24"x36" Arch D -SHEET SIZE

GENERAL NOTES

A. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL GOVERNING BUILDING CODES AND REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK THAT HAS BEEN PERFORMED WHICH DOES NOT MEET THESE CODES AND REGULATIONS.

B. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE TO THE ARCHITECT'S CONSTRUCTION DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR REPORTING IMMEDIATELY TO THE ARCHITECT ANY DISCREPANCIES OR DETAILS WHICH DO NOT MEET BUILDING CODES AND CONSTRUCTION STANDARDS.

C. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS ON SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. IN THE EVENT OF CONFLICTS OR CHANGES BETWEEN DETAILS, OR BETWEEN THE PLANS AND SPECIFICATIONS, THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY.

D. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES AND PIPING BEFORE BEGINNING WORK.

E. THE GC SHALL COORDINATE ALL OPERATIONS WITH THE OWNER, INCLUDING AREA FOR WORK, MATERIALS STORAGE, AND ACCESS TO AND FROM THE WORK. SPECIAL CONDITIONS OR NOISY WORK, TIMING OF WORK AND INTERRUPTION OF MECHANICAL AND ELECTRICAL SERVICES, NOISY OR DISRUPTIVE WORK SHALL BE SCHEDULED AT LEAST ONE (1) WEEK IN ADVANCE OF THE TIME WORK IS TO COMMENCE.

F. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HIGHEST STANDARD OF WORKMANSHIP IN GENERAL AND WITH SUCH STANDARDS AS ARE SPECIFIED.

G. GC SHALL SUBMIT SAMPLES OF ALL FINISHES OF SUCH SIZE AND NUMBER THAT THEY REPRESENT A REASONABLE DISTRIBUTION OF COLOR RANGES AND PATTERN PRIOR TO INSTALLATION FOR ARCHITECT'S APPROVAL. GC SHALL PROVIDE SHOP DWGS AND PRODUCT DATA FOR ARCHITECT'S APPROVAL ON ALL SPECIAL ITEMS REQUIRING CUSTOM FABRICATION (SHALL INCLUDE RATED FIRE DOORS AND HARDWARE).

H. SURROUNDING AREAS MAY BE OCCUPIED DURING CONSTRUCTION. THE GC SHALL PROTECT ALL PERSONNEL, PASSERSBY OR VISITORS TO THE SITE FROM HARM AND INJURY. BARRIERS SHALL BE INSTALLED AS REQUIRED TO PROTECT EQUIPMENT INSTALLED DURING CONSTRUCTION, CAREFULLY MAINTAIN AND PROTECT MONUMENTS, BENCH MARKS AND THEIR REFERENCE POINT FROM BEING DESTROYED OR DISTURBED; REPLACE AS REQUIRED.

I. MATERIALS, ARTICLES, DEVICES AND PRODUCTS ARE SPECIFIED IN THE DOCUMENTS BY LISTING ACCEPTABLE MANUFACTURERS OR PRODUCTS, BY REQUIRING COMPLIANCE WITH REFERENCED STANDARDS, OR BY PERFORMANCE SPECIFICATIONS. FOR ITEMS SPECIFIED BY NAME, SELECT ANY PRODUCT NAMED. FOR THOSE SPECIFIED BY REFERENCE STANDARDS OR BY PERFORMANCE SPECIFICATIONS SELECT ANY PRODUCT MEETING OR EXCEEDING SPECIFIED CRITERIA. FOR APPROVAL OF AN ITEM NOT SPECIFIED, SUBMIT REQUIRED SUBMITTALS, PROVIDING COMPLETE BACK-UP INFORMATION FOR PURPOSES OF EVALUATION. WHERE BUILDING STANDARD ITEMS ARE CALLED FOR, NO SUBSTITUTE WILL BE ACCEPTED.

J. REFER TO STRUCTURAL PLANS FOR SPECIAL INSPECTION REQUIREMENTS.

K. SUBSTITUTIONS

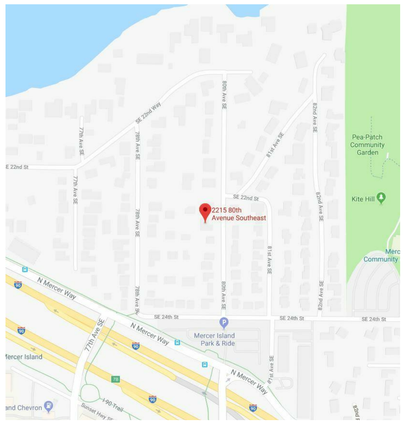
DEFERRED SUBMITTALS

MECHANICAL:
1. THE MECHANICAL WORK FOR THE PROJECT SHALL BE PERFORMED AS DESIGN-BUILD. THE GENERAL CONTRACTOR SHALL SUBMIT WITH THE BID A PROPOSED HVAC AND PLUMBING DRAWING THAT COORDINATES WITH THE ARCHITECTURAL DRAWINGS.
2. THE GENERAL CONTRACTOR'S MEP/FP SUBCONTRACTOR WILL BE RESPONSIBLE FOR APPLYING FOR AND SECURING ALL NECESSARY PERMITS.
3. ALL MEP/FP IS DESIGNED BY LICENSED PROFESSIONALS IN STATES & JURISDICTION FOR WORK, DESIGN CRETERIA IS PROVIDED BY OWNER/OR GENERAL CONTRACTORS.
4. REVIEW SET FOR CODES & NOTES APPLICABLE TO MEP/FP D/B SUBCONTRACTORS & FOR COORDINATION W/ ARCHITECTURAL DRAWINGS.

HANDRAIL AND GUARDRAIL SYSTEMS:
1. THE HANDRAIL AND GUARDRAIL DESIGNS AND ENGINEERING FOR THE PROJECT SHALL BE PERFORMED AS DESIGN-BUILD. THE GENERAL CONTRACTOR SHALL SUBMIT WITH THE BID PROPOSED HANDRAIL AND GUARDRAIL DRAWINGS THAT COORDINATE WITH THE ARCHITECTURAL DRAWINGS AND INTENT.
2. THE GENERAL CONTRACTOR'S HANDRAIL & GUARDRAIL SUBCONTRACTOR WILL BE RESPONSIBLE FOR APPLYING FOR AND SECURING ALL ASSOCIATED AND NECESSARY PERMITS.

DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND BEEN FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

VICINITY MAP



SCOPE OF WORK

RESIDENTIAL ADDITION INVOLVING DEMO OF THE EXISTING ENTRY LEVEL AND RECONSTRUCTION OF THAT LEVEL PLUS A NEW UPPER LEVEL FLOOR. SOME MODIFICATION OF INTERIOR BASEMENT WALLS FOR NEW ACCESSORY DWELLING UNIT OF 330 SF.

DESIGN CODE

2015 INTERNATIONAL RESIDENTIAL CODE WITH WASHINGTON STATE AMENDMENTS

2015 INTERNATIONAL FIRE CODE
2015 INTERNATIONAL MECHANICAL CODE
2015 INTERNATIONAL FUEL GAS CODE
2015 UNIFORM PLUMBING CODE

2015 WASHINGTON STATE ENERGY CODE

WASHINGTON CITIES ELECTRICAL CODE

SINGLE FAMILY ADDITION

PAEK RESIDENCE

2215 80TH AVE SE
MERCER ISLAND, WA 98040

TEAM

CLIENT:

TIMOTHY & ELLEN PAEK
2215 80TH AVE SE
MERCER ISLAND, WA 98040
PHONE: 425.628.7165
CONTACT NAME: TIMOTHY PAEK

ARCHITECT OF RECORD:

MZA, PS
600 108TH AVE NE, SUITE 108
BELLEVUE, WA 98004
PHONE: 425-559-7888
CONTACT: KEVIN SUTTON

SURVEYOR:

TERRANE
10801 MAIN STREET, SUITE 102
BELLEVUE, WA 98004
PHONE: 425.458.4488
CONTACT: DANNY SLAGER

STRUCTURAL:

Swenson Say Faget
2124 3rd Ave. Suite 100
Seattle, WA 98121
Telephone: 206-443-6212
Authorized Representative :
Ryan Anderson

LANDSCAPE ARCHITECT:

ANR Landscape Design
22310 98th Ave W
Edmonds, WA 980120
Telephone : 206-818-3610
Authorized Representative:
Anri Nozaka Rapelje

CIVIL:

ESM CONSULTING ENGINEERS, LLC
33400 8th Ave. S. Suite 205
Federal Way, WA 98003
Telephone: 253-838-6113

Envirmentail:

Altman Oliver Assocates,LLC
PO Box 578 Carnation, Wa 98014
Telephone: 425-333-4509
John Altman

DATA

SITE ADDRESS:	2215 80TH AVE SE MERCER ISLAND, WA 98040
PARCEL DATA :	
LEGAL DESCRIPTION :	MERCER PARK, Plat Block: 21, Plat Lot: 3-4
PARCEL NUMBER :	545230-2145
JURISDICTION :	CITY OF MERCER ISLAND
WATER & SEWER DISTRICT :	CITY OF MERCER ISLAND
SECTION/TOWNSHIP/RANGE :	SE-1-24-4
PROPERTY ZONING :	R-8.5
TOTAL LOT AREA (RECORDED) :	8,810 SF

GENERAL REQUIREMENTS **(Chart 20.20.010)**

	REQ'D (ft)	PROP (ft)
STRUCTURE SETBACKS		
FRONT EAST YARD :	20'	22'-0"
REAR WEST YARD :	25'	27'-0 3/4"
SIDE YARD NORTH :	10' EA/15' TOTAL	10'
SIDE YARD SOUTH:	10' EA/15' TOTAL	10'
MAX. IN BUILDING HEIGHT ABOVE AVE. EXISTING GRADE:	30'	27'-0 3/4"
BUILDING HEIGHT NOTES:	1.REFER TO SITE PLAN FOR AVERAGE GRADE CALCULATIONS 2.REFER TO BUILDING ELEVATIONS FOR GRADE DATUM POINTS AND ROOF PEAK...	

	REQ'D (%)	MAX(sf)	PROP. (sf)
MAXIMUM GROSS FLOOR AREA	45 (ADU)	3,964.5	3,932
MAX. LOT COV. BY STRUCT. :	40	3,524	2,469
MAX. HARDSCAPE:	9	792.9	595

SHEET INDEX

PEMITS UNDER SEPERATE REVIEW

-ACCESSCRY DWELLING UNIT (330 SF.)

