE.
- 10. WHERE FIXTURES REQUIRE REMOTE TRANSFORMERS OR BALLASTS, THE CONTRACTOR SHALL DETERMINE LOCATIONS AS REQUIRED FOR EVEN LOAD DISTRIBUTION, SERVICE ACCESS, AND VENTILATION.
- 11. THE CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL ENGINEER FOR EXACT LOCATIONS OF TIMERS AND/OR PHOTO CELLS, IF ANY.
- 12. WHERE APPLICABLE, THE CONTRACTOR SHALL AIM AND ADJUST LIGHTING FIXTURES AS DIRECTED BY THE LIGHTING DESIGNER UPON COMPLETION OF THE INSTALLATION.

#### SPECIAL NOTE TO THE CONTRACTOR:

FIXTURE SUBMITTALS THAT DO NOT INCLUDE LAMP SPECIFICATIONS WILL BE CONSIDERED INCOMPLETE AND WILL NOT BE REVIEWED.

#### LIGHTING CONTROL SYSTEM REQUIREMENTS

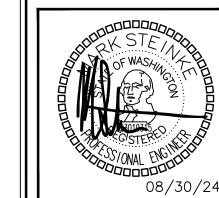
- . CONTRACTOR TO PROVIDE A FULLY OPERATIONAL LIGHTING CONTROL SYSTEM.
- 2. CONTRACTOR SHALL VERIFY THE COMPATIBILITY OF DIMMING AND CONTROL MODULES WITH FIXTURE TYPES PRIOR TO INSTALLATION.
- 3. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH A LIGHTING CONTROLS VENDOR TO OBTAIN LIGHTING CONTROL SYSTEM PACKAGE COMPLETE WITH DEVICES, WIRING DIAGRAMS, ANNOTATED PLANS INDICATING WHICH DEVICE TO BE USED IN EACH LOCATION, CONNECTION REQUIREMENTS, SET UP INSTRUCTIONS, COMMISSIONING AND CHECK-OUT FOLLOWING COMPLETION. PROVIDE ALL LOW VOLTAGE WIRING AS REQUIRED FOR CONTROL DEVICE INTERCONNECTIONS.
- 4. INSTALLER QUALIFICATIONS: TECHNICIAN INSTALLING AND WIRING THE LIGHTING CONTROL SYSTEM SHALL HAVE INSTALLED THIS SAME SYSTEM AT LEAST ONCE PREVIOUSLY. TECHNICIAN SHALL HAVE RECEIVED TRAINING BY FACTORY REPRESENTATIVE ON THE SYSTEM BEING INSTALLED.
- 5. PROVIDE LIGHTING CONTROL SYSTEM TO PERFORM THE FUNCTIONS DESCRIBED BELOW:
- 5.1. LIGHTING CONTROL SCHEDULE: PROVIDE SEPARATE SWITCHING AND DIMMING CONTROL FOR LIGHTING ZONES AS INDICATED.

#### 5.2. AUTOMATIC LIGHTING CONTROLS:

- 5.2.1. UNLESS OTHERWISE NOTED ON PLANS, OCCUPANCY SENSORS SHALL AUTOMATICALLY TURN OFF ALL CONNECTED LIGHTING WITHIN 20 MINUTES OF SPACE BEING UNOCCUPIED. OCCUPANCY SENSORS SHALL EITHER BE MANUAL ON OR SHALL BE CONTROLLED TO AUTOMATICALLY TURN THE LIGHTING ON TO NOT MORE THAN 50 PERCENT POWER EXCEPT WHERE MANUAL ON WOULD ENDANGER THE SAFETY OR SECURITY OF THE ROOM OR BUILDING OCCUPANTS. (C405.2.1.1)
- 5.2.2. MULTI-ZONE PHOTO-SENSORS SHALL PROVIDE SEPARATE CONTROL FOR LÚMINAIRES IN EACH TYPE OF DAYLIGHT ZONE. (C405.2.4.1)
- 5.2.3. EXTERIOR LIGHTING CONTROLS SHALL AUTOMATICALLY TURN OFF ALL EXTERIOR LIGHTING AS A FUNCTION OF AVAILABLE DAYLIGHT, BUILDING FACADE AND LANDSCAPE LIGHTING SHALL HAVE CONTROLS THAT AUTOMATICALLY SHUT OFF THE LIGHTING FOR A MINIMUM OF 6 HOURS PER NIGHT OR NOT LATER THAN ONE HOUR AFTER BUSINESS CLOSING TO NOT EARLIER THAN ONE HOUR BEFORE BUSINESS OPENING, WHICHEVER IS LESS. OTHER LIGHTING SHALL HAVE CONTROLS CONFIGURED TO AUTOMATICALLY REDUCE THE CONNECTED LIGHTING POWER BY AT LEAST 30 PERCENT FROM NO LATER THAN 12 MIDNIGHT TO 6 AM OR FROM ON HOUR AFTER BUSINESS CLOSING TO ONE HOUR BEFORE BUSINESS OPENING OR DURING ANY PERIOD WHEN NO ACTIVITY HAS BEEN DETECTED FOR A TIME OF NO LONGER THAN 15 MINUTES. (C405.2.6)
- 6. MEANS OF EGRESS ILLUMINATION: AT ANY TIME THE BUILDING IS OCCUPIED, THE MEANS OF EGRESS SHALL BE ILLUMINATED AT AN INTENSITY OF NOT LESS THAN 1 FOOTCANDLE AT FLOOR LEVEL. (IBC 1008.2.1)
- 7. DURING EMERGENCY CONDITIONS EMERGENCY LIGHTING CIRCUITS SHALL BYPASS ALL LIGHTING CONTROLS IN ORDER TO ENERGIZE ALL CONNECTED LUMINAIRES AT FULL CAPACITY. PROVIDE UL924 RELAYS AS REQUIRED TO BYPASS AREA CONTROLS.
- 7.1. EMERGENCY PATHWAY EGRESS LIGHTING: ILLUMINATION PROVIDED ALONG THE EGRESS PATH AT FLOOR LEVEL SHALL AVERAGE AT LEAST 1 FOOT CANDLE. (IBC 1008.3.5)
- 7.2. EMERGENCY LIGHTING SHALL BE SUPPLIED BY: ELECTRICAL CONTRACTOR

#### EXIT SIGN NOTES

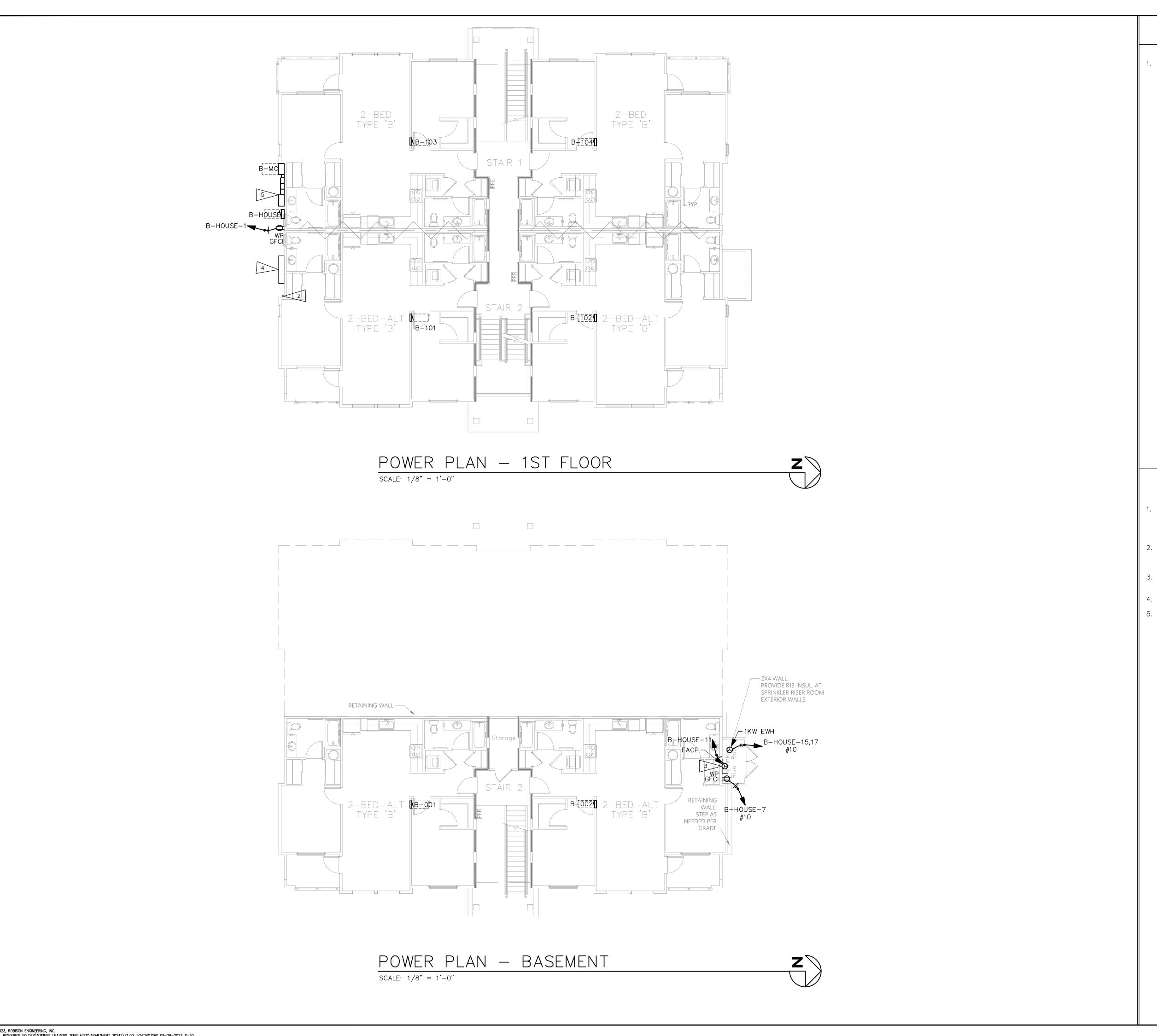
DURING CONSTRUCTION UPON COMPLETION OF A TYPICAL FLOOR FRAMING AND BEFORE WALL COVER, ELECTRICAL CONTRACTOR SHALL WALK THE EGRESS PATHS WITH THE LOCAL INSPECTOR (AHJ) TO CONFIRM THAT ALL THE EXIT SIGNS ARE LOCATED PER THE AHJ'S SATISFACTION AND IDENTIFY ANY ADDITIONAL EXIT SIGNS THAT THE AHJ WISHES TO BE INSTALLED (IBC 1013.1). CONTRACTOR SHALL PROVIDE UP TO 10% ADDITIONAL EXIT SIGNS AT NO ADDITIONAL COST.





08/30/24

HEET TITLE: LIGHTING NOTES & LUMINAIRE



SHEET NOTES:

WIRING METHOD FOR APARTMENT FEEDERS MUST BE SUITABLE FOR THE TYPE OF CONSTRUCTION. SEE NEC 334.10



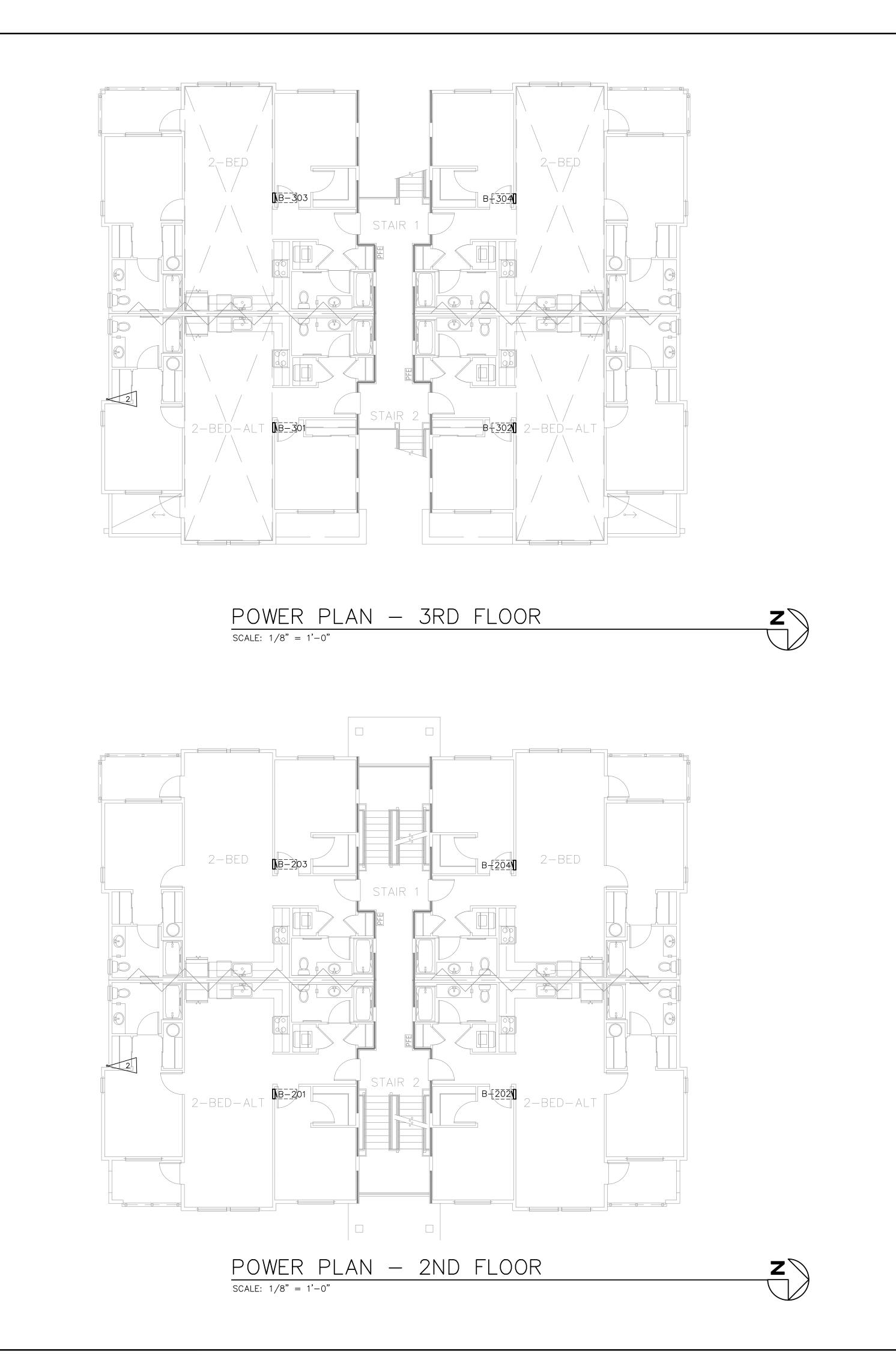


FLAG NOTES: # (NOT EVERY FLAG IS USED ON EVERY SHEET)

- FUTURE EV CHARGING STATIONS: PROVIDE 1-1/4" CONDUIT WITH PULL WIRE FROM EV PANEL(S) IN MAIN ELECTRICAL ROOM. TERMINATE CONDUIT IN A J-BOX ON WALL FOR FUTURE USE.
- 2. PROVIDE 2½"C WITH PULL STRING WEATHER CAP TO ROOF FOR FUTURE SOLAR PATHWAY. COORDINATE RISER LOCATION WITH ARCHITECT.
- 3. LOCATION OF FIRE ALARM PANEL TO BE COORDINATED BY FIRE ALARM CONTRACTOR WITH FIRE AUTHORITIES.
- 4. SPACE FOR FUTURE SOLAR EQUIPMENT.
- 5. PROVIDE LEVEL ACCESS SURFACE IN FRONT OF ELECTRICAL EQUIPMENT.

08/30/24

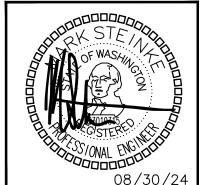
POWER PLAN - BASEMENT & 1ST FLOOR

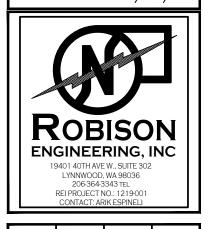


SHEET NOTES:

1. WIRING METHOD FOR APARTMENT FEEDERS MUST BE SUITABLE FOR THE TYPE OF CONSTRUCTION. SEE NEC 334.10

NO. DATE DESCRIPTION





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(NOT EVERY FLAG IS USED ON EVERY SHEET)

- 1. FUTURE EV CHARGING STATIONS:
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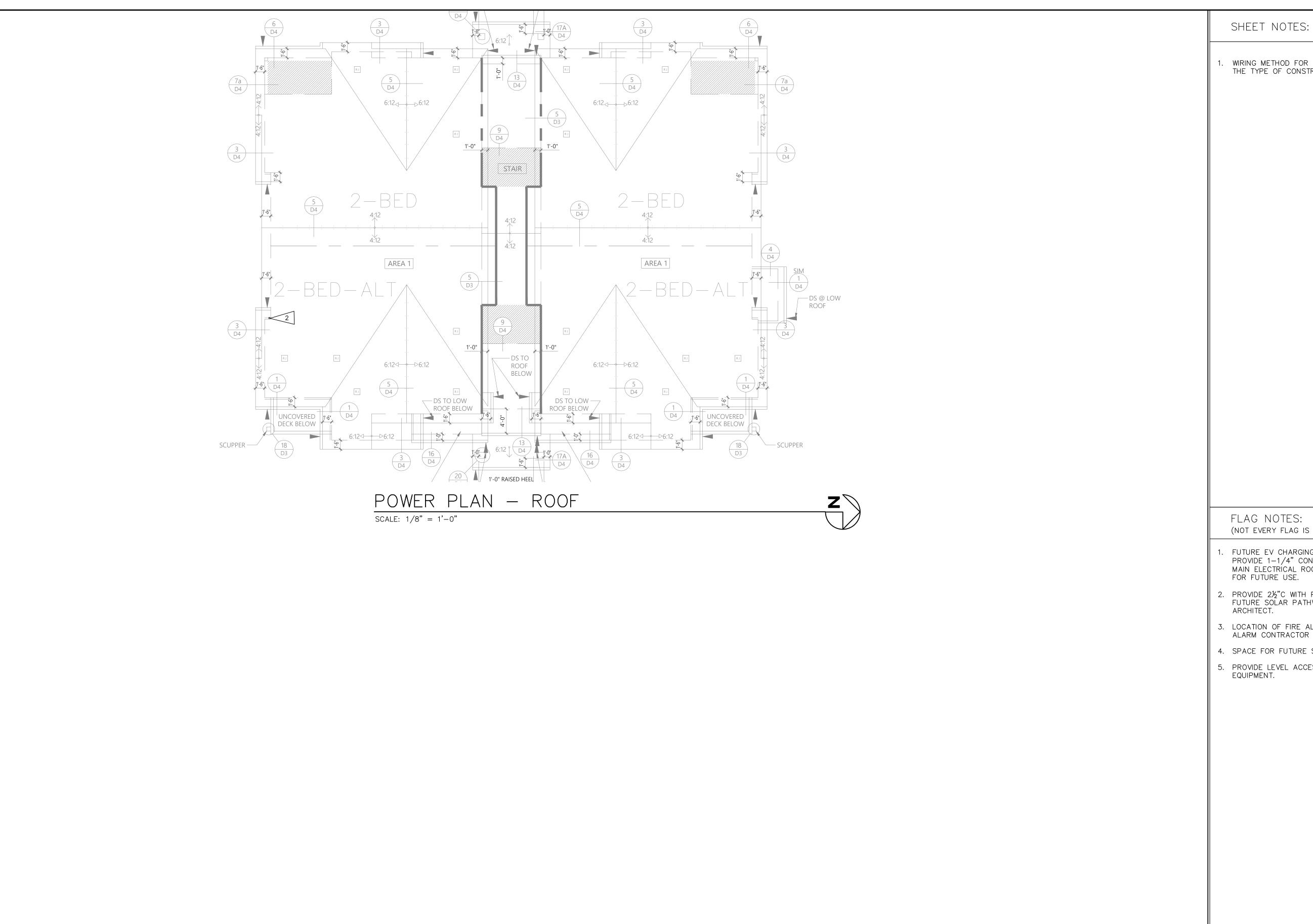
GHTS APARTMENTS BUILDIN AND 5TH ST SE PUYALLUP, 40140TH AVEW. SUITE 302 INNWOOD, WA 98036

SOBISON 1940

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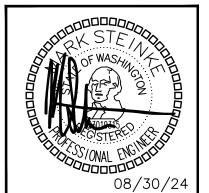
POWER PLAN
- 2ND & 3RD
FLOOR

E3.01



WIRING METHOD FOR APARTMENT FEEDERS MUST BE SUITABLE FOR THE TYPE OF CONSTRUCTION. SEE NEC 334.10

|  |               |      |     | DESCRIPTION | REVISIONS |
|--|---------------|------|-----|-------------|-----------|
|  |               |      |     | DATE        |           |
|  |               |      |     | NO.         |           |
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FLAG NOTES: # (NOT EVERY FLAG IS USED ON EVERY SHEET)

- 1. FUTURE EV CHARGING STATIONS:
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- 3. LOCATION OF FIRE ALARM PANEL TO BE COORDINATED BY FIRE ALARM CONTRACTOR WITH FIRE AUTHORITIES.
- 4. SPACE FOR FUTURE SOLAR EQUIPMENT.
- 5. PROVIDE LEVEL ACCESS SURFACE IN FRONT OF ELECTRICAL

08/30/24

**POWER PLAN** - ROOF

| UNIT LU | JMINAIRE | SCHEDU   | JLE                      |                          |         |               |                      |         |       |
|---------|----------|----------|--------------------------|--------------------------|---------|---------------|----------------------|---------|-------|
| CALLOUT | SYMBOL   | MOUNTING | DESCRIPTION              | MODEL                    | VOLTAGE | TYPE          | LAMPING              | WATTAGE | NOTES |
| U1      | 0        | CEILING  | 4" DOWNLIGHT             | DMF: DRD5S-4-R-10-9-30-0 | 120     | 0-10V DIMMING | (1) 12W LED<br>3000K | 12      |       |
| U2      | 0        | CEILING  | 4" DOWNLIGHT WET RATED   | DMF: DRD5S-4-S-10-9-30-0 | 120     | 0-10V DIMMING | (1) 12W LED<br>3000K | 12      |       |
| U3      | H        | WALL     | 24" VANITY LIGHT         | MAXIM - 52102            | 120     | ELV DIMMING   | (1) 16W LED<br>3000K | 16      |       |
| U4      | Ю        | WALL     | SLIM BALCONY LIGHT       | MAXIM - 26106BK          | 120     | NON DIMMING   | (1) 10W LED<br>3000K | 10      |       |
| U5      | 0        | SURFACE  | 6" FLUSH MOUNT DOWNLIGHT | MAXIM — 57413WTWT        | 120     | 0-10V DIMMING | (1) 11W LED<br>3000K | 11      |       |

## ∠BATHROOM EXHAUST FAN (BEF-1) 2-SPEED FAN WITH BUILT IN HUMIDITY SENSOR. / DWELLING UNIT ELECTRICAL PANEL ON/OFF SWITCH-\_120V/1P POWER POWERS BEF ONLY TO BE TURNED OFF IN POOR AIR QUALITY CONDITIONS. LOCATED NEAR LIGHT SWITCH IN BATHROOM DWELLING UNIT VENTILATION WIRING DIAGRAM DETAIL

|           | El          | ECTRIC HEA | ATERS   |            |                 |
|-----------|-------------|------------|---------|------------|-----------------|
| EQUIP NO. | SERVICE     | MOUNTING/  | HEATING | ELECTRICAL | BASIS OF DESIGN |
| EQUIP NO. | SERVICE     | DISCHARGÉ  | KW      | VOLTAGE    | DASIS OF DESIGN |
| EWH-1     | BEDROOM     | WALL       | 1       | 208V/1P    | (1)             |
| EWH-2     | LIVING ROOM | WALL       | 1.5     | 208V/1P    | (1)             |

(1) BROAN, CADET OR EQUIVALENT.

(2) PROVIDE REMOTE THERMOSTAT.

NOTES:

### ACCESSIBILITY NOTES:

- ALL SWITCHES AND CONTROLS 15" MIN; 48" MAX TO CONTROL.
- GENERAL OUTLETS MIN 18" AFF.
- ALL SWITCHES/CONTROLS ABOVE COUNTERTOPS 48" MAX.
- ELECTRICAL SUB-PANELS IN UNITS MUST COMPLY WITH ABOVE REACH RANGES.
- SWITCHES FOR EXHAUST HOODS AND GARBAGE DISPOSALS MUST COMPLY WITH ABOVE REACH RANGES. INSTALL SWITCHES ON FACE OF CABINETS IF REQUIRED TO COMPLY.

#### APARTMENT NOTES:

- 1. ALL ELECTRICAL WORK SHALL COMPLY WITH ALL LOCAL AND NATIONAL CODES.
- 2. DEVICE BOXES ON OPPOSITE SIDES OF DEMISING WALLS SHALL BE IN SEPARATE STUD BAYS. PROVIDE BACKING EQUIVALENT TO LOWRY'S OUTLET BOX PADS. CONDUIT FROM ONE UNIT SHALL NOT PASS THROUGH STUDS OF A SHARED WALL(DOUBLE STUDS) FROM AN ADJACENT UNIT(BRIDGING).
- 3. PROVIDE ARC-FAULT PROTECTION, TAMPER PROOF AND GFCI RECEPTACLES AS REQUIRED BY CODE AND LOCAL AHJ. ARC-FAULT PROTECTION MUST BE PROVIDED FOR CIRCUITS IN THE AREAS LISTED IN NEC 210.12(A).
- 4. PROVIDE SUFFICIENT DUPLEX RECEPTACLES TO MEET NEC 210.52.
- 5. THERMOSTATS SHALL NOT INTERFERE WITH DOOR SWINGS.
- 6. ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS FOR KITCHEN APPLIANCES. COORDINATE ALL J-BOX LOCATIONS WITH APPLIANCE INSTALLATION INSTRUCTIONS PRIOR TO ROUGH-IN.
- 7. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL CORD AND PLUG ASSEMBLY FOR EACH DISPOSER.
- 8. PROVIDE A DEDICATED 20 AMP CIRCUIT TO EACH UNIT BATHROOM RECEPTACLE. BATHROOM LIGHTS, FAN TO BE ON SAME CIRCUIT PER 210.11(C)(3) EXCEPTION.
- 9. HOME RUNS AND LOOPS CONNECTING LIGHT FIXTURES, WIRING DEVICES, AND HVAC EQUIPMENT ON PLANS INDICATE CIRCUITING SCHEME. SEE TYPICAL PANEL SCHEDULES FOR ACTUAL CIRCUIT NUMBERS FOR TYPICAL APARTMENT.
- 10. LIGHTS WITHIN 3' HORIZONTAL OF SHOWER OR TUB TO BE WET LOCATION RATED AND HAVE FULLY ENCLOSED TRIMS. PROVIDE GFCI PROTECTION IF THE LUMINAIRE INSTALLATION MANUAL STATES IT IS REQUIRED.
- 11. PROVIDE SMOKE DETECTORS AND CO ALARMS AS REQUIRED. DETECTORS AND ALARMS TO BE HARDWIRED AND PROVIDED WITH BATTERY BACKUP.
- 12. ELECTRICAL CONTRACTOR SHALL INSTALL RECEPTACLES AND TV. DATA/PHONE OUTLETS UNDER COMMON COVER PLATE WHERE POSSIBLE. PROVIDE AND INSTALL DIVIDERS AS REQUIRED FOR CABLE / POWER SEPARATION.
- 13. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND LAYOUTS OF ALL DEVICES.
- 14. ALL WALL PENETRATIONS SHALL BE CAULKED WITH APPROVED MATERIAL TO MAINTAIN THE FIRE RATING OF ALL WALLS AND FLOORS.
- 15. ALL CONDUIT SHALL BE INSTALLED IN NEAT SYMMETRICAL LINES HORIZONTAL OR PERPENDICULAR TO BUILDING COLUMNS AND ROOF LINES. CONDUITS SHALL BE GROUPED ON COMMON SUPPORTS WHEREVER POSSIBLE.
- 16. REFERENCE MECHANICAL DRAWINGS FOR EXACT LOCATION OF ALL MECHANICAL EQUIPMENT.
- 17. ELECTRICAL CONTRACTOR SHALL VERIFY ALL FUSE RATING WIRE SIZES AND DISCONNECT SIZES WITH EQUIPMENT SERVED ON THE JOB PRIOR TO INSTALLATION.
- 18. SEE ARCHITECTURAL DRAWINGS AND ELEVATIONS FOR ADDITIONAL DETAILS AND CASEWORK DIMENSIONS.
- 19. DEVICE LOCATIONS IN 1ST DWELLING/RESIDENT UNIT SHALL BE REVIEWED AND APPROVED BY OWNER PRIOR TO ROUGH-IN OF REMAINING UNITS
- 20. CONFIRM FINAL LOCATION OF HEATERS AND THERMOSTATS IN FIELD PRIOR TO ROUGH-IN

