

2021 IBC REFERENCE & WAC 110-300

CHAPTER 3: USE AND OCCUPANCY CLASSIFICATION
305.2 (EDUCATIONAL GROUP E) DAY CARE FACILITIES... BUILDINGS...PORTIONS THEREOF OCCUPIED BY MORE THAN FIVE CHILDREN OLDER THAN 2-1/2 YEARS OF AGE WHO RECEIVE EDUCATIONAL SUPERVISION... FOR FEWER THAN 24 HOURS PER DAY

CHAPTER 5: GENERAL BUILDING HEIGHTS AND AREAS
PROPOSED BUILDING DESIGN: E OCCUPANCY | SPRINKLER | TYPE V-B

CODE			
ALLOWABLE HEIGHT (TABLE 504.3)	60		
ALLOWABLE STORY (TABLE 504.4)	2		
ALLOWABLE AREA (TABLE 506.2)	38,000 SF (S1, SINGLE STORY)		

	CITY REQ'D	IBC REQ'D	PROVIDED
HEIGHT	40'	60'	36'-6" (A3.1)
STORY		2	1
AREA		38,000 SF	13,324 SF

CHAPTER 7: FIRE PROTECTION SYSTEMS

722.6.1 WOOD ASSEMBLIES, MAX FIRE-RESISTANCE RATING... NOT MORE THAN ONE HOURS

TABLE 722.6.2: TYPE ASSIGNED

1/2" TYPE X CWB	20 MIN
3/4" TYPE X CWB	40 MIN
WD STUDS @ 16" IC	20 MIN

CHAPTER 9: FIRE PROTECTION SYSTEMS

902.1.1~4 PUMP AND RISER ROOM SIZE

- THE DOOR SHALL BE PERMITTED TO BE LOCKED PROVIDED THAT THE KEY IS AVAILABLE AT ALL TIMES
 - LABELLED WHIT AN APPROVED SIGN, THE LETTER SHALL HAVE A MIN HEIGHT OF 2" WITH MIN STROKE OF 3/8"
 - MAINTAINED TEMPERATURE OF NOT LESS THAN 40 F. HEATING UNITS SHALL BE PERMANENTLY INSTALLED
 - PERMANENTLY INSTALLED ARTIFICIAL ILLUMINATION
- 903.3.1.1 NFPA-13 SPRINKLER SYSTEMS [DEFERRED SUBMITTAL]
903.2.3 GROUP E
AN AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED
906.1 EXCEPTIONS TO INSTALL FIRE-EXTINGUISHER
EACH CLASSROOM WILL HAVE MIN 2-A-20-B-C FIRE EXTINGUISHER
TABLE 906.3(1) MIN 2-A RATED FIRE EXTINGUISHER IN EVERY 75'
907.2.3 GROUP E
AUTOMATIC FIRE ALARM SYSTEM [DEFERRED SUBMITTAL]

CHAPTER 10: MEANS OF EGRESS

SEE GO.2 FOR EGRESS STUDY

TABLE 1004.5 MAX FLOOR AREA ALLOWANCES PER OCCUPANT

ACCESSORY STORAGE:	300 GROSS
ASSEMBLY - UNCONCENTRATED	15 NET
BUSINESS	150 GROSS
DAY CARE	35 NET
KITCHENS	200 GROSS

1004.9 POSTING OF OCCUPANT LOAD

EVERY ROOM OR SPACE THAT IS AN ASSEMBLY OCCUPANCY SHALL HAVE THE OCCUPANT LOAD OF THE ROOM OR SPACE POSTED IN A CONSPICUOUS PLACE NEAR THE MAIN EXIT OR EXIT ACCESS DOORWAY FROM THE ROOM OR SPACE
1005.3.2 OTHER EGRESS COMPONENTS SIZING EXCEPTION 1
MULTIPLIED BY 0.15 PER OCCUPANT

TABLE 1006.3.2 MINIMUM NUMBER OF EXITS: 1-500 PEOPLE, 2 EXITS
1007.1.1 TWO EXITS OR EXIT ACCESS DOORWAY: WHERE TWO EXITS ARE REQUIRED... (EXCEPTIONS 2 WHERE A BUILDING IS EQUIPPED THROUGHOUT WITH AN AUTOMATIC SPRINKLER SYSTEM), THE SEPARATION DISTANCE SHALL BE NOT LESS THAN 1/3 OF THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF THE AREA SERVE.

1008 MEANS OF EGRESS ILLUMINATION: NOT LESS THAN 1 FOOTCANDLE AT THE WALKING SURFACE.

1008.3.2-3: BUILDINGS & ROOMS: IN THE EVENT OF POWER SUPPLY FAILURE, EMERGENCY ELECTRICAL SYSTEM SHALL AUTOMATICALLY ILLUMINATE... EXIT PASSAGEWAY... ELEC EQUIPMENT ROOMS, FIRE PUMP ROOMS, AND PUBLIC RESTROOMS (GRATER THAN 300 SF)

1008.3.4~5 DURATION & LEVEL: EMERGENCY POWER SYSTEM SHALL PROVIDE POWER FOR NOT LESS THAN 90 MIN... RO PROVIDE INITIAL ILLUMINATION THAT IS NOT LESS THAN AVERAGE OF 1 FOOTCANDLE

1009.10 DIRECTIONAL SIGNAGE...INDICATE THE LOCATION OF ALL OTHER MEANS OF EGRESS... AT EXIT SERVING A REQUIRED ACCESS SPACE

1010.1.1. SIZE OF DOOR: THE REQUIRED CAPACITY OF EACH DOOR OPENING SHALL BE SUFFICIENT FOR THE OCCUPANT LOAD THEREOF AND SHALL PROVIDE A MIN CLEAR OPENING WIDTH OF 32".

1010.1.6 THRESHOLDS...AT DOORWAYS SHALL NOT EXCEED 3/4"

1010.2.3 HARDWARE HEIGHT... INSTALLED 34 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE FINISHED FLOOR

1010.2.8 LOCKING ARRANGEMENTS IN EDUCATIONAL OCCUPANCIES: IN GROUP E... EGRESS DOORS FROM CLASSROOMS... SHALL BE PERMITTED TO BE PROVIDED WITH LOCKING ARRANGEMENTS DESIGNED TO KEEP INTRUDERS FROM ENTERING THE ROOM... THE DOOR SHALL BE CAPABLE OF BEING UNLOCKED FROM OUTSIDE THE ROOM WITH A KEY... THE DOOR SHALL BE OPENABLE FROM WITHIN THE ROOM

1010.2.9 PANIC AND FIRE EXIT HARDWARE: SWINGING DOORS SERVING...E OCCUPANCY SHALL NOT BE PROVIDED WITH A LATCH OR LOCK OTHER THAN PANIC HARDWARE OR FIRE EXIT HARDWARE

1013.1 EXIT SIGNS REQUIRED...READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL... EXIT SIGN PLACEMENT SHALL BE SUCH THAT ANY POINT IN AN EXIT ACCESS CORRIDOR OR EXIT PASSAGEWAY IS WITHIN 100 FEET OR THE LISTED VIEWING DISTANCE OF THE SIGN, WHICHEVER IS LESS

EXCEPTION 2: MAIN EXIT EXIT DOORS THAT ARE OBVIOUSLY AND CLEARLY IDENTIFIABLE AS EXITS NEED NOT HAVE EXIT SIGNS WHERE APPROVED BY THE BUILDING OFFICIAL

1013.6.2-3: MIN INTENSITY OF 5 FOOTCANDLE, DURATION OF NOT LESS THAN 90 MIN IN CASE OF PRIMARY POWER LOSS...PROVIDED FROM STORAGE BATTERIES...

TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE: E: WITH SPRINKLER = 250

1020.2 EXCEPTIONS 1: A FIRE-RESISTANCE RATING IS NOT REQUIRED FOR CORRIDORS IN AN OCCUPANCY GROUP E, WHERE EACH ROOM THAT IS USED FOR INSTRUCTION HAS NOT LESS THAN ONE DOOR OPENING DIRECTLY TO THE EXTERIOR. EXTERIOR DOORS ARE REQUIRED TO BE AT GROUND LEVEL

TABLE 1020.1 CORRIDOR FIRE-RESISTANCE RATING: E, WITH SPRINKLER SYSTEM, "0" DOESNT REQUIRE FIRE-RESISTANCE RATING

TABLE 1020.2 MIN CORRIDOR WIDTH: IN GROUP E WITH A CORRIDOR HAVING AN OCCUPANT LOAD OF 100 OR MORE - MIN 72"

SECTION 29 PLUMBING SYSTEMS

SEE GO.2 FOR PLUMBING CALC

TABLE 2902.1 | EDUCATION:

"E" FOR GROUP E OCCUPANCIES: THE NUMBER OF OCCUPANTS SHALL BE DETERMINED BY USING A CALCULATION OF 100 SQFT GROSS BUILDING AREA PER STUDENT FOR THE MINIMUM NUMBER OF PLUMBING FIXTURES

2902.1.1.2 URINALS IN MEN'S FACILITIES... SHALL NOT BE REDUCED TO LESS THAN 25% OF THE MIN SPECIFIED (NUMBER OF WATER CLOSET).

2902.5 DRINKING FOUNTAIN LOCATION: PUBLIC DRINKING FOUNTAINS ARE LOCATED WITHIN A DISTANCE OF TRAVEL OF 500 FEET

2902.5.1 DRINKING FOUNTAIN NUMBER: OCCUPANCY LOADS OVER 30 SHALL HAVE ONE DRINKING FOUNTAIN FOR THE FIRST 150 OCCUPANTS, THEN ONE PER

EACH ADDITIONAL 500 OCCUPANTS

WAC 110-300-0135 ROUTINE CARE, PLAY, LEARNING, RELAXATION, AND COMFORT
(1) AN EARLY LEARNING PROVIDER MUST HAVE ACCESSIBLE AND CHILD-SIZE FURNITURE AND EQUIPMENT
(3) AN EARLY LEARNING PROVIDER MUST SUPPLY SOFT FURNISHINGS IN LICENSED SPACE ACCESSIBLE TO CHILDREN.

WAC 110-300-0140 ROOM ARRANGEMENT, CHILD-RELATED DISPLAYS...
(1) ENCOURAGE INDEPENDENT ACCESS BY CHILDREN
(3) PROVIDE A PLACE FOR PRIVACY
(5) STORAGE SPACE FOR EACH CHILD'S BELONGINGS

WAC 110-300-0145 OUTDOOR EARLY LEARNING PROGRAM SPACE
(2) MUST CONTAIN A MINIMUM OF 75 SQFT OF LICENSED USABLE SPACE PER CHILD
(3) SHADED AREAS BY TREES, BUILDINGS, OR SHADE STRUCTURES
(6) ENCLOSED WITH A FENCE OR BARRIER THAT IS INTENDED TO PREVENT CHILDREN FROM EXITING AND DISCOURAGES CLIMBING
(7) TO DETER PEOPLE WITHOUT PERMISSION FROM ENTERING THE AREA
(8) FENCES, BARRIERS, AND GATES MUST BE IN GOOD CONDITION, HAVE NO GAP THROUGH WHICH A SPHERE WITH A DIAMETER OF 3-1/2" CAN PASS, AND HAVE A MINIMUM HEIGHT OF 48"
(12) MUST HAVE TWO EXITS THAT MUST NOT BE PARTIALLY OR ENTIRELY BLOCKED, AT LEAST ONE OF THE TWO EXITS MUST NOT LEAD BACK INTO LICENSED INDOOR SPACE

WAC 110-300-0166 EMERGENCY PREPARATION AND EXITING
(1) EMERGENCY PREPAREDNESS PLAN REQUIRED BY WAC 110-300-0470

WAC 110-300-0170 FIRE SAFETY

(3.g.i) AT LEAST ONE SMOKE DETECTOR PER LICENSED SLEEPING AREA AND ONE PER FLOOR, COMPLY WITH WAC 51-50-0907
(3.g.ii) MAINTAIN CARBON MONOXIDE DETECTOR. MUST COMPLY WITH WAC 51-50-0915
(3.h) BACKUP METHOD TO SOUND AN ALARM
(i) EXTINGUISHERS, MIN RATING OF 2A:10BC
(iii) MOUNTED WITHIN 75 FEET OF AN EXIT NEXT TO THE PATH OF THE EXIT

WAC 110-300-0220 BATHROOM SPACE AND TOILET TRAINING
(1.a.ii) ONE WORKING FLUSH TOILET FOR EVERY 15 CHILDREN AND STAFF. A CHILD IN DIAPERS DOES NOT COUNT FOR PURPOSES OF TOILET CALCULATIONS UNTIL THE CHILD BEGINS TOILET TRAINING
(1.a.iii) TOILETS FOR STAFF MAY BE LOCATED OUTSIDE OF LICENSED SPACE ON THE PREMISES
(1.b) ONE WORKING SINK AND FAUCET
(5) TOILET TRAINING EQUIPMENT MUST BE CLEANED IN A SINK NOT USED FOR FOOD PREPARATION, HAND WASHING, OR CLEAN UP

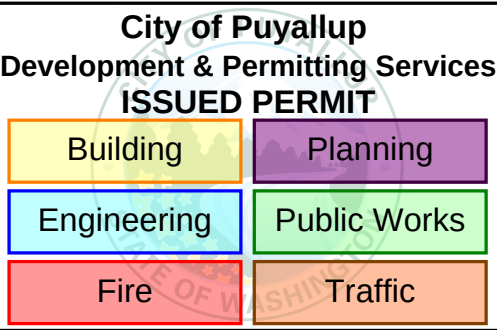
WAC 110-300-0221 DIAPER CHANGING AREAS, PRIVACY, AND DISPOSAL
(1) DESIGNATED DIAPER CHANGING AREA, INCLUDING STAND-UP DIAPERING, FOR EACH CLASSROOM OR FOR EVERY AGE GROUPING OF CHILDREN
(2.b.i) MOISTURE RESISTANT, WASHABLE MATERIAL THAT HORIZ. OR VERT. AND EXTENDS AT LEAST 2' FROM THE DIAPER CHANGING, A TABLE LARGE ENOUGH TO ACCOMMODATE THE LENGTH OF A CHILD, PROTECTIVE BARRIER AT LEAST 3-1/2" HIGH ON ALL SIDE FROM SURFACE THE CHILD LAYS

WAC 110-300-0240 CLEAN AND HEALTHY ENVIRONMENT
(1.B) AT LEAST 24" OF MOISTURE RESISTANT AND CLEANABLE MATERIALS OR BARRIER AROUND SINKS, DRINKING FOUNTAINS, AND TOILETS

WAC 110-300-0280 BOTTLE PREPARATION
(1.g) INCLUDE A SINK
(1.c.iv) BE PHYSICALLY SEPARATED FROM THE DIAPER CHANGING AREA... EXTEND AT LEAST 24" IN HEIGHT FROM THE COUNTER

WAC 110-300-0354 INDOOR EARLY LEARNING PROGRAM SPACE CAPACITY
(1) INDOOR EARLY LEARNING PROGRAM SPACE MUST HAVE A MIN OF 35 SF PER CHILD IN ATTENDANCE
(1.g) 15 ADDITIONAL SF FOR EACH INFANT OR TODDLER USING A CRIB
(2.c) BATHROOM AND DIAPER CHANGING AREA IS NOT COUNTED IN THE OVERALL CAPACITY

WAC 110-300-0356 CENTER CAPACITY, RATIO, AND GROUP SIZE
(5.a.i) INFANTS (0-11 MO) WITH A MAX GROUP SIZE OF 8 WITH RATIO OF 1 STAFF TO 4 CHILDREN
(5.b.i) TODDLERS (12-29 MO) WITH A MAX GROUP SIZE OF 14 WITH RATIO OF 1:7
(5.c) PRESCHOOLERS (30 MO TO 6 YRS) WITH A MAX GROUP SIZE OF 20 WITH A RATIO OF 1:10



ENERGY CODE COMPLIANCE

STEP BY STEP EARLY LEARNING CENTER - THERMAL ENVP COMPLIANCE PATH

INSULATION

- IF 2 OR MORE LAYERS OF RIGID INSULATION, STAGGER INSTALLATION
- PROVIDE W/ MNF R-VALUE IDENTIFICATION MARK; IF NOT, PROVIDE INSULATION CERTIFICATE PER WSEC C303.1.1

AIR BARRIER TESTING PER 2021 WSEC

- ALL JOINTS AND SEAMS SHALL BE SEALED, INCLUDING SEALING TRANSITIONS IN PLACES AND CHANGES IN MATERIAL.
- ALL PENETRATIONS OF THE AIR BARRIER SHALL BE CAULKED, GASKETED, OR OTHERWISE SEALED IN A MANNER COMPATIBLE WITH THE CONSTRUCTION MATERIALS AND LOCATIONS.

- AIR LEAKAGE TESTING SHALL BE PERFORMED PER ASTM C779 AND THE TARGET LEAKAGE RATE 0.25 cfm/ft2 AT 0.3 in.wg

- SUBMIT BLDG ENCLOSURE AIR LEAKAGE TEST TO JURISDICTION & OWNER. IF FAIL, CORRECTIVE ACTION SHALL BE TAKEN UNTIL THE REQUIRED AIR LEAKAGE RATING IS ACHIEVED
- RECESSED LIGHTING FIXTURES SHALL COMPLY WITH SECTION C402.5.10

PROJECT CLOSURE DOCUMENT

PROVIDE PROJECT CLOSE DOCUMENTATION INCLUDING WSEC ENVELOPE COMPLIANCE FORM AND CALCULATION AND FENESTRATION NFRC RATING CERTIFICATES

SYMBOLS LEGEND

ROOM IDENTIFICATION	XXX [XXX]
DOOR NUMBER	(XXX)
WINDOW NUMBER	[XX]
EQUIPMENT NUMBER	(XX)
WALL TYPE	XX —
CENTERLINE	⊕
NORTH ARROW	↑
DATUM	⊕
REVISION	#
COLUMN GRID/LINE	(X) — — — — —
ENLARGED DETAIL MARK	(X) [A.B.H.H] — — — — — (X) [A.X.Y]
BUILDING SECTION MARK	(X) [A.X.Y] — — — — — (X) [A.X.Y]
DETAIL MARK	(X) [A.B.H.H] — — — — — (X) [A.B.H.H]
EXTERIOR ELEVATIONS SYMBOL	(X) [A.X.Y] N W [A.X.Y] E S
INTERIOR ELEVATION SYMBOL	(X) [A.X.Y] N W [A.X.Y] E S
MATERIAL CALL OUT/TAG	XX-# — — — — — XX-#

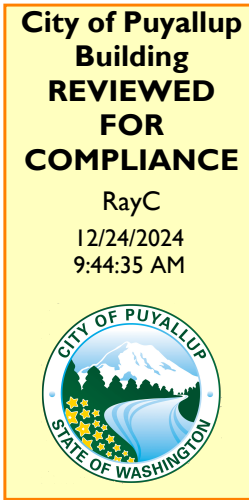
Applicants notes Occupant Load Capacity:
Licensing and restriction with state of Washington;
ELC can apply for:
14*4 = 54 Toddler (age 1-3)
8*4 = 32 Infant (age 0-12 month).
The total number of toddlers and infants are 86, which do not exceed code requirements of 100 to qualify as I-4 occupancy. Thus, this building is E.

GENERAL NOTES

- CODE CONFLICTS**
ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH MOST CURRENT APPLICABLE CODE AND ORDINANCES OF PIERCE COUNTY
- DISCREPANCY**
IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPORT DISCREPANCIES FOUND WITHIN THESE DOCUMENTS TO THE ARCHITECT AS SOON AS THEY ARE DISCOVERED
- SCALING DRAWINGS**
DO NOT SCALE THE DRAWINGS. CONTACT ARCHITECT WITH ANY CONFLICTS
- DIMENSIONS**
DIMENSIONS ARE TO FACE OF STUD AND FACE OF CONC. U.N.O. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, EXISTING CONDITIONS, AND MEMBER SIZES PERTAINING TO THE WORK PRIOR TO PROCEEDING. ALL DIMENSIONS OF EXISTING CONDITIONS SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED. THE ARCHITECT MUST BE NOTIFIED IN WRITING OF ANY VARIATION FROM THE DIMENSIONS AND/OR CONDITIONS SHOWN ON THESE DRAWINGS.
- DOORS AND WINDOWS**
ALL WINDOW AND DOOR SIZES SHALL BE VERIFIED AND FIELD MEASURED PRIOR TO FABRICATION
- EXISTING CONDITIONS**
THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AT THE SITE AND SHALL NOTIFY ARCHITECT IMMEDIATELY OF ANY UNCERTAINTIES OR DISCREPANCIES WITHIN THESE DOCUMENTS
CONTRACTOR SHALL PROTECT THE EXISTING SITE WORK, LANDSCAPING, AND AREAS OF THE SITE NOT IN THE SCOPE OF WORK
- DEMOLITION**
CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. PROTECT EXISTING STRUCTURE TO REMAIN
- HEALTH AND SAFETY**
CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY PRECAUTIONS AND THE MEANS AND METHODS TO PERFORM THE WORK
CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS
- QUALITY STANDARDS**
ALL CONSTRUCTION SHALL MEET OR EXCEED INDUSTRY STANDARDS. DETAILS ARE PROVIDED FOR MINIMUM QUALITY AND TO GIVE STANDARDS OF CONSTRUCTION. IF CONDITION IS NOT SPECIFICALLY DETAILED, SUBMIT A DETAIL FOR GUIDANCE AND REVIEW FOR ACCEPTANCE.
CONTRACTOR SHALL PROVIDE BLOCKING AS REQUIRED FOR ALL CASEWORK, FIXTURE, AND SPECIALTY ITEMS.

LIST OF DRAWINGS

GENERAL	PROJECT INFORMATION
G0.1	EXIT ACCESS & CODE CALC
G0.2	ACCESSIBILITY
ARCHITECTURAL	
A1.1	SITE PLAN
A1.2	ENLARGED SITE PLAN
LANDSCAPE	
L1.0	PLANTING PLAN WEST
L2.0	PLANTING PLAN EAST
L3.0	PLANTING DETAILS
L4.0	PAVING DETAILS
ARCHITECTURAL	
A2.11	MAIN FLOOR PLAN
A2.12	MAIN FLOOR - CLERESTORY & RCP
A2.13	ROOF PLAN
A2.21	ENLARGED PLAN - N. PRESCHOOL
A2.22	ENLARGED PLAN - S. PRESCHOOL, MECH & W. TODDLER
A2.23	ENLARGED PLAN - E. TODDLER & LOBBY
A2.24	ENLARGED PLAN - INFANT & PREP KITCHEN
A3.1	BUILDING ELEVATIONS (SOUTH & EAST)
A3.2	BUILDING ELEVATIONS (NORTH & WEST)
A3.3	BUILDING ELEVATIONS (COURT YARD)
A4.1	BUILDING SECTIONS
A4.2	BUILDING SECTIONS
A4.3	DETAILS
A7.1	DOOR SCHEDULE & TYPE
A7.2	WINDOW SCHEDULE
STRUCTURAL	
S1.0	GENERAL NOTES
S1.1	GENERAL DETAILS
S2.0	FOUNDATION PLAN
S2.1	CEILING FRAMING PLAN
S2.2	ROOF FRAMING PLAN
S3.0	DETAILS
S3.1	DETAILS
MECHANICAL	
MH001	LEGEND, ABBREVIATIONS, AND GENERAL NOTES
MH101	MECHANICAL FLOOR PLAN
MH102	MECHANICAL FLOOR PLAN 2
MH103	PIPING FLOOR PLAN
MH104	MECHANICAL ROOF PLAN
MH501	DETAILS I
MH502	DETAILS II
MH601	SCHEDULES I
MH602	SCHEDULES II
MH701	SEQUENCE OF OPERATIONS
MH801	SPECIFICATIONS
ELECTRICAL (FOR WSCE LIGHTING PURPOSE)	
E0.0	ELECTRICAL SYMBOLS LEGEND
E0.1	FIXTURES SCHEDULE
E0.2	GENERAL ELECTRICAL NOTES
E1.0	ELECTRICAL SITE PLAN
PH1.0	EGRESS SITE PHOTOMETRICS
E2.0	MAIN FLOOR LIGHTING PLAN
E3.0	MAIN FLOOR POWER / SIGNAL PLAN
E4.0	POWER RISER DIAGRAM
PLUMBING	
PP001	LEGENDS, ABBREVIATIONS, AND GENERAL NOTES
PP101	FOUNDATION PLAN
PP102	PLUMBING FLOOR PLAN
PP103	PLUMBING ROOF PLAN
PP401	PLUMBING ENLARGED FLOOR PLANS
PP501	DETAILS I
PP502	DETAILS II
PP503	DETAILS III
PP601	SCHEDULES I
PP602	SCHEDULES II
PP801	SPECIFICATIONS



Approval of submitted plans is not an approval of omissions or oversight by this office or noncompliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable building codes and regulations of the local government.

THE APPROVED CONSTRUCTION PLANS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION. PRINT IN COLOR and to SCALE.

ABBREVIATIONS

&	AND	GWB	GYPSUM WALL BOARD
<	ANGLE	HDR	HEADER
@	AT	INT.	INTERIOR
°	DEGREE	MFR	MANUFACTURE
Ø	DIAMETER	NTS	NOT TO SCALE
B/W	BETWEEN	O.C.	ON CENTER
BLCK	BLOCKING	RC	RAIN CHAIN
€	CENTERLINE	PW, PLW	PLY WOOD
APP.	APPROXIMATE(LY)	REF	REFRIGERATOR
CLR.	CLEAR(ANCE)	SCHD	SCHDULE
C.O.	CLEAR OPENING	SHGT	SHEATHING
COL.	COLUMN	S.D.	SMOKE DETECTOR
CONC.	CONCRETE	TEM	TEMPER/SAFETY GLASS
C.J.	CONTROL JOINT		
DEMO	DEMOLISH (ION)	T.O.BM	TOP OF BEAM
DOWN	DOWN	T.O.P.	TOP OF PLATE
DIM	DIMENSION	T.O.S.	TOP OF STEEL
D/W	DISH WASHER	TYP.	TYPICAL
ELEC.	ELECTRIC (AL)	U.N.O.	UNLESS NOTICED
E.Q.	EQUAL		OTHERWISE
E.J.	EXPANSION JOINT	VIF	VERIFY IN FIELD
EXT.	EXTERIOR	WIN	WINDOW
F.O.F.	FACE OF FINISH	W.T.	WEATHER THRESHOLD
F.F.	FINISH FLOOR	W/	WITH
FT	FOOT (FEET)	W/O	WITHOUT
FTG	FOOTING	WD	WOOD
FND	FOUNDATION		

PROJECT INFORMATION

PROJECT NAME
STEP BY STEP - EARLY LEARNING CENTER
PROJECT ADDRESS
3303 8TH AVE S, BLDG E
PUYALLUP, WA 98372
PROJECT DESCRIPTION
CREATE (4) PRESCHOOL AREA, (4) TODDLERS, (4) INFANT ROOM WITH OFFICE
LANDSCAPE DESIGN CREATE EARLY LEARNING SCHOOL CAMPUS
LANDSCAPE AND CIVIL TO CREATE PARKING (SEE A1.1&A1.2)
TAX PARCEL NUMBER
0420253071
DEFERRED PERMITS
SPRINKLER, ELECTRICAL (L&I), FIRE ALARM, FENCE (IF ABOVE 6'-0 H), MNF TRUSS
LEGAL DESCRIPTION
SEE SITE CIVIL PERMIT

PROJECT DIRECTORY

THE OWNER STEP BY STEP KRISTA LINDEN, EXECUTIVE DIRECTOR 3303 8TH AVE S, BLDG A PUYALLUP, WA 98372 kristalinden@stepbystepfamily.org 253.841.1776	CIVIL ENGINEER CECIL + ASSOCIATES, LLC ROGER CECIL, PE PO BOX 598 BOTHELL, WA 98011 rogerc@cecilnassoc.com 206.484.3492
THE ARCHITECT JEFF BROWN ARCHITECTURE JEFF BROWN, ARCHITECT SONG CHO (CONTACT PERSON) 12181 C STREET S. TACOMA, WA 98444 songylcho@hotmail.com 509.432.4651	STRUCTURAL ENGINEER CHRIS FYNBOE, P.E. CHRIS FYNBOE 12181 'C' STREET S. TACOMA, WA 98444 253.537.8128
INTERIOR DESIGNER MCGRANAHAN ARCHITECTS SEONG SHIN, PRINCIPLE INT. DESIGN 2111 PACIFIC AVE, SUITE 100 TACOMA, WA 98402 seong.shin@mcgranahan.com 253.383.3084	MECHANICAL ENGINEER MIDDLEBROOK ENGINEERING, LLC BRIAN MIDDLEBROOK, PE REGGIE CHRISTOP 6216 174TH AVE SW LONGBRANCH, WA 98351 brion@mittlebrookeng.com rchristofmiddlebrookeng.com
LANDSCAPE ARCHITECT IGM LANDSCAPE ARCHITECTS INC CRAIG LEWIS, PLA 12610 NE 104TH STREET KIRKLAND, WA 98033 craig@iglm-inc.com 206.795.3196	ELECTRIC ENGINEER CROSS ENGINEER, INC BRUCE ANDERSON 923 MARTIN LUTHER KING JR. WAY TACOMA, WA 98405 brucea@crossengineers.com 253.759.0118
CONTRACTOR MOUNTAIN CONSTRUCTION JEREMY PATNOT 7457 S MADISON ST TACOMA, WA 98409 jeremy@mountainconst.com 253.355.6135	



PRCNC20241019
QR for Building
Permit

Project Conditions
Please see both the project conditions established on this permit (see the permit for this project QR code above, OPEN conditions) and the Civil construction permit issued separately. Some of these conditions apply to final inspections and occupancy approval.
At the request of the architect of record and owner, the issuance of the Civil utility permits has been deferred. To check Civil permit status use QR code below.
Fire Hydrants must remain functional, active and accessible during construction.
NO WORK may continue beyond rough in inspections; no framing inspection or cover inspections. The contractor may not request inspections for cover or framing until the Civil permit has been issued.

CODE/ZONING INFORMATION

GOVERNING CODE
2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL MECHANICAL CODE
2021 UNIFORM PLUMBING CODE
2021 WASHINGTON STATE ENERGY CODE, COMMERCIAL
ADOPTED BY WA STATE BUILDING CODE COUNCIL
AND ANY CITY OF PUYALLUP ORDINANCE

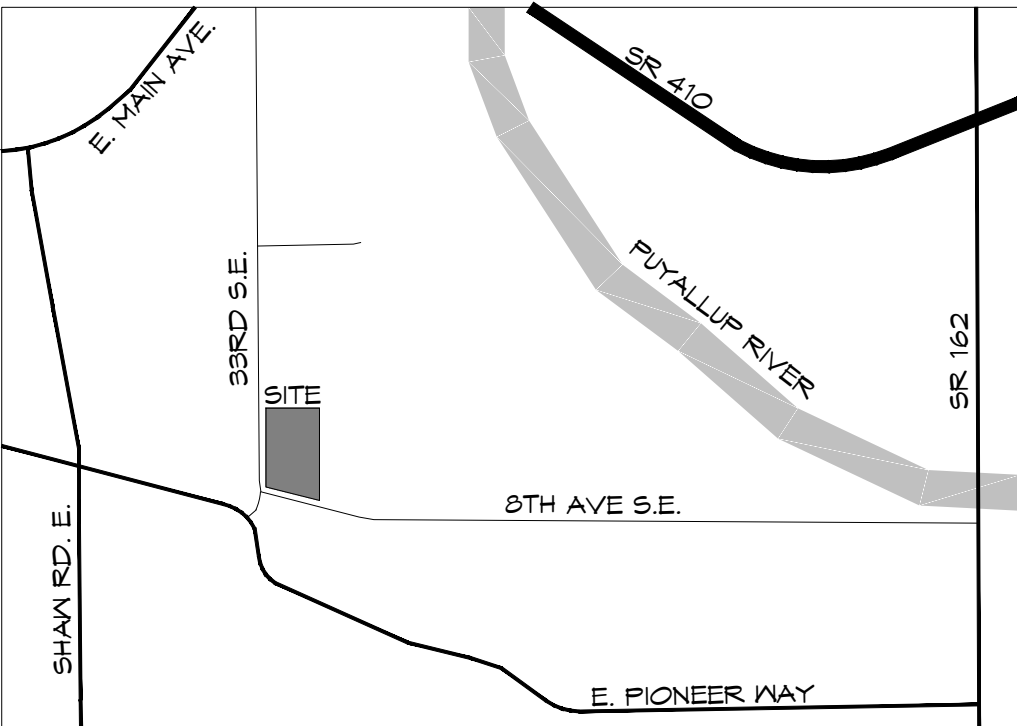
ZONING
ARO & DEVELOPMENT AGREEMENT
HEIGHT LIMIT: 40'

PRCCP20241109

QR Civil Permit



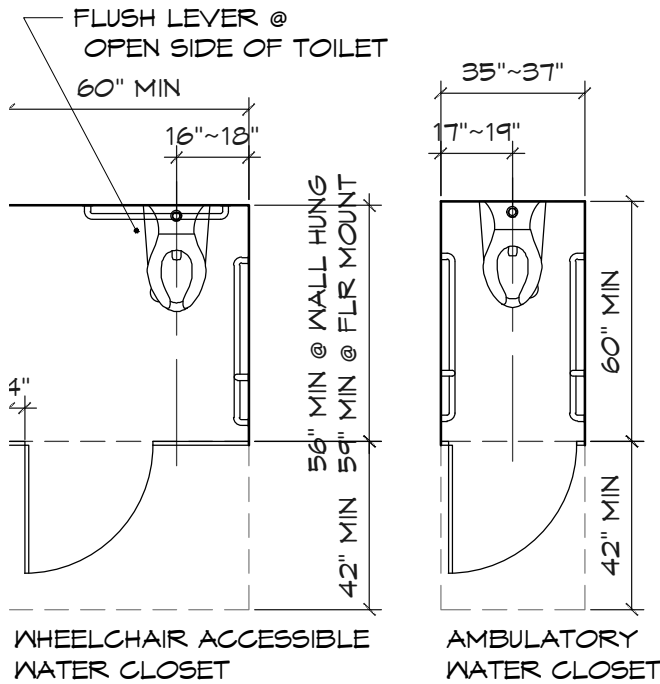
VICINITY MAP





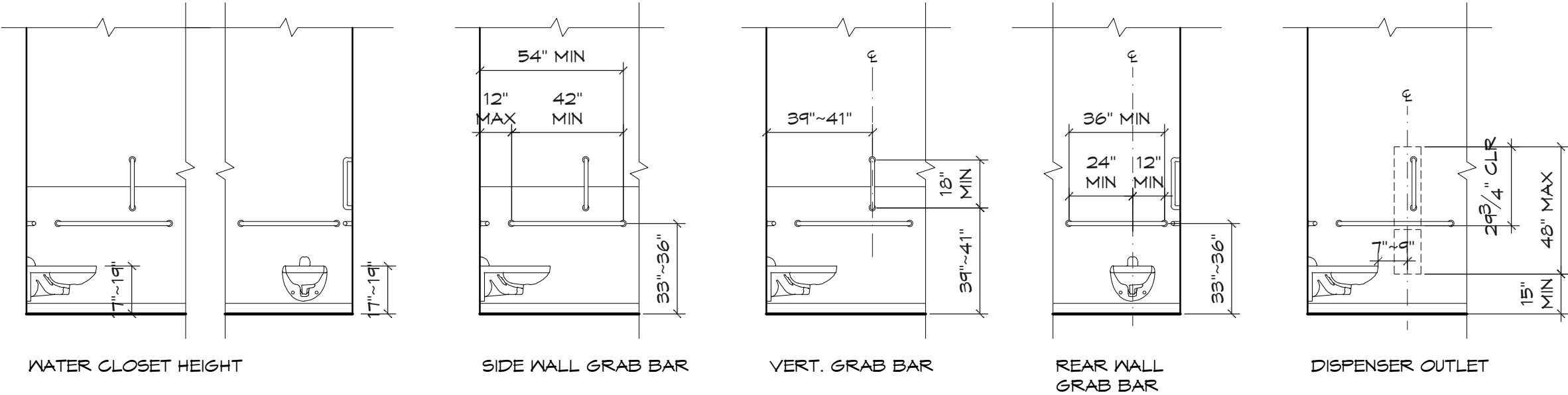
VANITY HEIGHT

ICC/ANSI A117.1 | SECTION 606



BATHROOM GRAB-BAR

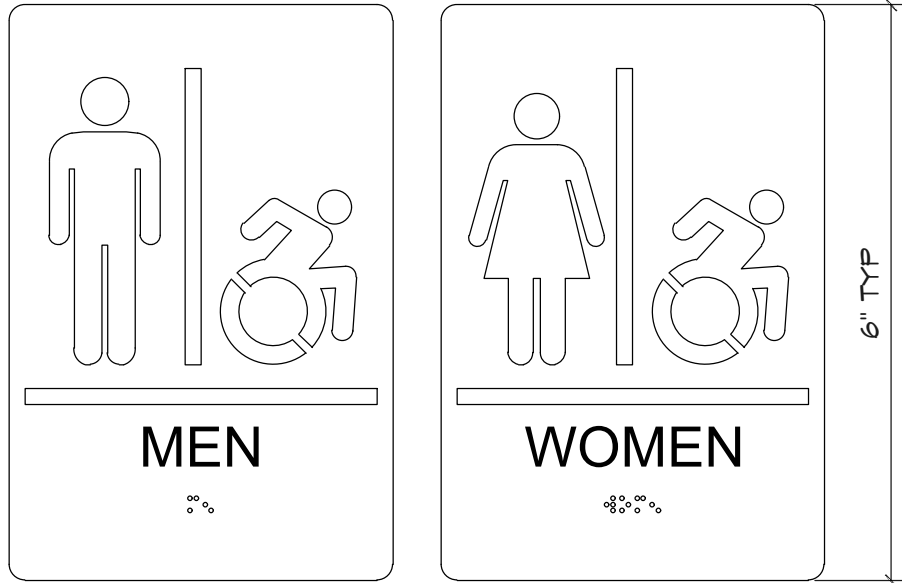
ICC/ANSI A117.1 | SECTION 604



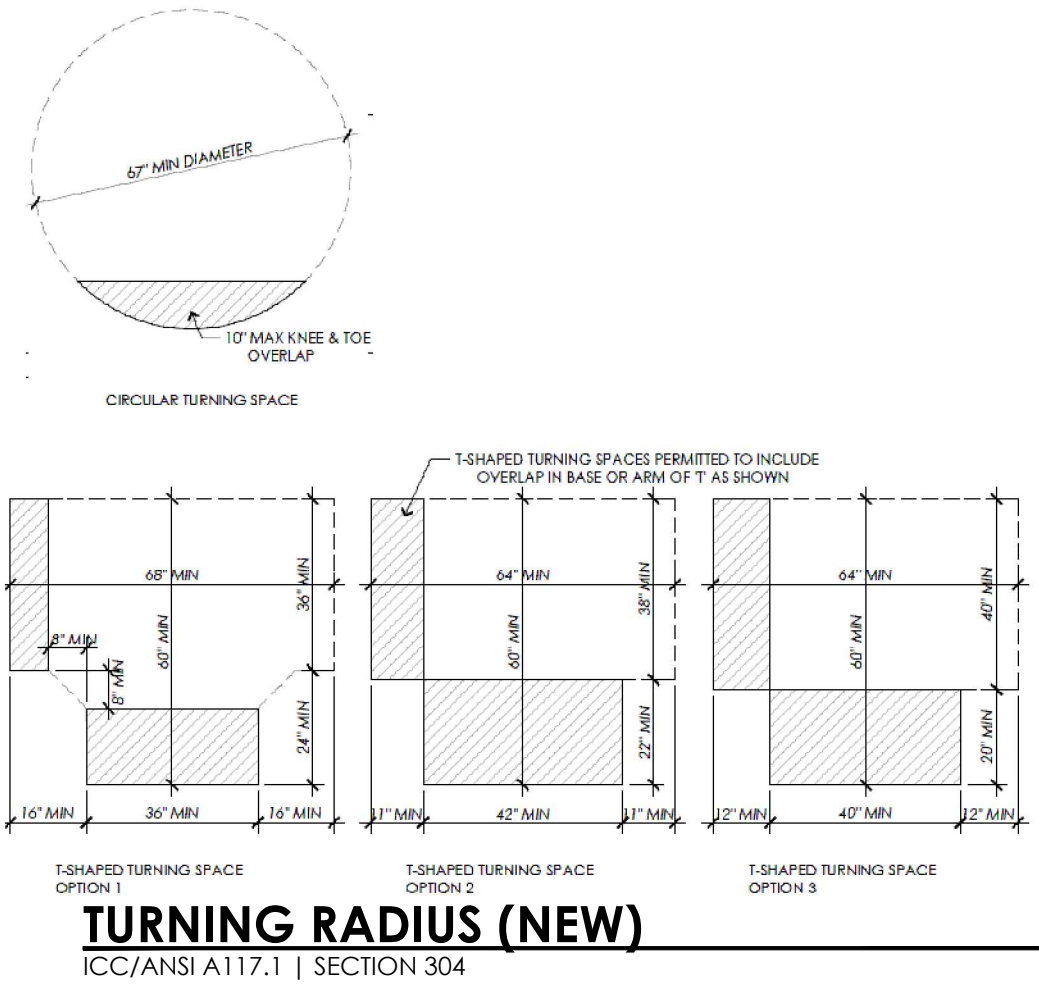
RESTROOM GENERAL NOTES:

- TOILET ROOM PLAN & ELEVATIONS ILLUSTRATE FIXTURE CLEARANCE DIMENSIONS, MOUNTING HEIGHTS AND ACCESSORY PLACEMENT. ACTUAL LAYOUT MAY VARY. SEE FLOOR PLAN FOR CORRECTION LAYOUT.
- LOWER EDGE OF LAVATORY TO BE 2'-3" MIN. ABOVE FINISH FLOOR FOR KNEE CLEARANCE
- MIRROR TO BE MOUNTED 3'-4" MAX ABOVE FINISH FLOOR.
- GRAB BARS TO BE 1-1/4" ~ 1-1/2" IN DIAMETER, MOUNTED 1-1/2" FROM WALL. BARS SHALL BE CAPABLE OF SUPPORTING 300 LB LIVE LOAD WITHOUT PERMANENT DEFLECTION.
- LAVATORY RIM TO BE 34" ABOVE FINISH FLOOR.
- FLOORS SHALL BE SMOOTH, HARD, NON-ABSORBENT SURFACE SUCH AS SHEET VINYL OR OTHER AS ACCEPTABLE BY LOCAL HEALTH AND BUILDING DEPARTMENTS. FLOORING MATERIAL MUST EXTEND ONTO THE WALL AT LEAST 6". SEE FINISH SCHEDULE FOR MORE INFORMATION.
- DIMENSIONS, NOTES, AND EQUIPMENT TYPICAL FOR ALL TOILET ROOMS, UNLESS NOTED OTHERWISE.
- SEE FINISH SCHEDULE ON SHEET ID## FOR RESTROOM FINISH INFORMATION.
- TOILET ROOM FAN TO BE INTEGRALLY SWITCHED WITH TOILET LIGHT AND VENTED TO THE OUTSIDE.
- CONCRETE OR CMU WALLS IN TOILET ROOMS SHALL BE FURRED OUT AND FINISHED SIMILAR TO ADJACENT WALLS.
- PROVIDE PAPER TOWEL DISPENSER. UNIT TO BE MOUNTED SO THAT CONTROLS OR OPENING ARE LOCATED 40" MAX ABOVE FINISH FLOOR.
- GYPSUM BOARD APPLIED TO PLUMBING WALLS SHOULD BE WATER-RESISTANT.
- WATER CLOSET FLUSH VALVE TO BE ON OPEN SIDE OF TANK.
- PROVIDE BLOCKING AS REQUIRED TO SUPPORT SINK, GRAB BARS, AND OTHER HARDWARE.
- TOILET PAPER DISPENSERS SHALL COMPLY WITH SECTION 309.4. WHERE THE DISPENSER IS LOCATED ABOVE THE GRAB BAR, THE OUTLET OF THE DISPENSER SHALL BE LOCATED WITHIN AN AREA 24" MIN AND 42" MAX FROM THE REAR WALL. THE OUTLET OF THE DISPENSER SHALL BE LOCATED 18" MIN AND 48" MAX ABOVE THE FLOOR. DISPENSERS SHALL COMPLY WITH SECTION 604.3.
- DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROL DELIVERY, OR DO NOT ALLOW CONTINUOUS PAPER FLOW.
- OUTLET SHALL BE 15" MIN AND 48" MAX ABOVE FINISH FLOOR. THERE SHALL BE 1-1/2" MIN CLEARANCE BELOW AND 12" MIN ABOVE THE GRAB BAR.
- OTHER DISPENSERS AND DISPOSAL FIXTURES SHALL BE LOCATED 40" MAX ABOVE FINISH FLOOR, MEASURED TO ANY RACK, OPERATING CONTROL, RECEPTACLE OR DISPENSER
- WALL WITHIN 2 FEET OF URINALS AND WATER CLOSETS SHALL HAVE A SMOOTH, HARD, NON-ABSORBENT SURFACE TO A HEIGHT OF 4'-0" ABOVE FINISH FLOOR.

ACCESSIBLE RESTROOM SIGN

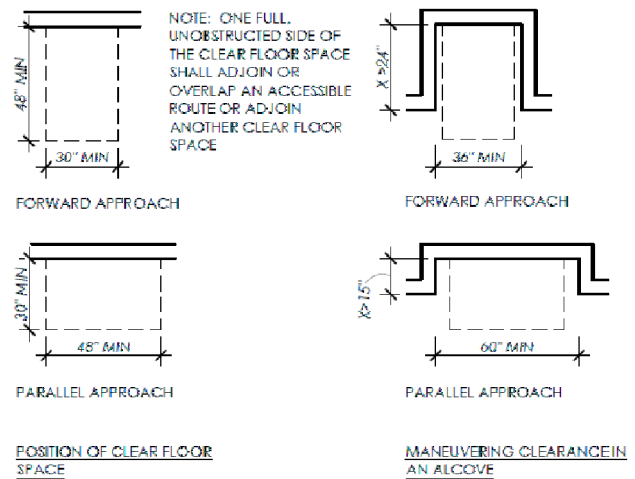


- ALL HANDICAP ROOMS TO HAVE SINGAGE PER ICC 1101.2.9 (ICC A117.1 SECTION 703.6.3.1) ALL INTERIOR SIGNS DEPICTING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL COMPLY WITH SECTION 706 (ICC A117.1 SECTION 703)
- ALL ACCESSIBLE SIGNAGE DEPICTING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE WHITE ON A BLUE BACKGROUND PER 1101.2.9 IN THE WA STATE AMENDMENTS TO THE IBC
- MOUNT ACCESSIBLE SIGNS 40" MIN AFF, MEASURED TO THE BASELINE OF THE CHARACTER PER ICC/ANSI 1117.1-2009 SECTION 703.4.5



TURNING RADIUS (NEW)

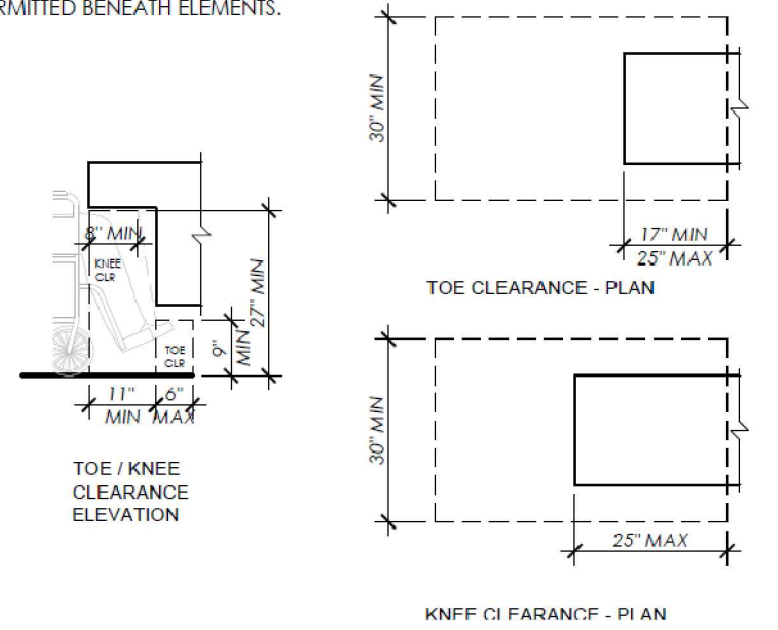
ICC/ANSI A117.1 | SECTION 304



CLEAR FLOOR SPACE

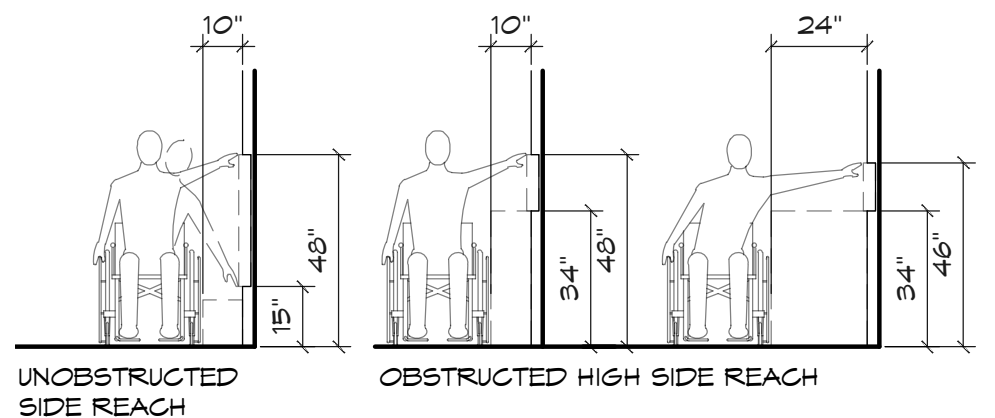
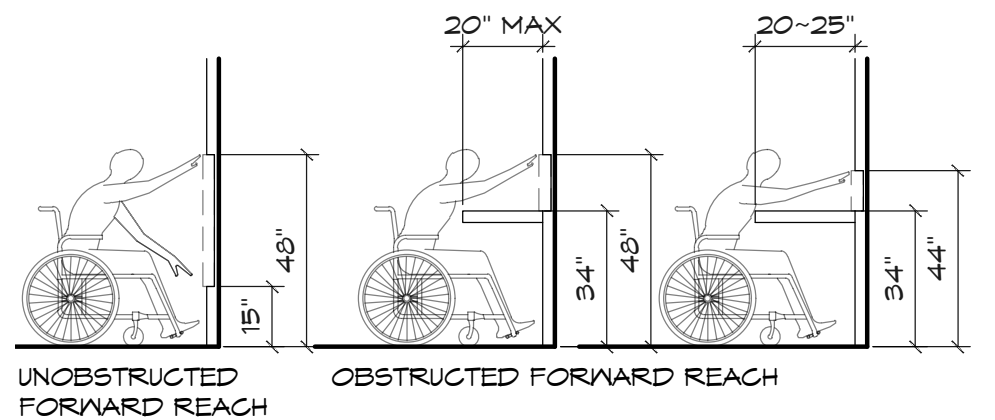
ICC/ANSI A117.1 | SECTION 305

NOTE: SPACE BENEATH AN ELEMENT IS INCLUDED AS PART OF THE CLEAR FLOOR SPACE AT AN ELEMENT, CLEARANCE AT AN ELEMENTS, OR A TURNING SPACE AS PROVIDED BELOW, ADDITIONAL SPACE BEYOND KNEE AND TOE CLEARANCE SHALL BE PERMITTED BENEATH ELEMENTS.



KNEE AND TOE CLEARANCE

ICC/ANSI A117.1 | SECTION 305



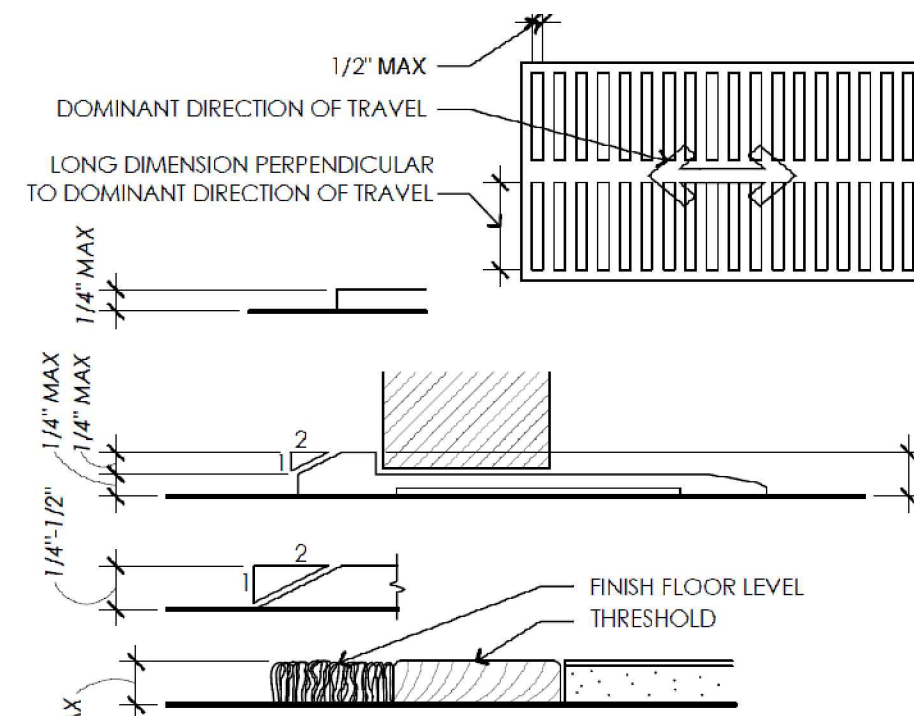
REACHING RANGES

ICC/ANSI A117.1 | SECTION 308

ACCESSIBILITY GENERAL NOTES

THE PROJECT SHALL COMPLY WITH THE CURRENT ICC/ANSI A117.1 CODE ADOPTED BY THIS JURISDICTION. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE CODE, EVEN IF NOT SPECIFICALLY DETAILED IN THE CONSTRUCTION DOCUMENTS.

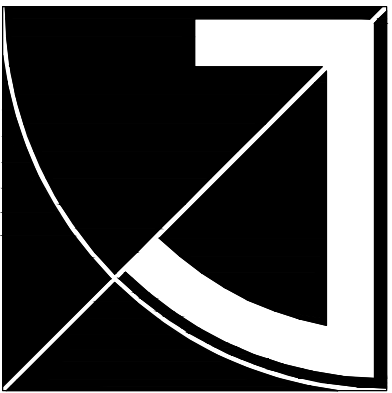
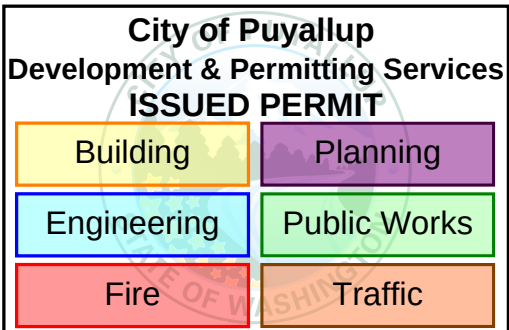
- FLOOR SURFACES SHALL BE STABLE, FIRM, AND SLIP RESISTANT
- OPENINGS IN THE FLOOR SURFACES SHALL BE OF A SIZE THAT DOES NOT PERMIT THE PASSAGE OF A 1/2" Ø UNLESS SPECIFICALLY ALLOWED AND NOTED WITHIN THE ENCLOSED DETAILS. ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL
- CHANGES IN LEVEL
 - CHANGES IN LEVEL OF 1/4" MAX IN HEIGHT SHALL BE PERMITTED TO BE VERTICAL
 - CHANGES IN LEVEL GREATER THAN 1/4" IN HEIGHT AND NOT MORE THAN 1/2" MAX. IN HEIGHT SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 1:2
 - CHANGE IN LEVEL GRATER THAN 1/2" IN HEIGHT SHALL BE RAMPED
 - CARPET OR CARPETTILE SHALL BE SECURELY ATTACHED AND SHALL HAVE A FIRM CUSHION, PAD, OR BACKING, OR NO CUSHION NOR PAD. CARPET OR CARPETILE SHALL HAVE A LEVEL LOOP, TEXTURED LOOP, LEVEL CUT PILE, OR LEVEL/UNCUT PILE TEXTURE. THE PILE SHALL BE 1/2" MAX IN HEIGHT. EXPOSED EDGES OF CARPET SHALL BE FASTENED TO THE FLOOR AND SHALL HAVE TRIM ALONGS THE ENTIRE LENGTH OF
- CLEAR FLOOR SPACE
 - FLOOR SURFACE OF A CLEAR FLOOR SPACE SHALL HAVE A SLOPE NOT STEEPER THAN 1:48
 - UNO. CLEAR FLOOR SPACE SHALL BE PERMITTED TO INCLUDE KNEE AND TOE CLEARANCE REQUIRED BY CODE
- ACCESSIBLE ROUTES
 - ACCESSIBLE ROUTES WILL INCLUDE WALKING SURFACES WITH A SLOPE NOT STEEPER THAN 1:20, DOORS AND DOORWAYS, RAMPS EXCLUDING THE FLARED SIDES, CURB RAMPS, ELEVATORS, AND PLATFORM LIFTS
 - THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:20 WITH A MAX CROSS SLOPE OF 1:48. SLOPES STEEPER THAN 1:30 SHALL COMPLY WITH RAMP REQUIREMENTS
- OPERABLE PARTS
 - CLEAR FLOOR SPACE SHALL COMPLY WITH CODE REQUIREMENTS
 - OPERABLE PARTS SHALL BE PLACED WITHIN ONE OR MORE OF THE REACH RANGE REQUIREMENTS
 - THE FORCE REQUIRED TO ACTIVATE OPERABLE PARTS SHALL BE 5.0 LB MAX
- DOOR HARDWARE
 - IF PROVIDED, THRESHOLDS AT DOOR SHALL BE 1/2" MAX IN HEIGHT. RAISED THRESHOLDS AND CHANGE IN LEVEL AT DOORWAYS SHALL COMPLY WITH FLOORS SURFACE AND LEVEL CHANGE REQUIREMENTS. THIS REQUIREMENT SHALL NOT APPLY TO EXISTING OR ALTERED THRESHOLDS 3/4" MAX HIGH WITH A BEVELED EDGE EACH SIDE WITH A MAX SLOPE OF 1:2 FOR THE HEIGHT EXCEEDING 1/4"
 - OPERABLE PARTS SHALL BE MOUNTED 34" MIN, 48" MAX AFF
 - OPERATING HARDWARE FOR SLIDING DOORS SHALL BE EXPOSED AND USABLE FROM BOTH SIDES WHEN THE DOOR IS FULLY OPEN
- HANDRAILS AND GRAB BARS
 - HANDRAILS, GRAB BARS, AND ADJACENT SURFACES SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS. EDGES SHALL BE ROUNDED
 - HANDRAILS AND GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.



NOTE: INTERIOR AND EXTERIOR THRESHOLDS SHALL BE NO HIGHER THAN 1/2 INCH ABOVE THE ADJACENT FLOOR LEVELS. EACH EXPOSED EDGE OF THRESHOLDS SHALL BE BEVELED OR SLOPED AT AN ANGLE NOT TO EXCEED 45 DEGREES SO THAT NO VERTICAL CHANGE OF ELEVATION EXCEEDS 1/4 INCH.

ACCESSIBLE THRESHOLD

ICC/ANSI A117.1 | SECTION 302 & 303

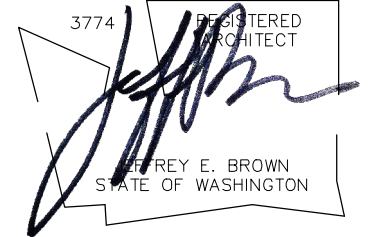


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STEP BY STEP EARLY LEARNING CENTER

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PROJECT NUMBER
21015

DRAWING TYPE

PERMIT DOCUMENT

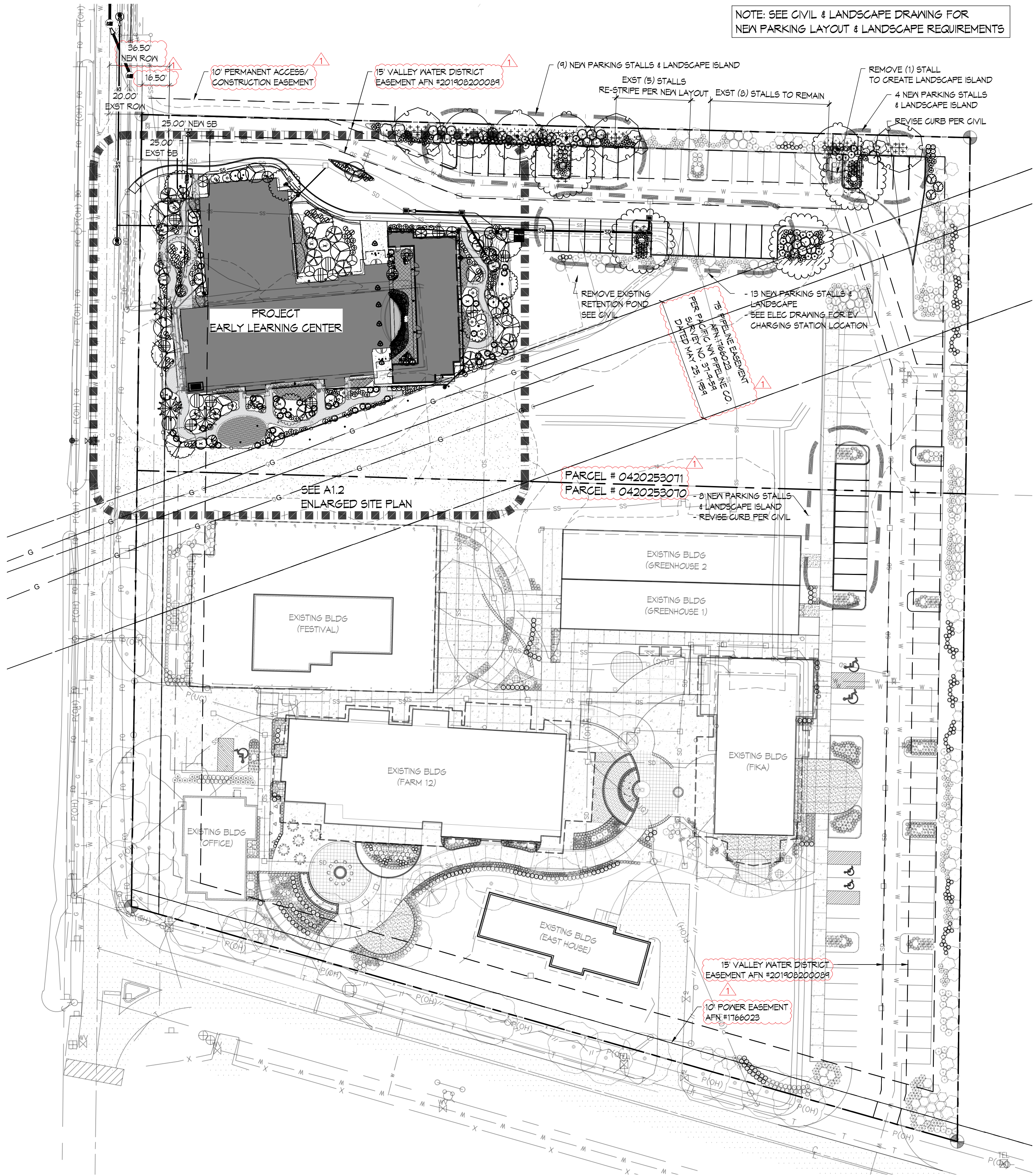
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06.21.24	PERMIT	
09.30.24	CITY	△

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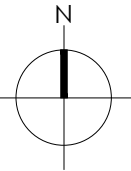
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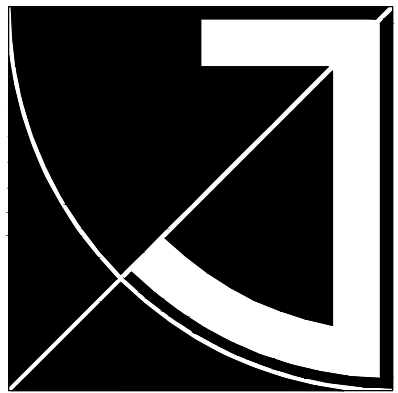
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SITE PLAN
(11x17) SCALE: 1" = 80'
(22x34) SCALE: 1" = 40'



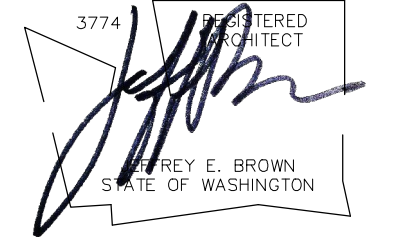
City of Puyallup Development & Permitting Services ISSUED PERMIT			
Building	Planning		
Engineering	Public Works		
Fire	Traffic		



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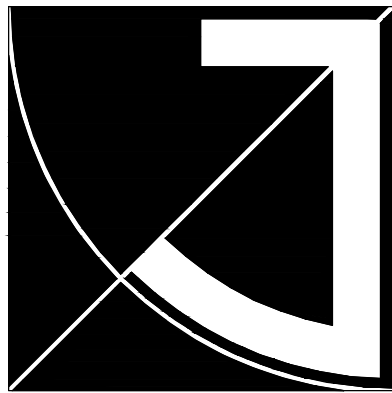
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09.30.24	CITY	

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SITE PLAN

SHEET #

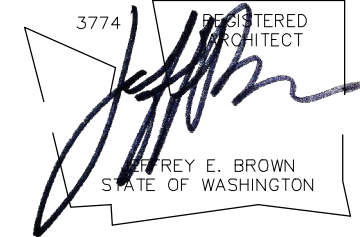
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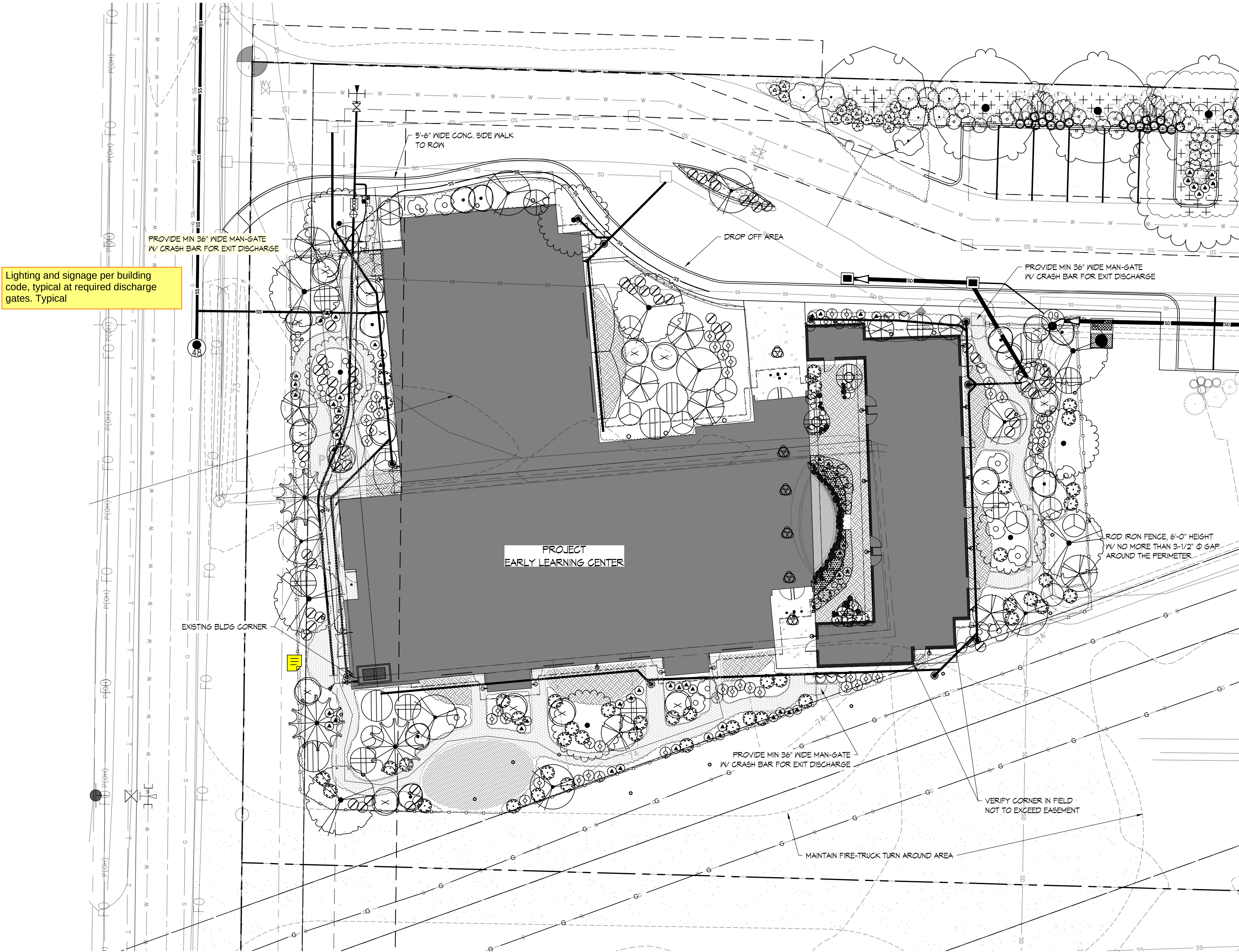
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09.30.24	CITY	

SHEET TITLE

ENLARGED
SITE PLAN

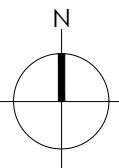
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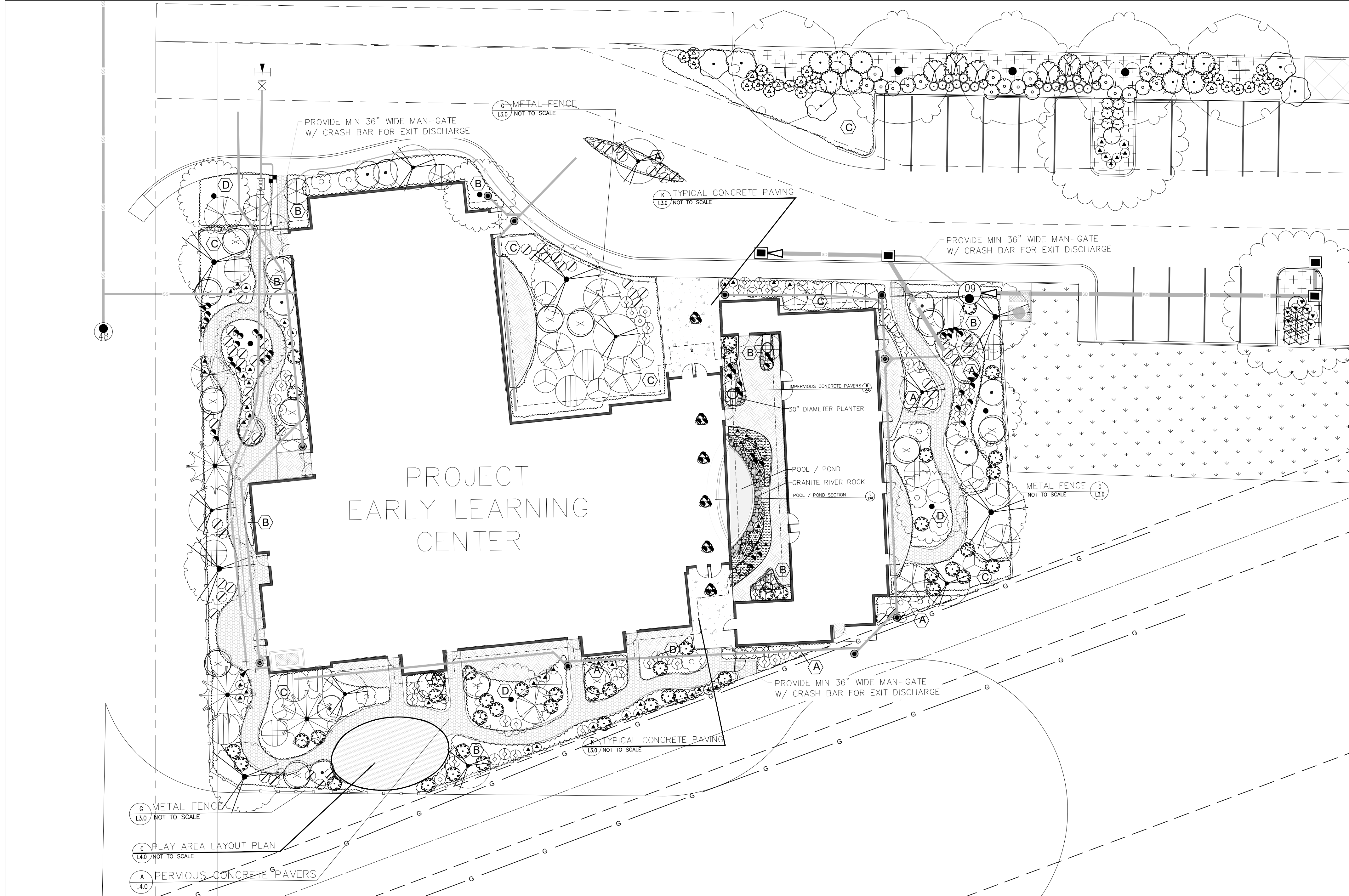


ENLARGED SITE PLAN

(11X17) SCALE : 1/32" = 1'-0"
(22X34) SCALE : 1/16" = 1'-0"

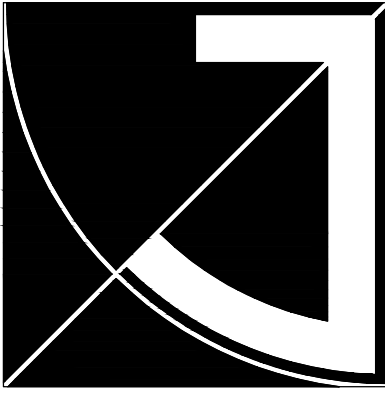


City of Puyallup Development & Permitting Services ISSUED PERMIT	
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Engineering	Public Works
Fire	Traffic



PAVING SCHEDULE:

	INDICATES IMPERVIOUS PAVING - CONCRETE PAVERS
	INDICATES CONCRETE PAVING
	INDICATES PERVIOUS PAVING - CONCRETE PAVERS
	INDICATES PLAY AREA SOFT SURFACING



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DOCUMENT

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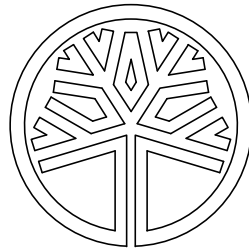
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PLANTING PLAN
WEST

SHEET #
L1.0

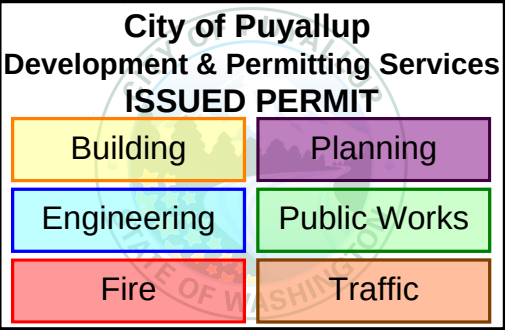


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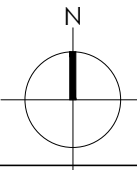


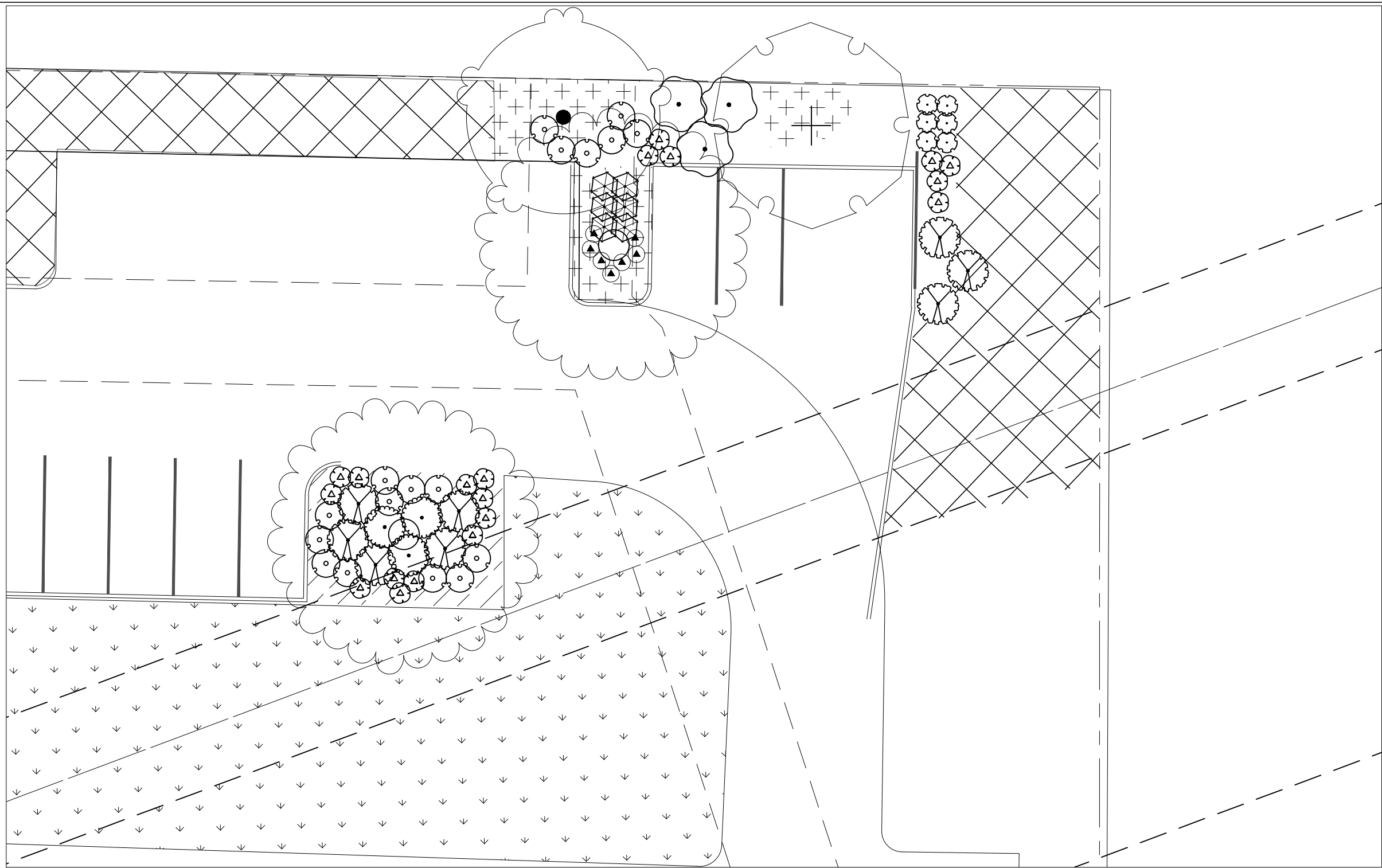
STATE OF
WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
Craig A. Lewis
CERTIFICATE NO. 442



PLANTING PLAN

(22X34) SCALE : 1/16" = 1'-0"





ENLARGED PLANTING PLAN

(22X34) SCALE : 1/16" = 1'-0"



ENLARGED INTERIOR PLANTING PLAN

(22X34) SCALE : 1/8" = 1'-0"

PLANTING SCHEDULE:

SYMBOL	BOTANICAL NAME / COMMON NAME	SIZE AT PLANTING	QTY.	SPACING
TREES				
	AESCULUS HIPPOCASTANUM 'BAUMANNII' / HORSE CHESTNUT	2" CALIPER, 10' HT. TREE FORM, BRANCHED AT 6'	6	
	GLEDITSIA TRICANTHOS /HONEY LOCUST	2" CALIPER, 10' HT. TREE FORM, BRANCHED AT 6'	3	
	GYMNOCLADUS DIOCA / KENTUCKY COFFEE TREE	2" CALIPER, 10' HT. TREE FORM, BRANCHED AT 6'	20	
	STEWARTIA PSEUDOCAMILLIA / JAPANESE STEWARTIA	2" CALIPER, 10' HT. TREE FORM, BRANCHED AT 6'	4	
	BETULA NIGRA 'HERITAGE' / RIVER BIRCH	2" CALIPER, 8-10' HT. TREE FORM, BRANCHED AT 4'	6	
	CORNUS KOUSA 'STARLIGHT' / STARLIGHT DOGWOOD	2-1/2" CALIPER, 10' HT. TREE FORM, BRANCHED AT 6'	9	
	MAGNOLIA SELLATA 'KING ROSE' STAR MAGNOLIA	2" CALIPER, 6-7' HT.	8	
	TAXUS MEDIA 'HATFIELDII' / YEW	5-6" HT., FULL SYMMETRICAL SHAPE	3	
SHRUBS				
	MYRICA CALIFORNICA / PACIFIC WAX MYRTLE	24" HT., 5-GAL POT	13	
	CISTUS HYBRIDUS / WHITE ROCK ROSE	24" HT., 5-GAL POT	35	
	OEMLERIA CERASIFORMIS / INDIAN PLUM	24" HT., 5-GAL POT	8	
	ROSA NUTKANA / NOOTKA ROSE	24" HT., 5-GAL POT	14	
	SYMFORICARPOS ALBUS / COMMON WHITE SNOWBERRY	24" HT., 5-GAL POT	47	
	TAXUS X MEDIA 'WARDII' / WARD'S YEW	12" HT., 2-GAL POT	12	
	VIBURNUM DAVIDII / DAVID'S VIBURNUM	12" HT., 2-GAL POT	12	
	MAHONIA NERVOSA / LONG-LEAF MAHONIA	12" HT., 2-GAL POT	19	
	RIBES SANGUINUM / RED FLOWERING CURRENT	24" HT., 5-GAL POT	35	

NOTES

- ALL NEW PLANTING AREAS ON SITE SHALL RECEIVE MINIMUM 6" OF IMPORTED SANDY LOAM TOPSOIL MIX CONTAINING 10% ORGANIC COMPOST TILLED INTO THE TOP 12" AND MINIMUM 2" OF FINE GRADE BARK MULCH.
- ALL PLANTING OF SHRUBS AND TREES WITHIN CRITICAL ROOT ZONE OF EXISTING TREES TO SAVE AND PROTECT SHALL BE PLANTED BY HAND METHODS.