-CRITICAL AREAS DETEMINATION

ABBREVIATION

SYMBOLS:

@	AT
&	AND
∠	ANGLE
℄	CENTER LINE
©	COPYRIGHT
°	DEGREE
∅	DIAMETER
=	EQUAL
>	GREATER THAN
<	LESS THAN
#	NUMBER
%	PERCENTAGE
±	PLUS/MINUS
℔	PLATE

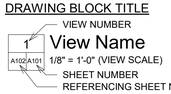
ABBREVIATIONS:

A.B.E. ELEVATION	AVERAGE BUILDING
A/C	AIR CONDITIONER
ADJ	ADJUSTABLE, ADJACENT
ADMIN	ADMINISTRATION
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
ALUM	ALUMINUM
ANOD	ANODIZED
APPROX	APPROXIMATE
ALT	ALTERNATE
ASR RISER	AUTOMATIC SPRINKLER
AVG	AVERAGE
BFF	BELOW FINISH FLOOR
BFG	BELOW FINISH GRADE
BD	BOARD
BLDG	BUILDING
B/S	BUILDING STANDARD
B.O.	BOTTOM OF
BOT	BOTTOM
BTW	BETWEEN
CB	CATCH BASIN
C.I.	CAST IRON
CIP	CAST IN PLACE
CJ	CONTROL JOINT, CONSTRUCTION JOINT
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CONSTR	CONSTRUCTION
CONTR	CONTRACTOR
COV	COVERAGE
CPT	CARPET
CT	CERAMIC TILE
DF	DRINKING FOUNTAIN
DS	DOWNSPOUT
DWG	DRAWING
EA	EACH
ELEV	ELEVATION, ELEVATOR
ELEC	ELECTRICAL
EJ	EXPANSION JOINT
EQ	EQUAL
EXIST	EXISTING
EJ	EXPANSION JOINT
EXP	EXPANSION
EXT	EXTERIOR
F.C.I.C. CONTRACTOR	FURNISH BY CONTRACTOR INSTALL BY
FD	FLOOR DRAIN
FDN	FOUNDATION
FF	FINISH FLOOR
F.O.I.O. INSTALLED BY	FURNISHED BY OWNER
FEC	OWNER FIRE EXTINGUISHER CABINET
F.O.I.C. CONTRACTOR	FURNISHED BY OWNER, INSTALLED BY
FPHB	FROST PROOF HOSE BIBB
FRP	FIBER REINFORCED PANEL(S)
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GLP	GYPSUM LATH & PLASTER
GWB	GYPSUM WALLBOARD
H	HIGH, HEIGHT
HB	HOSE BIBB
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HT	HEIGHT
HTR	HEATER
INSUL	INSULATION
JT/JTS	JOINT,JOINTS
L	LONG, LENGTH
LAM	LAMINATE, LAMINATED
L.F. FOOT	LINEAR FOOT, LINEAL
LW	LIGHT WEIGHT
LVL	LEVEL
MAS	MASONRY
MAX	MAXIMUM
M.B.S. SUPPLIER	METAL BUILDING
MCT	MARMOLEUM
COMPOSITE TILE	
MECH	MECHANICAL
MEZZ	MEZZANINE
MTL	METAL
MFG	MANUFACTURING
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
M.O.	MASONRY OPENING
M.R.	MOISTURE RESISTANT
MTD	MOUNTED
MTG	MOUNTING
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
O.H.	OVERHEAD
OPP	OPPOSITE
o/	OVER
PERP	PERPENDICULAR
PL	PLATE,
P-LAM	PLASTIC LAMINATE
PLUMB	PLUMBING
PNL	PANEL, PANELING
PROJ	PROJECT, PROJECTED
PRV	PRESSURE REDUCING VALVE
PT	POINT
QT	QUARRY TILE
QTR	QUARTER
R	RADIUS
RD	ROOF DRAIN
RL	RAIN LEADER
REC'D	RECEIVED
REF REFERENCE	REFRIGERATOR,
REINF	REINFORCING
REQ'D	REQUIRED
RF	RUBBER FLOORING
RR	RESTROOM
RO	ROUGH OPENING
ROW	PUBLIC RIGHT OF WAY
S.A.M. MEMBRANE	SELF ADHESIVE
SCHED	SCHEDULE
SC	SOLID CORE
SF	SQUARE FOOTAGE
SG	SAFETY GLASS
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL, SANITARY SEWER
STD	STANDARD
STL	STEEL
STRUCT STRUCTURAL	STRUCTURE,
SUSP	SUSPENDED
SYS	SYSTEM
T	TEMPERED, TREAD, TOP
T&B	TOP & BOTTOM
TEL	TELEPHONE
TEMP	TEMPERED
T&G	TONGUE & GROOVE
TG	TEMPERED GLASS
T.O.	TOP OF
TYP	TYPICAL
UTIL	UTILITY
U.O.N. NOTED	UNLESS OTHERWISE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
w/	WITH
w/o	WITHOUT
W-MAT	WALK OFF MAT
WP	WATERPROOF
WR	WATER RESISTANT
WRB BARRIER	WATER RESISTANT
WT	WEIGHT
WWM	WELDED WIRE MESH
WWF	WELDED WIRE FABRIC
Y.C.	YARD DRAIN

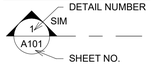
LEGEND OF SYMBOLS

VIEW REFERENCES

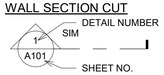
DRAWING BLOCK TITLE



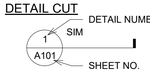
BUILDING SECTION CUT



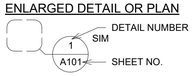
WALL SECTION CUT



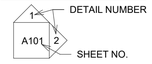
DETAIL CUT



ENLARGED DETAIL OR PLAN



EXTERIOR ELEVATIONS



INTERIOR ELEVATIONS

OBJECT REFERENCES

PROPERTY CORNER, BUILDING LEVEL OR SPOT ELEVATION

Room name ROOM NAME & ROOM NUMBER

? FLOOR/ROOF/MATERIAL ASSEMBLY TYPE REFERENCES ASSEMBLIES SCHEDULE

101 DOOR TYPE REFERENCES DOOR SCHEDULE

11 WINDOW TYPE REFERENCES WINDOW SCHEDULE

h WALL TYPE REFERENCES WALL ASSEMBLIE

1 PLAN KEYNOTE REFERENCES KEYNOTE LEGEND

1 DRAWING REVISION REFERENCES REVISION SCHEDULE

MATERIAL REFERENCES

AGGREGATE, BASE ROCK
EARTH, BACKFILL
CONCRETE
INSULATION
STONE
STEEL

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

Discrepancies must be reported immediately to the Architect before proceeding. Only figured dimensons are to be used. Contractors must check all dimensions on site. This drawing is protected by copyright.
ALL DIMENSIONS ARE SHOWN IN IMPERIAL.

M Z A
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP

DRAWING TITLE
COVER SHEET

DRAWN: KNS
DESIGNED: Designer

DATE: 09/04/18

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

PROJECT NO.: 18-009

DRAWING NO.: A0.0

REVISION NO.:

FILE NAME:
PLOT DATE:

24"x36" Arch D -SHEET SIZE

BUILDING PLANNING (CHAP. 3)

HABITABLE SPACE (IRC SECTION R202): A SPACE IN A BUILDING FOR LIVING, SLEEPING, EATING OR COOKING. BATHROOMS, TOILET ROOMS, CLOSETS, HALLS, STORAGE OR UTILITY SPACES AND SIMILAR AREAS ARE NOT CONSIDERED HABITABLE SPACES.

LIGHT, VENTILATION AND HEATING IN HABITABLE ROOMS (SECTION R303): ALL HABITABLE ROOMS SHALL HAVE AN AGGREGATE GLAZING AREA OF NOT LESS THAN 8 PERCENT OF THE FLOOR AREA OF SUCH ROOMS. NATURAL VENTILATION SHALL BE THROUGH WINDOWS, DOORS, LOUVERS OR OTHER APPROVED OPENINGS TO THE OUTDOOR AIR. SUCH OPENINGS SHALL BE PROVIDED WITH READY ACCESS OR SHALL OTHERWISE BE READILY CONTROLLABLE BY THE BUILDING OCCUPANTS. THE MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE 4 PERCENT OF THE FLOOR AREA BEING VENTILATED.

EXCEPTIONS:

1. THE GLAZED AREAS NEED NOT BE OPENABLE WHERE THE OPENING IS NOT REQUIRED BY SECTION R310 AND AN APPROVED MECHANICAL VENTILATION SYSTEM IS PROVIDED CAPABLE OF PRODUCING 0.35 AIR CHANGE PER HOUR IN THE ROOM OR A WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM IS INSTALLED CAPABLE OF SUPPLYING OUTDOOR VENTILATION AIR OF 15 CUBIC FEET PER MINUTE (CFM) PER OCCUPANT COMPUTED ON THE BASIS OF TWO OCCUPANTS FOR THE FIRST BEDROOM AND ONE OCCUPANT FOR EACH ADDITIONAL BEDROOM.
2. THE GLAZED AREAS NEED NOT BE PROVIDED IN ROOMS WHERE EXCEPTION 1 ABOVE IS SATISFIED AND ARTIFICIAL LIGHT IS PROVIDED CAPABLE OF PRODUCING AN AVERAGE ILLUMINATION OF 6 FOOTCANDLES OVER THE AREA OF THE ROOM AT A HEIGHT OF 30 INCHES ABOVE THE FLOOR LEVEL.

LIGHT, VENTILATION AND HEATING IN ADJOINING ROOMS (SECTION R303.2): FOR THE PURPOSE OF DETERMINING LIGHT AND VENTILATION REQUIREMENTS, ANY ROOM SHALL BE CONSIDERED AS A PORTION OF AN ADJOINING ROOM WHEN AT LEAST ONE-HALF OF THE AREA OF THE COMMON WALL IS OPEN AND UNOBSTRUCTED AND PROVIDES AN OPENING OF NOT LESS THAN ONE-TENTH OF THE FLOOR AREA OF THE INTERIOR ROOM BUT NOT LESS THAN 25 SQUARE FEET.

EXCEPTION: OPENINGS REQUIRED FOR LIGHT AND/OR VENTILATION SHALL BE PERMITTED TO OPEN INTO A THERMALLY ISOLATED SUNROOM ADDITION OR PATIO COVER, PROVIDED THAT THERE IS AN OPENABLE AREA BETWEEN THE ADJOINING ROOM AND THE SUNROOM ADDITION OR PATIO COVER OF NOT LESS THAN ONE-TENTH OF THE FLOOR AREA OF THE INTERIOR ROOM BUT NOT LESS THAN 20 SQUARE FEET. THE MINIMUM OPENABLE AREA TO THE OUTDOORS SHALL BE BASED UPON THE TOTAL FLOOR AREA BEING VENTILATED.

LIGHT, VENTILATION AND HEATING IN BATHROOMS (SECTION R303.3): BATHROOMS, WATER CLOSET COMPARTMENTS AND OTHER SIMILAR ROOMS SHALL BE PROVIDED WITH AGGREGATE GLAZING AREA IN WINDOWS OF NOT LESS THAN 3 SQUARE FEET, ONE-HALF OF WHICH MUST BE OPENABLE. EXCEPTION: THE GLAZED AREAS SHALL NOT BE REQUIRED WHERE ARTIFICIAL LIGHT AND A MECHANICAL VENTILATION SYSTEM ARE PROVIDED. THE MINIMUM VENTILATION RATES SHALL BE 50 CFM FOR INTERMITTENT VENTILATION OR 20 CFM FOR CONTINUOUS VENTILATION. VENTILATION AIR FROM THE SPACE SHALL BE EXHAUSTED DIRECTLY TO THE OUTSIDE.