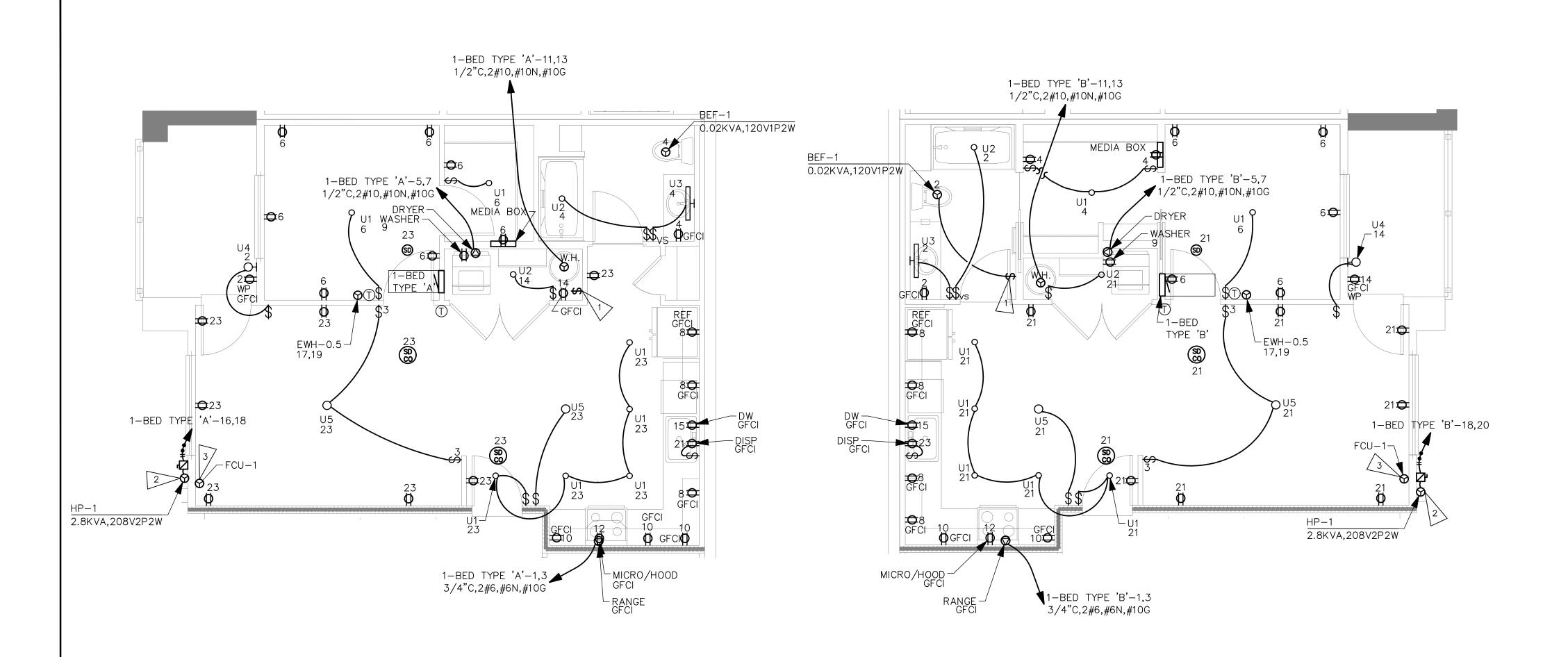
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| MHS       | PSR      | JAY         |
| DESIGNED: | CHECKED: | APPROVED:   |
|           |          |             |

08/30/24

**UNIT PLANS** NOTES



UNIT TYPICALS

1-BED-INT-2 TYPE 'A'

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

| 1                  | -B                               | ED          | TYPE                        | 'A'                                  |             |                     |                                       |                            |           |                      |                                                  |                |
|--------------------|----------------------------------|-------------|-----------------------------|--------------------------------------|-------------|---------------------|---------------------------------------|----------------------------|-----------|----------------------|--------------------------------------------------|----------------|
| MC<br>FE           | DOM<br>DUNTING<br>D FROM<br>DTE  | FLUSH       |                             | VOLTS 208/<br>BUS AMPS<br>NEUTRAL 10 | 12          | 5                   | 2P 3W                                 |                            |           | ١                    | AIC <b>22,00</b><br>Main Bkr<br>Lugs <b>sta</b>  | MLO            |
| CKT<br>#           | CKT<br>BKR                       | LOAD<br>KVA | CIRCUIT DESCRI              | PTION                                |             | CKT<br>#            | CKT<br>BKR                            | LOA<br>KVA                 |           | CIRC                 | UIT DESC                                         | RIPTION        |
| 1<br>3<br>5        | 50/2<br> <br>30/2                | 8<br>4.99   | RANGE<br>DRYER              |                                      | a<br>b<br>a | 2<br>4              | 20/1<br>20/1<br>20/1                  | 0.19<br>0.23<br>1.28       | <b>3</b>  | BEF-<br>LIGH         | TING, REC<br>-1, LIGHTII<br>TING, MED<br>EPTACLE | NG, RECEPTACLE |
| 7<br>9<br>11<br>13 | <br>  20/1<br>  30/2             | 1.5<br>4.4  | WASHER<br>WATER HEATER      |                                      | b           | 8<br>10<br>12<br>14 | 20/1<br>20/1<br>20/1<br>20/1          | 1.5<br>1.5<br>1.58<br>0.19 | }<br>}    | SMAI<br>SMAI<br>MICR | LL APPLIA<br>LL APPLIA<br>O/HOOD<br>TING, REC    | NCE            |
| 15<br>17<br>19     | 20/1<br>20/2                     | 1.2<br>0.5  | DISHWASHER WALL HEATER      |                                      | ь<br>Б      | 16<br>18<br>20      | 20/2<br> <br> -/1                     | 2.8                        |           | HP-<br>SPA           | 1<br>CE                                          |                |
| 21<br>23           | 20/1<br>20/1                     | 0.7<br>1.49 | DISPOSAL<br>LIGHTING, RECEP | TACLE, SDCO                          | 1 1         | 22<br>24            | -/1<br> -/1                           | 0                          | +         | SPA(                 |                                                  |                |
| OP.                | TIONAL D'                        | WELLING     | UNIT CALCULATION CONN KVA   | ON (NEC 220.8                        | 2)          |                     |                                       | _                          | COI<br>KV |                      | CALC<br>KVA                                      |                |
| SN                 | GHTING A<br>RECEPTAC<br>MALL—API | CLES        | 2.61<br>3                   | 871 SF<br>(3 VA/SF)                  |             | U                   | ERAL LOA<br>P TO 10<br>KVA            |                            | 10        |                      | 10                                               | (100%)         |
|                    | AUNDRY<br>PPLIANCE:              | S           | 1.5<br>8.47                 |                                      |             |                     | VER 10<br>KVA                         |                            | 13.6      |                      | 5.43                                             | (40%)          |
|                    | ECTRIC C                         |             | 8                           |                                      |             |                     | HEATING<br>OLING                      | OR                         |           |                      | 3.19                                             | (220.82(C)(4)) |
| TO                 | OTAL GEN                         | eral lo     | DAD <b>23.6</b>             |                                      |             | BAL<br>PH           | AL LOAD<br>ANCED LO<br>ASE A<br>ASE B | DAD                        |           |                      | 18.6<br>89.5 A<br>98.3%<br>102%                  |                |

#### UNIT TYPICALS

1-BED-INT-1 TYPE 'B'

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

| M(<br>FE                                        | OOM DUNTING TO FROM DIE                                             | FLUSH                                          | <u> TYP</u>                                                          | VOLTS 208,<br>BUS AMPS<br>NEUTRAL 10                       | 125    | 5         | 2P 3W                                 |                   |                                                                     | M                     | AIC <b>22,00</b> MAIN BKR UGS <b>STA</b> | MLO                       |
|-------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------|--------|-----------|---------------------------------------|-------------------|---------------------------------------------------------------------|-----------------------|------------------------------------------|---------------------------|
| CKT<br>#                                        | CKT<br>BKR                                                          | LOAD<br>KVA                                    | CIRCUIT DES                                                          | CRIPTION                                                   |        | CKT<br>#  | CKT<br>BKR                            | LO <i>A</i><br>KV |                                                                     | CIRCI                 | JIT DESC                                 | RIPTION                   |
| 1<br>3                                          | 50/2<br>                                                            | 8                                              | RANGE                                                                |                                                            | a<br>b | 2<br>4    | 20/1<br>20/1                          | 0.2               | 72                                                                  | LIGHT                 | TING, MED                                | NG, RECEPTACLE<br>IA BOX, |
| 5<br>7<br>9<br>11<br>13<br>15<br>17<br>19<br>21 | 30/2<br> <br>20/1<br>30/2<br> <br>20/1<br>20/2<br> <br>20/1<br>20/1 | 4.99<br>1.5<br>4.4<br>1.2<br>0.5<br>1.5<br>0.7 | DRYER WASHER WATER HEATI DISHWASHER WALL HEATEF LIGHTING, REDISPOSAL | a 14 20/1 0.19 LIGHTING, REC<br>b 16 20/1 0.38 RECEPTACLE, |        |           |                                       |                   | TING, REC<br>L APPLIA<br>L APPLIA<br>O/HOOD<br>TING, REC<br>PTACLE, | NCE<br>NCE<br>EPTACLE |                                          |                           |
| OP <sup>*</sup>                                 | TIONAL D                                                            | WELLING                                        | UNIT CALCUL<br>CON<br>KV                                             |                                                            | 32)    |           | l                                     |                   |                                                                     | NN<br>VA              | CALC<br>KVA                              |                           |
| SI                                              | GHTING A<br>RECEPTA<br>MALL—AP<br>AUNDRY                            | CLES<br>PLIANCE                                | 2.61<br>3<br>1.5                                                     | 871 SF<br>(3 VA/SF)                                        | (      | 0         | ERAL LOA<br>P TO 10<br>KVA<br>VER 10  | /D                | 10<br>13.6                                                          |                       | 10<br>5.43                               | (100%)<br>(40%)           |
| Α                                               | PPLIANCE<br>LECTRIC (                                               | :S                                             | 8.47<br>8                                                            |                                                            | 1      | MAX       | KVA<br>HEATING<br>OLING               | OR                |                                                                     | •                     | 3.19                                     | (220.82(C)(4)             |
| T                                               | OTAL GEN                                                            | IERAL LO                                       | DAD <b>23.6</b>                                                      |                                                            |        | 3AL<br>PH | AL LOAD<br>ANCED LO<br>ASE A<br>ASE B | DAD               |                                                                     |                       | 18.6<br>89.5 A<br>100%<br>99.7%          |                           |

#### **GENERAL NOTES:**

- 1. COORDINATE FINAL LOCATION OF THERMOSTATS, SWITCHES, RECEPTACLES, DATA, PHONE, LIGHT FIXTURES AND J-BOXES WITH ARCHITECTURAL ELEVATIONS AND INTERIOR DESIGN PLANS PRIOR TO ROUGH-IN.
- 2. ADA UNITS SHALL HAVE HOOD CONTROLS INSTALLED IN THE FACE OF THE LOWER CABINET WORK.
- 3. PROVIDE TAMPER RESISTANT RECEPTACLES PER NEC 406.12.
- 4. ALL UNITS: PROVIDE SWITCH CONTROLLING GARBAGE DISPOSAL TO BE LOCATED ABOVE BACKSPLASH NEXT TO SINK OR ON COUNTER. SEE ARCHITECTURE.
- 5. BATHROOM GFCI RECEPTACLES TO HAVE INTEGRAL NIGHTLIGHT.
- 6. RECESSED CEILING LIGHT IN BATHROOM SHALL BE LED RATED FOR WET LOCATIONS W/ SHATTER PROOF LENS.
- 7. ALL RECEPTACLES SHALL MEET REQUIREMENTS OF NEC ARTICLE 210.
- 8. PROVIDE TELEPHONE & CABLE T.V. MEDIA TERMINATION ENCLOSURE (MEDIA BOX): PROVIDE LEVITON COMPACT MEDIA ENCLOSURE OR EQUVALENT IN WALL WITH TOP NO HIGHTER THAN 60" AFF WITH 120V RECEPTACLE ADJACENT.
- 9. PROVIDE COMBINATION HARDWIRED 120VAC PHOTOELECTRIC SMOKE DETECTOR AND CARBON MONOXIDE DETECTOR WITH BATTERY-BACKUP
- •• DETECTOR SHALL BE MINIMUM 6'
  HORIZONTAL DISTANCE FROM PERMANENT
  COOKING APPLIANCE PER CFC 90.2.11.8.
- •• DETECTOR SHALL BE MINIMUM 3'
  HORIZONTAL DISTANCE FROM THE DOOR
  OF A BATHROOM THAT CONTAINS A
  BATHTUB OR SHOWER PER CFC 90.2.11.8.
- PROVIDE INTERCONNECTION WIRING SUCH THAT ACTUATION OF ONE ALARM WILL ACTIVATE ALL ALARMS IN THE DWELLING UNIT.
- OORDINATE WITH AHJ ON
  INTERCONNECTING EACH DWELLING UNIT
  INTO THE FIRE ALARM SYSTEM FOR THE
  BUILDING.
- OORDINATE WITH AHJ AS TO THE NUMBER AND LOCATION OF DEVICES PRIOR TO ROUGH—IN. DEVICES SHOWN ARE DIAGRAMMATIC.
- 10. DISHWASHER OUTLET SHALL BE ACCESSIBLE.
  RECEPTACLE SHALL BE LOCATED IN SPACE
  ADJACENT TO THE DISHWASHER.
- 11. PROVIDE 7-DAY PROGRAMMABLE THERMOSTAT FOR THE LIVING ROOM.

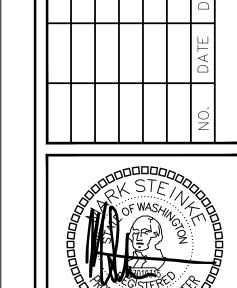
#### #>FLAG NOTES

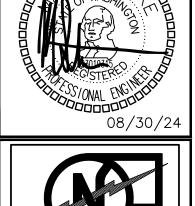
- 1. INTERLOCK ERV/BEF TO ON/OFF SWITCH. PROVIDE PERMANENT LABEL SAYING, "WHOLE HOUSE VENTILATION. LEAVE ON UNLESS OUTDOOR AIR QUALITY IS VERY POOR." ADHERE PERMANENT LABEL TO WALL ABOVE WALL SWITCH.
- 2. COORDINATE OUTDOOR LOCATION OF INDIVIDUAL HP UNITS WITH MECHANICAL PLANS.
- 3. POWERED FROM OUTDOOR UNIT.

#### AFCI/GFCI REQUIREMENTS FOR DWELLING UNITS:

- ALL 15 AND 20A, 120V SINGLE PHASE CIRCUITS NOT INCLUDING THE BATHROOM SHALL BE AFCI PROTECTED (210.12).
- ALL DWELLING UNIT CIRCUITS IN BATHROOMS, GARAGES, OUTDOORS, KITCHENS, LAUNDRY AREAS, AND AREAS WITHIN 6' OF A SINK SHALL BE GFCI PROTECTED (210.8).
   BATHROOM CIRCUIT TO BE GFCI PROTECTED VIA A GFCI RECEPTACLE, WHILE OTHER CIRCUITS SHALL BE
- 3. UTILIZE "DUAL FUNCTION" BREAKER WHEN BOTH AFCI AND GFCI PROTECTION IS REQUIRED.

PROTECTED AT THE BREAKER.





ROBISON ENGINEERING, INC 19401 40TH AVE W., SUITE 302 LYNNWOOD, WA 98036 2063643343 TEL REI PROJECT NO: 1219001 CONTACT: ARIK ESPINELI

DESIGNED: MHS
CHECKED: PSR
APPROVED: JAY

ST SE PUYALLUP, WA

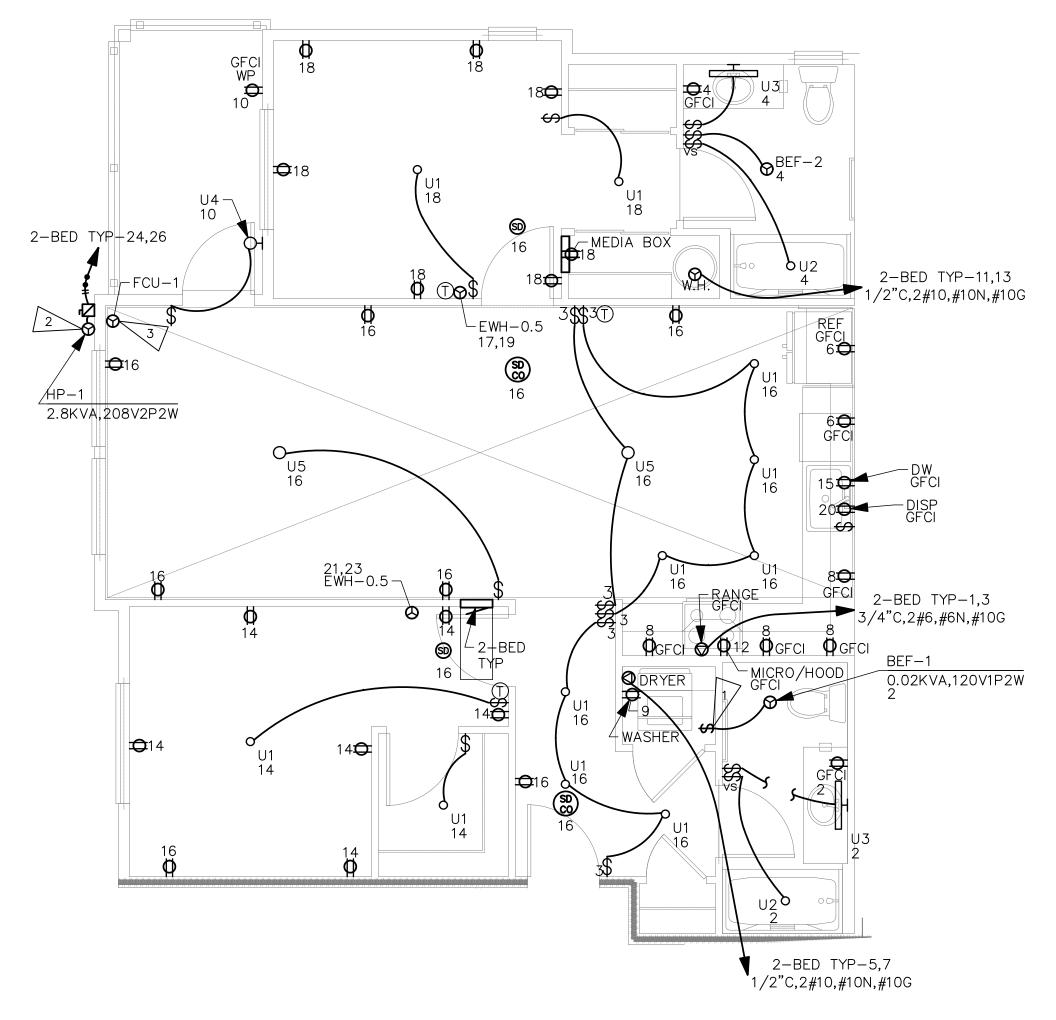
19401 4OTH AVE W. SUITE 302 LYNNWOOD, WA 98036

ROBISON ENGINEERING, INC

TE: 08/30/24

SHEET TITLE:
UNIT PLANS &
SCHEDULES

E5.01



UNIT TYPICALS

2-BED TYI

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

| 7                 | '-R                              | FD                 | Τ,               | YP                                      |                                                     |             |                    |                                       |                            |        |                              |                                                          |                             |
|-------------------|----------------------------------|--------------------|------------------|-----------------------------------------|-----------------------------------------------------|-------------|--------------------|---------------------------------------|----------------------------|--------|------------------------------|----------------------------------------------------------|-----------------------------|
| MC<br>FE          | DOM<br>DUNTING<br>D FROM<br>DTE  | FLUSH              |                  |                                         | VOLTS <b>208,</b><br>BUS AMPS<br>NEUTRAL <b>1</b> 0 | 12          | 5                  | 2P 3W                                 |                            |        | 1                            | AIC <b>22,00</b><br>MAIN BKR<br>LUGS <b>STA</b>          | MLO                         |
|                   | CKT<br>BKR                       | LOAD<br>KVA        | CIRCUI           | T DESCRIF                               | PTION                                               |             | CKT<br>#           | CKT<br>BKR                            | LO <i>A</i>                |        | CIRC                         | CUIT DESC                                                | RIPTION                     |
| 1<br>3            | 50/2                             | 8                  | RANGE            | , , , , , , , , , , , , , , , , , , , , |                                                     | a<br>b      | 2                  | 20/1 20/1                             | 0.2                        | 3      | BEF-                         | -1, LIGHTIN                                              | NG, RECEPTACLE<br>LIGHTING, |
| 5<br>7<br>9<br>11 | 30/2<br> <br>20/1<br>30/2        | 4.99<br>1.5<br>4.4 | DRYER<br>WASHE   | R<br>HEATER                             |                                                     | арар        | 6<br>8<br>10<br>12 | 20/1<br>20/1<br>20/1<br>20/1          | 1.5<br>1.5<br>0.19         | 9<br>B | SMAI<br>SMAI<br>LIGH<br>MICR | LL APPLIA<br>LL APPLIA<br>TING, RECI<br>20/HOOD          | NCE<br>EPTACLE              |
| 5<br>  7<br>  9   | 20/1<br>20/2                     | 1.2<br>0.5         | DISHWA<br>WALL H |                                         |                                                     | a<br>b<br>a | 16<br>18           | 20/1<br>20/1<br>20/1<br>20/1          | 1.1<br>1.19<br>1.20<br>0.7 | 9<br>B | LIGH<br>LIGH<br>RECE         | TING, RECI<br>TING, RECI<br>TING, MED<br>EPTACLE<br>OSAL | EPTACLE                     |
| 21<br>23<br>25    | 20/2<br> <br> <br> -/1           | 0.5                | WALL F           | IEATER                                  |                                                     | ара         | 22                 | 20/1<br>20/2                          | 0.2                        |        | SDC0                         | )                                                        |                             |
| OP                | <u> </u><br>Tional d'            | L<br>WELLING       | UNIT C           | ALCULATIO<br>CONN<br>KVA                | ON (NEC 220.8                                       | 32)         |                    |                                       |                            |        | NN<br>VA                     | CALC<br>KVA                                              |                             |
| F                 | GHTING A<br>RECEPTAC<br>MALL—APF | CLES               |                  | 3.52<br>3                               | 1,173 SF<br>(3 VA/SF)                               |             | U                  | ERAL LOA<br>P TO 10<br>KVA            | νD                         | 10     |                              | 10                                                       | (100%)                      |
|                   | AUNDRY<br>PPLIANCE:              | S                  |                  | 1.5<br>8.47                             |                                                     |             |                    | VER 10<br>KVA                         |                            | 6.4    | 9                            | 2.6                                                      | (40%)                       |
|                   | OTAL GEN                         |                    | DAD              | 16.5                                    |                                                     |             |                    | HEATING<br>OLING                      | OR                         |        |                              | 3.51                                                     | (220.82(C)(4))              |
|                   |                                  |                    |                  |                                         |                                                     |             | BAL.               | AL LOAD<br>ANCED LO<br>ASE A<br>ASE B | )AD                        |        |                              | 16.1<br>77.4 A<br>98.8%<br>101%                          |                             |

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#### #>FLAG NOTES

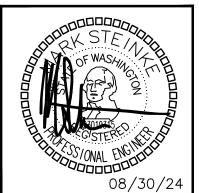
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|  |  |  | DESCRIPTION | REVISIO |
|--|--|--|-------------|---------|
|  |  |  | DATE        |         |
|  |  |  | NO.         |         |





| DESIGNED: | MHS |
|-----------|-----|
| CHECKED:  | PSR |
| APPROVED: | JAY |

ARTMENTS BUILDING E
ST SE PUYALLUP, WA
18302

**SON** 19401 40TH AVE W. SL LYNNWOOD, WA 9803

DATE: 08/30/24

SHEET TITLE:
UNIT PLANS &
SCHEDULES

SHEET NO. **E5.02** 

## REQUIRED ELECTRIC VEHICLE CHARGING INFRASTRUCTURE WAC 427:

- WHERE PARKING IS PROVIDED, TEN PERCENT OF PARKING SPACES SHALL BE PROVIDED WITH ELECTRIC VEHICLE CHARGING INFRASTRUCTURE.
- ELECTRICAL ROOM(S) SERVING PARKING AREAS SHALL BE DESIGNED TO ACCOMMODATE THE ELECTRICAL EQUIPMENT AND DISTRIBUTION REQUIRED TO SERVE A MINIMUM OF 20 PERCENT OF THE TOTAL PARKING SPACES WITH 208/240 V 40—AMP ELECTRIC VEHICLE CHARGING INFRASTRUCTURE.
- MINIMUM ONE ACCESSIBLE PARKING SPACE SHALL BE SERVED BY ELECTRIC VEHICLE CHARGING INFRASTRUCTURE.

TOTAL NUMBER OF PARKING SPACES = 354AVERAGE NUMBER OF PARKING SPACES PER BUILDING = 354/8 = 45;  $45 \times 0.2 = 9$ 

5 OUTDOOR EV CHARGERS WITH INFRASTRUCTURE 4 CONDUITS TO FUTURE EV CHARGING LOCATIONS

CAPACITY FOR 9 CHARGERS  $\times$  208V/1PH  $\times$  40A = 74.9 KVA = (208)A 3 PHASE POWER @ 120/208V

UTILIZING LOAD MANAGEMENT INFRASTRUCTURE, EV LOAD CAN BE REDUCED BY 50%. 208A/2 = 37.5KVA (104)A @ 208V 3 PHASE

PER WAC 427, ELECTRICAL INFRASTRUCTURE FOR EACH BUILDING SHALL BE DESIGNED TO ACCOMMODATE 104 AMPS OF EV ELECTRICAL LOAD.

#### GROUNDING NOTES AND REQUIREMENTS:

THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR, POWER COMPANY, PHONE COMPANY, INTERNET COMPANY, CABLE TV COMPANY, AND THE SATELLITE TV COMPANY TO ENSURE REQUIRED GROUNDING IS INSTALLED FOR EACH SYSTEM.

THIS SHALL BE DONE PRIOR TO AND DURING INSTALLATION OF FOUNDATION RE—BAR AND CONTINUE DURING THE CONSTRUCTION PHASES, TO ENSURE EACH SYSTEM HAS IT'S REQUIRED GROUNDING INSTALLED FOR PROPER OPERATION OF THE SYSTEM.

- THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND PROVIDE WHAT IS REQUIRED TO DO THE FOLLOWING:
- 2. FOOTING GROUND RE-BAR COMES UP IN THE ELECTRICAL ROOM AND THE RE-BAR IS SNUGLY SECURED TO THE FOOTING RE-BAR.
- 3. THE MSB GROUNDING TIES TO THE FOOTING RE-BAR, COUNTERPOISE, BUILDING STEEL, AND WATER PIPING.
- 4. THE GROUND WIRE FOR THE COUNTERPOISE SHALL BE STRANDED, INSULATED WIRE IN CONDUIT UNTIL IT REACHES THE FIRST BAR OF THE COUNTERPOISE. BETWEEN THE COUNTERPOISE BARS IT SHALL BE A STRANDED BARE COPPER WIRE.