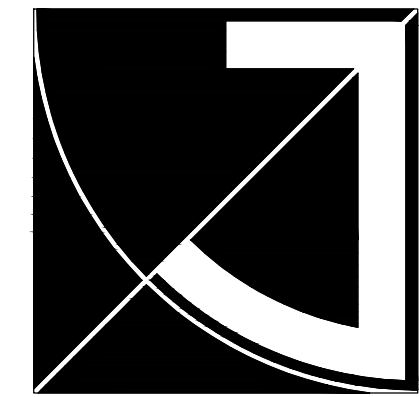
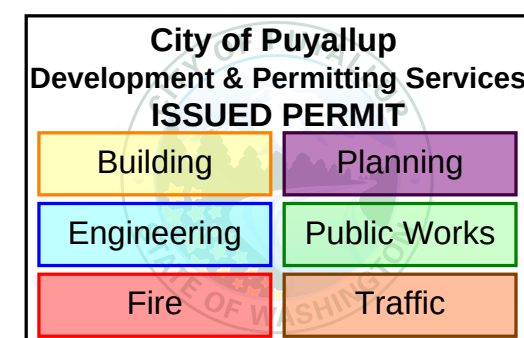
	VACCINIUM OVATUM / EVERGREEN HUCKLEBERRY	24" HT., 5-GAL POT	5	
	VIBURNUM TINUS "SPRING BOUQUET"	24" HT., 5-GAL POT	17	
	RHODODENDRON YAKUSHIMANUM 'YAKU PRINCESS' / RHODODENDRON	24" HT., 5-GAL POT	9	
	CORNUS STOLONIFERA 'KELSEYI' / DWARF RED-TWIG	12" HT., 2-GAL POT	49	
	PHILADELPHUS LEWISII / WILD MOCK ORANGE	18" HT., 3-GAL POT	5	
	SARCOCOCCA RUSCIFOLIA	18" HT., 3-GAL	9	
	BLECHNUM SPICANT / DEER FERN	18" HT., 2-GAL POT	48	

	AQUILEGIA FORMOSA / WESTERN COLUMBINE	12" HT., 2-GAL	61	
	PENNISETUM ALOPECUROIDES 'HAMELN' / FOUNTAIN GRASS	12" HT., 2-GAL POT	62	
	LIRIOPE MUSCARI / BIG BLUE LILYTURF	18" HT., 2-GAL POT	70	
	ROSA RUGOSA 'HANSA' / RUGOSA ROSE	36" HT., 5-GAL POT	12	
	CLEMATIS MONTANA / ANEMONE CLEMATIS	24" HT., 2-GAL STAKED VINE	18	
	ADIANTUM ALEUTICUM / WESTERN MAIDENHAIR FERN	12" HT., 2-GAL POT	10	
	SEDUM MIX / (3) VARIETIES STONECROP	4-INCH POT	1'-6" O.C.	
	CORNUS CANADENSIS / BUNCHBERRY	4-INCH POT	1'-6" O.C.	
	MAHONIA REPENS / CREEPING MAHONIA	4-INCH POT	1'-6" O.C.	
	FRAGARIA CHILOENSIS 'LIPSTICK' / SAND STRAWBERRY	4-INCH POT	1'-6" O.C.	
	GALLUM ODORATUM / SWEET WOODRUFF	4-INCH POT	1'-6" O.C.	
	ARENARIA MONTANA / SANDWORT	4-INCH POT	1'-0" O.C.	
	OPHIPOGON PLANISCAPUS 'NIGRESCENS' / BLACK MONDO GRASS	4-INCH POT	1'-0" O.C.	
	ARCTOSTAPHYLOS UNA-URSI 'EMERALD CARPET' / EMERALD MANZANTIA	4-INCH POT	1'-6" O.C.	
	INDICATES HYDROSEEDED LAWN			
	INDICATES EXISTING VEGETATION TO SAVE AND PROTECT			

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PROJECT NUMBER

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DRAWING TYPE

PERMIT DOCUMENT

ISSUE DATE ISSUE DESCRIP. NO.

SHEET TITLE

PLANTING PLAN EAST

SHEET #

L2.0



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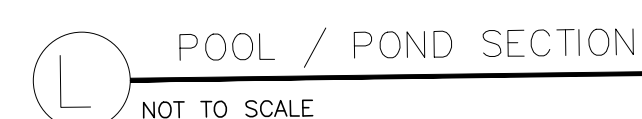
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PUYALLUP, WA 98372

21015

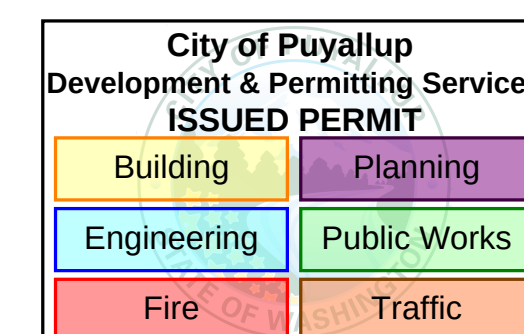
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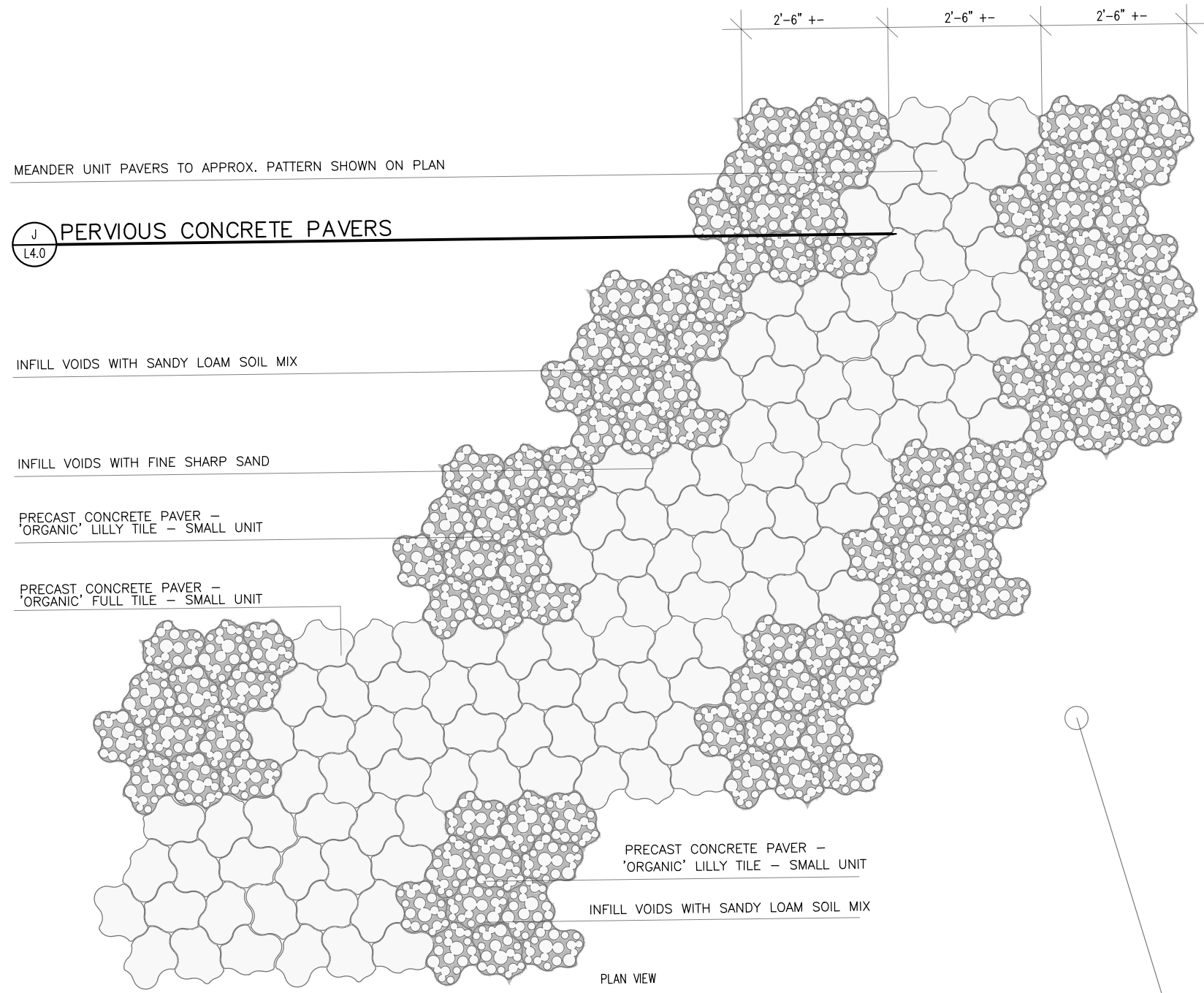
PLANTING DETAILS

L3.0

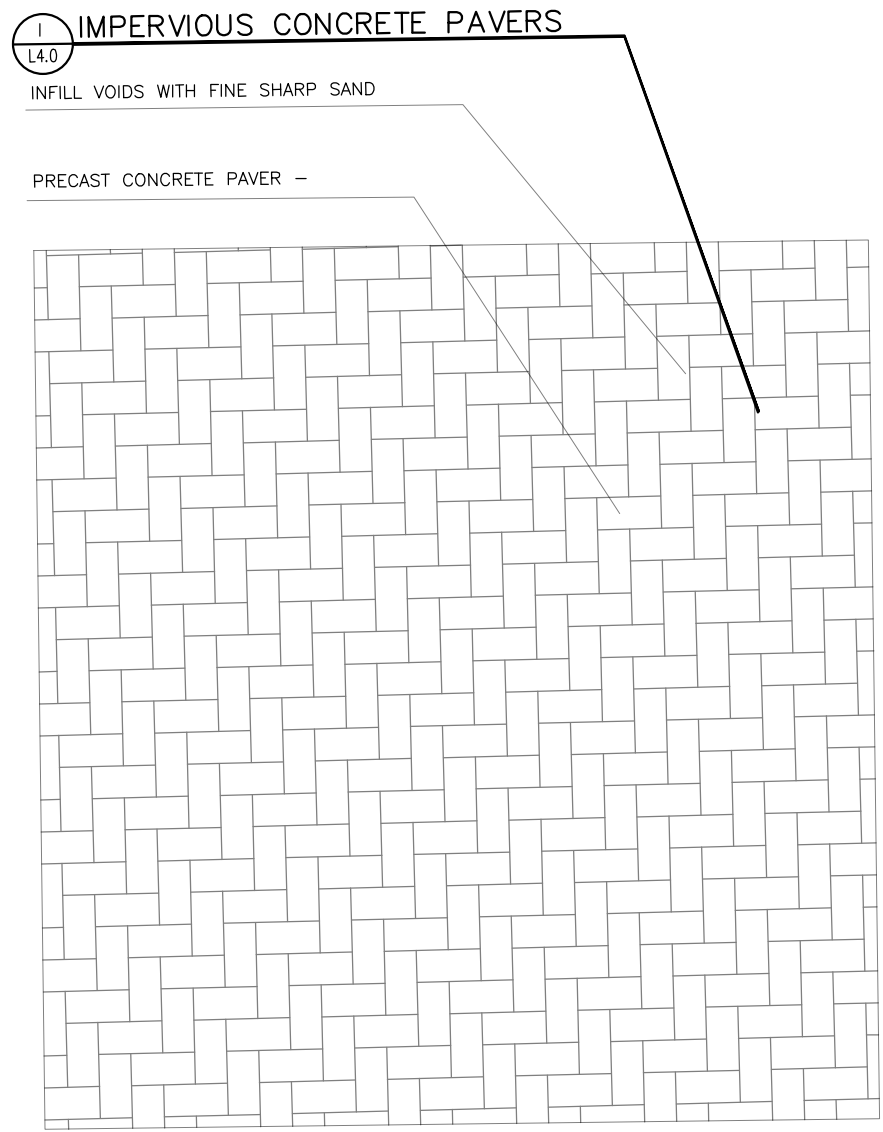


E-: craig@jgm-inc.com
www.jgm-inc.com



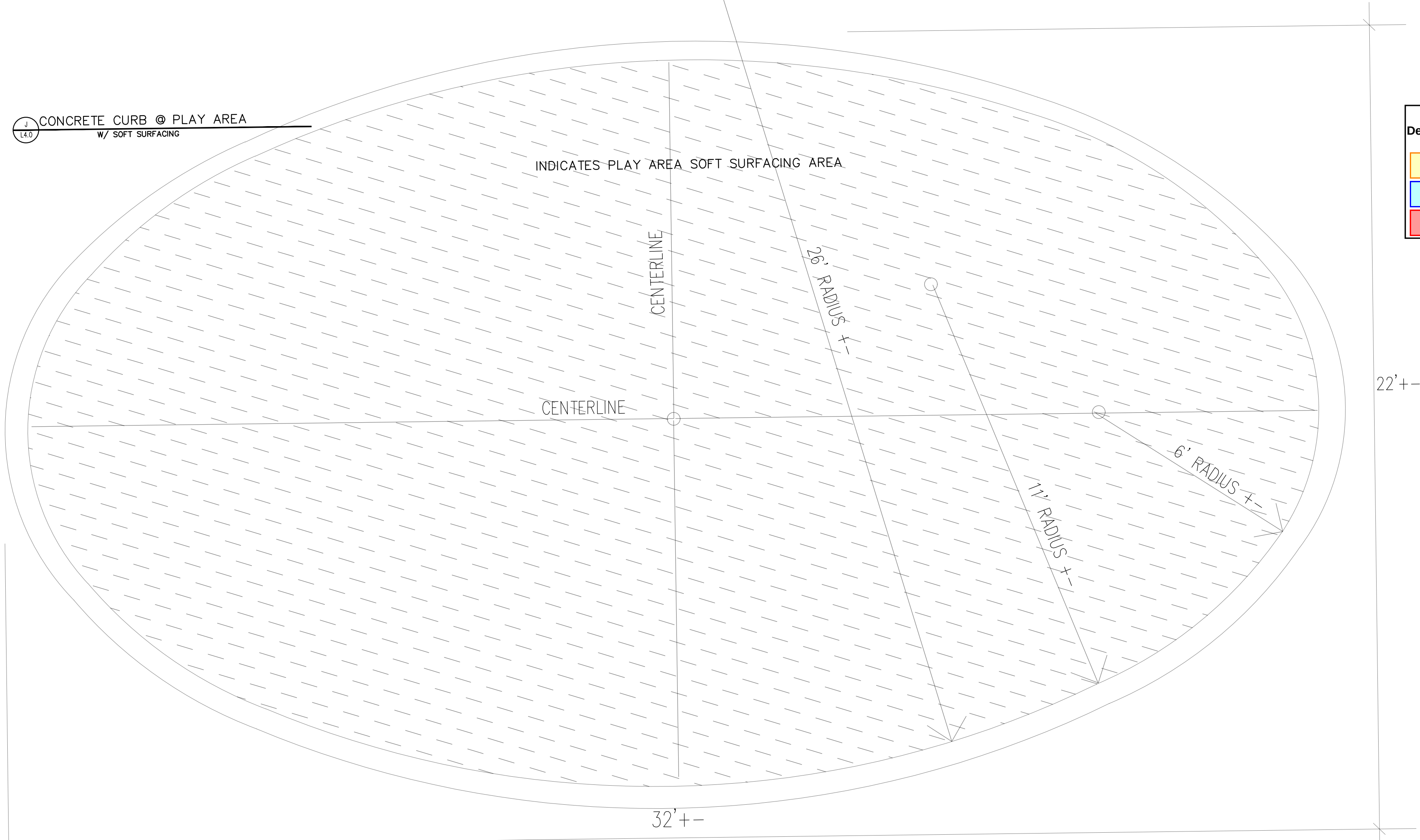


A TYPICAL PERVIOUS CONCRETE PAVERS
NOT TO SCALE

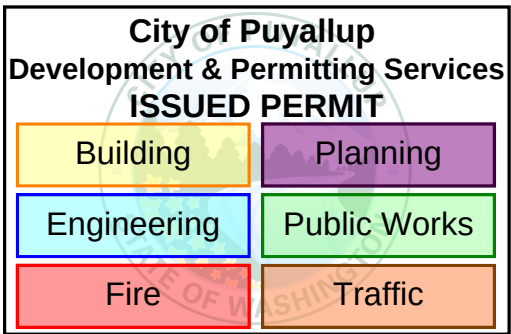


B TYPICAL IMPERVIOUS CONCRETE PAVERS
NOT TO SCALE

J CONCRETE CURB @ PLAY AREA
W/ SOFT SURFACING

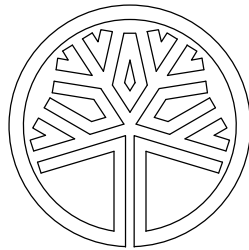


C PLAY AREA LAYOUT PLAN
NOT TO SCALE



INCORPORATED P.S.
12610 N.E. 104TH STREET
KIRKLAND WA 98033
PH: 425.434.5723

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CERTIFICATE NO. 442



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DESIGN TEAM

INFORMATION
JGM LANDSCAPE ARCHITECTS
CRAIG LEWIS, PLA
206.795.3196
CRAIG@JGM-INC.COM

PROJECT NAME/ADDRESS

STEP BY STEP
EARLY LEARNING CENTER
3303 8TH AVE SE, BLDG E
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PROJECT NUMBER

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DOCUMENT

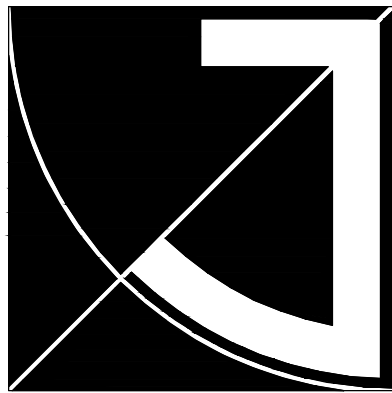
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SHEET TITLE

PAVING DETAILS

SHEET #

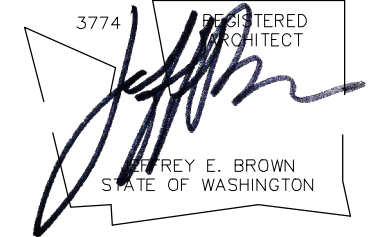
L4.0



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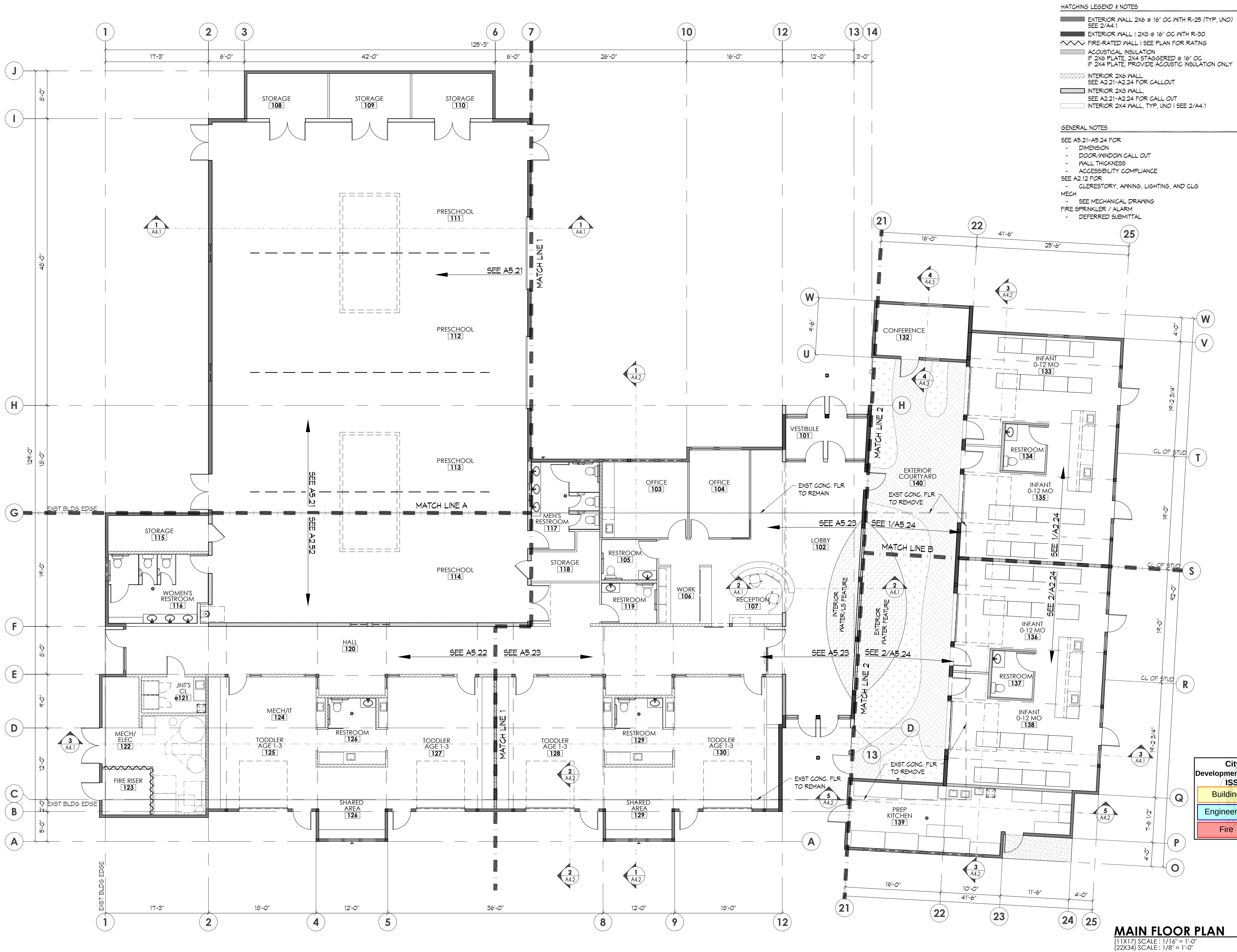
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06.21.24	PERMIT	
09.30.24	CITY	

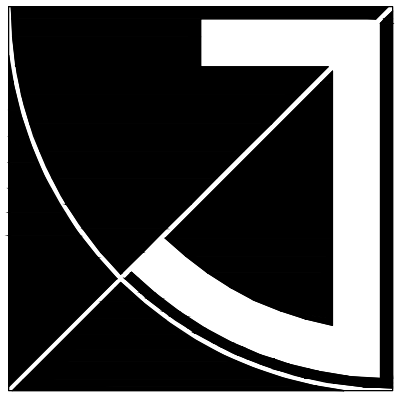
SHEET TITLE

MAIN FLOOR PLAN

SHEET #

A2.11

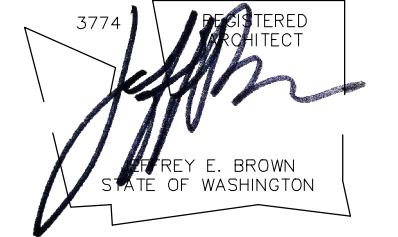




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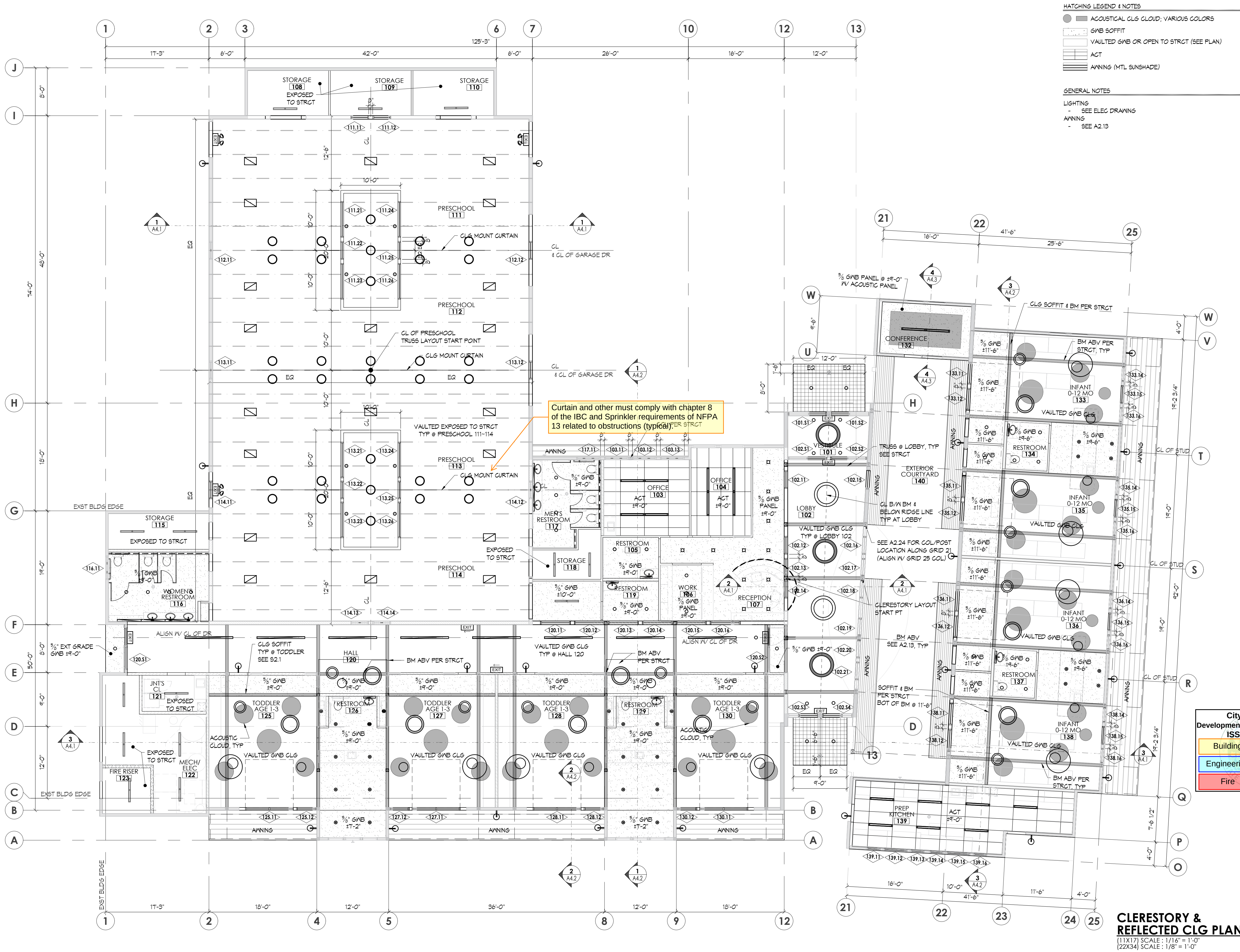
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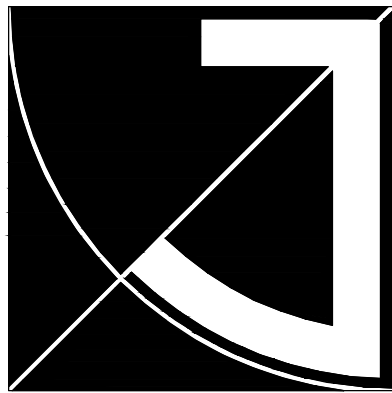
SHEET TITLE

CLERESTORY &
REFLECTED CLG
PLAN

SHEET #

A2.12

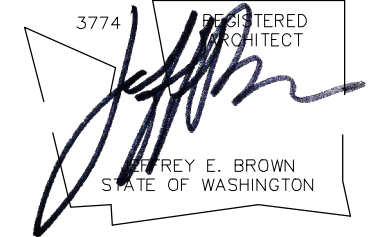




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PERMIT
DOCUMENT

City of Puyallup Development & Permitting Services ISSUED PERMIT		
Building	Planning	
Engineering	Public Works	
Fire	Traffic	

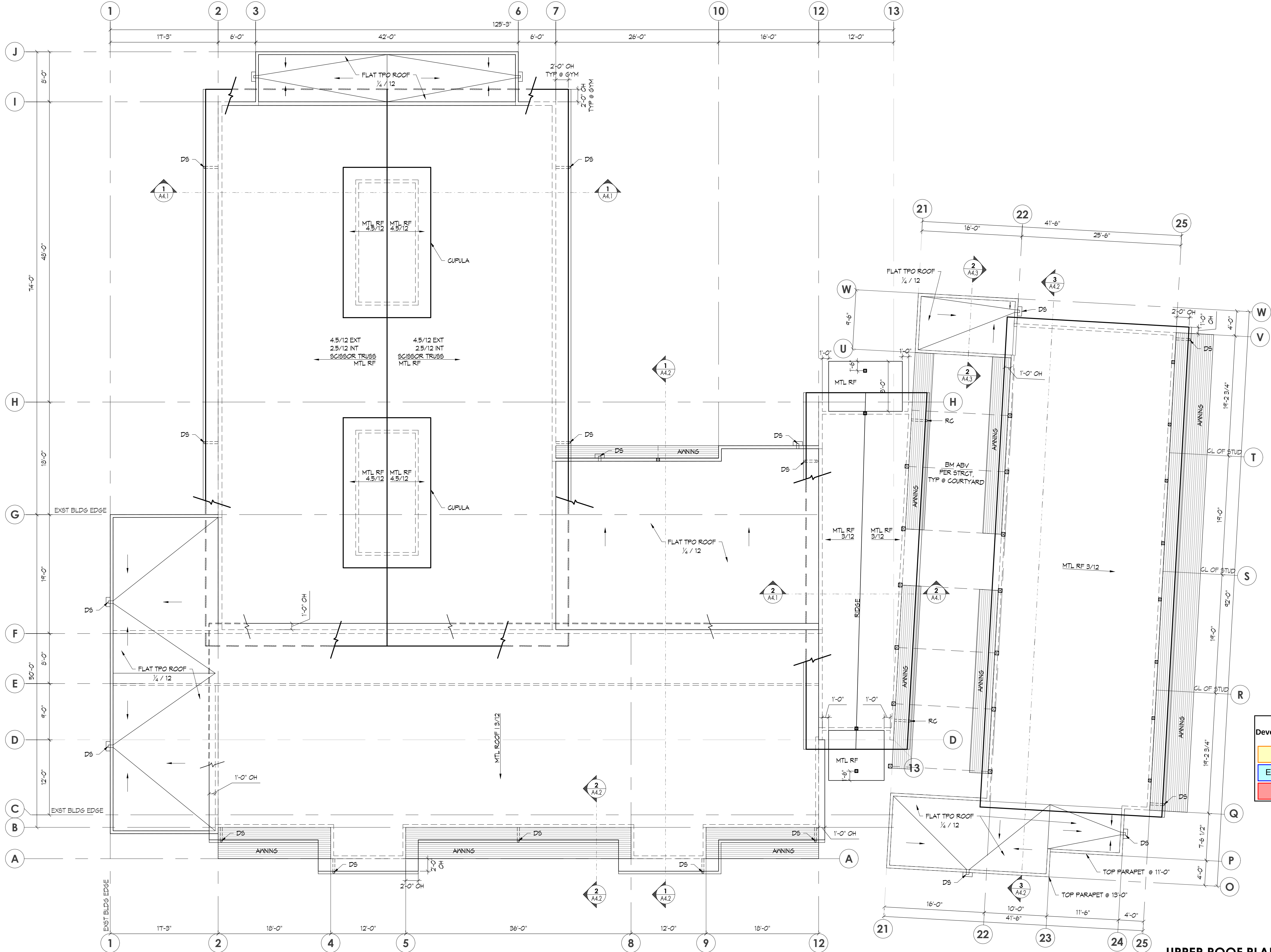
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09.30.24	CITY	

SHEET TITLE

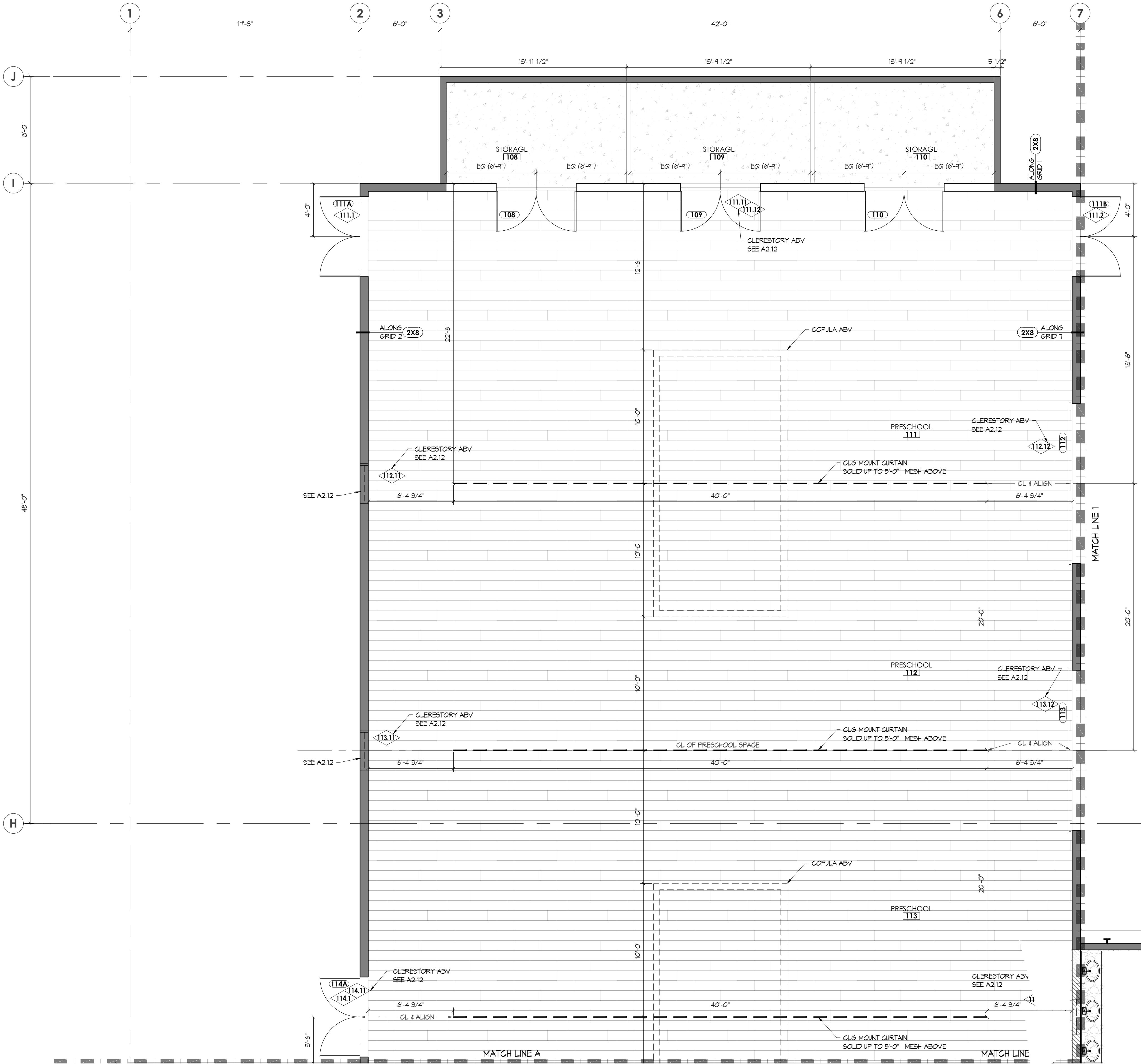
ROOF PLAN

SHEET #

A2.13



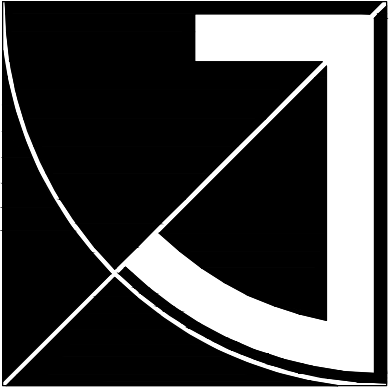
UPPER ROOF PLAN
(11x17) SCALE: 1/16" = 1'-0"
(22x34) SCALE: 1/8" = 1'-0"



HATCHING LEGEND & NOTES	
	EXPOSED CONC.
	OP1: EPOXY SEAL CONC. OP2: QUARRY TILE (KITCHEN)
	GRIND & POLISH CONC. w/ COLOR (FIELD)
	CARPETILE (OFFICE)
	WALK-OFF MAT (ENTRY)
	MAPLE FLOOR (PRESCHOOL)
	ROCK TILE (BATHROOM)

City of Puyallup Development & Permitting Services ISSUED PERMIT	
Building	Planning
Engineering	Public Works
Fire	Traffic

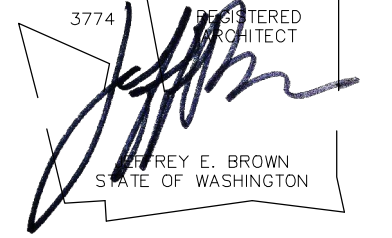
ENLARGED PLAN - N. PRESCHOOL
(11x17) SCALE: 1/16" = 1'-0"
(22x34) SCALE: 1/8" = 1'-0"



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STEP BY STEP
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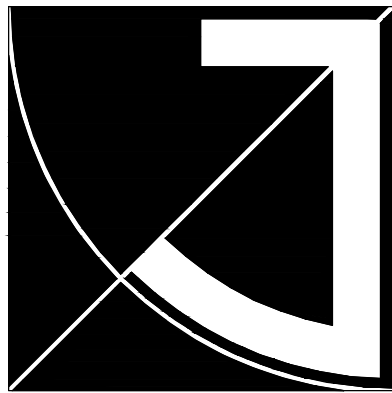
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06.21.24	PERMIT	
09.30.24	CITY	

SHEET TITLE

ENLARGED PLAN
N. PRESCHOOL

SHEET #

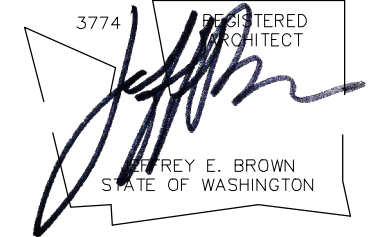
A2.21



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DRAWING TYPE

PERMIT
DOCUMENT

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09.30.24	CITY	

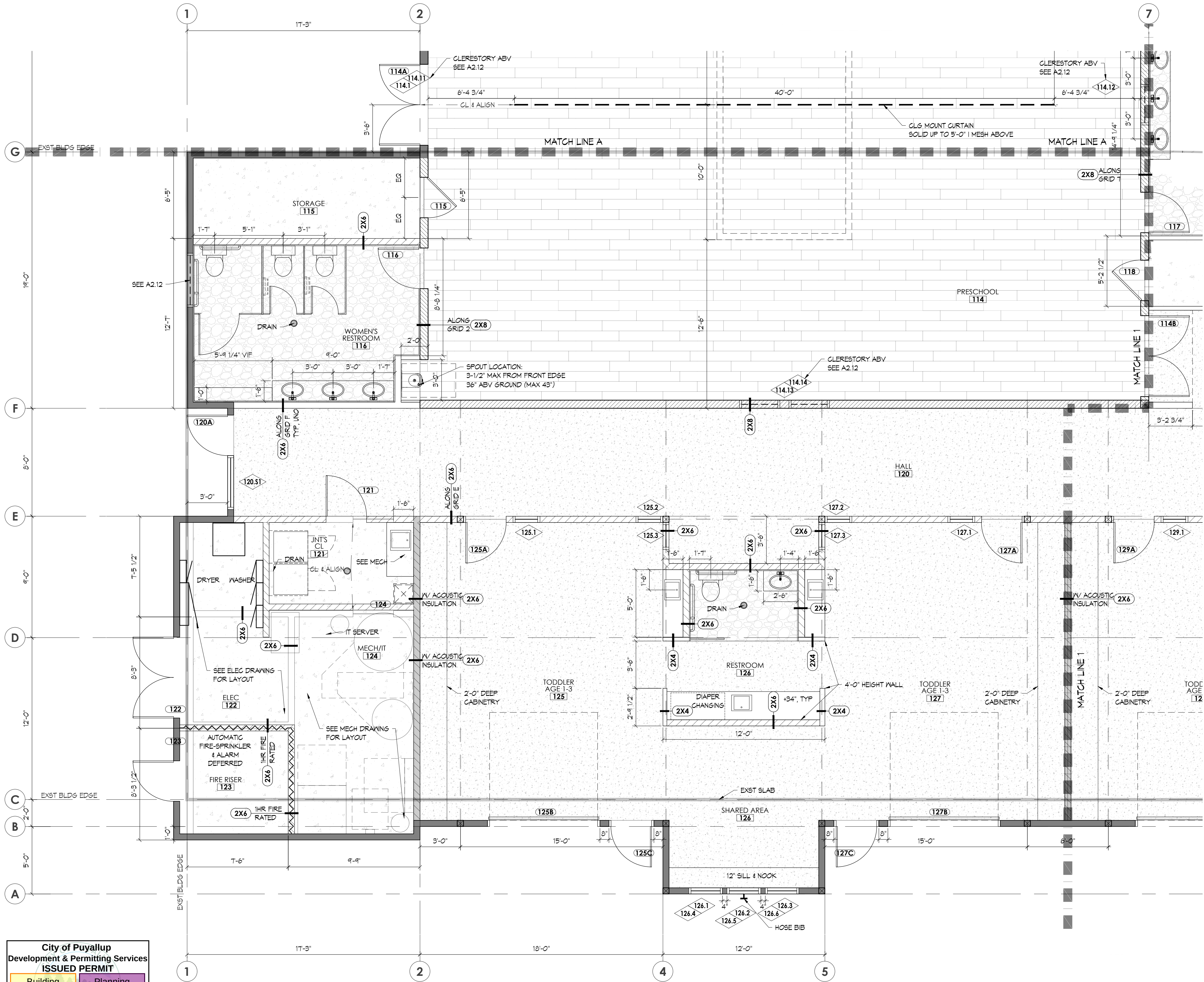
SHEET TITLE

ENLARGED PLAN
S. PRESCHOOL,
MECH & TODDLER
SHEET #

A2.22

HATCHING LEGEND & NOTES

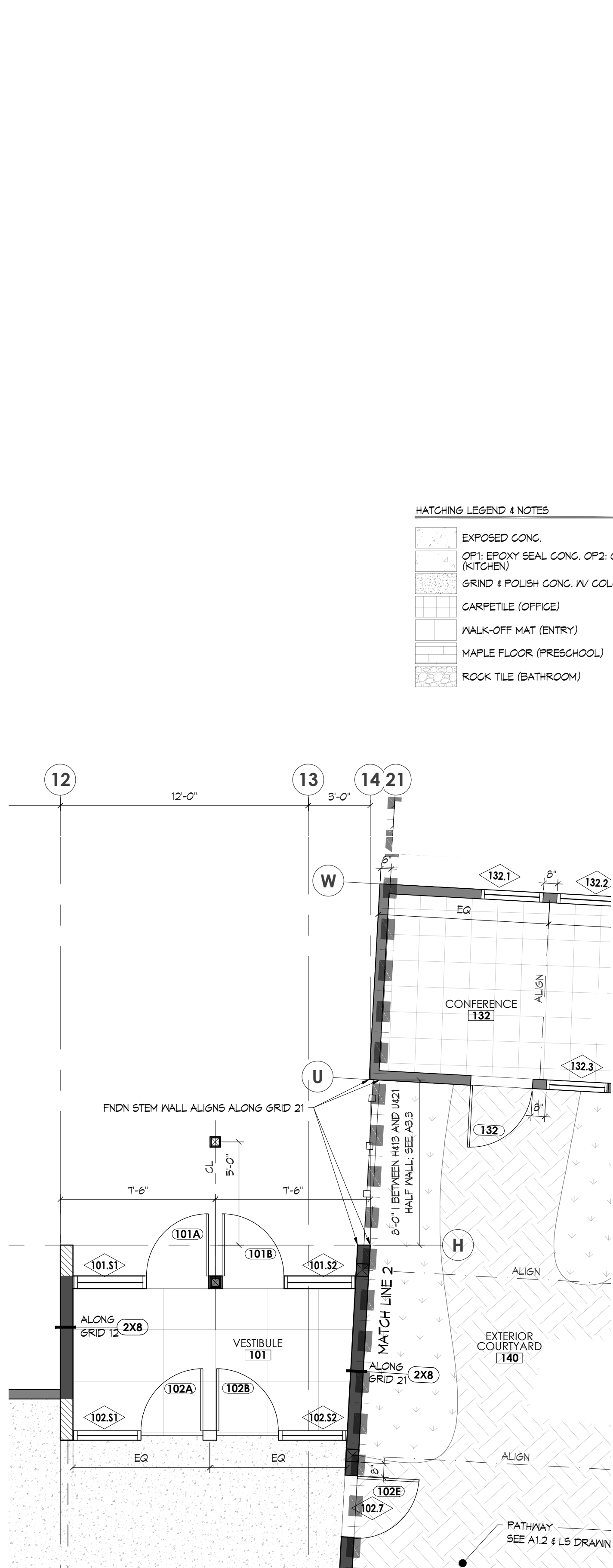
	EXPOSED CONC.
	OP1: EPOXY SEAL CONC. OP2: QUARRY TILE (KITCHEN)
	GRIND & POLISH CONC. IV/ COLOR (FIELD)
	CARPETILE (OFFICE)
	WALK-OFF MAT (ENTRY)
	MAPLE FLOOR (PRESCHOOL)
	ROCK TILE (BATHROOM)



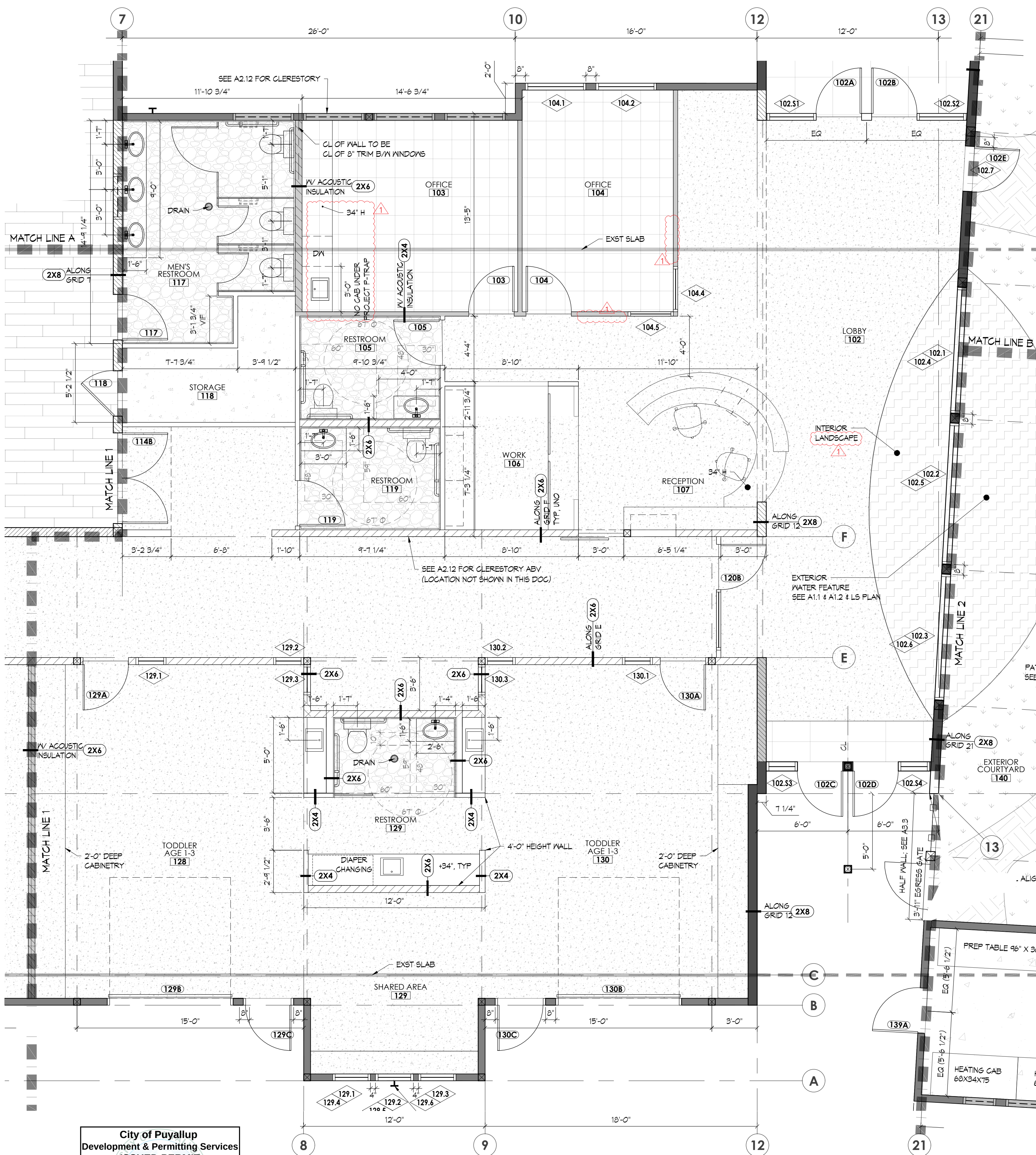
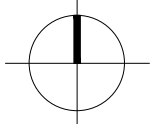
City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

S. PRESCHOOL
ENLARGED PLAN - MECH & W. TODDLER
(11X17) SCALE: 1/16" = 1'-0"
(22X34) SCALE: 1/8" = 1'-0"

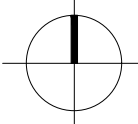


2 ENLARGED PLAN - N. LOBBY ENTRY
(11X17) SCALE: 1/16" = 1'-0"
(22X34) SCALE: 1/8" = 1'-0"

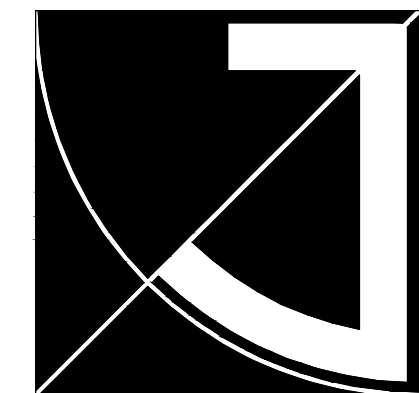


City of Puyallup Development & Permitting Services ISSUED PERMIT			
Building	Planning	Fire	Traffic
Engineering	Public Works		

1 ENLARGED PLAN - E. TODDLER & LOBBY
(11X17) SCALE: 1/16" = 1'-0"
(22X34) SCALE: 1/8" = 1'-0"



HATCHING LEGEND & NOTES	
	EXPOSED CONC.
	OP1: EPOXY SEAL CONC. OP2: QUARRY TILE (KITCHEN)
	GRIND & POLISH CONC. IV COLOR (FIELD)
	CARPET TILE (OFFICE)
	WALK-OFF MAT (ENTRY)
	MAPLE FLOOR (PRESCHOOL)
	ROCK TILE (BATHROOM)

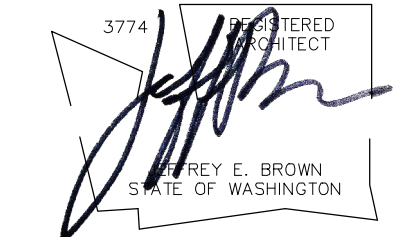


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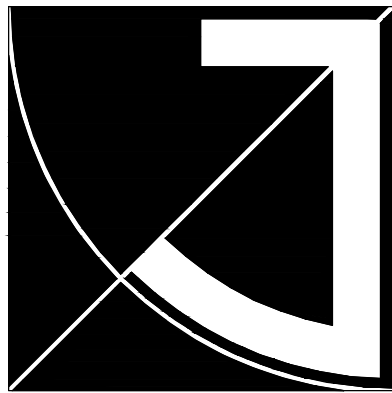
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09.30.24	CITY	

SHEET TITLE

**ENLARGED PLAN
E. TODDLER &
LOBBY**

SHEET #

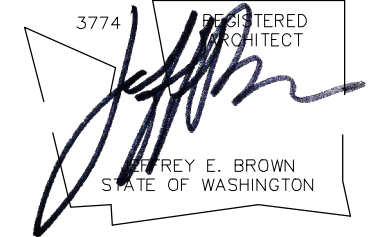
A2.23



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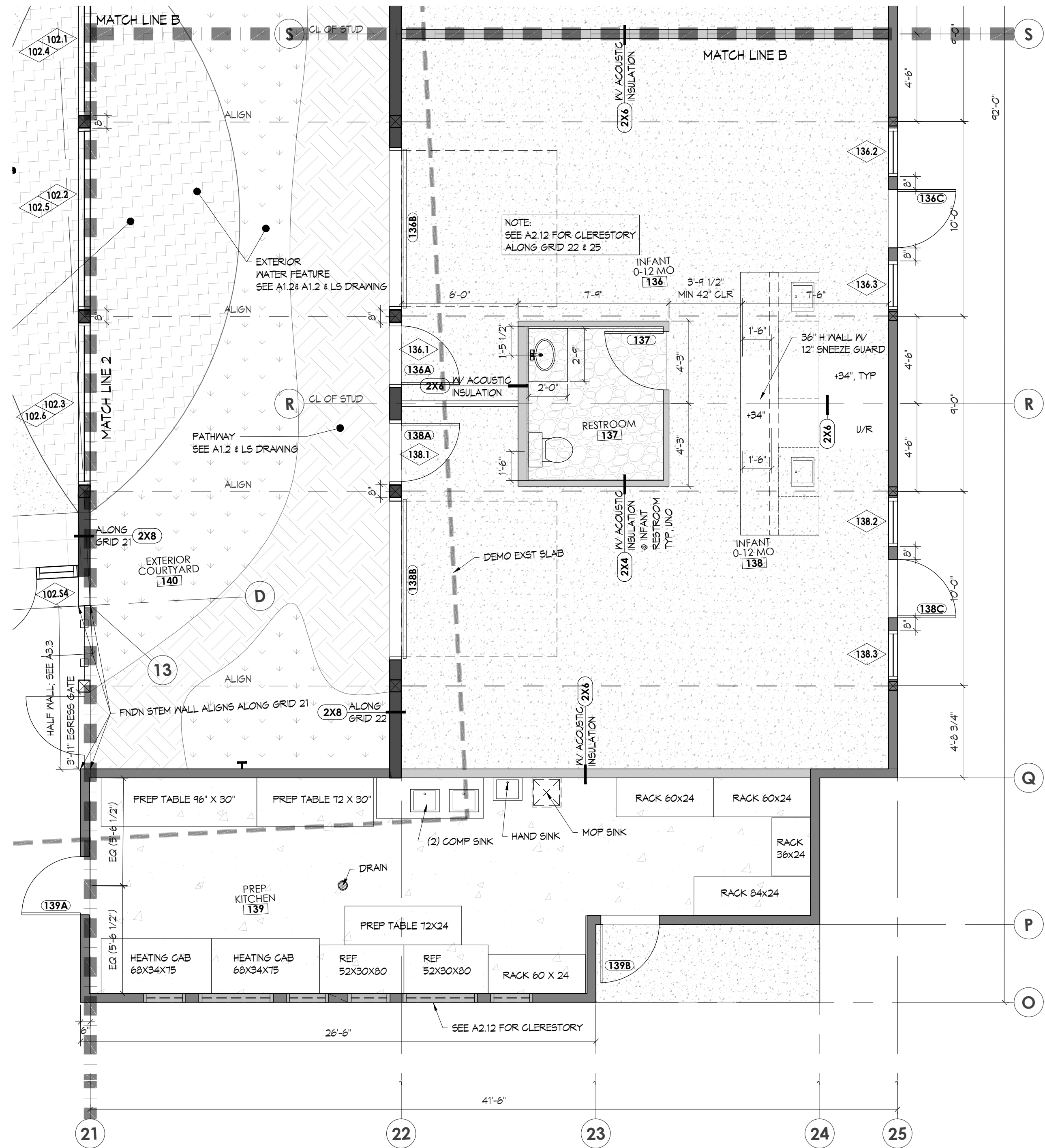
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SHEET TITLE

ENLARGED PLAN
INFANT &
PREP KITCHEN

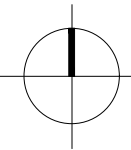
SHEET #

A2.24



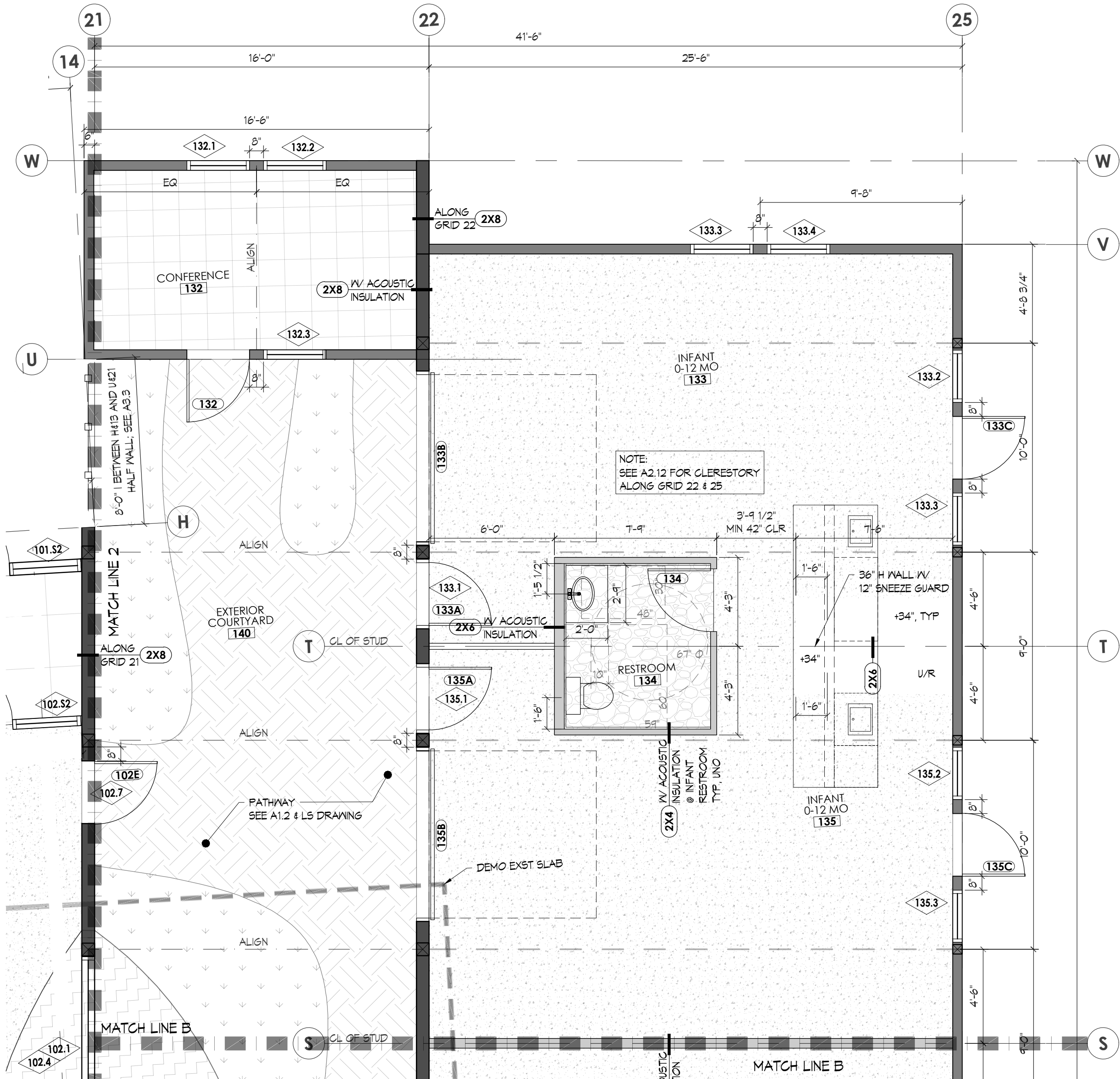
2 ENLARGED PLAN - S. INFANT & PREP KITCHEN

(11X17) SCALE: 1/16" = 1'-0"
(22X34) SCALE: 1/8" = 1'-0"



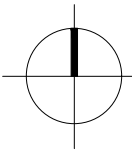
HATCHING LEGEND & NOTES	
[Hatch pattern]	EXPOSED CONC.
[Hatch pattern]	OP1: EPOXY SEAL CONC. OP2: QUARRY TILE (KITCHEN)
[Hatch pattern]	GRIND & POLISH CONC. IV/ COLOR (FIELD)
[Hatch pattern]	CARPETILE (OFFICE)
[Hatch pattern]	WALK-OFF MAT (ENTRY)
[Hatch pattern]	MAPLE FLOOR (PRESCHOOL)
[Hatch pattern]	ROCK TILE (BATHROOM)

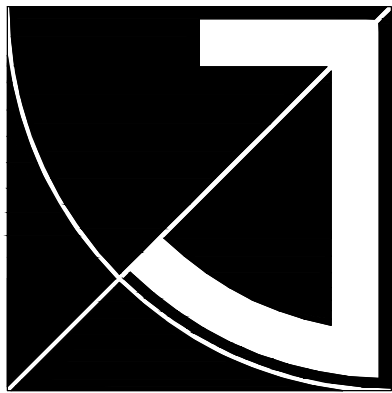
City of Puyallup Development & Permitting Services ISSUED PERMIT	
Building	Planning
Engineering	Public Works
Fire	Traffic



1 ENLARGED PLAN - N. INFANT

(11X17) SCALE: 1/16" = 1'-0"
(22X34) SCALE: 1/8" = 1'-0"

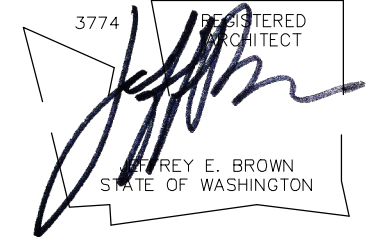




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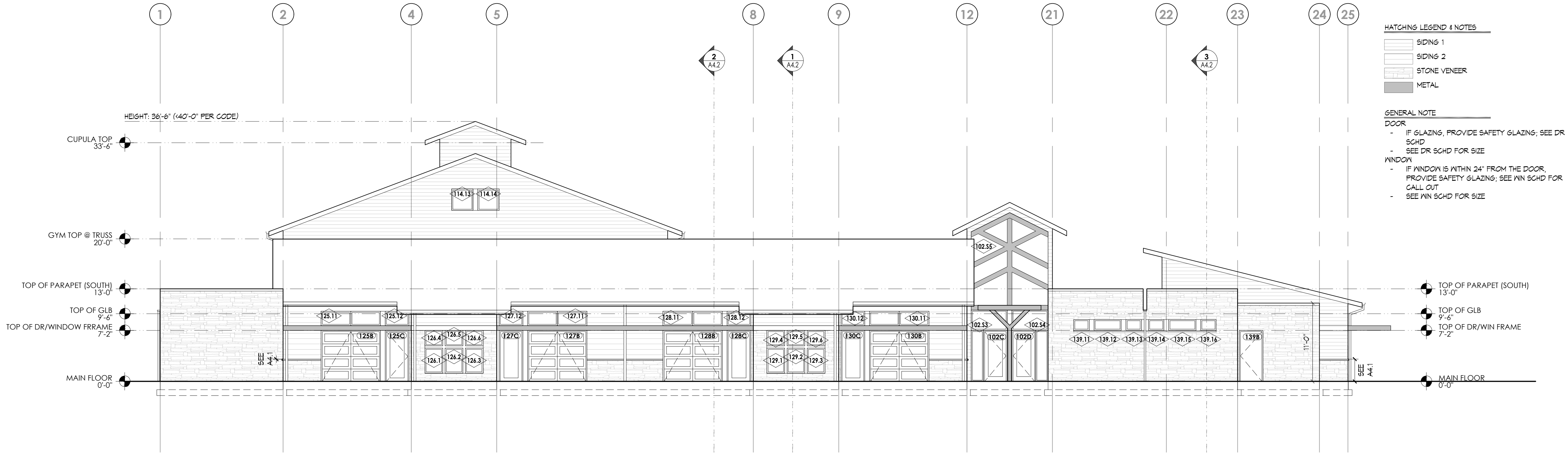
DATE	ISSUE	NO.
06.21.24		

SHEET TITLE

BUILDING
ELEVATIONS

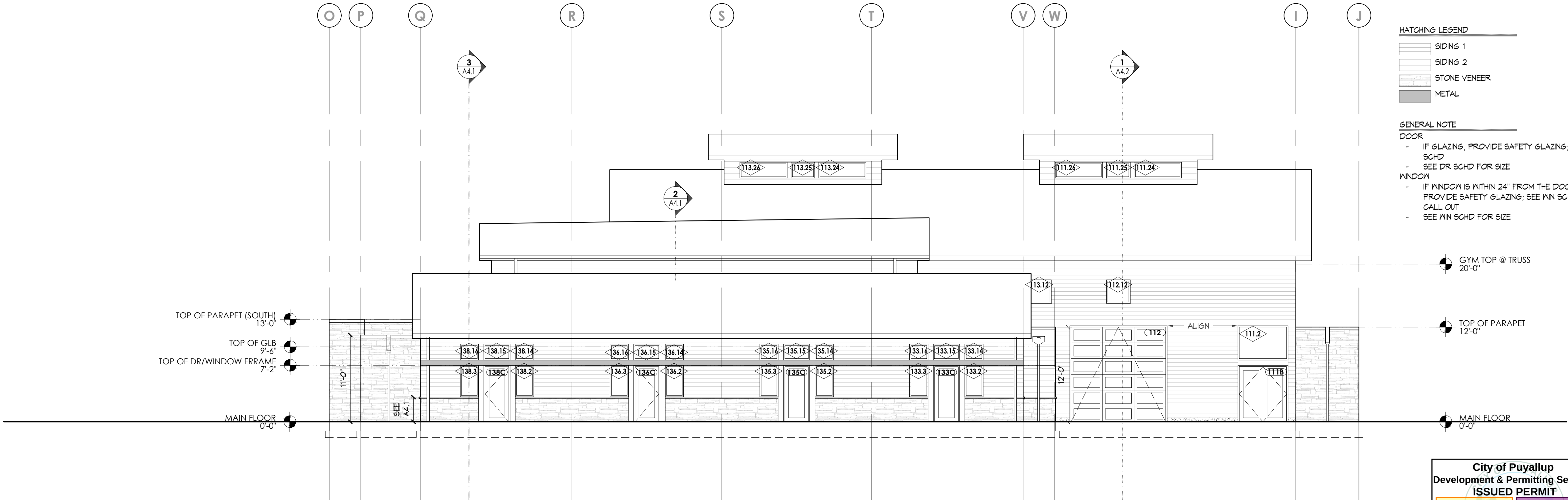
SHEET #

A3.1



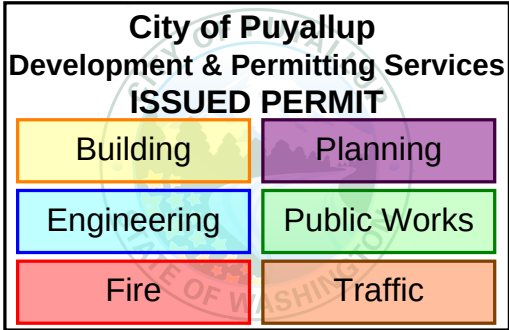
1 SOUTH ELEVATION

(11X17) SCALE: 1/8" = 1'-0"
(22X34) SCALE: 1/4" = 1'-0"



2 EAST ELEVATION

(11X17) SCALE: 1/8" = 1'-0"
(22X34) SCALE: 1/4" = 1'-0"