CEILING HEIGHT (SECTION R305): HABITABLE SPACE, HALLWAYS, CORRIDORS, BATHROOMS, TOILET ROOMS, LAUNDRY ROOMS AND BASEMENTS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7 FEET. THE REQUIRED HEIGHT SHALL BE MEASURED FROM THE FINISH FLOOR TO THE LOWEST PROJECTION FROM THE CEILING.

EXCEPTIONS:

1. FOR ROOMS WITH SLOPED CEILINGS, AT LEAST 50 PERCENT OF THE REQUIRED AREA OF A ROOM MUST HAVE A CEILING HEIGHT OF AT LEAST 7 FEET AND NO PORTION OF THE REQUIRED FLOOR AREA MAY HAVE A CEILING HEIGHT OF LESS THAN 5 FEET.
2. BATHROOMS SHALL HAVE A MINIMUM CEILING HEIGHT OF 6 FEET 8 INCHES AT THE CENTER OF THE FRONT CLEARANCE AREA FOR FIXTURES AS SHOWN IN FIGURE R307.1. THE CEILING HEIGHT ABOVE FIXTURES SHALL BE SUCH THAT THE FIXTURE IS CAPABLE OF BEING USED FOR ITS INTENDED PURPOSE. A SHOWER OR TUB EQUIPPED WITH A SHOWERHEAD SHALL HAVE A MINIMUM CEILING HEIGHT OF 6 FEET 8 INCHES ABOVE A MINIMUM AREA 30 INCHES BY 30 INCHES AT THE SHOWERHEAD.

BASEMENTS: PORTIONS OF BASEMENTS THAT DO NOT CONTAIN HABITABLE SPACE, HALLWAYS, BATHROOMS, TOILET ROOMS AND LAUNDRY ROOMS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 6 FEET 8 INCHES.

EXCEPTIONS:

1. BEAMS, GIRDERS, DUCTS, OR OTHER OBSTRUCTIONS MAY PROJECT TO WITHIN 6 FEET 4 INCHES OF THE FINISHED FLOOR.

TOILET SPACES (SECTION R307): WATER CLOSET COMPARTMENTS ARE TO BE A MINIMUM 30 INCHES WIDE WITH A MINIMUM OF 21 CLEAR SPACE IN FRONT OF THE FIXTURE.

BATHTUB AND SHOWER SPACES (SECTION R307): BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR.

CLOTHES DRYERS EXHAUST (SECTION M1502): DRYER EXHAUST SYSTEMS SHALL BE INDEPENDENT OF ALL OTHER SYSTEMS, SHALL CONVEY THE MOISTURE TO THE OUTDOORS AND SHALL TERMINATE ON THE OUTSIDE OF THE BUILDING. EXHAUST DUCT TERMINATIONS SHALL BE IN ACCORDANCE WITH THE DRYER MANUFACTURER'S INSTALLATION INSTRUCTIONS. SCREENS SHALL NOT BE INSTALLED AT THE DUCT TERMINATION. EXHAUST DUCTS SHALL NOT BE JOINED WITH SCREWS OR SIMILAR FASTENERS THAT PROTRUDE INTO THE INSIDE OF THE DUCT. EXHAUST DUCTS SHALL BE EQUIPPED WITH A BACKDRAFT DAMPER. EXHAUST DUCTS SHALL BE CONSTRUCTED OF MINIMUM 4 INCHES NOMINAL DIAMETER AND 0.016-INCH-THICK RIGID METAL DUCTS, HAVING SMOOTH INTERIOR SURFACES WITH JOINTS RUNNING IN THE DIRECTION OF AIR FLOW. FLEXIBLE TRANSITION DUCTS USED TO CONNECT THE DRYER TO THE EXHAUST DUCT SYSTEM SHALL BE LIMITED TO A SINGLE LENGTH THAT IS LISTED AND LABELED IN ACCORDANCE WITH UL 2158A. TRANSITION DUCTS SHALL BE A MAXIMUM OF 8 FEET IN LENGTH. TRANSITION DUCTS SHALL NOT BE CONCEALED WITHIN CONSTRUCTION.

EXCEPTION: THIS SECTION SHALL NOT APPLY TO LISTED AND LABELED CONDENSING (DUCTLESS) CLOTHES DRYERS.

CLOTHES DRYER LENGTH LIMITATION (SECTION M1502): THE MAXIMUM LENGTH OF A CLOTHES DRYER EXHAUST DUCT SHALL BE 35 FEET FROM THE DRYER CONNECTION TO THE OUTLET TERMINAL. WHERE FITTINGS ARE USED, THE MAXIMUM LENGTH OF THE EXHAUST DUCT SHALL BE REDUCED IN ACCORDANCE WITH IRC TABLE M1502.4.4.1. ALTERNATELY, THE SIZE AND MAXIMUM LENGTH OF THE EXHAUST DUCT SHALL BE DETERMINED BY THE DRYER MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE CODE OFFICIAL SHALL BE PROVIDED WITH A COPY OF THE INSTALLATION INSTRUCTIONS FOR THE MAKE AND MODEL OF THE DRYER AT THE CONCEALMENT INSPECTION.

RANGE HOODS (SECTION M1503): RANGE HOODS SHALL DISCHARGE TO THE OUTDOORS THROUGH A SINGLE-WALL DUCT. THE DUCT SERVING THE HOOD SHALL HAVE A SMOOTH INTERIOR SURFACE, SHALL BE AIR-TIGHT, SHALL BE EQUIPPED WITH A BACKDRAFT DAMPER, AND SHALL BE INDEPENDENT OF ALL OTHER EXHAUST SYSTEMS. DUCTS SERVING RANGE HOODS SHALL NOT TERMINATE IN AN ATTIC OR CRAWL SPACE OR AREAS INSIDE THE BUILDING. EXCEPTION: WHERE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND WHERE MECHANICAL OR NATURAL VENTILATION IS OTHERWISE PROVIDED, LISTED AND LABELED DUCTLESS RANGE HOODS SHALL NOT BE REQUIRED TO DISCHARGE TO THE OUTDOORS.

STAIRWAYS (SECTION R311.7)

UNDER STAIR PROTECTION (SECTION 302.7): ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS, UNDER-STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2-INCH GYPSUM BOARD.

WIDTH (R311.7.1): STAIRWAYS SHALL NOT BE LESS THAN 36 INCHES IN CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT. HANDRAILS SHALL NOT PROJECT MORE THAN 4.5 INCHES ON EITHER SIDE OF THE STAIRWAY AND THE MINIMUM CLEAR WIDTH OF THE STAIRWAY AT AND BELOW THE HANDRAIL HEIGHT, INCLUDING TREADS AND LANDINGS, SHALL NOT BE LESS THAN 31-1/2 INCHES WHERE A HANDRAIL IS INSTALLED ON ONE SIDE AND 27 INCHES WHERE HANDRAILS ARE PROVIDED ON BOTH SIDES.

EXCEPTION: THE WIDTH OF SPIRAL STAIRWAYS SHALL BE IN ACCORDANCE WITH SECTION R311.7.10.1.

HEADROOM: THE MINIMUM HEADROOM IN ALL PARTS OF THE STAIRWAY SHALL NOT BE LESS THAN 6 FEET 8 INCHES MEASURED VERTICALLY FROM THE SLOPED LINE ADJOINING THE TREAD NOSING OR FROM THE FLOOR SURFACE OF THE LANDING OR PLATFORM ON THAT PORTION OF THE STAIRWAY.

EXCEPTION: WHERE THE NOSINGS OF TREADS AT THE SIDE OF A FLIGHT EXTEND UNDER THE EDGE OF A FLOOR OPENING THROUGH WHICH THE STAIR PASSES, THE FLOOR OPENING SHALL BE ALLOWED TO PROJECT HORIZONTALLY INTO THE REQUIRED HEADROOM A MAXIMUM OF 4-3/4 INCHES

WALKLINE: THE WALKLINE ACROSS WINDER TREADS SHALL BE CONCENTRIC TO THE CURVED DIRECTION OF TRAVEL THROUGH THE TURN AND LOCATED 12 INCHES FROM THE SIDE WHERE THE WINDERS ARE NARROWER. THE 12-INCH DIMENSION SHALL BE MEASURED FROM THE WIDEST POINT OF THE CLEAR STAIR WIDTH AT THE WALKING SURFACE OF THE WINDER. IF WINDERS ARE ADJACENT WITHIN THE FLIGHT, THE POINT OF THE WIDEST CLEAR STAIR WIDTH OF THE ADJACENT WINDERS SHALL BE USED.

RISER HEIGHT: THE MAXIMUM RISER HEIGHT SHALL BE 7-3/4 INCHES. THE RISER SHALL BE MEASURED VERTICALLY BETWEEN LEADING EDGES OF THE ADJACENT TREADS. THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH.

TREAD DEPTH: THE MINIMUM TREAD DEPTH SHALL BE 10 INCHES. THE TREAD DEPTH SHALL BE MEASURED HORIZONTALLY BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AND AT A RIGHT ANGLE TO THE TREAD'S LEADING EDGE. THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH. CONSISTENTLY SHAPED WINDERS AT THE WALKLINE SHALL BE ALLOWED WITHIN THE SAME FLIGHT OF STAIRS AS RECTANGULAR TREADS AND DO NOT HAVE TO BE WITHIN 3/8 INCH OF THE RECTANGULAR TREAD DEPTH.

WINDER TREADS: SHALL HAVE A MINIMUM TREAD DEPTH OF 10 INCHES MEASURED BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AT THE INTERSECTIONS WITH THE WALKLINE. WINDER TREADS SHALL HAVE A MINIMUM TREAD DEPTH OF 6 INCHES AT ANY POINT WITHIN THE CLEAR WIDTH OF THE STAIR. WITHIN ANY FLIGHT OF STAIRS, THE LARGEST WINDER TREAD DEPTH AT THE WALKLINE SHALL NOT EXCEED THE SMALLEST WINDER TREAD BY MORE THAN 3/8 INCH.

NOSINGS: THE RADIUS OF CURVATURE AT THE NOSING SHALL BE NO GREATER THAN 9/16 INCH. A NOSING NOT LESS THAN 3/4 INCH BUT NOT MORE THAN 1-1/4 INCHES SHALL BE PROVIDED ON STAIRWAYS WITH SOLID RISERS. THE GREATEST NOSING PROJECTION SHALL NOT EXCEED THE SMALLEST NOSING PROJECTION BY MORE THAN 3/8 INCH BETWEEN TWO STORIES, INCLUDING THE NOSING AT THE LEVEL OF FLOORS AND LANDINGS. BEVELING OF NOSINGS SHALL NOT EXCEED 1/2 INCH. RISERS SHALL BE VERTICAL OR SLOPED UNDER THE TREAD ABOVE FROM THE UNDERSIDE OF THE NOSING ABOVE AT AN ANGLE NOT MORE THAN 30 DEGREES FROM THE VERTICAL. OPEN RISERS ARE PERMITTED, PROVIDED THAT THE OPENING BETWEEN TREADS DOES NOT PERMIT THE PASSAGE OF A 4-INCH DIAMETER SPHERE.