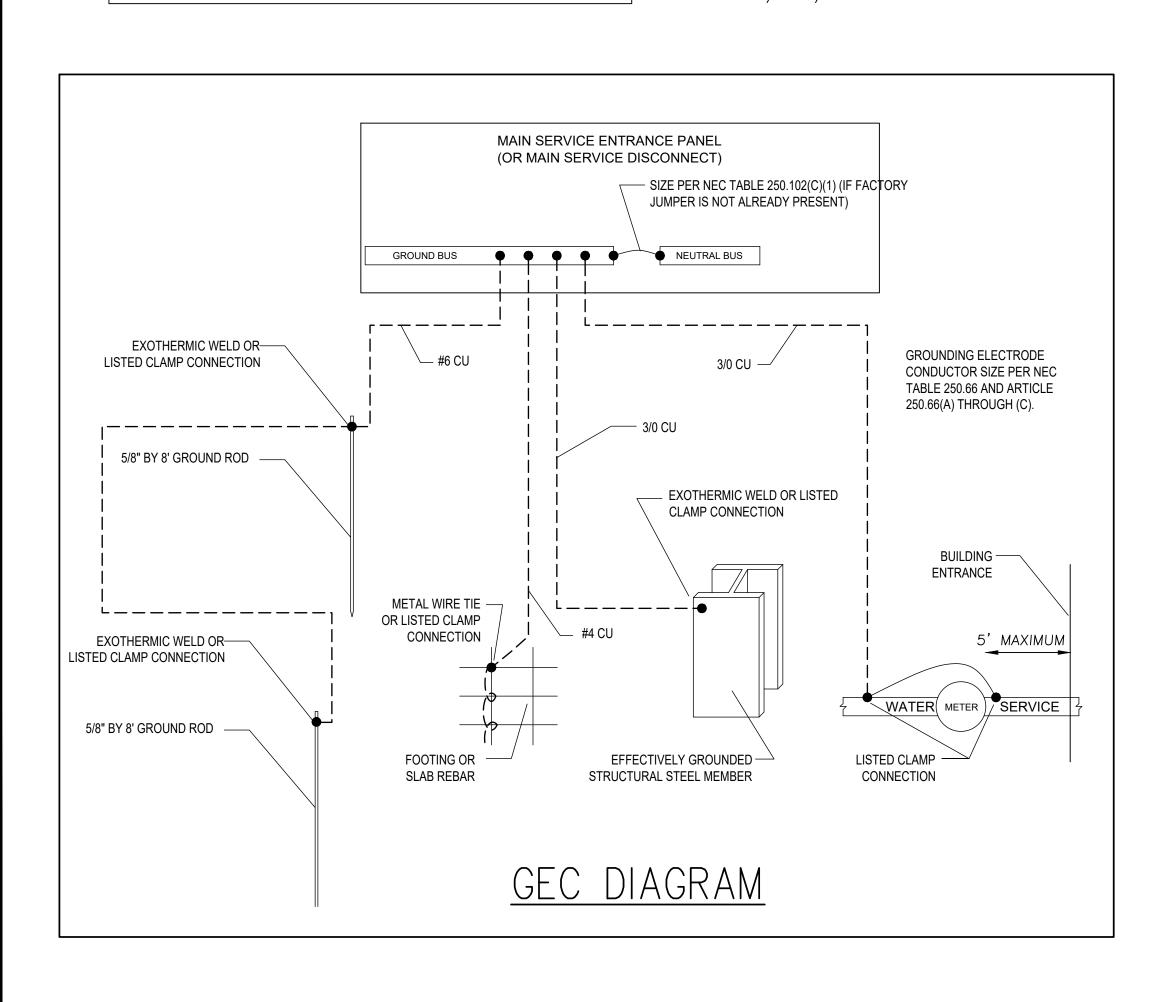
| ID  | FEEDER<br>AMPS | CONDUIT AND FEEDER                                        | FEEDING THESE DEVICES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----|----------------|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 100            | 1-1/2"C,3#1/0 AL,#1/0 AL N,#6 AL G                        | POOL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 2   | 125            | 2"C,3#2/O AL,#2/O AL N,#4 AL G                            | AM-B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3>  | 200            | 2"C,3#3/0,#3/0N,#6G                                       | A-HOUSE, B-HOUSE, C-HOUSE, D-HOUSE, E-HOUSE, F-HOUSE, G-HOUSE, H-HOUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 4   | 400            | (2)2-1/2"C,3#250kcmil AL,#250kcmil AL N,#1/0<br>AL G      | AM-CT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 5   | 400            | (2)2-1/2"C,3#250kcmil AL,#250kcmil AL N,#1<br>AL G        | AM-DISC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 6   | 400            | 3-1/2"C,3#500kcmil,#500kcmil N,#2G                        | AM-A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 7>  | 800            | (3)3"C,3#400kcmil AL,#400kcmil AL N,#4/0 AL G             | B-MC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 8   | 1000           | (4)3"C,3#350kcmil AL,#350kcmil AL N,#4/0 AL G             | H-MC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 9   | 1200           | (4)3-1/2"C,3#500kcmil AL,#500kcmil AL<br>N,#250kcmil AL G | A-MC, C-MC, E-MC, F-MC, G-MC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 10> | 1600           | (5)4"C,3#600kcmil AL,#600kcmil AL N,#500kcmil AL G        | D-MC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 11> | 125            | 1-1/2"C,2#2/0 AL,#2/0 AL N,#4 AL G                        | A-001, A-002, A-003, A-004, A-101, A-102, A-103, A-104, A-106, A-106, A-107, A-108, A-201, A-202, A-203, A-204, A-205, A-207, A-208, A-301, A-302, A-303, A-304, A-305, A-306, A-A-308, B-001, B-002, B-101, B-102, B-103, B-104, B-201, B-203, B-204, B-301, B-302, B-303, B-304, C-101, C-102, C-10 C-104, C-105, C-106, C-107, C-108, C-109, C-110, C-111, C-112 C-201, C-202, C-203, C-204, C-205, C-206, C-207, C-208, C-207, C-208, C-207, C-308, C-307, C-308, C-309, C-310, C-311, C-312, D001, D002, D003, D005, D006, D101, D102, D103, D104, D105, D106, D107, D108, D109 D110, D111, D112, D201, D202, D203, D204, D205, D206, D207, D208, D209, D210, D211, D212, D301, D302, D303, D304, D305, D306, D30, D308, D309, D310, D311, D312, E001, E002, E003, E004, E101, E102, E103, E104, E105, E106, E107, E108, E201, E202, E203, E204, E205, E206, E207, E208, E301, E302, E303, E304, E305, E306, E307, E308, F301, F302, F303, F304, F305, F306, F307, F308, G101, G102, G103, G104, G105, G106, G107, G108, G109, G110, G111, G112, G201, G202, G203, G204, G205, G206, G207, G208, G209, G210, G211, G212, G301, G302, G303, G30, G305, G306, G307, G308, G309, G310, G311, G312, H101, H102, H103, H104, H105, H106, H107, H108, H201, H202, H203, H204, H205, H207, H208, H301, H302, H303, H304, H305, H306, H307, H308 |

SIZING METHOD: COPPER, 60°C #12 THROUGH #1, 75°C 1/O AND ABOVE

#### FEEDER SCHEDULE NOTES:

- CONDUIT FILL:

  \* FOR CONDUIT SIZES 1-1/2" AND BELOW, FILL IS BASED ON EMT.
- \* FOR CONDUIT SIZES 2" AND ABOVE, FILL IS BASED ON SCHEDULE 40 PVC.
- IN LOCATIONS APPROVED FOR THE PURPOSE, CONTRACTOR MAY USE MC CABLE.
  IN LOCATIONS APPROVED FOR THE PURPOSE CONTRACTOR MAY USE OTHER CONDUIT TYPES, INCLUDING RMC, FMC AND LFMC. CONTRACTOR REQUIRED TO ENSURE CONDUIT FILL DOES NOT EXCEED 40%.
- CONTRACTOR RESPONSIBLE TO ENSURE TERMINATION/LUG CAPACITY FOR ALL SCHEDULED FEEDERS.
- XHHW/THHN/THWN SHALL BE USED FOR INSULATION OF THE CONDUCTOR.



#### COORDINATION AND ARC FLASH STUDIES:

IMMEDIATELY UPON SELECTION OF ACTUAL EQUIPMENT BEING PROVIDED FOR THE PROJECT, THE ELECTRICAL CONTRACTOR SHALL PERFORM AN ARC FLASH ANALYSIS AND COORDINATION STUDY ON THE STANDBY DISTRIBUTION BASED ON ACTUAL EQUIPMENT TO BE PROVIDED, CONDUCTOR TYPES/SIZES/LENGTHS, ETC. COORDINATION SHALL BE CONFIRMED BASED ON FAULT NUMBERS SHOWN ON THIS DRAWING.

STUDIES SUBMITTED SHALL BE STAMPED BY A PROFESSIONAL ELECTRICAL ENGINEER HOLDING A CURRENT LICENSE FROM THE STATE OF WA.

PRELIMINARY ARC FLASH AND COORDINATION STUDIES ARE TO BE SUBMITTED WITH THE SUBMITTALS FOR THE PROTECTIVE DEVICES, PANELBOARDS, SWITCHBOARDS, AND OTHER ELECTRICAL EQPT.

THE ELECTRICAL CONTRACTOR SHALL SUBMIT THE STAMPED AND SIGNED ARC FLASH AND COORDINATION STUDY TO THE AHJ AS REQUIRED.

THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL PERMANENT LABELS INDICATING ARC FLASH HAZARD RISK CATEGORIES ON ALL DISTRIBUTION POINTS (SWITCHBOARDS, PANELBOARDS, VFDS, DISCONNECT SWITCHES, ETC). LABELS SHALL COMPLY WITH NFPA 70E.

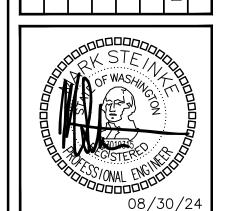
#### SHEET NOTES:

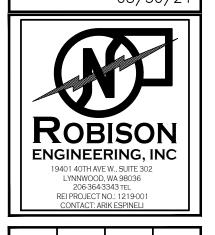
- A. CONTRACTOR TO OBTAIN UTILITY APPROVAL OF ALL SERVICE AND METERING EQUIPMENT PRIOR TO ORDERING.
- B. DISTRIBUTION SYSTEM AS DESIGNED IS FULLY RATED.
  CONTRACTOR WILL BE RESPONSIBLE FOR ENGINEERING IF SERIES
  RATED SYSTEMS ARE SUBMITTED, THE SUBMITTED SYSTEM SHALL
  MEET NEC 240.86(B) REQUIREMENTS FOR TESTED COMBINATIONS,
  AND SHALL NOT BE USED IF MOTOR CONTRIBUTION EXCEEDS
  LIMITS PER 240.86(C). NEC 110.22 MARKING REQUIREMENTS
  MUST BE MET.
- C. PROVIDE PERMANENT WARNING LABELS FOR ARC FLASH AND PPE REQUIREMENTS FOR THE SERVICE EQUIPMENT AND PANELS.

#### FLAG NOTES:

#

- 1. GROUNDING ELECTRODE CONDUCTOR AND SYSTEM GROUNDING SIZED PER N.E.C. 250
- 2. PROVIDE ARC ENERGY REDUCTION: ENERGY REDUCING MAINTENANCE SWITCH PER NEC 240.87(B)(3)
- 3. PROVIDE A LISTED SURGE PROTECTIVE DEVICE FOR DWELLING UNITS AS REQUIRED BY NEC 230.67. CONTRACTOR TO CONFIRM LOCATION IS ACCEPTABLE TO AUTHORITY HAVING JURISDICTION. OBTAIN PRICING FOR OPTION TO HAVE SPDs LOCATED IN UNIT PANELS VS UPSTREAM.
- 4. METER ELEVATIONS AND METERS PER STACK SHALL BE INSTALLED PER UTILITY ELECTRICAL PROVIDER REQUIREMENTS. METER SOCKET IN ELECTRICAL ROOM. VERIFY EXACT LOCATION AND REQUIREMENTS WITH ELECTRIC UTILITY (TYPICAL)
- 5. PROVIDE (1) 2 1/2" CONDUITS FOR SOLAR READY PATHWAY AND RESERVE SPACE IN THE MAIN ELECTRIC ROOM FOR FUTURE SOLAR EQUIPMENT. RESERVE SPACE FOR INSTALLATION OF FUTURE SOLAR CIRCUIT BREAKER AND PERMANENTLY MARK THIS LOCATION AS "FOR FUTURE SOLAR ELECTRIC".





DESIGNED: MHS
CHECKED: PSR
APPROVED: JAY

DRAWN:
UP, WA
DESIGNED:
CHECKED:

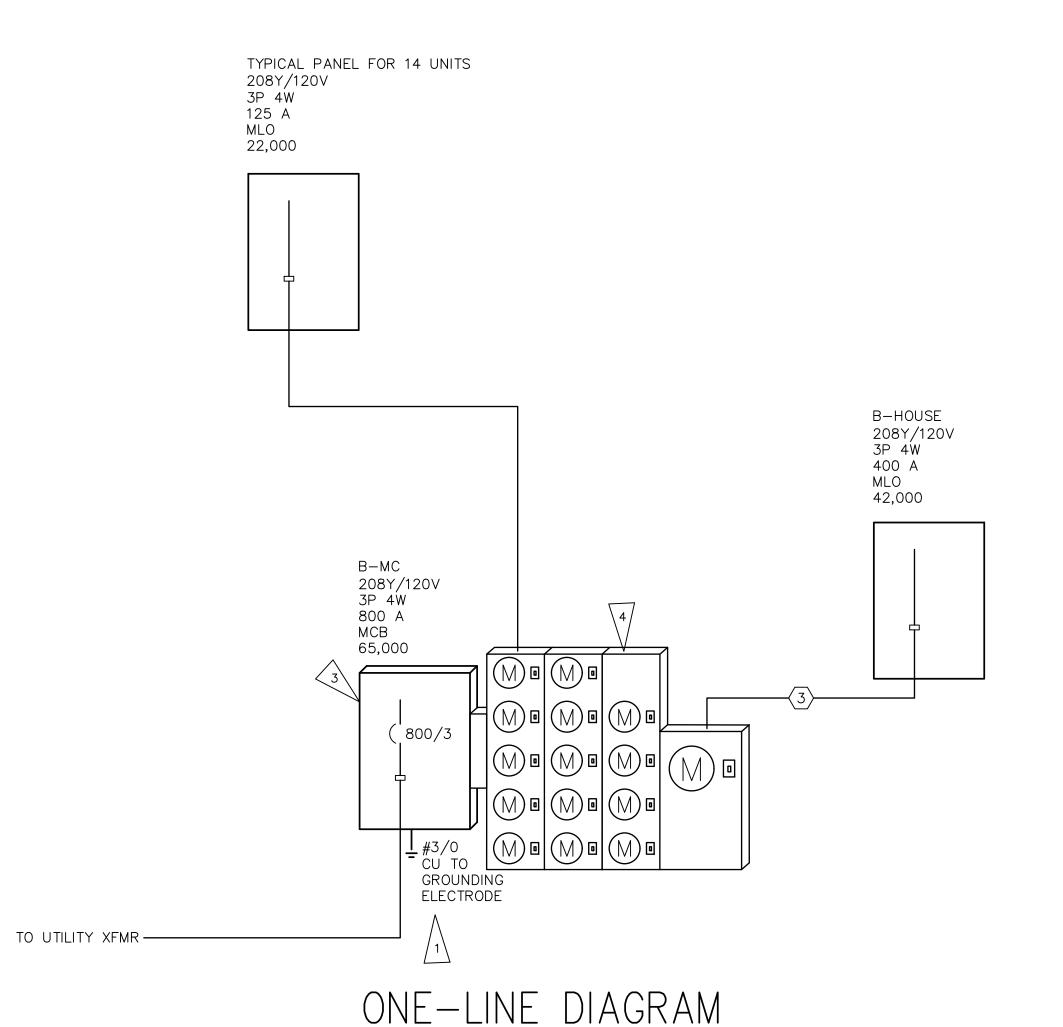
01 4OTH AVE W. SUITE 302 INWOOD, WA 98036 DNE:(206)364-3343

OBISON 1940 LYNN PHON

ATE: 08/30/24

SHEET TITLE:
ONE-LINE
DIAGRAM &
NOTES

E6.00



| DEVICE        | FAULT  | AIC<br>RATING | UTILITY | FED            | FROM   | FEE              | DER     | TOTAL                                   |
|---------------|--------|---------------|---------|----------------|--------|------------------|---------|-----------------------------------------|
|               |        | RATING        | FAULT   | DEVICE         | FAULT  | SIZE             | LENGTH  | $\frac{\textit{MOTOR}}{\textit{FAULT}}$ |
| XFMR<br>A/B/C | 64,512 | N/A           | 60,300  |                |        |                  |         | 4,212                                   |
| A-MC          | 32,461 | 65,000        | 30,318  | XFMR<br>A/B/C  | 60,300 | (4)#500kcm<br>AL | il150'  | 2,143                                   |
| A-HOUSE       | 22,509 | 42,000        | 21,485  | A-MC           | 30,318 | #3/0             | 21'     | 1,024                                   |
| В-МС          | 43,399 | 65,000        | 41,135  | XFMR<br>A/B/C  | 60,300 | (3)#400kcm<br>AL | il 50'  | 2,264                                   |
| B-HOUSE       | 28,836 | 42,000        | 27,880  | В-МС           | 41,135 | #3/0             | 18'     | 956                                     |
| C-MC          | 45,208 | 65,000        | 42,184  | XFMR<br>A/B/C  | 60,300 | (4)#500kcm<br>AL | il68'   | 3,024                                   |
| C-HOUSE       | 29,060 | 42,000        | 27,827  | C-MC           | 42,184 | #3/0             | 19'     | 1,233                                   |
| AM-CT         | 35,911 | 42,000        | 35,077  | XFMR<br>D/CLUB | 60,300 | (2)#250kcm<br>AL | il 35'  | 834                                     |
| AM-DISC       | 26,938 | 42,000        | 26,401  | AM-CT          | 35,077 | (2)#250kcm<br>AL | il 23'  | 537                                     |
| AM-A          | 20,059 | 22,000        | 19,654  | AM-DISC        | 26,401 | #500kcmil        | 33'     | 405                                     |
| AM-B          | 5,305  | 22,000        | 5,134   | AM-A           | 19,654 | #2/0 AL          | 108'    | 171                                     |
| POOL          | 14,058 | 22,000        | 13,842  | AM-A           | 19,654 | #1/0 AL-1        | 14'     | 216                                     |
| D-MC          | 25,827 | 65,000        | 23,500  | XFMR<br>D/CLUB | 60,300 | (5)#600kcm<br>AL | il 311' | 2,327                                   |
| D-HOUSE       | 19,593 | 42,000        | 18,233  | D-MC           | 23,500 | #3/0             | 19'     | 1,360                                   |
| E-MC          | 44,735 | 65,000        | 42,578  | XFMR E/H       | 60,300 | (4)#500kcm<br>AL | il66'   | 2,157                                   |
| E-HOUSE       | 28,149 | 42,000        | 27,309  | E-MC           | 42,578 | #3/0             | 21'     | 840                                     |
| H-MC          | 37,230 | 65,000        | 35,447  | XFMR E/H       | 60,300 | (4)#350kcm<br>AL | il 92'  | 1,783                                   |
| H-HOUSE       | 21,037 | 42,000        | 20,475  | H-MC           | 35,447 | #3/0             | 30'     | 562                                     |
| F-MC          | 30,384 | 65,000        | 28,329  | XFMR F/G       | 60,300 | (4)#500kcm<br>AL | il170'  | 2,055                                   |
| F-HOUSE       | 18,612 | 42,000        | 17,763  | F-MC           | 28,329 | #3/0             | 31'     | 849                                     |
| G-MC          | 49,103 | 65,000        | 46,216  | XFMR F/G       | 60,300 | (4)#500kcm<br>AL | il 49'  | 2,887                                   |
| G-HOUSE       | 31,135 | 42,000        | 29,998  | G-MC           | 46,216 | #3/0             | 19'     | 1,137                                   |

| VOLT           | AGE DRO      | P SCH            | FDULE             |              |                       |
|----------------|--------------|------------------|-------------------|--------------|-----------------------|
| DEVICE         | FEEDE        | R                | BRANCH CIRC       | JIT          | TOTAL<br>VOLTAGE DROP |
|                | VOLTAGE DROP | WIRE<br>SIZE     | MAX VOLTAGE DROP  | WIRE<br>SIZE | VOLIAGE DROP          |
| XFMR<br>A/B/C  | 0%           |                  | _                 | _            | 0%                    |
| A-MC           | 1.61%        | (4)#500kcm<br>AL | il —              | _            | 1.61%                 |
| A-HOUSE        | 1.93%        | #3/0             | 1.06% (CKT 19)    | #10          | 2.99%                 |
| В-МС           | 0.51%        | (3)#400kcm<br>AL | il —              | _            | 0.51%                 |
| B-HOUSE        | 0.79%        | #3/0             | 1.4% (CKT 3)      | #10          | 2.18%                 |
| С-МС           | 0.74%        | (4)#500kcm<br>AL | il —              | _            | 0.74%                 |
| C-HOUSE        | 0.91%        | #3/0             | 1.56% (CKT 7)     | #10          | 2.48%                 |
| XFMR<br>D/CLUB | 0%           |                  | _                 | _            | 0%                    |
| AM-CT          | 0.35%        | (2)#250kcm<br>AL | il —              | _            | 0.35%                 |
| AM-DISC        | 0.57%        | (2)#250kcm<br>AL | il —              | _            | 0.57%                 |
| AM-A           | 0.85%        | #500kcmil        | 1.95% (CKT 41)    | #12          | 2.79%                 |
| AM-B           | 2.33%        | #2/0 AL          | 2.18% (CKT 33,35) | #8           | 4.51%                 |
| POOL           | 0.89%        | #1/0 AL-1        | 0.28% (CKT 1)     | #12          | 1.18%                 |
| D-MC           | 2.76%        | (5)#600kcm<br>AL | il —              | _            | 2.76%                 |
| D-HOUSE        | 3.01%        | #3/0             | 1.52% (CKT 21)    | #10          | 4.53%                 |
| XFMR E/H       | 0%           |                  | _                 | _            | 0%                    |
| E-MC           | 0.64%        | (4)#500kcm<br>AL | il —              | _            | 0.64%                 |
| E-HOUSE        | 0.82%        | #3/0             | 1.1% (CKT 19)     | #10          | 1.92%                 |
| H-MC           | 0.97%        | (4)#350kcm<br>AL | il —              | _            | 0.97%                 |
| H-HOUSE        | 1.11%        | #3/0             | 1.1% (CKT 17)     | #10          | 2.21%                 |
| XFMR F/G       | 0%           |                  | -                 | _            | 0%                    |
| F-MC           | 1.6%         | (4)#500kcm<br>AL | il —              | _            | 1.6%                  |
| F-HOUSE        | 1.85%        | #3/0             | 1.1% (CKT 19)     | #10          | 2.95%                 |
| G-MC           | 0.54%        | (4)#500kcm<br>AL | il —              | _            | 0.54%                 |
| G-HOUSE        | 0.71%        | #3/0             | 1.52% (CKT 21)    | #10          | 2.23%                 |

| M(<br>FE                                                                                                  |                            | ITING<br>FROM                                                             | SURFA<br>B-MC                                                                      | CE                                                          |                                       | VOLTS 208<br>BUS AMPS<br>NEUTRAL 1 | 40       | 0                                                                                                     | ' 3P 4W                                                   |                                                      |                           | AIC 42,00<br>Main BKR<br>Lugs STA                                                                 | MLO                             |
|-----------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------|------------------------------------|----------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------|---------------------------------|
| CKT<br>#                                                                                                  | Ck<br>Bk                   | (T<br>(R                                                                  | LOAD<br>KVA                                                                        | CIRCUI                                                      | T DESCRIP                             | TION                               |          | CKT<br>#                                                                                              | CKT<br>BKR                                                | LOAD<br>KVA                                          | CIRC                      | CUIT DESC                                                                                         | RIPTION                         |
| 1<br>3<br>5<br>7<br>9<br>11<br>13<br>15<br>17<br>19<br>21<br>22<br>27<br>29<br>31<br>33<br>37<br>37<br>41 | 20<br>20<br>20<br>50<br>50 | 0/1<br>/1<br>0/1<br>0/1<br>0/1<br>0/2<br> <br>0/2<br> <br>0/2<br> <br>0/2 | 0.18<br>0.369<br>0<br>0.18<br>0.064<br>0.5<br>0.036<br>1<br>0<br>8.3<br>8.3<br>8.3 | FACP<br>SITE LI<br>EWH<br>SPACE<br>EV CH<br>EV CH<br>(F) EV | NG<br>TACLE<br>NG<br>IGHTING<br>ARGER |                                    | сарсарса | 4<br>6<br>8<br>10<br>12<br>14<br>16<br>18<br>20<br>22<br>24<br>26<br>28<br>30<br>32<br>34<br>36<br>38 | 50/2<br> <br> <br>  50/2                                  | 8.3<br>8.3<br>8.3<br>8.3<br>8.3<br>8.3<br>8.3<br>8.3 | EV ( EV ( EV ( F) (F) (F) | CHARGER CHARGER CHARGER CHARGER CHARGER CHARGER EV CHARGE EV CHARGE EV CHARGE EV CHARGE EV CHARGE | EER<br>EER<br>EER               |
| RI                                                                                                        | ECE                        | TING<br>PTAC<br>OAD                                                       | LES                                                                                | CONN<br>KVA<br><b>0.469</b><br><b>0.36</b><br><b>116</b>    | CALC<br>KVA<br>0.586<br>0.36<br>72.6  | (125%)<br>(50%>10)<br>(63%)        |          | NON<br>HEA<br>TOT<br>BAL<br>LO<br>PH.                                                                 | ITINUOUS ICONTINU TING AL LOAE ANCED AD ASE A ASE B ASE C | 0.5<br>Jous 0.2<br>1                                 |                           | CALC<br>KVA<br>0.625<br>0.2<br>1<br>75.4<br>209 A<br>95.4%<br>107%<br>97.5%                       | -<br>(125%)<br>(100%)<br>(100%) |

|                               | NTING SURFAC                          |                            | BUS        | TS <b>208Y,</b><br>AMPS <b>8</b><br>TRAL <b>100</b> | 00           | P 4W     |                    | N         | AIC <b>65,000</b><br>Main BKR <b>8</b><br>Lugs <b>Stand</b> |                              |                  |
|-------------------------------|---------------------------------------|----------------------------|------------|-----------------------------------------------------|--------------|----------|--------------------|-----------|-------------------------------------------------------------|------------------------------|------------------|
| CKT                           | BREAKER<br>TRIP/POLES                 | CIRCUIT DESCRIP            | TION       |                                                     |              | OAD KV   |                    | EEEDED D  |                                                             | CONDUCTORS                   |                  |
| #                             | , , , , , , , , , , , , , , , , , , , |                            | TION       |                                                     | Α            | В        | С                  |           |                                                             |                              |                  |
| 1                             | 125/2                                 | PANEL B-001                |            |                                                     | 16.6         | 17.1     |                    | 1         |                                                             | /O AL N,#4 A                 |                  |
| 2                             | 125/2                                 | PANEL B-002                |            |                                                     | 474          | 16.6     |                    |           |                                                             | /O AL N,#4 A                 |                  |
| 3<br>4                        | 125/2<br>125/2                        | PANEL B-101                |            |                                                     | 17.1<br>16.6 | 17.1     | 16.6               | •         |                                                             | /O AL N,#4 A                 |                  |
| <del>4</del><br>5             | 125/2<br>125/2                        | PANEL B-102<br>PANEL B-103 |            |                                                     | 10.0         | 16.6     | 17.1               |           |                                                             | /O AL N,#4 A<br>/O AL N,#4 A |                  |
| 6                             | 125/2                                 | PANEL B-103                |            |                                                     | 17.1         | 10.0     |                    |           |                                                             | /O AL N,#4 A<br>/O AL N,#4 A |                  |
| 7                             | 125/2                                 | PANEL B-201                |            |                                                     | 16.6         | 17.1     | 10.0               |           |                                                             | /O AL N,#4 A                 |                  |
| 8                             | 125/2                                 | PANEL B-202                |            |                                                     | 10.0         | 16.6     | 17.1               |           |                                                             | O AL N,#4 A                  |                  |
| 9                             | 125/2                                 | PANEL B-203                |            |                                                     | 17.1         |          |                    |           |                                                             | O AL N,#4 A                  |                  |
| 10                            | 125/2                                 | PANEL B-204                |            |                                                     | 16.6         | 17.1     |                    |           |                                                             | /O AL N,#4 A                 |                  |
| 11                            | 125/2                                 | PANEL B-301                |            |                                                     |              | 16.6     | 17.1               | 1-1/2"C,2 | #2/0 AL,#2/                                                 | /O AL N,#4 A                 | L G              |
| 12                            | 125/2                                 | PANEL B-302                |            |                                                     | 17.1         |          | 16.6               | 1-1/2°C,2 | #2/0 AL,#2/                                                 | /O AL N,#4 A                 | L G              |
| 13                            | 125/2                                 | PANEL B-303                |            |                                                     | 16.6         | 17.1     |                    |           |                                                             | O AL N,#4 A                  |                  |
| 14                            | 125/2                                 | PANEL B-304                |            |                                                     |              | 16.6     |                    |           |                                                             | /O AL N,#4 A                 | L G              |
| 15                            | 200/3                                 | PANEL B-HOUSE              |            |                                                     | 42.4         | 38.6     | 37.7               | 2°C,3#3/0 | ,#3/0N,#6G                                                  |                              |                  |
|                               |                                       | TOTAL CONNE                | CTED KVA B | Y PHASE                                             | 194          | 207      | 190                |           |                                                             |                              |                  |
| OPTI(                         | DNAL MULTIFAI                         | MILY DWELLING CA           |            |                                                     |              |          | ,,,,               |           |                                                             |                              |                  |
|                               |                                       |                            | `          |                                                     | )<br>WELLIN  | G UNIT I | _OADS              |           |                                                             |                              |                  |
|                               |                                       |                            | KVA        |                                                     |              |          |                    |           |                                                             | KVA                          |                  |
| LIGH                          | HTING AND RE                          | CEPTACLES                  | 49.3       | 16,417 S<br>(3 VA/S                                 |              |          | NECTED             |           |                                                             | 306                          |                  |
| SMALL-APPLIANCE 42 LAUNDRY 21 |                                       |                            | (0 4/1/5   | · /                                                 |              | LLING U  |                    |           | 14                                                          |                              |                  |
|                               |                                       |                            | AND FA     |                                                     |              | (40%)    |                    |           |                                                             |                              |                  |
| APF                           | PLIANCES                              |                            | 119        |                                                     |              | CAL      | CULATE             | ) LOAD    |                                                             | 123                          |                  |
|                               | TING                                  |                            | 75.6       | (100%)                                              |              |          |                    |           |                                                             |                              |                  |
| HEA                           |                                       |                            |            |                                                     | HOU          | SE LOAD  | )S                 |           |                                                             |                              |                  |
| HEA                           |                                       |                            |            |                                                     |              |          |                    |           | CONN KVA                                                    | CALC KVA                     |                  |
| HEA                           |                                       | CONN KVA                   | CALC KVA   |                                                     |              |          |                    |           |                                                             |                              |                  |
|                               | HTING                                 | 0.469                      | 0.586      | (125%)                                              |              | CON      | TINUOUS            | S         | 0.5                                                         | 0.625                        | (125%)           |
| LIGH                          | HTING<br>EPTACLES                     |                            |            | (125%)<br>(50%>10                                   |              |          | TINUOUS<br>CONTINU |           |                                                             |                              | (125%)<br>(100%) |