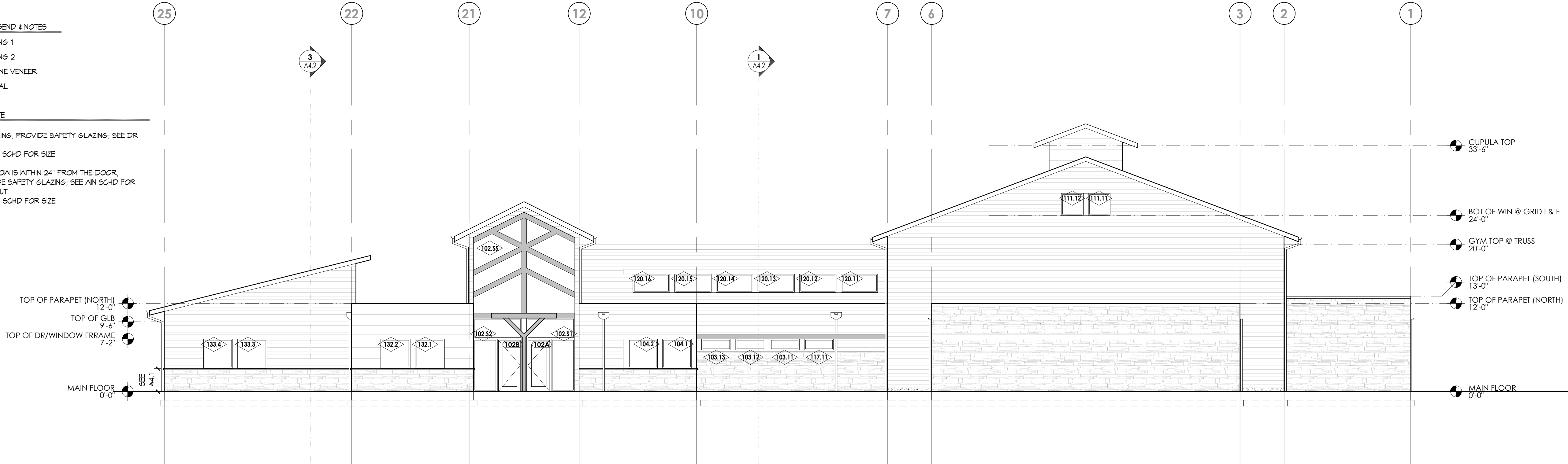


HATCHING LEGEND & NOTES

- SIDING 1
SIDING 2
STONE VENEER
METAL

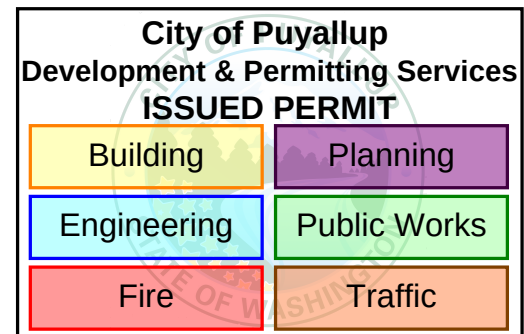
GENERAL NOTE

- DOOR
- IF GLAZING, PROVIDE SAFETY GLAZING; SEE DR SCHD
- SEE DR SCHD FOR SIZE
WINDOW
- IF WINDOW IS WITHIN 24" FROM THE DOOR, PROVIDE SAFETY GLAZING; SEE WIN SCHD FOR CALL OUT
- SEE WIN SCHD FOR SIZE



1 NORTH ELEVATION

(11X17) SCALE: 1/8" = 1'-0"
(22X34) SCALE: 1/4" = 1'-0"

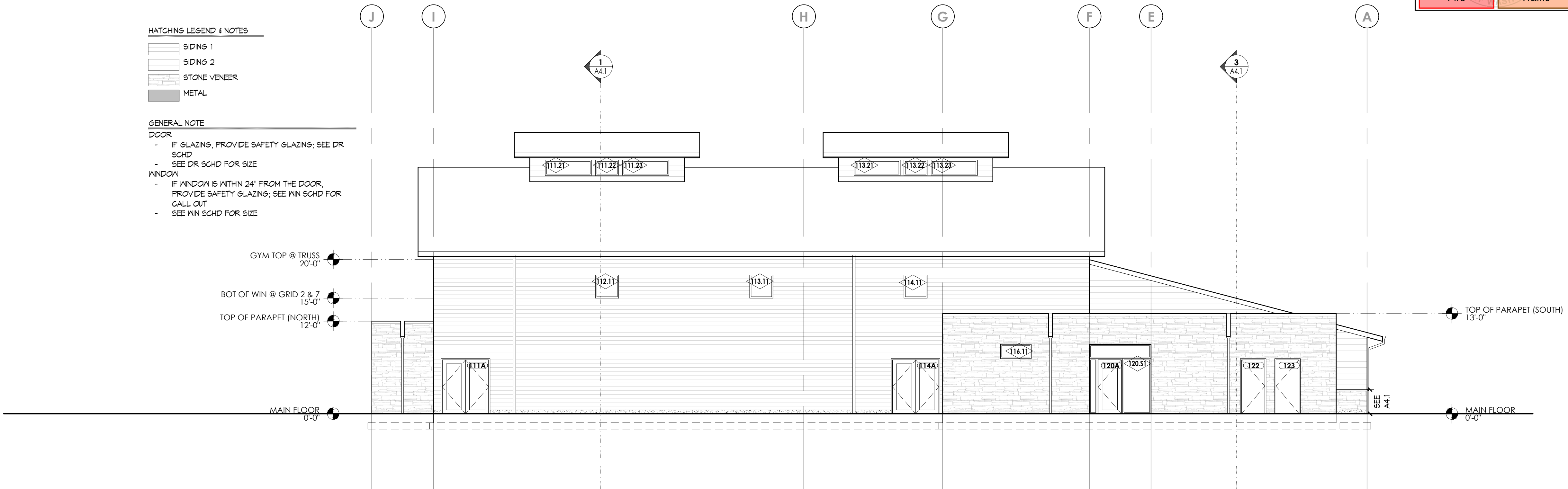


HATCHING LEGEND & NOTES

- SIDING 1
SIDING 2
STONE VENEER
METAL

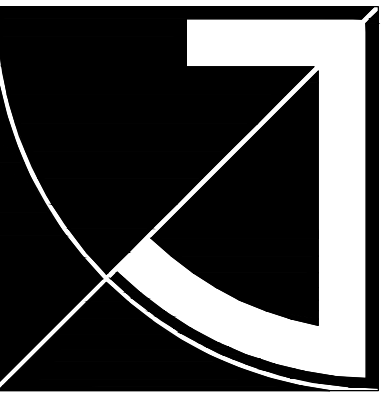
GENERAL NOTE

- DOOR
- IF GLAZING, PROVIDE SAFETY GLAZING; SEE DR SCHD
- SEE DR SCHD FOR SIZE
WINDOW
- IF WINDOW IS WITHIN 24" FROM THE DOOR, PROVIDE SAFETY GLAZING; SEE WIN SCHD FOR CALL OUT
- SEE WIN SCHD FOR SIZE



2 WEST ELEVATION

(11X17) SCALE: 1/8" = 1'-0"
(22X34) SCALE: 1/4" = 1'-0"

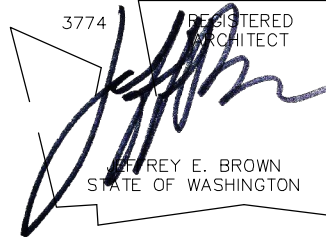


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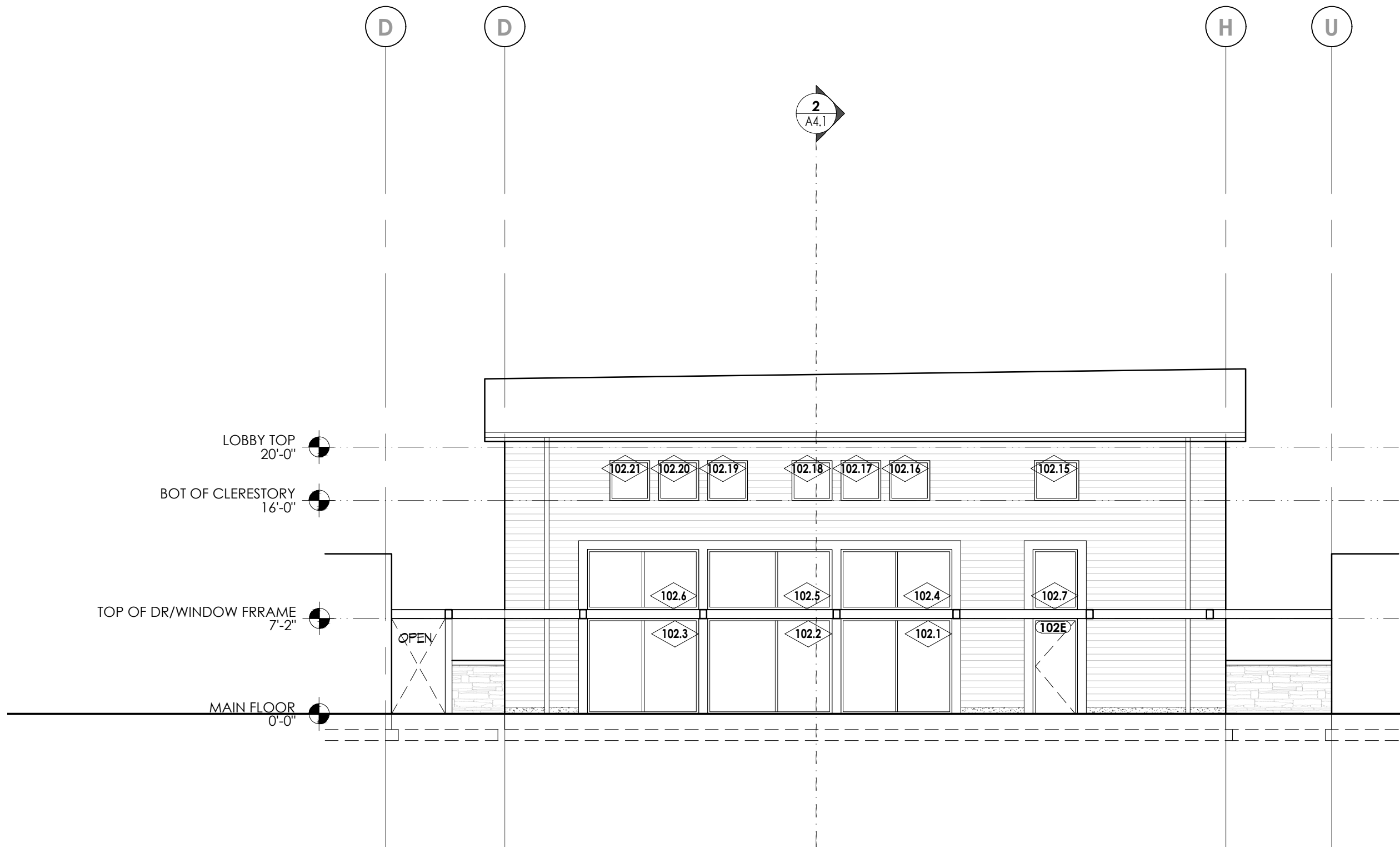
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06.21.24		

SHEET TITLE

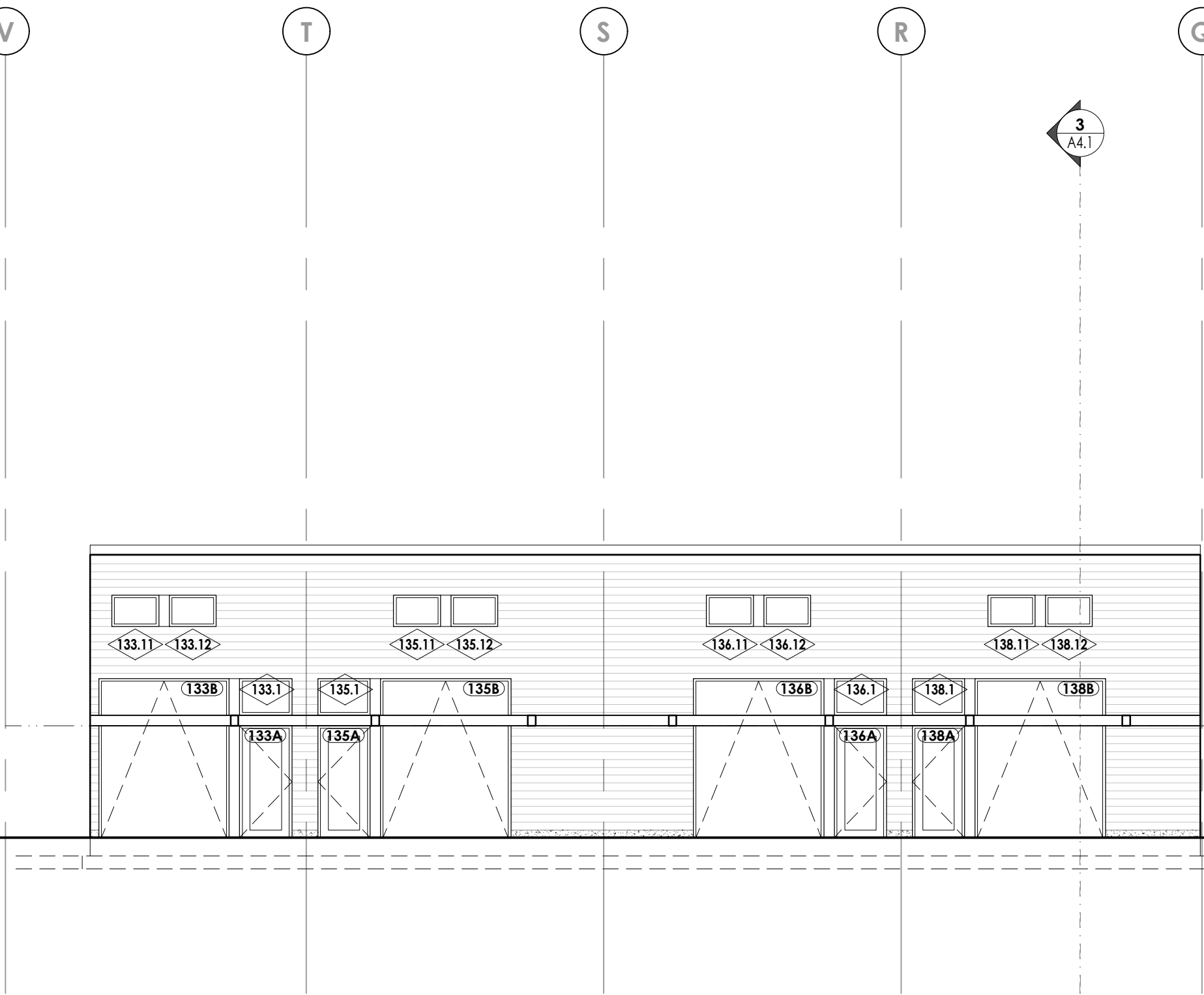
BUILDING ELEVATIONS

SHEET #

A3.2



2 COURT YARD - LOBBY
(11X17) SCALE : 1/8" = 1'-0"
(22X34) SCALE : 1/4" = 1'-0"



1 COURT YARD - INFANT
(11X17) SCALE : 1/8" = 1'-0"
(22X34) SCALE : 1/4" = 1'-0"

HATCHING LEGEND & NOTES

[Hatching Pattern]	SIDING 1
[Hatching Pattern]	SIDING 2
[Hatching Pattern]	STONE VENEER
[Hatching Pattern]	METAL

GENERAL NOTE

DOOR

- IF GLAZING, PROVIDE SAFETY GLAZING; SEE DR SCHD
- SEE DR SCHD FOR SIZE

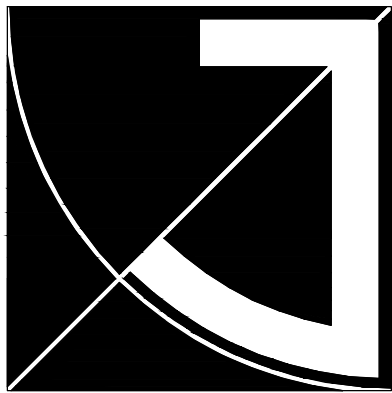
WINDOW

- IF WINDOW IS WITHIN 24" FROM THE DOOR, PROVIDE SAFETY GLAZING; SEE WIN SCHD FOR CALL OUT
- SEE WIN SCHD FOR SIZE

BOT OF WIN @ GRID 22
13'-6"

TOP OF DR/WINDOW FFRAME
7'-2"

MAIN FLOOR
0'-0"

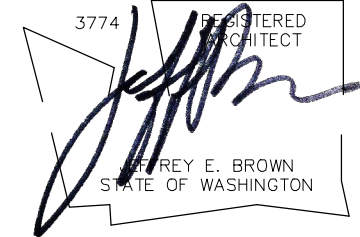


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**STEP BY STEP
EARLY LEARNING CENTER**
3303 8TH AVE SE, BLDG E
PUYALLUP, WA 98372

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PROJECT NUMBER
21015

DRAWING TYPE

**PERMIT
DOCUMENT**

City of Puyallup Development & Permitting Services ISSUED PERMIT	
Building	Planning
Engineering	Public Works
Fire	Traffic

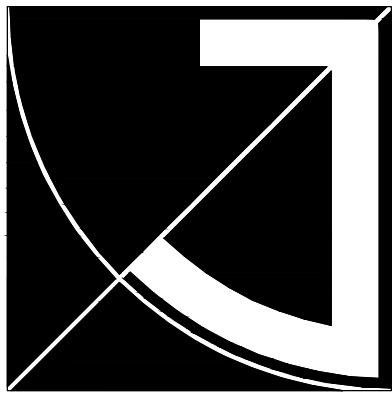
DATE	ISSUE	NO.
06.21.24		

SHEET TITLE

**BUILDING
ELEVATIONS**

SHEET #

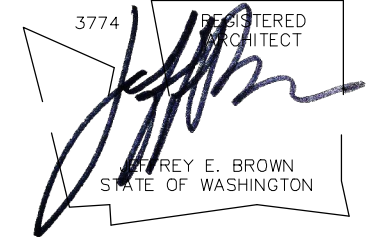
A3.3



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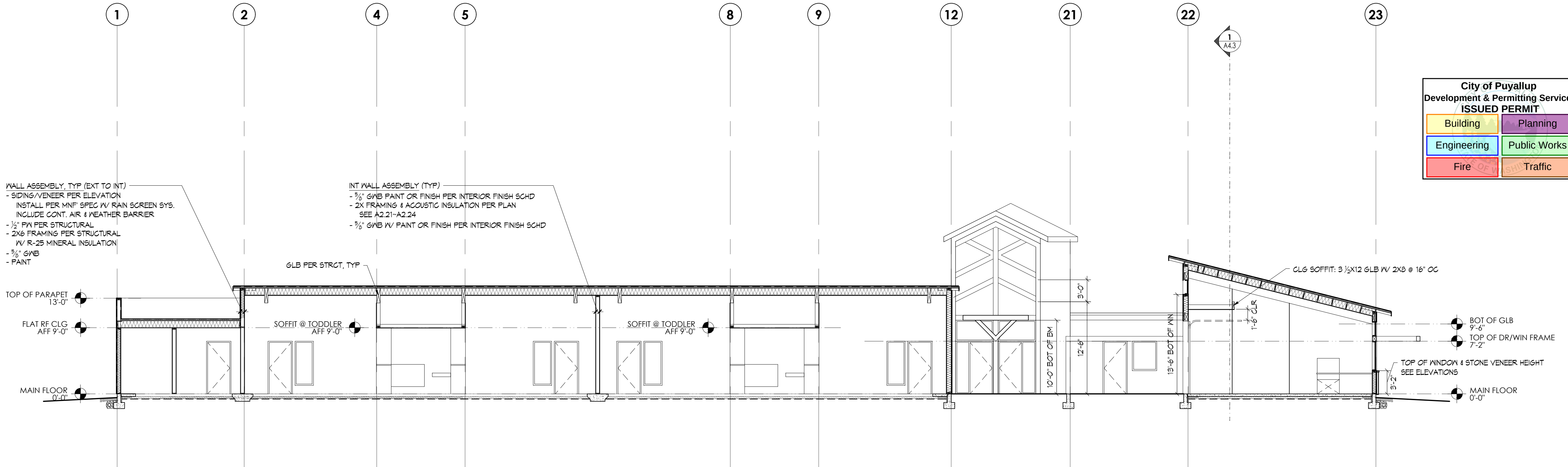
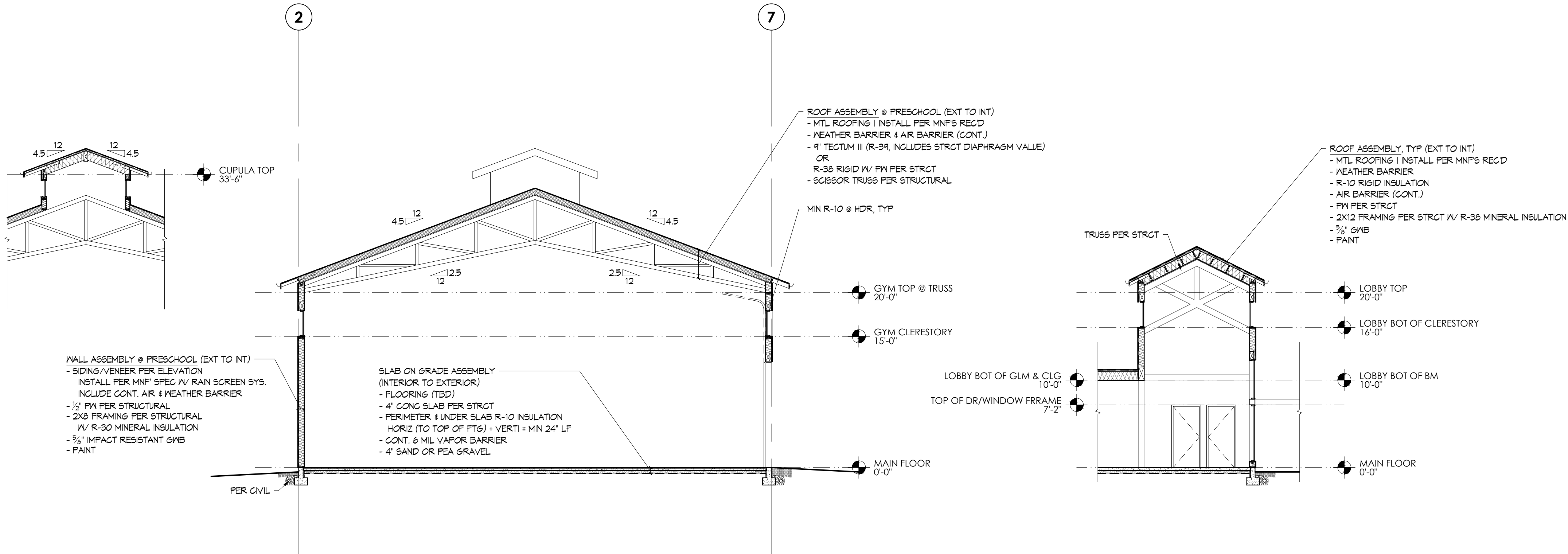
DATE	ISSUE	NO.
06.21.24		

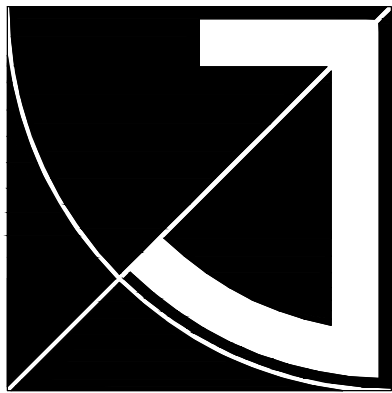
SHEET TITLE

BUILDING
SECTIONS

SHEET #

A4.1

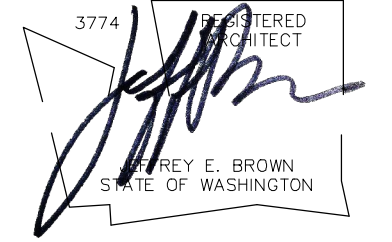




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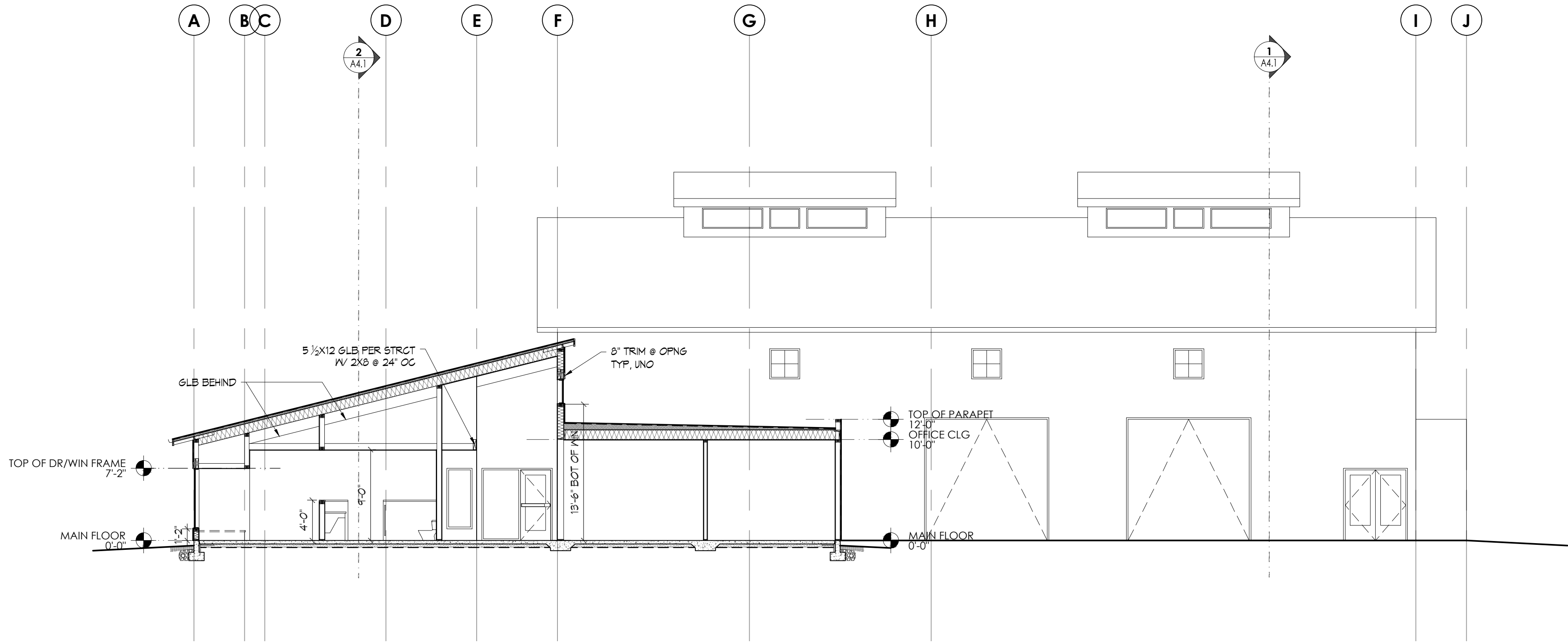
DATE	ISSUE	NO.
06.21.24		

SHEET TITLE

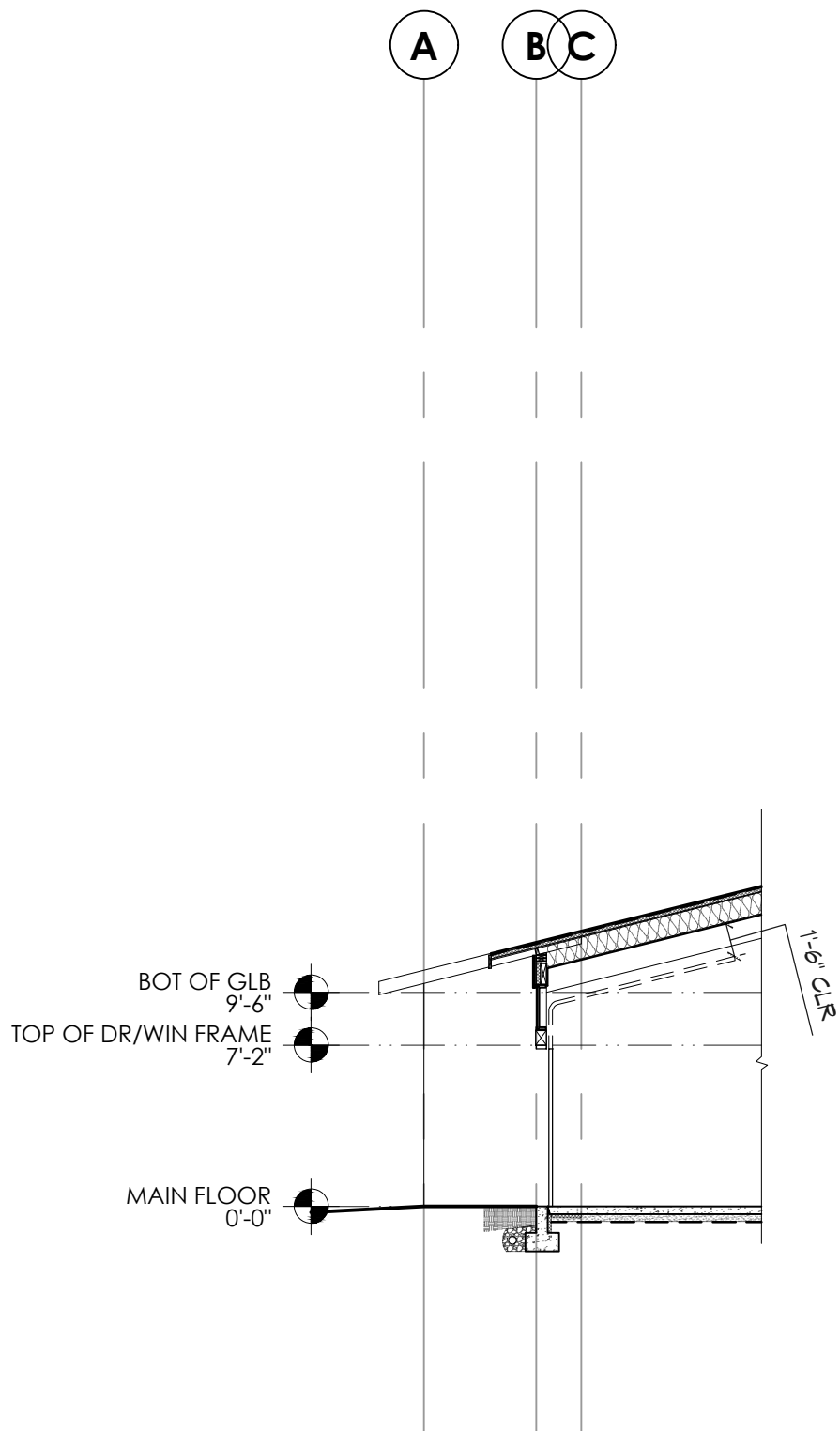
BUILDING
SECTIONS

SHEET #

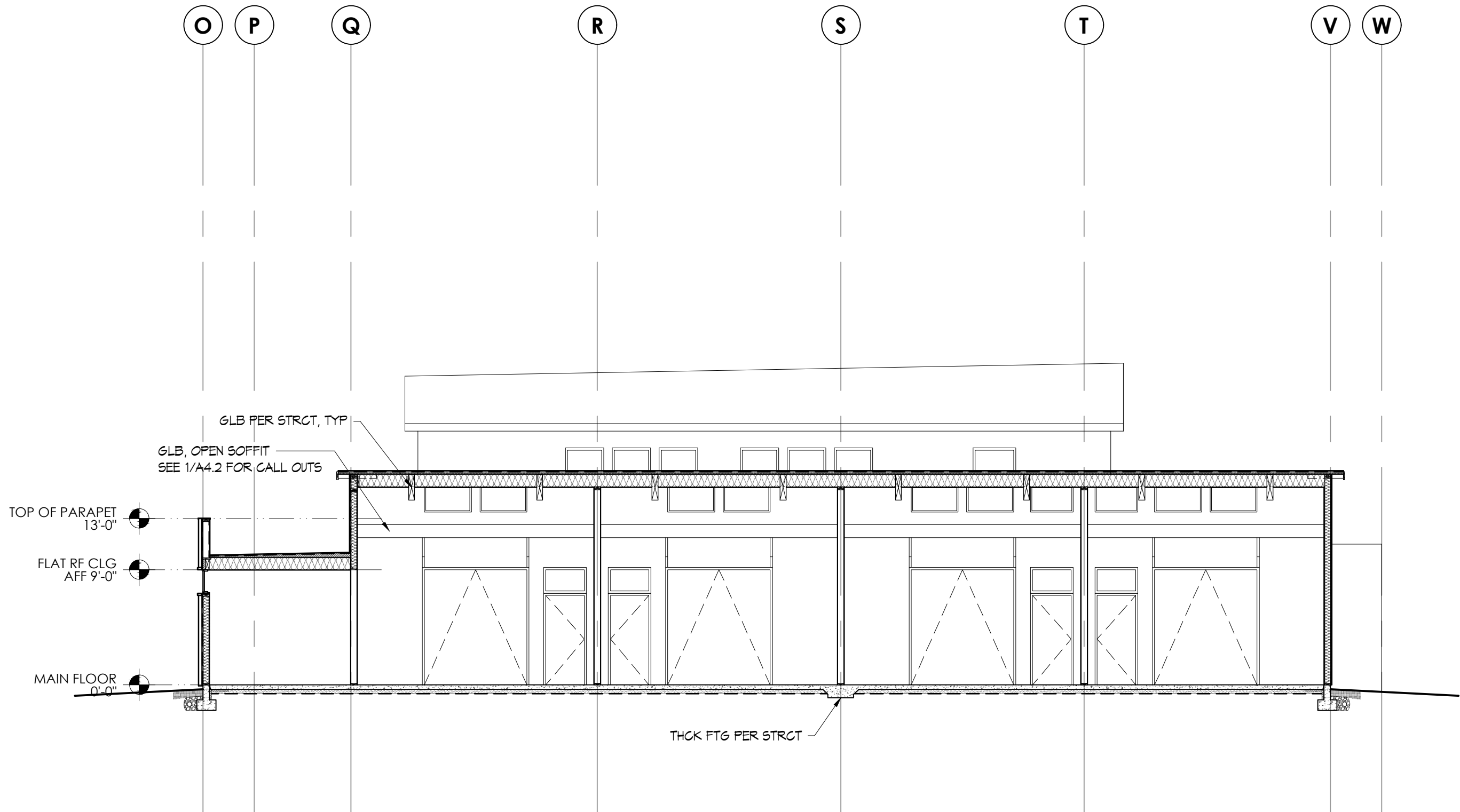
A4.2



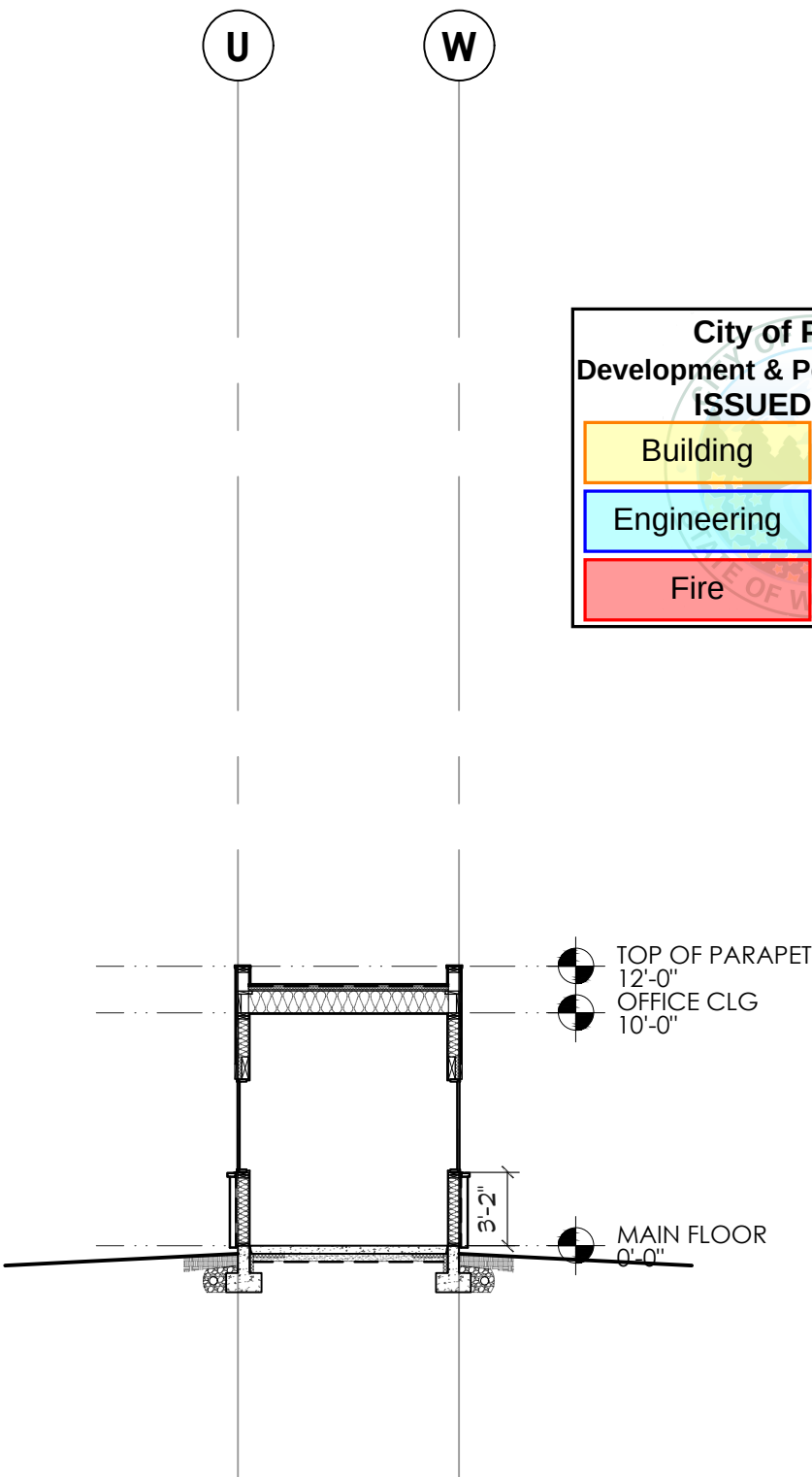
1 BUILDING SECTION
(11X17) SCALE: 1/8" = 1'-0"
(22X34) SCALE: 1/4" = 1'-0"



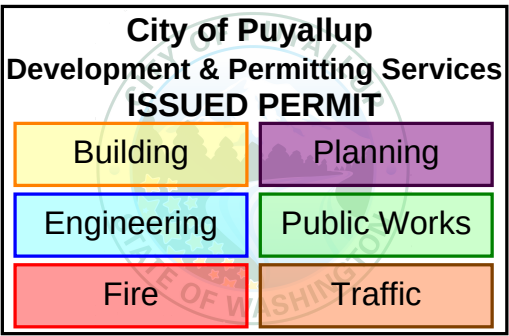
2 BUILDING SECTION
(11X17) SCALE: 1/8" = 1'-0"
(22X34) SCALE: 1/4" = 1'-0"

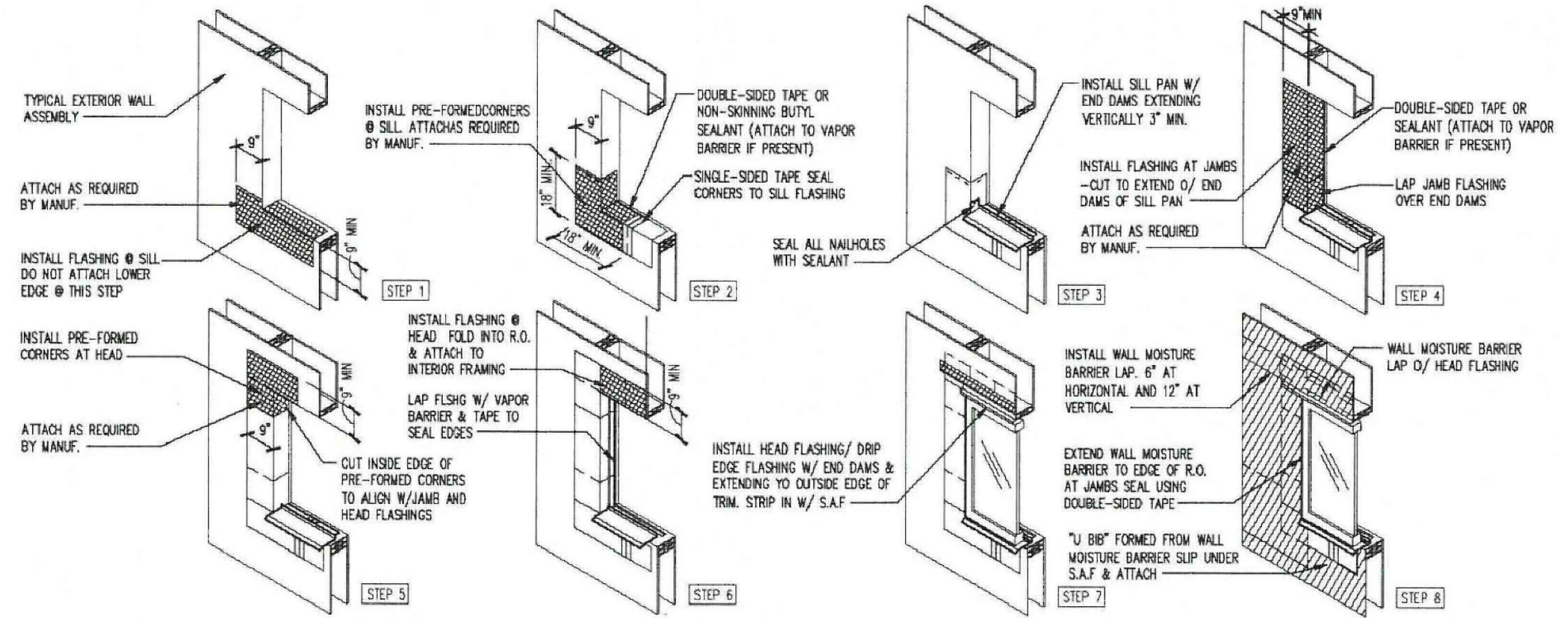


3 BUILDING SECTION
(11X17) SCALE: 1/8" = 1'-0"
(22X34) SCALE: 1/4" = 1'-0"

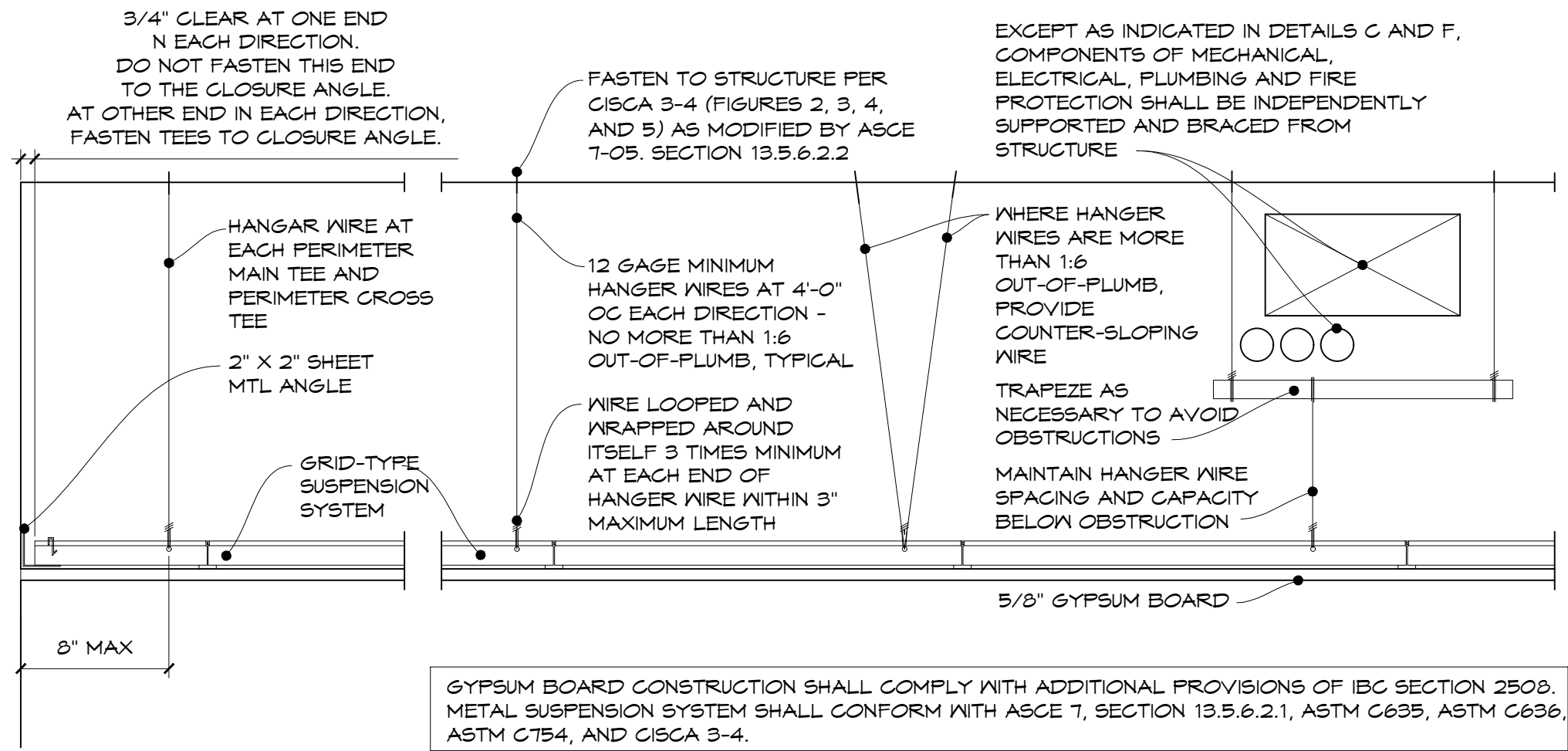


4 BUILDING SECTION
(11X17) SCALE: 1/8" = 1'-0"
(22X34) SCALE: 1/4" = 1'-0"

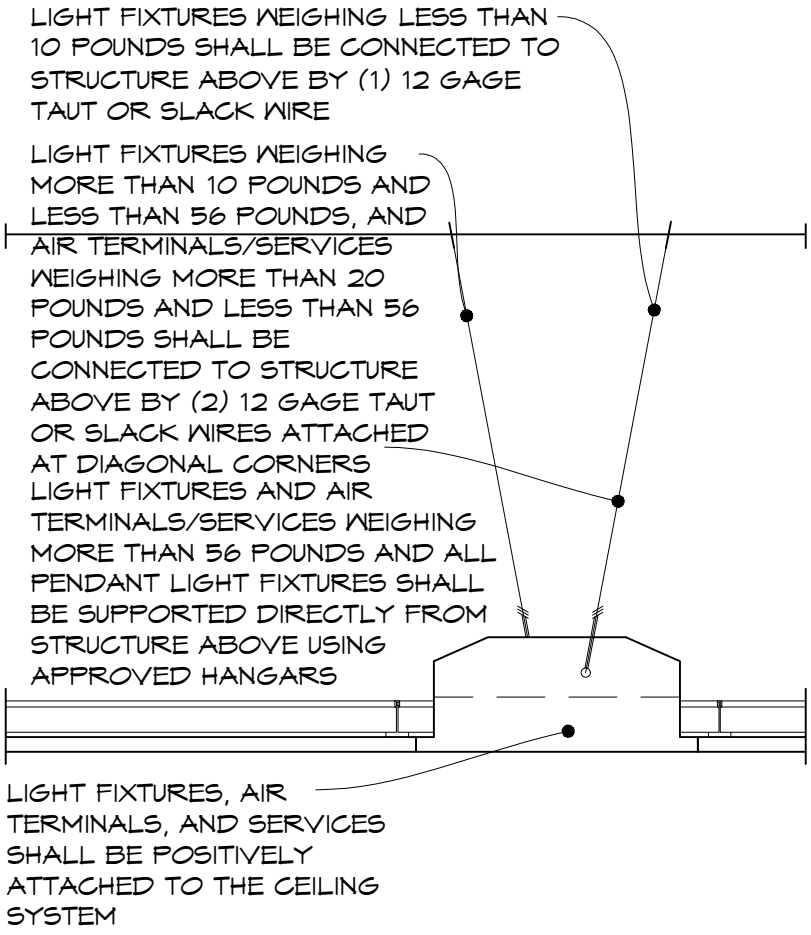




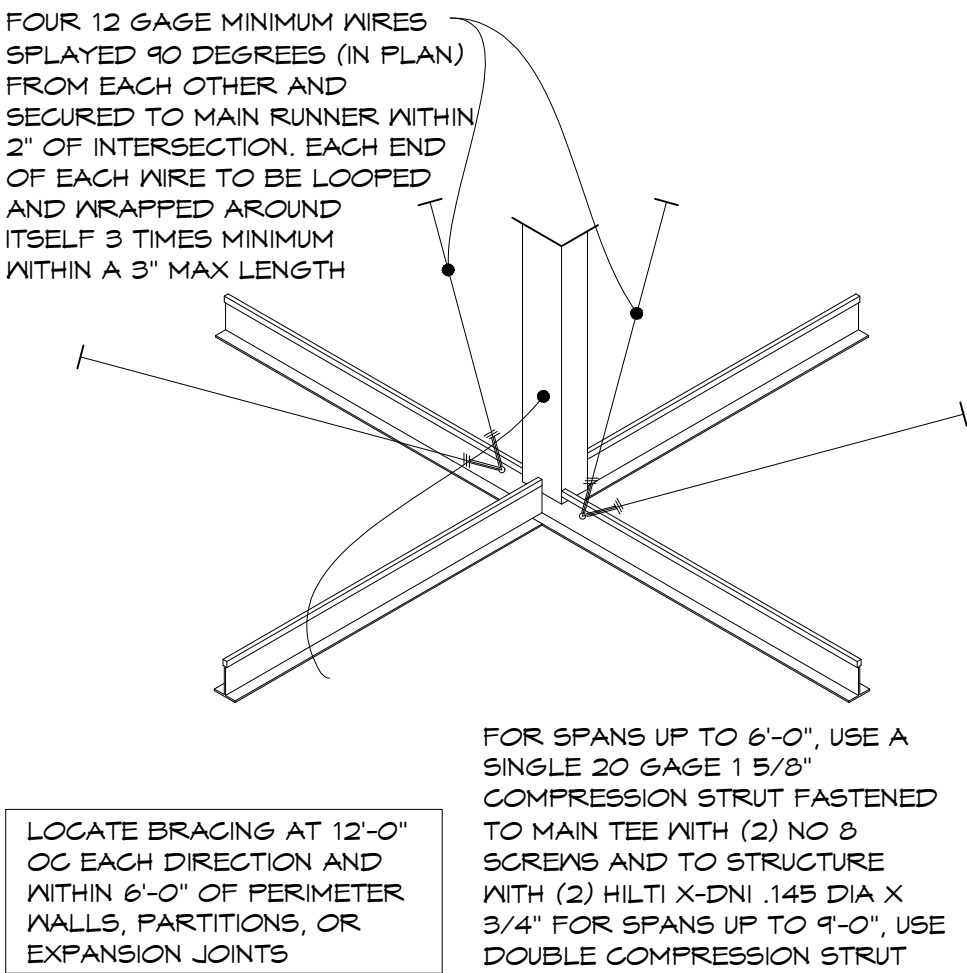
1 TYPICAL OPNG FLASHING INSTALLATION
NTS



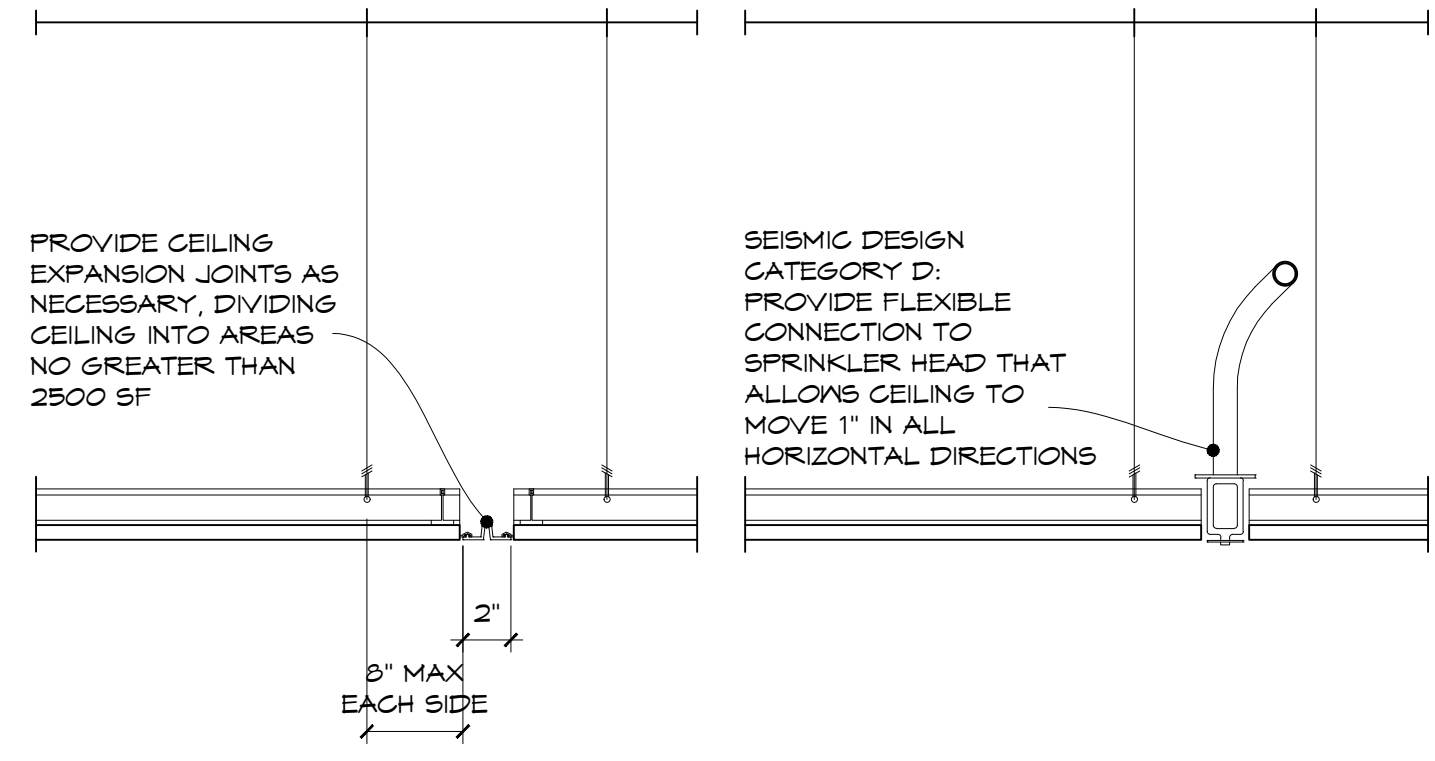
A PERIMETER SUPPORT B GENERAL SUPPORT



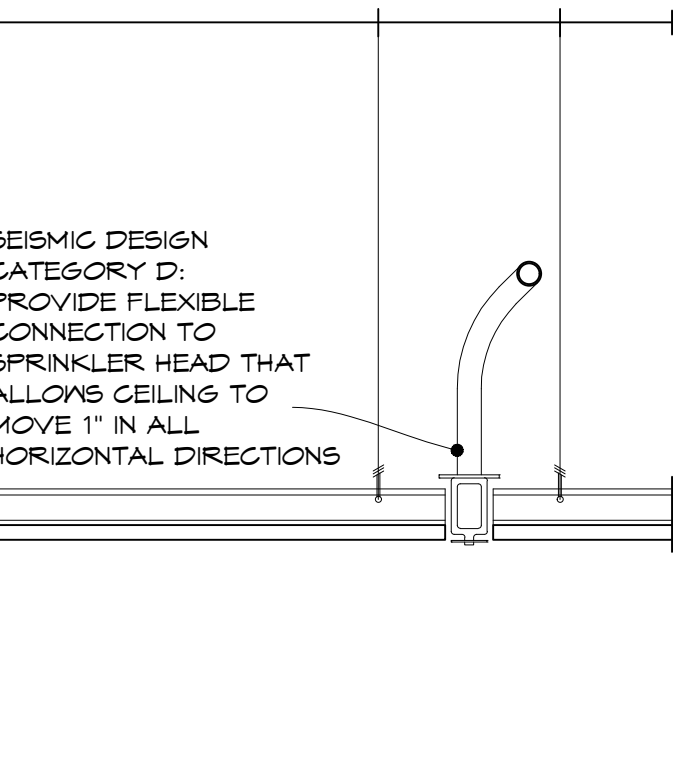
C LIGHT FIXTURE AND MECHANICAL SERVICE SUPPORT



D LATERAL BRACING REQUIRED IF ANY OF THE FOLLOWING EXISTS -GYPSUM BOARD CEILING THAT EXTENDS WALL-TO-WALL



E EXP. JOINT FOR CLG EXCEEDING 2500 SF

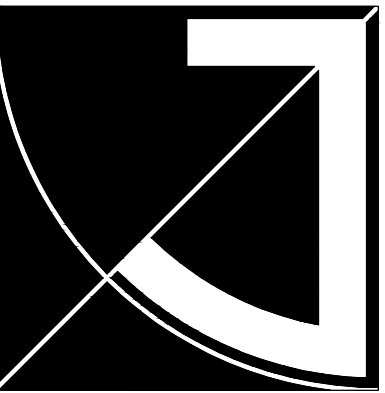


F SPRINKLER HEAD CLEARANCE

2 INSTALLATION OF SUSPENDED CEILING
NTS

ATC clouds require manufactured sway bracing and lateral support in accordance with installation instructions.

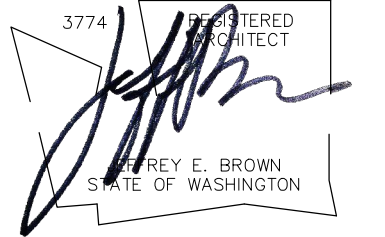
City of Puyallup Development & Permitting Services ISSUED PERMIT	
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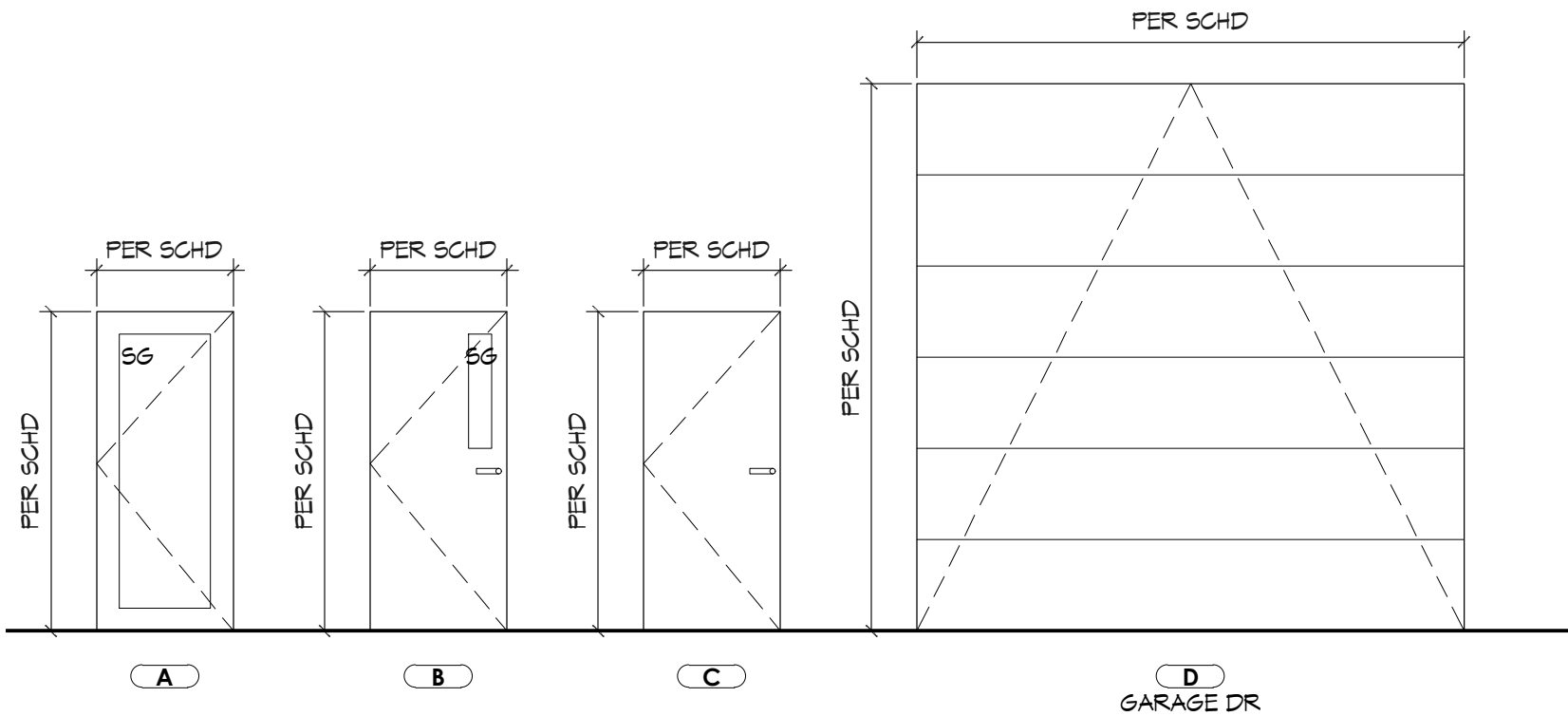
DATE	ISSUE	NO.
06.21.24	PERMIT	
09.30.24	CITY	

SHEET TITLE

DETAILS

SHEET #

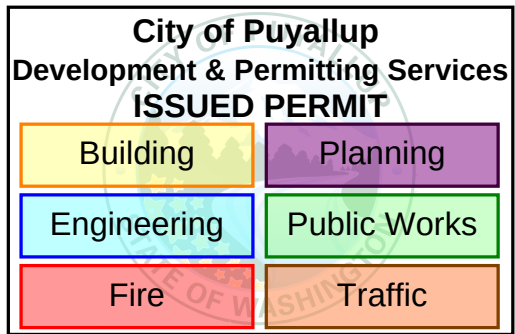
A4.3



1 DOOR TYPE

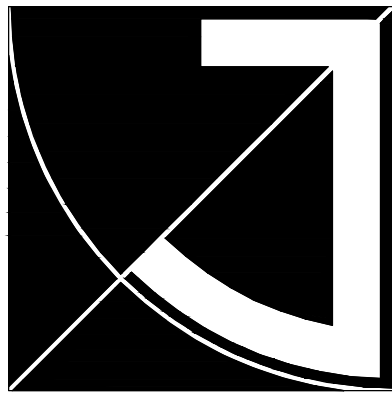
(11X17) SCALE: 1/8" = 1'-0"
(22X34) SCALE: 1/4" = 1'-0"

- NOTE:
1. ALL EXT WOOD DOOR TO BE SOLID-CORE
2. SG = SAFETY GLAZING
3. DOOR SAVING PER A2.11, A2.21-2.24
4. DOOR WIDTH AND HEIGHT PER SCHD, TYP



NO.	LOCATION	TYPE	DOORS						FRAME		REMARKS			
			WIDTH		HEIGHT		MAT	FINISH	MAT	FINISH				
			FT	IN	FT	IN								
101A	VESTIBULE	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
101B	VESTIBULE	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
102A	LOBBY (N)	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	CLOSER	PANIC BAR		
102B	LOBBY (N)	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	CLOSER	PANIC BAR		
102C	LOBBY (S)	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
102D	LOBBY (S)	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
102E	LOBBY(E)	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	TEP	
103	OFFICE	B	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED	RELITE	TEP		
104	OFFICE	B	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED	RELITE	TEP		
105	BATHROOM	C	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED				
108	STORAGE	C	6	0	7	0	WD	STAIN & VARNISH	HM	PAINTED	(2) 3'-0" DOOR	REMOVABLE MULLION		
109	STORAGE	C	6	0	7	0	WD	STAIN & VARNISH	HM	PAINTED	(2) 3'-0" DOOR	REMOVABLE MULLION		
110	STORAGE	C	6	0	7	0	WD	STAIN & VARNISH	HM	PAINTED	(2) 3'-0" DOOR	REMOVABLE MULLION		
111A	PRESCHOOL	A	6	0	7	0	AL	DARK BRONZE	AL	DARK BRONZE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
111B	PRESCHOOL	A	6	0	7	0	AL	DARK BRONZE	AL	DARK BRONZE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
112	PRESCHOOL	D	12	0	12	0	AL	DARK BRONZE	AL	DARK BRONZE	GARAGE DOOR			
113	PRESCHOOL	D	12	0	12	0	AL	DARK BRONZE	AL	DARK BRONZE	GARAGE DOOR			
114A	PRESCHOOL	A	6	0	7	0	AL	DARK BRONZE	AL	DARK BRONZE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
114B	PRESCHOOL	A	6	0	7	0	AL	DARK BRONZE	AL	DARK BRONZE	CLOSER	TEP		
115	STORAGE	C	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED				
116	WOMEN'S	C	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED	PUSH, TOE KICK PLATE	CLOSER		
117	STORAGE	C	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED				
118	MEN'S	C	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED	PUSH, TOE KICK PLATE	CLOSER		
120A	HALL	A	3	0	7	0	AL	TBD	AL	TBD	WEATHER STRIP	CLOSER	PANIC BAR	TEP
120B	HALL	A	3	0	7	0	AL	TBD	AL	TBD	PANIC BAR	TEP		
121	JANITOR'S CL	C	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED	CLOSER			
122	ELEC	C	3	0	7	0	HM	PAINTED	HM	PAINTED	WEATHER STRIP	CLOSER		
123	FIRE RISER	C	3	0	7	0	HM	PAINTED	HM	PAINTED	WEATHER STRIP	CLOSER		
124	MECH/IT	C	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED	CLOSER			
125A	TODDLER	C	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED				
125B	TODDLER	D	8	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	GARAGE DOOR			
125C	TODDLER	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
127A	TODDLER	C	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED				
127B	TODDLER	D	8	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	GARAGE DOOR			
127C	TODDLER	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
129A	TODDLER	C	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED				
129B	TODDLER	D	8	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	GARAGE DOOR			
129C	TODDLER	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
130A	TODDLER	C	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED				
130B	TODDLER	D	8	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	GARAGE DOOR			
130C	TODDLER	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
132	CONFERENCE	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER		
133A	INFANT	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	TEP	
133B	INFANT	D	8	0	10	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	GARAGE DOOR			
133C	INFANT	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
134	RESTROOM	C	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED				
135A	INFANT	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	TEP	
135B	INFANT	D	8	0	10	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	GARAGE DOOR			
135C	INFANT	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
136A	INFANT	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	TEP	
136B	INFANT	D	8	0	10	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	GARAGE DOOR			
136C	INFANT	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
137	RESTROOM	C	3	0	7	0	WD	STAIN & VARNISH	HM	PAINTED				
138A	INFANT	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	TEP	
138B	INFANT	D	8	0	10	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	GARAGE DOOR			
138C	INFANT	A	3	0	7	0	AL	PAINTED-WHITE	AL	PAINTED-WHITE	WEATHER STRIP	CLOSER	PANIC BAR	TEP
139A	PREP KITCHEN	B	3	0	7	0	HM	PAINTED	HM	PAINTED	WEATHER STRIP	CLOSER	TEP	FLUSH BOLT
139B	PREP KITCHEN	B	3	0	7	0	HM	PAINTED	HM	PAINTED	WEATHER STRIP	CLOSER	TEP	FLUSH BOLT
	FENCE		3	0	6	0	HM	PAINTED	HM	PAINTED	CRASH BAR	(3) THROUGHOUT SITE, SEE G0.2 & A1.1 FOR LOCATION		

2 DOOR SCHEDULE

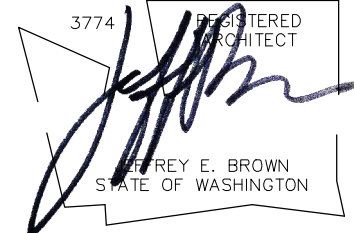


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06.21.24 PERMIT

09.30.24 CITY

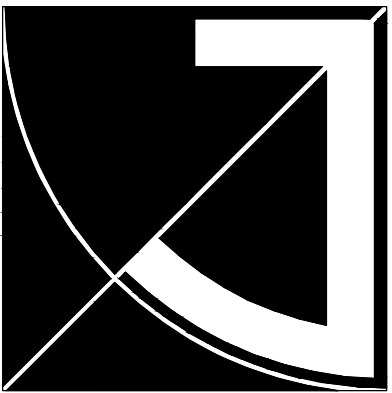


SHEET TITLE

DOOR SCHD & TYPE

SHEET #

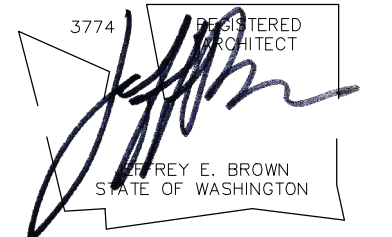
A7.1



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_____	_____	_____
_____	_____	_____
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_____	_____	_____

SHEET TITLE

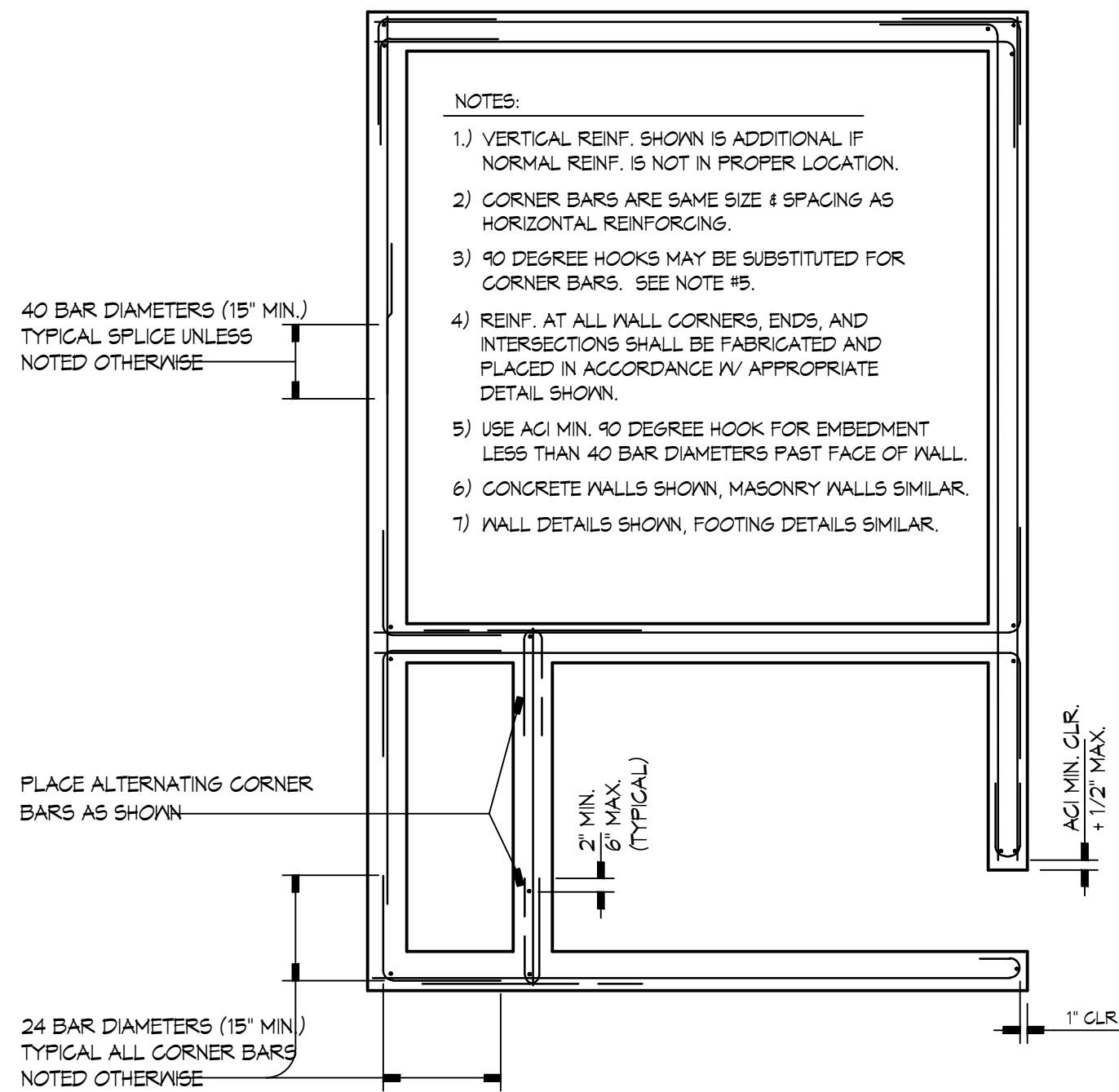
DOOR SCHD & TYPE
WIN SCHD & TYPE

SHEET #

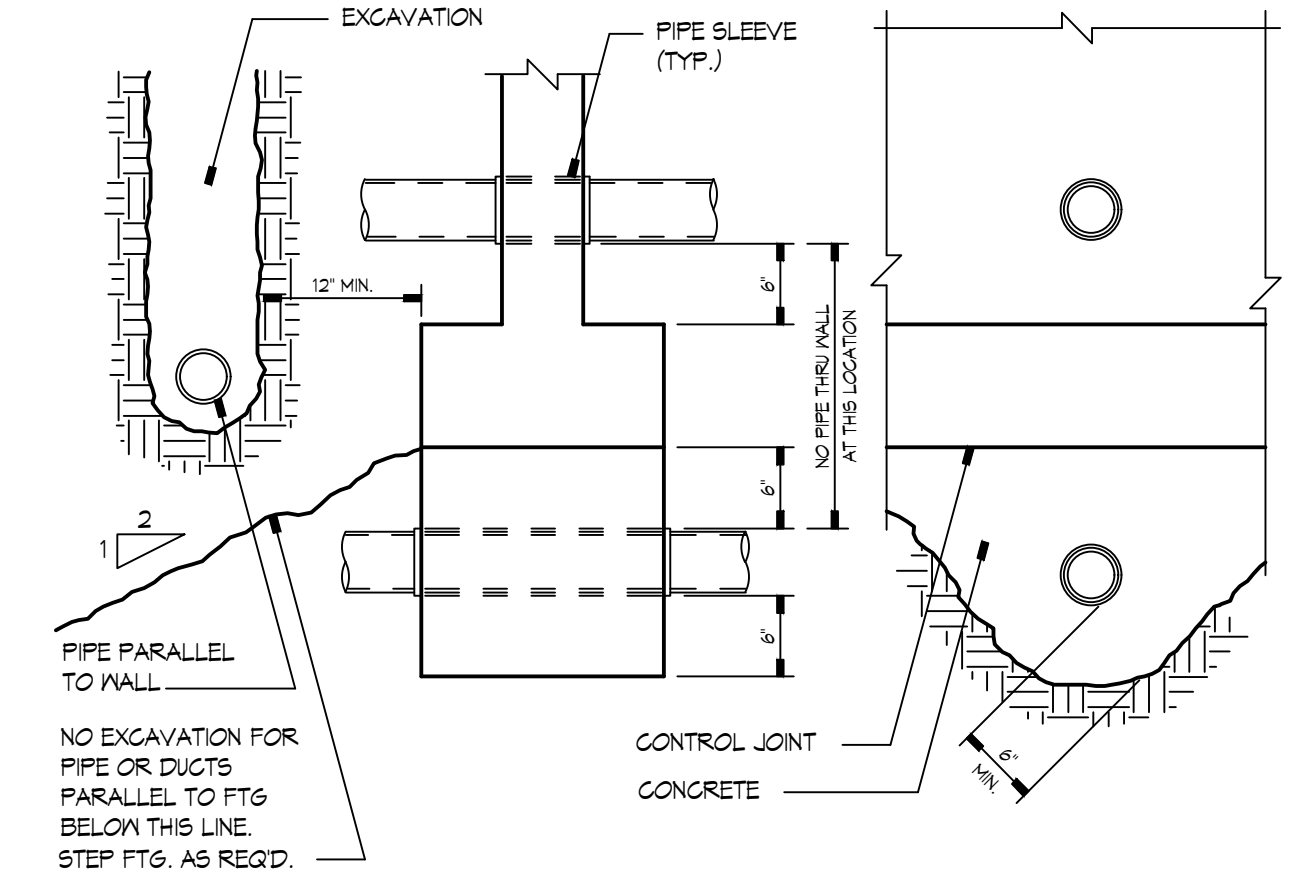
NO.	LOCATION	WIDTH		HEIGHT		U VALUE	QTY	TYPE	MANUFACTURE	FINISH	REMARKS
		FT	IN	FT	IN						
101.S1~S2	VESTIBULE	3	2	7	2	0.34	2	STOREFRONT-FIXED	KAWNEER	WHITE	SG (ADJACENT TO DR)
101.S1~S2	VESTIBULE	6	6	2	10	0.34	2	STOREFRONT-FIXED	KAWNEER	WHITE	ABV DOOR
101.S5	VESTIBULE	TBD				0.34		STOREFRONT-FIXED	KAWNEER	WHITE	VERIFY IN FIELD
102.S1~S2	LOBBY (N)	3	2	7	2	N/A	2	STOREFRONT-FIXED	KAWNEER	WHITE	INTERIOR SG (ADJACENT TO DR)
102.S1~S2	LOBBY (N)	6	6	2	10	N/A	2	STOREFRONT-FIXED	KAWNEER	WHITE	INTERIOR
102.S3~S4	LOBBY (S)	1	8	7	2	0.34	2	STOREFRONT-FIXED	KAWNEER	WHITE	SG (ADJACENT TO DR)
102.S3~S4	LOBBY (S)	5	1	2	10	0.34	2	STOREFRONT-FIXED	KAWNEER	WHITE	
102.S5	LOBBY (S)	TBD				0.34		STOREFRONT-FIXED	KAWNEER	WHITE	VERIFY IN FIELD
102.1, 102.3	LOBBY	8	4	7	2	0.34	2	STOREFRONT-FIXED	KAWNEER	WHITE	
102.2	LOBBY	9	4	7	2	0.34	1	STOREFRONT-FIXED	KAWNEER	WHITE	
102.4, 102.6	LOBBY	6	4	4	6	0.34	2	STOREFRONT-FIXED	KAWNEER	WHITE	ABV WIN 102.1, 102.3
102.5	LOBBY	9	4	4	6	0.34	1	STOREFRONT-FIXED	KAWNEER	WHITE	ABV WIN 102.2
102.7	LOBBY	3	4	4	6	0.34	1	STOREFRONT-FIXED	KAWNEER	WHITE	ABV DR 102E
102.11~14	LOBBY CLERE (W)	3	0	3	0	0.26	4	FIXED	MILGARD-AL	CLEAR ANODIZE	ALIGN WITH WIN 102.15~18
102.15	LOBBY CLERE (E)	3	4	3	0	0.26	1	FIXED	MILGARD-AL	CLEAR ANODIZE	ABV DR 102E
102.16~21	LOBBY CLERE (E)	3	0	3	0	0.26	7	FIXED	MILGARD-AL	CLEAR ANODIZE	SEE ELEV FOR ALIGNMENT
103.11~13	OFFICE CLERE	4	0	1	6	0.26	3	FIXED	MILGARD-AL	CLEAR ANODIZE	ALIGN WITH WIN 117.11
104.1~2	OFFICE	4	0	4	0	0.26	2	FIXED	MILGARD-AL	CLEAR ANODIZE	
104.3~104.6	OFFICE	4	0	4	0	N/A	4	FIXED	MILGARD-AL	CLEAR ANODIZE	INTERIOR 104.6 - SG (ADJACENT TO DR)
111.1~114.1	PRESCHOOL	6	4	4	4	0.26	3	FIXED	MILGARD-AL	BRONZE ANODIZE	ABV DR 111A, 111B, AND 114B
111.11~114.14	PRESCHL CLERE	3	0	3	0	0.26	10	FIXED	MILGARD-AL	BRONZE ANODIZE	
111.21~113.26	PRESCHL CUPULA	6	0	2	0	0.26	8	FIXED	MILGARD-AL	BRONZE ANODIZE	W/O MIDDLE WINDOWS
111.22~113.25	PRESCHL CUPULA	3	0	2	0	0.26	4	FIXED	MILGARD-AL	BRONZE ANODIZE	MIDDLE WINDOWS @ CUPULA
116.11	WOMEN'S	4	0	1	10	0.26	1	FIXED	MILGARD-AL	CLEAR ANODIZE	
117.11	MEN'S	4	0	1	6	0.26	1	FIXED	MILGARD-AL	CLEAR ANODIZE	ALIGN WITH WIN 103.11~103.13
120.S1	HALL	4	8	7	2	0.34	1	STOREFRONT-FIXED	KAWNEER	TBD	SG (ADJACENT TO DR)
120.S1	HALL	8	0	1	10	0.34	1	STOREFRONT-FIXED	KAWNEER	TBD	
120.S2	HALL	4	8	7	2	N/A	1	STOREFRONT-FIXED	KAWNEER	WHITE	INTERIOR SG (ADJACENT TO DR)
120.S2	HALL	8	0	1	10	N/A	1	STOREFRONT-FIXED	KAWNEER	WHITE	
120.11~120.16	HALL-CLERE	5	0	2	6	0.26	6	FIXED	MILGARD-AL	CLEAR ANODIZE	
125.1~130.3	TODDLER	2	0	6	0	N/A	12	FIXED	MILGARD-AL	CLEAR ANODIZE	INTERIOR SG (BOM SILL LOWER THAN 18")
125.11~130.11	TODDER	8	4	2	0	0.26	4	FIXED	MILGARD-AL	CLEAR ANODIZE	ABV GARAGE DOOR
125.12~130.12	TODDER	3	4	2	0	0.26	4	FIXED	MILGARD-AL	CLEAR ANODIZE	ABV SWING DOOR
126.1~129.3	TODDLER	2	6	3	4	0.26	6	FIXED	MILGARD-AL	CLEAR ANODIZE	SG (BOM SILL LOWER THAN 18")
126.4~129.6	TODDLER	2	6	2	2	0.26	6	FIXED	MILGARD-AL	CLEAR ANODIZE	ABV WIN 126.1~129.3
132.1~3	CONFERENCE	4	0	4	0	0.26	3	FIXED	MILGARD-AL	CLEAR ANODIZE	132.3 - SG (ADJACENT TO DR)
133.3~4	INFANT	4	0	4	0	0.26	2	FIXED	MILGARD-AL	CLEAR ANODIZE	
133.1~138.1	INFANT	3	4	2	4	0.26	4	FIXED	MILGARD-AL	CLEAR ANODIZE	ABV DR 133A~138A
133.2~138.3	INFANT	2	4	4	0	0.26	8	FIXED	MILGARD-AL	CLEAR ANODIZE	SG (ADJACENT TO DR)
133.11~138.12	INFANT CLERE (W)	3	0	2	0	0.26	8	FIXED	MILGARD-AL	CLEAR ANODIZE	
133.14~138.16	INFANT CLERE (E)	2	4	2	0	0.26	8	FIXED	MILGARD-AL	CLEAR ANODIZE	W/O MIDDLE WINDOWS (ABV DR)
133.15~138.15	INFANT CLERE (E)	3	4	2	0	0.26	4	FIXED	MILGARD-AL	CLEAR ANODIZE	ABV DOOR 113~138
139.11~16	PREP KITCHEN	2	2	1	6	0.26	4	FIXED	MILGARD-AL	CLEAR ANODIZE	W/O 139.12, 139.15
139.12, 139.15	PREP KITCHEN	3	10	1	6	0.26	2	FIXED	MILGARD-AL	CLEAR ANODIZE	