EXCEPTIONS: A NOSING IS NOT REQUIRED WHERE THE TREAD DEPTH IS A MINIMUM OF 11 INCHES.

HANDRAILS:

HANDRAILS SHALL BE PROVIDED ON AT LEAST ONE SIDE OF EACH CONTINUOUS RUN OF TREADS OR FLIGHT WITH FOUR OR MORE RISERS.

HEIGHT: HANDRAIL HEIGHT, MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE, SHALL BE NOT LESS THAN 34 INCHES AND NOT MORE THAN 38 INCHES.

EXCEPTIONS:

1. THE USE OF A VOLUTE, TURNOUT OR STARTING EASING SHALL BE ALLOWED OVER THE LOWEST TREAD.
2. WHEN HANDRAIL FITTINGS OR BENDINGS ARE USED TO PROVIDE CONTINUOUS TRANSITION BETWEEN FLIGHTS, THE TRANSITION FROM HANDRAIL TO GUARDRAIL, OR USED AT THE START OF A FLIGHT, THE HANDRAIL HEIGHT AT THE FITTINGS OR BENDINGS SHALL BE PERMITTED TO EXCEED THE MAXIMUM HEIGHT.

CONTINUITY: HANDRAILS FOR STAIRWAYS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE FLIGHT, FROM A POINT DIRECTLY ABOVE THE TOP RISER OF THE FLIGHT TO A POINT DIRECTLY ABOVE THE LOWEST RISER OF THE FLIGHT. HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS. HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 1-1/2 INCH BETWEEN THE WALL AND THE HANDRAILS.

EXCEPTIONS:

1. HANDRAILS SHALL BE PERMITTED TO BE INTERRUPTED BY A NEWEL POST AT THE TURN.
2. THE USE OF A VOLUTE, TURNOUT, STARTING EASING OR STARTING NEWEL SHALL BE ALLOWED OVER THE LOWEST TREAD.

GRIP-SIZE: ALL REQUIRED HANDRAILS SHALL BE OF ONE OF THE FOLLOWING TYPES OR PROVIDE EQUIVALENT GRASPABILITY.

1. TYPE I. HANDRAILS WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF AT LEAST 1-1/4 INCHES AND NOT GREATER THAN 2 INCHES. IF THE HANDRAIL IS NOT CIRCULAR, IT SHALL HAVE A PERIMETER DIMENSION OF AT LEAST 4 INCHES AND NOT GREATER THAN 6-1/4 INCHES WITH A MAXIMUM CROSS SECTION OF DIMENSION OF 2-1/4 INCHES. EDGES SHALL HAVE A MINIMUM RADIUS OF 0.01 INCH.
2. TYPE II. HANDRAILS WITH A PERIMETER GREATER THAN 6-1/4 INCHES SHALL HAVE A GRASPABLE FINGER RECESS AREA ON BOTH SIDES OF THE PROFILE. THE FINGER RECESS SHALL BEGIN WITHIN A DISTANCE OF 3/4 INCH MEASURED VERTICALLY FROM THE TALLEST PORTION OF THE PROFILE AND ACHIEVE A DEPTH OF AT LEAST 5/16 INCH WITHIN 7/8 INCH BELOW THE WIDEST PORTION OF THE PROFILE. THIS REQUIRED DEPTH SHALL CONTINUE FOR AT LEAST 3/8 INCH TO A LEVEL THAT IS NOT LESS THAN 1-3/4 INCHES BELOW THE TALLEST PORTION OF THE PROFILE. THE MINIMUM WIDTH OF THE HANDRAIL ABOVE THE RECESS SHALL BE 1-1/4 INCHES TO A MAXIMUM OF 2-3/4 INCHES. EDGES SHALL HAVE A MINIMUM RADIUS OF 0.01 INCH.

GUARDS (SECTION R312)

GUARDS SHALL BE LOCATED ALONG OPEN-SIDED WALKING SURFACES, INCLUDING STAIRS, RAMPS AND LANDINGS, THAT ARE LOCATED MORE THAN 30 INCHES MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW AT ANY POINT WITHIN 36 INCHES HORIZONTALLY TO THE EDGE OF THE OPEN SIDE. INSECT SCREENING SHALL NOT BE CONSIDERED AS A GUARD.

HEIGHT: REQUIRED GUARDS AT OPEN-SIDED WALKING SURFACES, INCLUDING STAIRS, PORCHES, BALCONIES OR LANDINGS, SHALL BE NOT LESS THAN 36 INCHES HIGH MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACE, ADJACENT FIXED SEATING OR THE LINE CONNECTING THE LEADING EDGES OF THE TREADS.

EXCEPTIONS:

1. GUARDS ON THE OPEN SIDES OF STAIRS SHALL HAVE A HEIGHT NOT LESS THAN 34 INCHES MEASURED VERTICALLY FROM A LINE CONNECTING THE LEADING EDGES OF THE TREADS.
2. WHERE THE TOP OF THE GUARD ALSO SERVES AS A HANDRAIL ON THE OPEN SIDES OF STAIRS, THE TOP OF THE GUARD SHALL NOT BE NOT LESS THAN 34 INCHES AND NOT MORE THAN 38 INCHES MEASURED VERTICALLY FROM A LINE CONNECTING THE LEADING EDGES OF THE TREADS.

OPENING LIMITATIONS: REQUIRED GUARDS SHALL NOT HAVE OPENINGS FROM THE WALKING SURFACE TO THE REQUIRED GUARD HEIGHT WHICH ALLOW PASSAGE OF A SPHERE 4 INCHES IN DIAMETER.

EXCEPTIONS:

1. THE TRIANGULAR OPENINGS AT THE OPEN SIDE OF A STAIR, FORMED BY THE RISER, TREAD AND BOTTOM RAIL OF A GUARD, SHALL NOT ALLOW PASSAGE OF A SPHERE 6 INCHES IN DIAMETER.
2. GUARDS ON THE OPEN SIDES OF STAIRS SHALL NOT HAVE OPENINGS WHICH ALLOW PASSAGE OF A SPHERE 4-3/8 INCHES IN DIAMETER.

WINDOW SILLS (SECTION R312.2.1): IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS LOCATED MORE THAN 72 INCHES ABOVE THE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE WINDOW SHALL BE A MINIMUM OF 24 INCHES ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED. OPERABLE SECTIONS OF WINDOWS SHALL NOT PERMIT OPENINGS THAT ALLOW PASSAGE OF A 4-INCH DIAMETER SPHERE WHERE SUCH OPENINGS ARE LOCATED WITHIN 24 INCHES OF THE FINISHED FLOOR.

EXCEPTIONS:

1. WINDOWS WHOSE OPENINGS WILL NOT ALLOW A 4-INCH DIAMETER SPHERE TO PASS THROUGH THE OPENING WHEN THE OPENING IS IN ITS LARGEST OPENED POSITION.
2. OPENINGS THAT ARE PROVIDED WITH WINDOW FALL PREVENTION DEVICES THAT COMPLY WITH ASTM F 2090.
3. WINDOWS THAT ARE PROVIDED WITH WINDOW OPENING CONTROL DEVICES THAT COMPLY WITH SECTION R312.2.2

SMOKE ALARMS (SECTION R314)

SMOKE DETECTION AND NOTIFICATION. ALL SMOKE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 217 AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THIS CODE AND THE HOUSEHOLD FIRE WARNING EQUIPMENT PROVISIONS OF NFPA 72.

SMOKE DETECTION SYSTEMS: HOUSEHOLD FIRE ALARM SYSTEMS INSTALLED IN ACCORDANCE WITH NFPA 72 THAT INCLUDE SMOKE ALARMS, OR A COMBINATION OF SMOKE DETECTOR AND AUDIBLE NOTIFICATION DEVICE INSTALLED AS REQUIRED BY THIS SECTION FOR SMOKE ALARMS, SHALL BE PERMITTED. THE HOUSEHOLD FIRE ALARM SYSTEM SHALL PROVIDE THE SAME LEVEL OF SMOKE DETECTION AND ALARM AS REQUIRED BY THIS SECTION FOR SMOKE ALARMS. WHERE A HOUSEHOLD FIRE WARNING SYSTEM IS INSTALLED USING A COMBINATION OF SMOKE DETECTOR AND AUDIBLE NOTIFICATION DEVICE(S), IT SHALL BECOME A PERMANENT FIXTURE OF THE OCCUPANCY AND OWNED BY THE HOMEOWNER. THE SYSTEM SHALL BE MONITORED BY AN APPROVED SUPERVISING STATION AND BE MAINTAINED IN ACCORDANCE WITH NFPA72.

EXCEPTION: WHERE SMOKE ALARMS ARE PROVIDED MEETING THE REQUIREMENTS OF SECTION R314.4.

LOCATION: SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:

1. IN EACH SLEEPING ROOM.
2. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.
3. ON EACH ADDITIONAL STORY OF THE DWELLING, INCLUDING BASEMENTS AND HABITABLE ATTICS BUT NOT INCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS. IN DWELLINGS OR DWELLING UNITS WITH SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN THE ADJACENT LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER LEVEL SHALL SUFFICE FOR THE ADJACENT LOWER LEVEL PROVIDED THAT THE LOWER LEVEL IS LESS THAN ONE FULL STORY BELOW THE UPPER LEVEL.

ALTERATIONS, REPAIRS AND ADDITIONS: WHEN ALTERATIONS, REPAIRS OR ADDITIONS REQUIRING A PERMIT OCCUR, OR WHEN ONE OR MORE SLEEPING ROOMS ARE ADDED OR CREATED IN EXISTING DWELLINGS, THE INDIVIDUAL DWELLING UNIT SHALL BE EQUIPPED WITH SMOKE ALARMS LOCATED AS REQUIRED FOR NEW DWELLINGS.

EXCEPTIONS:

1. WORK INVOLVING THE EXTERIOR SURFACES OF DWELLINGS, SUCH AS THE REPLACEMENT OF ROOFING OR SIDING, OR THE ADDITION OR REPLACEMENT OF WINDOWS OR DOORS, OR THE ADDITION OF A PORCH OR DECK, ARE EXEMPT FROM THE REQUIREMENTS OF THIS SECTION.
2. INSTALLATION, ALTERATION OR REPAIRS OF PLUMBING OR MECHANICAL SYSTEMS ARE EXEMPT FROM THE REQUIREMENTS OF THIS SECTION

POWER SOURCE: SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING WHEN SUCH WIRING IS SERVED FROM A COMMERCIAL SOURCE, AND WHEN PRIMARY POWER IS INTERRUPTED, SHALL RECEIVE POWER FROM A BATTERY. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN THOSE REQUIRED FOR OVERCURRENT PROTECTION. SMOKE ALARMS SHALL BE INTERCONNECTED.