TOTAL HOUSE LOAD

BALANCED 3-PHASE LOAD

TOTAL LOAD

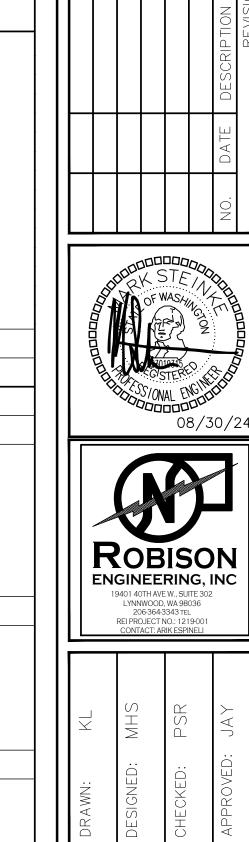
TOTAL LOAD

KVA

123 75.4

TOTAL DWELLING UNIT LOAD

TOTAL HOUSE LOAD



75.4

198 550 A

KVA

LEY HEIGHTS APARTMENTS BUILDINAVE SE AND 5TH ST SE PUYALLUP,

ATE: 08/30/24

PANELS
SCHEDULES

SHEET NO. **E6.01** 

#### **SYMBOLS GENERAL NOTES** GENERAL REFERENCE TO RELATED WORK: "REF" INDICATIONS DENOTE WORK COVERED ELSEWHERE (ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL, LANDSCAPE, OR KITCHEN), OR ITEM BASED ON A SPECIFIC MANUFACTURER'S DIMENSIONS (VERIFY). ARCHITECTURAL BACKGROUND BALL VALVE (THIN LINE) 2. ELECTRICAL CHARACTERISTICS: REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL GLOBE VALVE CHARACTERISTICS (VOLTAGES, ETC. OF MECHANICAL EQUIPMENT, UNLESS OTHERWISE INDICATED. NEW PIPING (HEAVY LINE) CHECK VALVE CODES: COMPLETE INSTALLATION OF THE PLUMBING SYSTEM SHALL BE PER THE APPLICABLE BUILDING, MECHANICAL, ENERGY, PLUMBING, FIRE, AND HEALTH CODES AND REGULATIONS AS BALANCING OR PLUG VALVE EXISTING PIPING (THIN LINE) ADOPTED BY THE LOCAL AHJ. BUTTERFLY VALVE EXISTING WORK TO BE REMOVED PREPARE AND SUBMIT FOR REVIEW A SHOP DRAWING BASED ON FINAL STRUCTURAL SHOP DRAWINGS FOR LOCATING AND ROUTING ALL EQUIPMENT, PIPING, ETC. -A. COORDINATE FLOOR AND BEAM PENETRATIONS WITH STRUCTURAL FLEXIBLE CONNECTION IN PIPING MATCHLINE OR PROPERTY LINE B. COORDINATE FINAL LOCATION AND ROUTING WITH CEILING, LIGHTS, WALLS, FIRE SPRINKLER PIPING, AND OTHER TRADES WORK. C. INCLUDE ADDITIONAL OFFSETS, ELBOWS, ROUTING, EQUIVALENT DUCT SIZING EXCHANGE, CONNECTION TO EXISTING RELOCATING, ETC. AS REQUIRED FOR A COMPLETE OPERATING MECHANICAL SYSTEM. PRESSURE REDUCING VALVE (PRV) D. PROVIDE SHOP DRAWINGS AT NO ADDITIONAL COST TO THE OWNER. SECTION IDENTIFICATION 5. PLUMBING CONTRACTOR SHALL LOCATE AND COORDINATE EXACT LOCATION OF ALL PLUMBING AUTOMATIC CONTROL VALVE, 2-WAY EQUIPMENT WITHIN THE STRUCTURE. INDICATES DIRECTION OF CUTTING AUTOMATIC CONTROL VALVE, 3-WAY ACCESS DOORS: COORDINATE WITH ARCHITECT AND LOCATE ALL ACCESS DOORS ON SHOP DRAWINGS PRIOR TO BEGINNING OF CONSTRUCTION. ACCESS DOORS IN FIRE RATED STRUCTURE SHALL BE FIRE RATED. VERIFY ACCESS DOOR LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO LETTER INDICATES SECTION RELIEF VALVE BIDDING. (NO. INDICATES DETAIL) 7. ROOF PENETRATIONS: SEE ARCHITECTURAL DRAWINGS FOR ROOF CAP, ROOF CURB, ROOF DRAIN, SHEET NUMBER WHERE SECTION IS - $\times$ + $\times$ -BALANCING/METERING VALVE OVERFLOW DRAINS AND VTR DETAILS. DRAWN 8. EXPOSED PIPING: PROVIDE CHROME PLATING FOR EXPOSED PIPING IN FINISHED ROOMS. SHEET NUMBER WHERE SECTION IS REDUCER TAKEN PENETRATIONS: PROVIDE ESCUTCHEON PLATES FOR EXPOSED PIPING PENETRATIONS AND SHEET DIRECTION OF FLOW METAL FLASHING FOR EXPOSED DUCTWORK PENETRATIONS. 10. SHAFT AND PLENUM CONNECTIONS: SEAL CONNECTIONS TO AIR SHAFTS AIRTIGHT. PROVIDE DETAIL IDENTIFICATION PIPE ANCHOR AIRTIGHT SEAL AROUND PENETRATIONS IN AIR PLENUMS. PIPE ALIGNMENT GUIDE DETAIL NUMBER 11. LIGHT FIXTURE CLEARANCE: COORDINATE LOCATIONS OF MECHANICAL WORK TO PROVIDE DRAWING/SHEET NUMBER PIPE SUPPORT CLEARANCES OVER LIGHTING FIXTURES FOR REMOVAL AND REPLACEMENT. 12. CABLE TRAYS: PIPING INSTALLED ADJACENT TO ELECTRICAL CABLE TRAYS SHALL ALLOW MINIMUM VALVE STATION OR ASSEMBLY ACCESS OF 6" ABOVE AND TO THE SIDE OF CABLE TRAYS. **EQUIPMENT** INDIRECT DRAIN, PIPE TO DRAIN 13. MOTORS: COMPLY WITH ENERGY CODE ENFORCED BY AHJ FOR MINIMUM EFFICIENCIES UNDER FULL TYPICAL EQUIPMENT DESIGNATION LOAD. POINT OF CONNECTION <u>HWCP-1</u> 14. ACCESS CLEARANCES FOR MAINTENANCE AND REPLACEMENT: VERIFY PHYSICAL DIMENSIONS OF EQUIPMENT TO ENSURE THAT ACCESS CLEARANCES CAN BE MET. COORDINATE LOCATIONS OF MECHANICAL WORK AND WORK OF OTHER TRADES TO PROVIDE ACCESS CLEARANCES FOR SERVICE <u>PIPING</u> ROOF DRAIN, OVERFLOW DRAIN AND MAINTENANCE. RD OD WASTE BELOW GRADE \_\_\_\_w\_\_\_ COORDINATION REQUIREMENTS FLOOR DRAIN WASTE ABOVE GRADE IRRIGATION SYSTEM: COORDINATE IRRIGATION WATER DEMAND. MINIMUM WATER PRESSURE PUMPED WASTE HOSE BIBB REQUIREMENTS & CONTROL CABINET LOCATIONS WITH IRRIGATION CONTRACTOR. INDIRECT WASTE GAS: CONTRACTOR/GAS COMPANY SHALL FINALIZE GAS METER AND GAS SERVICE LOCATIONS. BREAK IN PIPING OR DUCTWORK SANITARY SEWER BELOW GRADE INSTALL SEISMIC GAS SHUT OFF VALVE PER GAS COMPANY REGULATIONS. SANITARY SEWER ABOVE GRADE GAS METER 3. UTILITIES: COORDINATE WITH SITE UTILITY CONTRACTOR AND CIVIL DRAWINGS FOR UTILITY PUMPED SANITARY SEWER CONNECTIONS AND EXTENSIONS. INLINE WATER METER VENT 4. ROOF DRAINAGE: COORDINATE WITH GENERAL CONTRACTOR FOR ROOF DRAIN AND OVERFLOWS, STORM DRAIN SCUPPER DRAINS, AND CONDENSATE DRAINS. PUMP OVERFLOW STORM DRAIN 5. PLUMBING FIXTURES & EQUIPMENT: COORDINATE EXACT LOCATION OF ALL PLUMBING FIXTURES & EQUIPMENT WITH ARCHITECTURAL AND OTHER TRADES DOCUMENTS. PUMPED STORM DRAIN PRESSURE GAUGE CONDENSATE DRAIN PIPING: COORDINATE EXACT LOCATION OF ALL STRUCTURAL FRAMING & FOOTINGS AND FINALIZE THE EXACT ROUTING OF ALL PIPES WITH STRUCTURAL ENGINEER AT THE SITE PRIOR TO AND THERMOMETER PUMPED CONDENSATE DRAIN DURING THE CONSTRUCTION. COORDINATE UNDER GRADE PIPING & FOUNDATION DRAINAGE PIPING WITH CIVIL ENGINEER. COLD WATER (CW) PRESSURE/TEMPERATURE TEST PORT HOT WATER (HW), POTABLE, 120°F 7. ADJUSTMENTS: ALL EQUIPMENT, MOTORS, FANS GAS BURNERS, IGNITION DEVICES, DRIVES, ETC. \_\_\_\_\_ SHALL BE ADJUSTED AND BALANCED TO OPERATE AT SPECIFIED RATINGS AS REQUIRED FOR THIS REDUCED PRESSURE BACKFLOW HOT WATER, POTABLE, PROJECT SITE AND ACCOUNTING FOR ELEVATION ABOVE SEA LEVEL. PREVENTER TEMPERATURE OTHER THAN 120°F APPROVALS: MECHANICAL AND PLUMBING EQUIPMENT SHALL BE APPROVED FOR INSTALLATION IN \_\_\_\_\_ HOT WATER CIRCULATING (HWC), THE PROJECT LOCATION AND SHALL HAVE ALL CERTIFICATIONS AND RATINGS TO MEET ALL DOUBLE CHECK VALVE ASSEMBLY POTABLE, 120°F ENERGY, POLLUTION, ENVIRONMENTAL, SEISMIC, APPLICABLE CODES AND REGULATIONS. THE DCVA CONTRACTOR SHALL COORDINATE WITH MANUFACTURE SUPPLIERS AND SHALL INCLUDE ALL COSTS — --- — 140 —— HOT WATER CIRCULATING, POTABLE, CATCH BASIN - SAND/OIL INTERCEPTOR REQUIRED TO MEET THE BID DOCUMENTS. TEMPERATURE OTHER THAN 120°F FIRE PROTECTION: CONTRACTOR SHALL PROVIDE A FULLY DESIGNED FIRE PROTECTION SPRINKLER ——— FOF ——— FUEL OIL FILL TRENCH DRAIN SYSTEM IN COMPLIANCE WITH NFPA AND LOCAL CODES. PROVIDE DESIGN, PERMITS, MATERIALS, INSTALLATION, TESTING AND ALL OTHER FOR A FULLY OPERATIONAL SYSTEM. LOCATION OF ALL ——— FOS ——— FUEL OIL SUPPLY EMERGENCY GAS SHUT-OFF VALVE PIPING TO BE COORDINATED WITH OTHER TRADES. —— FOR ——— FUEL OIL RETURN 10. PRIOR TO PIPING INSTALLATION: PLUMBING CONTRACTOR TO COORDINATE PIPING LAYOUT WITH ALL SEISMIC GAS SHUT-OFF VALVE OTHER TRADES. — — FOV — — FUEL OIL VENT 11. ACCESS: COORDINATE ALL ACCESS LOCATIONS WITH GENERAL CONTRACTOR AND ARCHITECT TO RELIEF VENT WASHER BOX ENSURE ALL REQUIRED ACCESS HATCHES, ACCESS PANELS & ACCESS COVERS ARE PROVIDED. LOW PRESSURE NATURAL GAS GREASE INTERCEPTOR 12. PROVIDE WATER TIGHT SEALS FOR ANY PIPING PENETRATING THE EXTERIOR FOUNDATION WALLS OR MEDIUM PRESSURE NATURAL GAS 13. ANY DISCREPANCIES SHOULD BE REPORTED TO THE ARCHITECT IMMEDIATELY. IRRIGATION (NON POTABLE) 14. PROVIDE FIRE PROOFING FOR ALL PIPING PENETRATING FIRE BARRIER WALLS OR FLOOR SLABS. FIRE MAIN DISINFECTION OF POTABLE WATER SYSTEM REQUIREMENTS PIPE SYMBOLS 1. NEW OR REPAIRED POTABLE WATER SUPPLY SYSTEMS SHALL BE DISINFECTED TOP PIPE CONNECTION PRIOR TO USE. INITIAL COLIFORM SAMPLE IS REQUIRED PRIOR TO ADMINISTERING BOTTOM PIPE CONNECTION WATER-CHLORINE SOLUTION. SECTION 609.9 ITEMS #2 OR #3 CAN BE USED PRECEDED BY AND FOLLOWED BY PIPE TURNING UP ITEM #1. 3.1. NOTE FILL PORT TO ADD CHLORINE MUST BE WHERE WATER SUPPLY ENTERS PIPE TURNING DOWN/DROP BUILDING AND A FLOW METER TO MEASURE SOLUTION. 4. AFTER WATEROCHLORINE SOLUTION IS INCORPORATED INTO THE NEW OR REPAIRED PIPE CAP WATER SUPPLY SYSTEM A 48 HOUR WAITING PERIOD MUST BE OBSERVED PRIOR TO BACTERIOLOGICAL TEST. PIPE PLUG 5. BACTERIOLOGICAL TEST SHALL BE CONDUCTED BY A LABORATORY CERTIFIED FOR DRINKING WATER IN WASHINGTON STATE AFFIRMING WATER QUALITY CONTAINS NO COLIFORM BY SAMPLE TESTING THE FURTHEST FIXTURE FROM PUBLIC WATER SOURCE AND NOT LESS THAN TWO OTHER LOCATIONS PART OF THE WATER SUPPLY SYSTEM. CHLORINE LEVEL IN THE NEW OR REPAIRED WATER SUPPLY SYSTEM SHALL NOT WYE STRAINER BE LESS THAN THE MEAN AVERAGE OF THE AREA IN RELATIONSHIP FROM THE WATER PURVEYOR SOURCE. WYE STRAINER WITH CAPPED HOSE WARNING: IN CASE A WATER SOFTENER IS PART OF THE COLD WATER SYSTEM, END BLOWDOWN VALVE CONTRACTOR TO ENSURE THE WATER SOFTENER IS CONNECTED AND OPERATIONAL

BALL VALVE

BEFORE STARTING THE DISINFECTION PROCESS. FAILURE TO FOLLOW THE

INSTRUCTIONS WILL VOID THE WATER HEATER OR HEAT PUMP WARRANTY.

|    | ABOVE                         | FLR   | FLOOR                           |      | OVERFLOW DRAIN/DECK DRAIN           |
|----|-------------------------------|-------|---------------------------------|------|-------------------------------------|
|    | AREA DRAIN                    | FPM   | FEET PER MINUTE                 | OPD  | OVER PRESSURE DEVICE                |
|    | ABOVE FINISHED FLOOR          | FPS   | FEET PER SECOND                 | OPNG | OPENING                             |
|    | AUTHORITY HAVING JURISDICTION | FS    | FLOOR SINK                      | Р    | PUMP                                |
|    | BELOW FINISHED FLOOR          | FT    | FEET                            | PD   | PRESSURE DROP, PLANTER DRAIN        |
|    | BACKFLOW PREVENTER            | FU    | FIXTURE UNITS                   | POC  | POINT OF CONNECTION                 |
|    | BACK OF HOUSE                 | G     | GAS (LOW PRESSURE)              | PRV  | PRESSURE REDUCING VALVE             |
|    | BOOSTER PUMP                  | GAL   | GALLÒNS                         |      | PRESSURE RELIEF VALVE               |
|    | BATHTUB                       | GD    | GARAGE DRAIN                    | PS   | PUMPED STORM DRAINAGE               |
| 4  | BRITISH THERMAL UNIT PER HOUR | GM    | GAS METER                       | PSIG | POUNDS PER SQUARE INCH GAUGE        |
|    | BALANCING VALVE               | GPG   | GRAINS PER GALLON               | PSD  | PUMPED STORM DRAINAGE               |
|    | COMMON                        | GPM   | GALLONS PER MINUTE              | PSS  | PUMPED SANITARY SEWER               |
|    | CAPACITY                      | GV    | GATE VALVE                      | PSW  | PUMPED SANITARY WASTE               |
|    | CATCH BASIN                   | GWB   | GYPSUM WALLBOARD                | PW   | PUMPED WASTE                        |
|    | CONDENSATE DRAIN              | GWH   | GAS WATER HEATER                | RD   | ROOF DRAIN                          |
|    | CAPPED FOR FUTURE             | HB    | HOSE BIBB                       | REF  | REFERENCE                           |
|    | CUBIC FEET PER MINUTE         | HD    | HEAD                            | RPBP | REDUCED PRESSURE BACKFLOW PREVENTER |
|    | CAST IRON                     | HDR   | HUB DRAIN                       | RPM  | REVOLUTIONS PER MINUTE              |
|    | CEILING, COOLING              | HEDV  | HOSE END DRAIN VALVE            | S    | SINK                                |
|    | CLOTHES WASHER                | HORIZ | HORIZONTAL                      | SCH  | SCHEDULE                            |
|    | CLEANOUTS                     | HP    | HORSEPOWER                      | SCW  | SOFTENED COLD WATER                 |
| В  | COMBUSTION                    | HPCW  | HIGH PRESSURE COLD WATER        | SD   | STORM DRAIN                         |
| T  | CONTINUE, CONTROL             | HW    | HOT WATER                       | SEP  | SEWAGE EJECTOR PUMP                 |
| TR | CONTRACTOR                    | HWC   | HOT WATER RE-CIRCULATION        | SF   | SQUARE FOOT                         |
| 3  | CLEANOUTS TO GRADE            | HWCP  | HOT WATER CIRCULATION PUMP      | SGSV | SEISMIC GAS SHUT-OFF VALVE          |
|    | CIRCULATING PUMP              | HWR   | HOT WATER RETURN                | SH   | SHOWER                              |
|    | CHECK VALVE                   | HWST  | HOT WATER STORAGE TANK          | SO   | STORM OVERFLOW                      |
|    | COLD WATER                    | HX    | HEAT EXCHANGER                  | SP   | STATIC PRESSURE/SUMP PUMP           |
|    | DIAMETER                      | ICW   | INDUSTRIAL COLD WATER           | SR   | SUDS RELIEF                         |
|    | DRY BULB, DECIBEL             | ID    | INDIRECT DRAIN, INSIDE DIAMETER | SS   | STAINLESS STEEL/SANITARY SEWER      |
|    | DRINKING FOUNTAIN             | ΙE    | INVERT ELEVATION                | SSS  | SIDE SANITARY SEWER                 |
|    | DRAIN FIXTURE UNITS           | IHW   | INDUSTRIAL HOT WATER            | STD  | STANDARD                            |
|    | DIICTI E IDON                 | INI   | INICII                          |      |                                     |

TRENCH DRAIN

TRAP PRIMER

UNIT HEATER

VENT THRU ROOF

WATER CLOSET

WALL HYDRANT

WALL CLEANOUTS

WASHING MACHINE

WASTE, WATT, WIDE

URINAI

VFNT

UON

VTR

THERMOSTATIC MIXING VALVE

UNLESS OTHERWISE NOTED

WATER SUPPLY FIXTURE UNITS

KITCHEN SINK

LONG, LENGTH

WATER METER

MECHANICAL

MOUNTED

NEW

THOUSAND BTU PER HOUR

MAX. OVER CURRENT PROTECTION

OUTSIDE DIMENSION/DIAMETER

MIN. CIRCUIT AMPACITY

MEDIUM PRESSURE GAS

NORMALLY CLOSED

NORMALLY OPEN

KILOWATT

LAVATORY

POUND

MECH

MOCP

MTD

**ABBREVIATIONS** 

|        | DRAWING IN                               | <b>IDEX</b>               |                               |  |  |  |  |  |  |  |
|--------|------------------------------------------|---------------------------|-------------------------------|--|--|--|--|--|--|--|
| DWG    | DESCRIPTION                              |                           | INCLUDED IN SET               |  |  |  |  |  |  |  |
|        |                                          | PROGRESS SET<br>8/16/2024 | OWNER CHANGE SET<br>9/03/2024 |  |  |  |  |  |  |  |
| P0B.00 | LEGEND, GENERAL NOTES, AND DRAWING INDEX | ×                         | ×                             |  |  |  |  |  |  |  |
| P0B.01 | PLUMBING NOTES AND TABLES                | ×                         | ×                             |  |  |  |  |  |  |  |
| P0B.02 | PLUMBING CALCULATIONS                    | X                         | ×                             |  |  |  |  |  |  |  |
| P0B.03 | PLUMBING SCHEDULES                       | X                         | Х                             |  |  |  |  |  |  |  |
| P2B.00 | UNDERSLAB WASTE & VENT PLAN              | X                         | X                             |  |  |  |  |  |  |  |
| P2B.01 | BASEMENT WASTE & VENT PLAN               | ×                         | ×                             |  |  |  |  |  |  |  |
| P2B.02 | LEVEL 1 WASTE & VENT PLAN                | ×                         | ×                             |  |  |  |  |  |  |  |
| P2B.03 | LEVEL 2 WASTE & VENT PLAN                | х                         | Х                             |  |  |  |  |  |  |  |
| P2B.04 | LEVEL 3 WASTE & VENT PLAN                | X                         | ×                             |  |  |  |  |  |  |  |
| P2B.05 | ROOF WASTE & VENT PLAN                   | х                         | Х                             |  |  |  |  |  |  |  |
| P3B.01 | BASEMENT PLUMBING SUPPLY PLAN            | X                         | Х                             |  |  |  |  |  |  |  |
| P3B.02 | LEVEL 1 PLUMBING SUPPLY PLAN             | ×                         | ×                             |  |  |  |  |  |  |  |
| P3B.03 | LEVEL 2 PLUMBING SUPPLY PLAN             | Х                         | ×                             |  |  |  |  |  |  |  |
| P3B.04 | LEVEL 3 PLUMBING SUPPLY PLAN             | X                         | Х                             |  |  |  |  |  |  |  |
| P4B.00 | WASTE & VENT RISER DIAGRAMS              | X                         | Х                             |  |  |  |  |  |  |  |
| P4B.01 | WASTE & VENT RISER DIAGRAMS              | X                         | Х                             |  |  |  |  |  |  |  |
| P5B.00 | SUPPLY RISER DIAGRAMS                    |                           | Х                             |  |  |  |  |  |  |  |
| P5B.01 | SUPPLY RISER DIAGRAMS                    |                           | х                             |  |  |  |  |  |  |  |
| P7B.00 | DETAILS                                  | X                         | X                             |  |  |  |  |  |  |  |
| P7B.01 | DETAILS                                  | X                         | ×                             |  |  |  |  |  |  |  |

Update code references within the plumbing plans to be consistent with submittal of 2018 Washington State Plumbing Code. Example would be Sheet P0G.01, Pipe Insulation Schedule, note references the 2019 CEC. Another example would be on sheet P0G.02 Fixture Unit Calculations references 2021UPC. Review and update code references as needed.

CONTE

DIMENSION

**EXISTING** 

**EFFICIENCY** 

**EQUIVALENT** 

FAHRENHĖIT

FLOOR DRAIN

FINISHED FLOOR

ELECTRIC WATER COOLER

ELECTRIC WATER HEATER

FIRE DEPARTMENT CONNECTION

EXTERIOR, EXTERNAL

FLOOR CLEANOUTS

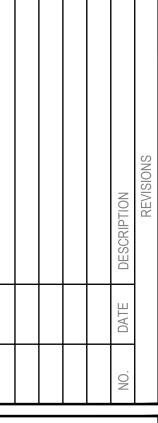
DOWN SPOUT

(Construction Set, Sheet P0G.00 and others)

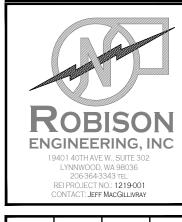
Update references in plumbing sheets to either details or other plumbing plan pages. There a multiple references to either incorrect pages or pages that do not exist. Example sheet P4G.00 refers to P200 for riser diagram, which are on sheets P4G.00 and P5G.00. See comment on sheet P0G.03 for another example. Review and update plumbing sheets as needed.

(Construction Set, Sheet P0G.00 and others)

mment on Review and







| DESIGNED: CHECKED: APPROVED: | JR<br>JR |
|------------------------------|----------|
|------------------------------|----------|

Y HEIGHT APARTMENTS - BUILDING VE SE , WA 98374

 $\mathbf{\Omega}$ 

POBISON

09/03/2024

09/03/2024

 $\mathbf{a} \approx \mathbf{a}$ 

LEGEND GENERAL NOTES AND

DRAWING INDEX

POB.00

|                                                                                                 | PIPE INSULATION SCHEDULE                       |                                             |                 |                                             |                |        |  |  |  |  |  |  |
|-------------------------------------------------------------------------------------------------|------------------------------------------------|---------------------------------------------|-----------------|---------------------------------------------|----------------|--------|--|--|--|--|--|--|
| SERVICE                                                                                         | OPTION                                         | 1                                           | OP <sup>2</sup> | TION 2                                      | VAPOR RETARDER | NOTES  |  |  |  |  |  |  |
| SERVICE                                                                                         | MATERIAL                                       | THICKNESS                                   | MATERIAL        | THICKNESS                                   | REQUIRED       | NOTES  |  |  |  |  |  |  |
| DOMESTIC COLD WATER, IRRIGATION WATER, CONDENSATE DRAINS, STORM DRAIN (IN CONDITIONED SPACE)    | MINERAL-FIBER WITH JACKET                      | ALL SIZES: ½"                               | PVC/NBR         | ALL SIZES: ¾"                               | YES            | 12,13  |  |  |  |  |  |  |
| DOMESTIC COLD WATER, IRRIGATION WATER, CONDENSATE DRAINS, WASTE (OUTSIDE THE CONDITIONED SPACE) | MINERAL-FIBER WITH JACKET                      | (R−3)<br>½" PIPE: ½"<br>ALL OTHER SIZES: 1" | PVC/NBR         | (R-3)<br>½" PIPE: ½"<br>ALL OTHER SIZES: ¾" | YES            | 7,8,10 |  |  |  |  |  |  |
| ROOF DRAIN BODIES                                                                               | MINERAL-FIBER OR CELLULAR<br>GLASS WITH JACKET | 1"                                          | PVC/NBR         | 1"                                          | YES            | 12     |  |  |  |  |  |  |
| DOMESTIC HOT WATER AND RECIRCULATED HOT WATER (RESIDENTIAL)                                     | MINERAL-FIBER WITH JACKET                      | (R-3)<br>½" PIPE: ½"<br>ALL OTHER SIZES: 1" | PVC/NBR         | (R-3)<br>½" PIPE: ½"<br>ALL OTHER SIZES: ¾" | NO             | 2,10   |  |  |  |  |  |  |
| DOMESTIC HOT WATER AND RECIRCULATED HOT WATER (NONRESIDENTIAL)                                  | MINERAL-FIBER WITH JACKET                      | ½"-1½" PIPE: 1"<br>1½"-4" PIPE:1.5"         | PVC/NBR         | ½"-1¼" PIPE: 1"<br>1½"-4" PIPE:1.5"         | NO             | 3,9    |  |  |  |  |  |  |
| EXPOSED SANITARY DRAINS AND DOMESTIC WATER SUPPLIES AND STOPS FOR ADA FIXTURES.                 | TRUEBRO LAV-GUARD                              | N/A                                         | N/A             | N/A                                         | NO             | 11     |  |  |  |  |  |  |

- 1. PIPING INSULATION EXPOSED TO THE WEATHER SHALL BE PROTECTED FROM DAMAGE. CONTRACTOR SHALL PROVIDE SHIELDING FROM SOLAR RADIATION THAT CAN CAUSE DEGRADATION OF THE MATERIAL. ADHESIVE TAPE SHALL NOT BE PERMITTED.
- 2. PER 2019 CEC SECTION R403.5.3 (RESIDENTIAL) INSULATION FOR HOT WATER PIPE SHALL HAVE A MINIMUM R—VALUE OF R—3.
- 3. PIPING FROM WATER HEATER TO THE TERMINATION OF HEATED WATER SUPPLY PIPE SHALL BE INSULATED IN ACCORDANCE WITH TABLE C403.2.9.
- 4. ON BOTH THE INLET AND OUTLET PIPING OF A STORAGE HOT WATER HEATER, THE FIRST 8 FEET OF PIPING OR PIPING FROM WATER HEATER TO HEAT TRAP SHALL BE INSULATED.
- 5. HEAT TRACED PIPING SHALL BE INSULATED IN THE SAME MANNER AS NON HEAT TRACED PIPING OR PER THE HEAT TRACE MANUFACTURER'S INSTRUCTIONS.
- TUBULAR PIPING INSULATION SHALL NOT BE REQUIRED FOR THE FOLLOWING:
- 6.1. THE TUBING FROM THE CONNECTION AT THE TERMINATION OF THE FIXTURE SUPPLY PIPING TO A PLUMBING FIXTURE OR PLUMBING APPLIANCE.
- VALVES, PUMPS, STRAINERS, AND THREADED UNIONS IN PIPING THAT IS 1 INCH OR LESS IN NOMINAL DIAMETER.
- PIPING FROM USER-CONTROLLED SHOWER AND BATH MIXING VALVES TO THE WATER OUTLETS.
- COLD WATER PIPING OF A DEMAND RECIRCULATION WATER SYSTEM.
- TUBING FROM A HOT DRINKING-WATER HEATING UNIT TO THE WATER OUTLET.
- 6.6. PIPING AT LOCATIONS WHERE A VERTICAL SUPPORT OF THE PIPING IS INSTALLED.
- PIPING SURROUNDED BY BUILDING INSULATION WITH A THERMAL RESISTANCE (R-VALUE) OF NOT LESS THAN R-3.
- HOT WATER PIPING THAT IS PART OF THE FINAL PIPE RUN TO THE PLUMBING FIXTURE AND IS NOT PART OF THE HEATED—WATER CIRCULATION SYSTEM CIRCULATION PATH IS NOT REQUIRED TO MEET THE MINIMUM INSULATION REQUIREMENTS OF C404.6.