2 WINDOW SCHEDULE

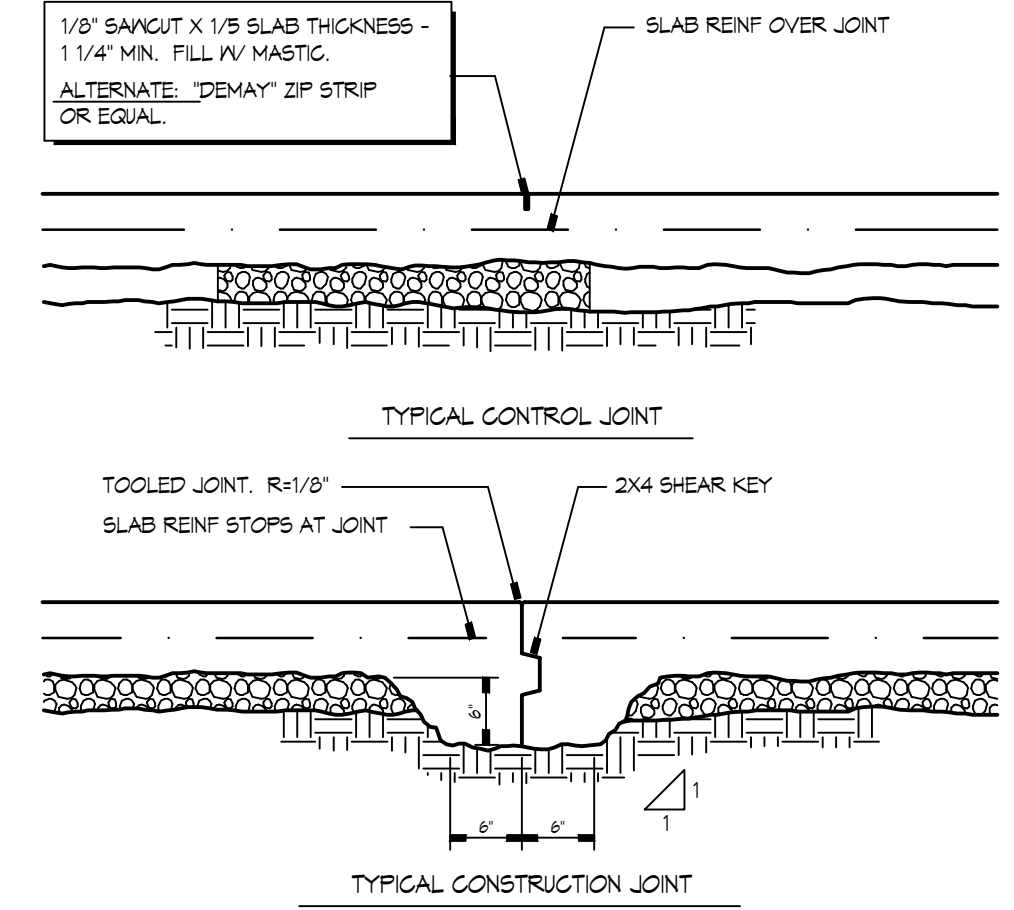
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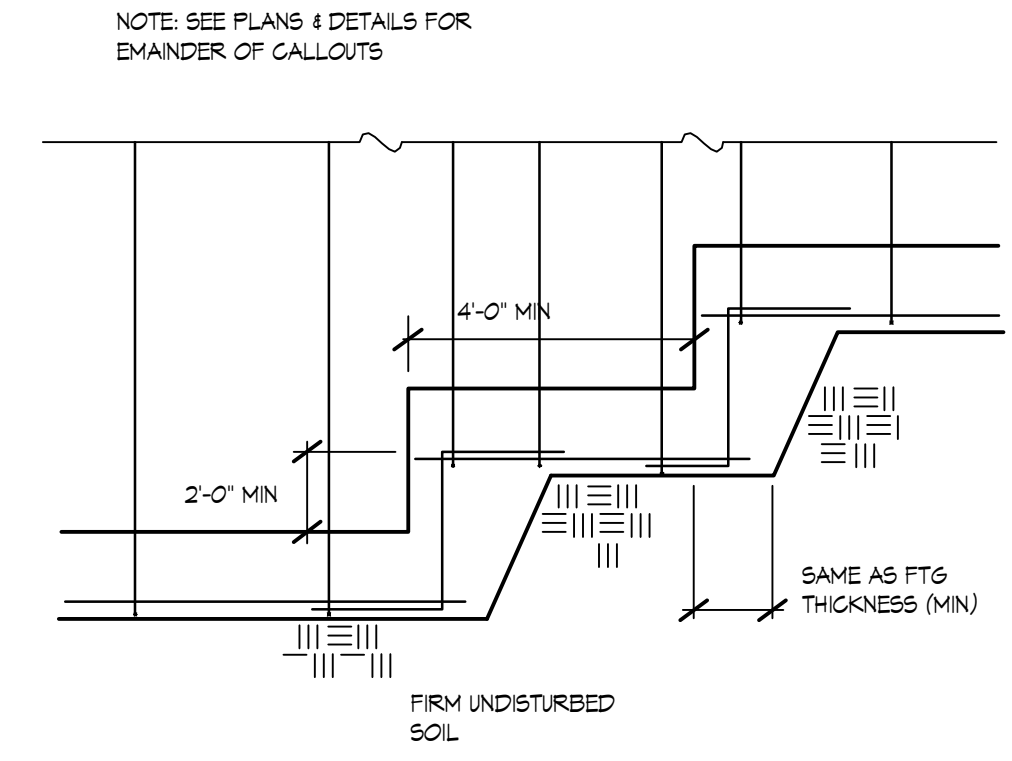
1 TYPICAL REINFORCEMENT PLACING DETAIL
NTS



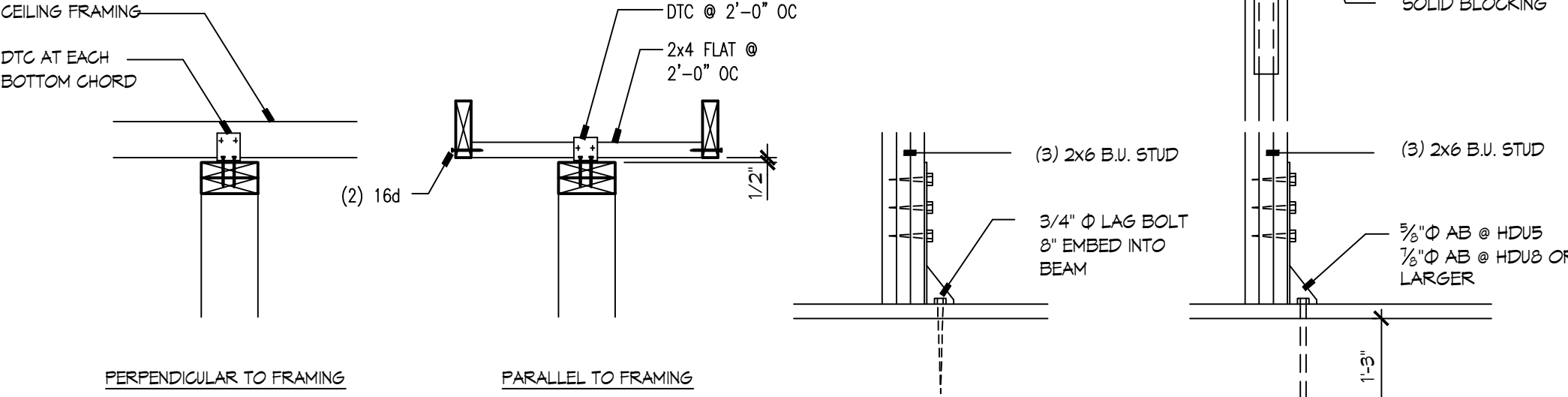
2 TYPICAL DETAIL OF PIPE @ CONCRETE FOOTING
NTS



3 TYPICAL SLAB JOINT DETAILS
NTS

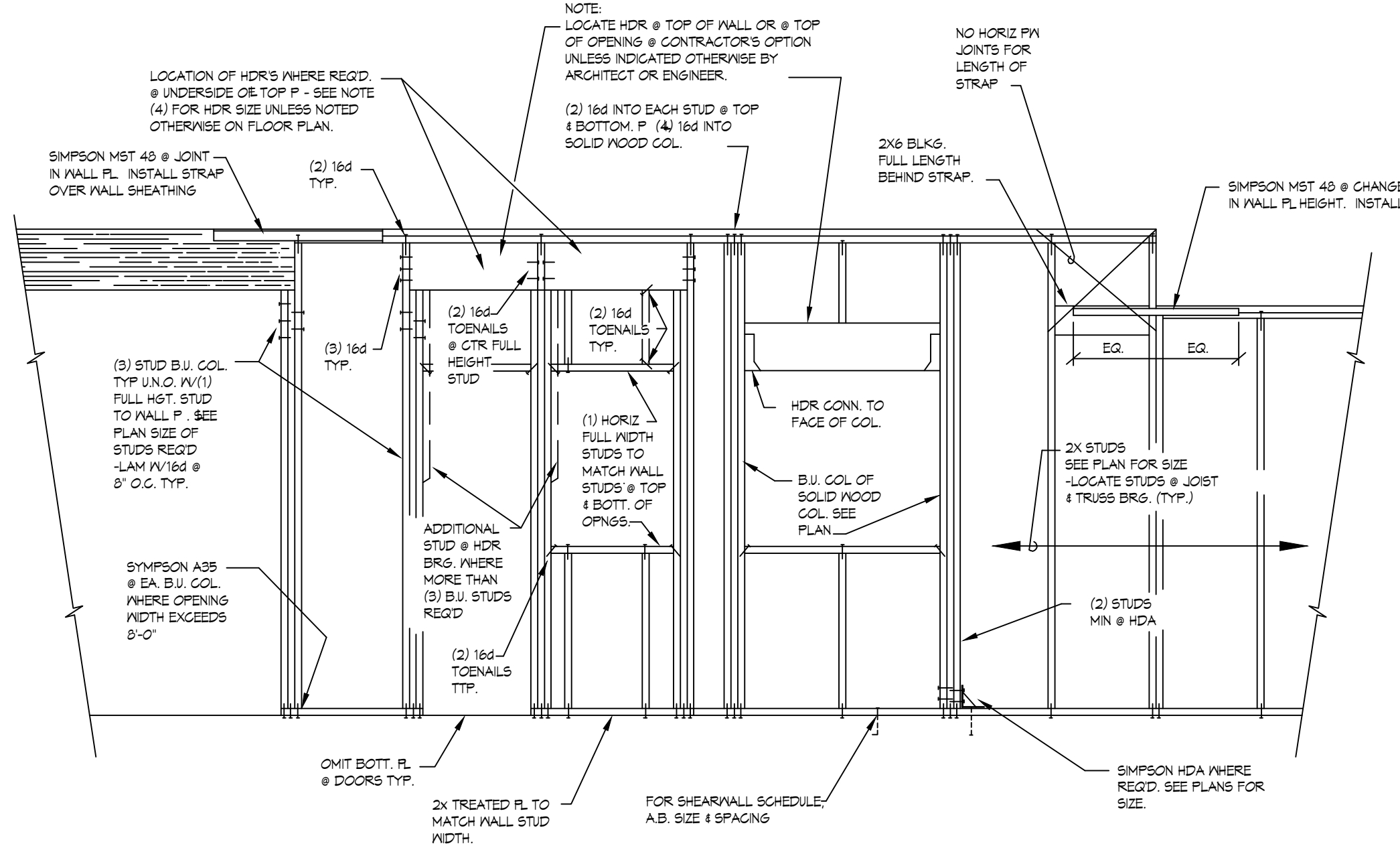


4 TYPICAL STEPPED FTG DETAIL
NTS

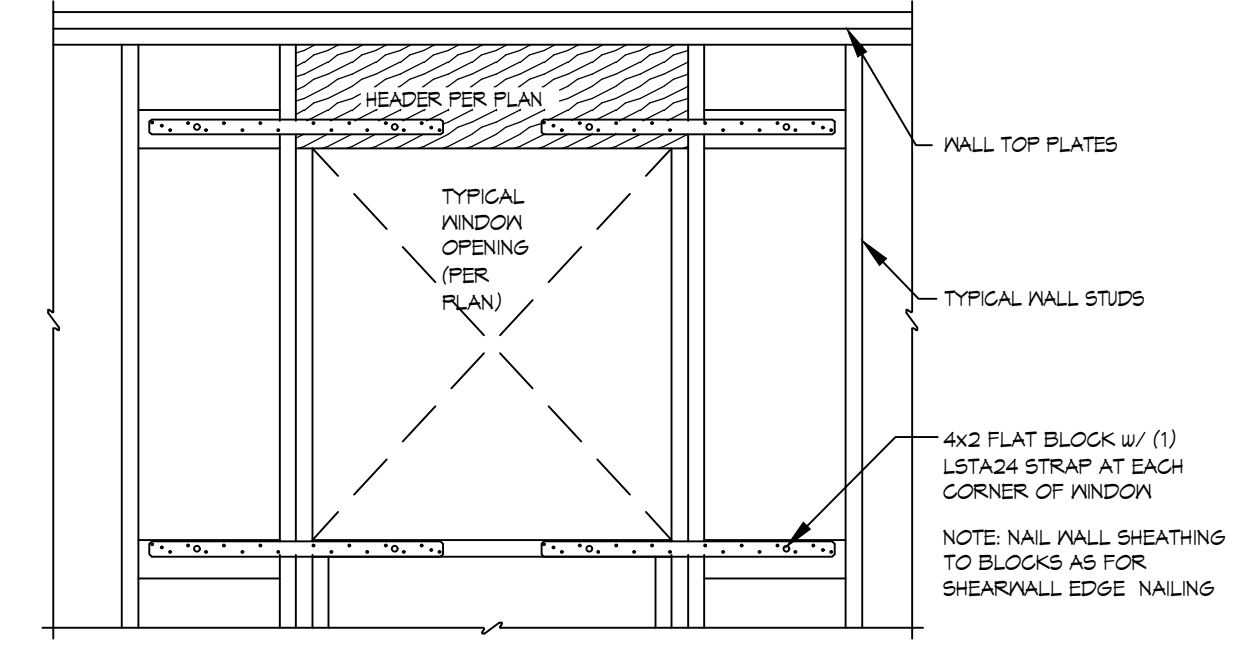


5 PARTITION WALL SUPPORT
NTS

6 TYPICAL HOLDOWN DETAIL
NTS



7 TYPICAL EXTERIOR & INTERIOR BEARING WALL FRAMING ELEVATION
NTS



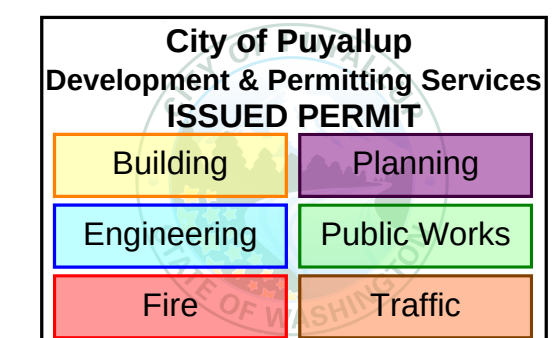
8 WINDOW STRAPPING DETAIL
NTS

MARK (SHEAR CAPACITY)	WALL TYPE	PANEL EDGE NAILING (1), (2)	INTERMEDIATE NAILING (2)	BOTTOM PLATE ANCHOR BOLTING OR NAILING (5)
1 (200 LB/FT)	1/2" CDX PLYWOOD OR OSB, ONE SIDE	8d @ 6" O.C.	8d @ 12" O.C.	1/2" A.B. @ 48" O.C. OR 16d @ 1 1/2" O.C.
2 (350 LB/FT)	1/2" CDX PLYWOOD OR OSB, ONE SIDE	8d @ 3 1/2" O.C.	8d @ 12" O.C.	5/8" A.B. @ 3'-4" O.C. OR 16d @ 4" O.C.
3 (510 LB/FT)	1/2" CDX PLYWOOD	10d @ 2" O.C. (4)	10d @ 12" O.C.	3/4" A.B. @ 18" O.C. OR SDS25#12 @ 4" O.C. STAGGERED

SHEAR WALL SCHEDULE NOTES:
1) BLOCK ALL PANEL EDGES
2) SEE NAILS - MINIMUM REQUIREMENTS
3) 2x STUDS SHALL BE HPF2 OR BETTER, KILN-DRIED
4) USE 3x STUDS AND PLATES @ PANEL EDGES AT
SHEARWALL S ONLY.
5) ANCHOR BOLTS SHALL HAVE MINIMUM 3" BY 3" BY
1/4" THICK PLATE WASHER
6) 1/16" OSB MAY BE SUBSTITUTED FOR 1/2" CDX

NAILS - MINIMUM REQUIREMENTS		
NAIL DESCRIPTION	MINIMUM WIRE DIAMETER	MINIMUM PENETRATION REQUIRED FOR LATERAL STRENGTH
8d Control	0.256"	1 1/2"
8d	0.219"	1 25"
8d	0.191"	1 25"
10d	0.132"	1 50"
16d	0.141"	1 75"

9 SHEARWALL NAILING SCHEDULE
NTS



Rev.

By

Date

Christian Furboe

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STEP BY STEP - ELC

GENERAL DETAILS

Designer: CCF

Drafter: PDS

Checker:

Issue Date: JUNE 21, 2024

Revision:

Project Ref.:

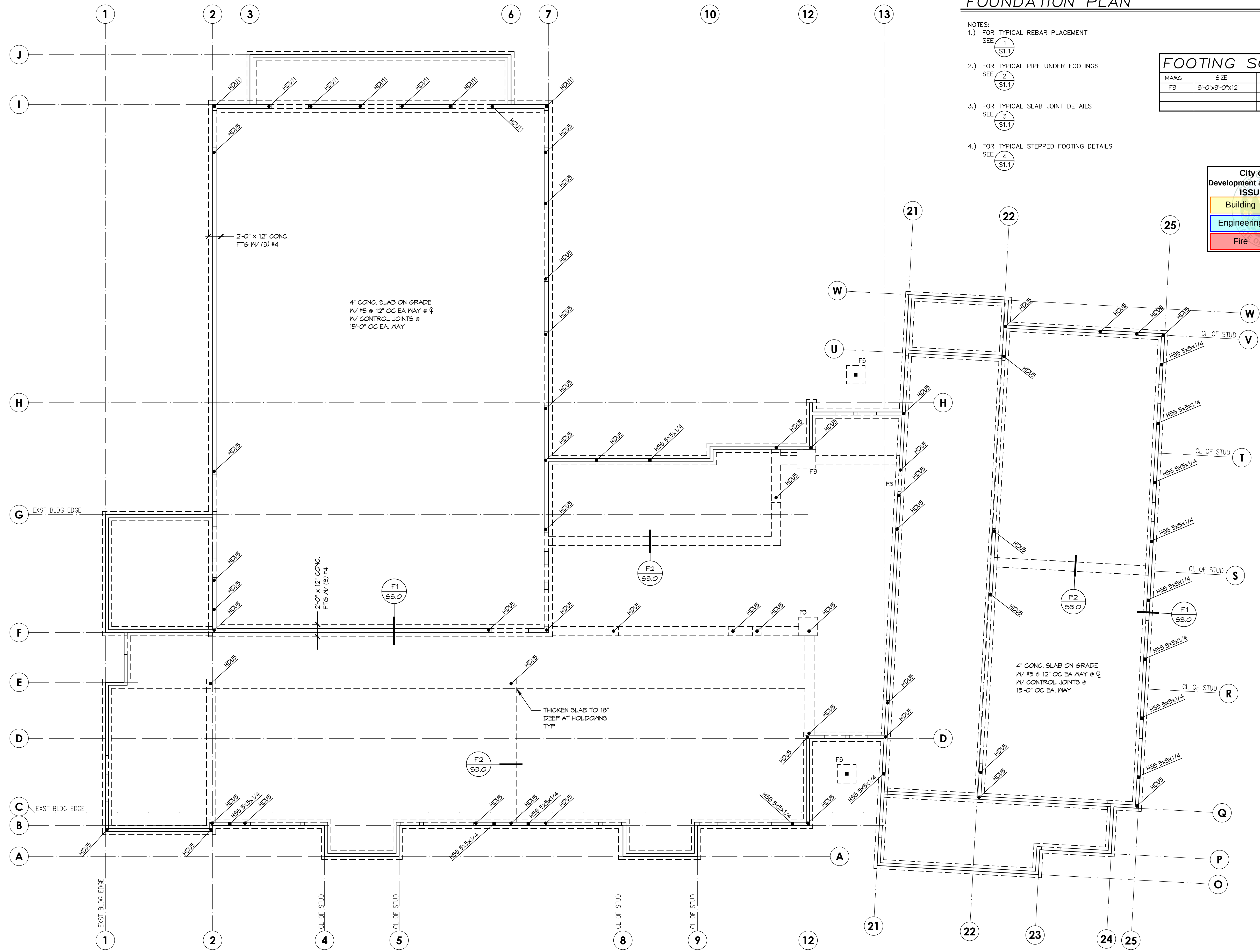
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SHEET NO.

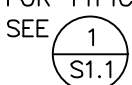
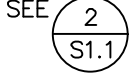
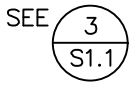
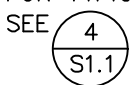
REV.

S1.1



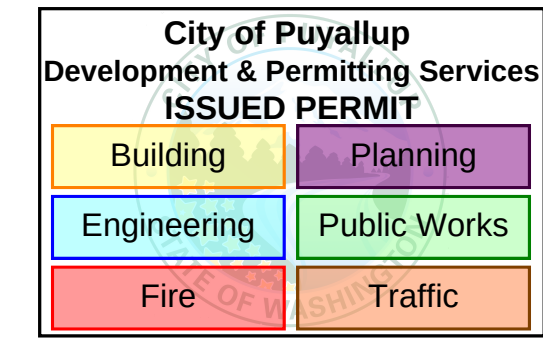
FOUNDATION PLAN

1/8" = 1'-0"

- NOTES:
- 1.) FOR TYPICAL REBAR PLACEMENT
SEE 
 - 2.) FOR TYPICAL PIPE UNDER FOOTINGS
SEE 
 - 3.) FOR TYPICAL SLAB JOINT DETAILS
SEE 
 - 4.) FOR TYPICAL STEPPED FOOTING DETAILS
SEE 

FOOTING SCHEDULE

MARG	SIZE	REINFORCING
F3	3'-0"X3'-0"X12"	(3) #4 EA WAY



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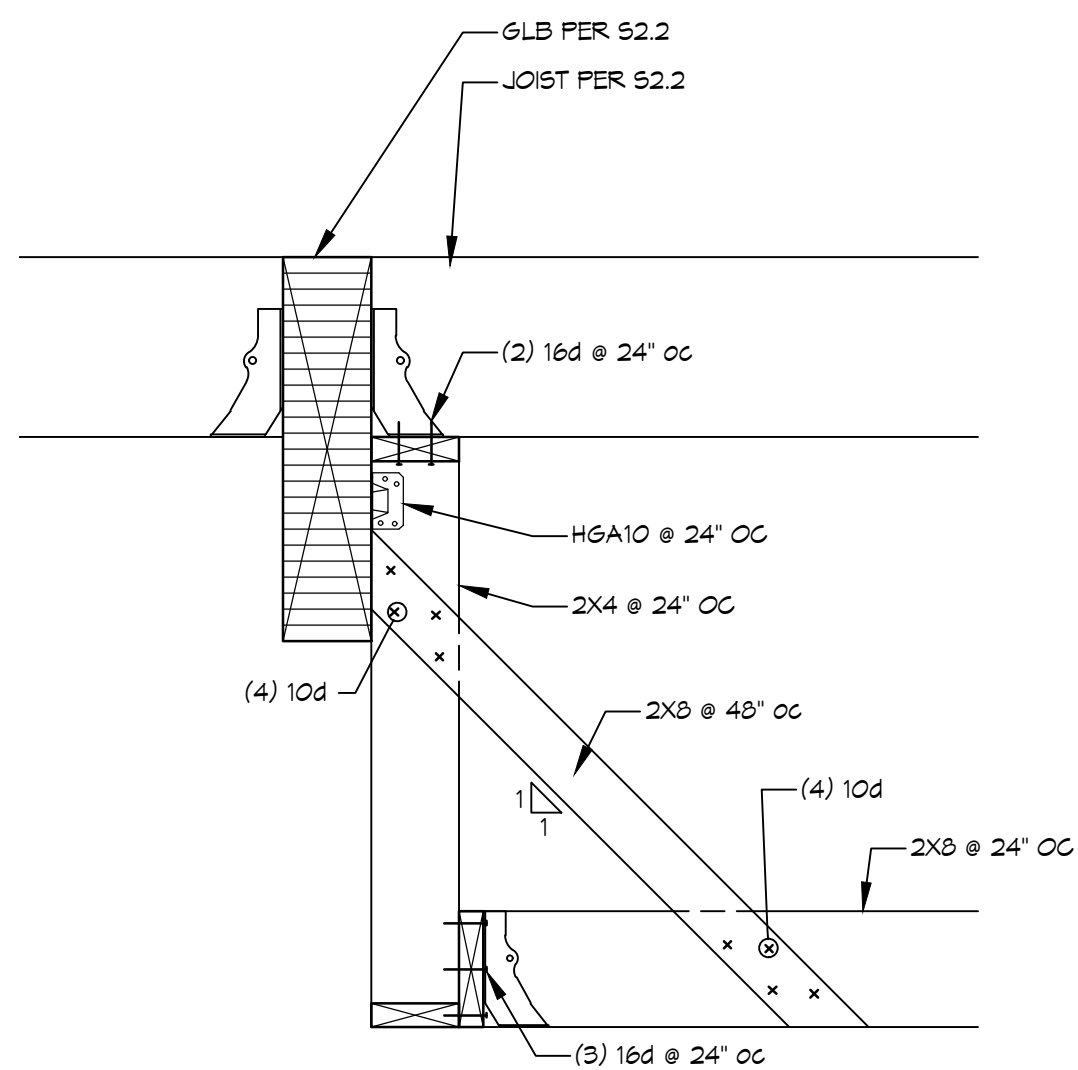
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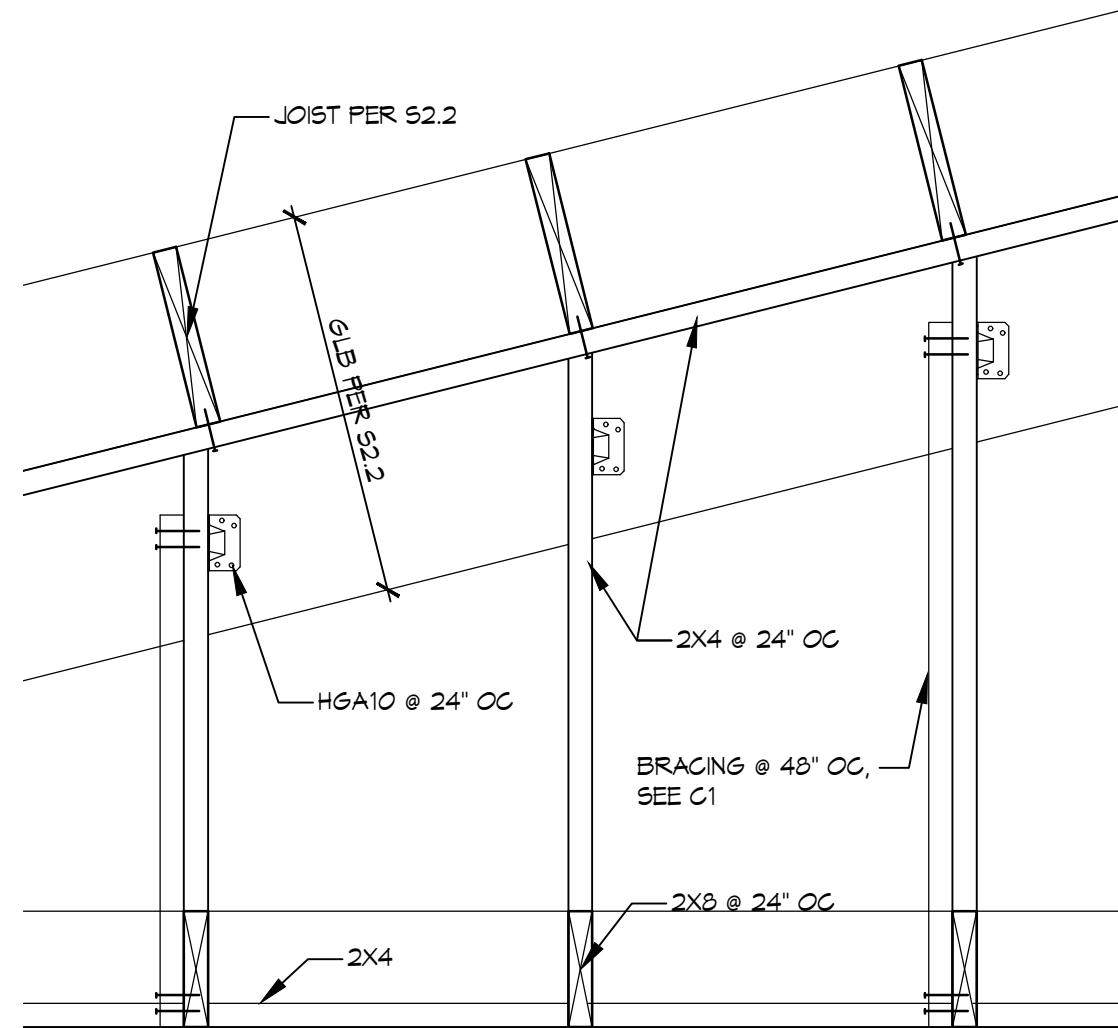
STEP BY STEP - ELC

FOUNDATION PLAN

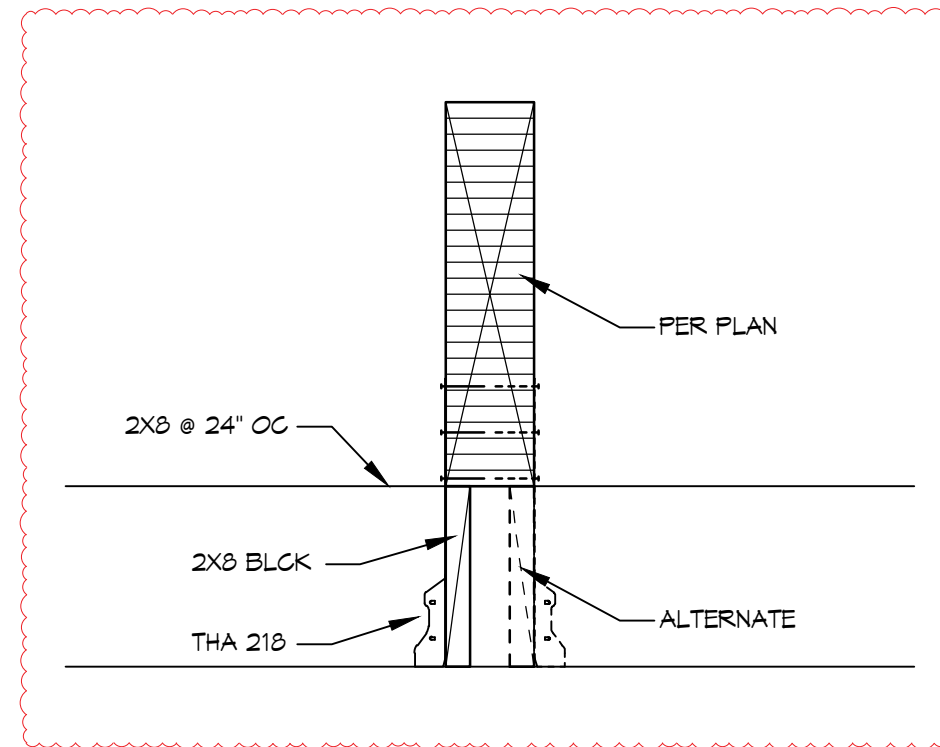
Designer:	CCF
Drafter:	PDS
Checker:	
Issue Date:	JUNE 21, 2024
Revision:	
Project Ref.:	
Client Ref.:	
CAD Ref.:	
SHEET NO.	REV.
S2.0	



C1 SECTION
SCALE: 1" = 1'-0"



C2 SECTION
SCALE: 1" = 1'-0"

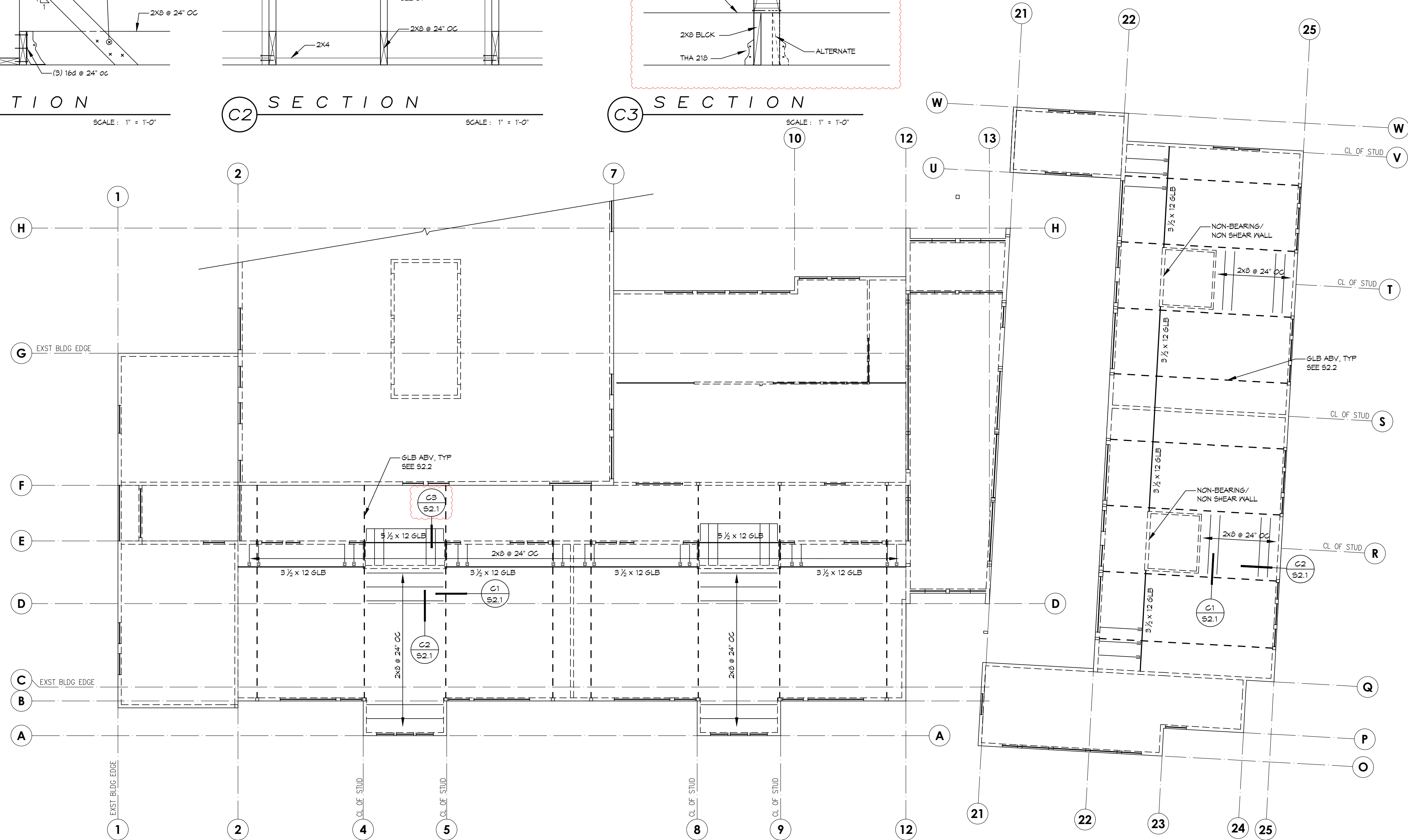
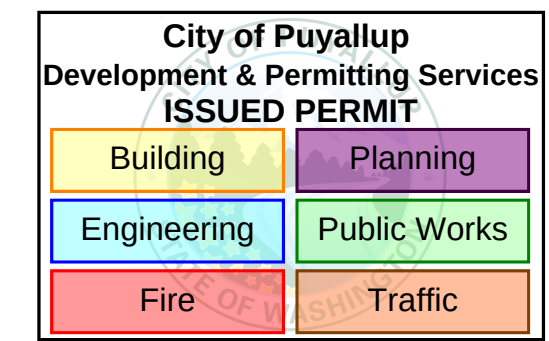


C3 SECTION
SCALE: 1" = 1'-0"

CLG FRAMING PLAN

PLAN NOTES:

- 1) SEE S2.1 FOR SHEAR WALL CALL OUT
SEE SHEET S1.1 FOR SCHEDULE.
- 2) SEE S2.2 FOR BM & RF FRAMING CALL OUT
- 3) SEE ARCH FOR CLG HEIGHT



Rev.	Date	By	CITY COMMENTS
1	09.24.24		

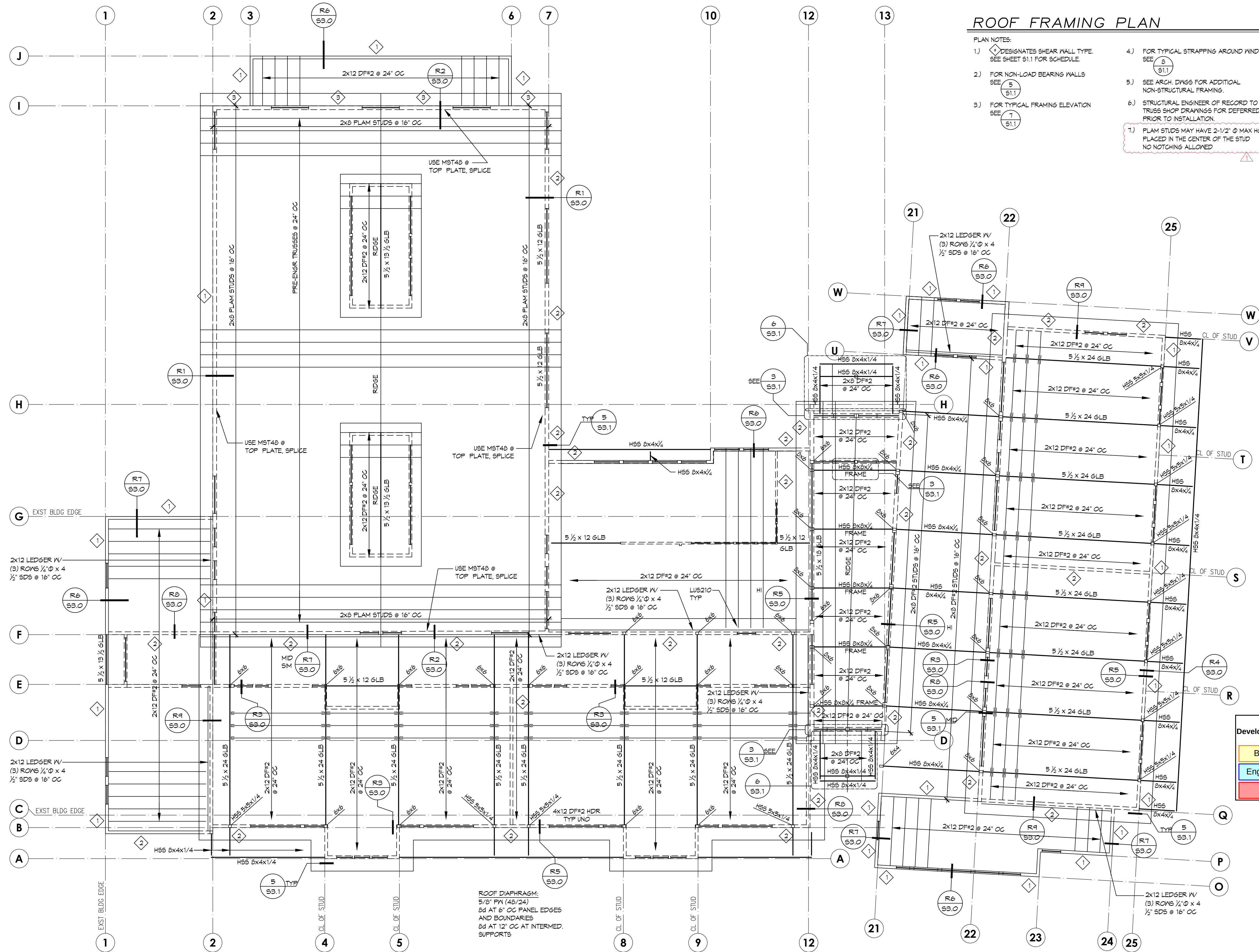
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STEP BY STEP - ELC
CLG FRAMING PLAN

Designer:	CCF
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Issue Date:	JULY 17, 2024
Revision:	SEPT 27, 2024
Project Ref.:	
Client Ref.:	
CAD Ref.:	

SHEET NO.	REV.
S2.1	1



Rev.	Date	By	CITY COMMENTS
1	09.24.24		

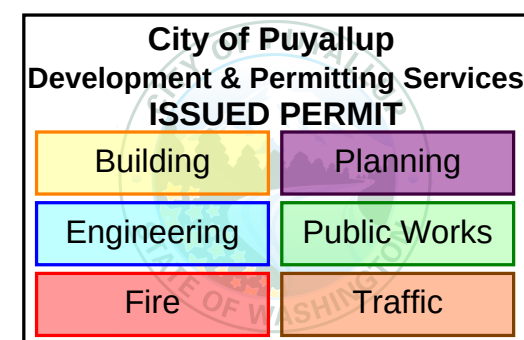
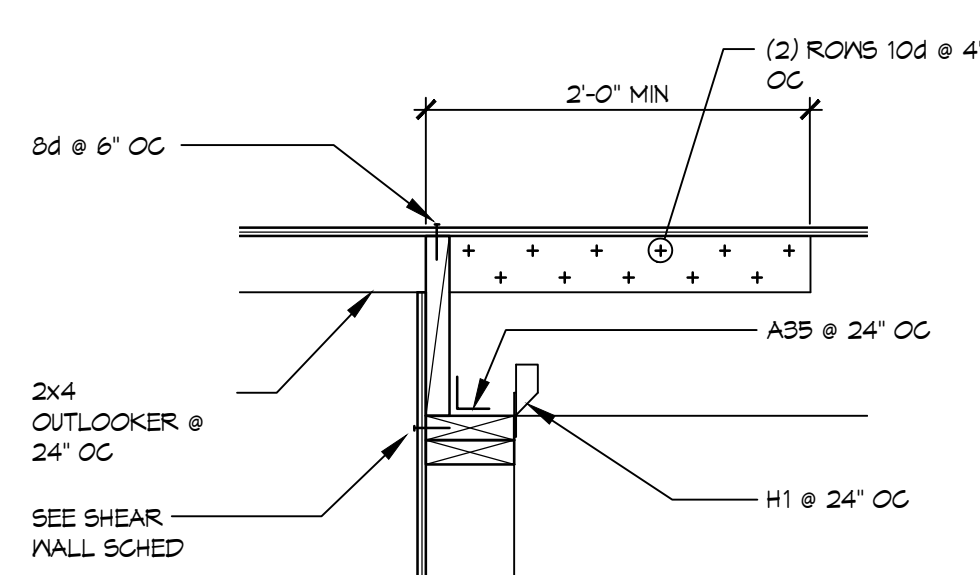
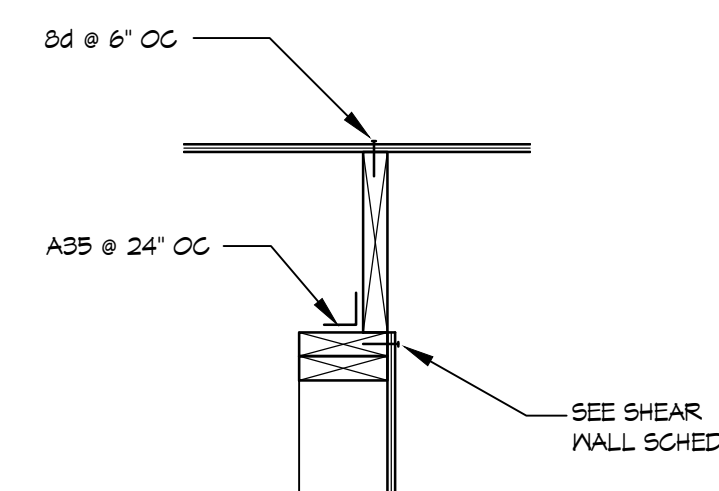
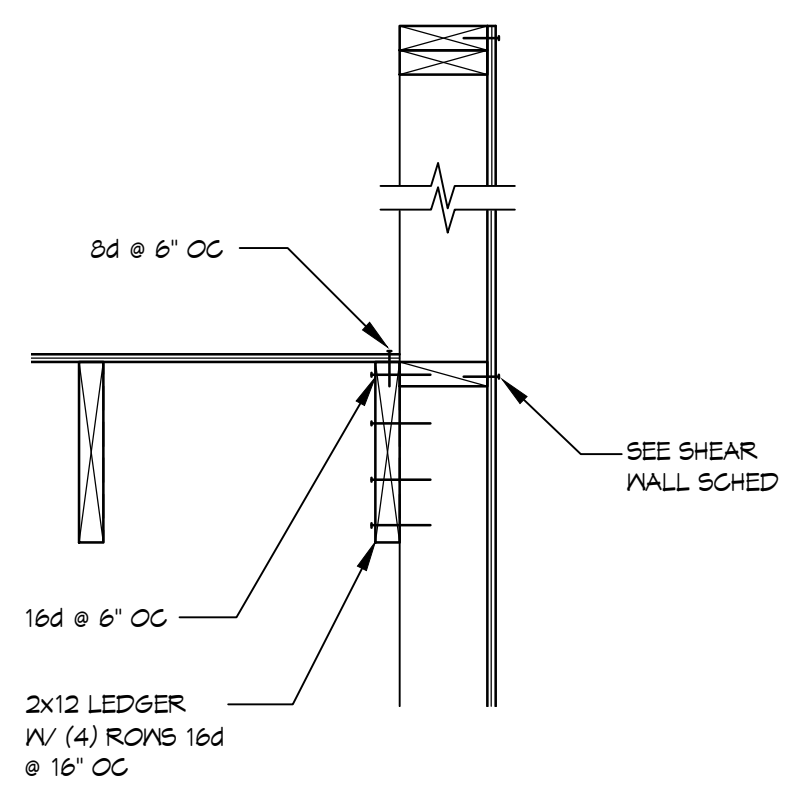
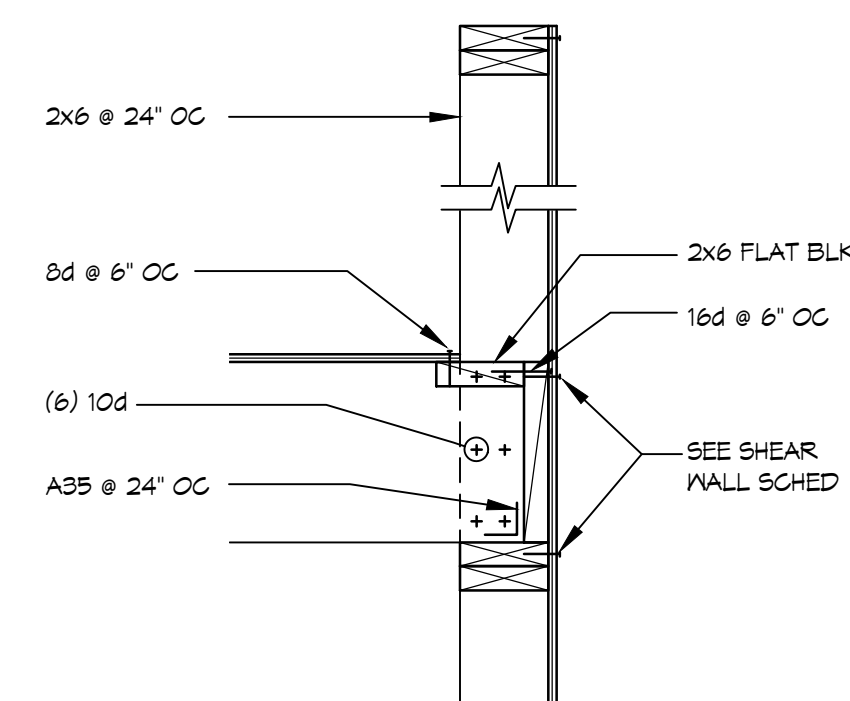
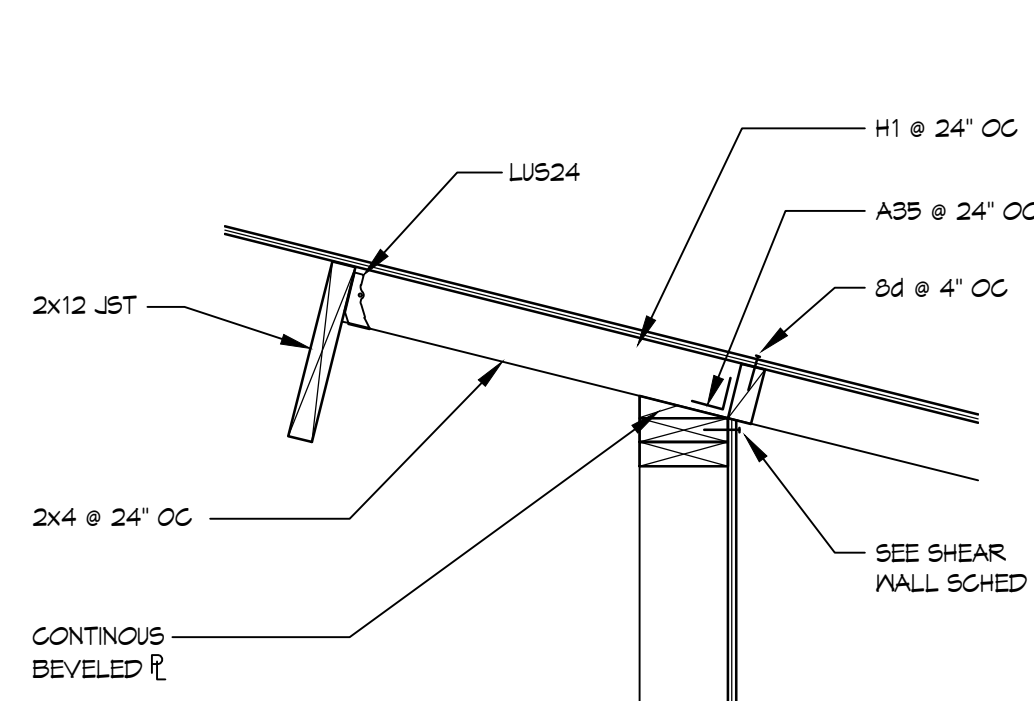
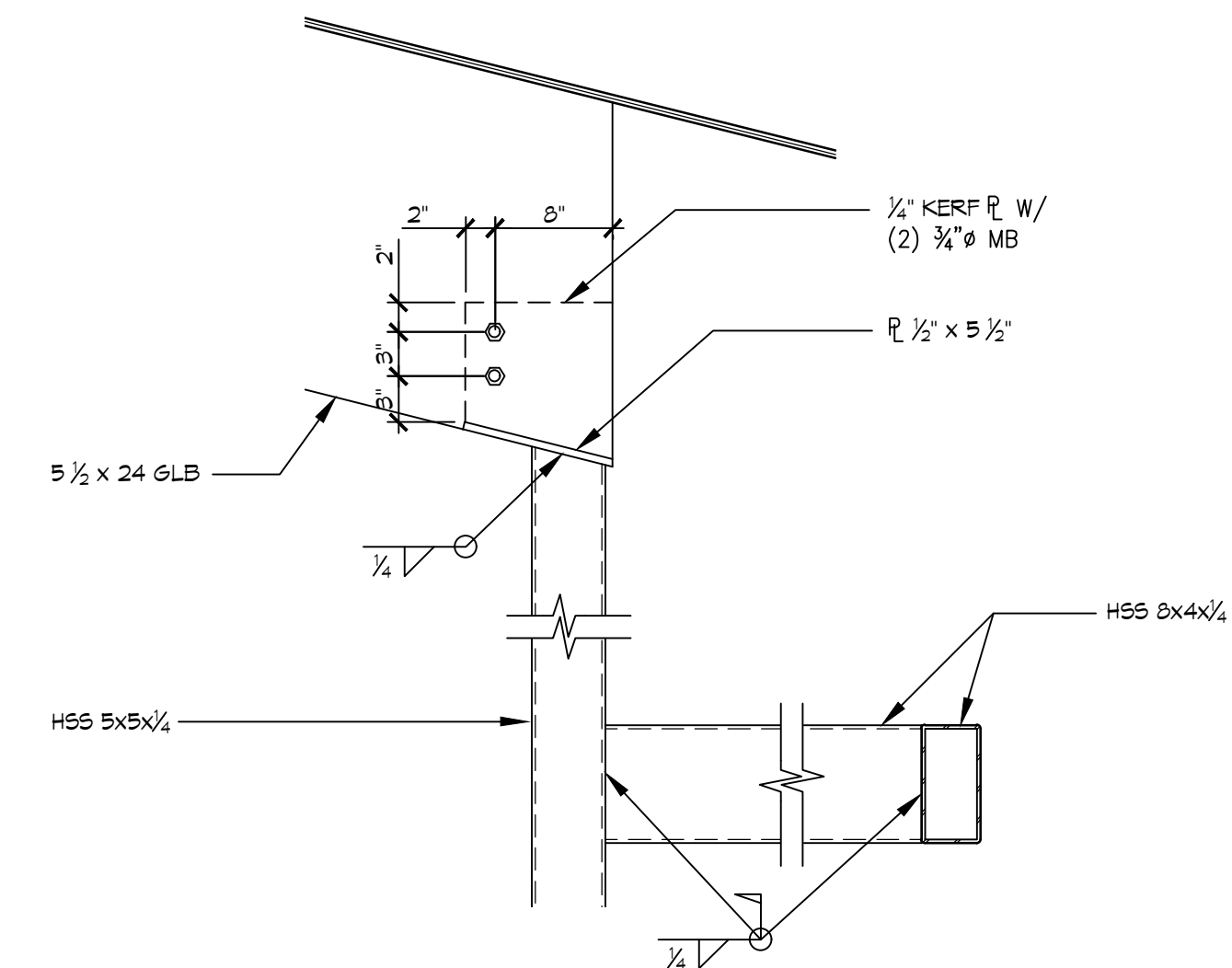
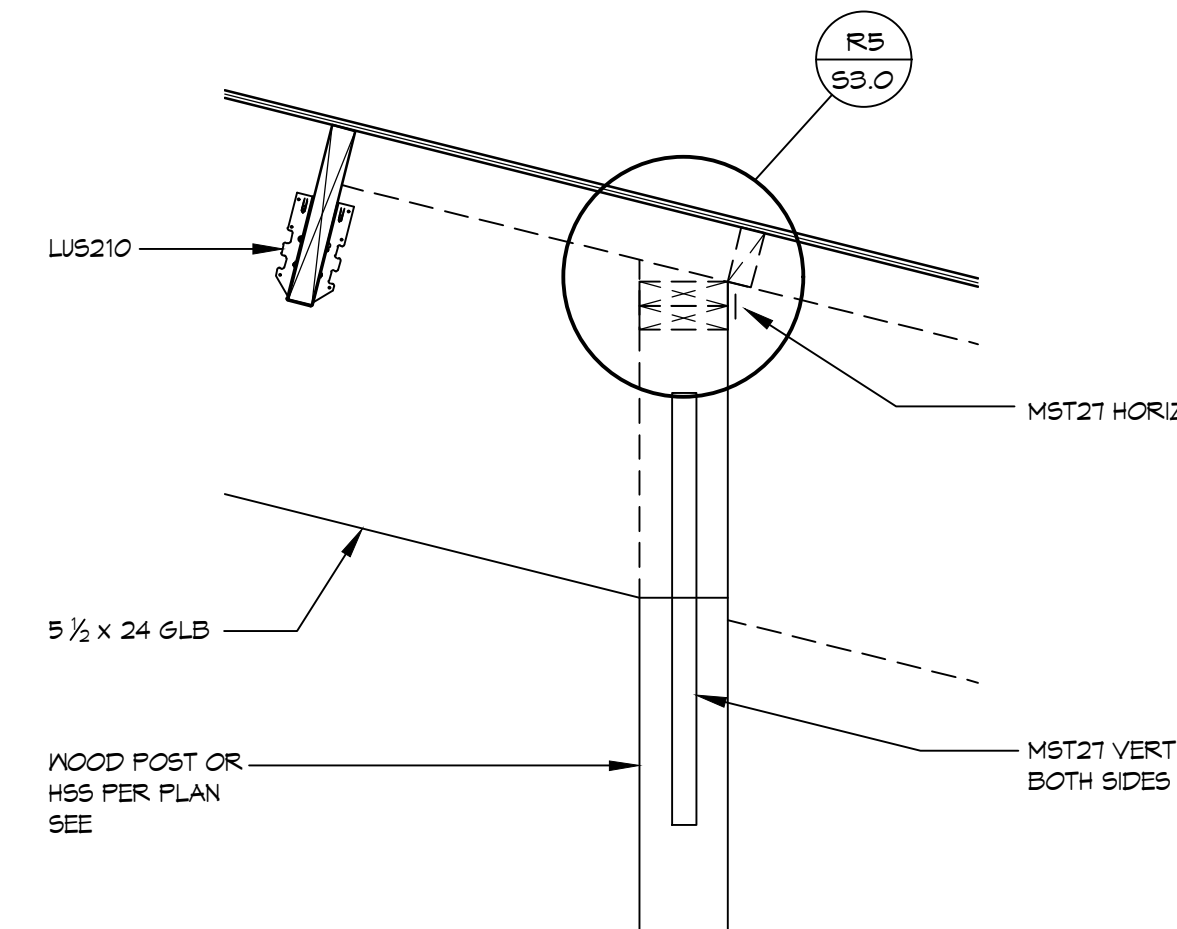
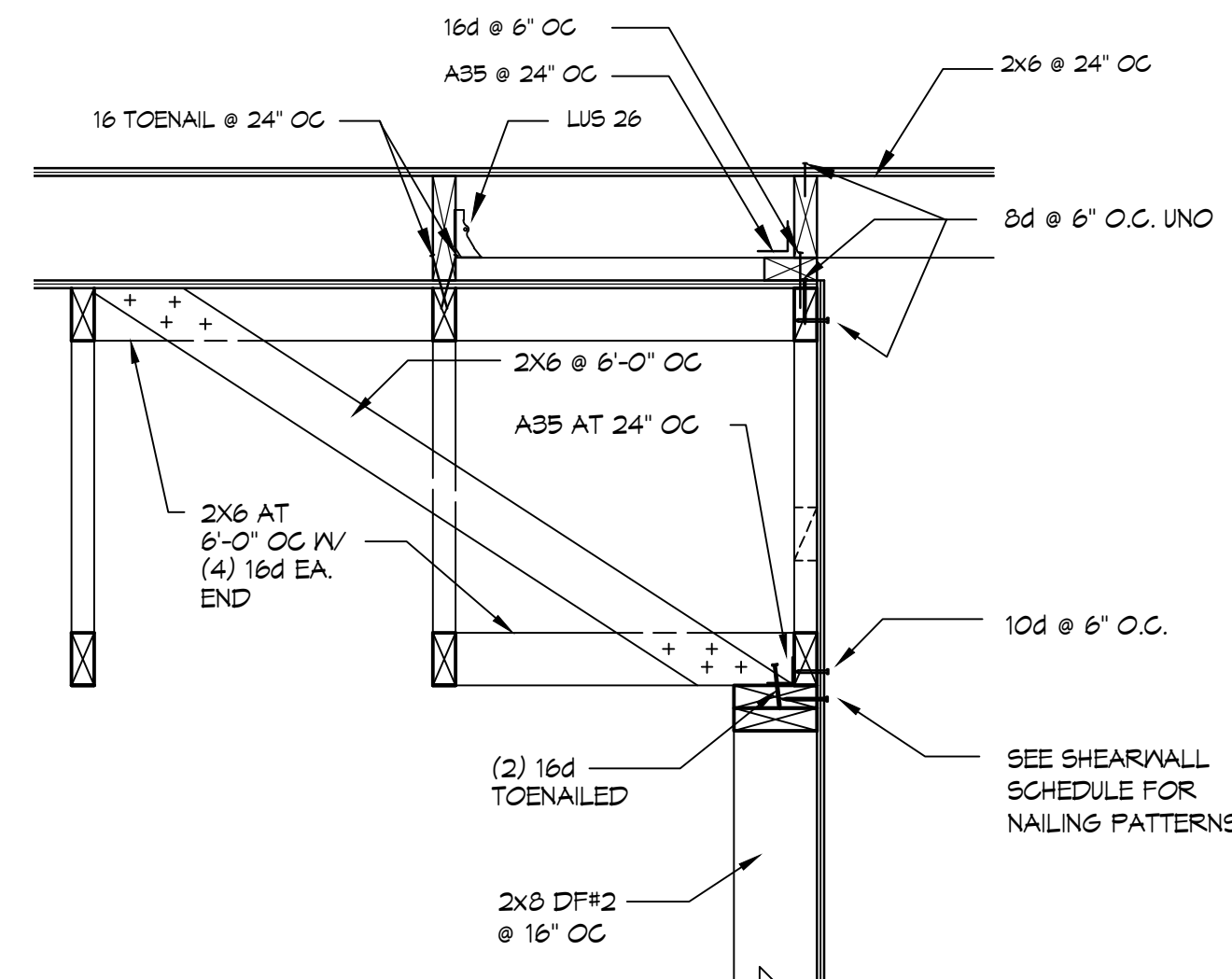
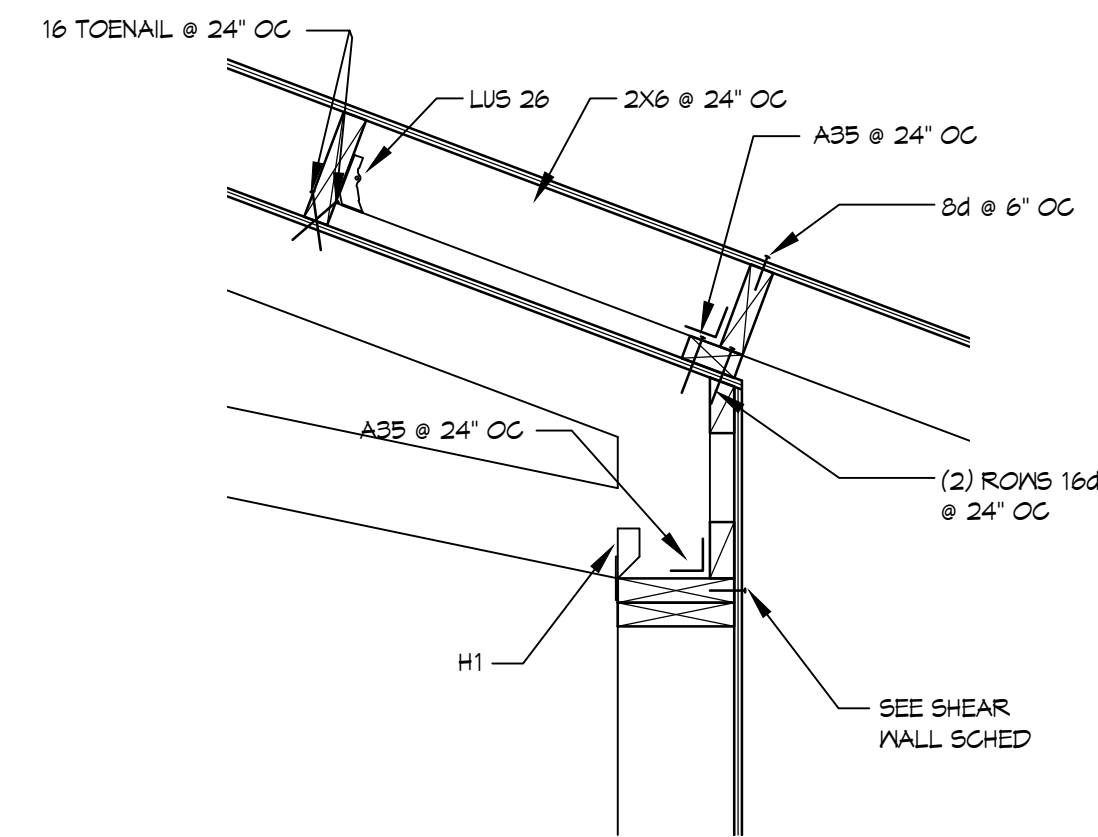
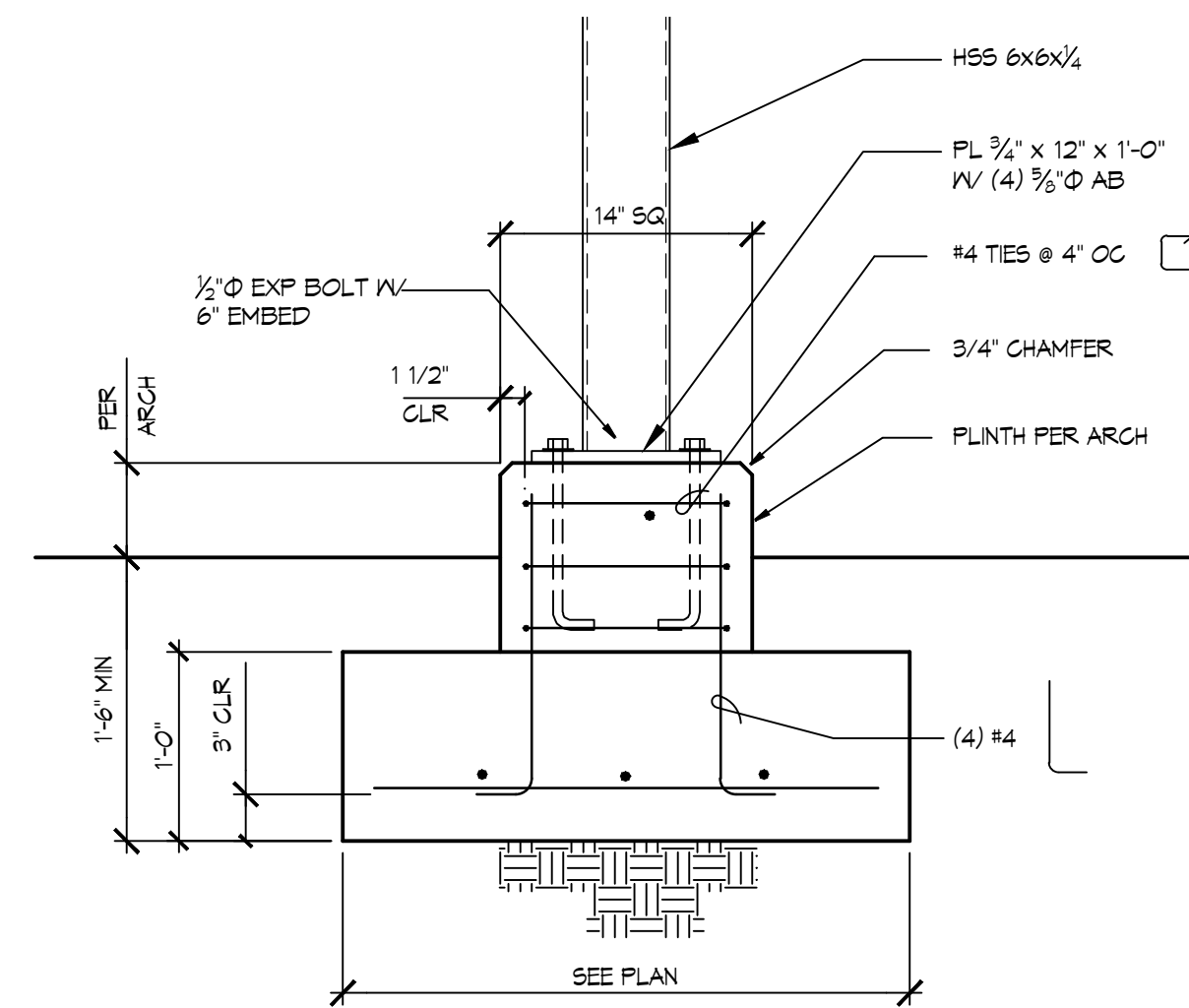
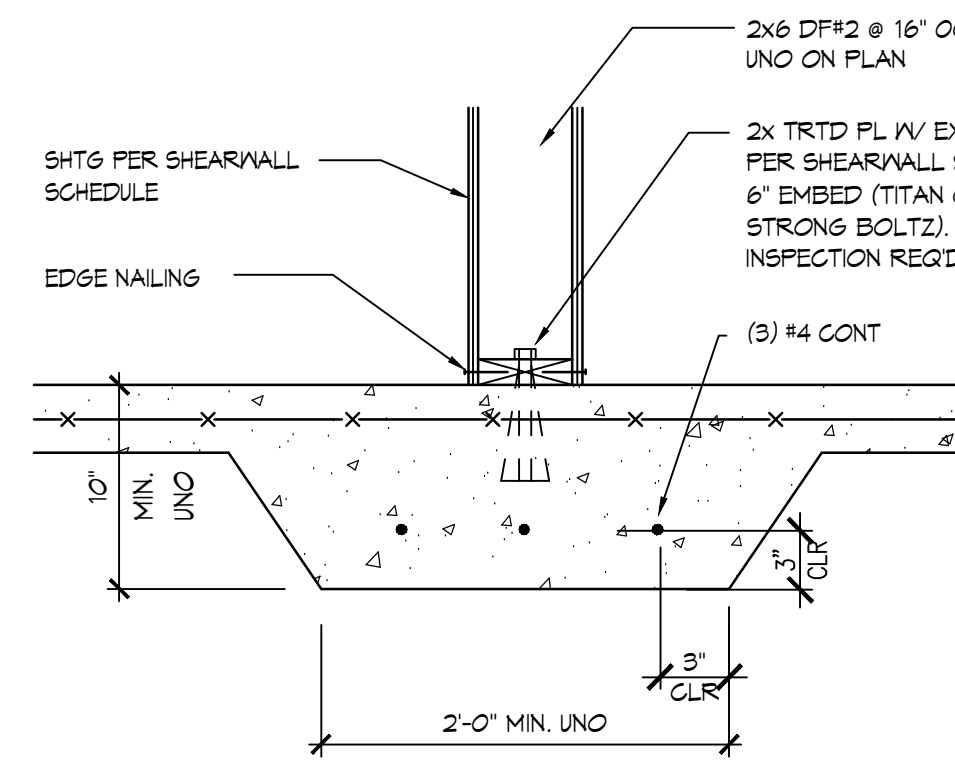
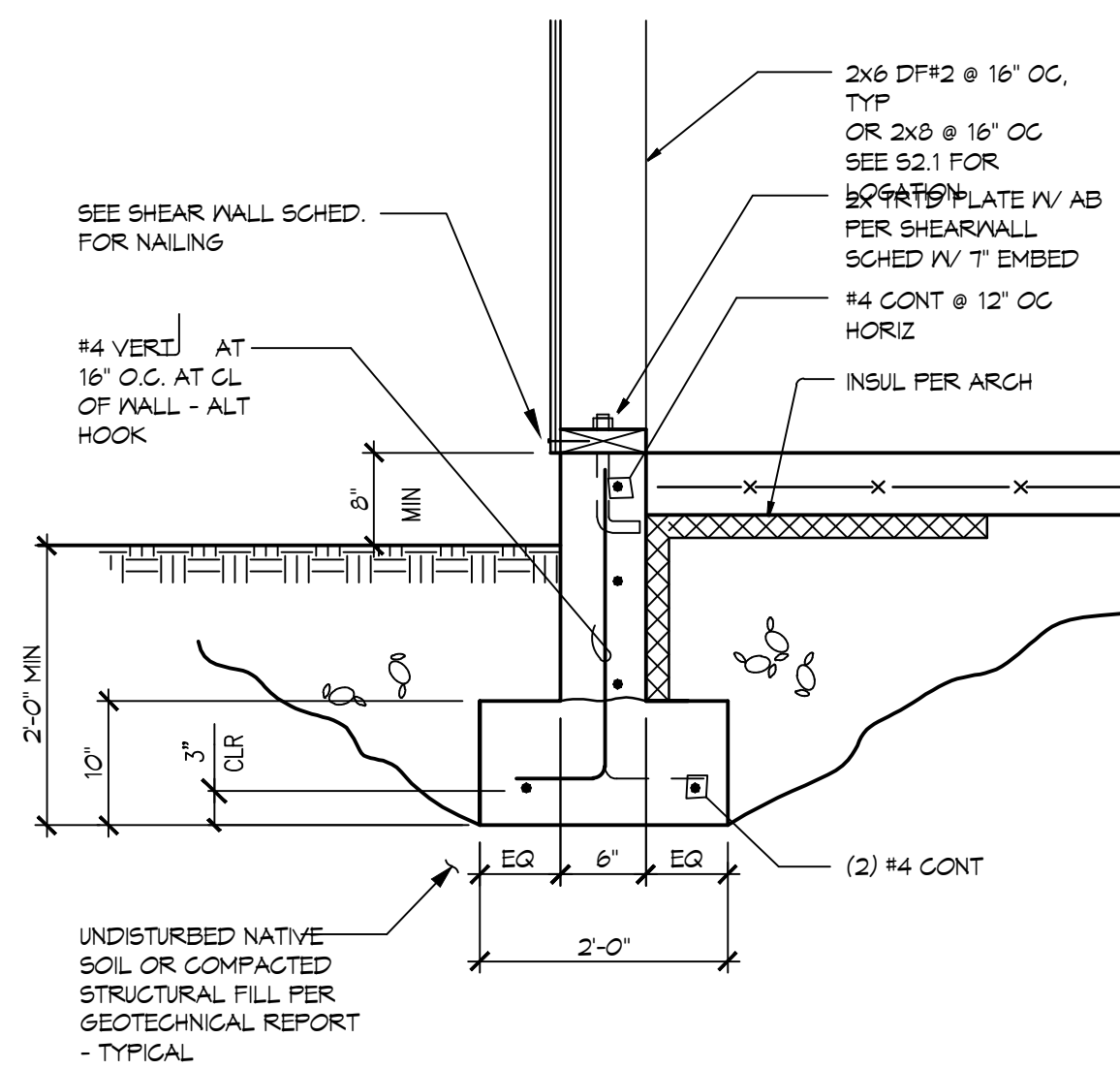
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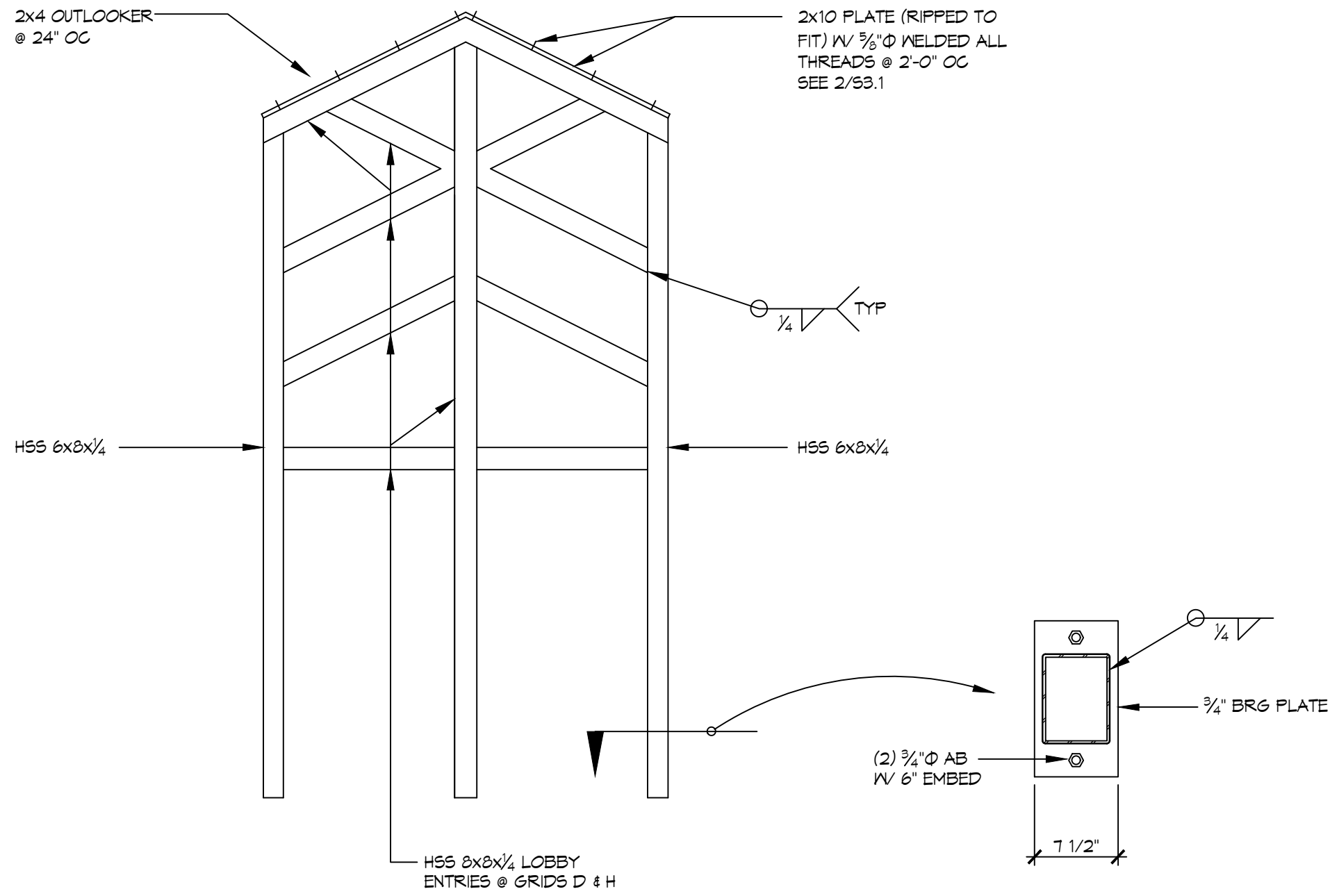
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STEP BY STEP - ELC