EXCEPTIONS:

1. SMOKE ALARMS SHALL BE PERMITTED TO BE BATTERY OPERATED WHEN INSTALLED IN BUILDINGS WITHOUT COMMERCIAL POWER.
2. INTERCONNECTION AND HARD-WIRING OF SMOKE ALARMS IN EXISTING AREAS SHALL NOT BE REQUIRED WHERE THE ALTERATIONS OR REPAIRS DO NOT RESULT IN THE REMOVAL OF INTERIOR WALL OR CEILING FINISHES EXPOSING THE STRUCTURE, UNLESS THERE IS AN ATTIC, CRAWL SPACE OR BASEMENT AVAILABLE WHICH COULD PROVIDE ACCESS FOR HARD WIRING AND INTERCONNECTION WITHOUT THE REMOVAL OF INTERIOR FINISHES.

CARBON MONOXIDE ALARMS (SECTION R315)

FOR NEW CONSTRUCTION, AN APPROVED CARBON MONOXIDE ALARM SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS IN DWELLING UNITS AND ON EACH LEVEL OF THE DWELLING AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

WHERE REQUIRED IN EXISTING DWELLINGS: EXISTING DWELLINGS SHALL BE EQUIPED WITH CARBON MONOXIDE ALARMS IN ACCORDANCE WITH SECTION R315.1. AN INSPECTION WILL OCCUR WHEN ALTERATIONS, REPAIRS OR ADDITIONS REQUIRING A PERMIT OCCUR, OR WHEN ONE OR MORE SLEEPING ROOMS ARE ADDED OR CREATED.

ALARM REQUIREMENTS: SINGLE-STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH UL 2034 AND SHALL BE INSTALLED IN ACCORDANCE WITH THIS CODE, NFPA 720-2012 AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

INSULATION

BUILDINGS SHALL COMPLY WITH THE BUILDING THERMAL ENVELOPE INSULATION REQUIREMENTS SET FORTH IN IRC CHAPTER N1102 OR PER THE REQUIREMENTS OF THE GOVERNING JURISDICTION, AS APPLICABLE.

FOAM PLASTIC INSULATION SHALL COMPLY WITH THE REQUIREMENTS IN IRC SECTION R316.

INSULATION MATERIALS, INCLUDING FACINGS, SUCH AS VAPOR RETARDERS AND VAPOR-PERMEABLE MEMBRANES INSTALLED WITHIN FLOOR-CEILING ASSEMBLIES, ROOF-CEILING ASSEMBLIES, WALL ASSEMBLIES, CRAWL SPACES AND ATTICS SHALL HAVE A FLAME SPREAD INDEX NOT TO EXCEED 25 WITH AN ACCOMPANYING SMOKE-DEVELOPED INDEX NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.

EXCEPTIONS:

1. WHEN SUCH MATERIALS ARE INSTALLED IN CONCEALED SPACES, THE FLAME SPREAD INDEX AND SMOKE-DEVELOPED INDEX LIMITATIONS DO NOT APPLY TO THE FACINGS, PROVIDED THAT THE FACING IS INSTALLED IN SUBSTANTIAL CONTACT WITH THE UNEXPOSED SURFACE OF THE CEILING, FLOOR OR WALL FINISH.
2. CELLULOSE LOOSE-FILL INSULATION, WHICH IS NOT SPRAY APPLIED, COMPLYING WITH THE REQUIREMENTS OF SECTION R302.10.3, SHALL ONLY BE REQUIRED TO MEET THE SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450.

CHIMNEYS AND FIREPLACES

ALL MASONRY AND FACTORY BUILT FIREPLACES, CHIMNEYS AND MASONRY HEATERS SHALL COMPLY WITH THE PROVISIONS OF IRC CHAPTERS 10, 18, AND 24.

HEATING AND COOLING EQUIPMENT (CHAPTER 14)

REQUIRED HEATING (SECTION R303.9): WHEN THE WINTER DESIGN TEMPERATURE IN TABLE R301.2(1) IS BELOW 60 DEGREES F, EVERY DWELLING UNIT SHALL BE PROVIDED WITH HEATING FACILITIES CAPABLE OF MAINTAINING A MINIMUM ROOM TEMPERATURE OF 68 DEGREES F AT A POINT 3 FEET ABOVE THE FLOOR AND 2 FEET FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS AT THE DESIGN TEMPERATURE. THE INSTALLATION OF ONE OR MORE PORTABLE SPACE HEATERS SHALL NOT BE USED TO ACHIEVE COMPLIANCE WITH THIS SECTION.

DEFINITION: THE BUILDING THERMAL ENVELOPE IS DEFINED AS: THE BASEMENT WALLS, EXTERIOR WALLS, FLOOR, ROOF AND ANY OTHER BUILDING ELEMENT THAT ENCLOSE CONDITIONED SPACES.

AIR SUPPLY: SOLID-FUEL-BURNING APPLIANCES SHALL BE PROVIDED WITH COMBUSTION AIR IN ACCORDANCE WITH THE APPLIANCE MANUFACTURER'S INSTALLATION INSTRUCTIONS. OIL-FIRED APPLIANCES SHALL BE PROVIDED WITH COMBUSTION AIR IN ACCORDANCE WITH NFPA 31. THE METHODS OF PROVIDING COMBUSTION AIR IN THIS CHAPTER TO APPLY TO FIREPLACES, FIREPLACE STOVES AND DIRECT-VENT APPLIANCES. THE REQUIREMENTS FOR COMBUSTION AND DILUTION AIR FOR GAS-FIRED APPLIANCES SHALL BE IN ACCORDANCE WITH IRC CHAPTER 24.

DUCT WORK, LOCATION OF APPLIANCES, SOURCE OF COMBUSTION AIR, ETC. SHALL COMPLY WITH IRC CHAPTERS 13, 14, 16, AND 17.

LABEL INFORMATION: A PERMANENT FACTORY-APPLIED NAMEPLATE(S) SHALL BE AFFIXED TO APPLIANCES ON WHICH SHALL APPEAR, IN LEGIBLE LETTERING, THE MANUFACTURER'S NAME OR TRADEMARK, THE MODEL NUMBER, SERIAL NUMBER, AND THE SEAL OR MARK OF THE TESTING AGENCY PER IRC SECTION M1303.1.

PROHIBITED SOURCES: COMBUSTION AIR DUCTS AND OPENINGS SHALL NOT CONNECT APPLIANCE ENCLOSURES WITH SPACE IN WHICH THE OPERATION OF A FAN MAY ADVERSELY AFFECT THE FLOW OF COMBUSTION AIR. COMBUSTION AIR SHALL NOT BE OBTAINED FROM AN AREA IN WHICH FLAMMABLE VAPORS PRESENT A HAZARD. APPLIANCES SHALL NOT BE LOCATED IN SLEEPING ROOMS, BATHROOMS, TOILET ROOMS, STORAGE CLOSETS OR SURGICAL ROOMS, OR IN A SPACE THAT OPENS ONLY INTO SUCH ROOMS OR SPACES, EXCEPT WHERE THE INSTALLATION COMPLIES WITH ONE OF THE EXCEPTIONS LISTED IN IRC SECTION G2406.2

APPLIANCE ACCESS FOR INSPECTION SERVICE, REPAIR AND REPLACEMENT WITHOUT REMOVING PERMANENT CONSTRUCTION, OTHER APPLIANCES, OR ANY OTHER PIPING OR DUCTS NOT CONNECTED TO THE APPLIANCE BEING INSPECTED, SERVICED, REPAIRED OR REPLACESD. A LEVEL WORKING SPACE AT LEAST 30 INCHES DEEP AND 30 INCHES WIDE SHALL BE PROVIDED IN FRONT OF THE CONTROL SIDE TO SERVICE AN APPLIANCE. INSTALLATION OF ROOM HEATERS SHALL BE PERMITTED WITH AT LEAST AN 18 INCH WORKING SPACE. A PLATFORM SHALL NOT BE REQUIRED FOR ROOM HEATERS.

APPLIANCES IN ROOMS: APPLIANCES INSTALLED IN A COMPARTMENT, ALCOVE, BASEMENT OR SIMILAR SPACE SHALL BE ACCESSED BY AN OPENING OR DOOR AND AN UNOBSTRUCTED PASSAGEWAY MEASURING NOT LESS THAN 24 INCHES WIDE AND LARGE ENOUGH TO ALLOW REMOVAL OF THE LARGEST APPLIANCE IN THE SPACE, PROVIDED THAT A LEVEL SERVICE SPACE OF NOT LESS THAN 30 INCHES DEEP AND THE HEIGHT OF THE APPLIANCE, BUT NOT LESS THAN 30 INCHES, IS PRESENT AT THE FRONT OR SERVICE SIDE OF THE APPLIANCE WITH THE DOOR OPEN.

ACCESS (SECTION M1401.2): HEATING AND COOLING EQUIPMENT AND APPLIANCES SHALL BE LOCATED WITH RESPECT TO BUILDING CONSTRUCTION AND OTHER EQUIPMENT TO PERMIT MAINTENANCE, SERVICING AND REPLACEMENT. CLEARANCES SHALL BE MAINTAINED TO PERMIT CLEANING OF HEATING AND COOLING SURFACES; REPLACEMENT OF FILTERS, LOWERS, MOTORS, CONTROLS AND VENT CONNECTIONS; LUBRICATION OF MOVING PARTS; AND ADJUSTMENTS.

EXTERIOR INSTALLATIONS (SECTION M1401.4): EQUIPMENT INSTALLED OUTDOORS SHALL BE LISTED AND LABELED FOR OUTDOOR INSTALLATION. SUPPORTS AND FOUNDATIONS SHALL PREVENT EXCESSIVE VIBRATION, SETTLEMENT OR MOVEMENT OF THE EQUIPMENT. SUPPORTS AND FOUNDATIONS SHALL BE LEVEL AND CONFORM TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

ANCHORAGE OF APPLIANCES (SECTION M1307.2): APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE FASTENED OR ANCHORED IN AN APPROVED MANNER. IN SEISMIC DESIGN CATEGORIES D1 AND D2, WATER HEATERS SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION. STRAPPING SHALL BE AT POINTS WITHIN THE UPPER ONE-THIRD AND LOWER ONE-THIRD OF THE APPLIANCE'S VERTICAL DIMENSIONS. AT THE LOWER POINT, THE STRAPPING SHALL MAINTAIN A MINIMUM DISTANCE OF 4 INCHES ABOVE THE CONTROLS.

ELEVATION OF IGNITION SOURCE (SECTION M1307.3): APPLIANCES HAVING AN IGNITION SOURCE SHALL BE ELEVATED SUCH THAT THE SOURCE OF IGNITION IS NOT LESS THAN 18 INCHES ABOVE THE FLOOR IN GARAGES. FOR THE PURPOSE OF THIS SECTION, ROOMS OR SPACES THAT ARE NOT PART OF THE LIVING SPACE OF A DWELLING UNIT AND THAT COMMUNICATE WITH A PRIVATE GARAGE THROUGH OPENINGS SHALL BE CONSIDERED TO BE PART OF THE GARAGE.

PROTECTION FROM IMPACT: APPLIANCES SHALL NOT BE INSTALLED IN A LOCATION SUBJECT TO VEHICLE DAMAGE EXCEPT WHERE PROTECTED BY APPROVED BARRIERS.

APPLIANCES INSTALLED IN ATTICS SHALL CONFORM TO IRC SECTION M1305.1 APPLIANCES INSTALLED IN CRAWL SPACES SHALL CONFORM TO IRC SECTION M1305.1.4.