7. PER 2018 UPC SECTION 312.6 NO WATER, SOIL, OR WASTE PIPE SHALL BE INSTALLED OR PERMITTED OUTSIDE OF A BUILDING, IN ATTICS OR CRAWL SPACES, OR IN AN EXTERIOR WALL UNLESS, WHERE NECESSARY,

- ADEQUATE PROVISION IS MADE TO PROTECT SUCH PIPE FROM FREEZING. ALL HOT AND COLD WATER PIPES OUTSIDE THE CONDITIONED SPACE SHALL BE PROVIDED WITH INSULATION WITH A MINIMUM R-VALUE OF
- 8. HEAT TRACING SHALL BE PROVIDED FOR COLD WATER AND IRRIGATION WATER IN UNCONDITIONED SPACES. CONTACT ENGINEERING IF NECESSARY. PER 2019 CEC SECTION C403.12.3 FREEZE PROTECTION SYSTEMS, SUCH AS HEAT TRACING OF OUTDOOR PIPING, SHALL INCLUDE AUTOMATIC CONTROLS CONFIGURED TO SHUT OFF THE SYSTEMS WHEN OUTDOOR AIR TEMPERATURES ARE ABOVE 40°F.
- 9. PER 2019 CEC TABLE C403.2.9 INSULATION FOR HOT WATER AND HOT WATER RECIRCULATION SHALL HAVE A THERMAL CONDUCTIVITY OF 0.21-0.28 (BTU.IN/H.FT².℉) AT OPERATING TEMPERATURE.
- 10. INSULATION R-VALUE SHALL MEET THE MINIMUM REQUIREMENT. THICKNESS IS BASED ON GRAINGER SAMPLE DATA FOR K-FLEX(PVC/NBR) AND OWENS CORNING(FIBER GLASS). 11. ALL ADA P-TRAPS, HOT WATER SUPPLY TUBING, AND SHUT-OFF COCKS SHALL BE PROTECTED WITH APPROVED COVERS TO PREVENT SCALDING.
- 12. REQUIRED BY ENGINEERING BASED ON BEST PRACTICE
- 13. INSULATION IS NOT REQUIRED ON PLASTIC COLD WATER PIPING.

|     | HANGE     | R SPA | CING F | OR W | /ATER | PIPING |  |
|-----|-----------|-------|--------|------|-------|--------|--|
| ALL | SUSPENDED | WATER | SUPPLY | PIPE | SHALL | BE     |  |

SUPPORTED AS FOLLOWS PER 2018 UPC TABLE 313.3:

|                     | MAX. HORIZONTAL | MAX. VERTICAL |
|---------------------|-----------------|---------------|
|                     | SPACING         | SPACING       |
| COPPER PIPE ≤1½"    | 6 FT.           | 10 FT.        |
| COPPER PIPE >2"     | 10 FT.          | 10 FT.        |
| COPPER TUBING ≤1½"  | 6 FT.           | 10 FT.        |
| COPPER TUBING >2"   | 10 FT.          | 10 FT.        |
| CPVC <u>&lt;</u> 1" | 3 FT.           | 10 FT.        |
| CPVC > 11/4"        | 4 FT.           | 10 FT.        |
|                     |                 |               |

#### HANGER SPACING FOR WASTE AND VENT PIPING

| ALL SUSPENDED SANITARY AND VENT | PIPE SHALL  | BE          |
|---------------------------------|-------------|-------------|
| SUPPORTED AS FOLLOWS PER 2018   | UPC TABLE 3 | 313.3:      |
|                                 | MAX. HORIZ. | MAX. VERT.  |
|                                 | SPACING     | SPACING     |
| ABS                             | 4 FT.       | 10 FT.      |
| PVC (TYPE DWV)                  | 4 FT.       | 10 FT.      |
| CAST-IRON HUBLESS*              | EVERY       | 15 FT.      |
|                                 | OTHER JOINT |             |
| *CAST-IRON OVER 4' SHALL BE SUF | PORTED AT E | EVERY JOINT |

| PLUMBING FIXTURE FLOW RATES PER 2018 UPC CH. 4 |                    |       |  |  |  |  |  |
|------------------------------------------------|--------------------|-------|--|--|--|--|--|
| FIXTURE TYPE                                   | FLOW RATE          | NOTES |  |  |  |  |  |
| SHOWERHEADS                                    | 1.8 GPM @ 80 PSI   |       |  |  |  |  |  |
| LAVATORY FAUCETS, RESIDENTIAL                  | 1.2 GPM @ 60 PSI   | 1     |  |  |  |  |  |
| LAVATORY FAUCETS, NON-RESIDENTIAL              | 0.5 GPM @ 60 PSI   | 2     |  |  |  |  |  |
| KITCHEN FAUCETS                                | 1.8 GPM @ 60 PSI   | 3     |  |  |  |  |  |
| GRAVITY TANK-TYPE WATER CLOSETS                | 1.28 GALLONS/FLUSH | 4     |  |  |  |  |  |
| FLUSHOMETER TANK WATER CLOSETS                 | 1.28 GALLONS/FLUSH | 4     |  |  |  |  |  |
| FLUSHOMETER VALVE WATER CLOSETS                | 1.28 GALLONS/FLUSH | 4     |  |  |  |  |  |
| ELECTROMECHANICAL HYDRAULIC WATER CLOSETS      | 1.28 GALLONS/FLUSH | 4     |  |  |  |  |  |
| URINALS                                        | 0.5 GALLONS/FLUSH  |       |  |  |  |  |  |

- LAVATORY FAUCETS SHALL NOT HAVE A FLOW RATE LESS THAN 0.8 GPM AT 20 PSI.
- WHERE COMPLYING FAUCETS ARE UNAVAILABLE, AERATORS RATED AT 0.35 GPM OR OTHER MEANS MAY BE USED TO ACHIEVE
- KITCHEN FAUCETS MAY TEMPORARILY INCREASE FLOW ABOVE THE MAXIMUM RATE, BUT NOT ABOVE 2.2 GPM @ 60 PSI AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GPM @ 60 PSI.
- INCLUDES SINGLE AND DUAL FLUSH WATER CLOSETS WITH AN EFFECTIVE FLUSH OF 1.6 GALLONS OR LESS. SINGLE FLUSH TOILETS - THE EFFECTIVE FLUSH VOLUME SHALL NOT EXCEED 1.6 GALLONS. THE EFFECTIVE FLUSH VOLUME IS THE AVERAGE FLUSH VOLUME WHEN TESTED IN ACCORDANCE WITH ASME A112.19.2 DUAL FLUSH TOILETS - THE EFFECTIVE FLUSH VOLUME SHALL NOT EXCEED 1.6 GALLONS. THE EFFECTIVE FLUSH VOLUME IS DEFINED AS THE COMPOSITE, AVERAGE FLUSH VOLUME OF TWO REDUCED FLUSHES AND ONE FULL FLUSH. FLUSH VOLUMES WILL BE TESTED IN ACCORDANCE WITH ASME A112.19.2 AND ASME A112.19.14.

#### NOTE TO CONTRACTOR

#### DRAWINGS ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE DUCTWORK, CONNECTIONS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY FOR A COMPLETE SYSTEM.

## **CONTRACTOR SUBSTITUTIONS** & REVISIONS

PLEASE SUBMIT PROPOSALS FOR SUBSTITUTIONS OR REVISIONS FOR REVIEW AND APPROVAL PRIOR TO ORDERING MATERIAL OR DOING WORK. FOR EQUIPMENT THAT IS SCHEDULED BY MANUFACTURER'S NAME AND CATALOG DESIGNATIONS, THE MANUFACTURER'S PUBLISHED DATA AND/OR SPECIFICATION FOR THAT ITEM ARE CONSIDERED PART OF SPECIFICATION. ENGINEERING COSTS FOR REVISING MEP PLANS SHALL BE ADDRESSED IN THE COST ANALYSIS OF THE SUBSTITUTION PROPOSAL. CONTRACTOR TO COORDINATE WITH ENGINEER AND DETERMINE ASSOCIATED DESIGN AND PERMITTING COSTS. CONTRACTOR SHALL BE RESPONSIBLE FOR OTHER COSTS ASSOCIATED WITH UNFORESEEN ISSUES RESULTING FROM SUBSTITUTIONS OR REVISIONS.

#### PRE-CONSTRUCTION MEETING NOTES

CONTRACTORS SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH THE ENGINEER FOR THE PURPOSE OF REVIEWING THE WORK PRIOR TO ORDERING ANY EQUIPMENT OR PERFORMING ANY WORK. THE MEETING SHALL BE LOCATED AT THE PROJECT SITE ON A DATE AND TIME TO BE MUTUALLY AGREED. THE MEETING WILL BE A WORKING SESSION. THE MEETING WILL BE FACILITATED BY THE ENGINEER AND THE AGENDA WILL INCLUDE A DETAILED REVIEW OF THE PLANS AND SPECIFICATIONS, CROSS CHECK WITH OTHER TRADES FOR COORDINATION ISSUES, REVIEW OF PROPOSED PRODUCTS, REVIEW OF PLANNED MEANS AND METHODS, AND ON-SITE INVESTIGATION OF FIELD CONDITIONS RELATIVE TO EXISTING CONDITIONS THAT COULD AFFECT THE WORK PERSONS ATTENDING THE MEETING SHALL BE KNOWLEDGEABLE OF THE PROJECT AND SHALL BE THE SPECIFIC PERSONS INTENDED TO CONTINUE WITH THE PROJECT THROUGH TO COMPLETION. IF REQUIRED, REVISED PLANS WILL BE ISSUED THROUGH OFFICIAL CHANNELS. CHANGES IN THE BID PRICE WILL BE DISCUSSED, BUT NO CHANGE ORDERS WILL BE ISSUED UNLESS PROCESSED THOUGH OFFICIAL CHANNELS. IT SHALL BE UNDERSTOOD THAT THE ENGINEER HAS NO AUTHORITY TO ISSUE CHANGE ORDERS.

THE FOLLOWING TRADES SHALL BE REPRESENTED FOR THE MINIMUM TIME INDICATED:

2 HOURS

ALL SESSIONS

MECHANICAL SHEET METAL PLUMBING/PIPING ELECTRICAL SPRINKLER

GENERAL CONTRACTOR

4 HOURS 4 HOURS 4 HOURS

#### PLUMBING NOTES

- WASTE, VENT, COLD WATER, AND HOT WATER SYSTEM IN ACCORDANCE WITH DRAWINGS, MANUFACTURER'S RECOMMENDATIONS, AND LOCAL CODES. CONNECT TO EACH FIXTURE, EQUIPMENT, ETC. WITH ALL ACCESSORIES, VALVES, VACUUM BREAKERS, REGULATORS, UNIONS, ETC. AS REQUIRED AND AS RECOMMENDED BY THE MANUFACTURERS. REFER TO PLUMBING FIXTURE CONNECTION SCHEDULE ON PLANS.
- 2. HOT AND COLD: WATER PIPING CONNECTION TO EACH FIXTURE SHALL BE COLD WATER ON THE RIGHT HAND SIDE AND HOT WATER ON THE LEFT HAND SIDE.
- 3. HOT WATER: NON-CIRCULATING HOT WATER PIPE SHALL NOT EXCEED 10' UNLESS OTHERWISE SHOWN ON DRAWINGS.
- 4. VENT STACKS: COORDINATE VENT STACK WITH HVAC EQUIPMENT TO MAINTAIN MINIMUM 10' CLEARANCE FROM OUTSIDE AIR INTAKES.
- CLEANOUTS: PROVIDE CLEANOUTS PER CURRENT UPC AND AS REQUIRED BY LOCAL JURISDICTIONS. CLEANOUTS SHALL BE LOCATED IN WALLS/FLOORS WHERE THEY ARE NOT HIGHLY VISIBLE. FLOOR CLEANOUTS IN CARPETED AREAS TO BE FITTED WITH CARPET INSERTS. LOCATIONS SHALL BE SUBMITTED TO ARCHITECT FOR APPROVAL. NOTE: NOT ALL CLEANOUTS ARE SHOWN ON THE PLUMBING DRAWINGS.
- SUDS RELIEF: PROVIDE SUDS RELIEF IN ACCORDANCE WITH 2018 UPC SECTION 711.0, STATE AND LOCAL CODES.
- 7. SHUT-OFFS: PROVIDE 1/4 TURN BALL VALVE ANGLE STOP SHUT-OFF VALVES AND BRAIDED STAINLESS STEEL FLEX CONNECTORS AT HOT AND COLD WATER SUPPLY TO EACH FIXTURE. EXCEPTION: PROVIDE SCREWDRIVER STOPS AT BATH/SHOWERS.
- 8. TUB SPOUTS SHALL BE THREADED (NO PUSH-ON FITTINGS).
- 9. TRAP ARMS: PROVIDE TRAP ARMS SUCH THAT THE MAXIMUM LENGTH WILL NOT EXCEED CODE REQUIREMENTS.
- 10. ADA INSULATION: AT PLUMBING PIPING EXPOSED UNDER LAVATORIES, INSULATE THE EXPOSED PIPING AND TRAPS WITH PRODUCT SPECIFICALLY DESIGNED FOR THIS APPLICATION MEETING ADA REQUIREMENTS. PROVIDE HANDI-LAV GUARD OR EQUIVALENT. OFFSET P-TRAPS TO CLEAR WHEELCHAIR ACCESS.
- 11. GAS EQUIPMENT: GAS EQUIPMENT SHALL BE INSTALLED PER EQUIPMENT LISTINGS, APPLICABLE SFGC, SPC, LOCAL CODES & NFPA STANDARDS.
- 12. GAS CONNECTIONS: INSTALL FLEXIBLE QUICK DISCONNECT ASSEMBLIES FOR ALL GAS FIRED KITCHEN EQUIPMENT PER APPLICABLE SFGC, SPC, LOCAL CODES & NFPA STANDARDS. PROVIDE LOCKABLE GAS SHUT-OFF VALVES FOR FIREPLACES & BBQS IN UNATTENDED PUBLIC LOCATIONS IN THE BUILDING.
- 13. GAS PIPING CONNECTIONS TO WATER HEATERS, BOILERS AND FURNACES SHALL HAVE DIRT LEGS AND UNIONS PROVIDED ON APPLIANCE SIDE OF SHUTOFF VALVE.
- 14. GAS PIPING INSTALLATION: STEEL OR MALLEABLE IRON FUEL LINES 2" OR SMALLER SHALL BE ASSEMBLED USING THREAD SEALANT SUITABLE FOR NATURAL GAS. GAS PIPING LARGER THAN 2" SHALL HAVE WELDED FITTINGS.
- 15. GAS PIPING UNDERGROUND: WHERE INSTALLED BELOW GRADE THROUGH THE OUTER FOUNDATION OR BASEMENT WALL OF A BUILDING, SHALL BE ENCASED IN A PROTECTIVE PIPE SLEEVE. THE ANNULAR SPACE BETWEEN THE GAS PIPING AND THE SLEEVE SHALL BE SEALED.
- 16. GAS PIPING ABOVE GROUND: WHERE PASSING THROUGH AN OUTSIDE WALL, GAS PIPING SHALL BE PROTECTED AGAINST CORROSION BY COATING OR WRAPPING WITH AN INERT MATERIAL. WHERE PIPING IS ENCASED IN A PROTECTIVE PIPE SLEEVE, THE ANNULAR SPACE BETWEEN THE PIPING AND THE SLEEVE SHALL BE SEALED.
- 17. GAS PIPE SUPPORT: FUEL LINES SHALL BE SUPPORTED OR STRAPPED, AND SHALL BE PLUMB AND SQUARE.
- THE ROOF. 19. GAS PIPING SHALL NOT BE BURIED UNDER A BUILDING, SLAB OR

18. GAS PIPING ON ROOFTOPS SHALL BE SUPPORTED AND ANCHORED TO

- OTHER STRUCTURE.
- 20. GAS PIPING PROTECTIVE COATING: PAINT ALL EXTERIOR EXPOSED GAS PIPING WITH TWO COATS OF RUST INHIBITIVE PAINT. COLOR: GRAY.
- 21. WATER HAMMER ARRESTORS: PROVIDE AT THE END OF HOT AND COLD WATER LINES SERVING TWO OR MORE FIXTURES; SIZE IN ACCORDANCE WITH PLUMBING AND DRAINAGE INSTITUTE (PDI) REQUIREMENTS. WATER HAMMER ARRESTORS ARE REQUIRED FOR QUICK CLOSING VALVES, SUCH AS LAUNDRY WASHERS, FLUSH VALVES (PUBLIC TOILETS), ETC.
- 22. TRAP PRIMERS AS SPECIFIED: PROVIDE TRAP PRIMERS AND PIPING FOR FLOOR DRAINS, FLOOR SINKS, AREA DRAINS & HUB DRAINS. ARRANGE PIPING TO ACHIEVE EQUAL FLOW TO EACH DRAIN AND FLOOR SINK FOR TRAP PRIMERS SERVING MULTIPLE DRAINS AND FLOOR SINKS. COORDINATE EXACT LOCATIONS WITH ARCHITECT & ELECTRICAL ENGINEER.
- 23. P-TRAPS: ALL EXPOSED P-TRAPS SHALL BE CHROME-PLATED BRASS. P-TRAPS SERVING HANDICAPPED COUNTER TOP LAVATORIES SHALL BE
- 24. THROUGHOUT THE PROJECT PROVIDE BALL VALVES. GATE VALVES SHALL NOT BE USED. NO EXCEPTIONS.
- 25. HOT WATER RECIRCULATING BALANCING VALVES SHOULD BE BELL & GOSSETT CIRCUIT SETTER (WATTS OR EQUAL) WITH INTEGRAL READOUT PORTS, ADJUSTMENT KNOB, DRAIN CONNECTION, AND POSITIVE SHUTOFF.

- CONNECTIONS: PROVIDE PLUMBING FIXTURE CONNECTIONS TO BUILDING 26. DISASSEMBLY PROVISIONS: PROVIDE UNIONS OR FLANGES AT PIPING CONNECTIONS TO EQUIPMENT, COILS, TRAPS, CONTROL VALVES, AND OTHER COMPONENTS TO ALLOW DISASSEMBLY FOR MAINTENANCE.
  - 27. REDUCERS: PROVIDE AS REQUIRED FROM LINE PIPE SIZE TO EQUIPMENT, TRAP, COIL, AND CONTROL VALVE CONNECTION SIZES.
  - 28. VALVE TAGS: PROVIDE VALVE TAGS PER SPECIFICATIONS TO IDENTIFY VALVE AND THE AREA IT SERVES.
  - 29. OFFSETS: PROVIDE FOR BRANCH LINES TO EQUIPMENT.
  - 30. ALL TEMPERATURE MIXING VALVES SHALL COMPLY WITH ASSE-1070 SAFETY STANDARDS.
  - 31. PROVIDE PIPE MARKER WITH DIRECTION OF FLOW. LABEL "NON-POTABLE WATER DO NOT DRINK" CLEARLY ON NON-POTABLE
  - 32. PROVIDE EXPANSION LOOPS/EXPANSION JOINTS IN PIPING PER 2018 UPC TABLE 313.3 AND MANUFACTURER INSTALLATION INSTRUCTIONS.
  - 33. PROVIDE APPROVED PIPE HANGERS & PIPE SUPPORTS IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND 2018 UPC TABLES 313.3 & 313.6. SUBMIT FOR APPROVAL.
  - 34. DIELECTRIC UNIONS: PROVIDE AT CONNECTIONS OF DISSIMILAR PIPE.
  - 35. REFRIGERANT PIPING: PROVIDE SIZING & INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
  - 36. CONDENSATE DRAIN: PROVIDE A P-TRAP FOR EACH HVAC UNIT CONDENSATE PAN WITH PLUG TEES FOR CLEANING. CONDENSATE DRAINS SHALL BE DISCHARGED TO AN INDIRECT WASTE OR OUTSIDE.
  - 37. PIPING & EQUIPMENT SUPPORTS/HANGERS & SEISMIC RESTRAINTS TO BE DESIGNED BY DESIGN BUILT CONTRACTOR.
  - 38. IF NEEDED, PROVIDE VACUUM BREAKERS AT ALL HOSE BIBBS.
  - 39. FLOOR DRAINS OR SIMILAR TRAPS DIRECTLY CONNECTED TO THE DRAINAGE AND SUBJECT TO INFREQUENT USE SHALL BE PROVIDED WITH AN APPROVED AUTOMATIC MEANS OF MAINTAINING THEIR WATER SEALS IN ACCORDANCE WITH 2018 UPC 1007.0.
  - 40. INSULATION MATERIAL SHALL MEET CITY OF FERNDALE QUALITY STANDARDS.
  - 41. ALL PIPING AND DUCTWORK SHALL BE INSULATED CONSISTENT WITH THE 2018 WASHINGTON STATE ENERGY CODE.
  - 42. BUILDING DRAIN AND VENT PIPING MATERIALS SHALL COMPLY WITH 2018 UPC 701.0 AND 903.0.
  - 43. ALL SANITARY SYSTEM MATERIAL SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
  - 44. ALL STORAGE WATER HEATING EQUIPMENT SHALL BE PROVIDED WITH AN APPROVED, LISTED EXPANSION TANK OR OTHER DEVICE DESIGNED FOR INTERMITTENT OPERATION FOR THERMAL EXPANSION CONTROL PER 2018 UPC 608.3.
  - 45. WATER HEATERS SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL DISPLACEMENTS DUE TO SEISMIC MOTION PER 2018 UPC
  - 46. MATERIAL EXPOSED WITHIN A DUCT OR PLENUM SHALL COMPLY WITH 2018 IMC 602.2.1.
  - 47. HVAC EQUIPMENT AND WATER HEATERS SHALL COMPLY WITH 2018 IMC CHAPTER 3.
  - 48. BOILERS SHALL COMPLY WITH ALL THE REQUIREMENTS OF 2018 IMC CHAPTER 10.
  - 49. PROVIDE EXPANSION TANKS FOR BOILERS PER 2018 IMC SECTION
  - 50. SHOWERS AND TUB/SHOWER COMBINATIONS SHALL BE PROVIDED WITH MIXING VALVES PER 2018 UPC 408.0.
  - 51. PLUMBING FIXTURES AND FITTINGS SHALL COMPLY WITH CITY OF FERNDALE WATER CONSERVATION STANDARDS.
  - CONTRACTOR SHALL PROVIDE FIRESTOPPING AT PENETRATIONS AS NECESSARY TO RETAIN THE FIRE RATING OF ALL ASSEMBLIES. ALL WORK SHALL BE IN COMPLIANCE WITH CODE REQUIREMENTS FOR THE BUILDING CONSTRUCTION TYPE.
  - 53. ALL GARAGE DRAINS, TRASH ROOMS DRAINS & GARAGE TRENCH DRAINS SHALL BE TAKEN TO SAND/OIL INTERCEPTOR(S) BEFORE CONNECTING TO THE SANITARY SEWER SYSTEM.
  - 54. PLUMBING CONTRACTOR SHALL PROVIDE REDUCED PRESSURE BACKFLOW PREVENTERS OR OTHER APPROVED BACKFLOW PREVENTION DEVICE WHERE REQUIRED BY HEALTH AUTHORITIES, FOOD SERVICE DRAWINGS, APPLIANCE MANUFACTURER INSTRUCTIONS AND BY CODE.

PROVIDE REQUIRED & PROPER BACK FLOW PREVENTERS AS SPECIFIED FOR THE APPLIANCES INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:

- ICE MACHINES AND ICE MAKERS CARBONATED BEVERAGE DISPENSING SYSTEMS
- COFFEE BREWERS
- ESPRESSO MACHINES WATER FILTERS
- IRRIGATION SYSTEM FIRE PROTECTION SYSTEM
- CHEMICAL TREATMENT SYSTEM
- SOAP/CHEMICAL DISPENSER SYSTEM COMMERCIAL WASHER

STEAM OR HOT WATER BOILERS

## **APPLICABLE CODES**

- THE FOLLOWING PROJECT DESIGN IS BASED ON THE FOLLOWING CODES:
- -2018 INTERNATIONAL BUILDING CODE (IBC)
- -2018 INTERNATIONAL MECHANICAL CODE (IMC)
- -2018 UNIVERSAL PLUMBING CODE (UPC)
- -2018 WASHINGTON STATE ENERGY CODE (WSEC) COMMERCIAL PROVISIONS



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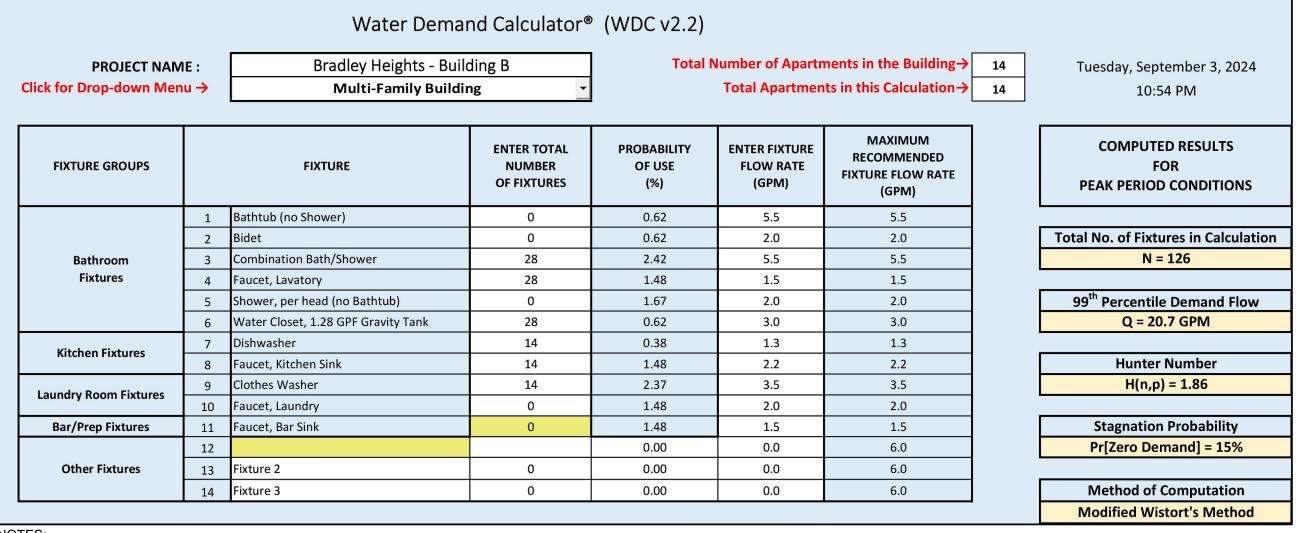
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PLUMBING NOTES AND TABLES

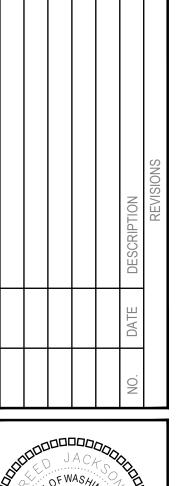
### PLUMBING CALCULATIONS



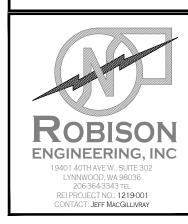
1. ADD 4 GPM FLOW RATE FOR HOSE BIBBS - TOTAL FLOW IS 24.7 GPM.