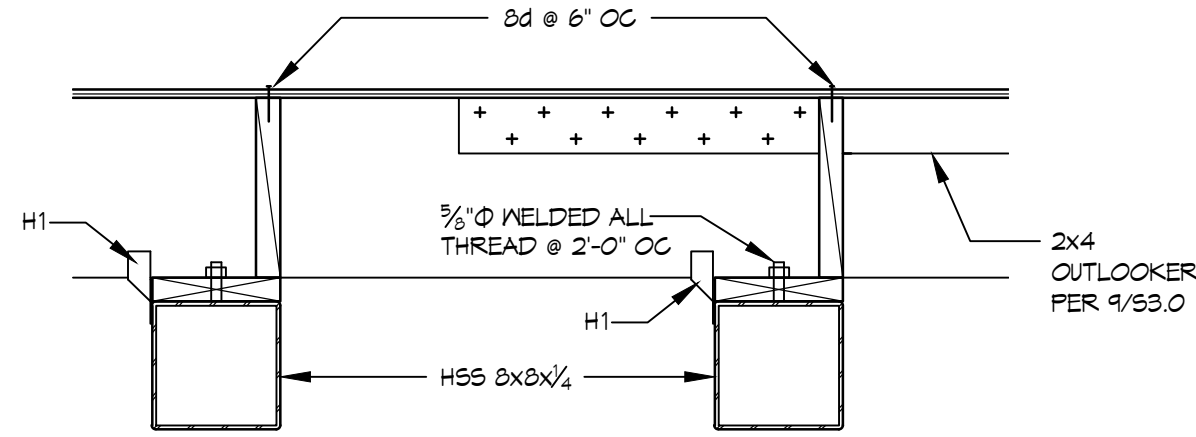
ROOF FRAMING PLAN

Designer:	CCF
Drafter:	PDS
Checker:	
Issue Date:	JULY 17, 2024
Revision:	SEPT 27, 2024
Project Ref:	
Client Ref:	
CAD Ref:	
SHEET NO.	REV.
S2.2	

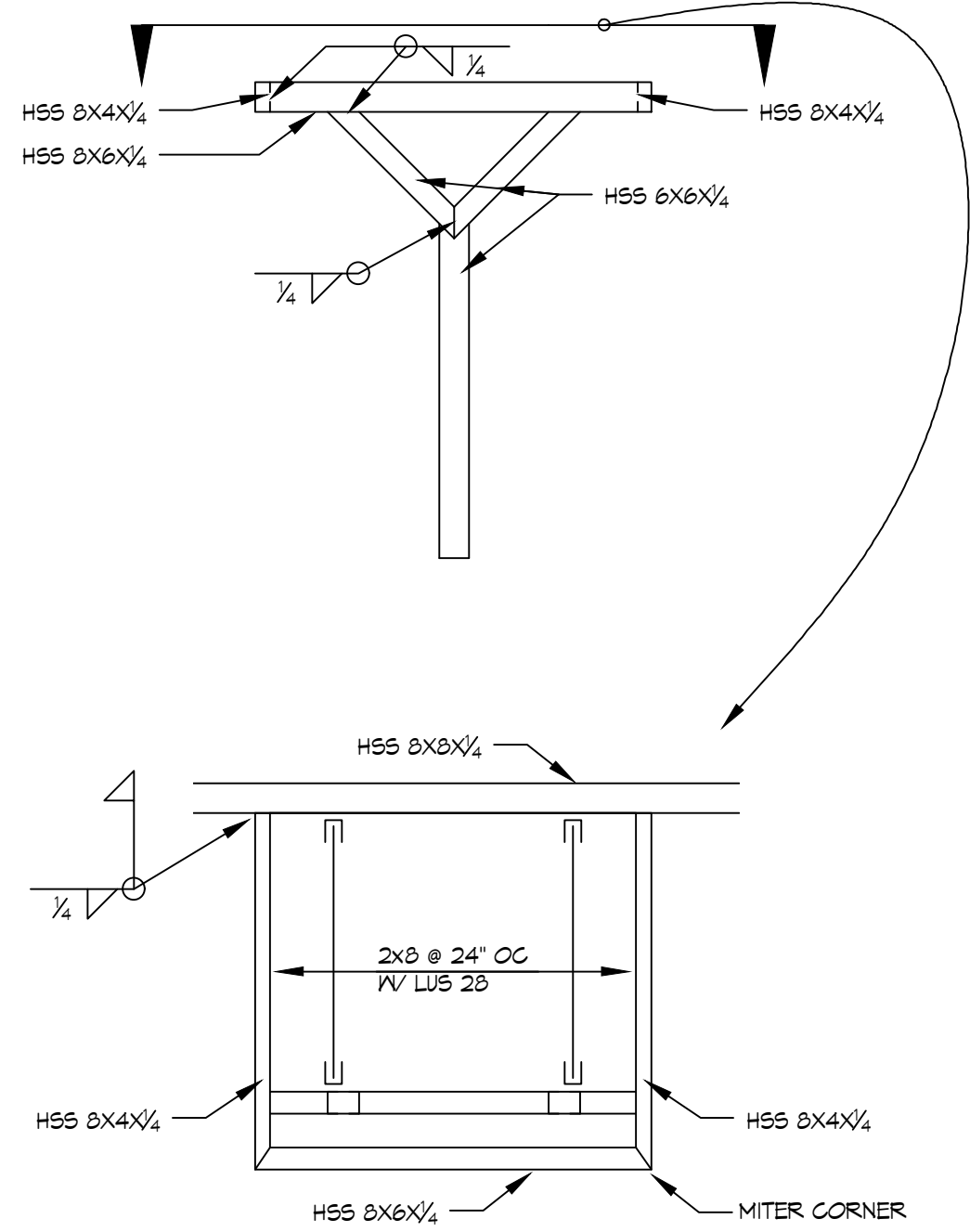




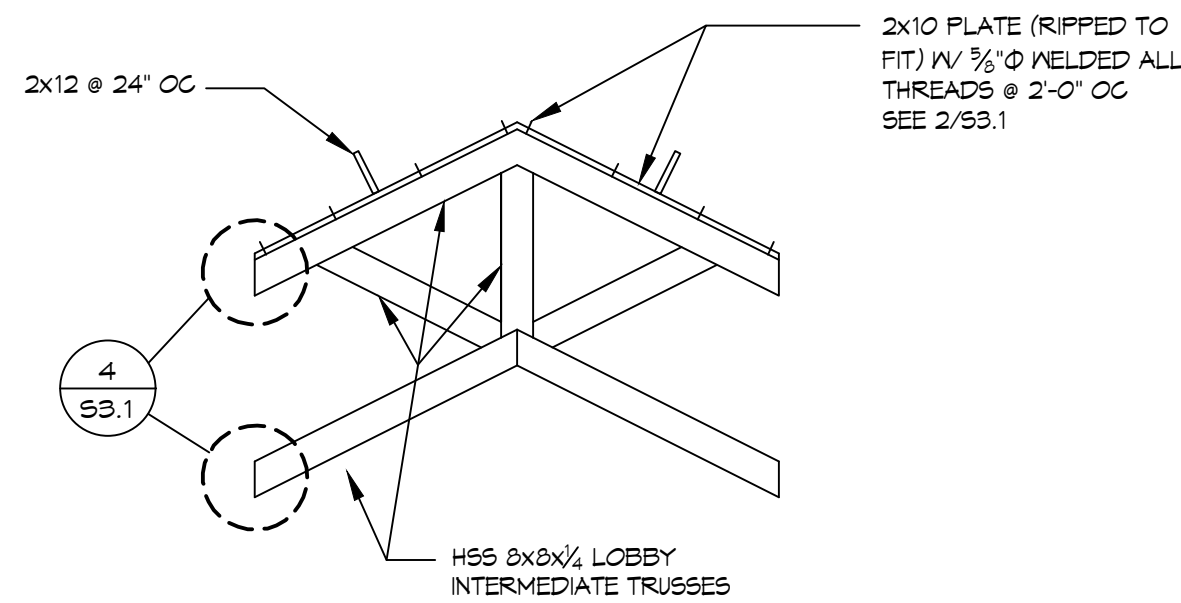
1 FRAME ELEVATION
SCALE: 1/4" = 1'-0"



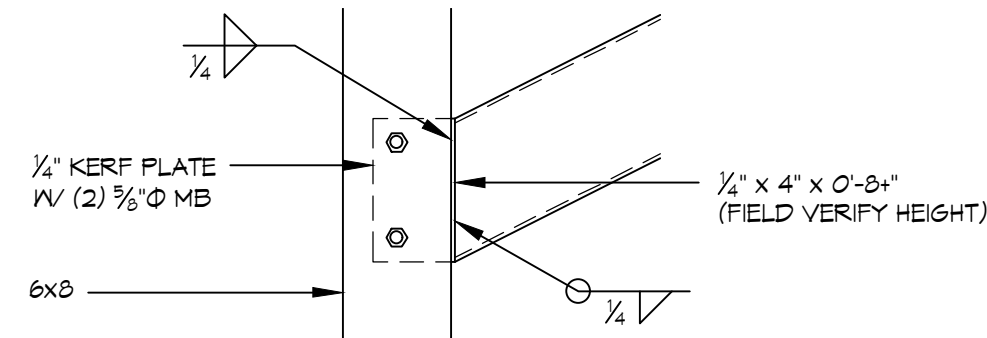
2 SECTION
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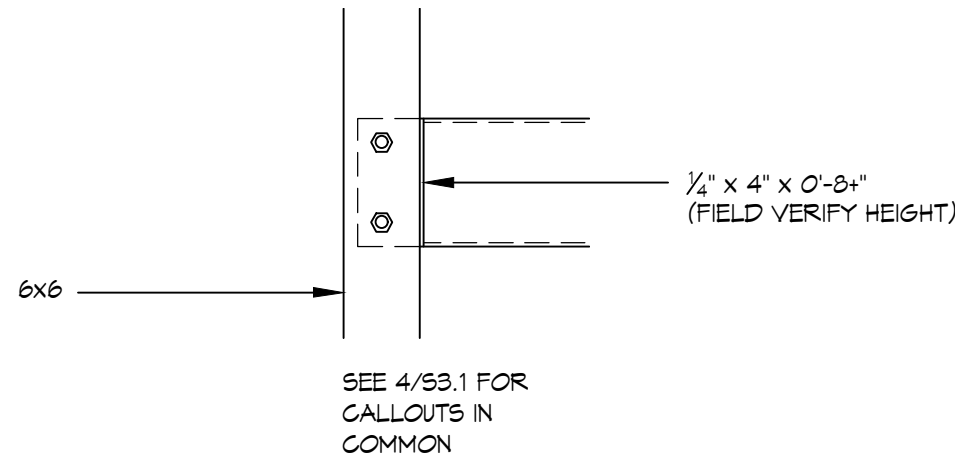
6 PLAN & ELEVATION
SCALE: 1" = 1'-0"



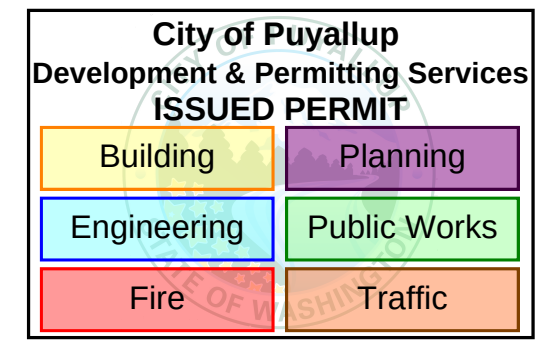
3 FRAME ELEVATION
SCALE: 1/4" = 1'-0"



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



5 DETAIL
SCALE: 1" = 1'-0"



Rev.					
Date					
By					

christian furboe pe

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DETAILS

Designer:	CCF
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Checker:	
Issue Date:	JUNE 21, 2024
Revision:	
Project Ref.:	
Client Ref.:	
CAD Ref.:	
SHEET NO.	REV.
S3.1	

GENERAL NOTES

3. ALL WORK PERFORMED SHALL BE DONE IN STRICT ACCORDANCE TO ALL APPLICABLE MECHANICAL, BUILDING, ENERGY, GAS, AND LOCAL CODES, WITH AMENDMENTS.
2. WHERE USED, THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".
3. COORDINATE MECHANICAL WORK WITH ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL AND LANDSCAPE WORK SHOWN ON OTHER CONTRACT DOCUMENTS. PROVIDE ADDITIONAL OFFSETS FOR COORDINATED INSTALLATION WHERE REQUIRED.
4. COORDINATE HVAC, PLUMBING, AND FIRE PROTECTION WORK PRIOR TO INSTALLATION. DUCTWORK AND EQUIPMENT ACCESS TAKES PRECEDENCE OVER ALL PIPING EXCEPT GRAVITY SYSTEMS FOR AVAILABLE SPACE.
5. CONTRACTOR IS RESPONSIBLE FOR CONFORMANCE WITH ALL PLANS AND SPECIFICATIONS. IF A DISCREPANCY EXISTS BETWEEN ANY PLAN AND/OR SPECIFICATION, THE MORE STRINGENT REQUIREMENT SHALL BE FOLLOWED. CONTRACTOR IS ENCOURAGED TO SUBMIT RFIs BEFORE BID TO CLARIFY PLAN AND SPECIFICATION INTENT.
6. COORDINATE EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS, COORDINATE AND PROVIDE DUCT AND PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.
7. CLEAN THE JOB SITE DAILY AND REMOVE FROM THE PREMISES ANY DIRT AND DEBRIS CAUSE BY THE PERFORMANCE OF THE WORK INCLUDED IN THIS CONTRACT. BEFORE SUBSTANTIAL COMPLETION, CLEAN EQUIPMENT, FIXTURES, EXPOSED DUCTS, PIPING AND SIMILAR ITEMS.
8. PROVIDE EQUIPMENT THAT FITS INTO THE SPACE ALLOTTED AND ALLOWS ADEQUATE ACCEPTABLE CLEARANCE FOR INSTALLATION, REPLACEMENT, SERVICING, AND MAINTENANCE. COORDINATE WITH OTHER TRADES TO ENSURE NO CONFLICT WITH REQUIRED CLEARANCES.
9. CONTRACTOR SHALL OBTAIN & PAY FOR ALL PERMITS AND CONSTRUCTION FEES. FURNISH FINAL CERTIFICATE TO OWNER SHOWING COMPLIANCE WITH CODE REQUIREMENTS.
10. REFER TO TYPICAL DETAILS PROVIDED IN THIS DRAWING SET FOR DUCTWORK, PIPING, AND EQUIPMENT INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR CONFORMANCE WITH DETAILS.
11. A SHORT DASH IN A SCHEDULE TABLE CELL INDICATES THAT THE COLUMN HEADING IS NOT USED OR NOT APPLICABLE TO THAT SCHEDULED ITEM.
12. PROVIDE COMMISSIONING FOR MECHANICAL SYSTEMS. COMMISSIONING AGENT SHALL PROVIDE A COMMISSIONING PLAN OUTLINING ORGANIZATION, SCHEDULE, NARRATIVE, RESPONSIBILITIES MATRIX, LIST OF EQUIPMENT TO BE TESTED, FUNCTIONS TO BE TESTED, CONDITIONS UNDER WHICH TESTS SHALL BE PERFORMED, AND MEASURABLE CRITERIA FOR PERFORMANCE. COMMISSIONING SHALL BE PER C408 OF THE 2021 WSEC.
13. ALL PIPING & DUCTWORK IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD LID CEILING. COORDINATE WITH ARCHITECTURAL DOCUMENTS FOR FURRING & CHASE LOCATIONS & SIZES.
14. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA 70 STANDARDS AND LOCAL REQUIREMENTS.
15. ALL FIELD WIRING SHALL REQUIRE AN ELECTRICAL PERMIT AND SHALL BE PERFORMED BY A LICENSED ELECTRICIAN.
16. COORDINATE ELECTRICAL REQUIREMENTS SHOWN ON PLANS AND SPECS WITH AVAILABLE VOLTAGES AND PANEL SPACE ON-SITE AS WELL AS WITH ELECTRICAL ENGINEER AND ELECTRICAL CONTRACTOR. IF DISCREPANCIES EXIST BETWEEN THESE PLANS AND AVAILABLE ON-SITE ELECTRICAL UTILITIES, DO NOT PURCHASE OR INSTALL EQUIPMENT BEFORE FIRST CONTACTING MEI AND RECEIVING INSTRUCTION.
17. LOCATE VALVES, DAMPERS, CONTROLS AND SIMILAR COMPONENTS SO THAT THEY ARE ACCESSIBLE. PROVIDE ACCESS DOORS FOR MECHANICAL EQUIPMENT INSTALLED BEHIND WALLS, ABOVE INACCESSIBLE CEILINGS AND BELOW FLOORS. COORDINATE ACCESS DOOR LOCATIONS WITH ARCHITECT/ENGINEER.
18. ACCESS PANELS SHALL BE 16 GA. FLUSH TYPE. ACCESS DOOR WITH CONCEALED HINGE AND SLOT SCREWDRIVER TYPE CAM LATCH. PROVIDE FACTORY PRIMED IN PAINTED SURFACE AREAS FOR FIELD PAINTING. PROVIDE STAINLESS STEEL FOR ALL OTHER AREAS. PROVIDE UL LISTED AND LABELED DOOR WHERE FIRE-RESISTANCE RATING IS INDICATED ON DRAWINGS. ACCESS DOOR SHALL BE SIZED SO THAT ADJACENT EQUIPMENT IS ACCESSIBLE. PROVIDE AJCOR, ELMCOR, MILCOR, OR APPROVED.
19. INSTALL TAG ON CEILING GRID FRAME TO INDICATE LOCATION AND TYPE OF EQUIPMENT THAT REQUIRES MAINTENANCE.

PIPING:

1. INSULATE PIPING PER WASHINGTON STATE ENERGY CODE SECTION C403.10.3.
2. ALL PRESSURES LISTED ARE GAGE PRESSURES UNLESS OTHERWISE NOTED.
3. PROVIDE COMPLETE CONDENSATE DRAINAGE SYSTEM FOR ALL INDOOR UNITS. FIELD ROUTE DRAINAGE PIPING FROM EQUIPMENT TO NEAREST DRAIN LOCATION (SUCH AS SERVICE SINK, FUNNEL DRAIN, ETC.). SLOPE NON-PRESSURIZED DRAIN PIPING TO DRAIN LOCATION. PIPING & FITTINGS SHALL BE PVC. USE COPPER FOR ALL PLENUM APPLICATIONS OR WHERE NONCOMBUSTIBLE PIPING IS REQUIRED. MINIMUM PIPE SIZE SHALL BE 3/4". INCREASE PIPE SIZE WHERE APPLICABLE PER IMC 307.2.2
4. VALVES SHALL BE INSTALLED SO THAT SYSTEM REMAINS IN SERVICE WHEN EQUIPMENT OR PIPING ON EQUIPMENT SIDE OF VALVE IS REMOVED.
5. VALVES (EXCEPT CONTROL VALVES) AND STRAINERS SHALL BE FULL SIZE OF PIPE BEFORE REDUCING SIZE TO MAKE CONNECTIONS TO EQUIPMENT AND CONTROLS UNLESS OTHERWISE NOTED.
6. THE PROPOSED ROUTING FOR THE REFRIGERATION PIPING BETWEEN THE INDOOR AND OUTDOOR UNITS IS INDICATED AS A SINGLE LINE ON THE PLANS. THAT SINGLE LINE REPRESENTS ALL THE PIPING RUNS REQUIRED FOR THE SYSTEM DESIGNED. SIZE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATION.

H/VAC/SHEET METAL:

1. THE FIRST FIGURE OF DUCT SIZE CALLOUTS INDICATES DIMENSION OF FACE SHOWN OR INDICATED. DUCT SIZES ARE NET INSIDE DIMENSIONS. PROVIDE ANY APPLICABLE DUCT LINING AND INSULATION PER THESE PLANS.
2. DUCT SIZE NOT SHOWN SHALL BE SIZED TO VELOCITIES NO GREATER THAN UP STREAM SECTIONS USING SIMILAR ASPECT RATIOS.
3. TOTAL STATIC PRESSURE NOTED IN SCHEDULES SHALL BE ASSUMED TO INCLUDE DUCT SYSTEM, TERMINAL UNITS, FILTERS, COILS, ETC.
4. ALL SUPPLY AIR FILTERS SHALL BE MERV-8 RATED. ALL RETURN/EXHAUST/OUTSIDE AIR FILTERS SHALL BE MERV-8 RATED.
5. AIR TERMINAL SIZES SHOWN ON PLANS ARE NECK SIZES. PROVIDE ADDITIONAL PANS, HARDWARE, ETC., REQUIRED TO INSTALL AIR TERMINAL IN CEILING SYSTEM.
6. AIR TERMINALS IN UNFINISHED SPACES OR OPEN CEILING AREAS SHALL BE INSTALLED AT[8] AFF UNLESS OTHERWISE NOTED ON THESE DRAWINGS.
7. DUCTWORK SHALL BE 2.0" PRESSURE CLASS UNLESS OTHERWISE NOTED ON THESE DRAWINGS.
8. CONSTRUCT DUCTWORK ACCORDING TO WASHINGTON STATE ENERGY CODE SECTION C403.10.2. ALL DUCT WORK SHALL BE PRIMED GALVANIZED SHEET STEEL, LOCK FORMING QUALITY, FABRICATED IN ACCORDANCE TO SMACNA STANDARDS.
9. PROVIDE TURNING VANES IN ALL MITERED RECTANGULAR DUCT ELBOWS & TEES.
10. PROVIDE MOTORIZED DAMPERS ON OUTDOOR AIR SUPPLY, AND EXHAUST OPENINGS. DAMPERS SHALL HAVE A MAXIMUM LEAKAGE RATE OF 4 CFM PER SQUARE FOOT AT 1" W.C.
11. ALL SUPPLY AND RETURN DUCTWORK SHALL BE INSULATED AND SEALED PER WASHINGTON STATE ENERGY CODE SECTION C403.10.1.
12. OUTSIDE AIR DUCTWORK SHALL BE INSULATED IN ACCORDANCE WITH C403.10.1.1.
13. VENTILATION AND EXHAUST AIR IS PROVIDED IN ACCORDANCE WITH C403.2.2.
14. PROVIDE EACH ZONE WITH THERMOSTATIC CONTROLS THAT PROVIDE A DEADBAND OF AT LEAST 5 DEGREES FAHRENHEIT IN WHICH HEATING OR COOLING ENERGY IS CAPABLE OF BEING SHUT OFF OR REDUCED TO A MINIMUM. THERMOSTAT SHALL BE CAPABLE OF THERMOSTATIC SETBACK, AUTOMATIC SETBACK AND SHUTDOWN, AND AUTOMATIC START CAPABILITIES PER WASHINGTON STATE ENERGY CODE SECTION C403.4.

15. PROVIDE TEMPORARY COVERS OVER OPEN ENDS OF EQUIPMENT AND DUCTWORK DURING CONSTRUCTION.
16. PROVIDE MANUAL VOLUME DAMPER FOR EACH DIFFUSER, REGISTER, AND GRILLE. OPPOSED BLADE DAMPERS LOCATED AT THE DIFFUSER, REGISTER, AND GRILLE SHALL NOT BE USED FOR SYSTEM BALANCE.
17. PROVIDE DUCT ACCESS DOORS AT DUCT SMOKE DETECTORS, BACKDRIFT DAMPERS, CONTROL CONTROL DAMPERS, FIRE DAMPERS, SMOKE DAMPERS, COMBINATION FIRE/SMOKE DAMPERS, DUCT MOUNTED COILS, DUCT AIRFLOW STATIONS AND LOUVER PLENUMS.
18. COORDINATE FINAL LOCATION OF EQUIPMENT WITH OWNER OR REPRESENTATIVE.

APPLICABLE CODES

AS ADOPTED BY THE CITY OF PUYALLUP, WA

INTERNATIONAL MECHANICAL CODE, IMC 2021
INTERNATIONAL BUILDING CODE, IBC 2021
WASHINGTON STATE ENERGY CODE, WSEC 2021
UNIFORM PLUMBING CODE, UPC 2021

AND ASSOCIATED WASHINGTON ADMINISTRATIVE CODE AMENDMENTS

DESIGN CONDITIONS

OUTDOOR CONDITIONS (PUYALLUP, WA)
COOLING: 86°F DB, (WSEC APPENDIX C)
HEATING: 19°F DB (WSEC APPENDIX C)

INDOOR CONDITIONS
COOLING: 75°F DB, 50% RH
HEATING: 70°F DB

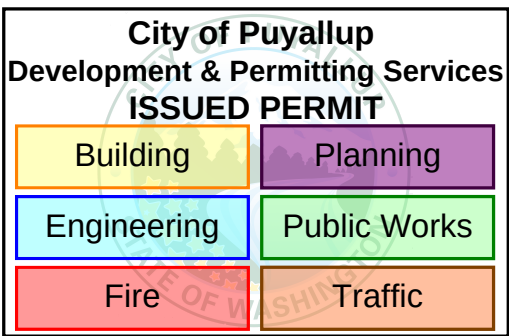
SCOPE OF WORK

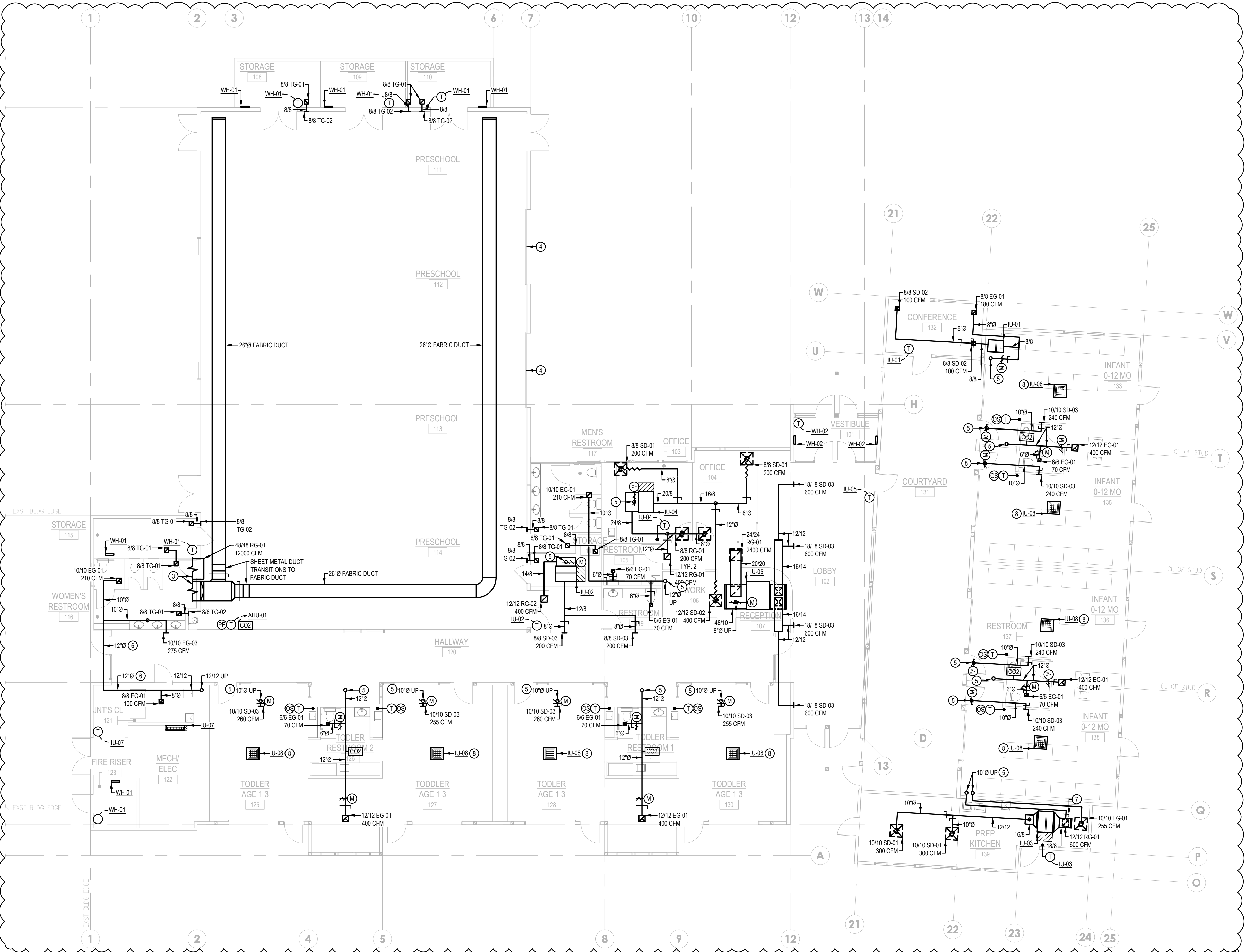
1. INSTALL TWO VRF SYSTEMS, AS SHOWN ON PLANS.
2. INSTALL TWO DOAS SYSTEMS, AS SHOWN ON PLANS. DOAS SYSTEM ARE PROVIDED WITH AUXILIARY ELECTRIC HEAT PER WSEC 403.1.4 EXEMPTION 16, SIZED AT A 55F DISCHARGE TEMPERATURE.
3. INSTALL PACKAGED UNIT SERVING PRESCHOOL WITH FABRIC SUPPLY DUCT. SPACE IS SERVED VIA NATURAL VENTILATION AND IS NOT PROVIDED WITH A DOAS AND HEAT RECOVERY.
4. INSTALL ELECTRIC RESISTANCE WALL HEATERS IN SEMI HEATED SPACES. FREEZE PROTECTION SYSTEMS WILL HAVE HEAT LOCKED OUT ABOVE 45F PER WSEC 403.1.4 EXEMPTION 15.
5. INSTALL RADIANT HEATERS IN VESTIBULES.

ABBREVIATIONS

E	EXISTING
AABC	AMERICAN AIR BALANCE COUNCIL
AFF	ABOVE FINISHED FLOOR
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
AG	AIR GAP
AGA	AMERICAN GAS ASSOCIATION
AHRI	AIR CONDITIONING, HEATING, & REFRIGERATION INSTITUTE
AMPI	AMERICAN MECHANICAL PIPING INSTITUTE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BAS	BUILDING AUTOMATION SYSTEM
BHP	BRAKE HORSEPOWER
CB	CATCH BASIN
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
COND	CONDENSATE
CONFIG	CONFIGURATION
CSA	CANADIAN STANDARDS ASSOCIATION
DB	DRY BULB
DC	DOUBLE CHECK
DDC	DIRECT DIGITAL CONTROLS
DIA	DIAMETER
DN	DOWN
DOAS	DEDICATED OUTSIDE AIR SYSTEM
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECM	ELECTRICALLY COMMUTATED MOTOR
EFF	EFFICIENCY
ESP	EXTERNAL STATIC PRESSURE
ETC	ET CETERA
EX. SP.	EXTERNAL STATIC PRESSURE
FLA	FULL LOAD AMPS
FM	FACTORY MANUAL
FPM	FEET PER MINUTE
FT	FEET
GA	GAUGE
HP	HORSEPOWER
HR	HOUR
IBC	INTERNATIONAL BUILDING CODE
IFGC	INTERNATIONAL FUEL GAS CODE
IMC	INTERNATIONAL MECHANICAL CODE
IN	INCH
IU	INDOOR UNIT
LAT	LATERAL
LB/LBS#	POUND/ POUNDS
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MCA	MAXIMUM CIRCUIT AMPACITY
MERV	MINIMUM EFFICIENCY REPORTING VALUE
MFG/MFR	MANUFACTURER
MIN	MINIMUM
MOP/ MOP	MAXIMUM OVER CURRENT PROTECTION
MSS	MANUFACTURER'S STANDARDIZING SOCIETY
NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
OC	ON CENTER
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OSA	OUTSIDE AIR
PH	PHASE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH, GAUGE
RA	RETURN AIR
RH	RELATIVE HUMIDITY
RP	REDUCED PRESSURE
RP/ M	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SF	SQUARE FEET
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SPEC	SPECIFICATION
STM	STEAM
THRD	THREADED
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UPC	UNIFORM PLUMBING CODE
V	VENT/ VOLT
VOLT	VOLTAGE
VRF	VARIABLE REFRIGERANT FLOW
VTR	VENT TO ROOF
VAV	VARIABLE AIR VOLUME
VERT	VERTICAL
W/	WITH
WIN	WINTER
WSEC	WASHINGTON STATE ENERGY CODE

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY DUCT, OSA DUCT UP		SQUARE DUCT
	SUPPLY DUCT, OSA DUCT DOWN		OVAl DUCT
	RETURN, RELIEF, TRANSFER UP		POINT OF CONNECTION
	RETURN, RELIEF, TRANSFER DOWN		LIMIT OF DEMOLITION
	EXHAUST AIR UP		ROUND 4-WAY CEILING DIFFUSERS
	EXHAUST AIR DOWN		SQUARE 4-WAY CEILING DIFFUSERS
	RECTANGULAR ELBOW WITH TURNING VANES		RETURN GRILLE
	ROUND/ RECTANGULAR ELBOW		EXHAUST GRILLE
	RECTANGULAR DUCT SQUARE ELBOW UP		SQUARE 3-WAY CEILING DIFFUSERS
	RECTANGULAR DUCT, RADIUS ELBOW UP		SQUARE 2-WAY CEILING DIFFUSERS
	RECTANGULAR DUCT, SQUARE ELBOW DOWN		SQUARE 1-WAY CEILING DIFFUSERS
	RECTANGULAR DUCT, RADIUS ELBOW DOWN		NATURAL GAS PIPING
	ROUND DUCT ELBOW UP		REFRIGERANT PIPING
	ROUND DUCT ELBOW DOWN		EXISTING PIPING
	EQUIPMENT ABBREVIATION AND NUMBER (TAG)		CROSSING LINES, NON CONNECTING
	AIR TERMINAL TYPE, SIZE, AND CFM		PIPE CONTINUATION
	DETAIL NUMBER		PUMP
	DRAWING NUMBER WHERE DRAWN		CAP
	COMPRESSED AIR		PIPE ANCHOR
	CONDENSATE		PIPE GUIDE
	GATE VALVE (GV)		FLEXIBLE CONNECTION (PIPE)
	GLOBE VALVE		REDUCER
	BUTTERFLY VALVE		SUCTION DIFFUSER
	PRESSURE REDUCING VALVE (PRV)		CURRENT SENSOR
	CHECK VALVE (CV)		CURRENT RELAY
	TEMP./PRESS. RELIEF VALVE (T&PRV)		SMOKE DETECTOR
	BALL VALVE		SPACE PRESSURE SENSOR
	BALANCING COCK (BC)		SWITCH
	2-WAY CONTROL VALVE		PRESSURE ELEMENT
	3-WAY CONTROL VALVE		DIFFERENTIAL PRESSURE ELEMENT
	GAS COCK		HUMIDISTAT (H'STAT)
	STRAINER WITH BLOWDOWN VALVE		HUMIDITY ELEMENT
	UNION		FIRE ALARM
	VACUUM BREAKER		FLOW SWITCH
	MANUAL AIR VENT		MOTOR/ ACTUATOR
	DRAIN VALVE		OCCUPANCY SENSOR
	WALL HYDRANT		THERMOSTAT (T'STAT)
	FLOAT AND THERMOSTATIC STEAM TRAP		TEMPERATURE INDICATOR
	FLEXIBLE DUCT		TEMPERATURE ELEMENT
	VOLUME DAMPER (VD)		FLOW INDICATOR
	MOTORIZED DAMPER		FLOW ELEMENT
	BACKDRAFT DAMPER		CONDUCTIVITY SENSOR
	CEILING RADIATION DAMPER		ELECTRONICALLY COMMUTATED MOTOR
	FIRE DAMPER		VARIABLE FREQUENCY DRIVE
	SMOKE DAMPER		CARBON DIOXIDE SENSOR
	COMBINATION FIRE/SMOKE DAMPER		EMERGENCY POWER OFF SWITCH
	ROUND DUCT		NITROGEN OXIDE SENSOR
	CONDENSER SUPPLY		CARBON MONOXIDE SENSOR
	CONDENSER RETURN		NITROGEN DIOXIDE SENSOR
	CHILLED WATER SUPPLY		
	CHILLED WATER RETURN		
	HOT WATER SUPPLY		
	HOT WATER RETURN		





GENERAL NOTES

- DUCTWORK IS SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE ADDITIONAL FITTINGS AND OFFSETS AS REQUIRED TO INSTALL A COMPLETE AND FUNCTIONING SYSTEM.

PLAN NOTES

- BALANCE SEGMENT TO 55 CFM.
- ADD BALANCE DAMPER IN VERTICAL DUCT SEGMENT. BALANCE SEGMENT TO 260 CFM
- CONTINUED ON ROOF PLAN.
- DOOR IS PART OF NATURAL VENTILATION STRATEGY FOR GYM/PRESCHOOL ROOM.
- DUCT UP TO 1\"/>

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MIDDLEBROOK
ENGINEERING, LLC

6216 174TH AVE SW
LONGBRANCH, WA 98351
253.765.8292

BRIAN SCOTT MIDDLEBROOK
STATE OF WASHINGTON
52770
REGISTERED PROFESSIONAL ENGINEER
9/18/2024

MECHANICAL FLOOR PLAN

PROJECT
STEP BY STEP ELC
3303 8TH AVE SE
PUYALLUP, WA 98372

REVISIONS

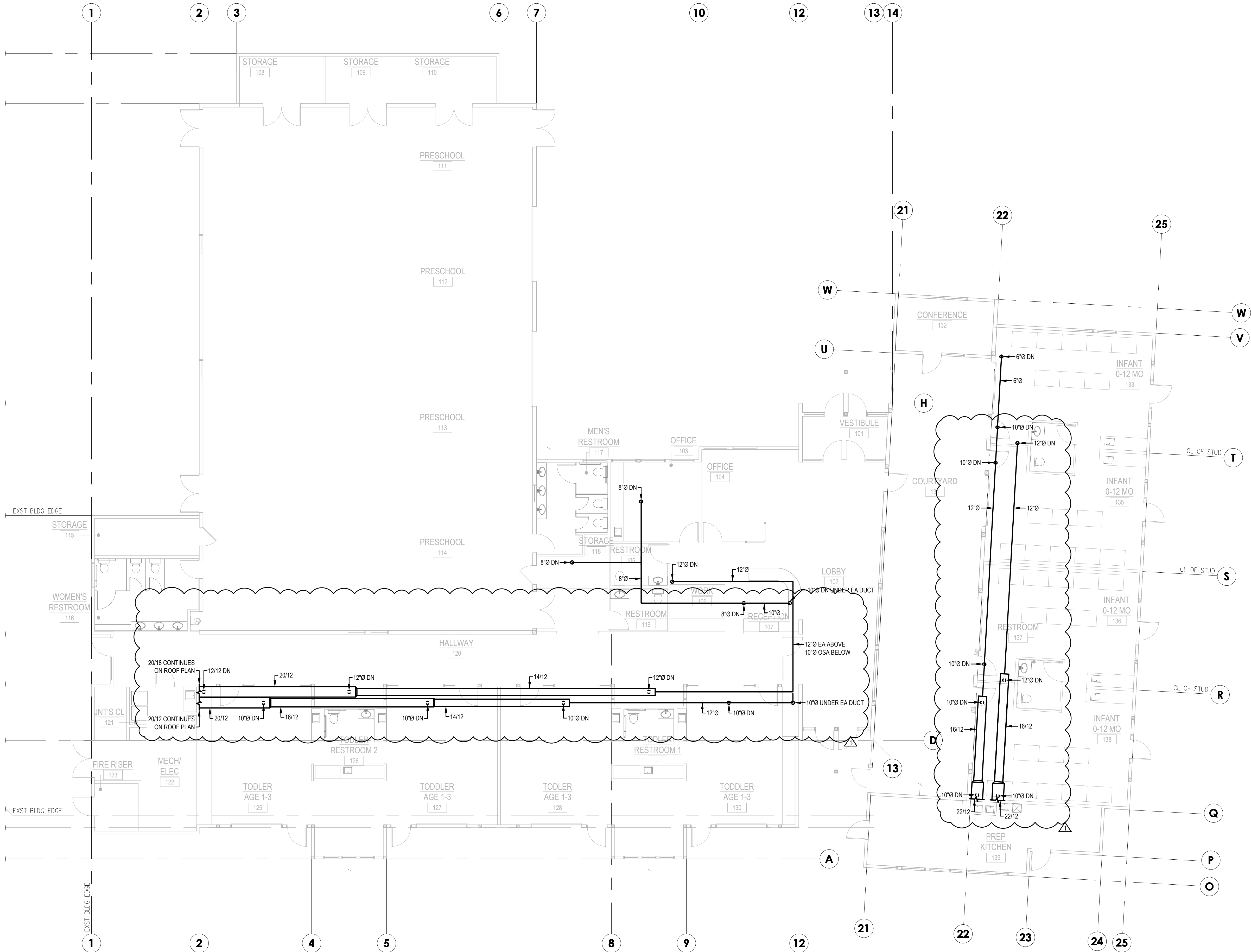
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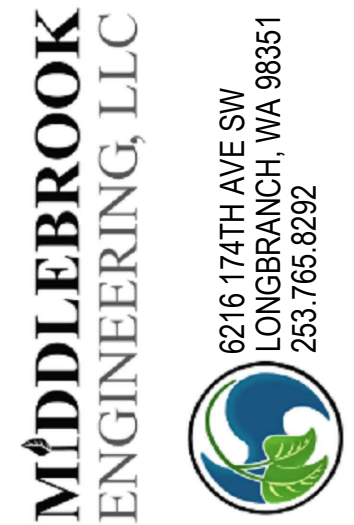
SHEET

MH101

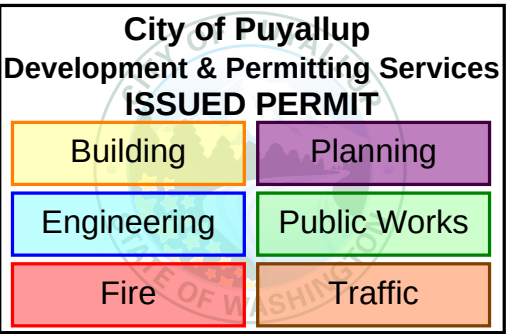


GENERAL NOTES

- DUCTWORK IS SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE ADDITIONAL FITTINGS AND OFFSETS AS REQUIRED TO INSTALL A COMPLETE AND FUNCTIONING SYSTEM.



SHEET TITLE
MECHANICAL FLOOR PLAN
2



PROJECT
STEP BY STEP ELC
3303 8TH AVE SE
PUYALLUP, WA 98372

REVISIONS

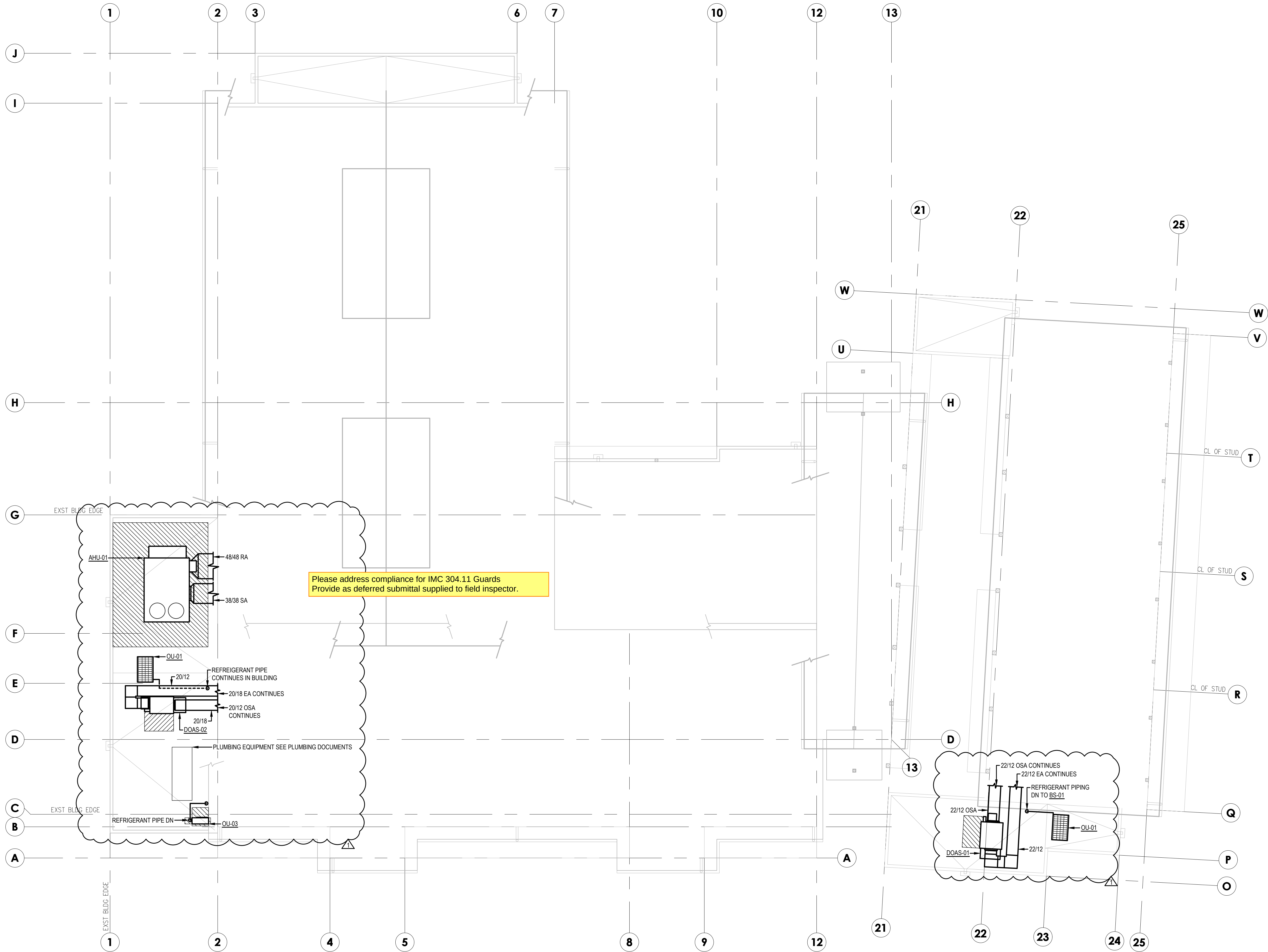
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MH102



GENERAL NOTES

1. DUCTWORK IS SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE ADDITIONAL FITTINGS AND OFFSETS AS REQUIRED TO INSTALL A COMPLETE AND FUNCTIONING SYSTEM.

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ENGINEERING, LLC
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LONGBRANCH, WA 98351
253.765.8292

9/18/2024

SHEET TITLE

MECHANICAL ROOF PLAN

PROJECT

STEP BY STEP ELC
3303 8TH AVE SE
PUYALLUP, WA 98372

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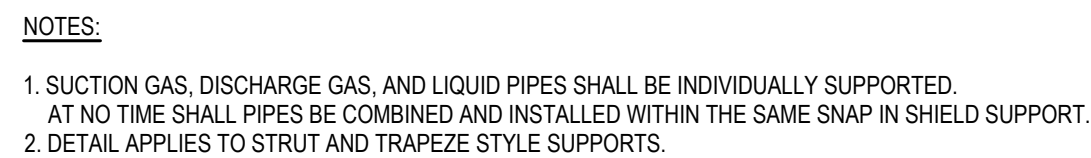
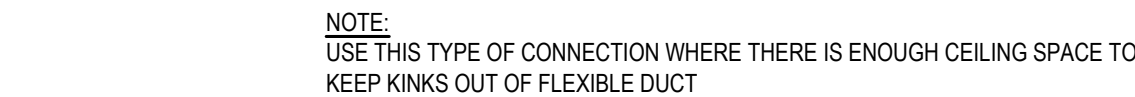
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SHEET

MH104



4 PIPE HANGER DETAIL

SCALE: NTS



DETAILS II

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3303 8TH AVE SE
PUYALLUP, WA 98372

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EET

MH502

PACKAGED ROOFTOP AIR HANDLING UNIT SCHEDULE																								
UNIT NO	MFR.	MODEL	LOCATION	TOTAL CFM	SUPPLY FAN DATA				HEATING			COOLING SECTION				WEIGHT	NOISE DB	FILTERS	ELECTRICAL				DISCONNECT FURN. BY	NOTES
					H P	BHP	ESP	RPM	INPUT (MBH)	OUTPUT (MBH)	EER	NOMINAL TONS	TOTAL (MBH)	SENSIBLE (MBH)	SEER/IEER (EER)				MCA	MOP	V	PH		
AHU-01	TRANE	WHJ300A3SON	ROOF	10,000	4.2	6.28	1.0	1725	-	122.4	10.4	25	258.79	228.92	16.1 (10.4)	2690	87	MERV 13	214	225	208	3	EC	1,2,3,4
NOTES: 1. PROVIDE WITH MANUFACTURER'S RECOMMENDED ROOF CURB SLOPED TO MATCH ROOF PITCH. 2. PROVIDE WITH CLASS 1 MOTORIZED SHUT OFF DAMPER. 3. PROVIDE DEMAND CONTROL VENTILATION. MODULATE OSA TO MAINTAIN AVERAGE CO2 BELOW 800 PPM. 4. PROVIDE WITH ECONOMIZER. SET MINIMUM OSA TO 0 CFM.																								

DEDICATED OUTSIDE AIR SYSTEM SCHEDULE																											
UNIT NO	MFR	MODEL	LOCATION	CONFIG	AREA SERVED	SUPPLY FAN DATA					EXHAUST FAN DATA					HEAT EXCHANGER DATA				FILTER	WEIGHT LBS	ELECTRICAL				DISCON FURN BY	NOTES
						CFM	HP	BHP	ESP	RPM	CFM	HP	BHP	ESP	RPM	WIN EAT	WIN EFF	SUM EAT	SUM EFF			MCA	MOP	V	PH		
DOAS-01	RENEWAIRE	HE2XJRTH	ROOF	CROSSFLOW	SEE PLANS	1465	1.5	0.99	0.31	1370	1315	1.5	0.85	0.38	1320	25.2	71	85.3	67.2	MERV 8	689	18.5	25	208	1	EC	1, 2, 3
DOAS-02	RENEWAIRE	HE1.5XJRTH	ROOF	CROSSFLOW	SEE PLANS	1180	-	-	0.47	1824	1060	-	-	0.35	1762	25.2	69	85.3	65	MERV 8	548	7.7	15	208	1	EC	1, 2, 3
NOTES 1. PROVIDE CONTROLS PER PLANS AND IMC 2018 WASHINGTON AMMENDMENTS. 2. UNIT USES LESS THAN 1 W/CFM. 3. PROVIDE WITH DIRECT DRIVE EC MOTOR OPTION.																											

AIR TERMINAL SCHEDULE					
UNIT NO	MFR	MODEL	MOUNTING TYPE	STYLE	NOTES
SD-01	TITUS	MCD	T-BAR	MODULAR CORE	1, 2
SD-02	TITUS	MCD	SURFACE	MODULAR CORE	1, 2
SD-03	TITUS	300RS	SIDEWALL	LOUVER FACE	1, 2
RG-01	TITUS	50F	T-BAR	EGGCRATE	1,2
RG-02	TITUS	50F	SURFACE	EGGCRATE	1, 2
TG-01	TITUS	50F	SURFACE	EGGCRATE	1, 2
TG-02	TITUS	50F	SIDEWALL	EGGCRATE	1, 2
EG-01	TITUS	50F	SURFACE	EGGCRATE	1, 2
EG-02	TITUS	50F	T-BAR	EGGCRATE	1, 2
EG-03	TITUS	50F	SIDEWALL	EGGCRATE	1, 2
NOTES: 1. PROVIDE AIR BALANCING DEVICE AT EACH AIR TERMINAL. 2. COORDINATE FINISH WITH ARCHITECT.					

VRF INDOOR SPLIT SYSTEM UNIT SCHEDULE																	
UNIT NO	MFR	MODEL	TYPE	SYSTEM SERVED	AREA SERVED	AIRFLOW CFM	ESP IN. W.C.	COOLING (MBH)		HEATING (MBH) TOTAL	WEIGHT	ELECTRICAL				DISCON FURN BY	NOTES
								TOTAL	SENSIBLE			MCA	MOP	V	PH		
IU-01	DAIKIN	FXSQ05TAVJU	DUCTED	SEE PLANS	SEE PLANS	200	0.6	5.8	4.7	6.5	55	0.8	15.0	208	1	EC	1, 2, 3, 4, 5, 6
IU-02	DAIKIN	FXSQ12TAVJU	DUCTED	SEE PLANS	SEE PLANS	400	0.6	12.0	9.7	13.5	55	0.8	15.0	208	1	EC	1, 2, 3, 4, 5, 6
IU-03	DAIKIN	FXSQ18TAVJU	DUCTED	SEE PLANS	SEE PLANS	600	0.6	18.0	13.6	20.0	77	1.6	15.0	208	1	EC	1, 2, 3, 4, 5, 6
IU-04	DAIKIN	FXSQ24TBVJU	DUCTED	SEE PLANS	SEE PLANS	800	0.6	24.0	17.1	27.0	77	1.8	15.0	208	1	EC	1, 2, 3, 4, 5, 6
IU-05	DAIKIN	FXMQ72MVJU	DUCTED	SEE PLANS	SEE PLANS	2400	1.1	72.0	57.0	81.0	302	9.5	15.0	208	1	EC	1, 2, 3, 4, 5, 6
IU-06	DAIKIN	FXZQ05TAVJU	CEILING CASSETTE	SEE PLANS	SEE PLANS	-	-	5.8	4.7	6.5	55	0.8	15.0	208	1	EC	1, 2, 3, 4, 5
IU-07	DAIKIN	FXZQ12TBVJU	CEILING CASSETTE	SEE PLANS	SEE PLANS	-	-	12.0	7.8	13.5	36.4	0.4	15.0	208	1	EC	1, 2, 3, 4, 5
IU-08	DAIKIN	FXZQ18TBVJU	CEILING CASSETTE	SEE PLANS	SEE PLANS	-	-	18.0	13.0	20.0	41.9	0.6	15.0	208	1	EC	1, 2, 3, 4, 5
NOTES 1. PROVIDE WITH CONDENSATE DRAIN PAN AND CONDENSATE PUMP OPTION. 2. PROVIDE WITH ALL APPURTUNANCES NECESSARY FOR A COMPLETE INSTALLATION. 3. SEE CORRESPONDING OUTDOOR UNIT SCHEDULE FOR CAPACITY AND EFFICIENCY DATA. 4. OSA AIR PROVIDED BY DEDICATED OUTDOOR AIR UNIT PER WSEC C403.3.5.3. 5. PROVIDE WITH OEM CONDENSATE PUMP ACCESSORY AND 120V POWER TRANSFORMER. 6. AIRFLOW IN DESIGN BASED ON 400 CFM/ TON																	

BRANCH SELECTOR SCHEDULE									
UNIT NO	MFG	MODEL	WEIGHT LBS	ELECTRICAL				DISCON FURN BY	NOTES
				MCA	MOP	V	PH		
BS-01	DAIKIN	BSF6Q54TVJ	73	0.6	15	208	1	EC	1
BS-02	DAIKIN	BSF8Q54TVJ	73	0.8	15	208	1	EC	1
NOTES: 1. PROVIDE WITH BALL VALVES ON EACH PORT.									

FAN SCHEDULE																	
UNIT NO	MFR	MODEL	CONFIGURATION	AREA SERVED	PERFORMANCE			SPEED CONTROL	CONTROLLED BY OR INTERLOCKED WITH	WEIGHT LBS	ELECTRICAL					DISCONNECT FURN. BY	NOTES
					CFM	EX. S.P.	RPM				HP	BHP	WATT	VOLTS	PH		
EF-01	GREENHECK	SP-LP0511-1	CEILING	RESTROOM	70	0.5	773	ECM	SWITCH	16	-	-	16	120	1	EC	1,2
GENERAL NOTES: 1. PROVIDE ALL FANS WITH 70% OR GREATER EFFICIENCY MOTORS OR ELECTRONICALLY COMMUTATED MOTORS AS REQUIRED BY 2021 WSEC SECTION C405.8 FOR FRACTIONAL HORSEPOWER FAN MOTORS THAT ARE 1/2 HP AND LARGER. 2. EQUIPMENT MAY BE SUBSTITUTED UPON ENGINEER'S APPROVAL FOR EQUAL OR OTHER MFG/MODEL. REFER TO EQUIPMENT SCHEDULES FOR FINAL SELECTIONS. NOTES: 1. PROVIDE WITH ROUND OUTLET, BACKDRAFT DAMPER, GRILL AND ASSOCIATED MOUNTING KIT. 2. PROVIDE WITH INTERNAL FAN SPEED SWITCH.																	

OUTDOOR UNIT SCHEDULE																
UNIT NO	MFR	MODEL	LOCATION	COOLING (MBH)			HEATING (MBH)		WEIGHT (LBS)	NOISE (DBA)	ELECTRICAL				DISCON FURN BY	NOTES
				TOTAL	SENSIBLE	SEER (EER)	TOTAL	COP (HPSF)			MCA	MOP	V	PH		
OU-03	DAIKIN	RXL24UMVJUA	ROOF	21.2	16.74	20.0 (12.5)	24	1.8 (10.3)	130	55	18.9	-	208	1	EC	1,2,3,4,5,6
NOTES 1. COOLING CAPACITY MBH AT 95 D.B. OUTDOOR AND 77 D.B./67 W.B. INDOOR. 2. HEATING CAPACITY AND EFFICIENCY AT 47 D.B. OUTDOOR AND 70 D.B. INDOOR. 3. PROVIDE ADDITIONAL REFRIGERANT CHARGE AS REQUIRED TO FULLY CHARGE SYSTEM. 4. PROVIDE WITH ALL APPURTUNANCES NECESSARY FOR A COMPLETE INSTALLATION. 5. PROVIDE WITH R410-A REFRIGERANT. 6. PROVIDE ALL UNITS LOCATED OUTDOORS WITH LOCKING REFRIGERANT ACCESS PORT PER IMC 1101.10																

City of Puyallup
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MIDDLEBROOK
ENGINEERING, LLC

6216 174TH AVE SW
LONGBRANCH, WA 98051
253.765.8292

BRIAN SCOTT MIDDLEBROOK
STATE OF WASHINGTON
52770
REGISTERED PROFESSIONAL ENGINEER

9/18/2024

SCHEDULES

SHEET/TITLE

PROJECT
STEP BY STEP ELC
3303 8TH AVE SE
PUYALLUP, WA 98372

REVISIONS

NO	DESCRIPTION	DATE
REV 1		9/18/2024

DRAWN BY: RPG

CHECKED BY: BSM

PROJECT MANAGER: RC

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SHEET

MH601

RADIANT CEILING PANEL											
UNIT NO	MFR	MODEL	AREA SERVED	WEIGHT	ELECTRICAL					DISCON FURN BY	NOTES
					WATTS	MCA	MOP	V	PH		
RCP-01	INDEECO	AS2424-250-120	VESTIBULE 101	15	250	-	-	120	1	EC	1,2
NOTES											
1. PROVIDE WITH FACTORY REMOTE, LINE VOLTAGE THERMOSTAT. INDEECO #: R-101											
2. PROVIDE FIELD-INSTALLED SURFACE MOUNTING FRAME. INDEECO #: SF-24.											

INDOOR UNIT SCHEDULE														
UNIT NO	MFR	MODEL	TYPE	AREA SERVED	COOLING (MBH)		HEATING (MBH) TOTAL	WEIGHT	ELECTRICAL				DISCON FURN BY	NOTES
					TOTAL	SENSIBLE			MCA	MOP	V	PH		
IU-07	DAIKIN	FTX24UVJU	WALL MOUNTED	MECH/IT	21.2	16.74	24	33	18.9	-	208	1	EC	1,2,3,4
NOTES														
1. PROVIDE WITH CONDENSATE DRAIN PAN AND CONDENSATE PUMP OPTION.														
2. PROVIDE WITH ALL APPURTUNANCES NECESSARY FOR A COMPLETE INSTALLATION.														
3. SYSTEM INCLUDES A SINGLE POINT POWER CONNECTION; INDOOR UNIT WIRED FROM OUTDOOR UNIT.														
4. SEE CORRESPONDING OUTDOOR UNIT SCHEDULE FOR EFFICIENCY DATA.														

ELECTRIC HEATER SCHEDULE											
UNIT NO	MFR	MODEL	AREA SERVED	WEIGHT	ELECTRICAL					DISCON FURN BY	NOTES
					WATTS	MCA	MOP	V	PH		
WH-01	INDEECO	WRI	SEE PLANS	9	500	-	-	208	1	EC	1,2,3
WH-02	INDEECO	WRI	PER PLANS	9	1250	-	-	120	1	EC	1,2,3
NOTES											
1. PROVIDE WITH REMOTE, SINGLE POLE THERMOSTAT.											
2. MOUNT HEATER AT 12" AFF.											
3. PROVIDE WITH RECESSED INSTALLATION KIT.											

VRF OUTDOOR UNIT SCHEDULE														
UNIT NO	MFR	MODEL	LOCATION	COOLING (MBH)		HEATING (MBH)		WEIGHT (LBS)	ELECTRICAL MODULES				DISCON FURN BY	NOTES
				TOTAL	IEER (EER)	TOTAL	COP (HPSPF)		MCA	MOP	V	PH		
OU-01	DAIKIN	REYQ168AATJA	ROOFTOP	160.0	21.4 (11.1)	180	3.2	787	54.9	60	208	3	EC	1, 2, 3, 4, 5, 6
OU-02	DAIKIN	REYQ96AATJB	ROOFTOP	92.0	19.3 (11.9)	108	3.6	710	34.1	35	208	3	EC	1, 2, 3, 4, 5, 6
NOTES														
1. COOLING CAPACITY MBH AT 95 D.B. OUTDOOR AND 80 D.B./67 W.B. INDOOR.														
2. HEATING CAPACITY AND EFFICIENCY AT 47 D.B./43 W.B. OUTDOOR AND 70 D.B. INDOOR.														
3. PROVIDE ADDITIONAL REFRIGERANT CHARGE AS REQUIRED TO FULLY CHARGE SYSTEM.														
4. PROVIDE WITH ALL APPUTUNANCES NECESSARY FOR A COMPLETE INSTALLATION.														
5. PROVIDE WITH R410-A REFRIGERANT.														
6. PROVIDE ALL UNITS LOCATED OUTDOORS WITH LOCKING REFRIGERANT ACCESS PORT PER IMC 1101.10														

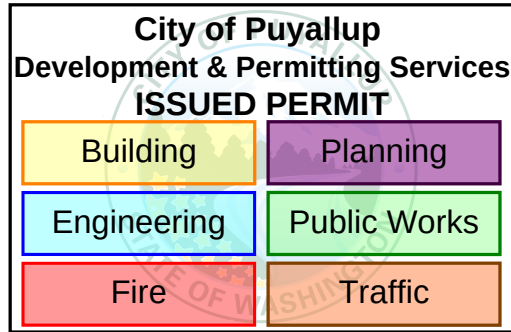
PIPE INSULATION SCHEDULE							
FLUID OPERATING AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL OR TUBE SIZE (inches)				
	BTU · in./h · ft ² · °F)	TEMPERATURE, °F	< 1	1 to 1-1/2	1-1/2 to < 4	4 to < 8	≥8
> 350	0.32 - 0.34	250	4.5	5.0	5.0	5.0	5.0
251 - 350	0.29 - 0.32	200	3.0	4.0	4.5	4.5	4.5
201 - 250	0.27 - 0.30	150	2.5	2.5	2.5	3.0	3.0
141 - 200	0.25 - 0.29	125	1.5	1.5	2.0	2.0	2.0
105 - 140	0.21 - 0.28	100	1	1.0	1.5	1.5	1.5
40 - 60	0.21 - 0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20 - 0.26	75	0.5	1.0	1.0	1.0	1.5

SUPPLY, RETURN, EXHAUST, AND RELIEF AIR DUCTWORK INSULATION SCHEDULE				
DUCT SYSTEM	DUCT LOCATION AND USE	CLIMATE ZONE	MINIMUM INSTALLED DUCT INSULATION R-VALUE	NOTES
SUPPLY AIR OR RETURN AIR	OUTSIDE THE BUILDING (OUTDOORS AND EXPOSED TO WEATHER)*	4C	R-8	SEE SECTION C403.10.1.2 FOR DETAILS
SUPPLY AIR OR RETURN AIR	UNCONDITIONED SPACE (ENCLOSED BUT NOT IN THE BUILDING CONDITIONED ENVELOPE)	4C AND 5B	R-5	SEE SECTION C403.10.1.2 FOR DETAILS
SUPPLY AIR OR RETURN AIR	UNCONDITIONED SPACE WHERE THE DUCT CONVEYS AIR THAT IS WITHIN 15°F OF THE AIR TEMPERATURE OF THE SURROUNDING UNCONDITIONAL SPACE.	4C AND 5B	R-3.3	SEE IMC SECTION 603.12 FOR ADDITIONAL REQUIREMENTS FOR CONDENSATION CONTROL AT DUCTWORK
SUPPLY AIR OR RETURN AIR	WHERE LOCATED IN A BUILDING ENVELOPE ASSEMBLY	4C AND 5B	R-16	DUCT OR PLENUM IS SEPARATED FROM BUILDING ENVELOPE ASSEMBLY WITH THE MINIMUM INSULATION VALUE
SUPPLY AIR	WITHIN CONDITIONED SPACE WHERE THE SUPPLY DUCT CONVEYS AIR THAT IS LESS THAN 55°F OR GREATER THAN 105°F	4C AND 5B	R-3.3	SEE SECTION C403.10.1.2 FOR DETAILS
SUPPLY AIR	WITHIN CONDITIONED SPACE THAT DUCT DIRECTLY SERVES WHERE THE SUPPLY DUCT CONVEYS AIR THAT IS LESS THAN 55°F OR GREATER THAN 105°F	4C AND 5B	NONE	SEE SECTION C403.10.1.2 FOR DETAILS
SUPPLY AIR	WITHIN CONDITIONED SPACE WHERE THE SUPPLY DUCT CONVEYS AIR THAT IS LESS THAN 55°F OR GREATER THAN 105°F OR LESS	4C AND 5B	NONE	
RETURN OR EXHAUST AIR	WITHIN CONDITIONED SPACE, DOWNSTREAM OF AN ENERGY RECOVERY MEDIA, UPSTREAM OF AN AUTOMATIC SHUT OFF DAMPER.	4C	R-8	
RELIEF OR EXHAUST AIR	CONDITIONED SPACE DOWNSTREAM OF AN AUTOMATIC SHUT OFF DAMPER.	4C AND 5B	R-16	

GENERAL NOTES:

- INSULATION R-VALUES, MEASURED IN h · ft² · °F/BTU, ARE FOR THE INSULATION AS INSTALLED AND DO NOT INCLUDE FILM RESISTANCE. THE REQUIRED MINIMUM THICKNESSES DO NOT CONSIDER WATER VAPOR TRANSMISSION AND POSSIBLE SURFACE CONDENSATION. INSULATION RESISTANCE MEASURED ON A HORIZONTAL PLANE IN ACCORDANCE WITH ASTM C518 AT A MEAN TEMPERATURE OF 75°F AT THE INSTALLED THICKNESS.
- SEE INTERNATIONAL MECHANICAL CODE SECTIONS 603.12 AND 604 FOR FURTHER DETAILS ON DUCT INSTALLATION REQUIREMENTS.
- INCLUDES ATTIC ABOVE INSULATED CEILINGS, PARKING GARAGES AND CRAWL SPACES.