DUCT PENETRATION (SECTION R302.5.2): DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF A MINIMUM NO. 26 GAGE SHEET STEEL OR OTHER APPROVED MATERIAL AND SHALL HAVE NO OPENINGS INTO THE GARAGE.

VENTING REQUIRED (SECTION M1801.1): FUEL-BURNING APPLIANCES SHALL BE VENTED TO THE OUTSIDE IN ACCORDANCE WITH THEIR LISTING AND LABEL AND MANUFACTURER'S INSTALLATION INSTRUCTIONS EXCEPT APPLIANCES LISTED AND LABELED FOR UNVENTED USE. VENTING SYSTEMS SHALL CONSIST OF APPROVED CHIMNEYS OR VENTS, OR VENTING ASSEMBLIES THAT ARE INTEGRAL PARTS OF LABELED APPLIANCES. GAS-FIRED APPLIANCES SHALL BE VENTED IN ACCORDANCE WITH CHAPTER 24.

DUCT DESIGN (SECTION 1601.1): DUCT SYSTEMS SERVING HEATING, COOLING AND VENTILATION EQUIPMENT SHALL BE FABRICATED IN ACCORDANCE WITH THE PROVISIONS OF THIS SECTION AND ACCA MANUAL D OR OTHER APPROVED METHODS.

ABOVE-GROUND DUCT SYSTEMS SHALL CONFORM TO THE PROVISIONS OF IRC SECTION M1601.1.1. AND TABLE M1601.1.1 (2).

JOINTS OF DUCT SYSTEMS SHALL BE MADE SUBSTANTIALLY AIRTIGHT BY MEANS OF TAPES, MASTICS, LIQUID SEALANTS, GASKETING OR OTHER APPROVED CLOSURE SYSTEMS PER IRC SECTION M1601.4.1.

SWIMMING POOLS, SPAS AND HOT TUBS (CHAPTER 42)

SWIMMING POOLS, WADING POOLS, DECORATIVE POOLS, FOUNTAINS, HOT TUBS AND SPAS, AND HYDROMASSAGE BATHTUBS, WHETHER PERMANENTLY INSTALLED OR STORABLE, SHALL CONFORM TO IRC CHAPTER 42 WITH RESPECT TO CONSTRUCTION AND INSTALLATION OF METALLIC AUXILIARY EQUIPMENT, SUCH AS PUMPS, FILTERS AND SIMILAR EQUIPMENT.

SWIMMING POOLS, SPAS AND HOT TUBS INSTALLED IN OR ON THE LOT OF A ONE- OR TWO-FAMILY DWELLING SHALL CONFORM TO THE PROVISIONS OF IRC APPENDIX G.

FOUNDATIONS AND BUILDING LOCATION

REQUIREMENTS (R401.2): FOUNDATION CONSTRUCTION SHALL BE CAPABLE OF ACCOMMODATING ALL LOADS ACCORDING TO SECTION R301 AND OF TRANSMITTING THE RESULTING LOADS TO THE SUPPORTING SOIL. FILL SOILS THAT SUPPORT FOOTINGS AND FOUNDATIONS SHALL BE DESIGNED, INSTALLED AND TESTED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE. GRAVEL FILL USED AS FOOTINGS FOR WOOD AND PRECAST CONCRETE FOUNDATIONS SHALL COMPLY WITH SECTION R403.

DRAINAGE (SECTION 401.3): SURFACE DRAINAGE SHALL BE DIVERTED TO A STORM SEWER CONVEYANCE OR OTHER APPROVED POINT OF COLLECTION THAT DOES NOT CREATE A HAZARD. LOTS SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS. THE GRADE SHALL FALL A MINIMUM OF 6 INCHES WITHIN THE FIRST 10 FEET.

EXCEPTION: WHERE LOT LINES, WALLS, SLOPES OR OTHER PHYSICAL BARRIERS PROHIBIT 6 INCHES OF FALL WITHIN 10 FEET, DRAINS OR SWALES SHALL BE CONSTRUCTED TO ENSURE DRAINAGE AWAY FROM THE STRUCTURE. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2 PERCENT AWAY FROM THE BUILDING.

SOIL TESTS (SECTION 401.4): WHERE QUANTIFIABLE DATA CREATED BY ACCEPTED SOIL SCIENCE METHODOLOGIES INDICATE EXPANSIVE, COMPRESSIBLE, SHIFTING OR OTHER QUESTIONABLE SOIL CHARACTERISTICS ARE LIKELY TO BE PRESENT, THE BUILDING OFFICIAL SHALL DETERMINE WHETHER TO REQUIRE A SOIL TEST TO DETERMINE THE SOIL'S CHARACTERISTICS AT A PARTICULAR LOCATION. THIS TEST SHALL BE DONE BY AN APPROVED AGENCY USING AN APPROVED METHOD.

GEOTECHNICAL EVALUATION: IN LIEU OF A COMPLETE GEOTECHNICAL EVALUATION, THE LOAD-BEARING VALUES IN TABLE R401.4.1 SHALL BE ASSUMED.

FOOTINGS (SECTION 403.1): ALL EXTERIOR WALLS SHALL BE SUPPORTED ON CONTINUOUS SOLID OR FULLY GROUTED MASONRY OR CONCRETE FOOTINGS, CRUSHED STONE FOOTINGS, WOOD FOUNDATIONS, OR OTHER APPROVED STRUCTURAL SYSTEMS WHICH SHALL BE OF SUFFICIENT DESIGN TO ACCOMMODATE ALL LOADS ACCORDING TO SECTION R301 AND TO TRANSMIT THE RESULTING LOADS TO THE SOIL WITHIN THE LIMITATIONS AS DETERMINED FROM THE CHARACTER OF THE SOIL. FOOTINGS SHALL BE SUPPORTED ON UNDISTURBED NATURAL SOILS OR ENGINEERED FILL. CONCRETE FOOTING SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R403 OR IN ACCORDANCE WITH ACI 332.

MINIMUM SIZE (SECTION 403.1.1): MINIMUM SIZES FOR CONCRETE AND MASONRY FOOTINGS SHALL BE AS SET FORTH IN TABLE R403.1 AND FIGURE R403.1(1). THE FOOTING WIDTH SHALL BE BASED ON THE LOAD-BEARING VALUE OF THE SOIL IN ACCORDANCE WITH TABLE R401.4.1. SPREAD FOOTINGS SHALL BE AT LEAST 6 INCHES IN THICKNESS, T. FOOTING PROJECTIONS, P, SHALL BE AT LEAST 2 INCHES AND SHALL NOT EXCEED THE THICKNESS OF THE FOOTING. THE SIZE OF FOOTINGS SUPPORTING PIERS AND COLUMNS SHALL BE BASED ON THE TRIBUTARY LOAD AND ALLOWABLE SOIL PRESSURE IN ACCORDANCE WITH TABLE R401.4.1.

MINIMUM DEPTH: ALL EXTERIOR FOOTINGS SHALL BE PLACED AT LEAST 12 INCHES BELOW THE UNDISTURBED GROUND. WHERE APPLICABLE, THE DEPTH OF FOOTINGS SHALL ALSO CONFORM TO SECTIONS R403.1.4.1.

REFER TO LOCAL REQUIREMENTS WITH RESPECT TO MINIMUM REQUIRED FOOTING DEPTH AND STRUCTURAL ENGINEER'S DRAWINGS AND GEOTECHNICAL REQUIREMENTS.

CONCRETE AND MASONRY FOUNDATION WALLS SHALL EXTEND ABOVE THE FINISHED GRADE ADJACENT TO THE FOUNDATION AT ALL POINTS A MINIMUM OF 4 INCHES WHERE MASONRY VENEER IS USED AND A MINIMUM OF 6 INCHES ELSEWHERE.

FOOTINGS ON OR ADJACENT TO SLOPES (SECTION 403.1.7): THE PLACEMENT OF BUILDINGS AND STRUCTURES ON OR ADJACENT TO SLOPES STEEPER THAN 1 UNIT VERTICAL IN 3 UNITS HORIZONTAL (33.3-PERCENT SLOPE) SHALL CONFORM TO SECTIONS R403.1.7.1 THROUGH R403.1.7.4.

BUILDING CLEARANCES FROM ASCENDING SLOPES: IN GENERAL, BUILDINGS BELOW SLOPES SHALL BE SET A SUFFICIENT DISTANCE FROM THE SLOPE TO PROVIDE PROTECTION FROM SLOPE DRAINAGE, EROSION AND SHALLOW FAILURES. EXCEPT AS PROVIDED IN SECTION R403.1.7.4 AND FIGURE R403.1.7.1,

FOUNDATION ANCHORAGE: REFER TO STRUCTURAL DRAWINGS AND DETAILS FOR SILL PLATE AND BOTTOM TRACK TO FOUNDATION ANCHORAGE REQUIREMENTS.

DAMPPROOFING AND VENTILATION

LOCATION REQUIRED: PROTECTION OF WOOD AND WOOD BASED PRODUCTS FROM DECAY SHALL BE PROVIDED IN THE FOLLOWING LOCATIONS BY THE USE OF NATURALLY DURABLE WOOD OR WOOD THAT IS PRESERVATIVE-TREATED IN ACCORDANCE WITH AWPA U1 FOR THE SPECIES, PRODUCT, PRESERVATIVE AND END USE. PRESERVATIVES SHALL BE LISTED IN SECTION 4 OF AWPA U1.

1. WOOD JOISTS OR THE BOTTOM OF A WOOD STRUCTURAL FLOOR WHEN CLOSER THAN 18 INCHES OR WOOD GIRDERS WHEN CLOSER THAN 12 INCHES TO THE EXPOSED GROUND IN CRAWL SPACES OR UNEXCAVATED AREA LOCATED WITHIN THE PERIPHERY OF THE BUILDING FOUNDATION.
2. ALL WOOD FRAMING MEMBERS THAT REST ON CONCRETE OR MASONRY EXTERIOR FOUNDATION WALLS AND ARE LESS THAN 8 INCHES FROM THE EXPOSED GROUND.
3. SILLS AND SLEEPERS ON A CONCRETE OR MASONRY SLAB THAT IS IN DIRECT CONTACT WITH THE GROUND UNLESS SEPARATED FROM SUCH SLAB BY AN IMPERVIOUS MOISTURE BARRIER.
4. THE ENDS OF WOOD GIRDERS ENTERING EXTERIOR MASONRY OR CONCRETE WALLS HAVING CLEARANCES OF LESS THAN 1/2 INCH ON TOPS, SIDES AND ENDS.
5. WOOD SIDING, SHEATHING AND WALL FRAMING ON THE EXTERIOR OF A BUILDING HAVING A CLEARANCE OF LESS THAN 6 INCHES FROM THE GROUND OR LESS THAN 2 INCHES MEASURED VERTICALLY FROM CONCRETE STEPS, PORCH SLABS, PATIO SLABS, AND SIMILAR HORIZONTAL SURFACES EXPOSED TO THE WEATHER.
6. WOOD STRUCTURAL MEMBERS SUPPORTING MOISTURE-PERMEABLE FLOORS OR ROOFS THAT ARE EXPOSED TO THE WEATHER, SUCH AS CONCRETE OR MASONRY SLABS, UNLESS SEPARATED FROM SUCH FLOORS OR ROOFS BY AN IMPERVIOUS MOISTURE BARRIER.
7. WOOD FURRING STRIPS OR OTHER WOOD FRAMING MEMBERS ATTACHED DIRECTLY TO THE INTERIOR OF EXTERIOR MASONRY WALLS OR CONCRETE WALLS BELOW GRADE EXCEPT WHERE AN APPROVED VAPOR RETARDER IS APPLIED BETWEEN THE WALL AND THE FURRING STRIPS OR FRAMING MEMBERS.