| CALCULATIONS BASED ON 2018 UPC     |                                                           |       |          |     |   |   |   |   |          |                           |             |                     |          |             |          |             |         |         |         |
|------------------------------------|-----------------------------------------------------------|-------|----------|-----|---|---|---|---|----------|---------------------------|-------------|---------------------|----------|-------------|----------|-------------|---------|---------|---------|
| 2 Bedroom Unit (2 Bath)            |                                                           |       |          |     |   |   |   |   |          |                           |             |                     |          |             |          |             |         |         |         |
| FIVTUDE                            |                                                           | FIXTU | RE UNITS | •   |   | _ | _ |   | 3 R      | # OF FIXTURES<br>PER UNIT | TOTAL QTY   | TOTAL FIXTURE UNITS |          |             |          |             |         |         |         |
| FIXTURE                            | TOTAL                                                     | CW    | HW       | W/V | В | 1 | 2 | 3 |          |                           | OF FIXTURES | SERVICE             | CW ONLY  | HW ONLY     | W/V ONLY |             |         |         |         |
| WATER CLOSET                       | 2.5                                                       | 2.5   | 0        | 3   | 2 | 4 | 4 | 4 | 0        | 2                         | 28          | 70                  | 70       | 0           | 84       |             |         |         |         |
| LAVATORY                           | 1                                                         | 0.75  | 0.75     | 1   | 2 | 4 | 4 | 4 | 0        | 2                         | 28          | 28                  | 21       | 21          | 28       |             |         |         |         |
| BATHTUB                            | 4                                                         | 3     | 3        | 2   | 2 | 4 | 4 | 4 | 0        | 2                         | 28          | 112                 | 84       | 84          | 56       |             |         |         |         |
| CLOTHES WASHER                     | 4                                                         | 3     | 3        | 3   | 2 | 4 | 4 | 4 | 0        | 1                         | 14          | 56                  | 42       | 42          | 42       |             |         |         |         |
| 2" HUB DRAIN                       | 0                                                         | 0     | 0        | 4   | 2 | 4 | 4 | 4 | 0        | 1                         | 14          | 0                   | 0        | 0           | 56       |             |         |         |         |
| KITCHEN SINK W/ DISHWASHER         | 3                                                         | 2.25  | 2.25     | 2   | 2 | 4 | 4 | 4 | 0        | 1                         | 14          | 42                  | 31.5     | 31.5        | 28       |             |         |         |         |
|                                    |                                                           |       |          |     |   |   |   |   |          |                           | TOTAL:      | 308                 | 248.5    | 178.5       | 294      |             |         |         |         |
|                                    |                                                           |       |          |     |   |   |   |   |          |                           |             |                     |          |             |          |             |         |         |         |
| Public Fixtures                    |                                                           |       |          |     |   |   |   |   |          |                           |             |                     |          |             |          |             |         |         |         |
| FIXTURE                            |                                                           | FIXTU | RE UNITS |     | В | 1 | 2 | 3 | R        |                           | TOTAL QTY   |                     | TOTAL FI | XTURE UNITS |          |             |         |         |         |
| TIATORE                            | TOTAL                                                     | CW    | HW       | W/V |   |   |   | · | <u> </u> |                           | '           |                     | 3        | I N         |          | OF FIXTURES | SERVICE | CW ONLY | HW ONLY |
| HOSE BIB                           | 2.5/1                                                     | 2.5/1 | 0        | 0   | 2 | 0 | 0 | 0 | 0        |                           | 2           | 3.5                 | 3.5      | 0           | 0        |             |         |         |         |
| 4" FLOOR DRAIN                     | 0                                                         | 0     | 0        | 8   | 1 | 0 | 0 | 0 | 0        |                           | 1           | 0                   | 0        | 0           | 8        |             |         |         |         |
|                                    |                                                           |       |          |     |   |   |   |   |          |                           | TOTAL:      | 3.5                 | 3.5      | 0           | 8        |             |         |         |         |
|                                    |                                                           |       |          |     |   |   | ! | - | !        |                           |             |                     |          |             |          |             |         |         |         |
|                                    | TOTAL                                                     | CW    | HW       | W/V |   |   |   |   |          |                           |             |                     |          |             |          |             |         |         |         |
| TOTAL FIXTURE UNITS:               | 311.5                                                     | 252   | 178.5    | 302 |   |   |   |   |          |                           |             |                     |          |             |          |             |         |         |         |
| PEAK FLOW:                         | FOR<br>SUPPLY<br>USE<br>APPENDIX<br>M<br>CALCULATI<br>ONS |       |          |     |   |   |   |   |          |                           |             |                     |          |             |          |             |         |         |         |
|                                    |                                                           |       |          |     |   |   |   |   |          |                           |             |                     |          |             |          |             |         |         |         |
|                                    | SUPPLY                                                    | WASTE |          |     |   |   |   |   |          |                           |             |                     |          |             |          |             |         |         |         |
| REQUIRED SERVICE SIZE IN BUILDING: | 1 1/2"                                                    | 6"    |          |     |   |   |   |   |          |                           |             |                     |          |             |          |             |         |         |         |
| REQUIRED METER SIZE:               | 1"                                                        |       |          |     |   |   |   | 1 |          |                           |             |                     |          |             |          |             |         |         |         |

| BRADLEY HEIGHTS APARTMENTS - WATER SUPP<br>CALCULATIONS ARE BASED ON 2018 UPC AF |             | RE       |
|----------------------------------------------------------------------------------|-------------|----------|
| FROM STREET TO RPBP                                                              | PENDIX A    |          |
| STREET PRESSURE, PSI                                                             |             | 75       |
| MINIMUM STREET PRESSURE, PSI                                                     |             | 75       |
| ASSUME +/- 5 PSI FLUCTUATION                                                     |             |          |
| EQUIPMENT LOSSES, PSI                                                            |             |          |
| WATER METER LOSS                                                                 |             | 4        |
| BACKFLOW PREVENTER                                                               |             | 10       |
| SITE SERVICE LINE (ESTIMATE)                                                     |             |          |
| PIPING SYSTEM LENGTH, FEET                                                       | 50          |          |
| FITTING ALLOWANCE, FEET                                                          | 12.5        |          |
| FROM STREET TO RPBP                                                              |             |          |
| ZONE FRICTION LOSS FACTOR, PSI/100'                                              | 3.0         |          |
| TOTAL ZONE FRICTION LOSS, PSI                                                    |             | 1.88     |
| MINIMUM PRESSURE AT RPBP, PSI                                                    |             | 59.13    |
| FROM RPBP TO FURTHEST APARTMENT                                                  | UNIT        |          |
| MINIMUM PRESSURE AT END PREVIOUS ZONE, PSI                                       |             | 59.1     |
| EQUIPMENT LOSSES, PSI                                                            |             |          |
| THERMOSTATIC MIXING VALVE LOSS                                                   |             | 4        |
| STATIC HEAD, PSI                                                                 |             |          |
| TOTAL ELEVATION GAIN, FT                                                         | 30          | 13.0     |
| PIPING FRICTION LOSSES                                                           |             |          |
| PIPING SYSTEM LENGTH, FEET                                                       | 150         |          |
| FITTING ALLOWANCE, FEET                                                          | 22.5        |          |
| ZONE FRICTION LOSS FACTOR, PSI/100'                                              | 3.0         |          |
| TOTAL ZONE FRICTION LOSS, PSI                                                    |             | 5.175    |
| MINIMUM PRESSURE AT FURTHEST APARTMENT UNIT, PSI                                 |             | 37.0     |
| FROM FURTHEST APARTMENT UNIT TO FURTHE                                           | EST FIXTURE | <b>.</b> |
| MINIMUM PRESSURE AT FURTHEST APARTMENT UNIT, PSI                                 |             | 37.0     |
| PIPING FRICTION LOSSES                                                           |             |          |
| RISER TO MANIFOLD, FEET                                                          | 4           |          |
| FITTING ALLOWANCE, FEET                                                          | 6           |          |
| FROM MANIFOLD TO FURTHEST FIXTURE                                                | 35          |          |
| ZONE FRICTION LOSS FACTOR, PSI/100'                                              | 14.0        |          |
| TOTAL ZONE FRICTION LOSS, PSI                                                    |             | 6.3      |
| MINIMUM PRESSURE AT FURTHEST FIXTURE, PSI                                        |             | 30.7     |







| MC        | RJ       | JR        |
|-----------|----------|-----------|
| DESIGNED: | CHECKED: | APPROVED: |

H AVE SE UP, WA 98374

ROBISON 194 PH

DATE: 09/03/2024

SHEET TITLE:
PLUMBING
CALCULATIONS

POB.02

## PLUMBING SCHEDULES

| F                         | PIPE MATERIALS             |                                |       |
|---------------------------|----------------------------|--------------------------------|-------|
| PIPE TYPE                 | MATERIAL                   | JOINT                          | NOTES |
| WATER DISTRIBUTION PIPING | COPPER, TYPE L.            | SOLDERED                       | 2     |
| APARTMENT WATER PIPING    | PEX-A                      | EXPANSION OR PUSH-FIT FITTINGS | 2     |
| WASTE AND VENT PIPING     | SCHEDULE 40 SOLID CORE PVC | SOLVENT CEMENT                 | 1,3   |
| CONDENSATE DRAIN PIPING   | COPPER, TYPE M.            | SOLDERED OR PROPRESS FITTINGS  |       |

#### NOTES:

- ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.
- PROVIDE THERMAL EXPANSION LOOPS FOR ALL WATER PIPING IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS.
- 3. PROVIDE CAST IRON PIPING FOR WASTE DISCHARGE EXCEEDING 110 DEGREES FAHRENHEIT.

| PIPE      | SIZING SO        | CHEDULE -          | COPPER T         | YPE L AT 3       | 3.0 PSI/100  | FEET             |
|-----------|------------------|--------------------|------------------|------------------|--------------|------------------|
|           | cc               | OLD WATER, FLUSH 1 | ANK              |                  | HOT WATER    |                  |
| PIPE SIZE | FIXTURE<br>UNITS | FLOW,<br>GPM       | VELOCITY,<br>FPS | FIXTURE<br>UNITS | FLOW,<br>GPM | VELOCITY,<br>FPS |
| 1/2"      | 0.8              | 1.8                | 2.4              | 1.0              | 2.0          | 2.8              |
| 3/4"      | 5.5              | 4.7                | 3.1              | 6.5              | 5.5          | 3.6              |
| 1"        | 12.8             | 9.8                | 3.8              | 15.2             | 11.2         | 4.4              |
| 1-1/4"    | 25.5             | 17.3               | 4.4              | 29.3             | 19.6         | 5.0              |
| 1-1/2"    | 46.6             | 27.7               | 5.0              | 46.8             | 27.7         | 5.0              |
| 2"        | 166.0            | 58.2               | 6.0              | 116.9            | 48.2         | 5.0              |
| 2-1/2"    | 395.0            | 104.0              | 7.0              | 246.9            | 74.4         | 5.0              |
| 3"        | 735.1            | 167.3              | 7.9              | 405.8            | 106.2        | 5.0              |
| 4"        | 1782.4           | 303.2              | 8.0              | 872.0            | 189.5        | 5.0              |
| 6"        | 6381.3           | 669.1              | 8.0              | 2847.0           | 418.2        | 5.0              |

|           | PIPE SIZII       | NG SCHED          | ULE - PEX A      | AT 14.0 PSI      | /100 FEET    |                  |
|-----------|------------------|-------------------|------------------|------------------|--------------|------------------|
|           | cc               | LD WATER, FLUSH T | ANK              |                  | HOT WATER    |                  |
| PIPE SIZE | FIXTURE<br>UNITS | FLOW,<br>GPM      | VELOCITY,<br>FPS | FIXTURE<br>UNITS | FLOW,<br>GPM | VELOCITY,<br>FPS |
| 1/2"      | 1.9              | 2.9               | 5.3              | 3.4              | 3.4          | 6.2              |
| 3/4"      | 9.0              | 7.5               | 6.8              | 11.2             | 8.6          | 7.8              |
| 1"        | 21.2             | 14.7              | 8.1              | 20.9             | 14.6         | 8.0              |
| 1-1/4"    | 40.8             | 25.3              | 9.3              | 33.5             | 21.8         | 8.0              |
| 1-1/2"    | 76.3             | 37.9              | 10.0             | 53.3             | 30.3         | 8.0              |
| 2"        | 199.8            | 65.0              | 10.0             | 134.8            | 52.0         | 8.0              |
| 2-1/2"    | 369.5            | 98.9              | 10.0             | 270.6            | 79.1         | 8.0              |
| 3"        | 588.9            | 141.0             | 10.0             | 439.0            | 112.8        | 8.0              |

|           |     | REDUCED        | PRESSURE BACKFLOW | ASSEMBLY           |       |
|-----------|-----|----------------|-------------------|--------------------|-------|
| EQUIP NO. | QTY | SERVICE        | INLET/OUTLET SIZE | BASIS OF DESIGN    | NOTES |
| RPBP-1    | 1   | DOMESTIC WATER | 2"                | ZURN WILKINS 375XL | 1,2   |

#### NOTES:

- 1. INSTALL IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS.
- 2. ALL DOMESTIC WATER EQUIPMENT SHALL BE NSF-61 LISTED.

|           |            |              |       | ELE          | CTRIC WAT        | TER HE  | ATER      |           |                              |           |
|-----------|------------|--------------|-------|--------------|------------------|---------|-----------|-----------|------------------------------|-----------|
| EQUIP NO. | SERVICE    | GPH RECOVERY |       | INLET/OUTLET | OPERATING WEIGHT |         | ELECTRICA | L         | BASIS OF DESIGN              | NOTES     |
| LQOII NO. | SERVICE    | AT 100°F TR  | (GAL) | CONNECTION   | (LBS)            | VOLTAGE | AMPS      | HEATER KW | DASIS OF DESIGN              | NOTES     |
| WH-1      | APARTMENTS | 16           | 50    | 3/4"         | 550              | 208V/3P | 18.75     | 4.5       | BRADFORD WHITE RE250T6-1NCWW | 1,2,3,4,5 |

#### NOTES:

1. PROVIDE CONDENSATE NEUTRALIZER. VENT PER MANUFACTURER'S INSTRUCTIONS.

3. UNITS SHALL BE CERTIFIED IN THE AIR QUALITY MANAGEMENT DISTRICT HAVING JURISDICTION.

Update detail reference for the electric water heater. in note 2.

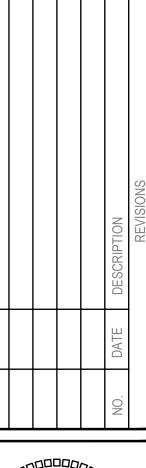
2. FOR WATER HEATER PIPING SEE DETAIL 1/P4.00.

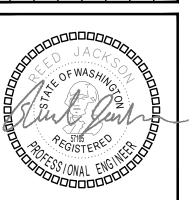
- (Construction Set, Sheet P0G.03, Electric Water Heater)
- 4. FACTORY AUTHORIZED START-UP AND OWNERS TRAINING REQUIRED. OWNER, ENGINEER, AND CONTRACTOR TO RECEIVE A COPY OF START UP REPORT.
- 5. ALL DOMESTIC WATER EQUIPMENT SHALL BE NSF-61 LISTED.

|       |                    |          | EX                   | PANSION TAN | K      |                   |                       |       |
|-------|--------------------|----------|----------------------|-------------|--------|-------------------|-----------------------|-------|
| EQUIP | SERVICE            | CAPACITY | PRE-CHARGE PRESSURE, | TANK        | SIZE   | OPERATING WEIGHT, | BASIS OF              | NOTES |
| NO.   | SERVICE            | GAL.     | PSI                  | DIAMETER    | HEIGHT | LBS               | DESIGN                | NOTES |
| ET-1  | DOMESTIC HOT WATER | 4.5      | 50                   | 11          | 15     | 9                 | THERM-X-TROL<br>ST-12 | 1     |

#### NOTES

1. INSTALL PER MANUFACTURER'S RECOMMENDATIONS







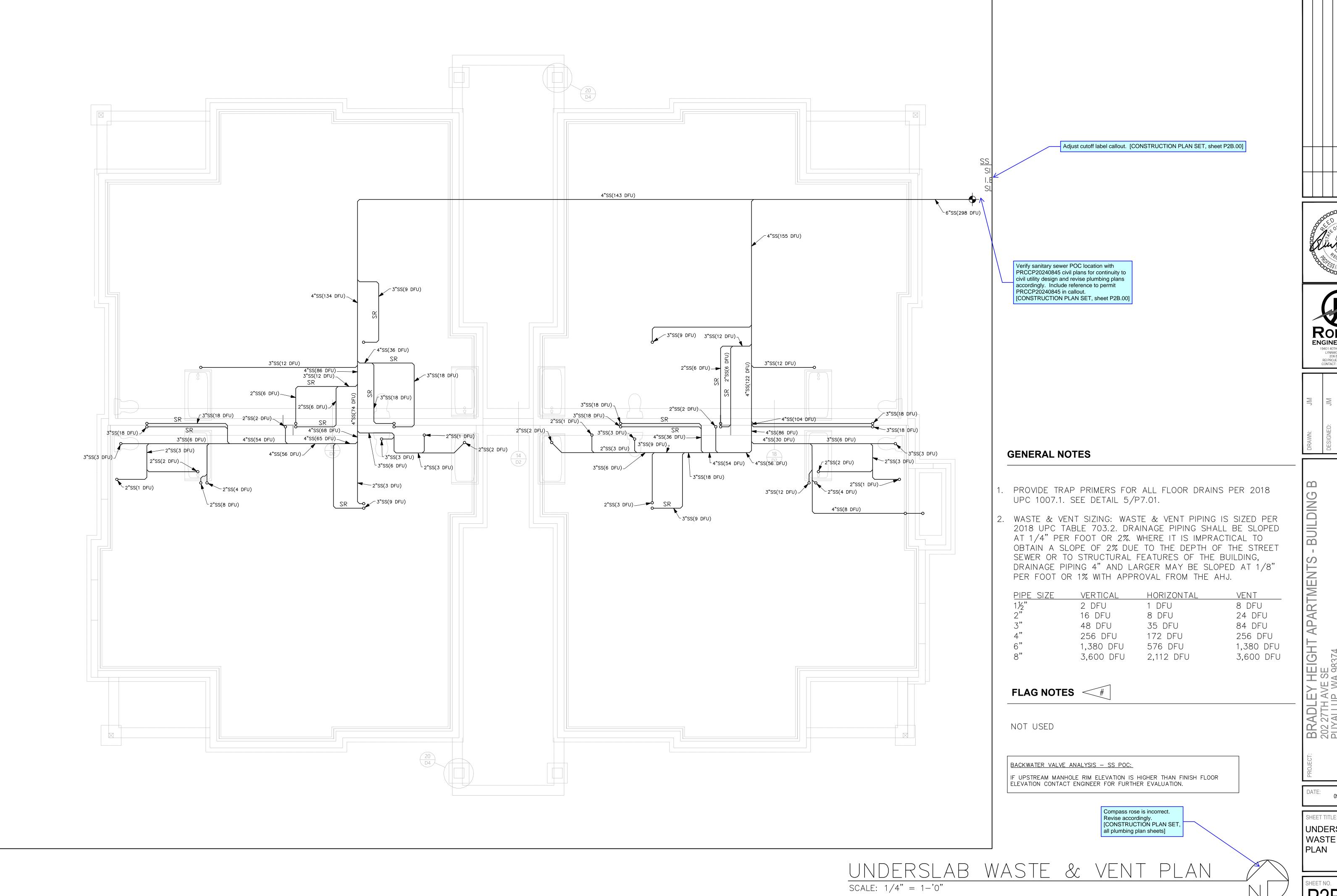
| $\geq$ | MC        | RJ       | JR        |
|--------|-----------|----------|-----------|
| DRAWN: | DESIGNED: | CHECKED: | APPROVED: |

EY HEIGHT APARTMENTS - BUILDIN AVE SE 9, WA 98374

ATE: 09/03/2024

SHEET TITLE:
PLUMBING
SCHEDULES

POB.03







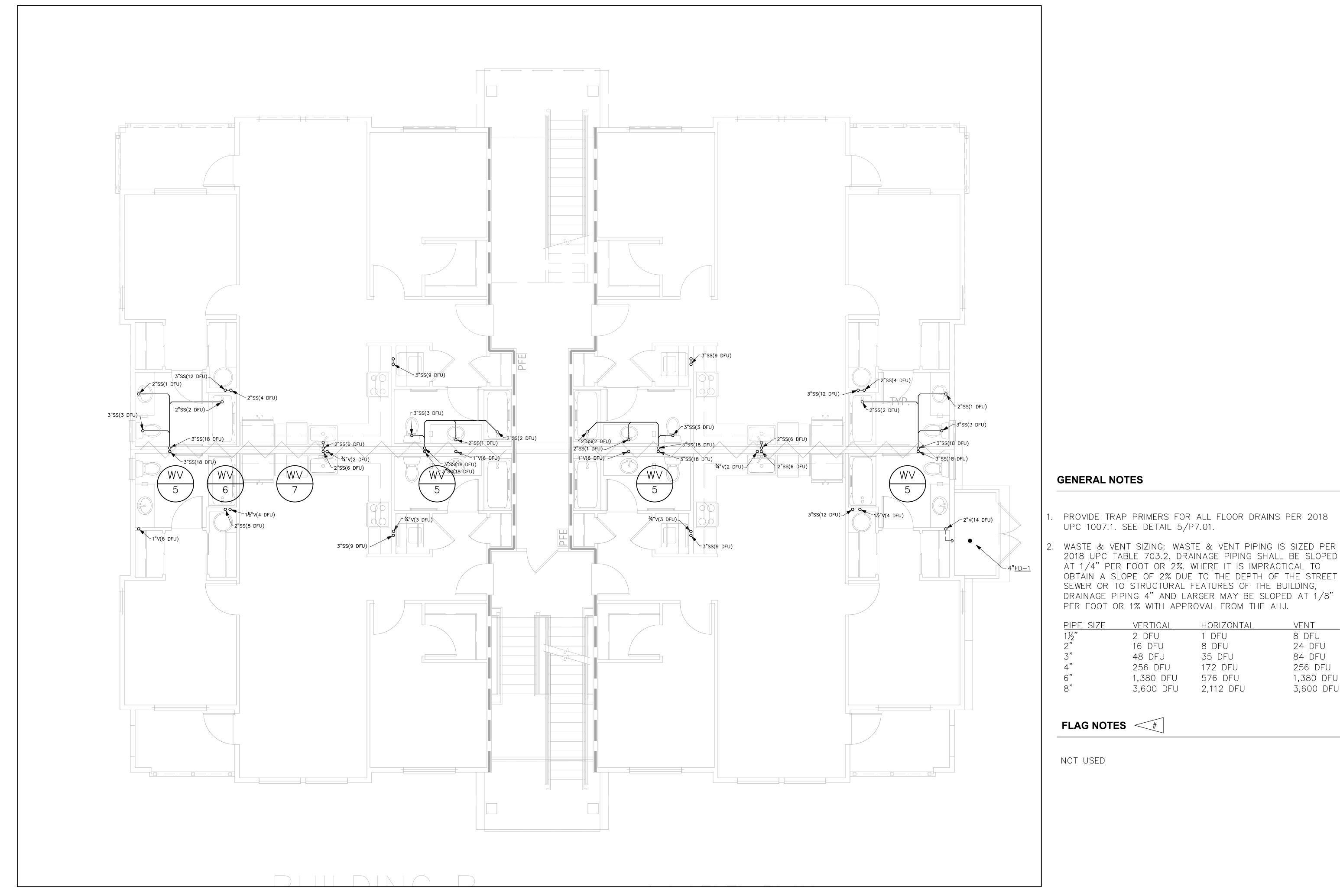
| M         | RJ       | JR        |
|-----------|----------|-----------|
| DESIGNED: | CHECKED: | APPROVED: |

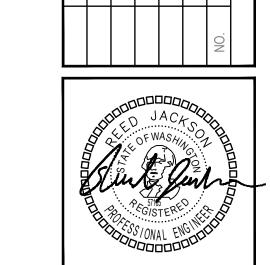
BUILDING

09/03/2024

SHEET TITLE: UNDERSLAB WASTE & VENT

P2B.00







| M         | RJ       | JR        |
|-----------|----------|-----------|
| DESIGNED: | снескер: | APPROVED: |

BUILDING B

VENT 8 DFU

24 DFU

84 DFU

256 DFU

1,380 DFU 3,600 DFU

09/03/2024

SHEET TITLE: BASEMENT WASTE & VENT PLAN

VERTICAL

2 DFU

16 DFU

48 DFU

256 DFU

1,380 DFU

3,600 DFU

2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED

HORIZONTAL

1 DFU

8 DFU

35 DFU

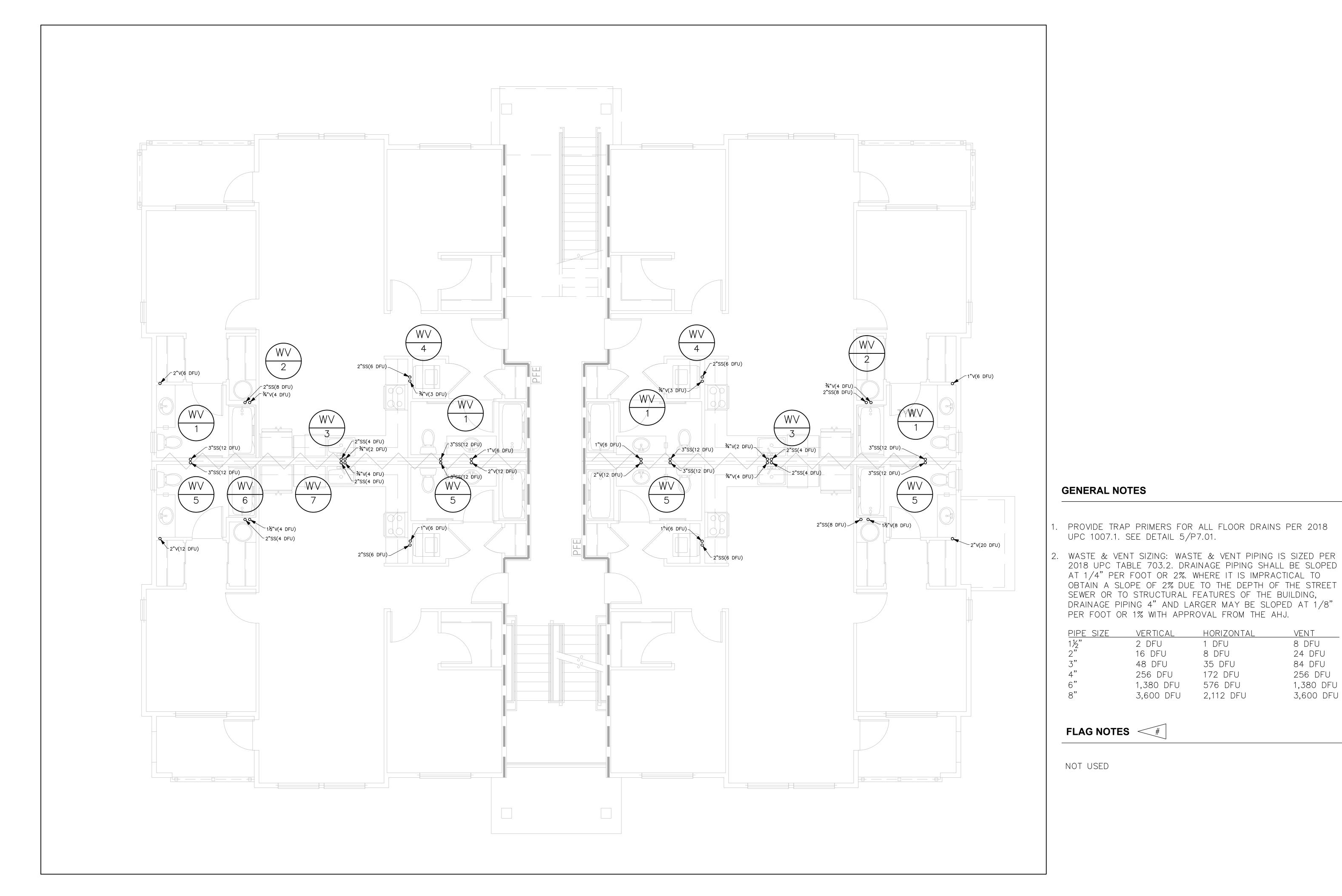
172 DFU

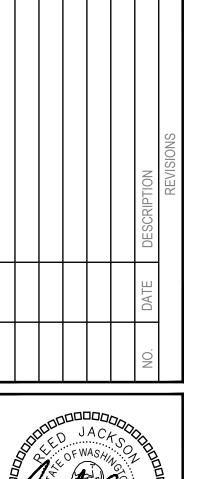
576 DFU

2,112 DFU

BASEMENT WASTE & VENT PLAN SCALE: 1/4" = 1-0"