OSA DUCT INSULATION SCHEDULE					
DUCT SYSTEM	DUCT LOCATION AND USE	CLIMATE ZONE	AIRFLOW	MINIMUM INSTALLED DUCT INSULATION R-VALUE	NOTES
OUTDOOR AIR	INSIDE CONDITIONED SPACE AND UPSTREAM OF AUTOMATIC SHUT OFF DAMPER.	4C AND 5B	≥2800 CFM	4.5	SEE SECTION C403.10.1.1 FOR ADDITIONAL REQUIREMENTS
OUTDOOR AIR	INSIDE CONDITIONED SPACE AND DOWNSTREAM OF AUTOMATIC SHUT OFF DAMPER TO HVAC UNIT OR ROOM.	4C	≥2800 CFM	3.0	
OUTDOOR AIR	INSIDE CONDITIONED SPACE	4C AND 5B	<2800	1.5	SEE EXCEPTION 1 TO SECTION C403.10.1.1 FOR ADDITIONAL DETAILS
GENERAL NOTES:					
1. INSULATION R-VALUES, MEASURED IN h · ft ² · °F/BTU, ARE FOR THE INSULATION AS INSTALLED AND DO NOT INCLUDE FILM RESISTANCE. THE REQUIRED MINIMUM THICKNESSES DO NOT CONSIDER WATER VAPOR TRANSMISSION AND POSSIBLE SURFACE CONDENSATION. INSULATION RESISTANCE MEASURED ON A HORIZONTAL PLANE IN ACCORDANCE WITH ASTM C518 AT A MEAN TEMPERATURE OF 75°F AT THE INSTALLED THICKNESS.					
2. SEE INTERNATIONAL MECHANICAL CODE SECTIONS 603.12 AND 604 FOR FURTHER DETAILS ON DUCT INSTALLATION REQUIREMENTS.					



GENERAL CONTRACT REQUIREMENTS

1. MECHANICAL, PLUMBING, AND CONTROLS SCOPE SHALL FALL UNDER THE ULTIMATE RESPONSIBILITY OF ONE CONTRACTOR, WHO IS RESPONSIBLE FOR UNDERSTANDING ALL MECHANICAL AND PLUMBING DOCUMENTS, DISTRIBUTING CONTRACT DOCUMENTS TO ALL SUBCONTRACTORS, AND SHALL BE RESPONSIBLE FOR CONTRACT COMPLETION.
2. THE DRAWINGS ARE DIAGRAMMATIC. COORDINATE INSTALLATION WITH THE BUILDING, PROVIDE ALL NECESSARY OFFSETS, CHANGES IN DIRECTION, EXTENSIONS AND ASSOCIATED MATERIALS FOR A COMPLETE AND FUNCTIONAL INSTALLATION.
3. COORDINATE MECHANICAL WORK WITH ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, AND LANDSCAPE WORK SHOWN ON OTHER CONTRACT DOCUMENTS. PROVIDE ADDITIONAL PIPE OR DUCT OFFSETS WHERE REQUIRED TO COORDINATE INSTALLATION.
4. LOCATIONS AND SIZES OF FLOORS, WALL, AND ROOF OPENINGS) SHALL BE COORDINATED WITH OTHER TRADES INVOLVED. INCLUDE THE FOLLOWING IN THE COST OF MECHANICAL WORK: CUTTING, CORING, PATCHING AND PAINTING OF EXISTING WALLS, CEILINGS, FLOORS, AND ROOFS AS REQUIRED TO ACCOMMODATE WORK AS INDICATED IN THE MECHANICAL CONTRACT DOCUMENTS UNLESS SPECIFICALLY SHOWN ON ARCHITECTURAL DOCUMENTS.
5. MAINTAIN A SET OF PLANS ON SITE. RECORD ALL CHANGES TO ACTUAL ARRANGEMENTS ON THESE PLANS. PROVIDE THIS SET OF PLANS TO THE OWNER'S REPRESENTATIVE WHEN WORK IS COMPLETE.
6. ALL WORK PERFORMED SHALL BE DONE IN STRICT ACCORDANCE TO ALL APPLICABLE MECHANICAL, BUILDING, ELECTRICAL, AND LOCAL CODES, WITH AMENDMENTS. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND CONSTRUCTION FEES. FURNISH FINAL CERTIFICATE TO OWNER SHOWING COMPLIANCE WITH CODE REQUIREMENTS.
7. PROJECT SCHEDULING: COMPLY WITH OWNER'S REQUIREMENTS
8. OPERATION AND MAINTENANCE MANUAL: PROVIDE COMPLETE OPERATIONS AND MAINTENANCE MANUAL IN HARD COVER. PROVIDE OPERATIONS, MAINTENANCE AND PARTS DATA ON ANY ITEM OF EQUIPMENT THAT HAS MOVING PARTS.
9. PROVIDE THE FOLLOWING DOCUMENTS PRIOR TO FINAL ACCEPTANCE OF THE PROJECT: FINAL PAYMENT OF THE CONTRACT WILL BE CONTINGENT UPON RECEIVING THESE DOCUMENTS:
 - A. RECORD (AS-BUILT) DRAWINGS.
 - B. MAINTENANCE AND OPERATING INSTRUCTIONS (3 SETS).
 - C. EXTENDED WARRANTIES (OTHER THAN THE ONE-YEAR).
 - D. BALANCING LOGS (AIR AND HYDRONIC SYSTEMS) (3 SETS).
 - E. FINAL CERTIFICATES OF INSPECTION AND CODE COMPLIANCE.
 - F. COMMISSIONING DOCUMENTATION PER WSC.
11. WARRANTY PROVISIONS: THE CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT AND SYSTEMS FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIAL, EQUIPMENT, OR POOR WORKSMANSHIP, WHICH MAY SHOW ITSELF DURING THIS WARRANTY PERIOD.

SEISMIC AND VIBRATION REQUIREMENTS

1. HANGERS AND SEISMIC BRACING FOR THE MECHANICAL SYSTEMS SHALL BE DESIGNED AND PROVIDED BY THE MECHANICAL CONTRACTOR. REFER TO CONTRACTOR SHOP DRAWINGS FOR LOCATIONS OF EQUIPMENT AND HUNG MECHANICAL SYSTEMS. THE MECHANICAL CONTRACTOR SHALL COORDINATE THE SUPPORT SYSTEMS AND DESIGN LOADS FOR HUNG MECHANICAL SYSTEMS WITH THE GENERAL CONTRACTOR AND OTHER TRADES THAT MAY BE IMPACTED.
 - A. PROVIDE ALL SEISMIC RESTRAINT REQUIRED BY THE AUTHORITY HAVING JURISDICTION AND THE APPLICABLE CODES.
 - B. EMPLOY A LICENSED STRUCTURAL ENGINEER, IF NECESSARY, TO ACHIEVE COMPLIANCE.
 - C. THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION, INC. (SMACNA) SEISMIC RESTRAINT MANUAL GUIDELINES MAY BE USED FOR PIPING AND DUCTWORK. INSURE THE PROPER HAZARD LEVEL IS EMPLOYED FOR THE AREA OF INSTALLATION.
2. VIBRATION CRITERIA: PROVIDE VIBRATION ISOLATION IN ACCORDANCE WITH THE AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR CONDITIONING ENGINEERS (ASHRAE); APPLICATIONS HANDBOOK.

BASIC MATERIALS AND METHODS

1. ALL MATERIALS AND EQUIPMENT SHALL BE LISTED OR LABELED BY A RECOGNIZED AGENCY. UL, AGA, FM, CSA, API, ETC.
2. EQUIPMENT SHALL BE AS INDICATED ON THE DRAWING SCHEDULES. THE DRAWING SCHEDULES ESTABLISH THE LEVEL OF QUALITY. SUBSTITUTIONS WILL BE CONSIDERED. SUBMIT TECHNICAL DATA (PERFORMANCE AND CONSTRUCTION) TO THE OWNER'S REPRESENTATIVE FOR APPROVAL. ALLOW TWO WEEKS FOR TURN-AROUND.
3. MECHANICAL SYSTEM PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE PROTECTED IN ACCORDANCE WITH THE BUILDING CODE IN FORCE IN THE AUTHORITY HAVING JURISDICTION FOR THIS PROJECT. THIS INCLUDES PIPING, DUCTWORK, SUPPORTS, CONDUIT, AND ANY OTHER SYSTEM AND APPURTENANCE PROVIDED AS PART OF THE MECHANICAL WORK OF THIS CONTRACT. IN ADDITION, ALL THROUGH-PENETRATION SEALING METHODOLOGIES SHALL BE LISTED IN THE UNDERWRITER'S LABORATORIES (UL) FIRE RESISTANCE DIRECTORY, ISSUE CURRENT AT TIME OF BID.
4. MOTORS SHALL COMPLY WITH THE WSEC.
5. ALL MOTORS SHALL BE ELECTRONICALLY COMMUTATED UNLESS NOTED ON SCHEDULE.
6. ELECTRICAL INSTALLATION SHALL COMPLY WITH THE NEC.
7. PROTECT STORED MATERIALS. REPLACE DAMAGED MATERIALS PRIOR TO INSTALLATION.
8. PROVIDE WATER-TIGHT SEAL FOR OPENINGS TO THE BUILDING THROUGH WHICH PIPE PASSES.
9. PROVIDE AND INSTALL PIPE SUPPORTS IN ACCORDANCE WITH MANUFACTURER'S STANDARDS. PROVIDE VALVE AND FITTING INDUSTRY (MSS) STANDARDS. SPECIFICALLY STANDARD SP-69, "PIPE HANGERS AND SUPPORTS" SELECTION AND APPLICATION" AND STANDARD SP-58, "PIPE HANGERS AND SUPPORTS - MATERIALS, DESIGN AND MANUFACTURE". PROVIDE PIPE SUPPORT SPACING IN ACCORDANCE WITH THE UPC OR IMC.
10. TESTING: ALL WORK UNDER THIS CONTRACT SHALL BE THOROUGHLY AND SYSTEMATICALLY TESTED, BOTH DURING CONSTRUCTION AND AFTER COMPLETION. PIPE TESTING SHALL BE EITHER AS SPECIFIED IN THE APPROPRIATE SPECIFICATION SECTION, OR AS SPECIFIED IN THE APPLICABLE PLUMBING OR MECHANICAL CODE. DUCTWORK SHALL BE TESTED AS PART OF THE AIR BALANCING PROCESS. NOTIFY THE OWNER'S REPRESENTATIVE 48-HOURS IN ADVANCE OF ALL TESTS. TESTS SHALL BE MAINTAINED UNTIL APPROVED.
11. START-UP, BALANCING AND COMMISSIONING.
 - A. EQUIPMENT STARTUP SHALL BE PERFORMED BY QUALIFIED PERSONNEL. THE TECHNICAL SPECIFICATION SECTIONS WILL DETAIL OTHER SPECIAL REQUIREMENTS, IF ANY. PROVIDE A STATEMENT OF THE STARTUP TECHNICIANS' QUALIFICATIONS IF REQUESTED BY THE OWNER'S REPRESENTATIVE OR ELSEWHERE SPECIFIED.
 - B. BALANCE ALL AIR AND WATER SYSTEMS. BALANCE IN ACCORDANCE WITH EITHER NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) OR AMERICAN AIR BALANCE COUNCIL (AABC) CRITERIA.
 - C. PROVIDE COMMISSIONING IN ACCORDANCE WITH THE WSEC, UNLESS ENHANCED COMMISSIONING IS REQUIRED. PROVIDE DOCUMENTATION OF COMMISSIONING.
 - a. A CERTIFIED COMMISSIONING AGENT SHALL PROVIDE A COMMISSIONING PLAN OUTLINING THE RESPONSIBILITY MATRIX, SCHEDULE, AND EQUIPMENT FUNCTIONAL PERFORMANCE TESTING PER WSEC 408.
 - b. THE COMMISSIONING REPORT SHALL BE COMPLETED PRIOR TO FINAL MECHANICAL INSPECTION PER C408.1.3.
 - c. FINAL REPORT SHALL BE MADE AVAILABLE TO CODE OFFICIAL PER COMPLETION REQUIREMENTS OF WSEC C408.1.4.

LOW PRESSURE STEEL DUCTWORK

1. GALVANIZED CARBON STEEL PER SMACNA STANDARDS.
2. FLEXIBLE DUCTWORK SHALL BE VINYL COATED SPRING STEEL HELIX BONDED TO A VINYL COATED FIBERGLASS MECH LINER WRAPPED WITH FIBERGLASS WOOL INSULATION. JACKET WITH A REINFORCED METALIZED MYLER/ NEOPRENE LAMINATE OUTER CASING.

DUCTWORK SOUNDLINER

1. MAXIMUM VELOCITY ON MAT OR COATED SIDE SHALL BE 5000 FT/MIN.
2. NOISE REDUCTION COEFFICIENT: 0.65 OR HIGHER, TYPE A MOUNTING, ASTM C423.
3. K = 0.25 AT 75 DF. ASTM C518.
4. PROVIDE ACOUSTIC LINING IN CONNECTING DUCTWORK 10' UPSTREAM AND DOWNSTREAM OF FAN POWERED MECHANICAL UNIT, UNLESS OTHERWISE NOTED ON PLANS.
5. APPROVED MANUFACTURERS
 - A. MANVILLE PERMACOTE LINACOUSTIC
 - B. MANVILLE PERMACOTE SPIRACOUSTIC LINER

DUCT INSULATION

1. FLEXIBLE FIBERGLASS DUCTWORK SHALL MEET ASTM C553, TYPE 1, CLASS B2 FLEXIBLE BLANKET. K VALUE SHALL BE 0.27 @ 75 DF.
2. VAPOR BARRIER JACKET: PROVIDE FSK, ALUMINUM FOIL REINFORCED WITH FIBER GLASS YARN AND LAMINATED FIRE RESISTANT KRAFT. SECURE WITH UL LISTED PRESSURE SENSITIVE TAPE AND/OR OUTWARD CINCHED EXPANDED STABLES.
3. INSULATION SHALL MEET THE REQUIREMENTS OF THE INSULATION SCHEDULE, SHOWN ON PLANS.
4. APPROVED MANUFACTURERS: MANVILLE, OWENS CORNING, OR APPROVED EQUAL.

AIR DISTRIBUTION SYSTEM - GENERAL

- PROVIDE PER THE IMC, THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) "DUCT CONSTRUCTION MANUAL, METAL AND FLEXIBLE," AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
2. IN ADDITION TO THE REQUIREMENTS ABOVE, INSTALL EQUIPMENT AND COMPONENTS IN ACCORDANCE WITH THE PUBLISHED MANUFACTURER'S INSTALLATION REQUIREMENTS.
3. FIRE/SMOKE DAMPERS' UL LISTED FOR SERVICE INTENDED, INSTALL IN ACCORDANCE WITH THE LISTING.
4. FLEXIBLE CONNECTIONS: PROVIDE AT EACH FAN AND AIR HANDLING UNIT CONNECTION TO DUCT.
5. ACCESS PANELS: PROVIDE FOR MAINTENANCE OF ALL DUCT-MOUNTED EQUIPMENT (FIRE DAMPERS, CONTROL DAMPERS, COILS, ETC.).
6. LOCATE VALVES, CLEANOUTS, DAMPERS, CONTROLS AND SIMILAR COMPONENTS SO THAT THEY ARE ACCESSIBLE.
- A. INSTALL TAG ON CEILING GRID FRAME TO INDICATE LOCATION AND TYPE OF EQUIPMENT THAT REQUIRES MAINTENANCE.
7. ACCESS DOORS FOR MECHANICAL EQUIPMENT INSTALLED BEHIND WALLS, ABOVE INACCESSIBLE CEILINGS AND BELOW FLOORS. COORDINATE ACCESS DOOR LOCATIONS WITH ARCHITECT/ENGINEER. ACCESS DOOR SHALL BE SIZED SO THAT ADJACENT EQUIPMENT IS ACCESSIBLE.
- A. PROVIDE 16 GA. STEEL, FLUSH TYPE ACCESS DOOR WITH CONCEALED HINGE AND SLOT SCREWDRIVER TYPE CAM LATCH. PROVIDE FACTORY PRIMED IN PAINTED SURFACE AREAS FOR FIELD PAINTING.
- B. PROVIDE STAINLESS STEEL FOR ALL OTHER AREAS. PROVIDE UL LISTED AND LABELED DOOR WHERE FIRE-RESISTANCE RATING IS INDICATED ON DRAWINGS.
- C. PROVIDE DUCT ACCESS PANELS FOR FIRE DAMPER ACTUATOR ACCESS ACENT EQUIPMENT IS ACCESSIBLE.
8. VOLUME DAMPERS
- A. FABRICATED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS AND AS INDICATED.
- B. FABRICATE SPLITTER DAMPERS OF SAME MATERIAL AND GAGE AS DUCT TO 24 INCHES (600 MM) SIZE IN EITHER DIRECTION, AND TWO GAGES HEAVIER FOR LARGER SIZES, SECURED WITH CONTINUOUS HINGE OR ROD, OPERATED WITH MINIMUM 1/4-INCH (6 MM) DIAMETER ROD.
- C. FABRICATE SINGLE BLADE DAMPERS FOR DUCT SIZES TO 9-12 X 30 INCH. FABRICATE MULTI-BLADE DAMPER OF OPPOSED BLADE PATTERN WITH MAXIMUM BLADE SIZES 12 X 72 INCH ASSEMBLE CENTER AND EDGE CRUMPLED BLADES IN PRIME COATED OR GALVANIZED CHANNEL FRAME WITH SUITABLE HARDWARE.
- D. EXCEPT IN ROUND DUCTWORK 12 INCHES (300 MM) IN DIAMETER AND SMALLER, PROVIDE END BEARINGS.
- E. PROVIDE LOCKING, INDICATING QUADRANT REGULATORS ON SINGLE AND MULTI-BLADE DAMPERS, WHERE WIDTH EXCEEDS 30 INCHES (750 MM), PROVIDE REGULATOR AT BOTH ENDS.
9. BACKDRAFT DAMPERS
- A. 0.125 INCH EXTRUDED ALUMINUM FRAME, 0.07 INCH ALUMINUM BLADES WITH VINYL ENDS, SYNTHETIC BEARINGS, COUNTERBALANCE, AND ADJUSTABLE PLATED BAR ON BLADES. LEAKAGE SHALL BE RATED AT NO MORE THAN 20 CFM/SF AT 1" W.C. BALANCE AS NOTED ON PLANS.
- B. APPROVED MANUFACTURERS:
- a. RUSKIN
- b. GREENHECK
10. MOTORIZED DAMPERS
- A. GENERAL
- a. COORDINATE ACTUATOR TYPE WITH CONTROLS CONTRACTOR.
- b. DAMPER ACTUATORS AND ACTUATOR LINKAGES SHALL BE MOUNTED IN THE AIRSTREAM FOR ALL ROOFTOP FANS/ROOF HOODS AND MOUNTED EXTERNAL OF THE AIRFLOW AT ALL OTHER LOCATIONS, UNLESS SPECIFICALLY INDICATED OTHERWISE ON PLANS.
- c. MULTI SECTION DAMPER ASSEMBLIES SHALL BE PROVIDED WITH A FACTORY INSTALLED COMMON JACKSHAFT.
- d. PROVIDE WITH DOUBLE FLANGE DUCT CONNECTION.
- e. SHALL BE CLASS A LEAKAGE RATED.
- f. PROVIDE PARALLEL BLADE AIRFLOW TYPE FOR OPEN/CLOSED CONTROL AND OPPOSED BLADE AIRFLOW TYPE FOR MODULATING/THROTTLING CONTROL.
- B. DAMPER BLADES:
- a. EXTRUDED ALUMINUM OR GALVANIZED STEEL AIR FOILS WITH REPLACEABLE RUBBER BLADE SLATES, 6-INCHES WIDE MAXIMUM.
- b. 304 STAINLESS STEEL WHEN INSTALLED IN DISHWASHER HOOD DUCTWORK.
- c. JAMB SLATES SHALL BE FLEXIBLE METAL COMPRESSION TYPE.
- C. PERFORMANCE:
- a. MAXIMUM LEAKAGE RATE SHALL BE 3 CFM/SQ. FT. OF DAMPER AREA PER 1.0-INCH W.G. IN ACCORDANCE WITH AMCA STANDARD 500D.
- b. MAXIMUM PRESSURE DROP FOR A 12"X12" DAMPER SHALL BE 0.08" W.G. AT 1.00 FPM FACE VELOCITY.
- D. APPROVED MANUFACTURERS:
- a. RUSKIN (CD50/CD60)
- b. GREENHECK (VCD-33/VCD-43)

FILTERS

1. PROVIDE 2" MERV 8, PLEATED, DISPOSABLE FILTERS. SIZE OF FILTER SHALL BE COMPATIBLE WITH FILTER BOX OR AIR HANDLER.

AIR TERMINALS

1. SCHEDULED GRILLES, REGISTERS, AND DIFFUSERS SHALL BE THE BASIS OF DESIGN. UNITS OF SIMILAR CONSTRUCTION AND CAPABILITIES MAY BE SUBMITTED FOR REVIEW. DEVICES SHALL DISTRIBUTE THE QUANTITY OF AIRFLOW UNIFORMLY THROUGHOUT THE INDICATED SPACE WITHOUT CAUSING NOTICEABLE NOISE OR DRAFTS.
2. PROVIDE ALL DEVICES FOR COMPLETE INSTALLATION DEPENDING ON LOCATION OF INSTALLATION (IE: A.C.T OR HARD LID CEILINGS).
3. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND AS NOTED ON PLANS.

AIR BALANCING

1. SCOPE OF WORK INCLUDES SETTING VOLUME (FLOW) AND SPEED ADJUSTMENTS TO HVAC INSTRUMENTATION USED TO BALANCE THIS SYSTEM SHALL BE IN GOOD CONDITION AND MAINTAINED. IF REQUIRED BY THE OWNER, THE TESTS SHALL BE DONE IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
2. THE BALANCER SHALL BE AN INDEPENDENT FIRM THAT SPECIALIZES IN BALANCING AND TESTING OF PUMPING SYSTEMS AND AIR MOVING EQUIPMENT/ AIR DISTRIBUTION AND EXHAUST SYSTEMS. THE BALANCER SHALL PROVIDE PROOF OF HAVING SUCCESSFULLY COMPLETED FIVE PROJECTS OF SIMILAR SCOPE. TESTING AND ADJUSTING SHALL BE PERFORMED IN ACCORDANCE WITH NEBB OR AABC STANDARDS AND PROCEDURES.
3. DAMAGE DONE TO THE SYSTEM BY THE BALANCER SHALL BY HIS/HER RESPONSIBILITY TO RECTIFY. NEATLY TYPED RECORDS SHALL BE MAINTAINED AT ALL STEPS, ADJUSTMENTS, AND BEGINNING AND FINAL READINGS, THE RECORDS SHALL ALSO INCLUDE MEASUREMENT LOCATIONS, DESIGN CAPACITIES, AND DATES AND NAMES OF PERSONNEL INVOLVED. FINAL SETTINGS SHALL BE CLEARLY MARKED ON EACH BALANCING DEVICE.
4. CHECK OUT TEMPERATURE CONTROLS TO ASSURE PROPER CONTROL SEQUENCE, PROPER CONTROL SETTINGS, AND PROPER CONTROL CALIBRATION. REPORT MALFUNCTIONS IN LOGS UNDER "ADDITIONAL REMARKS."
5. AIR BALANCE LOG:
 - A. TEST AND ADJUST ENTIRE SYSTEM WITHIN SCOPE OF WORK. VOLUMES SHALL BE WITHIN 10% OF DESIGN REQUIREMENTS.
 - B. MEASURE TOTAL STATIC PRESSURE INCLUDING DUCT SYSTEM, TERMINAL UNITS, FILTERS, ETC.
 - C. ADJUST AND RECORD SYSTEM TO DESIGN RECIRCULATED AIR CFM.
 - D. DIFFUSERS, GRILLES AND REGISTERS SHALL BE ADJUSTED TO MINIMIZE DRAFTS IN ALL AREAS.
 - E. ALL FILTERS SHALL BE CLEAN AND IN PLACE BEFORE STARTING FANS.
6. DATA: RECORD AND CHECK THE FOLLOWING SYSTEMS AND EQUIPMENT:
 - a. AIR TERMINALS: SUPPLY, RETURN, OR EXHAUST IDENTIFICATIONS, CATALOGUE IDENTIFICATION, APPLICATIONS FACTORS, DESIGN AND RECORDED VELOCITIES AND AIR QUANTITIES, AND STATIC PRESSURES.

CONTROLS

1. STAND ALONE CONTROL SYSTEMS
 - A. SCOPE: PROVIDE UNIT CONTROLS, ZONE TEMPERATURE CONTROLS AND ANY OTHER CONTROL ITEMS REQUIREMENT FOR A COMPLETE AND FUNCTIONAL SYSTEM. PROVIDE ALL REQUIRED WIRING, CONDUIT, COMPONENTS (RELAYS, TRANSFORMERS, ETC) AND EQUIPMENT. OBTAIN AND UNDERSTAND ALL MECHANICAL AND PLUMBING DOCUMENTS BEFORE BIDDING WORK.
 - B. APPROVED MANUFACTURERS ARE TRANE, MITSUBISHI, AND HONEYWELL. NO OTHER MANUFACTURER IS ACCEPTABLE UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE.
 - C. SPECIFIC REQUIREMENTS: EACH UNIT SHALL HAVE INDIVIDUAL STANDALONE CONTROLS THAT PERFORM THE FUNCTIONS LISTED IN THE DRAWINGS. PNEUMATIC CONTROLS ARE NOT ACCEPTABLE.
2. ROOM TEMPERATURE SENSORS: ROOM TEMPERATURE SENSORS SHALL BE MOUNTED 5'4" UNLESS OTHERWISE NOTED ON PLANS. VERIFY ALL LOCATIONS WITH OWNER'S REPRESENTATIVE.
3. ACTUATION EQUIPMENT:
 - A. SPRING RETURN IS REQUIRED IN ALL EQUIPMENT EXPOSED TO OUTDOOR AIR AND/OR FAILURE CONDITIONS.
 - B. ALL AIR HANDLER AND DOAS DAMPER AND VALVE ACTUATION SHALL BE SPRING RETURN AND PROPORTIONALLY CONTROLLED.
 - C. ALL 120V ACTUATION SHALL HAVE DISCONNECTS IN ACCORDANCE WITH ELECTRICAL STANDARDS.
 - D. ALL CONTROLS ACTUATORS SHALL BE SIZED CAPABLE OF CLOSING AGAINST THE MAXIMUM SYSTEM SHUTOFF PRESSURE.
4. WIRING:
 - A. ALL CLASS 2 (24VAC OR LESS) CONTROLS WIRING SHALL BE CONCEALED IN CONDUIT, UNLESS CONCEALED IN ACCESSIBLE LOCATIONS.
 - B. WIRE SUPPORTS SHALL BE INSTALLED PER LOCAL WIRING CODE REQUIREMENTS. ALL 120V SUPPLY SPACING SHALL BE 5'.
 - C. WIRING SHALL HANG FROM THE BUILDING STRUCTURE AND BE DESIGNED FOR THIS APPLICATION.
 - D. PROVIDE FIRE STOPPING FOR ALL PENETRATIONS USED BY CONTROLS CONDUIT AND RACEWAYS.
 - E. WIRING SHALL NOT PENETRATE STRUCTURAL ELEMENTS.
5. PROVIDE FULL COMMISSIONING OF THE CONTROL SYSTEM IN ACCORDANCE WITH THE WSEC.
6. PROVIDE 2 HOURS OF SCHEDULED INSTRUCTION PERIOD TO THE OWNER. COST FOR TIME INVOLVED SHALL BE INCLUDED IN THE BID.
7. INSTALL IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS, THE NEC AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.

SPLIT SYSTEM UNITS

1. BASIS OF DESIGN SHALL REPRESENT THE QUALITY OF UNITS.
2. MAJOR COMPONENTS INCLUDE:
 - A. EVAPORATOR AND CONDENSER UNITS.
 - B. CONTROLS - UNITS SHALL BE CONTROLLED BY MANUFACTURER'S PROPRIETARY TEMPERATURE CONTROL SYSTEM.
3. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
4. PROVIDE ACOUSTIC LINING IN CONNECTING DUCTWORK 10' UPSTREAM AND DOWNSTREAM OF FAN, UNLESS OTHERWISE NOTED ON PLANS.

DEDICATED OUTDOOR AIR UNITS

1. BASIS OF DESIGN SHALL REPRESENT THE QUALITY OF UNIT.
2. CABINET SHALL INCLUDE FACTORY WIRING, CONTROLS, BLOWERS, FILTERS, INSTALLED INLET AIR THERMISTERS, AND ENTHALPIC HEAT EXCHANGER.
3. APPROVED MANUFACTURER: LOSSNAY.
4. PROVIDE ACOUSTIC LINING IN CONNECTING DUCTWORK 10' UPSTREAM AND DOWNSTREAM OF FAN, UNLESS OTHERWISE NOTED ON PLANS.

PACKAGED AIR HANDLING UNITS

1. BASIS OF DESIGN SHALL REPRESENT QUALITY OF UNIT. UNIT SHALL BE FACTORY CONFIGURED TO OPERATE AS A SINGLE ZONE VAV, MATCHING FAN SPEEDS WITH HEATING AND COOLING LOADS.
2. ALL UNITS SHALL BE FACTORY WIRED, CHARGED WITH R-410A, COME WITH ALL NECESSARY INTERNAL CONTROLS, AND RATED IN ACCORDANCE WITH ARI CRITERIA.
3. UNIT CASING SHALL BE CONSTRUCTED OF ZINC COATED, HEAVY GAUGE, GALVANIZED STEEL. EXTERIOR SURFACES SHALL BE FINISHED WITH A WEATHER-RESISTANT ENAMEL FINISH. SURFACE OF UNIT SHALL BE TEST 672 HOURS IN A SALT SPRAY TEST IN COMPLIANCE WITH ASTM B117.
4. INTERNALLY FINNED, 516" COPPER TUBES MECHANICALLY BONDED TO AN ALUMINUM PLATE SHALL BE STANDARD.
5. COMPRESSORS: THE COMPRESSOR SHALL BE INDUSTRIAL GRADE, DIRECT DRIVE, 3600 RPM, MAXIMUM SPEED SCROLL TYPE. THE MOTOR SHALL BE SUCTION GAS-COOLED HERMETIC DESIGN, COMPRESSOR SHALL HAVE CENTRIFUGAL OIL PUMP WITH DIRT SEPARATOR, OIL GLASS GLIGHT, AND OIL CHARGING VALVE. COMPRESSOR SHALL BE PROVIDED WITH A THERMOSTATIC MOTOR WINDING TEMPERATURE CONTROL TO PROTECT AGAINST EXCESSIVE MOTOR TEMPERATURES RESULTING FROM OVER-UNDER-VOLTAGE OR LOSS OF CHARGE, HIGH AND LOW PRESSURE CUTOUTS, AND RESET RELAY.
7. SUPPLY FAN: SUPPLY FAN MOTORS SHALL BE OPEN DRIP-PROOF. ALL SUPPLY FANS SHALL BE DYNAMICALLY BALANCED IN FACTORY. SUPPLY FAN SHALL BE TEST RUN IN UNIT AND SHALL BE RATED RPM.
 - A. 20 TO 75 TONS WITH FORWARD-CURVED SUPPLY FAN. SUPPLY FANS SHALL HAVE TWO DOUBLE -INLET, FORWARD-CURVED FANS MOUNTED ON A COMMON SHAFT WITH FIXED SHEAVE DRIVE. FANS SHALL BE FACTORY-TESTED TO THE RATED RPM OF THE FAN SHAFT. FANS SHALL PASS THROUGH FIRST CRITICAL SPEED. FAN SHAFT SHALL BE MOUNTED ON TWO GRADES LUBRICATED BALL BEARINGS DESIGNED FOR 200,000 HOURS AVERAGE LIFE. FAN MOTOR AND FAN ASSEMBLY SHALL BE MOUNTED ON COMMON BASE TO ALLOW CONSISTENT BELT TENSION WITH NO RELATIVE MOTION BETWEEN FAN AND MOTOR SHAFTS. ENTIRE ASSEMBLY SHALL BE COMPLETELY ISOLATED FROM UNIT AND FAN BOARD BY DOUBLE DEFLECTION RUBBER-IN-SHEAR ISOLATORS, OR BY OPTIONAL 2" DEFLECTION SPRING ISOLATION.
 - B. PROVIDE ALL NECESSARY CONTROL TO OPERATE A ROOFTOP UNIT BASED ON MAINTAINING TWO TEMPERATURE SETPOINTS: THE DISCHARGE AIR AND ZONE. OPTION SHALL INCLUDE FACTORY-INSTALLED VARIABLE FREQUENCY DRIVE (VFD) TO PROVIDE SUPPLY FAN MOTOR SPEED MODULATION. DURING SINGLE ZONE VAV COOLING, THE UNIT SHALL MAINTAIN ZONE COOLING SETPOINT BY MODULATING THE SUPPLY FAN SPEED MORE OR LESS TO MEET ZONE LOAD DEMAND, AND THE UNIT SHALL MAINTAIN DISCHARGE TEMPERATURE TO THE DISCHARGE COOLING SETPOINT BY MODULATING ECONOMIZER IF AVAILABLE AND STAGING DX COOLING REFRIGERANT CIRCUIT SHALL OFFER THERMAL EXHAUSTION STANDARD.
8. UNIT SHALL BE PROVIDED WITH PHASE MONITORING.
9. PROVIDE 10% OF DUCT LINE UPSTREAM AND DOWNSTREAM OF UNIT TO REDUCE UNIT NOISE. NOTE: DUCTWORK SHOWN ON PLANS REPRESENTS MINIMUM INSIDE DIMENSION REQUIREMENTS.
10. REFER TO SCHEDULES AND THESE DOCUMENTS FOR ADDITIONAL REQUIRED ACCESSORIES, DISCHARGE, AND MOUNTING REQUIREMENTS.

VRF UNITS

1. BASIS OF DESIGN SHALL REPRESENT THE QUALITY OF UNITS.
2. MAJOR COMPONENTS INCLUDE:
 - A. EVAPORATOR AND CONDENSER UNITS.
 - B. CONTROLS - UNITS SHALL BE CONTROLLED BY MANUFACTURER'S PROPRIETARY TEMPERATURE CONTROL SYSTEM.
3. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
4. APPROVED MANUFACTURER: MITSUBISHI

RADIANT CEILING PANEL

1. BASIS OF DESIGN SHALL REPRESENT QUALITY OF UNIT.
2. CRIMPED PANEL IS MADE OF 22 GAUGE GALVANIZED STEEL WITH A WHITE BAKED-ON POWDER COAT FINISH. EACH PANEL CONTAINS 2" OF HIGH TEMPERATURE/ DENSITY MINERAL WOOL INSULATION.
3. HEAT CAN BE INSTALLED IN SUSPENDED HARD LID CEILINGS OR CAN BE SURFACE OR RECESSED MOUNTED. PROVIDE APPROPRIATE MOUNTING FRAMES.
4. PROVIDE WITH REMOTE MOUNTED ROOM STAT. COORDINATE CONTROL WIRE LENGTH WITH MANUFACTURER.
5. APPROVED MANUFACTURER: INDEECO.

DUCT HEATERS

1. HEATING ELEMENT SHALL BE OPEN COIL, 80/20 NICKEL/CHROMIUM. STAINLESS TERMINALS SHALL EXTEND AT LEAST 1" INTO AIRSTREAM. COILS SHALL BE SUPPORTED BY CERAMIC BRACKETS.
2. HEAT FRAMES AND TERMINALS SHALL BE MADE OF CORROSION-RESISTANT STEEL UNLESS INDICATED ON SCHEDULE. TERMINAL BOX SHALL BE NEMA 1.
3. HEATERS SHALL BE RATED FOR THE VOLTAGE, PHASE, AND NUMBER OF STAGES LISTED ON SCHEDULE. ALL INTERNAL WIRING SHALL BE COPPER.
4. HEATERS SHALL BE FURNISHED WITH THE CONTROLS OPTION LISTED IN THE SCHEDULE. HEATERS SHALL BE PROVIDED WITH AN AIRFLOW PROVING SWITCH. UNLESS INDICATED ON THE PLANS, DUCT HEATERS SHALL BE PROVIDED WITH DUCT THERMOSTATS COMPATIBLE WITH CONTROLS OPTION.
5. INSTALL WITH "A" STRAIGHT DUCT BEFORE DUCT HEATER AND 2" AFTER. ENSURE THAT CONTRACTOR SHOP DRAWINGS TAKE THESE MEASUREMENTS INTO ACCOUNT BEFORE INSTALLATION.
6. FINAL SIZE OF THE DUCT HEATER SHALL NOT FALL BELOW MINIMUM ALLOWABLE DUCT HEATER VELOCITIES AS DESCRIBED IN THE INSTALLATION/ OPERATIONS MANUAL. PROVIDE PROPER SIZE TO ENSURE THAT MINIMUM VELOCITIES ARE MET.
7. APPROVED MANUFACTURERS:
 - A. INDECO

COPPER LINESET

1. COPPER LINESET SHALL BE USED FOR REFRIGERANT PIPING.
2. SIZE OF PIPING SHALL BE PER THE MANUFACTURER'S RECOMMENDATION AND REQUIREMENTS.
3. MATERIALS FOR COPPER LINESET SHALL BE SOFT ANNEALED COPPER. CONTRACTOR TO SELECT END FINISHING TO SUIT INSTALLATION AND MANUFACTURER'S RECOMMENDATION.
4. LINE SET SHALL BE CONTINUOUS FROM OUTDOOR UNIT TO INDOOR UNIT. SUCH THAT THERE ARE NO JOINTS IN FIRE RATED CORRIDOR OR EXIT PASSAGEWAYS.
5. NO REFRIGERANT PIPE SHALL BE INSTALLED IN STAIR WELLS.
6. INSTALL PER IMC CHAPTER 11.

PLASTIC PIPE, DWV & SEWER

1. PVC PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS SHALL BE PER IAPM INSTALLATION STANDARD (IS) 09-03, "PVC BUILDING DRAIN, WASTE, AND VENT PIPE AND FITTINGS."

PIPING SYSTEM SPECIALTIES

1. SPECIALITY PIPE SYSTEMS SHALL BE CONSTRUCTED OF MATERIALS THAT ARE COMPATIBLE WITH THE TYPE OF PIPING MATERIAL AND FLUIDS IN THE SYSTEM. THEY SHALL BE RATED FOR THE TEMPERATURES AND PRESSURES OF THE SYSTEMS IN WHICH THE VALVES ARE INSTALLED
2. PROVIDE SENSORS WHERE INDICATED ON THE PLANS.
3. PROVIDE DIELECTRIC BREAKS BETWEEN DISSIMILAR METALS.

VALVES

1. VALVES SHALL BE CONSTRUCTED OF MATERIALS THAT ARE COMPATIBLE WITH THE TYPE OF PIPING MATERIAL AND FLUIDS IN THE SYSTEM. VALVES SHALL BE RATED FOR THE TEMPERATURES AND PRESSURES OF THE SYSTEMS IN WHICH THE VALVES ARE INSTALLED.
2. LOCATE AND ORIENT VALVES TO PERMIT PROPER OPERATION AND ACCESS FOR MAINTENANCE OF PACKING, SEAT, AND DISK. GENERALLY, LOCATE VALVES IN OVERHEAD PIPING IN HORIZONTAL POSITION. PROVIDE A UNION ADJACENT TO ONE END OF EACH THREADED VALVE.

PIPE TESTING

1. WASTE AND VENT PIPING SHALL BE TESTED WITH AT LEAST 10 FOOT HEAD OF WATER FOR A PERIOD OF NOT LESS THAN 15 MINUTES. TESTS SHALL BE PER UPC CHAPTER 7. TEST GAUGES SHALL BE PER UPC 318.
2. REFRIGERANT PIPING SHALL BE TESTED FOR A PERIOD OF NOT LESS THAN 60 MINUTES AT A PRESSURE NOT LOWER THAN THE DESIGN PRESSURES OR THE SETTING OF THE PRESSURE RELIEF DEVICES. TEST PER IMC SECTION 1110.

REFRIGERANT PIPE INSULATION

1. RUBBER OR FLEXIBLE FOAM STYLE INSULATION FOR REFRIGERANT PIPING SYSTEMS SHALL BE PROVIDED WITH LINESET.
2. PROVIDE PER THE WSEC AND THE MANUFACTURER'S PUBLISHED INSTRUCTIONS. INSULATION THICKNESSES SHALL COMPLY WITH WSEC.
3. LINESET PIPING EXPOSED TO WEATHER SHALL BE PROTECTED FROM DAMAGE. PROVIDE ARMAFLEX SHIELD OR EQUAL IN AREAS THAT ARE EXTERIOR TO THE BUILDING ENVELOPE OR AREAS THAT ARE SUBJECT TO DAMAGE.

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graph TD
    A[ISSUED PERMIT] --- B[Building]
    A --- C[Planning]
    A --- D[Engineering]
    A --- E[Public Works]
    A --- F[Fire]
    A --- G[Traffic]
  
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PROFESSIONAL ENGINEER

9/18/2024

PROJECT TITLE

SPECIFICATIONS

PROJECT

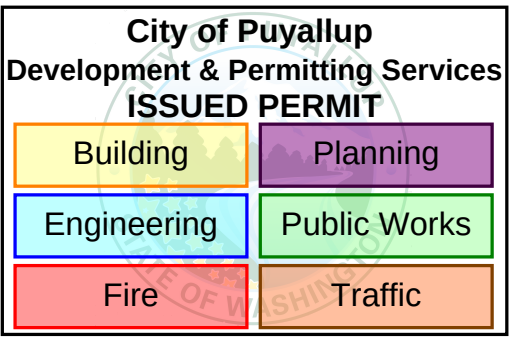
STEP BY STEP ELC
3303 8TH AVE SE
PUYALLUP, WA 98372

REVISIONS		
NO	DESCRIPTION	DATE
	REV 1	9/18/2024
DRAWN BY:		RPG
CHECKED BY:		BSM
PROJECT MANAGER:		RC

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SHEET

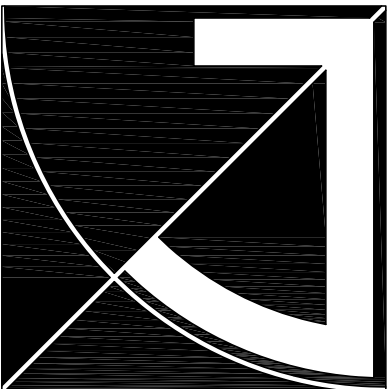
MH801



ELECTRICAL SYMBOLS LEGEND

	DETAIL/SECTION IDENTIFICATION: A = DETAIL/SECTION LETTER, B = SHEET NUMBER WHERE DETAIL/SECTION IS DRAWN.
	EQUIPMENT CONNECTION CALLOUT. A.B EQUAL EQUIPMENT IDENTIFICATION ON MECHANICAL OR KITCHEN EQUIPMENT CONNECTION SCHEDULES. VERIFY EXACT EQUIPMENT REQUIREMENTS ON SHOP DRAWING EQUIPMENT SUBMITTALS PRIOR TO ROUGH-IN. DO NO ROUGH-IN FOR EQUIPMENT PRIOR TO REVIEW OF SUBMITTALS. REPORT ANY DIFFERENCES IN REQUIREMENTS TO ENGINEER IN WRITING.
	CONDUIT CONCEALED. HASH MARKS INDICATE NUMBER OF #12 CONDUCTORS IN CODE SIZE CONDUIT. NO HASH MARKS INDICATES 2-#12 CONDUCTORS PLUS GROUND IN 3/4" CONDUIT, LONG HASH MARKS INDICATES NEUTRAL CONDUCTOR. ✓ INDICATES GROUND CONDUCTOR.
	FLEXIBLE RACEWAY, PROVIDE GROUND CONDUCTORS PER NEC.
	A-1,3 ADJACENT TO ARROW INDICATES HOMERUN OF CONDUCTORS IN CONDUIT FOR CIRCUITS 1 AND 3 TO PANEL "A".
	EXIT LIGHT WITH BATTERY, UNIVERSAL MOUNTING.
	EMERGENCY FLOODLIGHT WITH BATTERY.
	LED LIGHT FIXTURE, SURFACE MOUNTED ON CEILING.
	LED LIGHT FIXTURE, RECESS MOUNTED IN CEILING.
	LED LIGHT FIXTURE, WITH EMERGENCY BATTERY PACK.
	LED LIGHT FIXTURE, WALL MOUNTED.
	LED STRIP LIGHT FIXTURE. SURFACE MOUNTED OR CHAIN HUNG FROM CEILING.
	LED DOWNLIGHT FIXTURE.
	LED WALL MOUNT LIGHT FIXTURE.
	JUNCTION BOX.
A1	LIGHT FIXTURE TYPE. A1 = SPECIFIC LIGHTING FIXTURE REFERENCED ON LIGHTING FIXTURE SCHEDULE.
	PHOTOCELL, MOUNT ON ROOF FACING NORTH.
	POWER PANEL
	DUPLEX RECEPTACLE 20A, 125 VOLT WALL MOUNTED AT 18 INCHES AFF. G = GROUND FAULT INTERRUPTING, T = TAMPERPROOF.
	DUPLEX RECEPTACLE 20A, 125 VOLT WALL MOUNTED HORIZONTALLY 2" ABOVE COUNTERTOP BACKSPLASH TO THE BOTTOM OF THE RECEPTACLE COVERPLATE.
	FOURPLEX RECEPTACLE 20A, 125 VOLT, WALL MOUNTED AT 18 INCHES AFF.
	FOURPLEX RECEPTACLE. (2)20A, 125 VOLT, DUPLEX RECEPTACLES; ONE SWITCHED, ONE UN-SWITCHED, WALL MOUNTED AT 18 INCHES AFF. U = USB / 120V, 20A DUPLEX RECEPTACLE.
	DUPLEX RECEPTACLE 20A, 125 VOLT MOUNTED IN FLUSH FLOOR BOX WITH CARPET FLANGE.
	SURFACE WIREMOLD WITH 20A, 125 VOLT RECEPTACLES ON 24 INCH CENTERS.
	SPECIAL RECEPTACLE. AMPERAGE AND VOLTAGE AS SHOWN.

S	LIGHT SWITCH TOGGLE TYPE, SINGLE POLE, SUBSCRIPTS; 3 = THREE WAY, 4 = FOUR WAY, D = DIMMER CONTROL, K = KEY OPERATED, P = PILOT LIGHT, a, b, c, ETC = NUMBER OF SWITCHES AT THE LOCATION AND SPECIFIC FIXTURES CONTROLLED. MOUNT AT 42 INCHES AFF.
St	DIGITAL 0-12 HOUR TIMER SWITCH. SENSORWORX #SWX-843-12H OR EQUAL.
Sy	AUTOMATIC/MANUAL OCCUPANCY SENSOR AND SINGLE POLE TOGGLE SWITCH. SENSORWORX #SWX-123 OR EQUAL. SWITCH SHALL BE PROGRAMMED FOR MANUAL ON, AUTOMATIC OFF.
SyDL	AUTOMATIC/MANUAL OCCUPANCY SENSOR SWITCH WITH DAYLIGHT PHOTOSENSOR. SENSORWORX #SWX-133-D OR EQUAL. SWITCH SHALL BE PROGRAMMED FOR MANUAL ON, AUTOMATIC OFF.
Sm	WIRELESS NETWORKED LIGHT SWITCH. D=DIMMER, 3=THREE WAY, 4=FOUR WAY.
	WIRELESS INPUT/ OUTPUT POWER PACK MODULE FOR LIGHT CONTROLS.
	DUAL TECHNOLOGY AUTOMATIC OCCUPANCY SENSOR DEVICE WITH POWER PACK (WATT STOPPER #DT-300).
	DAYLIGHT PHOTOSENSOR
	DISCONNECT SWITCH
	FUSED DISCONNECT SWITCH WITH FUSES.
Sm	MOTOR RATED TOGGLE SWITCH WITH OVERLOAD HEATER(S), SIZE PER NEC AND MANUFACTURERS REQUIREMENTS.
TTB	TELEPHONE TERMINAL BOARD. 4"x8"x3/4" EXTERIOR GRADE, FIRE RESISTANT TREATED PLYWOOD
	FLUSH MOUNTED DUAL TELEPHONE/DATA OUTLET, MOUNT AT 18" AFF. PROVIDE 4-11/16" SQUARE BOX WITH 1-1/4" CONDUIT AND PULL STRING TO ACCESSIBLE CEILING SPACE.
	TRANSFORMER. SIZE AND TYPE AS NOTED. PROVIDE GROUNDING AS REQUIRED BY NEC TABLE 250.102(C){1}.
	GROUND PER NEC.
	MANUAL FIRE ALARM PULL STATION. WALL MOUNT AT 42 INCHES AFF.
	FIRE ALARM HORN WALL MOUNT AT 80 INCHES AFF.
	FIRE ALARM HORN/ADA STROBE. WALL MOUNT AT 80 INCHES AFF. SUBSCRIPT INDICATES CANDELA LEVEL.
	FIRE ALARM MINI ADA STROBE, WALL MOUNT AT 80 INCHES AFF. SUBSCRIPT INDICATES CANDELA LEVEL.
	DOOR CONTACT 6" IN FROM STRIKE.
	SMOKE DETECTOR
	HEAT DETECTOR
	DUCT SMOKE DETECTOR
	WATER SPRINKLER SYSTEM FLOW SWITCH.
	WATER SPRINKLER SYSTEM TAMPER SWITCH.
xxx	AVAILABLE FAULT CURRENT
	TRANSIENT VOLTAGE SURGE SUPPRESSION. TPS3-X-11-15-D2, SIEMENS OR EQUAL. "X" = VOLTAGE/ PHASE (VARIES). SEE POWER RISER DIAGRAM AND/OR PANEL SCHEDULES FOR VOLTAGE AND PHASE REQUIREMENTS.
(E)	EXISTING
WP	WEATHERPROOF

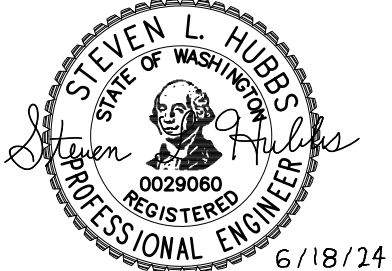


JEFF BROWN ARCHITECTURE

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PROJECT NAME/ADDRESS

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3303 8TH AVE SE BLDG E
PUYALLUP, WA 98372

PROJECT NUMBER
21015

DRAWING TYPE

PERMIT DOCUMENT

ISSUE DATE	ISSUE DESCRIPT.	NO.
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SHEET TITLE

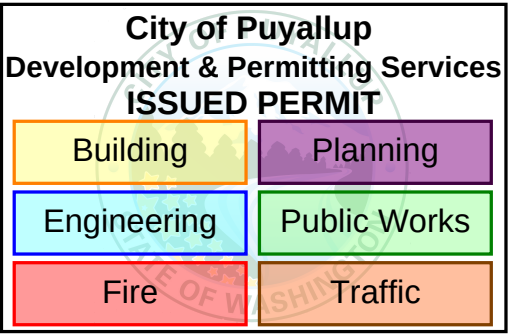
ELECTRICAL SYMBOLS LEGEND

SHEET #

E0.0

LIGHTING FIXTURE SCHEDULE

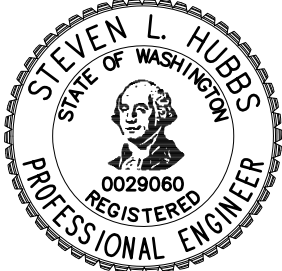
TYPE	MANUFACTURER	LAMPS	WATTS	MOUNTING	TYPE	MANUFACTURER	LAMPS	WATTS	MOUNTING
B1	GOTHAM LIGHTING EV04-35/15-AR-FL-LSS-MWD-MVOLT-GZ10	LED	15	RECESSED	L5	PRUDENTIAL LIGHTING O-30-LED35-SO-FWA-TMW-D1-SC-UNV-CA48-X3-DM01	LED	76	PENDANT
B1X	SAME AS TYPE B1 WITH EMERGENCY BATTERY PACK				L5X	SAME AS TYPE L5 WITH EMERGENCY BATTERY PACK			
B2	GOTHAM LIGHTING EVO4PC-35/20-AR-LSS-MWD-MVOLT-GZ10-JBX-PCAN45-SXX	LED	20	PENDANT	L5A	PRUDENTIAL LIGHTING O-20-LED35-SO-FWA-TMW-D1-SC-UNV-CA48-X3-DM01	LED	47	PENDANT
C1	KUZCO LIGHTING VL47225	LED	31	WALL MOUNTED	L5AX	SAME AS TYPE L5 WITH EMERGENCY BATTERY PACK			
C2	AXIS LIGHTING BMPRLD-1000-80-35-SO-FL-X-W-120-DP-1-DF-X	LED	37 / 4FT	WALL MOUNTED	L6	PRUDENTIAL LIGHTING OLV-40-LED35-SO-FWA-TMW-D1-SC-UNV-CA48-X3-DM01	LED	133	PENDANT
C3	BARN LIGHT - SYDNEY LED SERIES G-U1S12-CC-G26-20FT-X-X-CAP-FST-X-LED16.8-4000K	LED	17	WALL MOUNTED AT 7' AFF	L6X	SAME AS TYPE L6 WITH EMERGENCY BATTERY PACK			
E1	TMS LIGHTING O-17W-35K-120V-WM-X-EMC-G2	LED	17	WALL MOUNTED	L7	AXIS LIGHTING BMRLED-1000-80-35-FL-4-W-120-DP-1-TB	LED	37 / 4FT	RECESSED
E1X	SAME AS TYPE E1 WITH EMERGENCY BATTERY PACK				L7X	SAME AS TYPE L7 WITH EMERGENCY BATTERY PACK			
E2	GOTHAM LIGHTING EVO6-40/20-AR-FL-LSS-MWD-MVOLT-GZ10	LED	20	RECESSED	L8	PRUDENTIAL LIGHTING O-40-LED35-HO-FWA-TMW-D1-SC-UNV-CA48-X3-DM01	LED	139	PENDANT
E2X	SAME AS TYPE E2 WITH EMERGENCY BATTERY PACK				L8X	SAME AS TYPE L8 WITH EMERGENCY BATTERY PACK			
E3	PERFORMANCE IN LIGHTING MIMIK 10 POST - #304619 EG000027	LED	10	POST	P1	TMS LIGHTING SM-10-32LED-40K-120-X-00-LNC-PC	LED	32	12' ROUND POLE
E4	KICHLER 15805-BKT-4W-15601BKT	LED	4	POST	P1X	SAME AS TYPE P1 WITH EMERGENCY BATTERY PACK			
E5	HK LIGHTING ZX20-1R1-2-A-ABL-120V-SL-X-MHJB-12-BRZ	LED	11	POST	X1	LITHONIA LES1GELN 120/277	INCLUDED	3	UNIVERSAL
L1	AXIS LIGHTING TBS3DILED-300-1000-80-35-SO-SO-8-W-120-DP-1-CASLX	LED	83	SUSPENDED	X2	SAME AS X1 WITH DUAL FACE	INCLUDED	3	UNIVERSAL
L1X	SAME AS TYPE L1 WITH EMERGENCY BATTERY PACK				X3	LITHONIA ELM4 N	INCLUDED	3	WALL
L2	DAY-BRITE LIGHTING FSSEZ-4-40L-UNV	LED	32	SURFACE					
L2X	SAME AS TYPE L2 WITH EMERGENCY BATTERY PACK								
L3	LINMORE LED ES40P-A1-08K-2MS-35-80+-FR-LV-CRM-10V	LED	50	PENDANT					
L3X	SAME AS TYPE L3 WITH EMERGENCY BATTERY PACK								
L4	PRUDENTIAL LIGHTING P4018-LED35-SO-FWA-TMW-D1-SC-UNV-CA48-X3-DM01	LED	39	PENDANT					
L4X	SAME AS TYPE L4 WITH EMERGENCY BATTERY PACK								
L4U	PRUDENTIAL LIGHTING P4018-LED35-SO-FWA-TMW-D9-SC-UNV-CA48-X3-DM01	LED	39	PENDANT					



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PROJECT NUMBER
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DRAWING TYPE

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DOCUMENT

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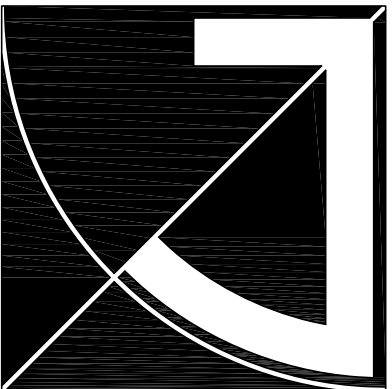
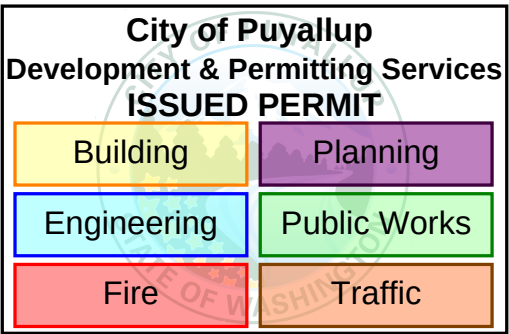
FIXTURE SCHEDULE

SHEET #

E0.1

GENERAL NOTES:

1. ELECTRICAL REQUIREMENTS ARE NOT LIMITED TO ELECTRICAL DRAWINGS AND SPECIFICATIONS. THERE IS ADDITIONAL ELECTRICAL WORK REQUIRED TO BE INCLUDED IN THE BID, INDICATED ON ARCHITECTURAL, LANDSCAPE, CIVIL, MECHANICAL, AND DRAWINGS. ADDITIONAL ELECTRICAL WORK REQUIRED IN THE BID IS ALSO LOCATED IN THE SPECIFICATIONS. CONTRACTOR SHALL REVIEW ALL ARCHITECTURAL, CIVIL, LANDSCAPE, AND MECHANICAL SPECIFICATIONS FOR ADDITIONAL ELECTRICAL INFORMATION AND INCLUDE COSTS FOR THIS WORK IN THE BID.
2. CONTRACTOR SHALL INCLUDE IN HIS BID LIGHTING CONTROL COMMISSIONING COSTS. CONTRACTOR SHALL PROVIDE THE OWNER A COMPLETE REPORT OF TEST PROCEDURES AND RESULTS INDICATING ALL LIGHTING CONTROLS HAVE BEEN TESTED, ADJUSTED AND OPERATE IN ACCORDANCE WITH APPROVED PLANS AND SPECIFICATIONS AND THE WASHINGTON STATE NONRESIDENTIAL ENERGY CODE, SECTION C408. CONTRACTOR SHALL PROVIDE A SPREAD SHEET INDICATING ROOM NUMBER, TYPE OF CONTROL (OCCUPANCY SENSOR, LOW VOLTAGE, ETC.), VERIFICATION OF PROPER WORKING ORDER, AND ADJUSTMENTS MADE.
3. CONTRACTOR SHALL CONCEAL CONDUIT WHEREVER POSSIBLE. CONTRACTOR SHALL SUBMIT TO ARCHITECT FOR REVIEW AND APPROVAL. ALL ROUTINGS OF ANY EXPOSED CONDUIT PRIOR TO ROUGH-IN. NO EXPOSED CONDUIT SHALL BE INSTALLED UNTIL APPROVAL IS PROVIDED IN WRITING FROM THE ARCHITECT. ALL EXPOSED CONDUIT SHALL BE ROUTED IN A NEAT AND WORKMANSHIP LIKE MANNER.
4. CONTRACTOR SHALL PROVIDE A HOT-WIRE OF THE SAME CIRCUIT FOR ALL LIGHT FIXTURES WITH BATTERY PACKS, SO THAT THE BATTERY PACK IS BEING CHARGED AT ALL TIMES.
5. CONTRACTOR SHALL SEE ARCHITECTURAL DRAWINGS FOR THE FIRE WALL SEPARATIONS. CONTRACTOR SHALL PROVIDE CAULKING, SEAL-OFFS, ETC. AS REQUIRED BY CODE TO RETAIN FIRE WALL SEPARATION RATINGS.
6. CONTRACTOR SHALL INCLUDE IN THE BID ALL COSTS TO HAVE A DEPARTMENT OF LABOR AND INDUSTRIES APPROVED FIRM TO EVALUATE THE INSTALLATION, SAFETY, AND COMPLIANCE WITH CODE AS REQUIRED PER W.A.C. 296-46B-901. FOR ANY EQUIPMENT SPECIFIED OR FURNISHED THAT IS NOT UL LABELED.
7. ALL WALL PENETRATIONS SHALL BE NEATLY CORE-DRILLED, CAULKED AND SEALED TO MAINTAIN FIRE, AND WATERPROOF RATING. PATCH, REPAIR, AND PAINT TO MATCH EXISTING.
8. ALL JANITOR CLOSETS, STORAGE ROOMS, MECHANICAL/ELECTRICAL ROOMS, AND BACK OF HOUSE SPACES WILL BE PROVIDED WITH A 0-12 HOUR DIGITAL TIMER SWITCH. THE TIMER SWITCH SHALL BE SET TO 1 HOUR. LIGHTS SHALL BLINK THREE TIMES 1 MINUTE PRIOR TO TURNING OFF TO WARN OCCUPANTS. OCCUPANT MAY ACTIVATE THE SWITCH FOR ADDITIONAL TIME.
9. ALL SINGLE OCCUPANT OFFICES, SMALL CONFERENCE ROOMS, WORK ROOMS, COPY ROOMS, AND SIMILAR SPACES SHALL BE PROVIDED WITH OCCUPANCY SENSORS. OCCUPANCY SENSORS SHALL TURN LIGHTS OFF AFTER 30 MINUTES OF NOT SENSING OCCUPANTS.
10. LARGE OFFICE SPACES SHALL BE CONTROLLED VIA A LOW VOLTAGE CONTROL PANEL WITH AN INTEGRAL TIME CLOCK. THE WINDOW (DAYLIGHTING) ZONES SHALL BE CIRCUITED AND CONTROLLED SEPARATELY FROM THE REMAINDER OF THE ROOM BY SEPARATE SWITCHES. THE TIME CLOCK SHALL SWEEP THE LIGHTS AT 10:00PM AND 12:00AM.
11. CORRIDORS, LOBBIES, ENTRIES, AND SIMILAR SPACES WILL BE CONTROLLED VIA THE LOW VOLTAGE CONTROL PANEL WITH INTEGRAL TIME CLOCK. THESE SPACES WILL TURN ON AT 4:00AM AND TURN OFF AT 12:00AM. SELECT FIXTURES WILL BE LEFT ON 24 HOURS FOR SECURITY PURPOSES.
12. EXTERIOR LIGHTING WILL BE CONTROLLED VIA THE LOW VOLTAGE CONTROL PANEL WITH INTEGRAL TIME CLOCK AND PHOTOSENSOR. THE PHOTOSENSOR TAKES PRECEDENCE ON THE LIGHTING CONTROL. IF THE SENSOR MEASURES ADEQUATE NATURAL LIGHT, ALL EXTERIOR LIGHTING WILL BE OFF. PARKING AREA LIGHTING WILL BE CONTROLLED VIA THE TIME CLOCK TO BE ON FROM 4:00AM TO 8:00AM AND 4:00PM TO 12:00AM. BUILDING PERIMETER LIGHTS WILL BE ON FROM 6:00AM TO 8:00AM AND 4:00PM TO 10:00PM.
13. CONTRACTOR SHALL INCLUDE IN THE BID ALL COSTS TO HAVE A DEPARTMENT OF LABOR AND INDUSTRIES APPROVED FIRM TO EVALUATE THE INSTALLATION, SAFETY, AND COMPLIANCE WITH CODE AS REQUIRED PER W.A.C. 296-46B-901. FOR ANY EQUIPMENT SPECIFIED OR FURNISHED THAT IS NOT UL LABELED.
14. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION BY CALLING THE UNDERGROUND LOCATE LINE AT 1-(800)-424-5555 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR MAINTAINING ALL LOCATE MARKS ONCE THE UTILITIES HAVE BEEN LOCATED.
15. CONTRACTOR SHALL PROVIDE TRENCHED 1"C-FIRE ALARM CONDUCTORS AND CONNECT THE POST INDICATOR VALVE TO THE FIRE ALARM SYSTEM FOR MONITORING. SEE CIVIL AND MECHANICAL DRAWINGS FOR LOCATIONS.
16. CONDUIT (OR PLENUM RATED CABLE WHERE ALLOWED) AND WIRING IS NOT SHOWN ON THE ELECTRICAL DRAWINGS FOR THE SIGNAL/SYSTEM DEVICES (FIRE ALARM, SECURITY, AND CAMERA) CONTRACTOR SHALL PROVIDE MANUFACTURER'S REQUIRED WIRING IN MINIMUM 3/4"C TO ALL SIGNAL/SYSTEM DEVICES OR PLENUM RATED CABLE WHERE ALLOWED BY CODE.
17. CONNECT FIRE/SMOKE DAMPERS SUPPLIED BY MECHANICAL CONTRACTOR AND POWERED BY 120 VAC FROM MECHANICAL PANEL THRU A CONTROL RELAY SUCH THAT DAMPERS ARE POWERED OPEN WHEN CONTROL RELAY IS ENERGIZED AND DAMPERS ARE CLOSED WHEN PANEL IS IN ALARM. PROVIDE SMOKE DETECTOR OR DUCT SMOKE DETECTOR WITHIN 5' OF EACH FIRE/SMOKE DAMPER. SEE MECHANICAL PLANS, SCHEDULES AND SPECIFICATIONS FOR FIRE/SMOKE DAMPER LOCATIONS. COORDINATE WITH MECHANICAL CONTRACTOR.
18. CONNECT ALL DOOR HOLDERS AND DOOR CLOSERS SUPPLIED WITH DOOR HARDWARE. THESE ITEMS SHALL BE POWERED BY THE FIRE ALARM CONTROL PANEL WITH 24V THRU A CONTROL RELAY SUCH THAT ALL DOORS RELEASE TO CLOSE WHEN PANEL IS IN ALARM. PROVIDE A SMOKE DETECTOR WITH AUXILIARY RELAY ON EACH SIDE OF DOOR. SEE ARCHITECTURAL PLANS, SCHEDULES AND SPECIFICATIONS FOR FIRE DOOR LOCATIONS.
19. PROVIDE FIRE ALARM CONDUIT AND WIRE CONNECTION FOR SHUTDOWN OF AIR HANDLING UNIT(S) AND EXHAUST FANS FOR SHUTDOWN ON ALARM AS REQUIRED PER THE UNIFORM MECHANICAL CODE. PROVIDE MONITOR/CONTROL MODULES FOR EXHAUST FANS LOCATED WITHIN 3 FEET OF FAN CONTROLLER, THRU ENERGIZED CONTROL RELAY SUCH THAT THE EXHAUST FANS SHUTDOWN UPON ALARM. SEE MECHANICAL PLANS, SCHEDULES AND SPECIFICATIONS FOR LOCATIONS. COORDINATE WITH MECHANICAL CONTRACTOR.
20. FURNISH DUAL CONTACT DUCT SMOKE DETECTOR, INCLUDING SAMPLING TUBE, TO MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL LOCATE AND MOUNT THE DUCT SMOKE DETECTOR ENCLOSURE/SAMPLING TUBE FOR FIRE ALARM SYSTEM SHUTDOWN. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH MECHANICAL CONTRACTOR FOR SAMPLING TUBE LENGTH AND SIZE REQUIRED. ELECTRICAL CONTRACTOR SHALL PROVIDE NECESSARY CONDUIT (OR PLENUM RATED CABLE WHERE ALLOWED), WIRING, REMOTE INDICATORS AND ACCESSORIES TO SHUTDOWN EACH UNIT UPON ACTIVATION OF THAT UNIT'S SMOKE DETECTOR(S) REQUIRED PER THE MECHANICAL CODE. CONNECTIONS SHALL BE HARDWIRED, INDEPENDENT OF ANY CONTROL SYSTEM LOGIC, SO FAILURE OF THE CONTROL SYSTEM OR LOSS OF CONTROL SYSTEM POWER WILL NOT PREVENT THE FIRE ALARM SYSTEM, SHUTDOWN OF THE UNIT. IN ADDITION TO SHUTTING DOWN THE UNIT WITH THE ALARMED SMOKE DETECTOR, ALL EQUIPMENT INTERLOCKED OR SERVED BY THAT UNIT SHALL BE OFF. OTHER UNITS SHALL ALSO SHUT OFF TO AVOID BUILDING PRESSURE DIFFERENTIALS AND SIMILAR UNDESIRABLE EFFECTS. UPON RESET OF ALARMED DEVICE, SYSTEM SHALL AUTOMATICALLY RETURN TO NORMAL. MECHANICAL CONTRACTOR TO PROVIDE TIME DELAY START OF EQUIPMENT TO PREVENT EXCESS LOAD STARTING AT THE SAME TIME. CONTRACTOR SHALL PROVIDE CONDUIT AND WIRE AND CONNECT TO FIRE ALARM CONTROL PANEL. SEE MECHANICAL DRAWINGS, SCHEDULES AND SPECIFICATIONS FOR LOCATIONS.
21. CONTRACTOR SHALL PROVIDE CONDUIT, WIRE, AND CONNECT THE EXTERIOR FIRE ALARM BELL FURNISHED BY THE SPRINKLER CONTRACTOR. THE SPRINKLER SYSTEM IS A DESIGN BUILD SYSTEM. COORDINATE FINAL LOCATION WITH THE SPRINKLER CONTRACTOR. FOR 24V SPRINKLER BELLS, CONNECT THE BELL TO THE FIRE ALARM PANEL. FOR 120V SPRINKLER BELLS, CONNECT TO A DEDICATED SPARE 120V CIRCUIT.