UNDER-FLOOR SPACE ACCESS (SECTION R408.4): ACCESS SHALL BE PROVIDED TO ALL UNDER-FLOOR SPACES. ACCESS OPENINGS THROUGH THE FLOOR SHALL BE A MINIMUM OF 18 INCHES BY 24 INCHES. OPENINGS THROUGH A PERIMETER WALL SHALL BE 16 INCHES BY 24 INCHES. WHEN ANY PORTION OF THE THROUGH WALL ACCESS IS BELOW GRADE, AN AREAWAY OF NOT LESS THAN 16 INCHES BY 24 INCHES SHALL BE PROVIDED. THE BOTTOM OF THE AREAWAY SHALL BE BELOW THE THRESHOLD OF THE ACCESS OPENING. THROUGH-WALL ACCESS OPENINGS SHALL NOT BE LOCATED UNDER A DOOR TO THE RESIDENCE.

APPLIANCES UNDER FLOORS (SECTION 1305.1.4): UNDER-FLOOR SPACES CONTAINING APPLIANCES SHALL BE PROVIDED WITH AN UNOBSTRUCTED PASSAGEWAY LARGE ENOUGH TO REMOVE THE LARGEST APPLIANCE, BUT NOT LESS THAN 30 INCHES HIGH AND 22 INCHES WIDE, NOR MORE THAN 20 FEET LONG WHEN MEASURED ALONG THE CENTERLINE OF THE PASSAGEWAY FROM THE OPENING TO THE APPLIANCE.

VENTILATION (SECTION R408.1): THE UNDER-FLOOR SPACE BETWEEN THE BOTTOM OF THE FLOOR JOISTS AND THE EARTH UNDER ANY BUILDING (EXCEPT SPACE OCCUPIED BY A BASEMENT) SHALL HAVE VENTILATION OPENINGS THROUGH FOUNDATION WALLS OR EXTERIOR WALLS. THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 SQUARE FOOT FOR EACH 150 SQUARE FEET OF UNDER-FLOOR SPACE AREA, UNLESS THE GROUND SURFACE IS COVERED BY A CLASS 1 VAPOR RETARDER MATERIAL. WHEN A CLASS 1 VAPOR RETARDER IS USED, THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 SQUARE FOOT FOR EACH 1,500 SQUARE FEET OF UNDER-FLOOR SPACE AREA. ONE SUCH VENTILATING OPENING SHALL BE WITHIN 3 FEET OF EACH

CORNER OF THE BUILDING.

VENTILATION OPENINGS SHALL BE COVERED FOR THEIR HEIGHT AND WIDTH WITH ANY OF THE FOLLOWING MATERIALS PROVIDED THAT THE LEAST DIMENSION OF THE COVERING SHALL NOT EXCEED 1/4 INCH:

1. PERFORATED SHEET METAL PLATES NOT LESS THAN 0.070 INCH THICK.
2. EXPANDED SHEET METAL PLATES NOT LESS THAN 0.047 INCH THICK.
3. CAST-IRON GRILL OR GRATING.
4. EXTRUDED LOAD-BEARING BRICK VENTS.
5. HARDWARE CLOTH OF 0.035 INCH WIRE OR HEAVIER.
6. CORROSION-RESISTANT WIRE MESH, WITH THE LEAST DIMENSION BEING 1/8 INCH THICK.

CONCRETE AND MASONRY FOUNDATION DAMPPROOFING (SECTION R406.1): EXCEPT WHERE REQUIRED BY SECTION R406.2, FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE INTERIOR SPACES AND re

LOCATED BELOW GRADE SHALL BE DAMPPROOFED FROM THE TOP OF THE FOOTING TO THE FINISHED GRADE. MASONRY WALLS SHALL HAVE NOT LESS THAN 3/8 INCH PORTLAND CEMENT PARGING APPLIED TO THE EXTERIOR OF THE WALL. THE PARGING SHALL BE DAMPPROOFED IN ACCORDANCE WITH ONE OF THE FOLLOWING:

1. A BITUMINOUS COATING
2. 3 POUNDS PER SQUARE YARD OF ACRYLIC MODIFIED CEMENT
3. 1/8-INCH COAT OF SURFACE-BONDING CEMENT COMPLYING WITH ASTM C 887
4. ANY MATERIAL PERMITTED FOR WATERPROOFING IN SECTION R406.2.
5. OTHER APPROVED METHODS OR MATERIALS

CONCRETE WALLS SHALL BE DAMPPROOFED BY APPLYING ANY ONE OF THE ABOVE LISTED DAMPPROOFING MATERIALS OR ANY ONE OF THE WATERPROOFING MATERIALS LISTED IN SECTION R406.2 TO THE EXTERIOR OF THE WALL.

EXTERIOR WALL COVERING (SECTION R703)

EXTERIOR WALLS SHALL PROVIDE THE BUILDING WITH A WEATHER-RESISTANT EXTERIOR WALL ENVELOPE. THE EXTERIOR WALL ENVELOPE SHALL INCLUDE FLASHING AS DESCRIBED IN SECTION R703.8. THE EXTERIOR WALL ENVELOPE SHALL BE DESIGNED AND CONSTRUCTED IN SUCH A MANNER THAT PREVENTS THE ACCUMULATION OF WATER WITHIN THE WALL ASSEMBLY BY PROVIDING A WATER-RESISTANT BARRIER BEHIND THE EXTERIOR VENEER AS REQUIRED BY SECTION R703.2. AND A MEANS OF DRAINING TO THE EXTERIOR WATER THAT ENTERS THE ASSEMBLY. PROTECTION AGAINST CONDENSATION IN THE EXTERIOR WALL ASSEMBLY SHALL BE PROVIDED IN ACCORDANCE WITH SECTION R702.7.

WOOD WALL FRAMING (SECTION R602)

LOAD-BEARING DIMENSION LUMBER FOR STUDS, PLATES AND HEADERS SHALL BE IDENTIFIED BY A GRADE MARK OF A LUMBER GRADING OR INSPECTION AGENCY THAT HAS BEEN APPROVED BY AN ACCREDITED BODY THAT COMPLIES WITH DOC PS 20. IN LIEU OF A GRADE MARK, A CERTIFICATION OF INSPECTION ISSUED BY A LUMBER OR GRADING AGENCY MEETING THE REQUIREMENTS OF THIS SECTION SHALL BE ACCEPTED.

TOP PLATE (SECTION R602.3.2): WOOD STUD WALLS SHALL BE CAPPED WITH A DOUBLE TOP PLATE INSTALLED TO PROVIDE OVERLAPPING AT CORNERS AND INTERSECTIONS WITH BEARING PARTITIONS. END JOINTS IN TOP PLATES SHALL BE OFFSET AT LEAST 24 INCHES. JOINTS IN PLATES NEED NOT OCCUR OVER STUDS. PLATES SHALL BE NOT LESS THAN 2-INCHES NOMINAL THICKNESS AND HAVE A WIDTH AT LEAST EQUAL TO THE WIDTH OF THE STUDS.

BOTTOM (SOLE) PLATE: STUDS SHALL HAVE FULL BEARING ON A NOMINAL 2-BY OR LARGER PLATE OR SILL HAVING A WIDTH AT LEAST EQUAL TO THE WIDTH OF THE STUDS.

FIREBLOCKING (SECTION 302.11): IN COMBUSTIBLE CONSTRUCTION, FIREBLOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE. FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAME CONSTRUCTION IN THE FOLLOWING LOCATIONS:

1. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS, AS FOLLOWS:
   - 1.1. VERTICALLY AT THE CEILING AND FLOOR LEVELS.
   - 1.2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET.
2. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS.
3. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SECTION R302.7.
4. AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES AND WIRES AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION. THE MATERIAL FILLING THIS ANNULAR SPACE SHALL NOT BE REQUIRED TO MEET THE ASTM E 136 REQUIREMENTS.
5. FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES, SEE SECTION R1003.19.
6. FIREBLOCKING OF CORNICES OF A TWO-FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING UNIT SEPARATION.

ROOF ASSEMBLIES & CONSTR. (CHAPTERS 8 & 9)

ROOFING COVERING MATERIALS (SECTION R902.1): ROOFS SHALL BE COVERED WITH MATERIALS AS SET FORTH IN SECTIONS R904 AND R905. CLASS A, B OR C ROOFING SHALL BE INSTALLED IN AREAS DESIGNATED BY LAW AS REQUIRING THEIR USE OR WHEN THE EDGE OF THE ROOF IS LESS THAN 3 FEET FROM A PROPERTY LINE. CLASSES A, B AND C ROOFING REQUIRED BY THIS SECTION TO BE LISTED SHALL BE TESTED IN ACCORDANCE WITH UL 790 OR ASTM E 108.

ROOF DECKS SHALL BE COVERED WITH APPROVED ROOF COVERINGS SECURED TO THE BUILDING OR STRUCTURE IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 9. ROOF ASSEMBLIES SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THIS CODE AND THE APPROVED MANUFACTURER'S INSTALLATION INSTRUCTIONS SUCH THAT THE ROOF ASSEMBLY SHALL SERVE TO PROTECT THE BUILDING OR STRUCTURE.

VENTILATION REQUIRED (SECTION R806.1): ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATING OPENINGS SHALL HAVE A LEAST DIMENSION OF 1/16 INCH MINIMUM AND 1/4 INCH MAXIMUM. VENTILATION OPENINGS HAVING A LEAST DIMENSION LARGER THAN 1/4 INCH SHALL BE PROVIDED WITH CORROSION-RESISTANT WIRE CLOTH SCREENING, HARDWARE CLOTH, OR SIMILAR MATERIAL WITH OPENINGS HAVING A LEAST DIMENSION OF 1/16 INCH MINIMUM AND 1/4 INCH MAXIMUM. OPENINGS IN ROOF FRAMING MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF SECTION R802.7.

MINIMUM VENT AREA (SECTION R806.2): THE TOTAL NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/150 OF THE AREA OF THE VENTED SPACE.

EXCEPTIONS: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED ONE OR MORE OF THE FOLLOWING CONDITIONS ARE MET:

1. IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE OF THE CEILING.
2. AT LEAST 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NO MORE THAN 3 FEET BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY, WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EVE OR CORNICE VENTS. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION MORE THEN 3 FEET BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.

FILE NAME:
PLOT
DATE:

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

Discrepancies must be reported immediately to the Architect before proceeding. Only figured dimensions are to be used. Contractors must check all dimensions on site. This drawing is protected by copyright.