P2B.01









| ML        | RJ       | JR        |
|-----------|----------|-----------|
| DESIGNED: | CHECKED: | APPROVED: |

8 DFU

24 DFU

84 DFU

256 DFU

1,380 DFU 3,600 DFU

09/03/2024

LEVEL 1 WASTE & VENT PLAN

VERTICAL

2 DFU

16 DFU

48 DFU

256 DFU

1,380 DFU

3,600 DFU

HORIZONTAL

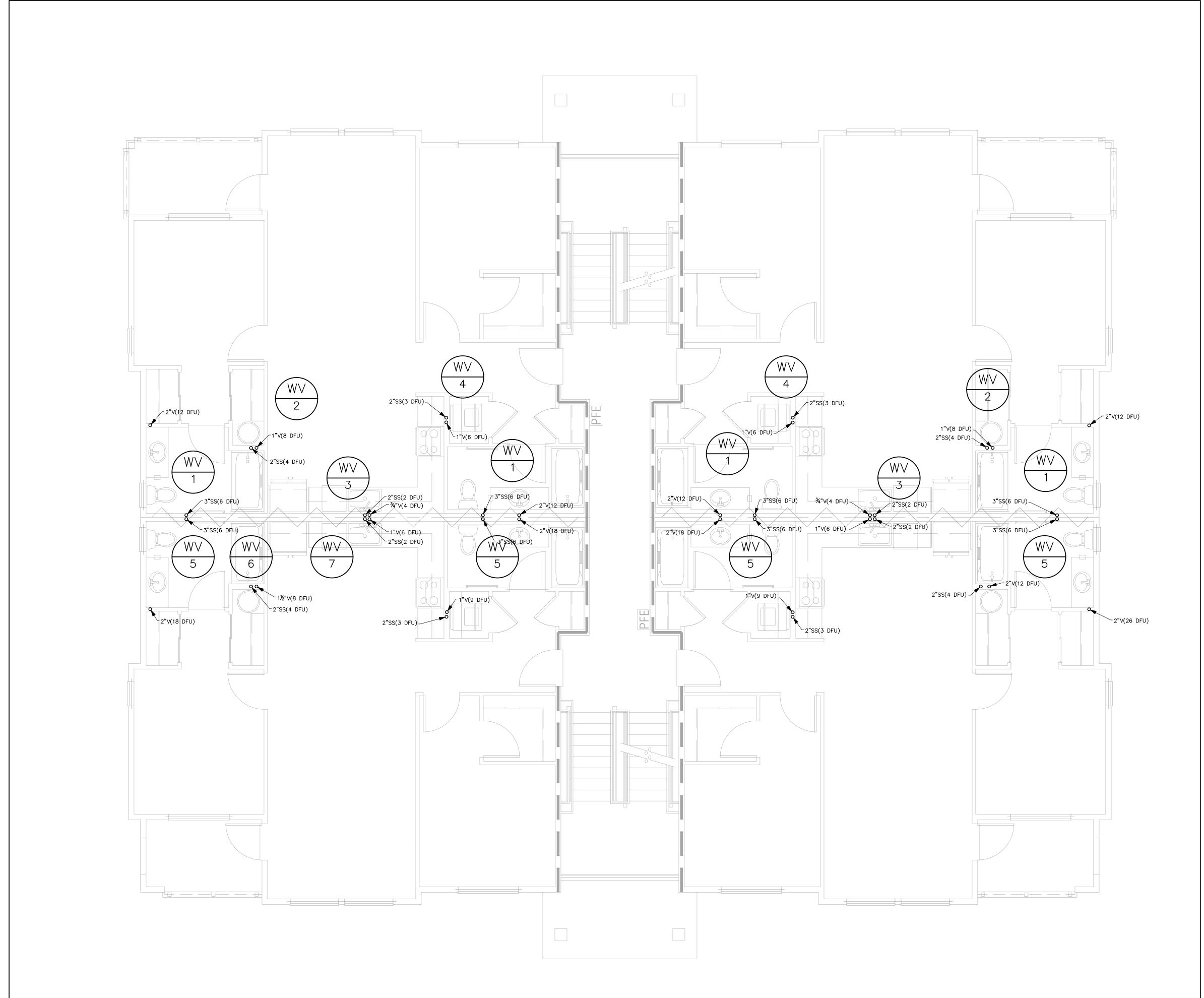
1 DFU

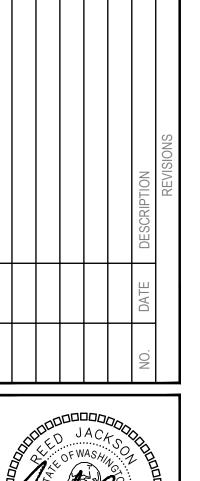
8 DFU

35 DFU

172 DFU

576 DFU 2,112 DFU









| MC        | RJ       | JR        |
|-----------|----------|-----------|
| DESIGNED: | CHECKED: | APPROVED: |

09/03/2024

LEVEL 2 WASTE & VENT PLAN

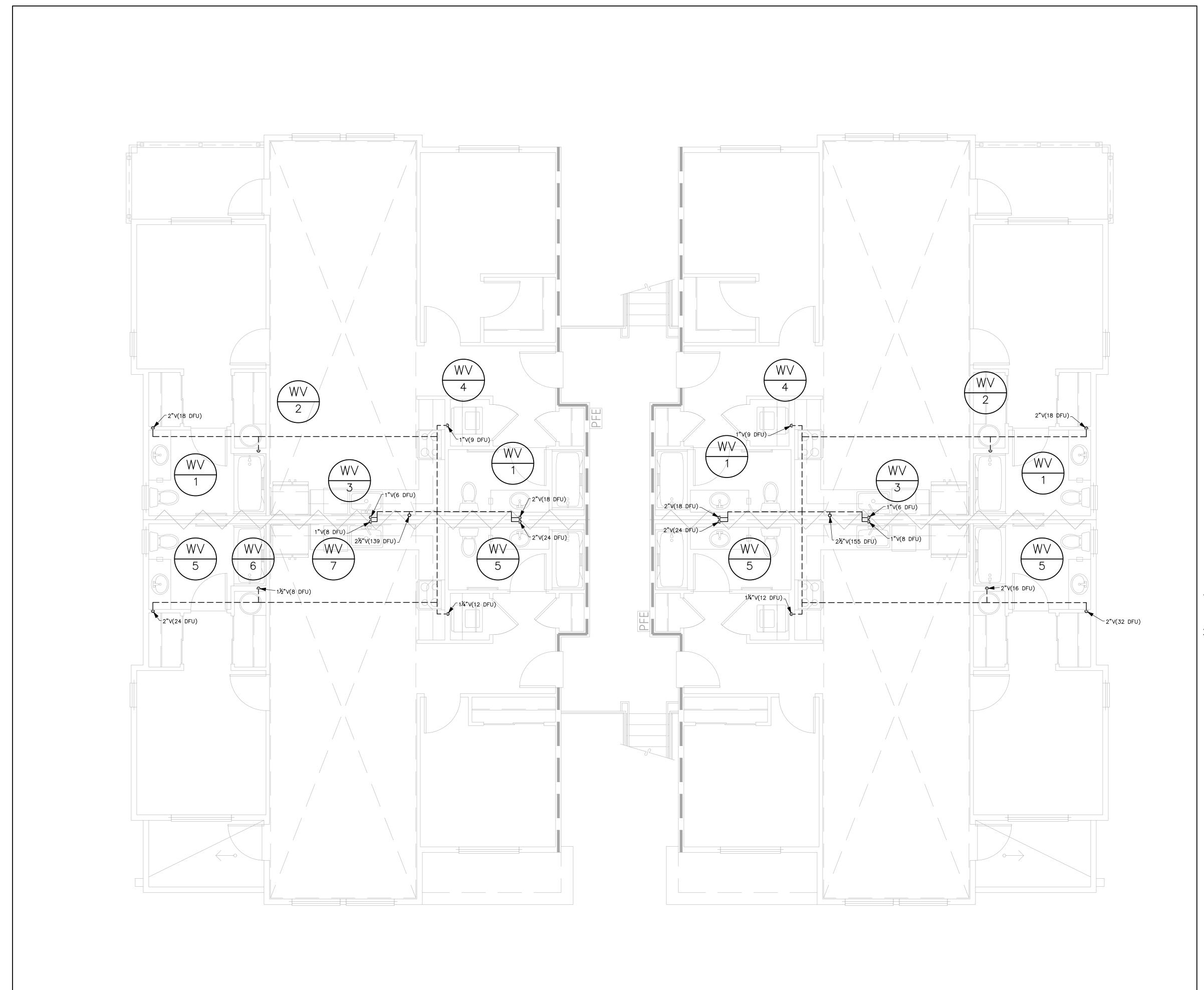
**GENERAL NOTES** 

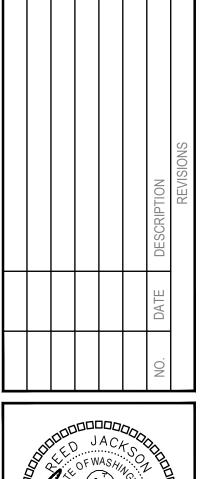
- 1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC 1007.1. SEE DETAIL 5/P7.01.
- 2. WASTE & VENT SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING,
  DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8"
  PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

| PIPE SIZE | VERTICAL  | HORIZONTAL | VENT      |
|-----------|-----------|------------|-----------|
| 1½"       | 2 DFU     | 1 DFU      | 8 DFU     |
| 2"        | 16 DFU    | 8 DFU      | 24 DFU    |
| 3"        | 48 DFU    | 35 DFU     | 84 DFU    |
| 4"        | 256 DFU   | 172 DFU    | 256 DFU   |
| 6"        | 1,380 DFU | 576 DFU    | 1,380 DFU |
| 8"        | 3,600 DFU | 2,112 DFU  | 3,600 DFU |

## FLAG NOTES #

NOT USED









| MC        | R        | JR.       |
|-----------|----------|-----------|
| DESIGNED: | CHECKED: | APPROVED: |

1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS PER 2018 UPC 1007.1. SEE DETAIL 5/P7.01.

2. WASTE & VENT SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING,
DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8"
PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

| PIPE SIZE | VERTICAL  | HORIZONTAL | VENT      |
|-----------|-----------|------------|-----------|
| 1½"       | 2 DFU     | 1 DFU      | 8 DFU     |
| 2"        | 16 DFU    | 8 DFU      | 24 DFU    |
| 3"        | 48 DFU    | 35 DFU     | 84 DFU    |
| 4"        | 256 DFU   | 172 DFU    | 256 DFU   |
| 6"        | 1,380 DFU | 576 DFU    | 1,380 DFU |
| 8"        | 3,600 DFU | 2,112 DFU  | 3,600 DFU |

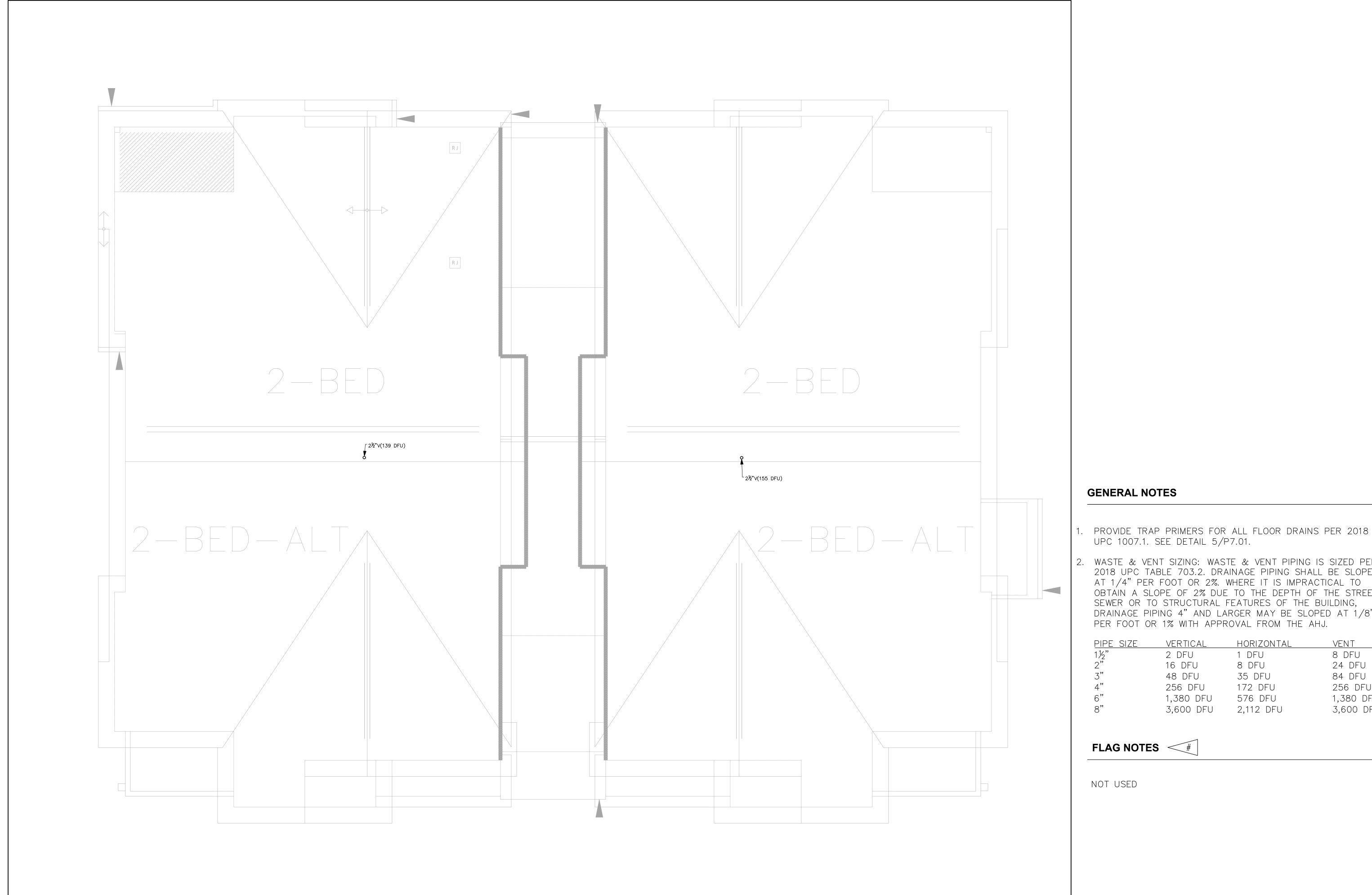
# FLAG NOTES #

**GENERAL NOTES** 

NOT USED

09/03/2024

LEVEL 3 WASTE & VENT PLAN





UPC 1007.1. SEE DETAIL 5/P7.01. 2. WASTE & VENT SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

| PIPE SIZE        | VERTICAL  | HORIZONTAL | VENT      |
|------------------|-----------|------------|-----------|
| <i>1</i> /2"     | 2 DFU     | 1 DFU      | 8 DFU     |
| ½"<br>."         | 16 DFU    | 8 DFU      | 24 DFU    |
| , <b>,,</b><br>) | 48 DFU    | 35 DFU     | 84 DFU    |
| ,,<br>-          | 256 DFU   | 172 DFU    | 256 DFU   |
| . <b>"</b><br>)  | 1,380 DFU | 576 DFU    | 1,380 DFU |
| "                | 3,600 DFU | 2,112 DFU  | 3,600 DFU |
|                  |           |            |           |

FLAG NOTES #

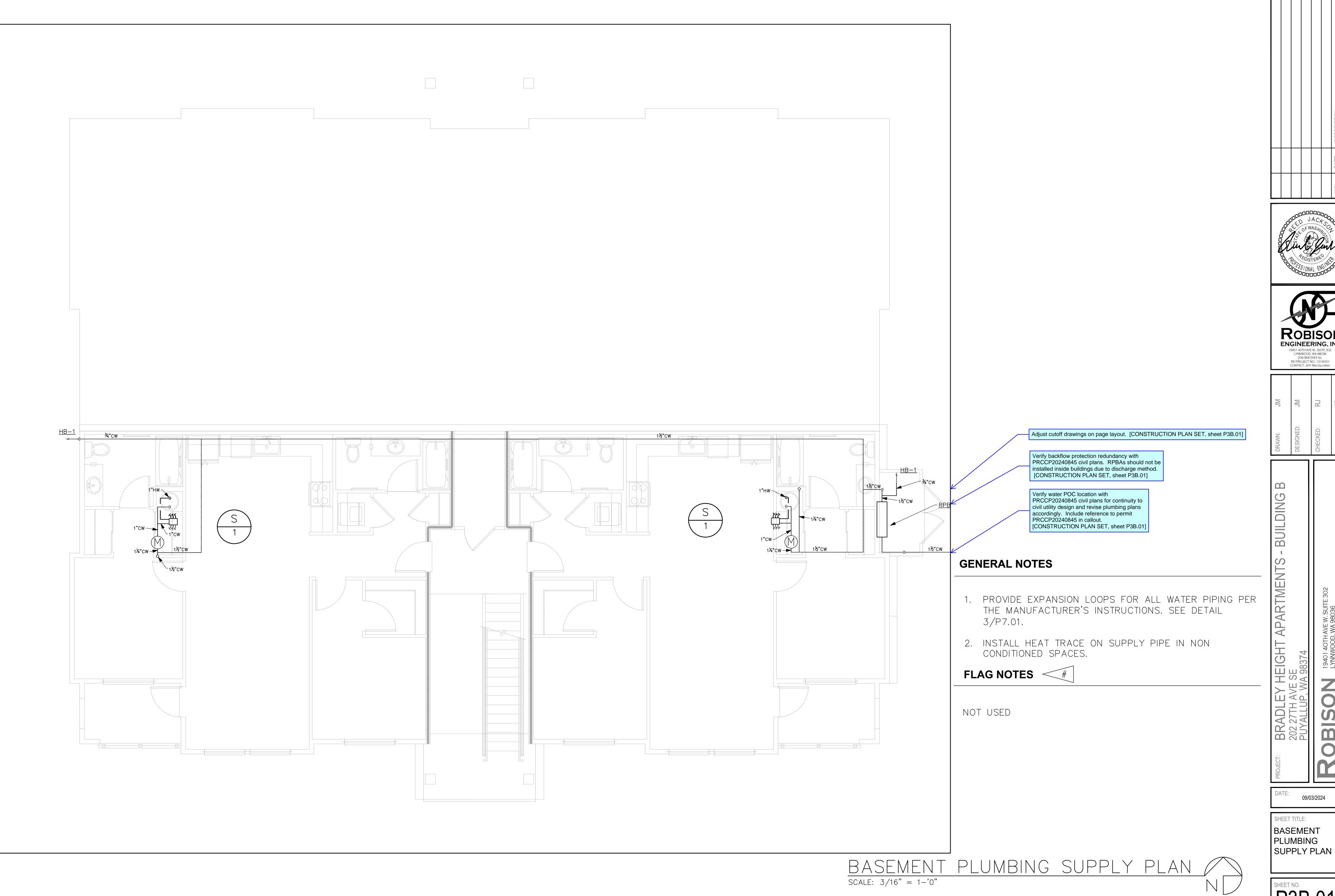
NOT USED

ROOF WASTE & VENT PLAN

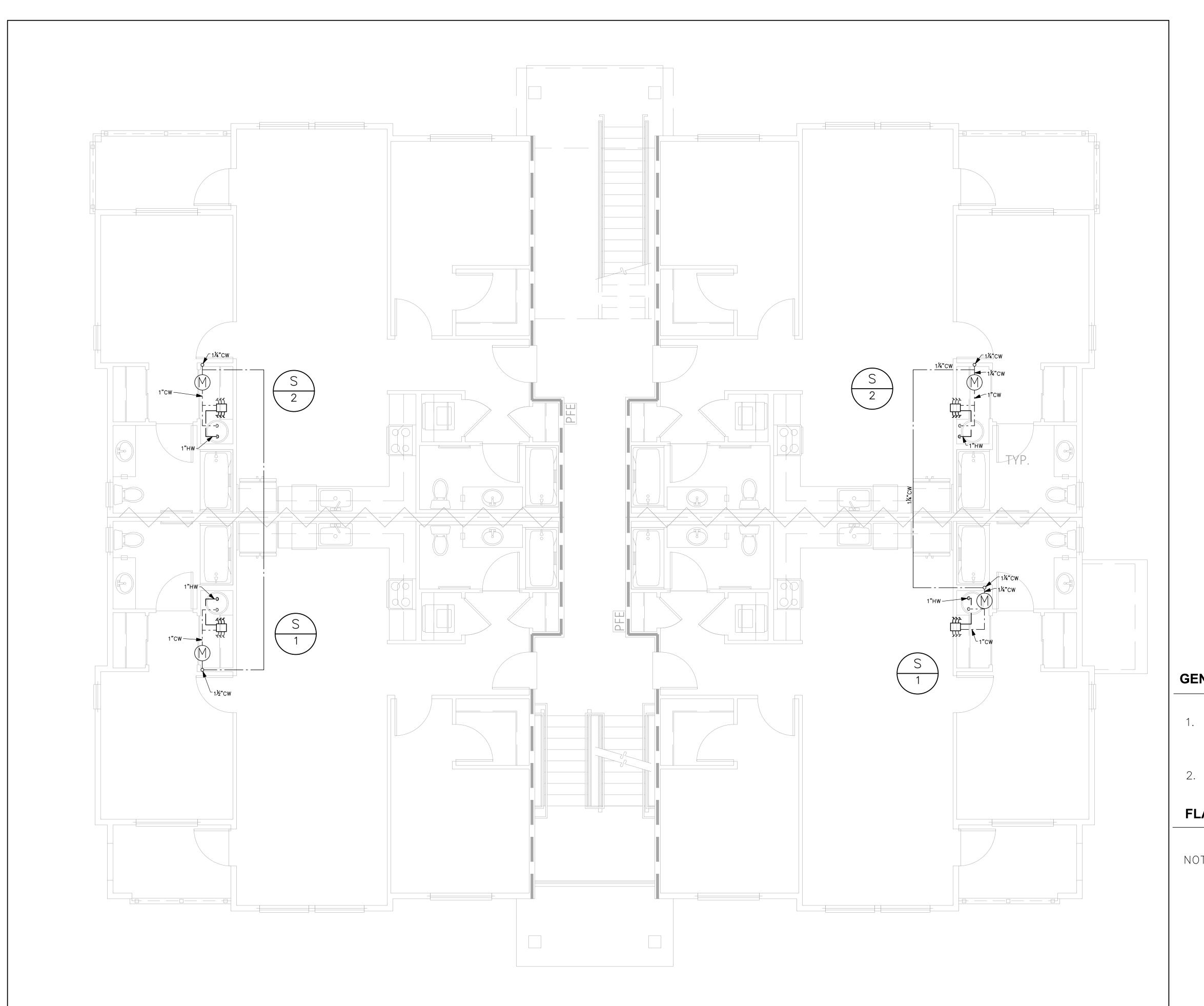
ROOF WASTE & VENT PLAN

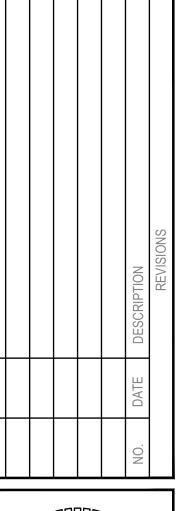
SCALE: 1/4" = 1-0"

P2B.05



P3B.01









| DRAWN:    | M  |
|-----------|----|
| DESIGNED: | MC |
| CHECKED:  | RJ |
| APPROVED: | JR |

Y HEIGHT APARTMENTS - BUILDING B VE SE WA 98374

# **GENERAL NOTES**

- 1. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.01.
- 2. INSTALL HEAT TRACE ON SUPPLY PIPE IN NON CONDITIONED SPACES.

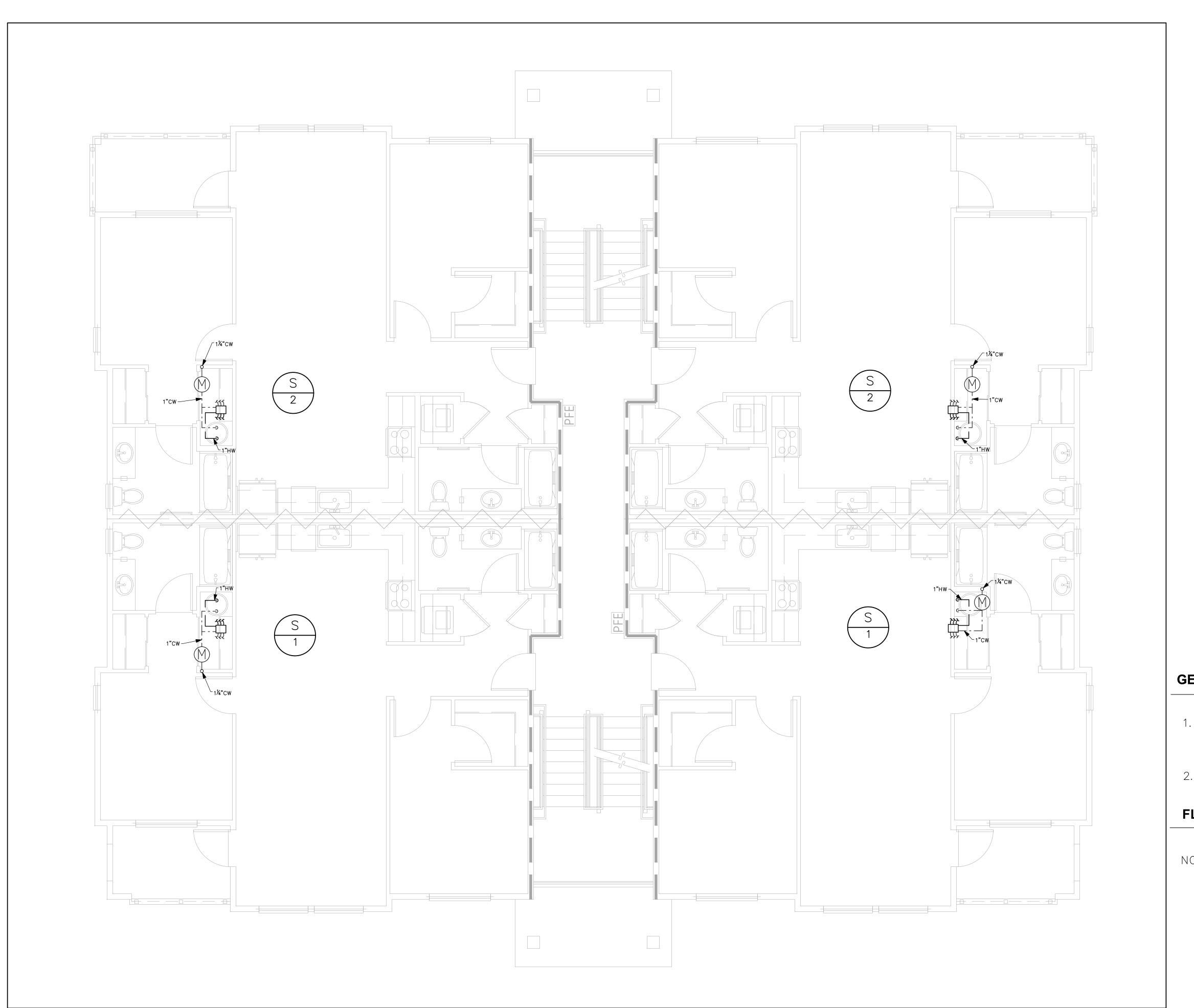
# FLAG NOTES #

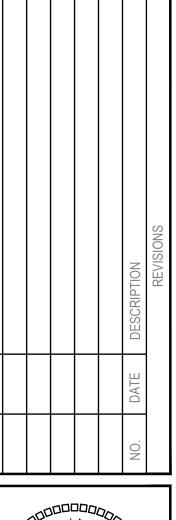
NOT USED

DATE: 09/03/2024

SHEET TITLE:

LEVEL 1
PLUMBING
SUPPLY PLAN









| DRAWN:    | MC |
|-----------|----|
| DESIGNED: | M  |
| CHECKED:  | RJ |
| APPROVED: | JR |

Y HEIGHT APARTMENTS - BUILDING B VE SE WA 98374

### **GENERAL NOTES**

- 1. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.01.
- 2. INSTALL HEAT TRACE ON SUPPLY PIPE IN NON CONDITIONED SPACES.

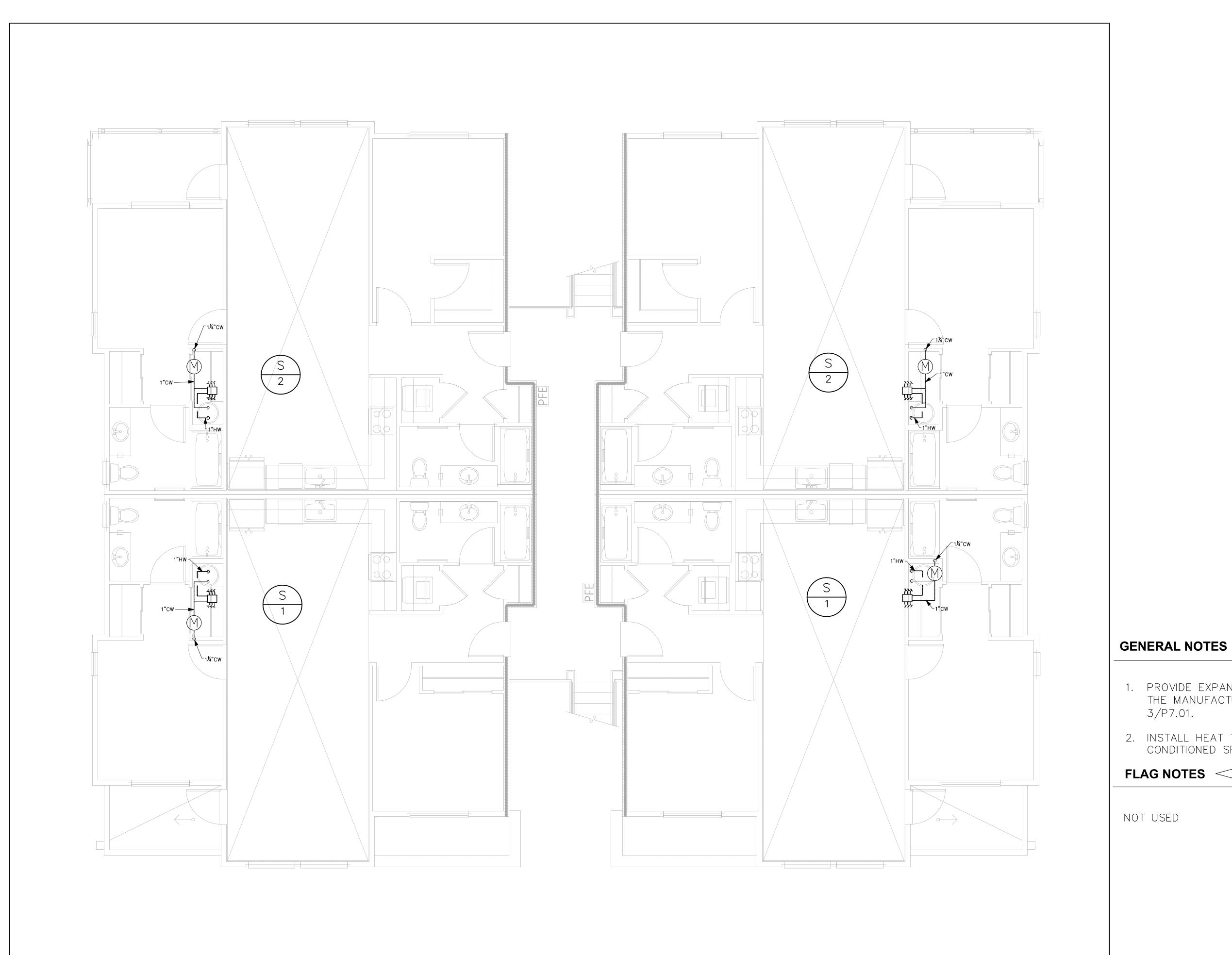
# FLAG NOTES #

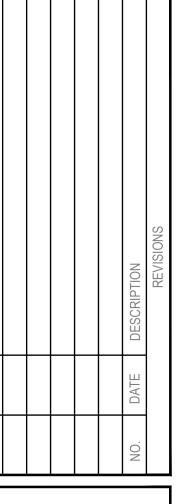
NOT USED

DATE: 09/03/2024

SHEET TITLE:

LEVEL 2
PLUMBING
SUPPLY PLAN









| DRAWN:    | JM |
|-----------|----|
| DESIGNED: | JM |
| CHECKED:  | RJ |
| APPROVED: | JR |

### 1. PROVIDE EXPANSION LOOPS FOR ALL WATER PIPING PER THE MANUFACTURER'S INSTRUCTIONS. SEE DETAIL 3/P7.01.

2. INSTALL HEAT TRACE ON SUPPLY PIPE IN NON CONDITIONED SPACES.

# FLAG NOTES #

NOT USED

09/03/2024

LEVEL 3 PLUMBING SUPPLY PLAN

P3B.04

### **GENERAL NOTES**

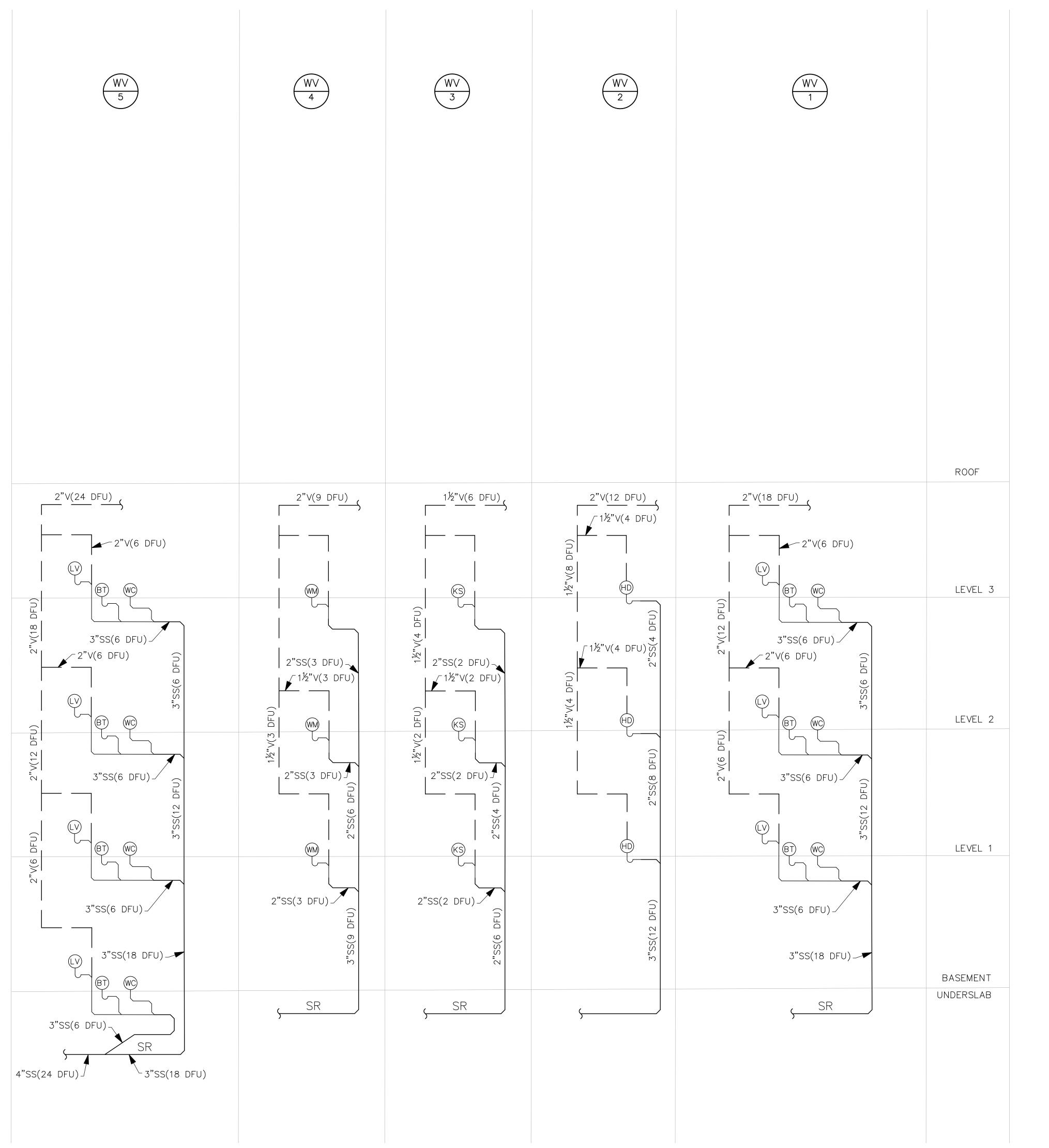


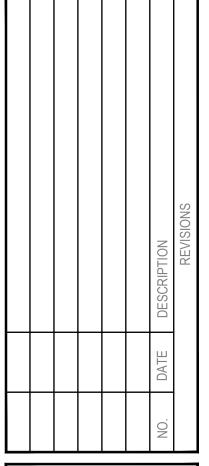
= WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P200 SERIES FOR RISER DIAGRAMS.

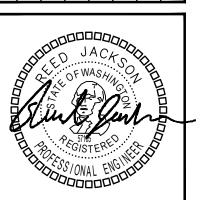
- 1. SUD RELIEF PIPING WITH LENGTH OF 8FT WILL BE USED.
- 2. WASTE & VENT SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

| <u>PIPE SIZE</u> | VERTICAL  | HORIZONTAL | <u>vent</u> |
|------------------|-----------|------------|-------------|
| 1½"              | 2 DFU     | 1 DFU      | 8 DFU       |
| 2"               | 16 DFU    | 8 DFU      | 24 DFU      |
| 3"               | 48 DFU    | 35 DFU     | 84 DFU      |
| 4"               | 256 DFU   | 216 DFU    | 256 DFU     |
| 6"               | 1,380 DFU | 720 DFU    | 1,380 DFU   |
| 8"               | 3,600 DFU | 2,640 DFU  | 3,600 DFU   |

| ABBREVIATION LEGEND:                                                                                                                                                        |                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| LV = LAVATORY BT = BATHTUB SH = SHOWER KS = KITCHEN SINK WITH DISHWASHER WM = WASHING MACHINE WC = WATER CLOSET UR = URINAL FD = FLOOR DRAIN FS = FLOOR SINK HD = HUB DRAIN | (1 DFU) (2 DFU) (2 DFU) (2 DFU) (3 DFU) (3 DFU) (2 DFU) (2 DFU) (4 DFU) (4 DFU) |









| DRAWN:    | M  |
|-----------|----|
| DESIGNED: | MC |
| CHECKED:  | RJ |
| APPROVED: | JR |
|           |    |

EY HEIGHT APARTMENTS - BUILDING B

AVE SE

WA 98374

I 9401 40TH AVE W. SUITE 302

LYNNWOOD, WA 98036

LYNNWOOD, WA 98036

LYNNWOOD, WA 98036

DATE: 09/03/2024

SHEET TITLE:
WASTE RISER
DIAGRAMS

SHEET NO.
P4B.00

### **GENERAL NOTES**

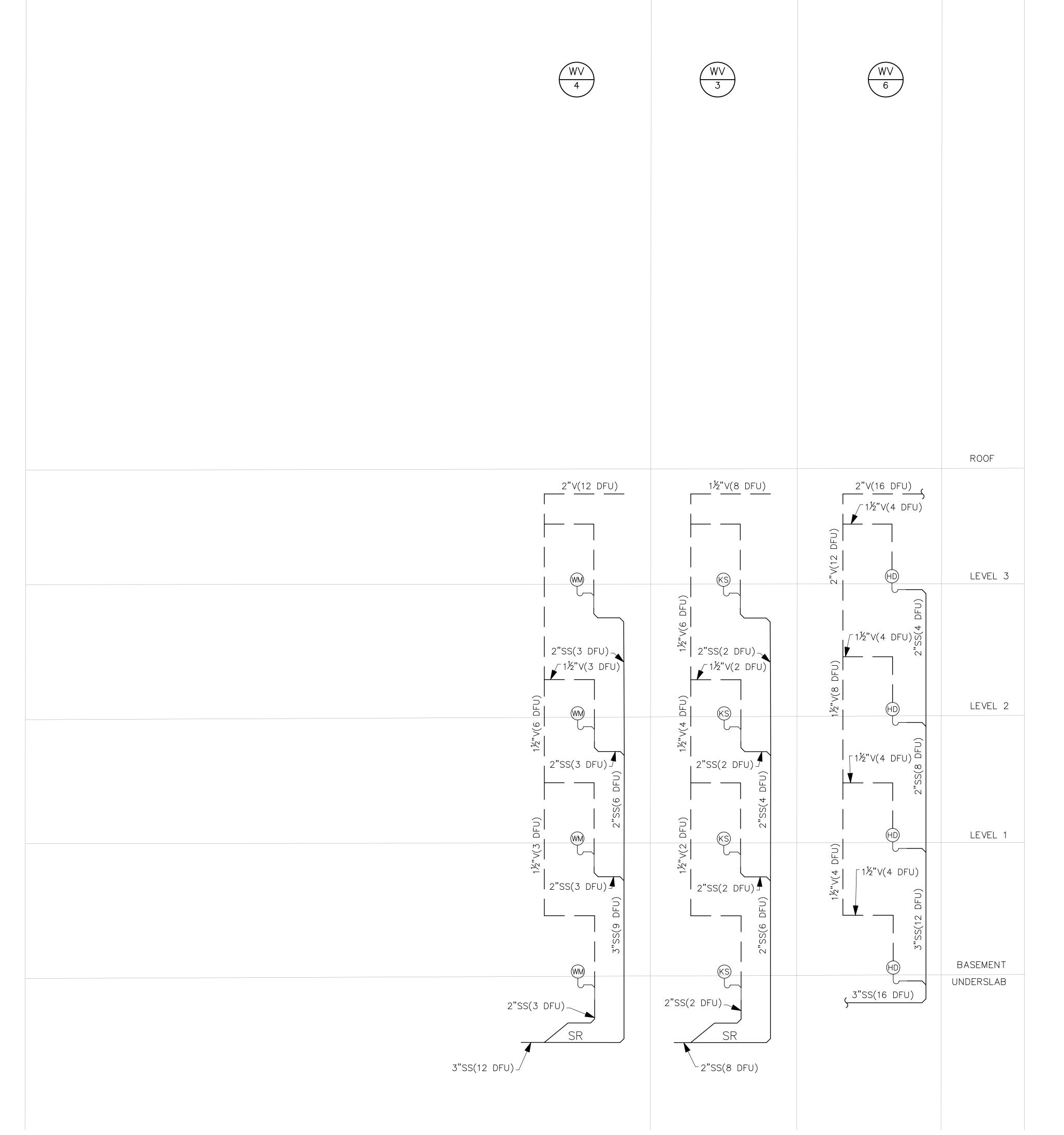


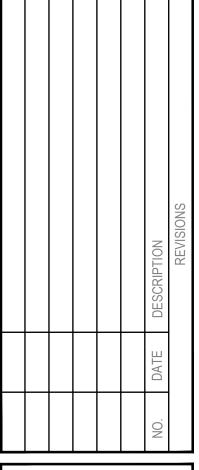
= WASTE & VENT RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P200 SERIES FOR RISER DIAGRAMS.

- 1. SUD RELIEF PIPING WITH LENGTH OF 8FT WILL BE USED.
- 2. WASTE & VENT SIZING: WASTE & VENT PIPING IS SIZED PER 2018 UPC TABLE 703.2. DRAINAGE PIPING SHALL BE SLOPED AT 1/4" PER FOOT OR 2%. WHERE IT IS IMPRACTICAL TO OBTAIN A SLOPE OF 2% DUE TO THE DEPTH OF THE STREET SEWER OR TO STRUCTURAL FEATURES OF THE BUILDING, DRAINAGE PIPING 4" AND LARGER MAY BE SLOPED AT 1/8" PER FOOT OR 1% WITH APPROVAL FROM THE AHJ.

| PIPE SIZE | VERTICAL  | HORIZONTAL | VENT      |
|-----------|-----------|------------|-----------|
| 1½"       | 2 DFU     | 1 DFU      | 8 DFU     |
| 2"        | 16 DFU    | 8 DFU      | 24 DFU    |
| 3"        | 48 DFU    | 35 DFU     | 84 DFU    |
| 4"        | 256 DFU   | 216 DFU    | 256 DFU   |
| 6"        | 1,380 DFU | 720 DFU    | 1,380 DFU |
| 8"        | 3,600 DFU | 2,640 DFU  | 3,600 DFU |

| ABBREVIATION LEGEND:                                                                                                                                                        |                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| LV = LAVATORY BT = BATHTUB SH = SHOWER KS = KITCHEN SINK WITH DISHWASHER WM = WASHING MACHINE WC = WATER CLOSET UR = URINAL FD = FLOOR DRAIN FS = FLOOR SINK HD = HUB DRAIN | (1 DFU) (2 DFU) (2 DFU) (2 DFU) (3 DFU) (3 DFU) (2 DFU) (2 DFU) (4 DFU) (4 DFU) |









|   | DRAWN:    | M  |
|---|-----------|----|
|   | DESIGNED: | MC |
|   | CHECKED:  | R  |
| _ | APPROVED: | JR |

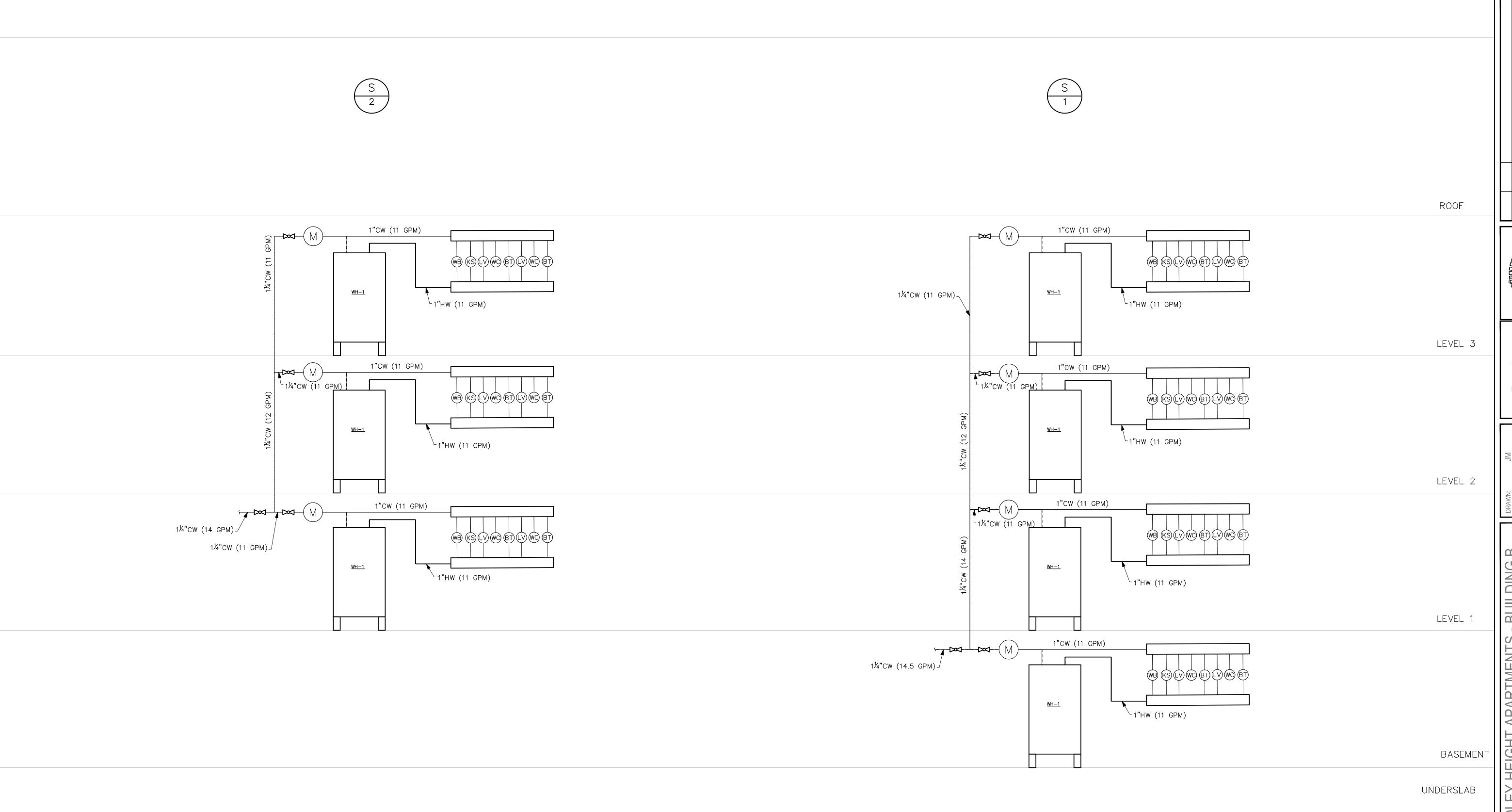
Y HEIGHT APARTMENTS - BUILDING B
VE SE
WA 98374

N 19401 40TH AVE W. SUITE 302

DATE: 09/03/2024

SHEET TITLE:
WASTE RISER
DIAGRAMS

SHEET NO.
P4B.01



### **GENERAL NOTES**

S #

= SUPPLY RISER IDENTIFICATION (I.E. RISER "#"). REFER TO P5 SERIES FOR RISER DIAGRAMS.

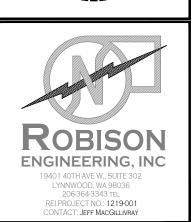
- 1. PROVIDE TRAP PRIMERS FOR ALL FLOOR DRAINS AND HUB DRAINS PER 2021 UPC 1007.1. SEE DETAIL 5/P7.01
- 2. WATER PIPES ARE SIZED PER THE WATER SUPPLY PRESSURE CALCULATION ON POB.02.

| ABBREVIATION LEGEND:                                                                                       |                                                                           |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| LV = LAVATORY BT = BATHTUB SH = SHOWER KS = KITCHEN SINK WITH DISHWASHER WB = WASHER BOX WC = WATER CLOSET | (0.75 WSFU)<br>(4 WSFU)<br>(2 WSFU)<br>(3 WSFU)<br>(4 WSFU)<br>(2.5 WSFU) |

| PIPE SIZING SCHEDULE - PEX AT 14.0 PSI/100 FEET  COLD WATER, FLUSH TANK HOT WATER |               |              |                  |                  |              |                  |
|-----------------------------------------------------------------------------------|---------------|--------------|------------------|------------------|--------------|------------------|
| PIPE SIZE                                                                         | FIXTURE UNITS | FLOW,<br>GPM | VELOCITY,<br>FPS | FIXTURE<br>UNITS | FLOW,<br>GPM | VELOCITY,<br>FPS |
| 1/2"                                                                              | 1.9           | 2.9          | 5.3              | 3.4              | 3.4          | 6.2              |
| 3/4"                                                                              | 9.0           | 7.5          | 6.8              | 11.2             | 8.6          | 7.8              |
| 1"                                                                                | 21.2          | 14.7         | 8.1              | 20.9             | 14.6         | 8.0              |
| 1-1/4"                                                                            | 40.8          | 25.3         | 9.3              | 33.5             | 21.8         | 8.0              |
| 1-1/2"                                                                            | 76.3          | 37.9         | 10.0             | 53.3             | 30.3         | 8.0              |
| 2"                                                                                | 199.8         | 65.0         | 10.0             | 134.8            | 52.0         | 8.0              |
| 2-1/2"                                                                            | 369.5         | 98.9         | 10.0             | 270.6            | 79.1         | 8.0              |
| 3"                                                                                | 588.9         | 141.0        | 10.0             | 439.0            | 112.8        | 8.0              |

| PIPE SIZING SCHEDULE - COPPER TYPE L AT 3.0 PSI/100 FEET |         |             |           |         |                  |           |
|----------------------------------------------------------|---------|-------------|-----------|---------|------------------|-----------|
|                                                          |         | VATER, FLUS |           |         | <b>HOT WATER</b> |           |
| PIPE SIZE                                                | FIXTURE | FLOW,       | VELOCITY, | FIXTURE | FLOW,            | VELOCITY, |
|                                                          | UNITS   | GPM         | FPS       | UNITS   | GPM              | FPS       |
| 1/2"                                                     | 0.8     | 1.8         | 2.4       | 1.0     | 2.0              | 2.8       |
| 3/4"                                                     | 5.5     | 4.7         | 3.1       | 6.5     | 5.5              | 3.6       |
| 1"                                                       | 12.8    | 9.8         | 3.8       | 15.2    | 11.2             | 4.4       |
| 1-1/4"                                                   | 25.5    | 17.3        | 4.4       | 29.3    | 19.6             | 5.0       |
| 1-1/2"                                                   | 46.6    | 27.7        | 5.0       | 46.8    | 27.7             | 5.0       |
| 2"                                                       | 166.0   | 58.2        | 6.0       | 116.9   | 48.2             | 5.0       |
| 2-1/2"                                                   | 395.0   | 104.0       | 7.0       | 246.9   | 74.4             | 5.0       |
| 3"                                                       | 735.1   | 167.3       | 7.9       | 405.8   | 106.2            | 5.0       |
| 4"                                                       | 1782.4  | 303.2       | 8.0       | 872.0   | 189.5            | 5.0       |
| 6"                                                       | 6381.3  | 669.1       | 8.0       | 2847.0  | 418.2            | 5.0       |

| É | Sold | JAN SU | OFW | A CA | DDD No. | ALLE | _ |
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|   |      |        |     |      |         | DE   |   |



| DKAWN: | DESIGNED: | CHECKED: | APPROVED: |
|--------|-----------|----------|-----------|
|        | VED:      | (ED:     | VED:      |
| MIC    | JM        | RJ       | JR        |

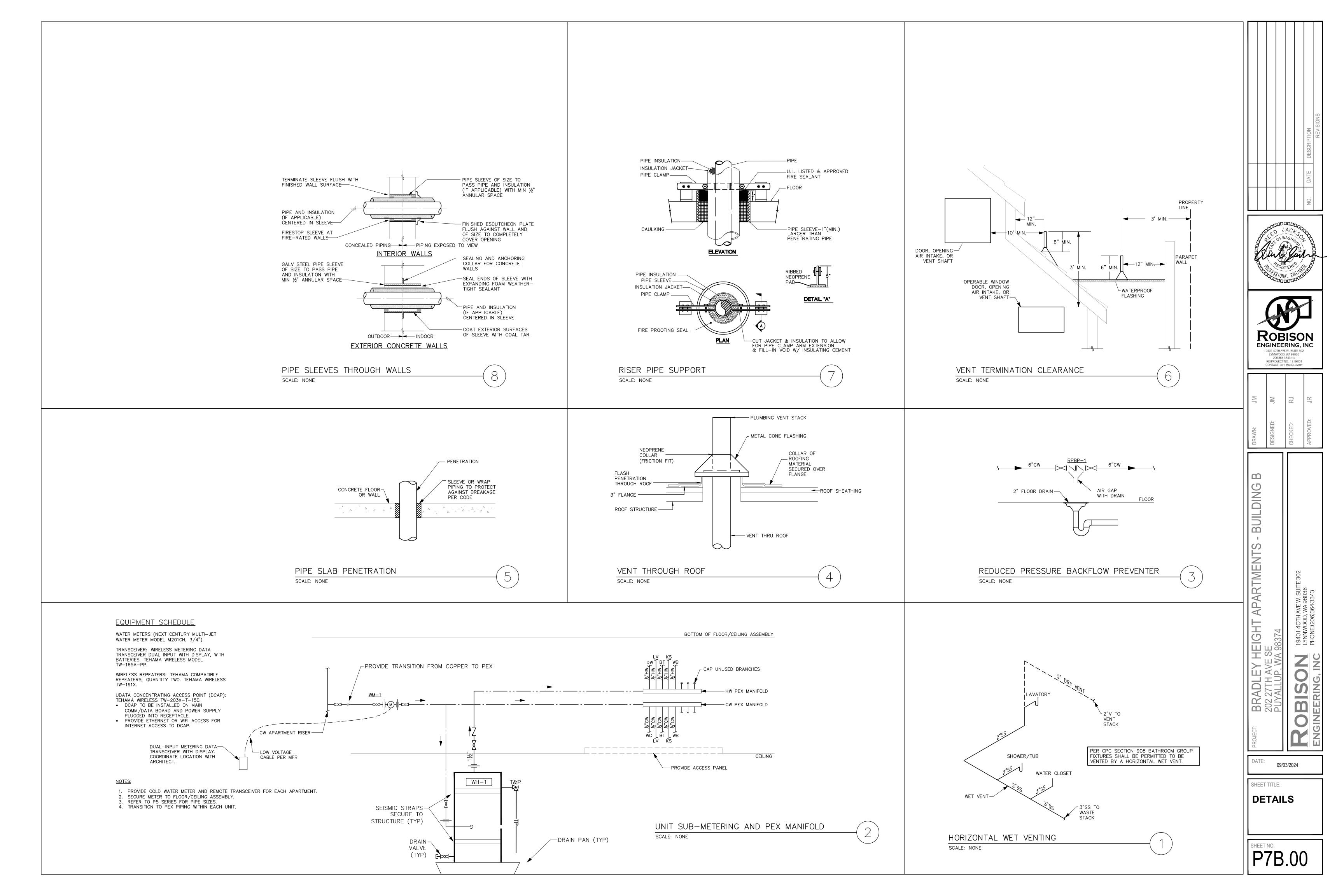
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ALLUP, WA 98374
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ALON, WA 98374

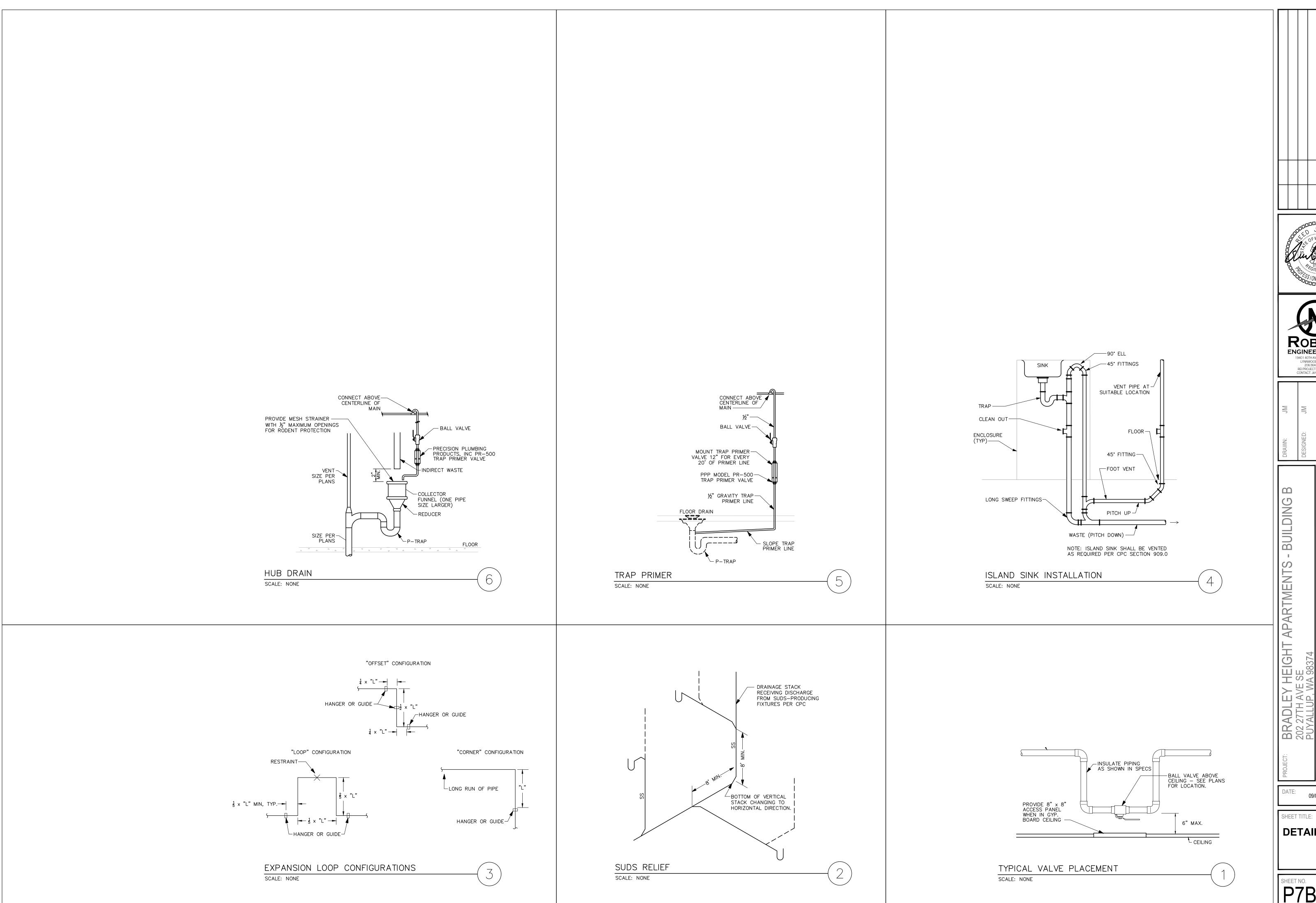
202 27TH AVE SE PUYALLUP, WA 9

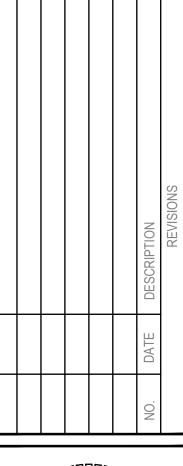
DATE: 09/03/2024

SHEET TITLE: SUPPLY RISER DIAGRAMS

P5B.00











| 200 | MC        | RJ       | JR        |
|-----|-----------|----------|-----------|
|     | DESIGNED: | CHECKED: | APPROVED: |

| $\mathbb{M}$ | M         | R        | JR        |
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| DRAWN:       | DESIGNED: | CHECKED: | APPROVED: |
|              |           |          |           |

09/03/2024

DETAILS

P7B.01