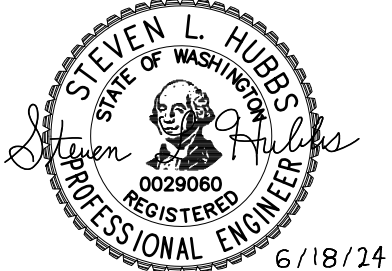


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PROJECT NAME/ADDRESS

STEP BY STEP
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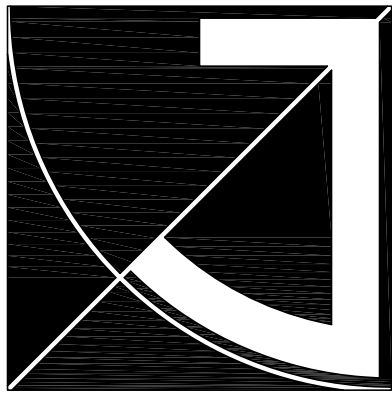
GENERAL ELECTRICAL NOTES

SHEET #

E0.2

GENERAL NOTES:

1. SEE SHEET E0.2 FOR ALL APPLICABLE GENERAL NOTES.

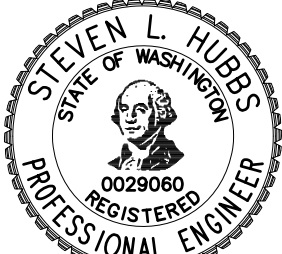


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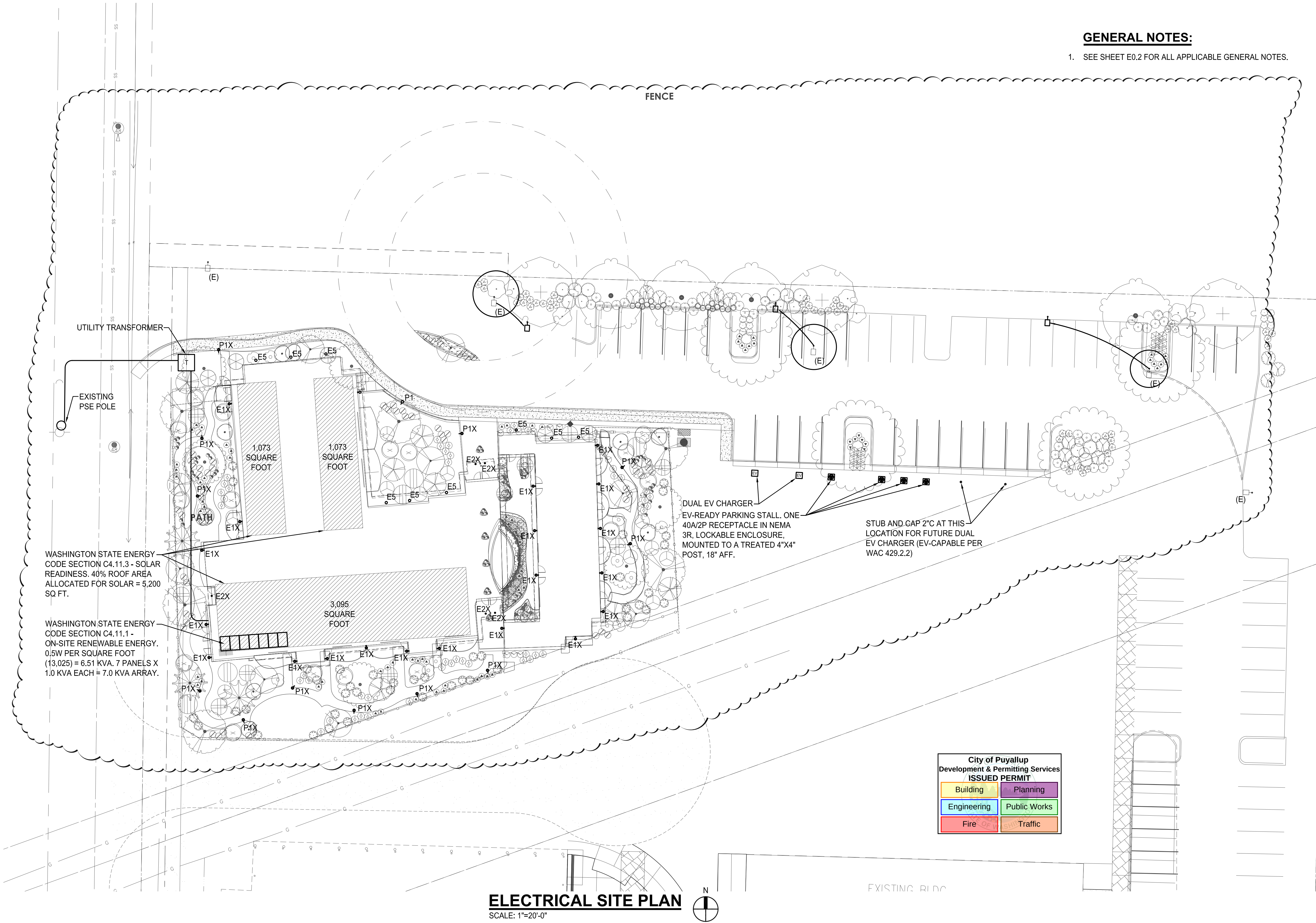
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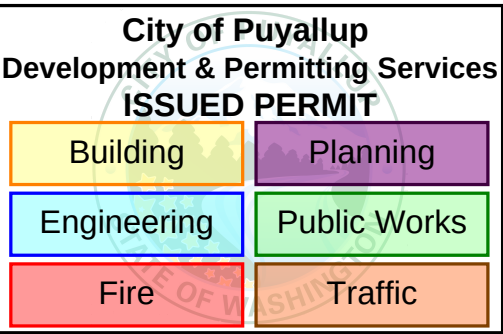
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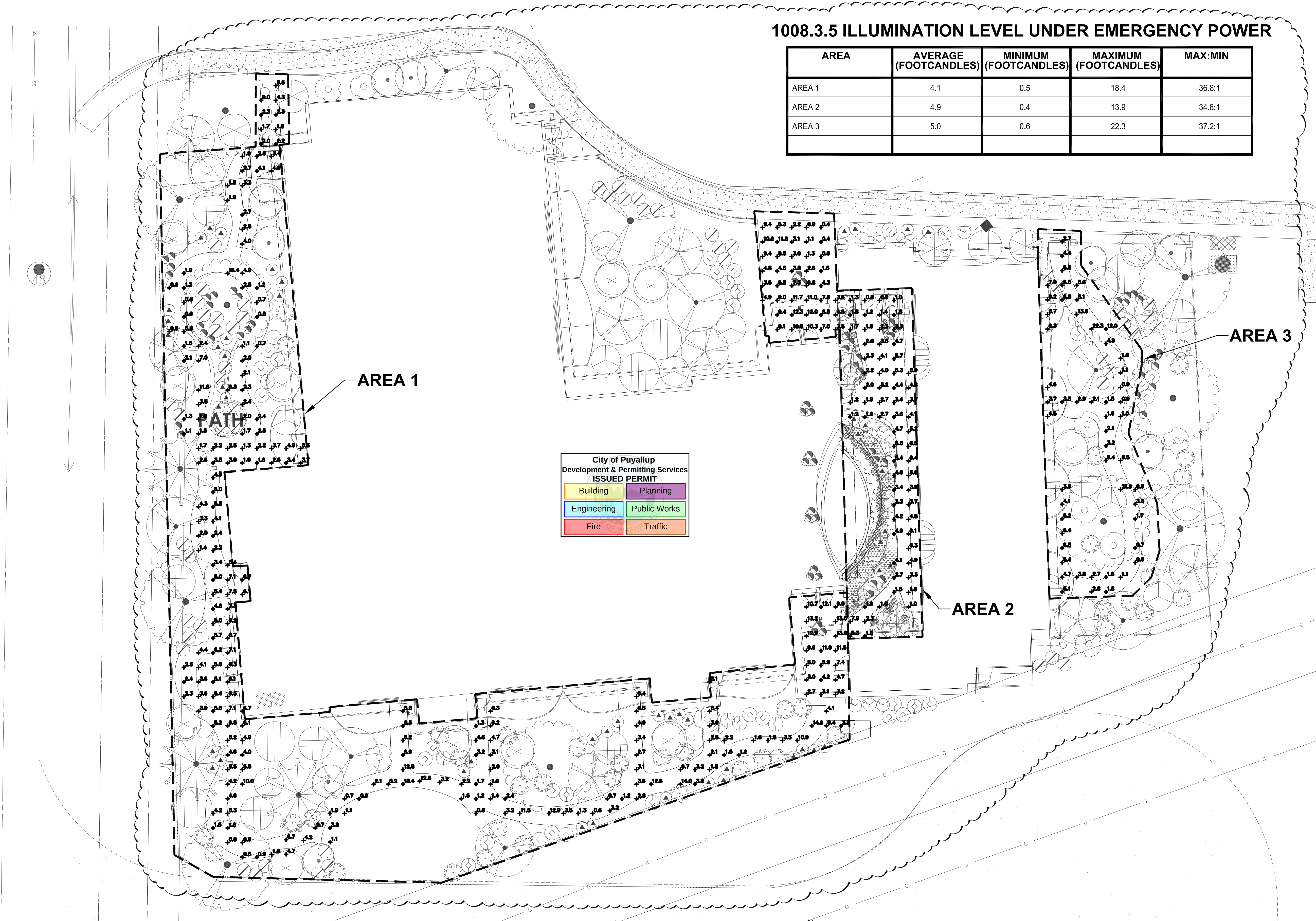
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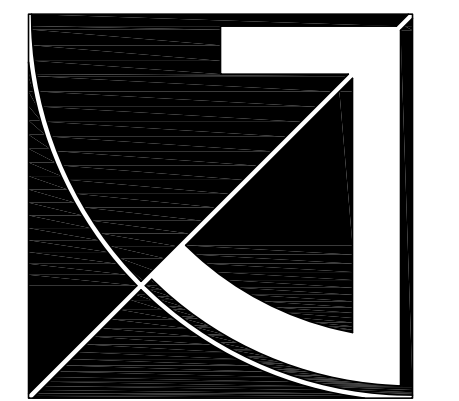
E1.0



ELECTRICAL SITE PLAN
SCALE: 1"=20'-0"



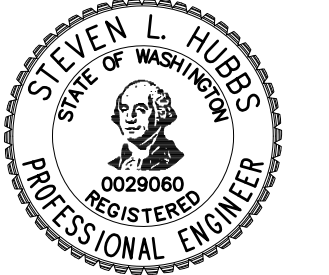




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STEVEN L. HUBBS
STATE OF WASHINGTON
0029060
REGISTERED
PROFESSIONAL ENGINEER

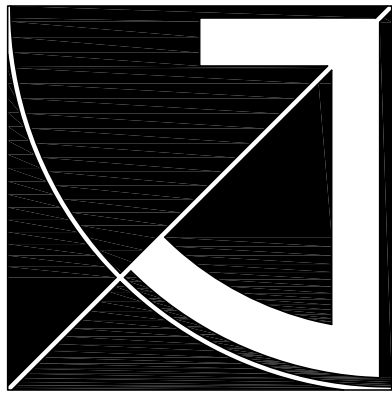
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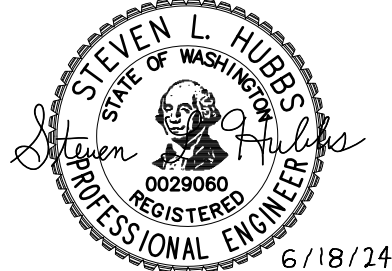


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6/18/24
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MAIN FLOOR
LIGHTING PLAN

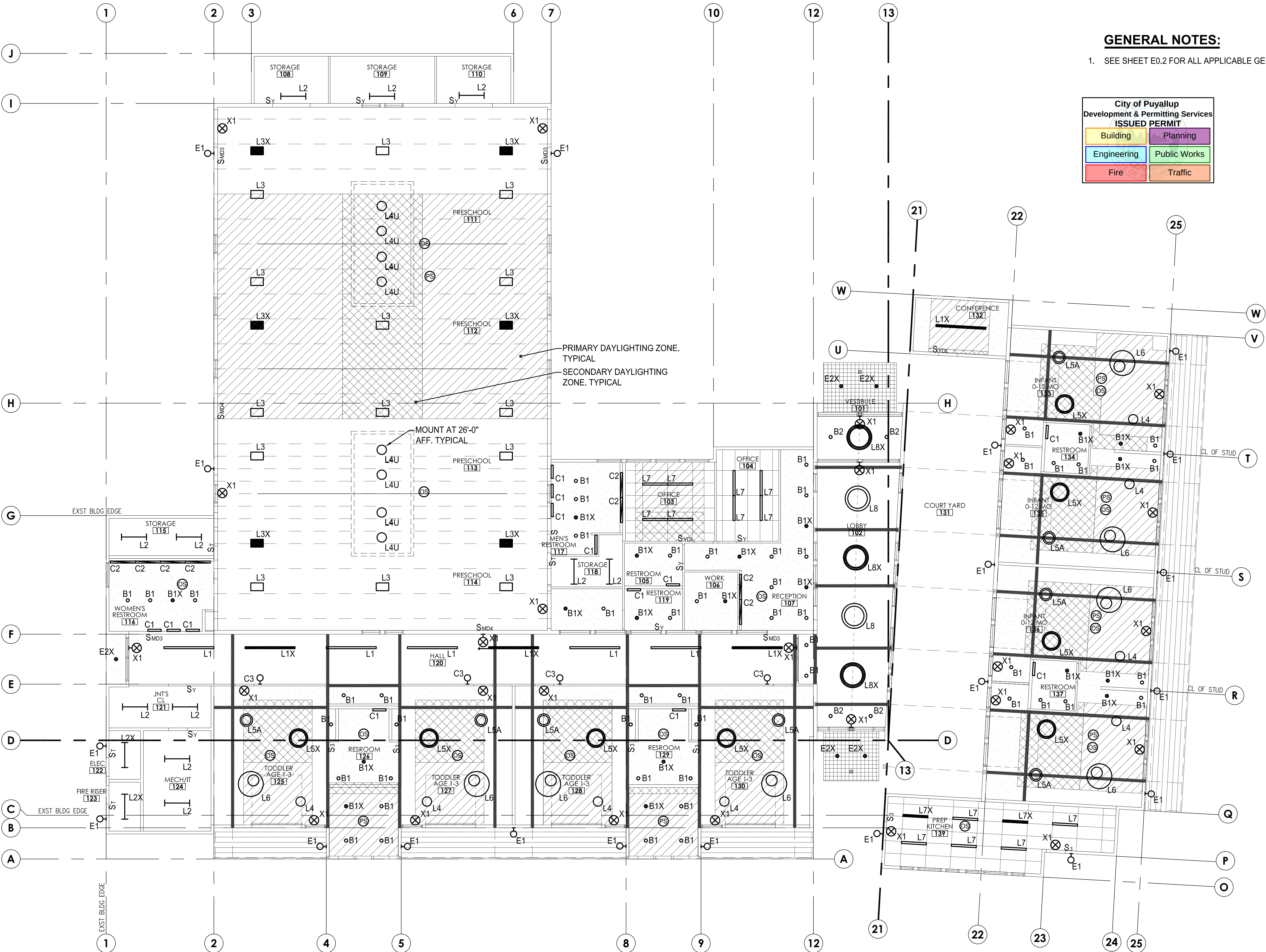
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E2.0

GENERAL NOTES:

1. SEE SHEET E0.2 FOR ALL APPLICABLE GENERAL NOTES.

City of Puyallup Development & Permitting Services ISSUED PERMIT			
Building	Planning		
Engineering	Public Works		
Fire	Traffic		

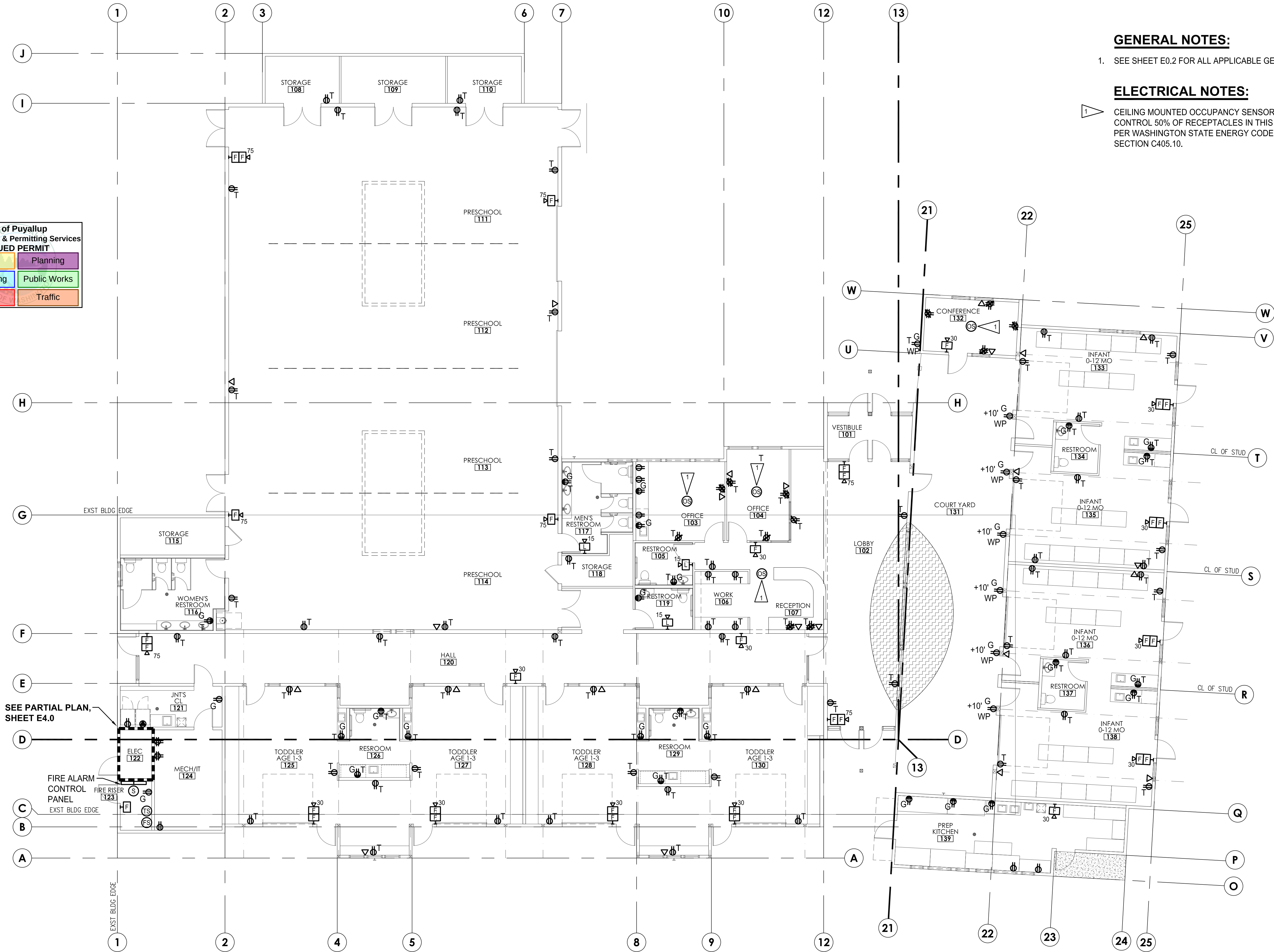


MAIN FLOOR LIGHTING PLAN

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

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic



GENERAL NOTES:

- SEE SHEET E0.2 FOR ALL APPLICABLE GENERAL NOTES.

ELECTRICAL NOTES:

CEILING MOUNTED OCCUPANCY SENSOR SHALL CONTROL 50% OF RECEPTACLES IN THIS ROOM PER WASHINGTON STATE ENERGY CODE SECTION C405.10.

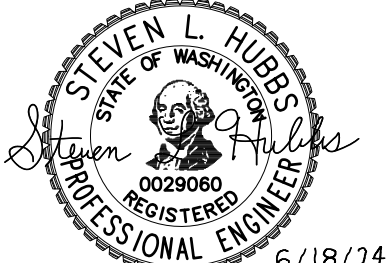


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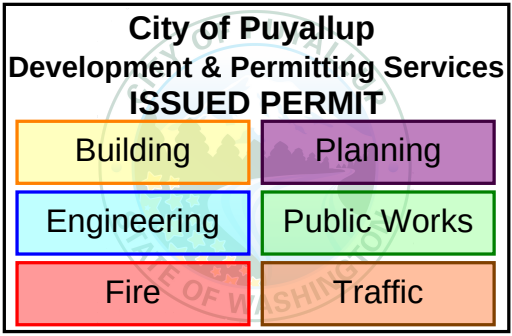
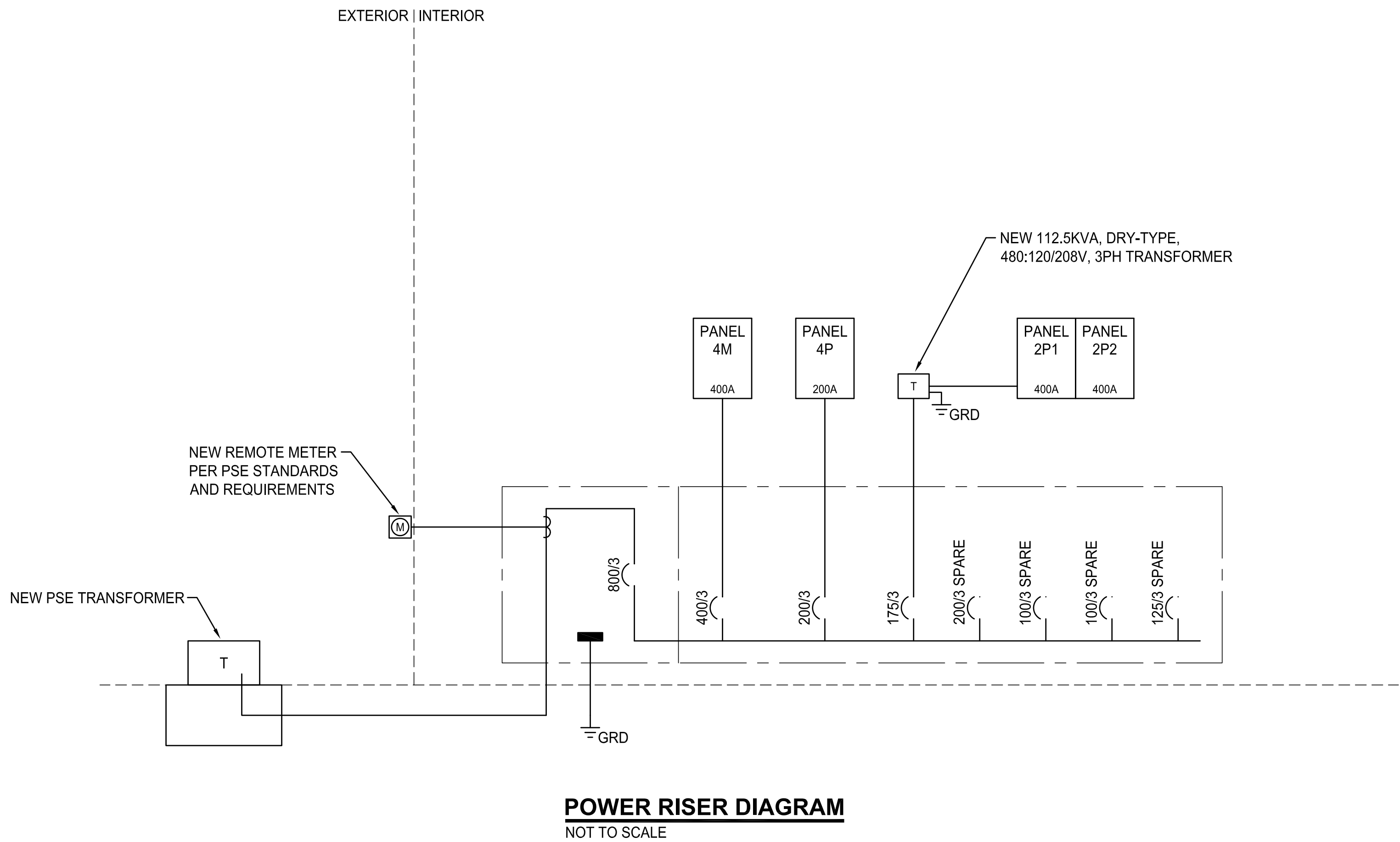
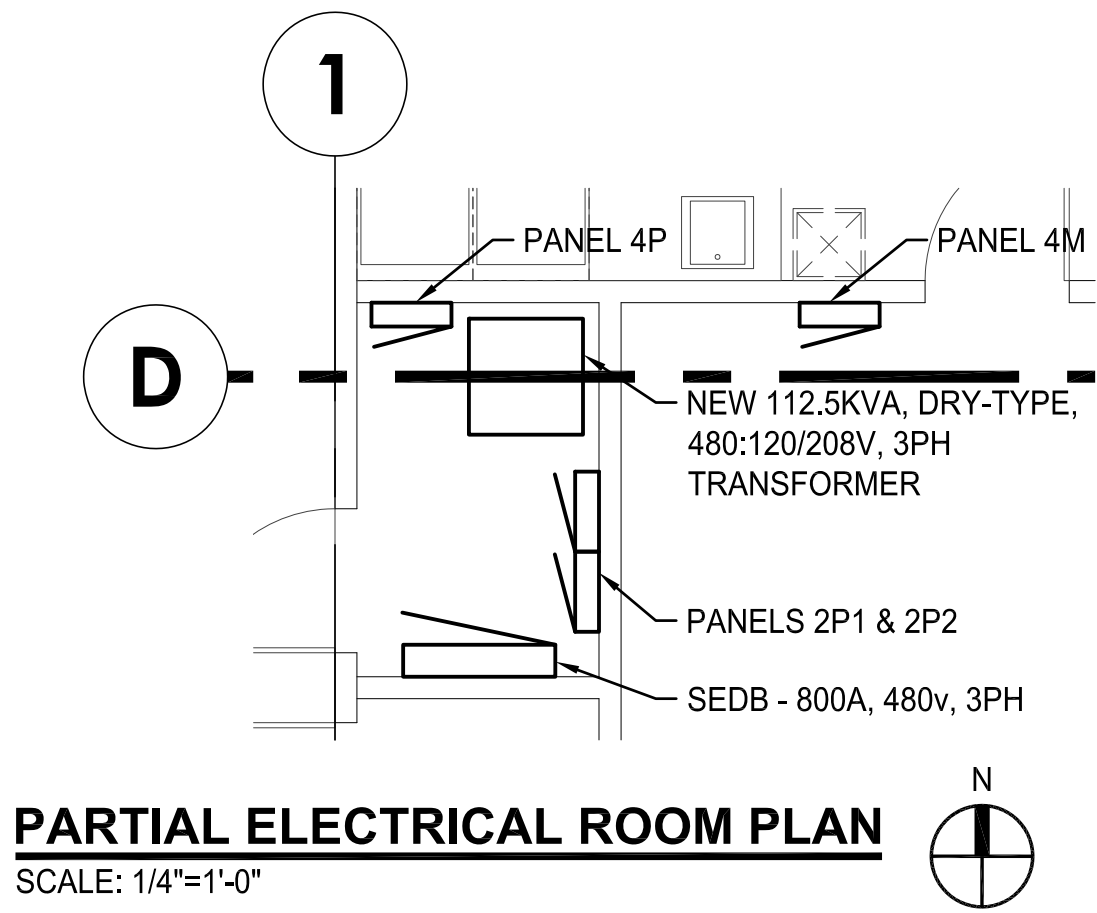
**MAIN FLOOR
POWER/SIGNAL
PLAN**

SHEET #

E3.0

MAIN FLOOR POWER/SIGNAL PLAN

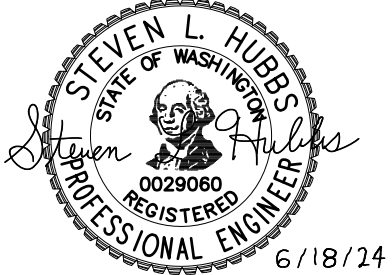
SCALE: 1/8"=1'-0"



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POWER RISER
DIAGRAM

SHEET #

E4.0

GENERAL NOTES

3. ALL WORK PERFORMED SHALL BE DONE IN STRICT ACCORDANCE TO ALL APPLICABLE MECHANICAL, BUILDING, ENERGY, PLUMBING AND LOCAL CODES, WITH AMENDMENTS.
2. WHERE USED, THE TERM "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".
3. COORDINATE MECHANICAL WORK WITH ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL AND LANDSCAPE WORK SHOWN ON OTHER CONTRACT DOCUMENTS. PROVIDE ADDITIONAL OFFSETS FOR COORDINATED INSTALLATION WHERE REQUIRED.
4. COORDINATE HVAC, PLUMBING, AND FIRE PROTECTION WORK PRIOR TO INSTALLATION. DUCTWORK AND EQUIPMENT ACCESS TAKES PRECEDENCE OVER ALL PIPING EXCEPT GRAVITY SYSTEMS FOR AVAILABLE SPACE.
5. CONTRACTOR IS RESPONSIBLE FOR CONFORMANCE WITH ALL PLANS AND SPECIFICATIONS. IF A DISCREPANCY EXISTS BETWEEN ANY PLAN AND/OR SPECIFICATION, THE MORE STRINGENT REQUIREMENT SHALL BE FOLLOWED. CONTRACTOR IS ENCOURAGED TO SUBMIT RFIs BEFORE BID TO CLARIFY PLAN AND SPECIFICATION INTENT.
6. COORDINATE EQUIPMENT CONNECTIONS WITH MANUFACTURERS' CERTIFIED DRAWINGS. COORDINATE AND PROVIDE DUCT AND PIPING TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE DUCT AND PIPING DIMENSIONS BEFORE FABRICATION.
7. CLEAN THE JOB SITE DAILY AND REMOVE FROM THE PREMISES ANY DIRT AND DEBRIS CAUSE BY THE PERFORMANCE OF THE WORK INCLUDED IN THIS CONTRACT. BEFORE SUBSTANTIAL COMPLETION, CLEAN EQUIPMENT, FIXTURES, EXPOSED DUCTS, PIPING AND SIMILAR ITEMS.
8. PROVIDE EQUIPMENT THAT FITS INTO THE SPACE ALLOTTED AND ALLOWS ADEQUATE ACCEPTABLE CLEARANCE FOR INSTALLATION, REPLACEMENT, SERVICING, AND MAINTENANCE. COORDINATE WITH OTHER TRADES TO ENSURE NO CONFLICT WITH REQUIRED CLEARANCES.
9. CONTRACTOR SHALL OBTAIN & PAY FOR ALL PERMITS AND CONSTRUCTION FEES. FURNISH FINAL CERTIFICATE TO OWNER SHOWING COMPLIANCE WITH CODE REQUIREMENTS.
10. ALL NEW PENETRATIONS IN CONCRETE SLABS REQUIRE CAREFUL COORDINATION WITH CAREFUL COORDINATION WITH EXISTING POST TENSION ELEMENTS OR REBAR. COORDINATE LOCATIONS OF NEW COVE DRILLS WITH ARCHITECT AND GC. FOLLOW CLEARANCE GUIDANCE FOR COVE DRILL TO STRUCTURAL ELEMENTS AS NOTED IN STRUCTURAL ELEMENTS AS NOTED IN STRUCTURAL DOCUMENTS. DO NOT IMPACT REBAR OR PAST TENSION ELEMENTS W/ CORE DRILL.
11. REFER TO TYPICAL DETAILS PROVIDED IN THIS DRAWING SET FOR DUCTWORK, PIPING, AND EQUIPMENT INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR CONFORMANCE WITH DETAILS.
12. A SHORT DASH IN A SCHEDULE TABLE CELL INDICATES THAT THE COLUMN HEADING IS NOT USED OR NOT APPLICABLE TO THAT SCHEDULED ITEM.
13. ALL PIPING & DUCTWORK IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN A FURRED CHASE OR ABOVE THE HARD LID CEILING. COORDINATE WITH ARCHITECTURAL DOCUMENTS FOR FURRING & CHASE LOCATIONS & SIZES.
14. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA 70 STANDARDS AND LOCAL REQUIREMENTS.
15. ALL FIELD WIRING SHALL REQUIRE AN ELECTRICAL PERMIT AND SHALL BE PERFORMED BY A LICENSED ELECTRICIAN.
16. COORDINATE ELECTRICAL REQUIREMENTS SHOWN ON PLANS AND SPECS WITH AVAILABLE VOLTAGES AND PANEL SPACE AS WELL AS WITH ELECTRICAL ENGINEER AND ELECTRICAL CONTRACTOR. IF DISCREPANCIES EXIST BETWEEN THESE PLANS AND AVAILABLE ONSITE ELECTRICAL UTILITIES, DO NOT PURCHASE OR INSTALL EQUIPMENT BEFORE FIRST CONTACTING MEL AND RECEIVING INSTRUCTION.
17. PROVIDE 4" MINIMUM CONCRETE BASES (HOUSEKEEPING PADS) UNDER FLOOR MOUNTED MECHANICAL EQUIPMENT. THIS INCLUDES, BUT IS NOT LIMITED TO PUMPS, EXPANSION TANKS, WATER HEATERS, AND STORAGE TANKS. COMPLY WITH REQUIREMENTS FOR EQUIPMENT BASES AND FOUNDATIONS SPECIFIED IN DIVISION 03.
18. LOCATE VALVES, WATER HAMMER ARRESTERS, CLEANOUTS, DAMPERS, CONTROLS AND SIMILAR COMPONENTS SO THAT THEY ARE ACCESSIBLE. PROVIDE ACCESS DOORS FOR MECHANICAL EQUIPMENT INSTALLED BEHIND WALLS, ABOVE INACCESSIBLE CEILINGS AND BELOW FLOORS. COORDINATE ACCESS DOOR LOCATIONS WITH ARCHITECT/ENGINEER.
19. ACCESS PANELS SHALL BE 16 GA. STEEL. FLUSH TYPE ACCESS DOOR WITH CONCEALED HINGE AND SLOT SCREWDRIVER TYPE CAM LATCH. PROVIDE FACTORY PRIMED IN PAINTED SURFACE AREAS FOR FIELD PAINTING. PROVIDE STAINLESS STEEL FOR ALL OTHER AREAS. PROVIDE UL LISTED AND LABELED DOOR WHERE FIRE-RESISTANCE RATING IS INDICATED ON DRAWINGS. ACCESS DOOR SHALL BE SIZED SO THAT ADJACENT EQUIPMENT IS ACCESSIBLE. PROVIDE ACUDOR, ELMODR, MILCOR, OR APPROVED.
20. INSTALL TAG ON CEILING GRID FRAME TO INDICATE LOCATION AND TYPE OF EQUIPMENT THAT REQUIRES MAINTENANCE.

PLUMBING:

1. DOMESTIC WATER TUBE, PIPE, FITTINGS, JOINING MATERIALS, SPECIAL TIES, PLUMBING EQUIPMENT, PLUMBING FIXTURES, PLUMBING FITTINGS AND ALL OTHER APPURTENANCES IN CONTACT WITH DRINKING WATER SHALL BE LEAD-FREE EXCEPT THOSE EXPLICITLY EXEMPTED IN SECTION 3874 OF THE SAFE WATER DRINKING ACT. LEAD-FREE SHALL MEAN (A) NOT CONTAINING MORE THAN 0.2 PERCENT LEAD WHEN USED WITH RESPECT TO SOLDER AND FLUX; AND (B) NOT MORE THAN A WEIGHTED AVERAGE OF 0.25 PERCENT LEAD WHEN USED WITH RESPECT TO WETTED SURFACES OF DOMESTIC WATER TUBE, PIPE, FITTINGS, JOINING MATERIALS, SPECIALTIES, PLUMBING EQUIPMENT, PLUMBING FIXTURES, AND PLUMBING FITTINGS.
2. PROVIDE WATER HAMMER ARRESTORS IN DOMESTIC WATER PIPING IN ACCORDANCE WITH PD-WH201.
3. INSULATE HOT AND COLD WATER PER WASHINGTON STATE ENERGY CODE C403.10.3.
4. CIRCULATION SYSTEM SHALL AUTOMATICALLY DISABLE PUMP WHEN THE WATER IN THE CIRCULATION LOOP TEMPERATURE REACHES THE SUPPLY TEMPERATURE AND SHALL NOT ENABLE PUMP UNTIL CIRCULATION LOOP TEMPERATURE IS A MINIMUM OF 10 F LOWER THAN SUPPLY TEMPERATURE PER WSEC C404.7.1.
5. DISCHARGE TEMPERATURE OF PUBLIC LAVATORIES SHALL BE 104 DEGREES FAHRENHEIT.
6. PROVIDE R-10 INSULATED SURFACE UNDER ELECTRIC WATER HEATERS.
7. VALVES, EXPANSION FITTINGS/LOOPS, AND PIPING SPECIALTIES SHALL BE FULL SIZE OF PIPE UNLESS NOTED OTHERWISE.

NON-STRUCTURAL MECHANICAL COMPONENTS

1. HANGERS AND SEISMIC BRACING FOR THE MECHANICAL SYSTEMS SHALL BE DESIGNED AND PROVIDED BY THE MECHANICAL CONTRACTOR. REFER TO CONTRACTOR SHOP DRAWINGS FOR LOCATIONS OF EQUIPMENT AND HUNG MECHANICAL SYSTEMS. THE MECHANICAL CONTRACTOR SHALL COORDINATE THE SUPPORT SYSTEMS AND DESIGN LOADS FOR HUNG MECHANICAL SYSTEMS WITH THE GENERAL CONTRACTOR AND OTHER TRADES THAT MAY BE IMPACTED.

APPLICABLE CODES

AS ADOPTED BY THE CITY OF PUYALLUP, WA

INTERNATIONAL MECHANICAL CODE, IMC 2021
INTERNATIONAL BUILDING CODE, IBC 2021
WASHINGTON STATE ENERGY CODE, WSEC 2021
UNIFORM PLUMBING CODE, UPC 2021

AND ASSOCIATED WASHINGTON ADMINISTRATIVE CODE AMENDMENTS

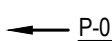
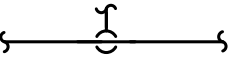
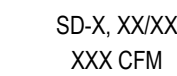
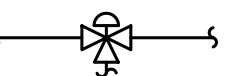
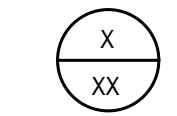
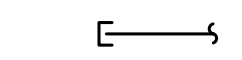
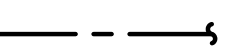
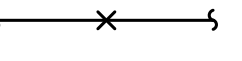
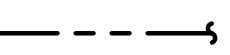
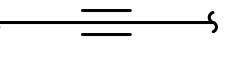
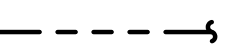
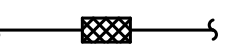
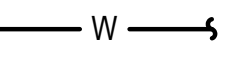
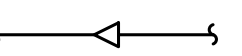
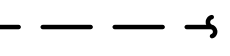
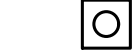
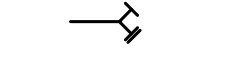
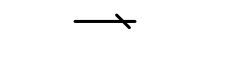
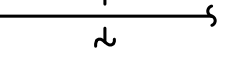
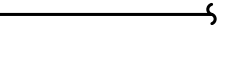
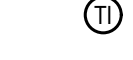
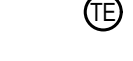
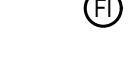
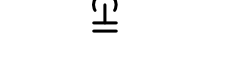
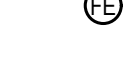
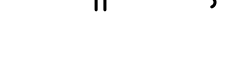
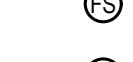
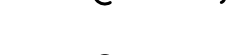
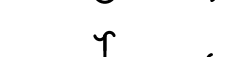
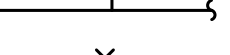
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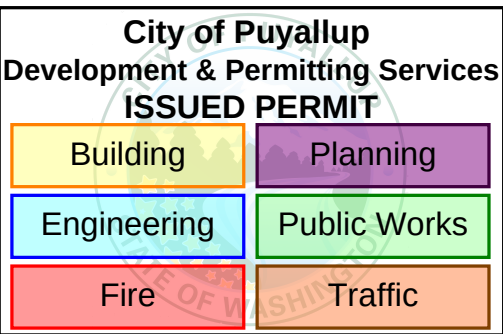
1. COORDINATE LOCATION FOR BUILDING WATER SERVICE ROOM.
2. PROVIDE HUB DRAIN AND FLOOR DRAIN IN THE FIRE SPRINKLER ROOM.
3. PROVIDE A WATER HEATING PLANT SERVING THE ENTIRE BUILDING.
4. PROVIDE RAINLEADER AND OVERFLOW PIPE ROUTING.
5. PROVIDE FULL DWV DESIGN FOR ALL FIXTURES SHOWN ON PLAN.

SCOPE OF WORK

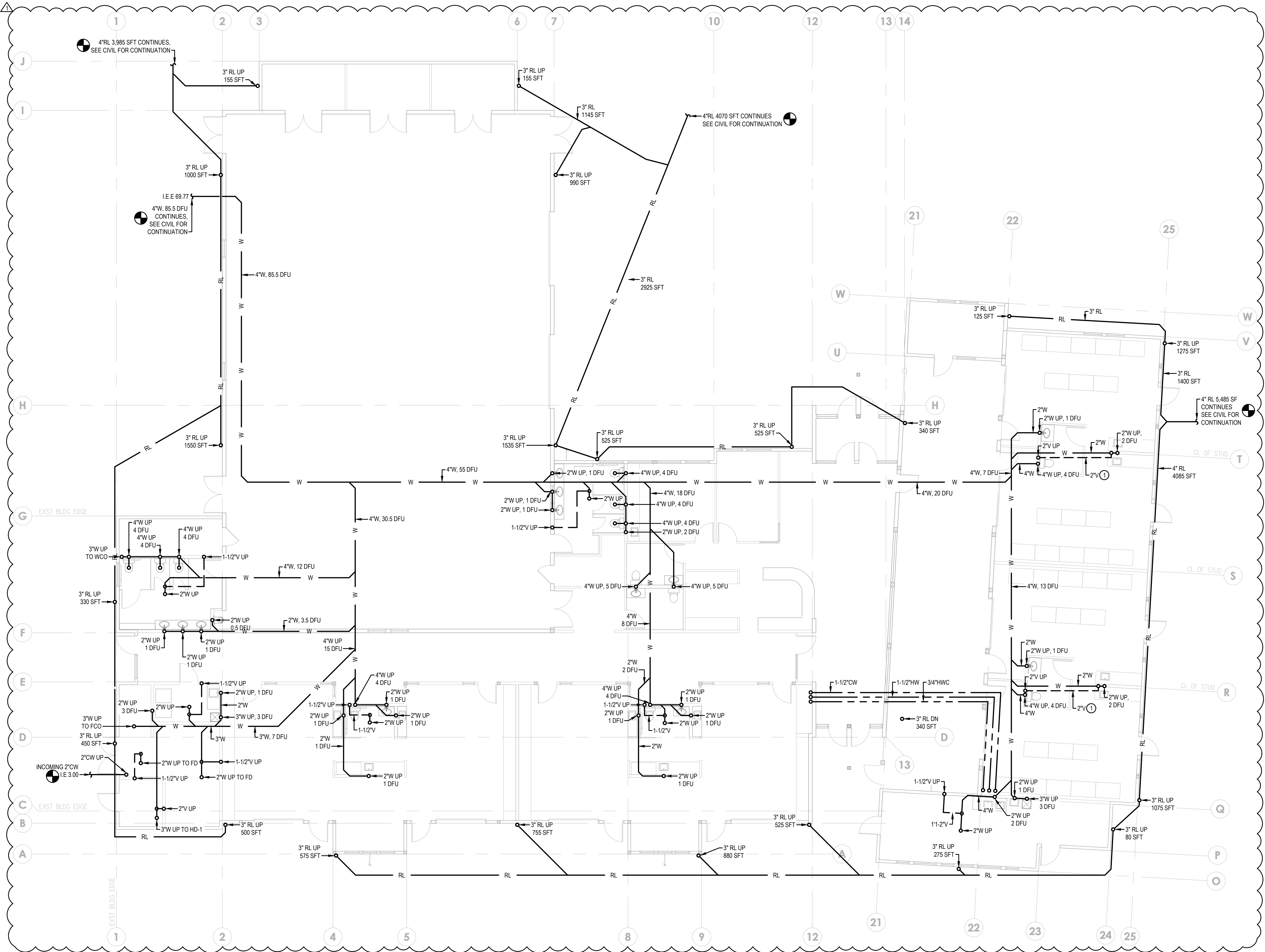
ABBREVIATIONS

AE	EXISTING
AABC	AMERICAN AIR BALANCE COUNCIL
AFF	ABOVE FINISHED FLOOR
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
AG	AIR GAP
AGA	AMERICAN GAS ASSOCIATION
AHRI	AIR CONDITIONING, HEATING, & REFRIGERATION INSTITUTE
AMPI	AMPERAGE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AW	ACID WASTE
BAS	BUILDING AUTOMATION SYSTEM
BHP	BRAKE HORSEPOWER
CB	CATCH BASIN
CFH	CUBIC FEET PER HOUR
CI	CAST IRON
CO	CLEANOUT
CONF/G	CONFIGURATION
CSA	CANADIAN STANDARDS ASSOCIATION
CW	COLD WATER
DB	DRY BULB
DC	DOUBLE CHECK
DDC	DIRECT DIGITAL CONTROLS
dF	DEGREES FAHRENHEIT
DFU	DRAINAGE FIXTURE UNIT
DIA	DIAMETER
DN	DOWN
DX	DIRECT EXPANSION
EFF	EFFICIENCY
BSP	EXTERNAL STATIC PRESSURE
ETC	ET CETERA
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FLA	FULL LOAD AMPS
FM	FACTORY MANUAL
FPM	FEET PER MINUTE
FS	FLOOR SINK
FT	FEET
GA	GAUGE
GAL	GALLON
GPF	GALLONS PER FLUSH
GPM	GALLONS PER HOUR
GPH	GALLONS PER MINUTE
HB	HOSE BIBB
HP	HORSEPOWER
HR	HOUR
HW	HOT WATER
HWC	HOT WATER CIRCULATING
IBC	INTERNATIONAL BUILDING CODE
IFGC	INTERNATIONAL FUEL GAS CODE
IMC	INTERNATIONAL MECHANICAL CODE
IN	INCH
IPS	IRON PIPE SIZE
LAT	LATERAL
LB/LBS#	POUND/ POUNDS
LF	LINEAR FEET
LVL	LEVEL
MAX	MAXIMUM
MBH	MILLIONS OF BRITISH THERMAL UNITS PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MAXIMUM CIRCUIT CAPACITY
MERV	MINIMUM EFFICIENCY REPORTING VALUE
MFG/MFR	MANUFACTURER
MIN	MINIMUM
MOPP/MOP	MAXIMUM OVER CURRENT PROTECTION
MSS	MANUFACTURER'S STANDARDIZATION SOCIETY
NEBB	NATIONAL ENVIRONMENTAL BALANCING BUREAU
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
OC	ON CENTER
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NO	NUMBER
NOM	NOMINAL
NPCW	NON-POTABLE COLD WATER
NPHW	NON-POTABLE HOT WATER
NPHWC	NON-POTABLE HOT WATER CIRC
NPS	NOT TO SCALE
PH	PHASE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH, GAUGE
PVC	POLYVINYL CHLORIDE
RP	REDUCED PRESSURE
RPM	REVOLUTIONS PER MINUTE
SD	STORM DRAIN
SF	SQUARE FEET
SPEC	SPECIFICATION
STM	STEAM
THRD	THREADED
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UPC	UNIFORM PLUMBING CODE
V	VENTI/ VOLT
VOLT	VOLTAGE
VRF	VARIABLE REFRIGERANT FLOW
VTR	VENT TO ROOF
VAV	VARIABLE AIR VOLUME
VERT	VERTICAL
W/	WITH
W	WASTE
W.C.	WATER COLUMN
WCO	WALL CLEANOUT
WIN	WINTER
WSEC	WASHINGTON STATE ENERGY CODE
WSFU	WATER SUPPLY FIXTURE UNITS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	EQUIPMENT ABBREVIATION AND NUMBER (TAG)		BRANCH-BOTTOM CONNECTION
	AIR TERMINAL TYPE, SIZE, AND CFM		3-WAY CONTROL VALVE
	DETAIL NUMBER DRAWING NUMBER WHERE DRAWN		CAP
	DOMESTIC COLD WATER (CW)		PIPE ANCHOR
	DOMESTIC HOT WATER (HW)		PIPE GUIDE
	DOMESTIC HOT WATER CIRCULATING (HWC)		FLEXIBLE CONNECTION (PIPE)
	SOIL, WASTE (S, W)		REDUCER
	VENT (V), OR HIDDEN BELOW WASTE		SUCTION DIFFUSER
	EXISTING PIPING		FLOOR DRAIN
	DRAIN VALVE		FLOOR FUNNEL DRAIN
	WALL HYDRANT		FLOOR SINK
	CROSSING LINES, NON CONNECTING		TRAP PRIMER WITH ACCESS PANEL
	PIPE CONTINUATION		DRAIN
	FLOW DIRECTION		TEMPERATURE INDICATOR
	PUMP		TEMPERATURE ELEMENT
	WASTE/ VENT UP, SURFACE/ FLOOR CLEANOUT (SCO/FCO)		FLOW INDICATOR
	WALL CLEANOUT		FLOW ELEMENT
	CLEANOUT (CO)		FLOW SWITCH
	P-TRAP		CONDUCTIVITY SENSOR
	PIPE DOWN		PRESSURE INDICATOR
	PIPE UP		PRESSURE ELEMENT
	BRANCH-TOP CONNECTION		DIFFERENTIAL PRESSURE ELEMENT
	WATER HAMMER ARRESTOR		HUMIDISTAT (HSTAT)
	PLUMBING STOP		HUMIDITY ELEMENT
			LOW WATER CUT OFF SWITCH



 MIDDLEBROOK ENGINEERING, LLC 6216 174TH AVE SW LONGBRANCH, WA 98351 253.765.8292		
 BRIAN SCOTT MIDDLEBROOK STATE OF WASHINGTON 52770 REGISTERED PROFESSIONAL ENGINEER		
9/18/2024		
PROJECT TITLE LEGEND, ABBREVIATIONS, AND GENERAL NOTES		
PROJECT STEP BY STEP ELC 3303 8TH AVE SE PUYALLUP, WA 98372		
REVISIONS		
NO	DESCRIPTION	DATE
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CHECKED BY:		BSM
PROJECT MANAGER:		RC
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PP001		



GENERAL NOTES

- 1. PIPING IS SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE ADDITIONAL FITTINGS AND OFFSETS AS REQUIRED TO INSTALL A COMPLETE AND FUNCTIONING SYSTEM.
- 2. THIS DRAWING WAS CREATED FROM AS BUILT DOCUMENTATION AND FIELD NOTES AND MAY NOT REPRESENT ACTUAL AS BUILT CONDITIONS. CONTRACTOR TO VERIFY SCOPE PRIOR TO COMMENCING WORK.
- 3. WASTE PIPING 4" AND LARGE SHALL BE SLOPED AT 1/8" PER FOOT. WASTE PIPING 3" AND SMALLER SHALL BE SLOPED AT 1/4" PER FOOT.
- 4. LINES AND EQUIPMENT SHOWN DARK IS NEW WORK. LINES AND EQUIPMENT SHOWN LIGHT IS EXISTING TO REMAIN.
- 5. PLANS ASSUME ELEVATION OF FLOOR IS SET AT 0 FEET. COORDINATE FINAL ELEVATIONS WITH STRUCTURAL AND CIVIL PLANS.

PLAN NOTES

- ① ROUTE VENT PIPING FROM ISLAND FIXTURE 1" MINIMUM ABOVE WASTE.

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Engineering

Public Works

Fire

Traffic

MIDDLEBROOK
ENGINEERING, LLC
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BRIAN SCOTT MIDDLEBROOK
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
52770
9/18/2024

FOUNDATION PLAN

PROJECT
STEP BY STEP ELC
3303 8TH AVE SE
PUYALLUP, WA 98372

REVISIONS

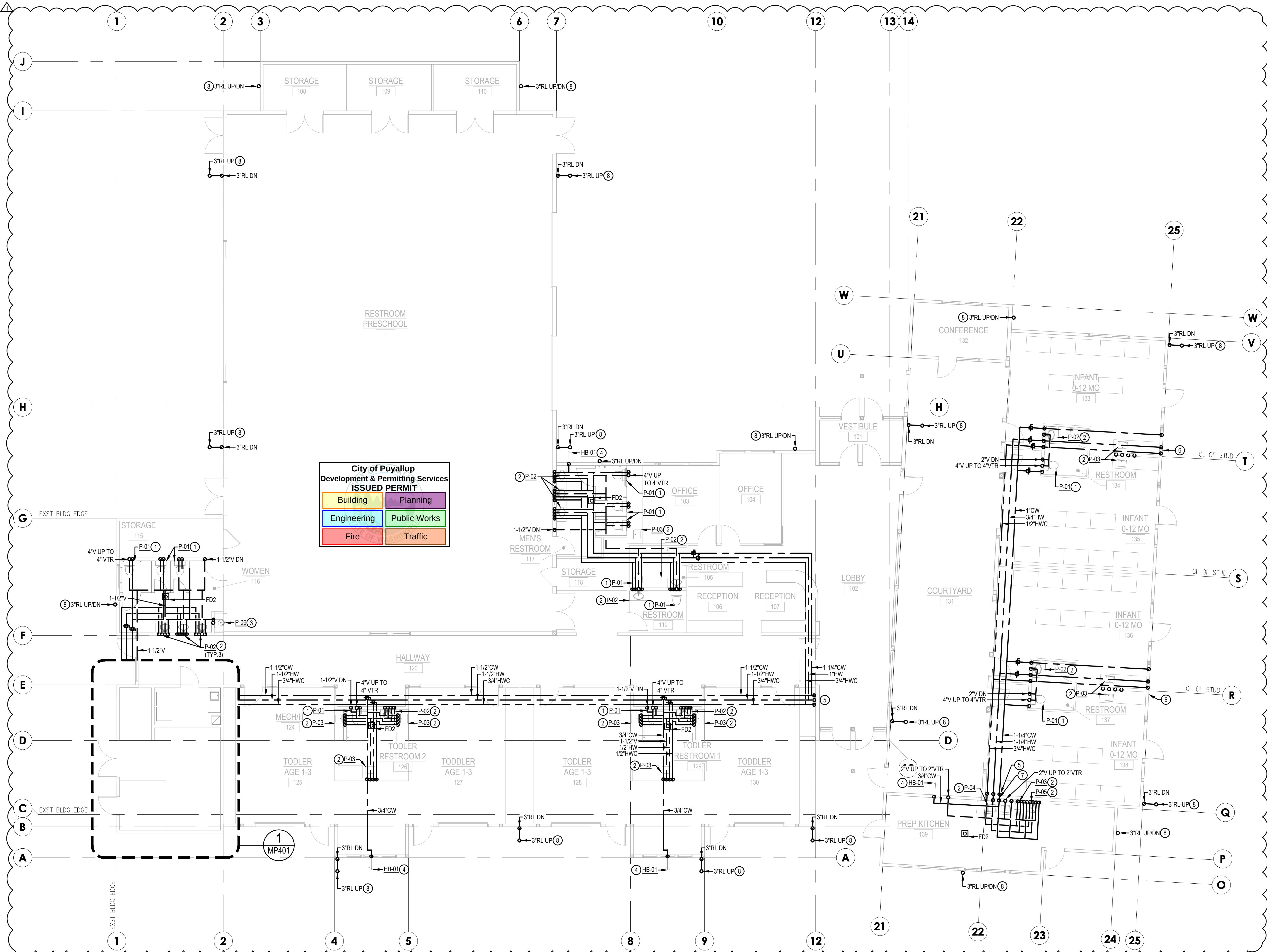
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PLUMBING FLOOR PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. PIPING IS SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE ADDITIONAL FITTINGS AND OFFSETS AS REQUIRED TO INSTALL A COMPLETE AND FUNCTIONING SYSTEM.
2. THIS DRAWING WAS CREATED FROM AS BUILT DOCUMENTATION AND FIELD NOTES AND MAY NOT REPRESENT ACTUAL AS BUILT CONDITIONS. CONTRACTOR TO VERIFY SCOPE PRIOR TO COMMENCING WORK.
3. WASTE PIPING 4" AND LARGE SHALL BE SLOPED AT 1/8" PER FOOT. WASTE PIPING 3" AND SMALLER SHALL BE SLOPED AT 1/4" PER FOOT.
4. LINES AND EQUIPMENT SHOWN DARK IS NEW WORK. LINES AND EQUIPMENT SHOWN LIGHT IS EXISTING TO REMAIN.
5. PLANS ASSUME ELEVATION OF FLOOR IS SET AT 0 FEET. COORDINATE FINAL ELEVATIONS WITH STRUCTURAL AND CIVIL PLANS.

PLAN NOTES

- 1 4"W, 2"V, 3/4"CW
- 2 2"W, 1-1/2"V, 1/2"CW, 1/2"HW
- 3 2"W, 1-1/2"V, 1/2"CW
- 4 3/4"CW
- 5 HW, CW, AND HWC ROUTED UNDERGROUND THROUGH CHASE.
- 6 ROUTED 3/4"CW, 3/4"HW, 1/2"HWC DOWN FURRED OUT WALL AND SERVE ISLAND FIXTURES FROM BENEATH COUNTER.
- 7 3/4"CW, 3/4"HW, 1/2"HWC
- 8 GUTTER AND DOWNSPOUT BY OTHERS.

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STATE OF WASHINGTON
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PROFESSIONAL ENGINEER
92770
9/18/2024

SHEET TITLE

PLUMBING FLOOR PLAN

PROJECT
STEP BY STEP ELC
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PUYALLUP, WA 98372

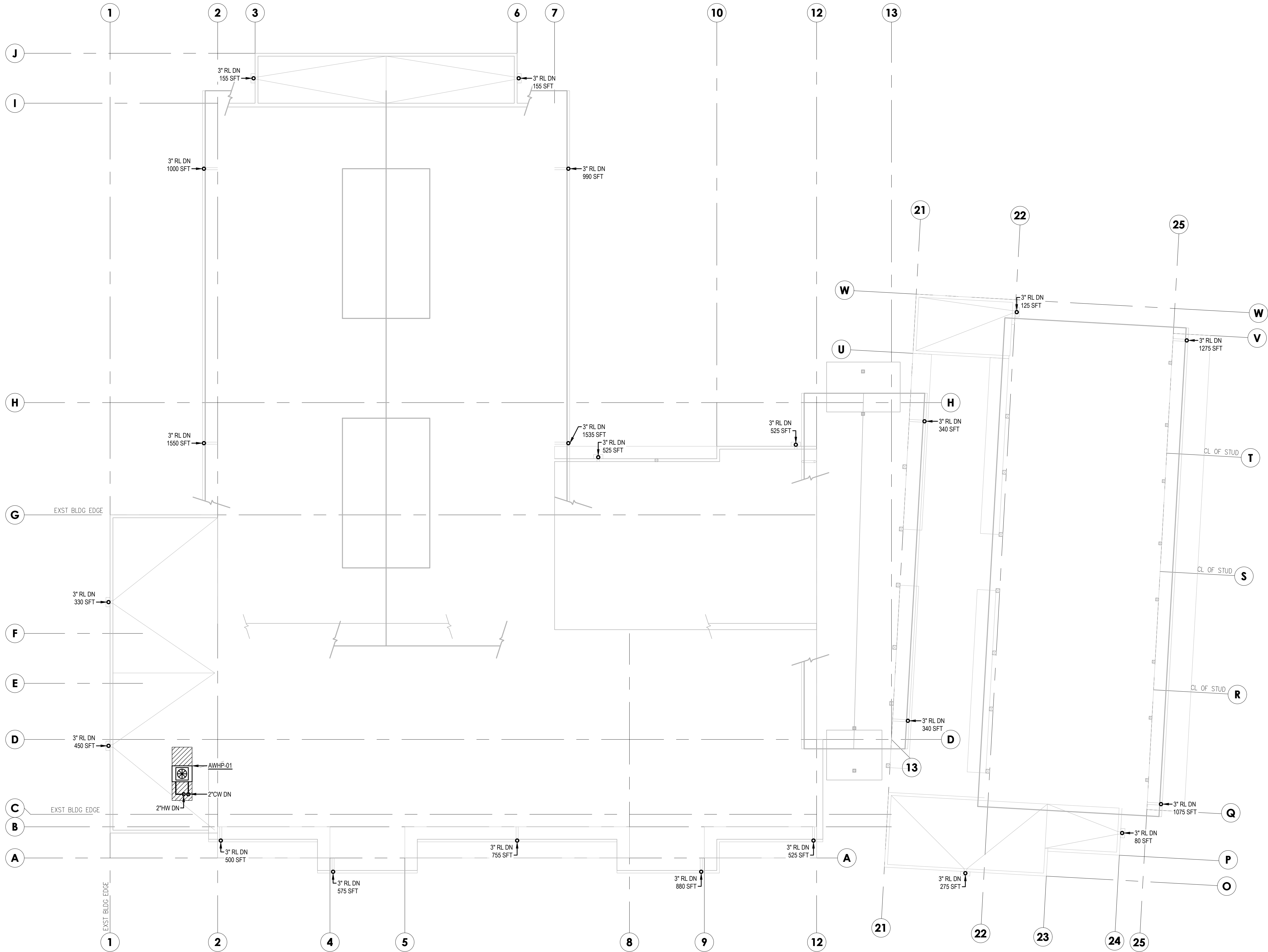
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PP102



- GENERAL NOTES
1.

PIPING IS SCHEMATIC IN NATURE. CONTRACTOR TO PROVIDE ADDITIONAL FITTINGS AND OFFSETS AS REQUIRED TO INSTALL A COMPLETE AND FUNCTIONING SYSTEM.
2.

THIS DRAWING WAS CREATED FROM AS BUILT DOCUMENTATION AND FIELD NOTES AND MAY NOT REPRESENT ACTUAL AS BUILT CONDITIONS. CONTRACTOR TO VERIFY SCOPE PRIOR TO COMMENCING WORK.
3.

WASTE PIPING 4" AND LARGE SHALL BE SLOPED AT 1/8" PER FOOT. WASTE PIPING 3" AND SMALLER SHALL BE SLOPED AT 1/4" PER FOOT.
4.

LINES AND EQUIPMENT SHOWN DARK IS NEW WORK. LINES AND EQUIPMENT SHOWN LIGHT IS EXISTING TO REMAIN.
5.

PLANS ASSUME ELEVATION OF FLOOR IS SET AT 0 FEET. COORDINATE FINAL ELEVATIONS WITH STRUCTURAL AND CIVIL PLANS.

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BRIAN SCOTT MIDDLEBROOK

STATE OF WASHINGTON

REGISTERED

PROFESSIONAL ENGINEER

92770

9/18/2024

PLUMBING ROOF PLAN

SHEET TITLE

PROJECT

STEP BY STEP ELC

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PUYALLUP, WA 98372

REVISIONS

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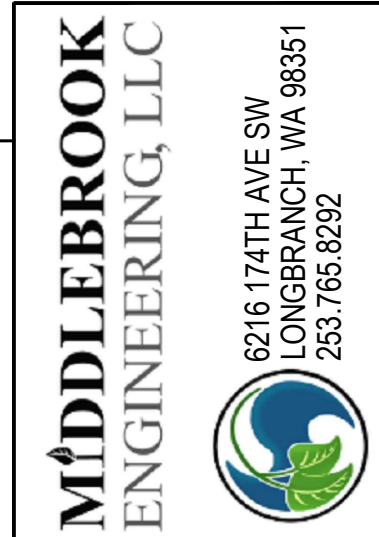
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PP103



- ① 2"W, 1-1/2"V, 1/2"CW, 1/2"H/W
- ② 2"CW, 2"H/W, UP TO AWHP.
- ③ 3"W, 2"V, 1/2"CW, 1/2"H/W
- ④ GUTTER AND DOWNSPOUT BY OTHERS.



SHEET TITLE

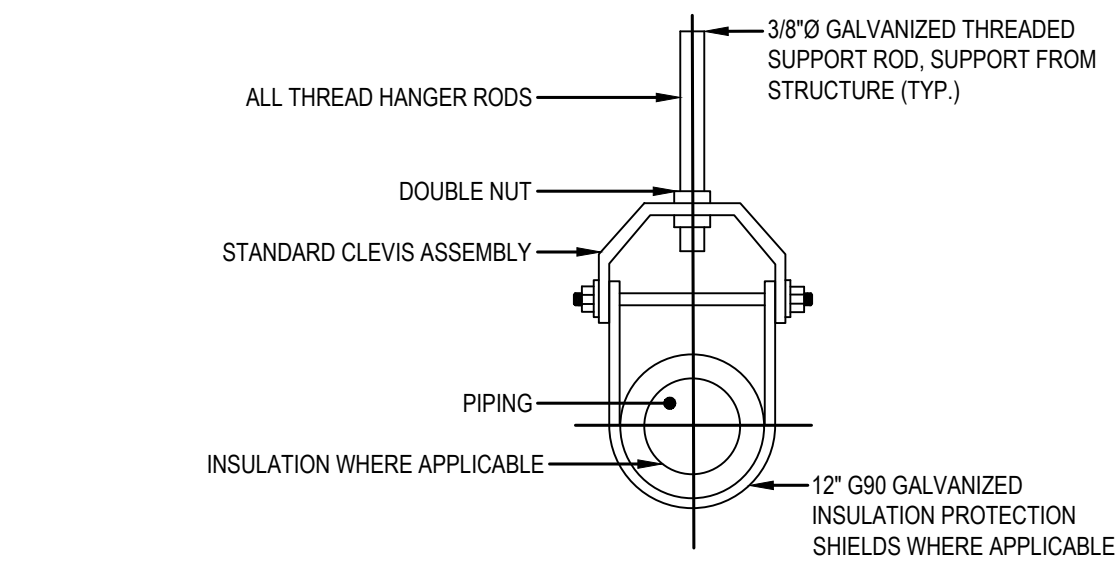
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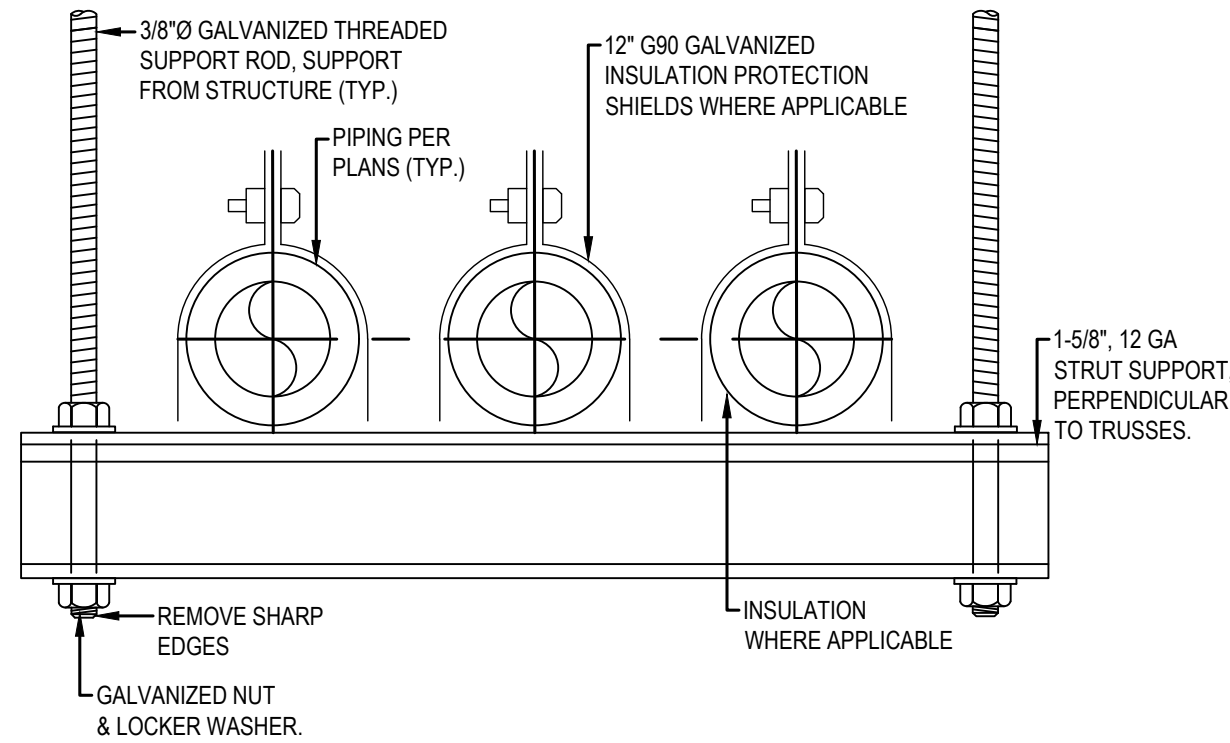
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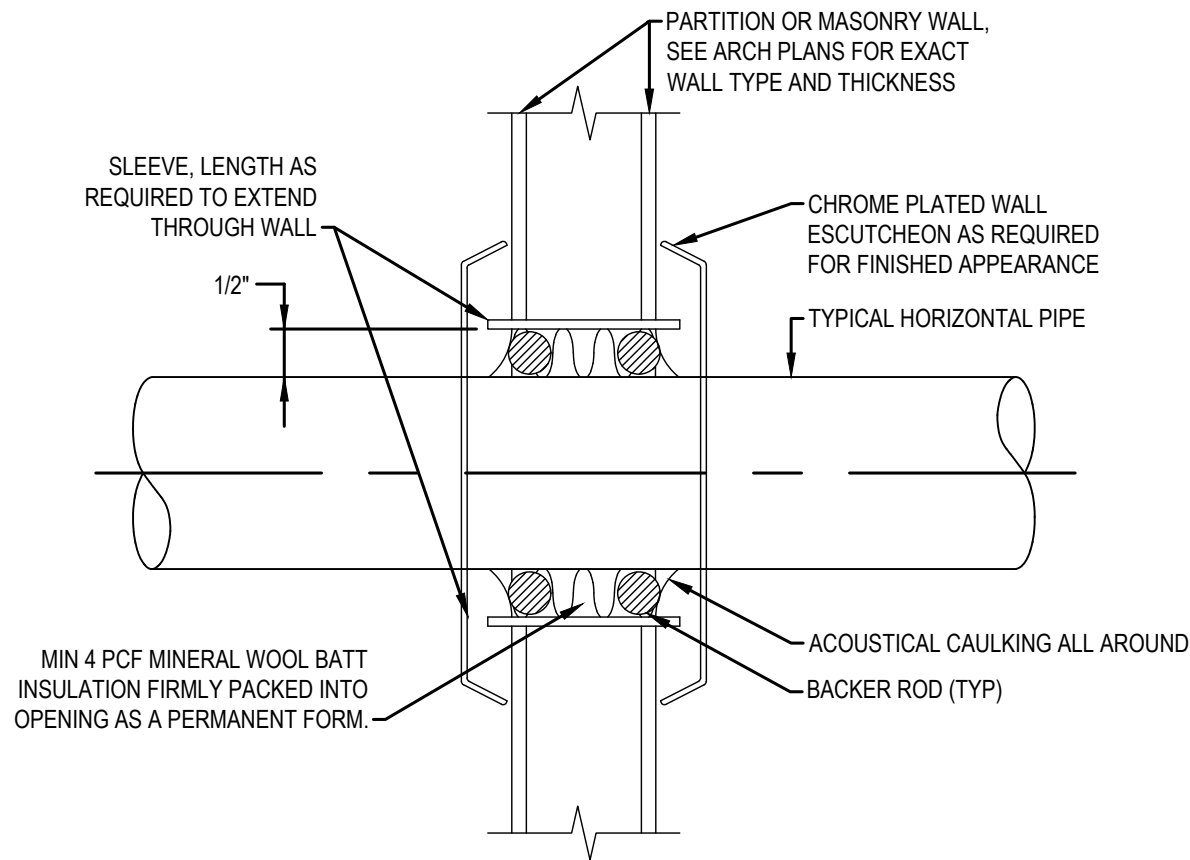
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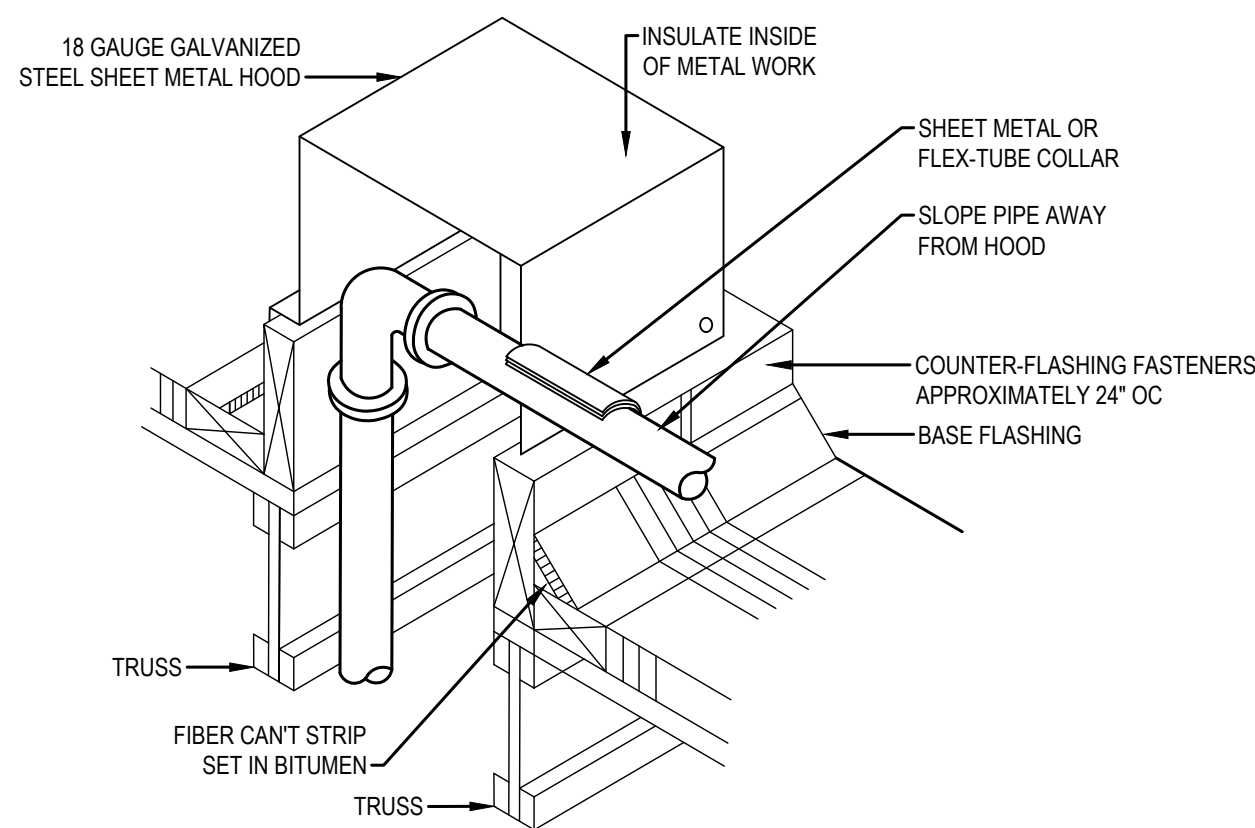
1 PIPE HANGER DETAIL
SCALE: NTS



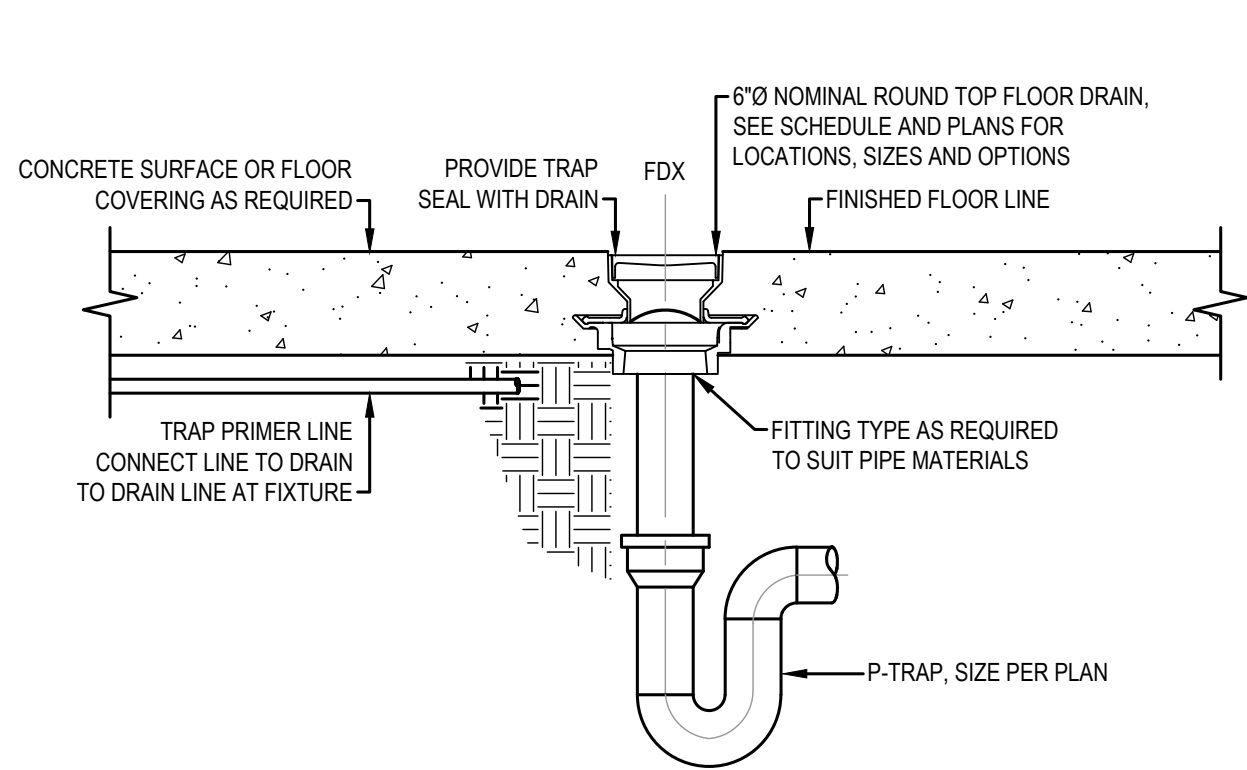
2 PIPE TRAPEZE DETAIL
SCALE: NTS



3 PIPE PENETRATION DETAIL
(HORIZONTAL ASSEMBLY)
SCALE: NTS

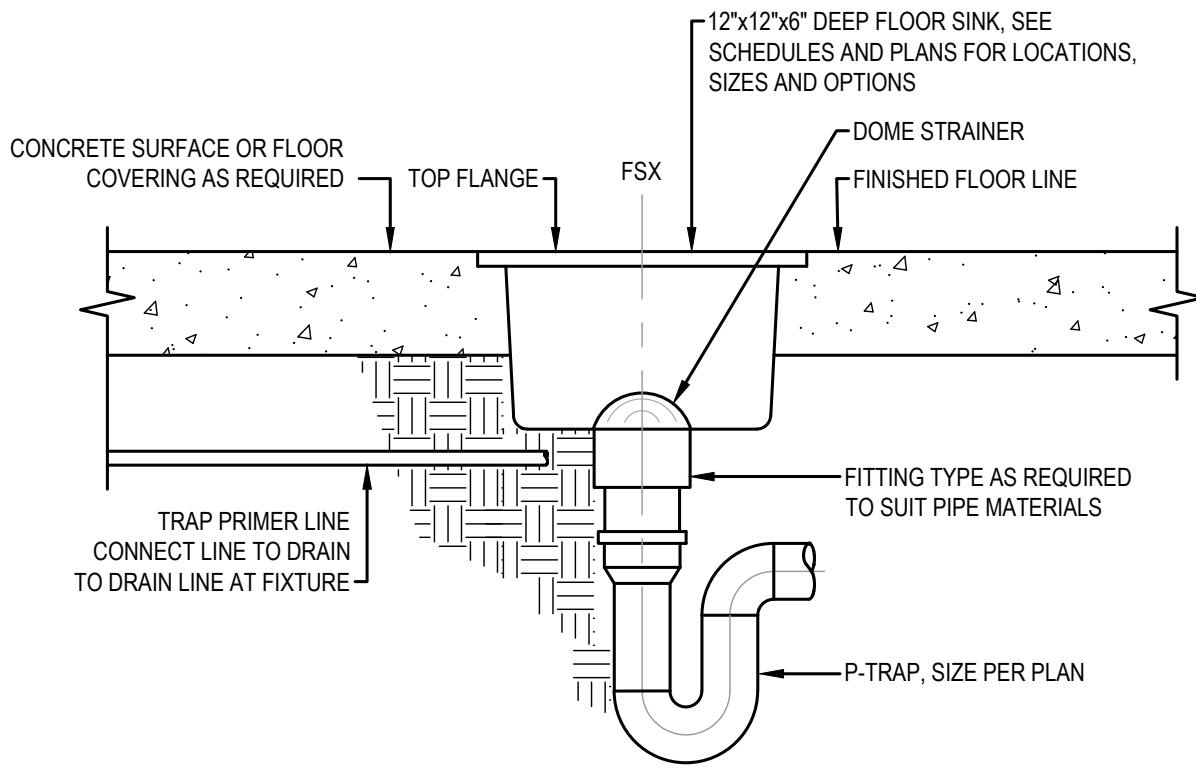


4 ROOFTOP PIPE PENETRATION DETAIL
SCALE: NTS

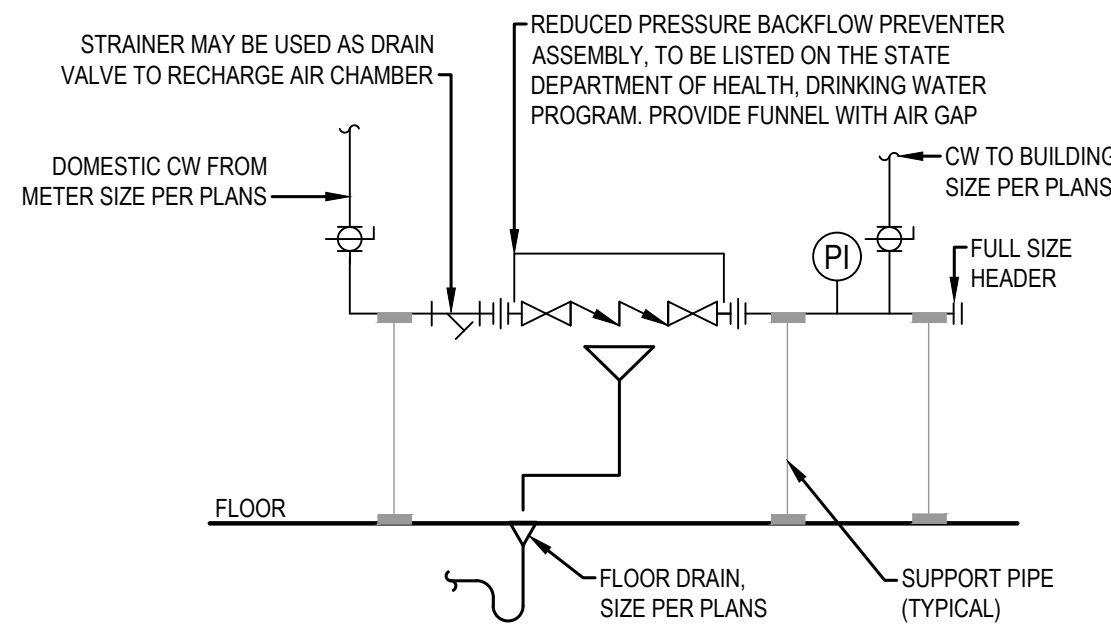


NOTE: FLOOR DRAIN SHOWN, AREA DRAIN SIMILAR.

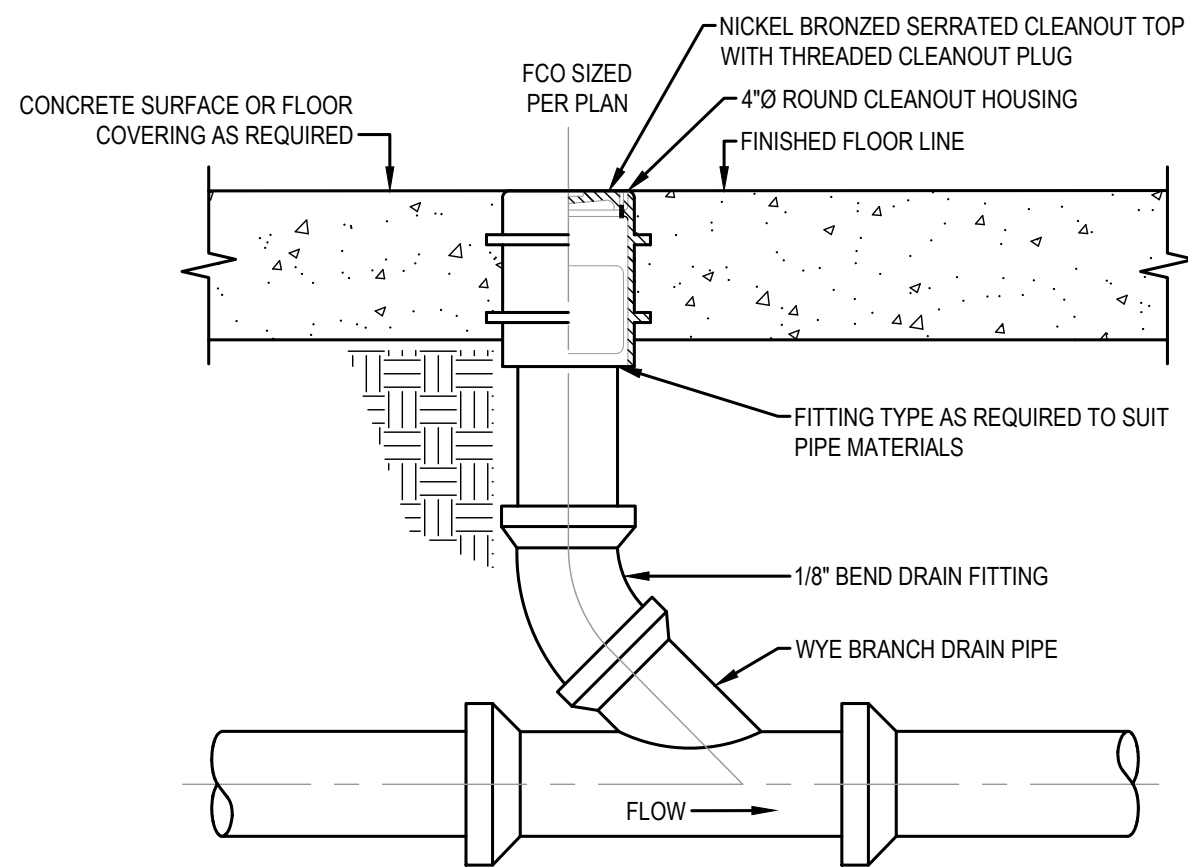
5 FLOOR / AREA DRAIN
SCALE: NTS



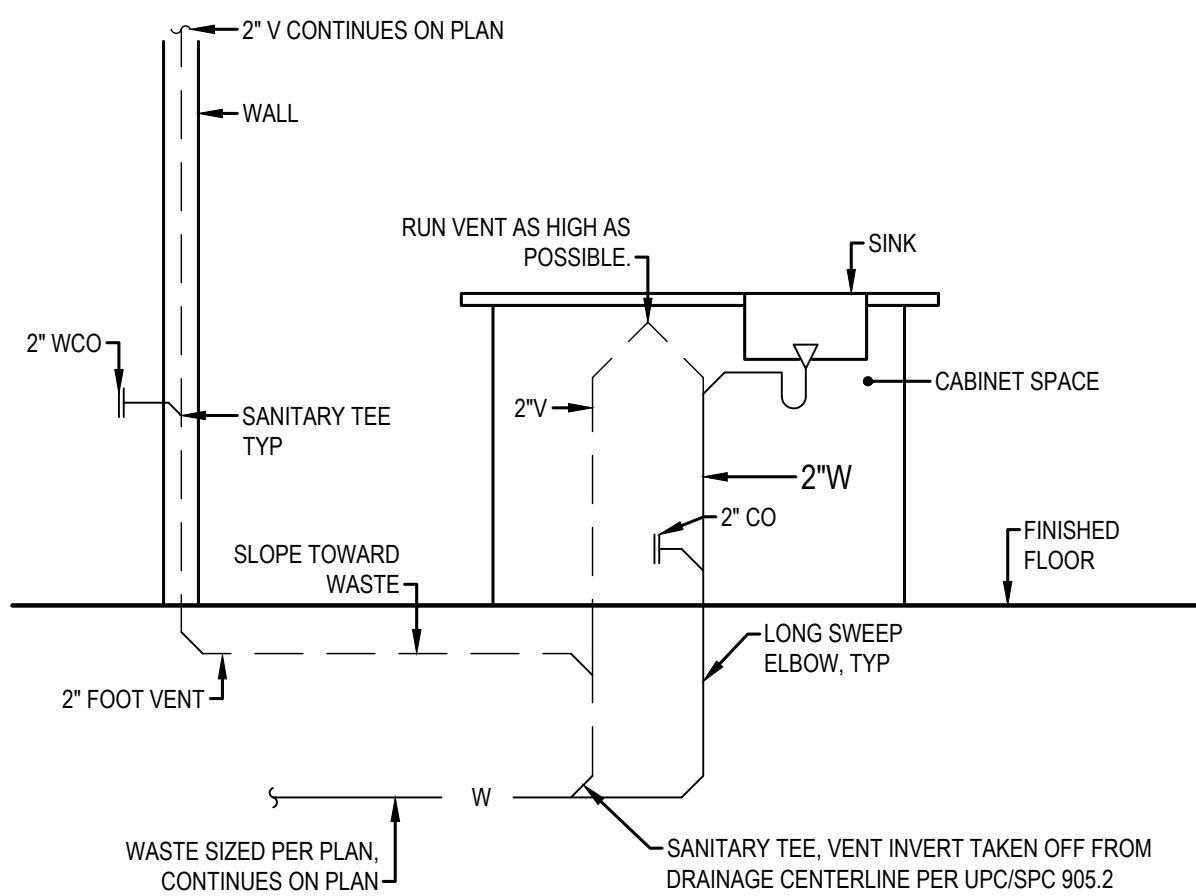
6 FLOOR SINK
SCALE: NTS



7 DOMESTIC WATER HEADER DETAIL
SCALE: NTS

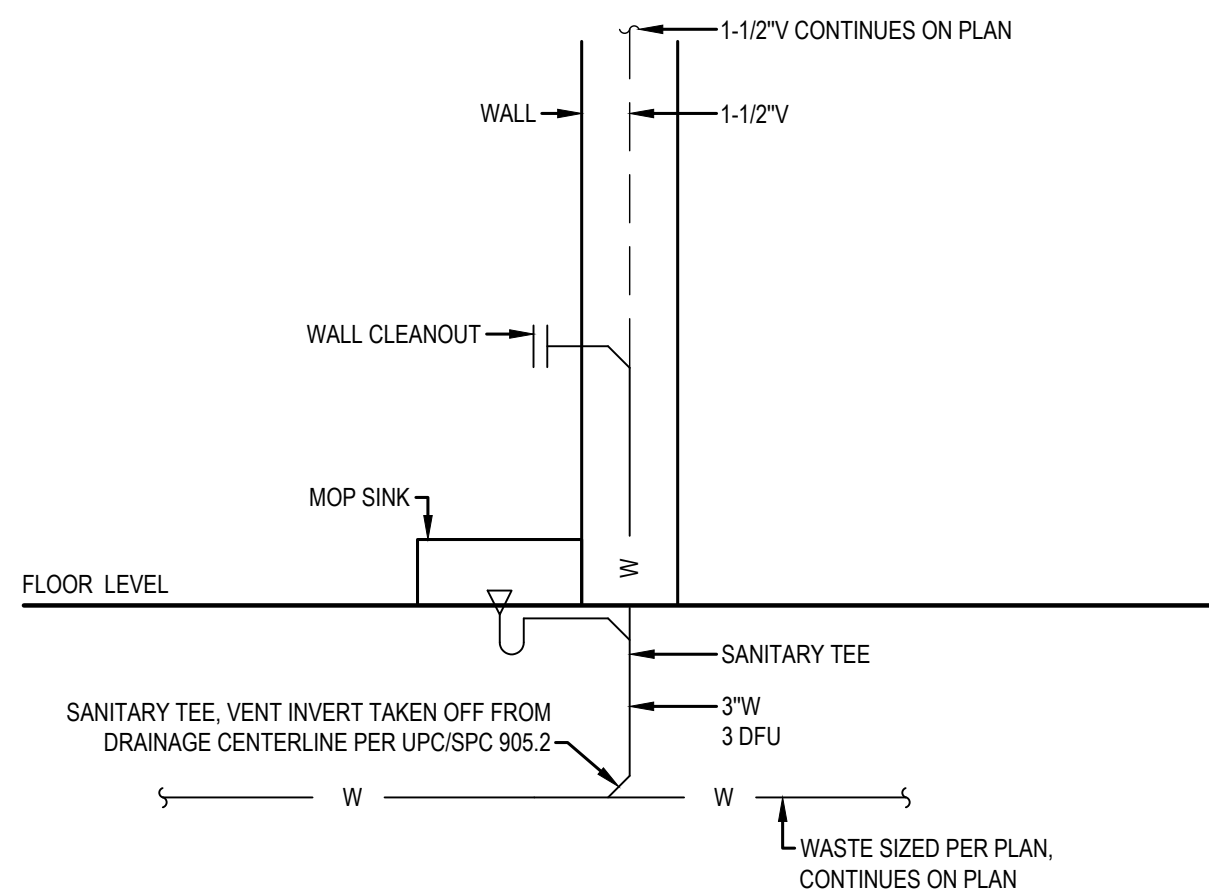


8 FLOOR CLEANOUT
SCALE: NTS



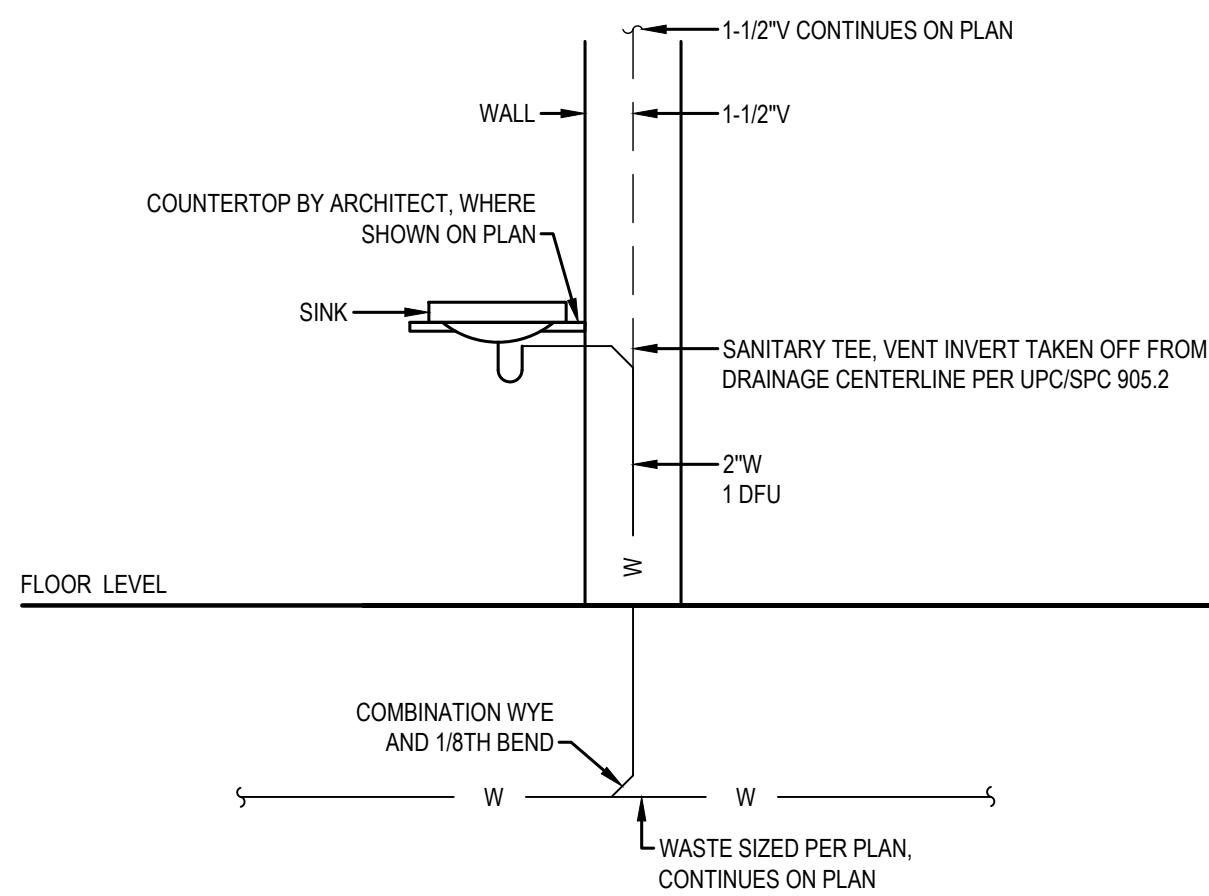
NOTE: LINE INVERT = FINISH FLOOR -1.760 MINIMUM

9 TYPICAL ISLAND SINK WASTE
& VENT PIPING DIAGRAM
SCALE: NTS



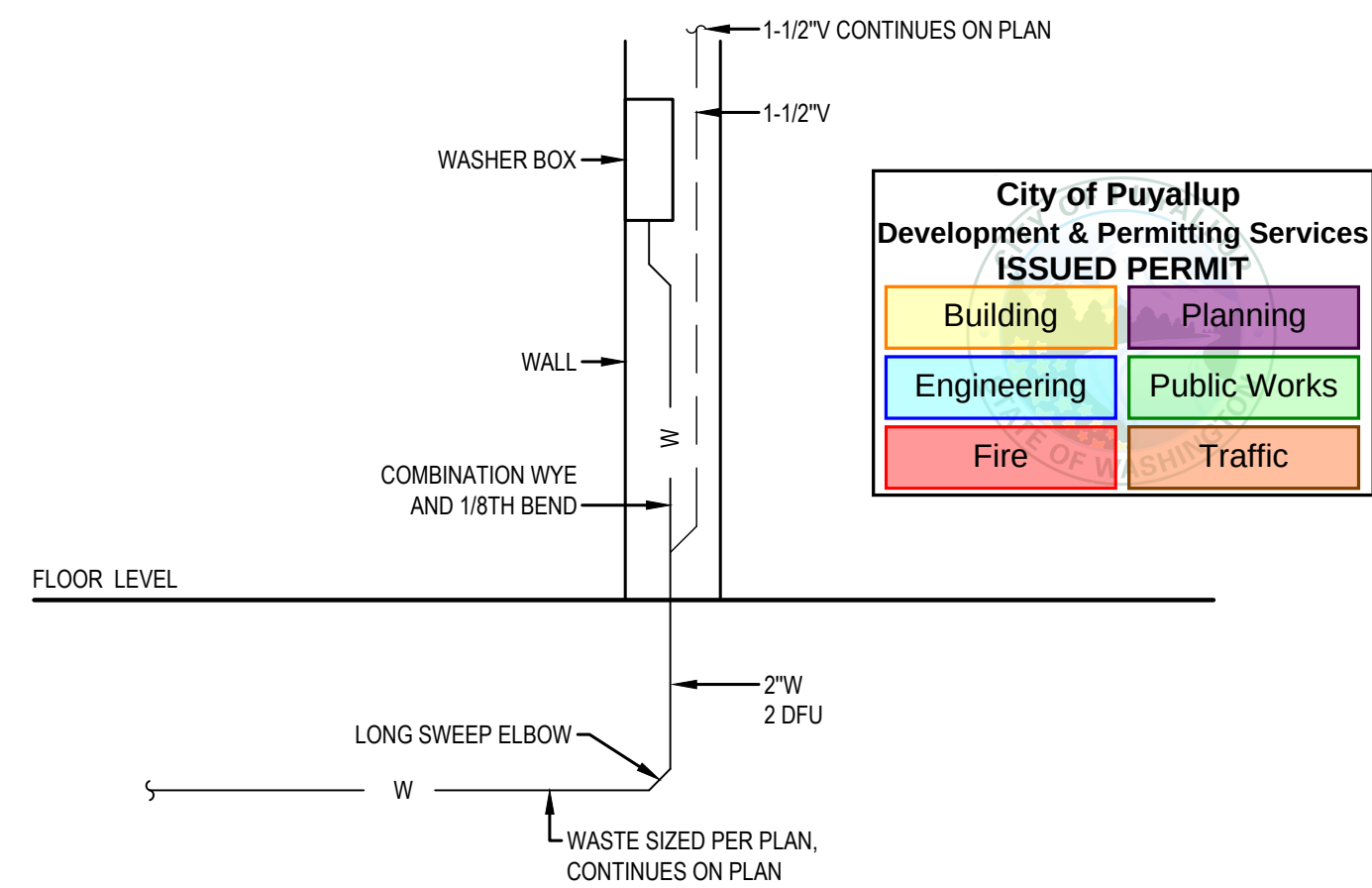
NOTE: LINE INVERT = FINISH FLOOR -2.313' MINIMUM

10 SERVICE SINK WASTE
RISER (MOP SINK RISER)
SCALE: NTS



NOTE: LINE INVERT = FINISH FLOOR -1.208' MINIMUM

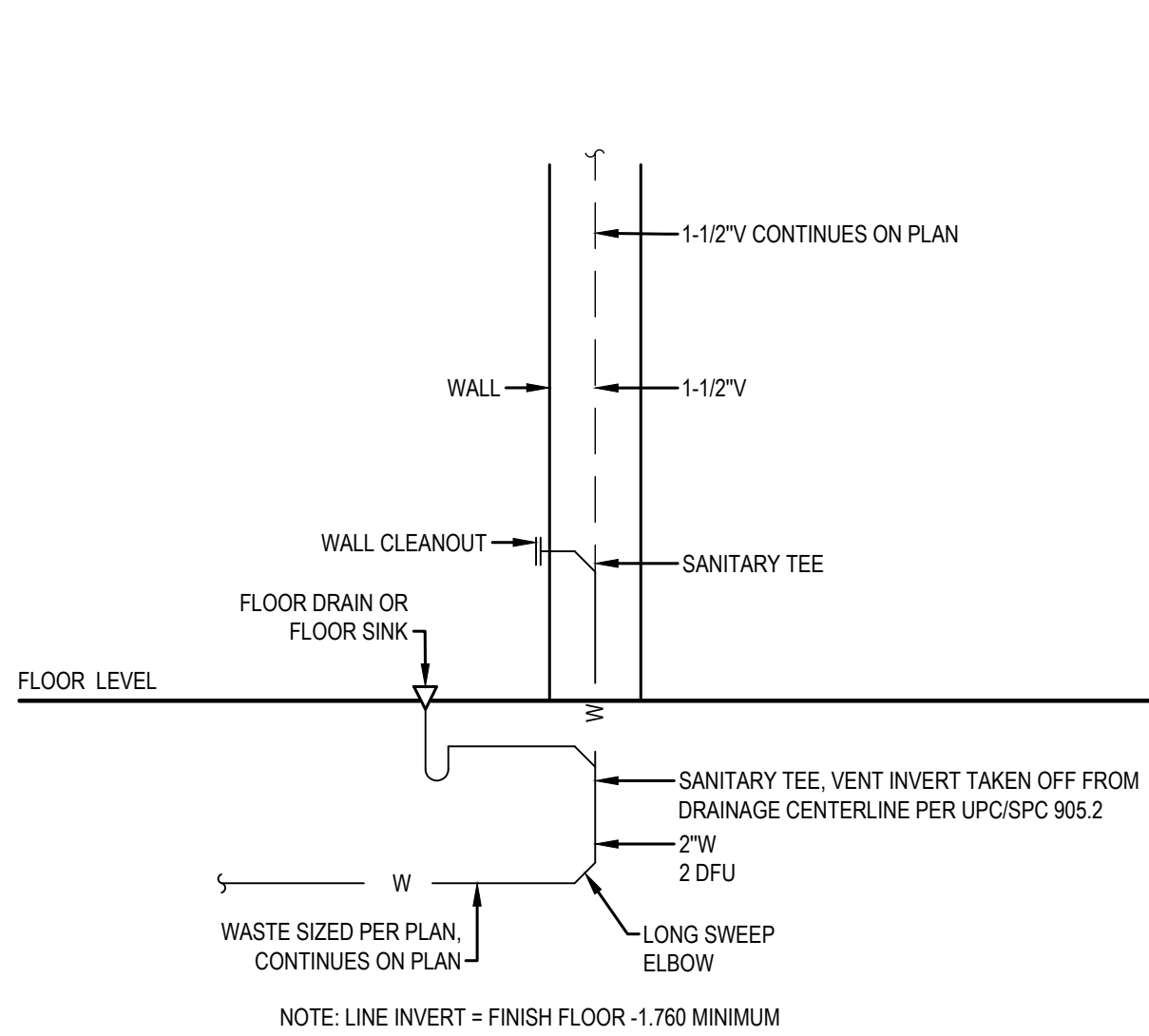
11 LAVATORY WASTE RISER
SCALE: NTS



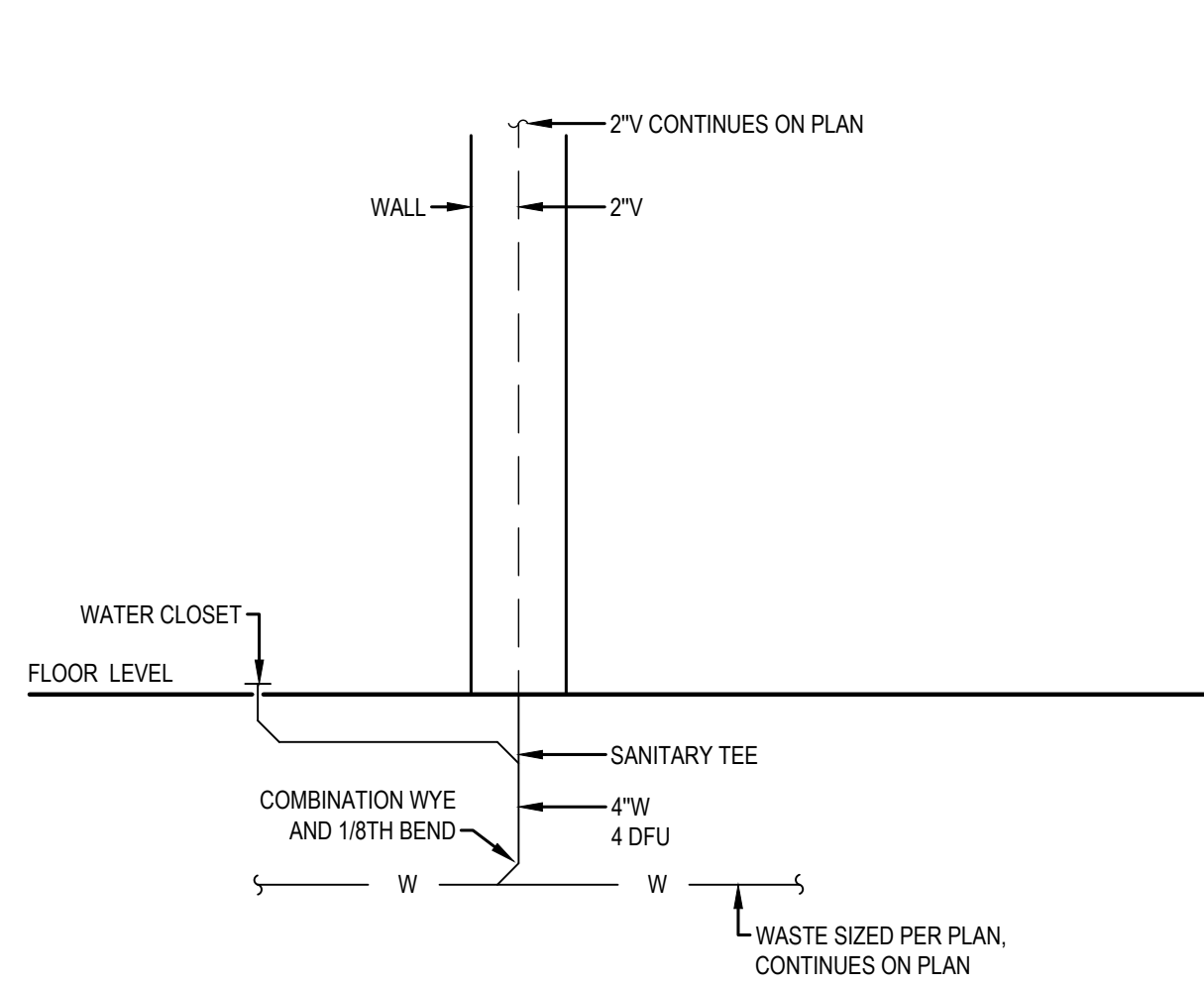
NOTE: LINE INVERT = FINISH FLOOR -1.280 MINIMUM

12 WASHER BOX WASTE RISER
SCALE: NTS

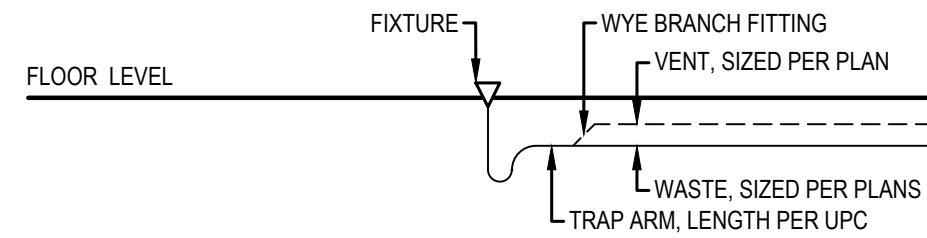
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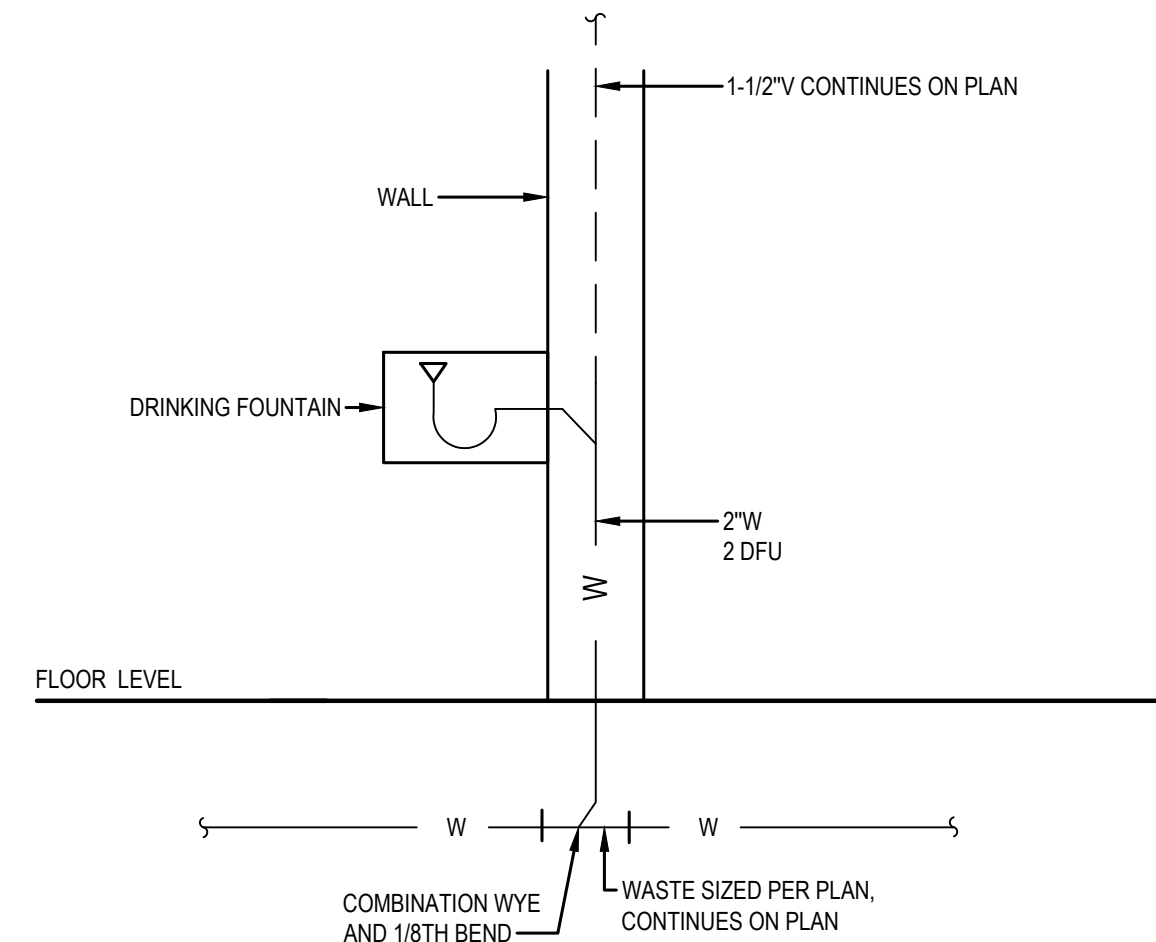
1 FLOOR DRAIN / FLOOR SINK WASTE RISER
SCALE: NTS



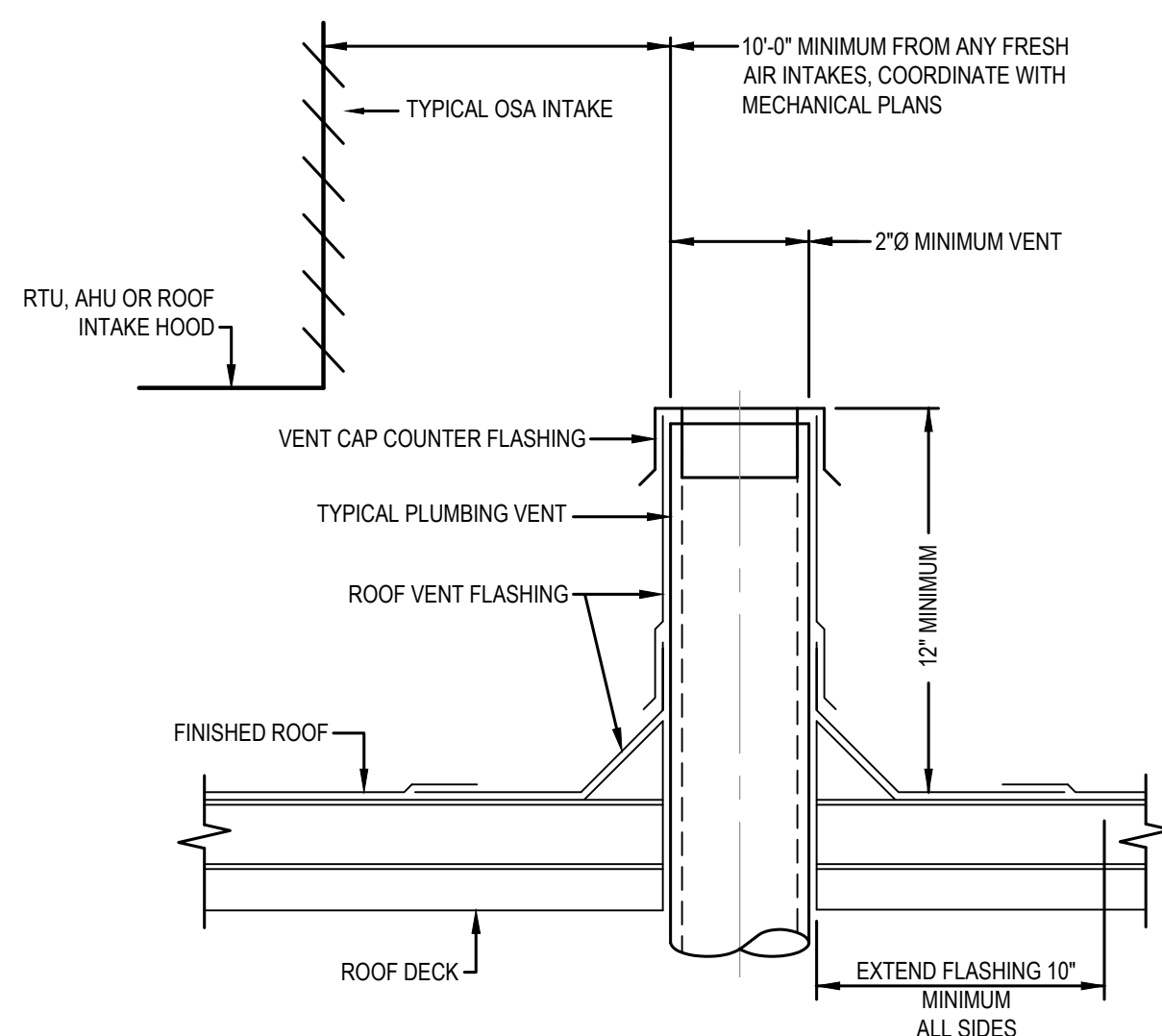
2 FLOOR MOUNTED WATER CLOSET WASTE RISER
SCALE: NTS



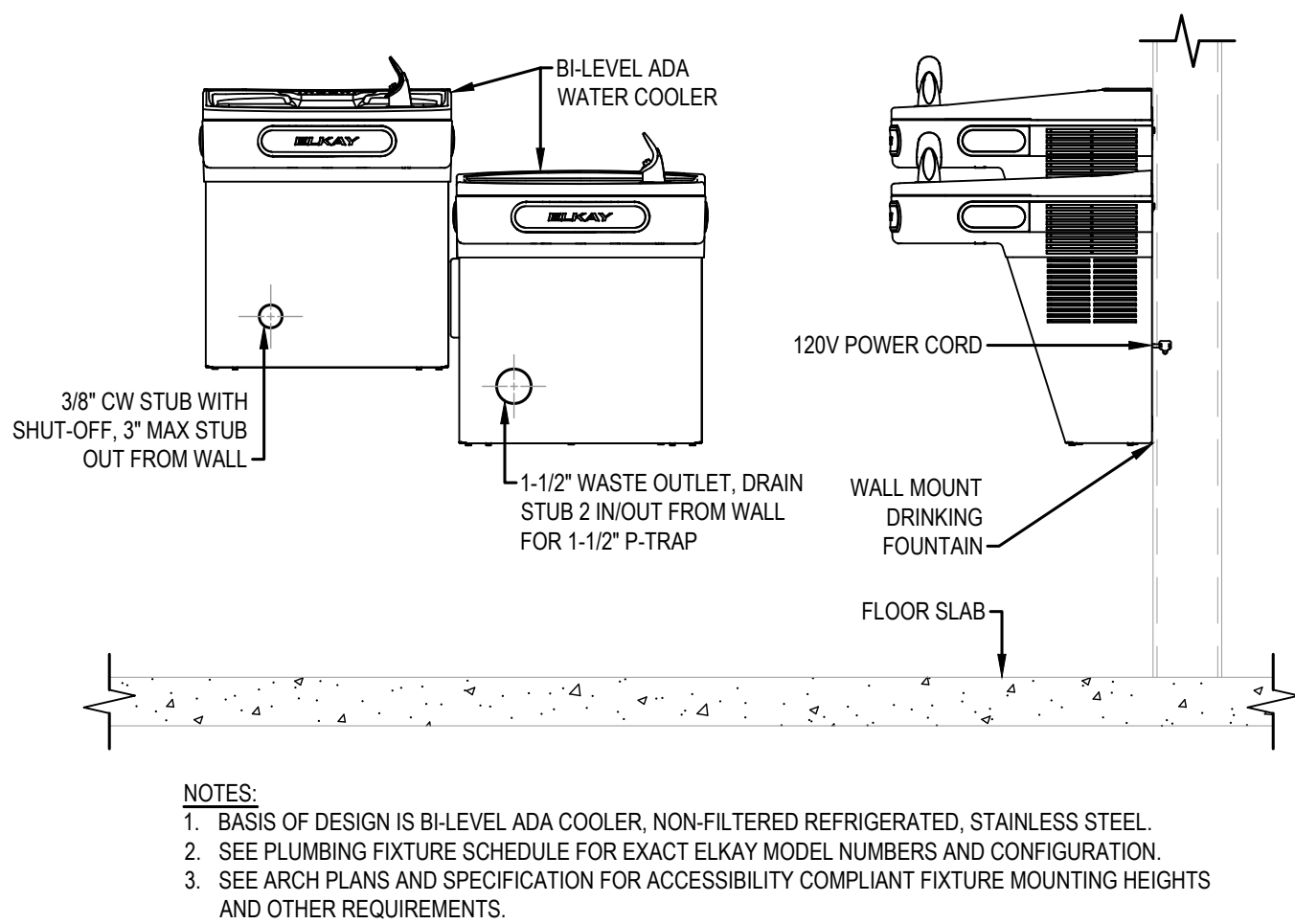
3 REMOTE FLOOR DRAIN DETAIL
SCALE: NTS



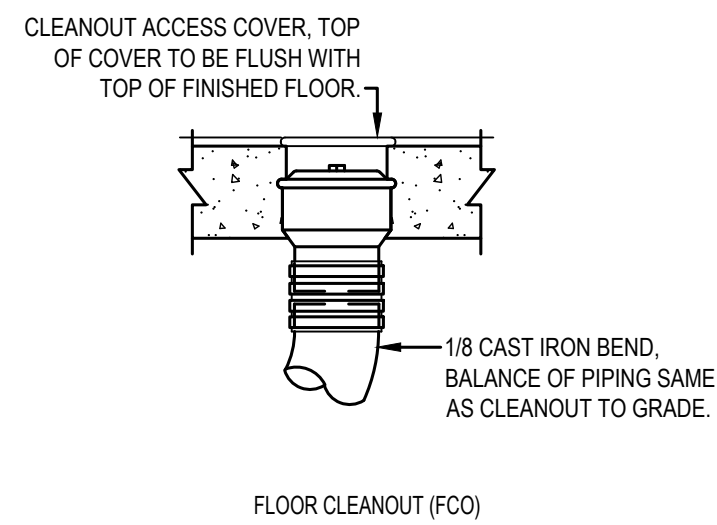
4 DRINKING FOUNTAIN RISER
SCALE: NTS



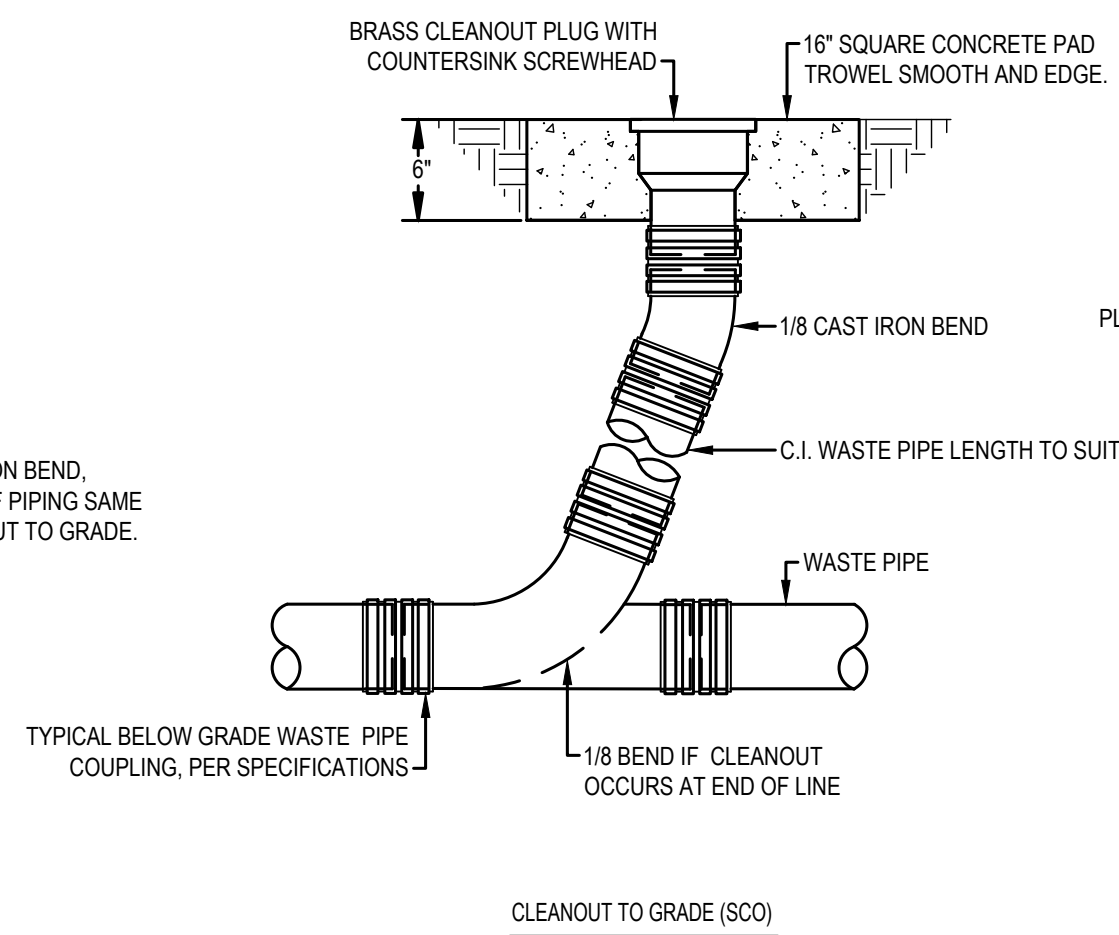
5 VENT THROUGH ROOF
SCALE: NTS



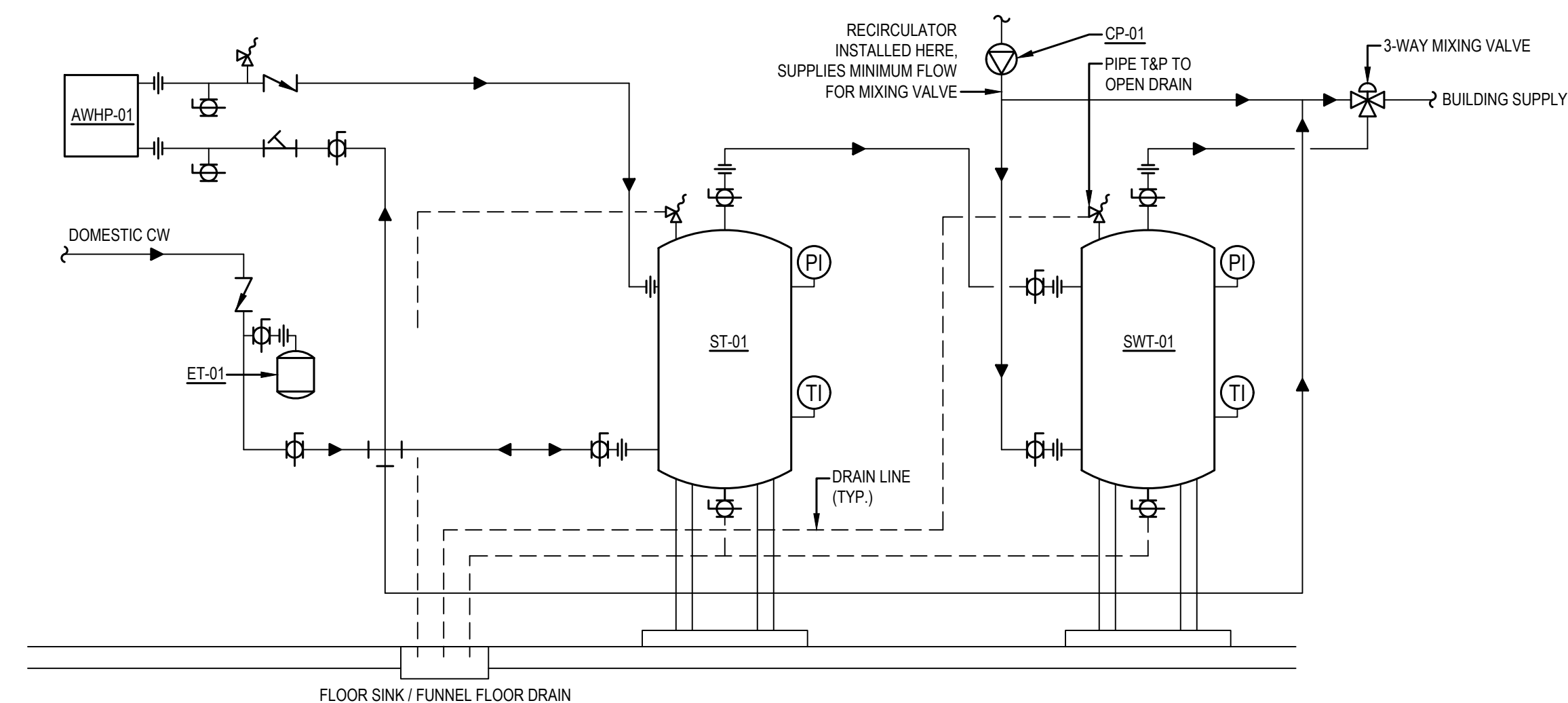
6 DRINKING FOUNTAIN (DF-X)
SCALE: NTS



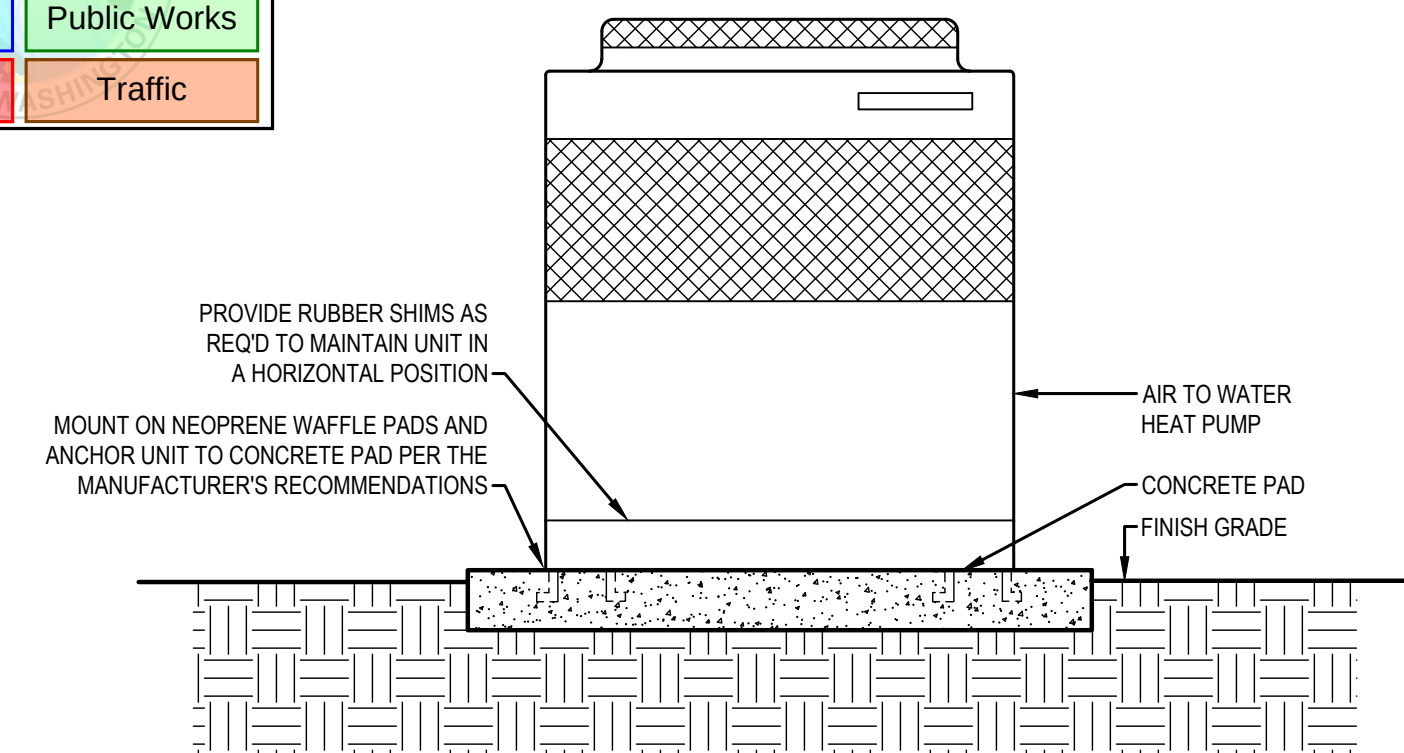
7 CLEANOUT DETAIL
SCALE: NTS



8 HOT WATER PIPE TO PLUMBING FIXTURE DETAIL
SCALE: NTS



9 AWHP PLANT DETAIL
SCALE: NTS

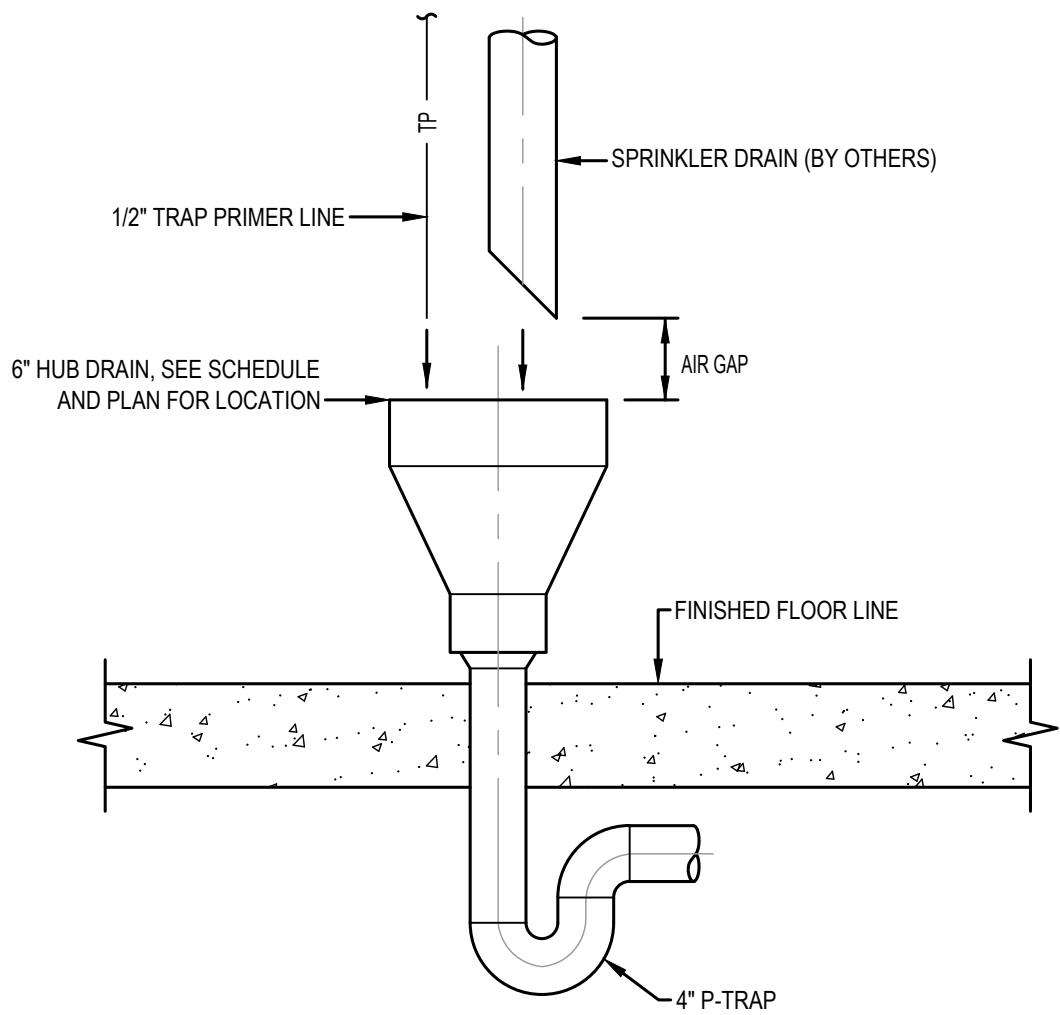


10 AIR TO WATER HEAT PUMP MOUNTING DETAIL
SCALE: NTS

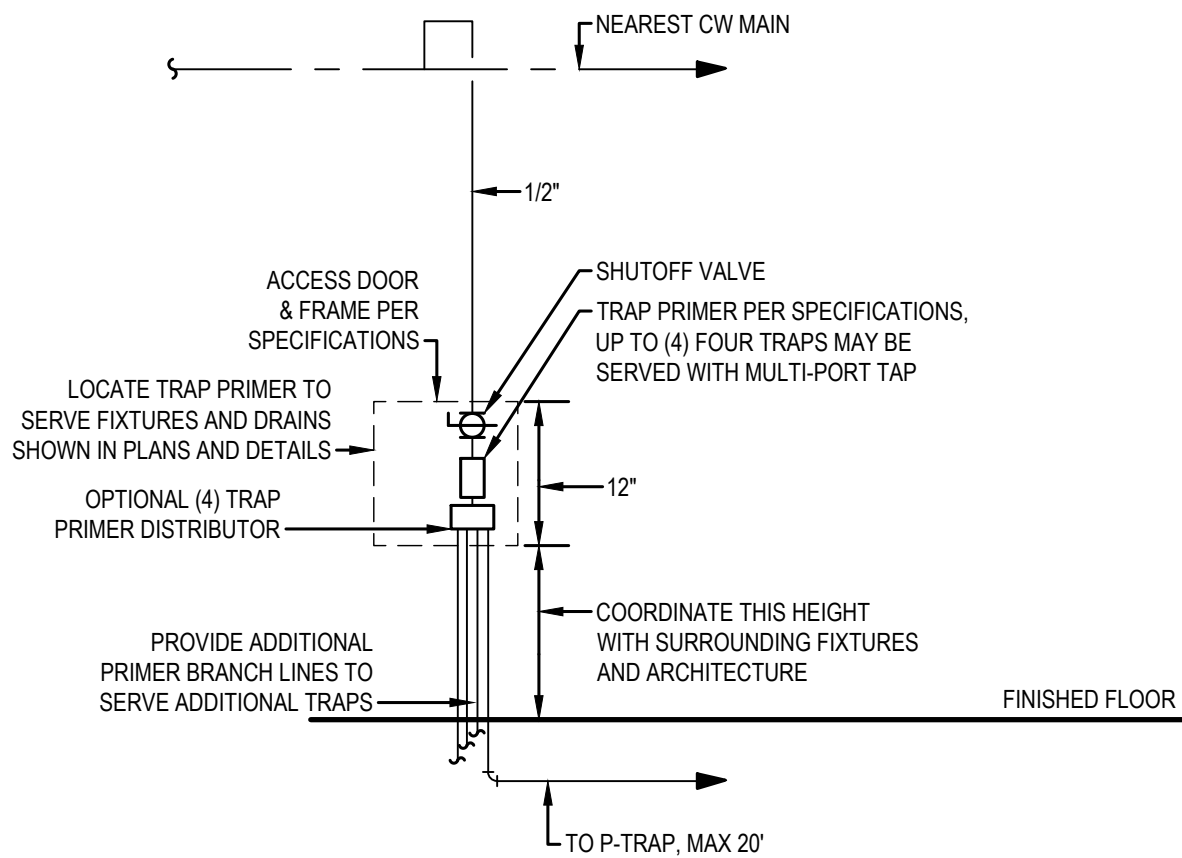
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1 HUB DRAIN
SCALE: NTS



2 TRAP PRIMER PIPING DIAGRAM
SCALE: NTS

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building

Planning

Engineering

Public Works

Fire

Traffic

MIDDLEBROOK
ENGINEERING, LLC

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BRIAN SCOTT MIDDLEBROOK
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
92770
9/18/2024

DETAILS III

PROJECT

STEP BY STEP ELC
3303 8TH AVE SE
PUYALLUP, WA 98372

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PP503

EXPANSION TANK SCHEDULE

UNIT NO	MFR	MODEL	LOCATION	TANK SIZE (GAL)	ACCEPTANCE (GAL)	WEIGHT (LBS)	NOTES
ET-01	BELL & GOSSETS	PTA-60V	MECHANICAL ROOM	26	18	62	1
NOTES: 1. FILL PRESSURE SHALL BE SET TO 150 PSI RELIEF.							

PLUMBING FIXTURE SCHEDULE

UNIT NO	FIXTURE	MOUNTING	MANUFACTURER AND MODEL NUMBERS		W	V	HW	CW	GPF	GPM	NOTES
P-01	WATER CLOSET ADA	FLOOR	TOILET:	KHOLER -K25077	4"	2"	-	-	-	-	2,3,4
			SEAT:	BEMIS - 1955CT	-	-	-	-	-	-	
P-02	LAVATORY ADA	UNDERMOUNT	LAVATORY:	TOTO LT641	2"	1-1/2"	-	-	-	-	
			FAUCET:	TOTO T28S11	-	-	1/2"	1/2"	-	0.5	1,3,4
			TRAP:	DEARBORN BRASS - 17GA W/ GROUND JOINT	1-1/2"	-	-	-	-	-	
P-03	1-COMPARTMENT SINK	DROP IN	SINK:	ELKAY - GE12522R	2"	1-1/2"	-	-	-	-	
			FAUCET:	DELTA-9913-DST	-	-	1/2"	1/2"	-	1.5	
			SUPPLIES:	FLUIDMASTER- PRO1F20	-	-	1/2"	1/2"	-	1.5	
			TRAP:	DEARBORN BRASS - 17GA W/ GROUND JOINT	1-1/2"	-	-	-	-	-	
P-04	2-COMPARTMENT SINK	DROP IN	SINK:	JOHN BOOS 42PB20028-2D	2"	1-1/2"	-	-	-	-	
			FAUCET:	T&S BRASS B-0231	-	-	1/2"	1/2"	-	1.5	
			SUPPLIES:	EBC - LAH20-K	-	-	1/2"	1/2"	-	1.5	
			TRAP:	DEARBORN BRASS - 17GA W/ GROUND JOINT	1-1/2"	-	-	-	-	-	
P-05	MOP SINK	FLOOR MOUNTED	SINK:	REGENCY-600SM162012C	2"	1-1/2"	-	-	-	-	
			FAUCET:	CHICAGO FAUCET- 897-RCF	-	-	1/2"	1/2"	-	1.5	
			TRAP:	DEARBORN BRASS - 17GA W/ GROUND JOINT	1-1/2"	-	-	-	-	-	
P-06	DRINKING FOUNTAIN	WALL	UNIT:	ELKAY- EDFPVR217C	2"	1-1/2"	-	3/8"	-	-	
P-07	CLOTHES WASHER WALL BOX	WALL	UNIT:	OATEY - 38957	2"	1-1/2"	1/2"	1/2"	-	-	
HB-01	HOSE BIB	WALL	UNIT:	WOODFORD MODEL 68	-	-	-	3/4"	-	-	
RD-1	ROOF DRAIN	FLOOR	UNIT	JAY R SMITH 1800	-	-	-	-	-	-	3
FCO	FLOOR CLEANOUT	FLOOR	UNIT:	JAY R SMITH - 4040	-	-	-	-	-	-	
WCO	WALL CLEANOUT	WALL	UNIT:	JAY R R SMITH - 4422	-	-	-	-	-	-	
FD	FLOOR DRAIN, 2"	FLOOR	UNIT:	ZURN Z511	2"	1-1/2"	-	-	-	-	

GENERAL NOTES:

1. EQUIPMENT MAY BE SUBSTITUTED UPON ENGINEER'S APPROVAL FOR EQUAL OR OTHER MFG/MODEL. REFER TO EQUIPMENT SUBMITTAL FOR FINAL SELECTIONS.
2. TRANSITION PIPE SIZE SHOWN ON PLAN TO STOP OR CONNECTION SIZE SHOWN ON SCHEDULE.
3. IF COLOR/FINISH OPTIONS EXIST FOR FIXTURES, COORDINATE FINAL COLORS/FINISHES WITH ARCHITECT.

NOTES:

1. MAXIMUM DELIVERY TEMPERATURE SHALL BE 105 DEGREES FAHRENHEIT. PROVIDE WITH BELOW DECK MIXING VALVE OPTION.
2. PROVIDE WITH BOLTS AND BOLT COVERS.
3. COORDINATE SIZES WITH PLANS.
4. ADA COMPLIANT FIXTURE. COORDINATE FIXTURE HEIGHT WITH ARCHITECT.
5. HARDWIRE FLUSH VALVE. COORDINATE REQUIREMENTS WITH FINAL FIXTURE SELECTION.

WATER HEATER SCHEDULE

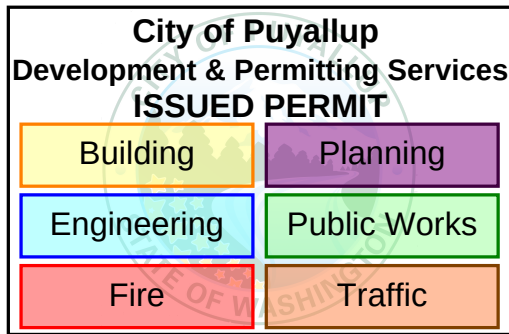
UNIT NO	MFR.	MODEL	LOCATION	DIMENSIONS		TANK SIZE (GAL)	INPUT (MBH)	OUTPUT (MBH)	COP	EFF	CFM	RECOVERY (GPH)	TEMP RISE (F)	ELECTRICAL				DISCON FURN. BY	WEIGHT	NOTES
				HEIGHT	WIDTH									MCA	MOCP	VOLT	PH			
AWPH-01	LOCHINVAR	AHP060	MECH ROOM	71.75	38.5	-	-	66.688	4.61	-	17224	-	-	46.6	50	208	3	EC	2032	1.2
NOTES 1. PROVIDE WITH SINGLE POINT ELECTRICAL BUS PANEL. 2. PROVIDE WITH STEP UP TRANSFORMER																				

THERMOSTATIC MIXING VALVE SCHEDULE

UNIT NO	MFR	MODEL	SERVICE	INLET SIZES (IN)	OUTLET SIZE (IN)	MINIMUM FLOW	PRESSURE DROP (PSI)	ELECTRICAL		WEIGHT	NOTES
								VOLTS	PH	(LBS)	
TMV-01	HEAT-TIMER	TMV25	LOW TEMP FIXTURES	1	0.75	5 GPM	5	120	1	2.6	1
TMV-02	BRADLEY	S59-2007	LOW TEMP FIXTURES	0.5	0.5	2GPM	5	-	-	-	-

NOTES:

1. PROVIDE COMPLETE ASSEMBLY PART NO 915672-00.



MIDDLEBROOK
ENGINEERING, LLC

6216 174TH AVE SW
LONGBRANCH, WA 98351
253.765.8292



SCHEDULES I

SHEET TITLE

PROJECT
STEP BY STEP ELC
3303 8TH AVE SE
PUYALLUP, WA 98372

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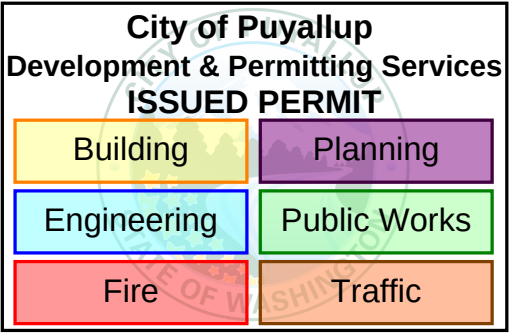
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PP601

PIPE INSULATION SCHEDULE							
FLUID OPERATING AND USAGE (°F)	INSULATION CONDUCTIVITY		NOMINAL OR TUBE SIZE (inches)				
	BTU · in./(h · ft² · °F)	TEMPERATURE, °F	< 1	1 to 1-1/2	1-1/2 to < 4	4 to < 8	≥8
> 350	0.32 - 0.34	250	4.5	5.0	5.0	5.0	5.0
251 - 350	0.29 - 0.32	200	3.0	4.0	4.5	4.5	4.5
201 - 250	0.27 - 0.30	150	2.5	2.5	2.5	3.0	3.0
141 - 200	0.25 - 0.29	125	1.5	1.5	2.0	2.0	2.0
105 - 140	0.21 - 0.28	100	1	1.0	1.5	1.5	1.5
40 - 60	0.21 - 0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20 - 0.26	75	0.5	1.0	1.0	1.0	1.5
GENERAL NOTES: 1. FOR PIPING SMALLER THAN 1-1/2 INCH (38mm) AND LOCATED IN PARTITIONS WITHIN CONDITIONED SPACES, REDUCTION OF THESE THICKNESESS BY 1 INCH (25mm) SHALL BE PERMITTED (BEFORE THICKNESSES REQUIRED IN FOOTNOTE b) NOT TO A THICKNESS LESS THAN 1 INCH (25mm). 2. FOR INSULATION OUTSIDE THE STATED CONDUCTIVITY RANGE, THE MINUMUM THICKNESS (T) SHALL BE DETERMINED AS FOLLOWS: $T = \frac{r}{k} \{ 1 + \frac{t}{r} \} \frac{k}{k - 1}$ WHERE: T = MINIMUM INSULATION THICKNESS, r = ACTUAL OUTSIDE RADIUS OF PIPE, t = INSULATION THICKNESS LISTED IN THE TABLE FOR APPLICABLE FLUID TEMPERATUREAND PIPE SIZE. K = CONDUCTIVITY OF ALTERNATE MATERIAL AT MEAN RATING TEMPERATURE INDICATED FOR THE APPLICABLE FLUID TEMPERATURE (Btu · in/h · ft² · x °F) k = THE UPPER VALUE OF THE CONDUCTIVITY RANGE LISTED IN THE TABLE FOR THE APPLICABLE FLUID TEMPERATURE. 3. FOR DIRECT-BURIED HEATING AND HOT WATER SYSTEM PIPING, REDUCTION OF THESE THICKNESSES BY 1-1/2 INCHES (38mm) SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE b BY BUT NOT TO THICKNESS LESS THAN 1 INCH (25mm)							



BOOSTER PUMP SCHEDULE													
UNIT NO	GRUNDFOS	MODEL	LOCATION	FLOW (GPM)	HEAD FT (PSI)	RPM	ELECTRICAL					DISCONNECT FURN. BY	NOTES
							MCA	MOP	VOLTS	SCCR (kVA)	PH		
BP-01	ARMSTRONG	NPS-110020-01S-2HP	MECH ROOM	40	25	3600	18	20	240	5	1	EC	1,2,3,4,5,6
NOTES: 1. PROVIDE WITH CONCRETE PAD. 2. CONNECT TO PIPING SYSTEM WITH FLEXIBLE JOINTS. DO NOT USE PUMPS TO SUPPORT WIEGHT OF PIPE. 3. TWINNED UNIT. 4. UNIT SHALL BE NSF 61 COMPLIANT. 5. PROVIDE 2" THREADED CONNECTION. 6. PROVIDE ARMSTRONG DRAWDOWN TANK MODEL 85L. 7. PROVIDE WITH SINGLE POINT POWER CONNECTION AT CONTROL PANEL.													

PUMP SCHEDULE												
UNIT NO	MFR	MODEL	LOCATION	FLOW (GPM)	HEAD FT	RPM	ELECTRICAL				DISCONNECT FURN. BY	NOTES
							HP	WATT	VOLTS	PH		
CP-1	BELL & GOSSETT	ECOCIRC 20-18	MECHANICAL RM	5	10	3734	0.0257	-	115	1	EC	1
NOTES: 1. PROVIDE WITH AQUASTAT AND TIMER AS UNIT STARTER.												

BACKFLOW PREVENTER SCHEDULE										
UNIT NO	MFR	MODEL	LOCATION	TYPE			SIZE (IN)	PRESSURE DROP (PSI)	SERVICE	NOTES
				RP	DC	AG				
BFP-01	WATTS	LF009	JANITOR'S CLOSET	X	-	-	2	12	DOMESTIC	1, 2
NOTES: 1. PROVIDE WITH 1" AIR GAP FITTING. 2. PROVIDE WITH QUARTER TURN VALVES.										

PLUMBING PIPE SIZING CHART												
COLD WATER				HOT WATER			WASTE				VENT	
PIPE SIZE	GPM RANGE	TANK UNITS	VALVE UNITS	PIPE SIZE	GPM RANGE	FIXTURE UNITS	PIPE SIZE	VERTICAL	HORIZONTAL (1/4"/FT)	HORIZONTAL (1/8"/FT)	VENT UNITS	MAX VENT LENGTH
1/2"	0-1.8	0-0.8	-	1/2"	0-1.8	0-0.8	1/2"	-	-	-	-	-
3/4"	1.9-4.8	0.9-5.8	-	3/4"	1.9-4.8	0.9-5.8	3/4"	-	-	-	-	-
1"	4.9-9.9	5.9-12.9	-	1"	4.9-9.9	5.9-12.9	1"	-	-	-	-	-
1-1/4"	10-17.0	13-24	-	1-1/4"	10-17.0	13-24	1-1/4"	1.0	1.0	-	1.0	15'
1-1/2"	18-27	25-46	0-10	1-1/2"	18-27	25-46	1-1/2"	2.0	1.0	-	2-8.0	20'
2"	28-58	47-165	11-69.0	2"	28-46	47-111	2"	3-16.0	2-8.0	-	9-24.0	40'
2-1/2"	59-100	166-380	70-245	2-1/2"	47-73	112-241	2-1/2"	17-32	9-14.0	-	25-48	60'
3"	101-170	381-748	246-700	3"	74-110	242-431	3"	33-48	15-35	-	49-84	70'
4"	171-300	749-1755	701-1755	4"	111-180	432-909	4"	49-256	36-216	1-172	85-256	100'
5"	301-470	1756-3340	1756-3340	5"	181-290	810-1688	5"	257-600	217-428	173-342	257-600	130'
6"	471-670	3341-5110	3341-5110	6"	291-420	1689-2862	6"	601-1380	429-720	343-676	601-1380	170'
8"	671-1300	5111-11500	5111-11500				8"	1381-3600	721-2640	577-2112	1381-3600	250'
							10"	3601-5600	2641-4680	2113-3744	3601-5600	-
							12"	5601-8400	4681-8200	3745-6560	5601-8400	-
NOTES 1. THIS CHART IS BASED ON THE UPC APPENDIX A, WATER PIPE COPPER TYPE L 2. COLD WATER IS BASED ON A MAXIMUM OF 8FPS. 3. HOT WATER IS BASED ON A MAXIMUM OF 5 FPS 4. THIS CHART IS BASED ON 3PSI/100 FT FRICTION LOSS.												

STORAGE TANK SCHEDULE					
UNIT NO	TYPE	MFG	MODEL	DESCRIPTION/ DATA	NOTES
ST-01	STORAGE TANK	LOCHINVAR	HP500G	450 GAL,1726 LBS	
SWT-01	SWING STORAGE TANK	BOCK WATER HEATERS	SWP119-A-1A	119 GAL, 550 LBS, 72 GPH @100 DEG RISE 18KW, 208V,3PH	
NOTES:					

MIDDLEBROOK
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BRIAN SCOTT MIDDLEBROOK
STATE OF WASHINGTON
REGISTERED
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92770
9/18/2024

SCHEDULES II

SHEET TITLE

PROJECT
STEP BY STEP ELC
3303 8TH AVE SE
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