ALL DIMENSIONS ARE SHOWN IN IMPERIAL.

MZA
ARCHITECTURE

600 108th Ave NE
Suite 108
Bellevue WA98004

425.559.7888
contact@mza-us.com

STAMP

6446
REGISTERED ARCHITECT
Ming Zhang
STATE OF WASHINGTON

DRAWING TITLE
GENERAL CODE NOTES

DRAWN
Author

DESIGNED
Designer

DATE
08/16/18

GRAPHIC SCALE

PROJECT NO.
18-009

DRAWING NO.
A0.1

REVISION NO.

24"x36" Arch D -SHEET SIZE

GENERAL CODE NOTES

VENT AND INSULATION CLEARANCE: WHERE EAVE OR CORNICE VENTS ARE INSTALLED, INSULATION SHALL NOT BLOCK THE FREE FLOW OF AIR. A MINIMUM OF A 1-INCH (25 MM) SPACE SHALL BE PROVIDED BETWEEN THE INSULATION AND THE ROOF SHEATHING AND AT THE LOCATION OF THE VENT.
ATTIC ACCESS (SECTION R807.1): BUILDINGS WITH COMBUSTIBLE CEILING OR ROOF CONSTRUCTION SHALL HAVE AN ATTIC ACCESS OPENING TO ATTIC AREAS THAT EXCEED 30 SQUARE FEET AND HAVE A VERTICAL HEIGHT OF 30 INCHES OR GREATER. THE VERTICAL HEIGHT SHALL BE MEASURED FROM THE TOP OF THE CEILING FRAMING MEMBERS TO THE UNDERSIDE OF THE ROOF FRAMING MEMBERS.

ROOF ASSEMBLIES & CONSTR. (CHAPTERS 8 & 9) - CONT'D
THE ROUGH-FRAMED OPENING SHALL NOT BE LESS THAN 22 INCHES BY 30 INCHES AND SHALL BE LOCATED IN A HALLWAY OR OTHER READILY ACCESSIBLE LOCATION. WHEN LOCATED IN A WALL, THE OPENING SHALL BE A MINIMUM OF 22 INCHES WIDE BY 30 INCHES HIGH. WHEN THE ACCESS IS LOCATED IN A CEILING, MINIMUM UNOBSTRUCTED HEADROOM IN THE ATTIC SPACE SHALL BE 30 INCHES AT SOME POINT ABOVE THE ACCESS MEASURED VERTICALLY FROM THE BOTTOM OF CEILING FRAMING MEMBERS. SEE SECTION M1305.1.3 FOR ACCESS REQUIREMENTS WHERE MECHANICAL EQUIPMENT IS LOCATED IN ATTICS.

WOOD TRUSSES (R802.10)
TRUSS DESIGN DRAWINGS: TRUSS DESIGN DRAWINGS, PREPARED IN CONFORMANCE WITH SECTION R802.10.1, SHALL BE PROVIDED TO THE BUILDING OFFICIAL AND APPROVED PRIOR TO INSTALLATION. TRUSS DESIGN DRAWINGS SHALL INCLUDE, AT A MINIMUM, THE INFORMATION SPECIFIED IN SECTION R802.10.1. TRUSS DESIGN DRAWINGS SHALL BE PROVIDED WITH THE SHIPMENT OF TRUSSES DELIVERED TO THE JOBSITE.

DESIGN: WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE. THE DESIGN AND MANUFACTURE OF METAL PLATE CONNECTED WOOD TRUSSES SHALL COMPLY WITH ANSI/TPI 1. THE TRUSS DESIGN DRAWINGS SHALL BE PREPARED BY A REGISTERED PROFESSIONAL WHERE REQUIRED BY THE STATUTES OF THE JURISDICTION IN WHICH THE PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH SECTION R106.1.

BRACING: TRUSSES SHALL BE BRACED IN ACCORDANCE WITH IRC SECTION R802.10.3.
ALTERATIONS TO TRUSSES: TRUSS MEMBERS SHALL NOT BE CUT, NOTCHED, DRILLED, SPLICED OR OTHERWISE ALTERED IN ANY WAY WITHOUT THE APPROVAL OF A REGISTERED DESIGN PROFESSIONAL. ALTERATIONS RESULTING IN THE ADDITION OF LOAD (E.G., HVAC EQUIPMENT, WATER HEATER) THAT EXCEEDS THE DESIGN LOAD FOR THE TRUSS SHALL NOT BE PERMITTED WITHOUT VERIFICATION THAT THE TRUSS IS CAPABLE OF SUPPORTING SUCH ADDITIONAL LOADING.

GARAGES AND CARPORTS
OPENING PROTECTION (SECTION R302.5.1): OPENINGS FROM A PRIVATE GARAGE DIRECTLY INTO A ROOM USED FOR SLEEPING PURPOSES SHALL NOT BE PERMITTED. OTHER OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL BE EQUIPPED WITH SOLID WOOD DOORS NOT LESS THAN 1-3/8 INCHES IN THICKNESS, SOLID OR HONEYCOMB CORE STEEL DOORS NOT LESS THAN 1-3/8 INCHES THICK, OR 20-MINUTE FIRE-RATED DOORS, EQUIPPED WITH A SELF-CLOSING DEVICE.
DWELLING/GARAGE FIRE SEPARATION (SECTION R302.6): THE GARAGE SHALL BE SEPARATED AS REQUIRED BY TABLE R302.6. OPENINGS IN GARAGE WALLS SHALL COMPLY WITH SECTION R302.5. THIS PROVISION DOES NOT APPLY TO GARAGE WALLS THAT ARE PERPENDICULAR TO THE ADJACENT DWELLING UNIT WALL.

FLOOR SURFACE (SECTION R309): GARAGE FLOOR SURFACES SHALL BE OF APPROVED NONCOMBUSTIBLE MATERIAL. THE AREA OF FLOOR USED FOR PARKING OF AUTOMOBILES OR OTHER VEHICLES SHALL BE SLOPED TO FACILITATE THE MOVEMENT OF LIQUIDS TO A DRAIN OR TOWARD THE MAIN VEHICLE ENTRY DOORWAY.
CARPORTS (SECTION R309.2): CARPORTS SHALL BE OPEN ON AT LEAST TWO SIDES. CARPORT FLOOR SURFACES SHALL BE OF APPROVED NONCOMBUSTIBLE MATERIAL. CARPORTS NOT OPEN ON AT LEAST TWO SIDES SHALL BE CONSIDERED A GARAGE AND SHALL COMPLY WITH THE PROVISIONS OF THIS SECTION FOR GARAGES.

EMERGENCY ESCAPE AND RESCUE OPENINGS (R310)
EMERGENCY ESCAPE AND RESCUE REQUIRED: BASEMENTS, HABITABLE ATTICS AND EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPERABLE EMERGENCY ESCAPE AND RESCUE OPENING. WHERE BASEMENTS CONTAIN ONE OR MORE SLEEPING ROOMS, EMERGENCY EGRESS
AND RESCUE OPENINGS SHALL BE REQUIRED IN EACH SLEEPING ROOM. WHERE EMERGENCY ESCAPE AND RESCUE OPENINGS ARE PROVIDED THEY SHALL HAVE A SILL HEIGHT OF NOT MORE THAN 44 INCHES ABOVE THE FLOOR. WHERE A DOOR OPENING HAVING A THRESHOLD
BELOW THE ADJACENT GROUND ELEVATION SERVES AS AN EMERGENCY ESCAPE AND RESCUE OPENING AND IS PROVIDED WITH A BULKHEAD ENCLOSURE, THE BULKHEAD ENCLOSURE SHALL COMPLY WITH SECTION R310.3. THE NET CLEAR OPENING DIMENSIONS REQUIRED BY THIS SECTION SHALL BE OBTAINED BY THE NORMAL OPERATION OF THE EMERGENCY ESCAPE AND RESCUE OPENING FROM THE INSIDE. EMERGENCY ESCAPE AND RESCUE OPENINGS WITH A FINISHED SILL HEIGHT BELOW THE ADJACENT GROUND ELEVATION SHALL BE PROVIDED WITH A WINDOW WELL IN ACCORDANCE WITH SECTION R310.2. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY, OR TO A YARD OR COURT THAT OPENS TO A PUBLIC WAY.
EXCEPTION: BASEMENTS USED ONLY TO HOUSE MECHANICAL EQUIPMENT AND NOT EXCEEDING TOTAL FLOOR AREA OF 200 SQUARE FEET.
MINIMUM OPENING AREA: ALL EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET.
EXCEPTION: GRADE FLOOR OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5 SQUARE FEET.
MINIMUM OPENING HEIGHT SECTION (R310.1.2): THE MINIMUM NET CLEAR OPENING HEIGHT SHALL BE 24 INCHES.
MINIMUM OPENING WIDTH: THE MINIMUM NET CLEAR OPENING WIDTH SHALL BE 20 INCHES.
OPERATIONAL CONSTRAINTS: EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE.
WINDOW WELLS SECTION (R310.2): THE MINIMUM HORIZONTAL AREA OF THE WINDOW WELL SHALL BE 9 SQUARE FEET, WITH A MINIMUM HORIZONTAL PROJECTION AND WIDTH OF 36 INCHES. THE AREA OF THE WINDOW WELL SHALL ALLOW THE EMERGENCY ESCAPE AND RESCUE OPENING TO BE FULLY OPENED.
EXCEPTION: THE LADDER OR STEPS REQUIRED BY SECTION R310.2.1 SHALL BE PERMITTED TO ENCROACH A MAXIMUM OF 6 INCHES INTO THE REQUIRED DIMENSIONS OF THE WINDOW WELL.
LADDER AND STEPS: WINDOW WELLS WITH A VERTICAL DEPTH GREATER THAN 44 INCHES SHALL BE EQUIPPED WITH A PERMANENTLY AFFIXED LADDER OR STEPS USABLE WITH THE WINDOW IN THE FULLY OPEN POSITION. LADDERS OR STEPS REQUIRED BY THIS SECTION SHALL NOT BE REQUIRED TO COMPLY WITH SECTIONS R311.7 AND R311.8. LADDERS OR RUNGS SHALL HAVE AN INSIDE WIDTH OF AT LEAST 12 INCHES, SHALL PROJECT AT LEAST 3 INCHES FROM THE WALL AND SHALL BE SPACED NOT MORE THAN 18 INCHES ON CENTER VERTICALLY FOR THE FULL HEIGHT OF THE WINDOW WELL.
DRAINAGE (SECTION R310.2.2): WINDOW WELLS SHALL BE DESIGNED FOR PROPER DRAINAGE BY CONNECTING TO THE BUILDING'S FOUNDATION DRAINAGE SYSTEM REQUIRED BY SECTION R405.1 OR BY AN APPROVED ALTERNATIVE METHOD.
EXCEPTION: A DRAINAGE SYSTEM FOR WINDOW WELLS IS NOT REQUIRED WHEN THE FOUNDATION IS ON WELL-DRAINED SOIL OR SAND-GRAVEL MIXTURE ACCORDING TO THE UNITED SOIL CLASSIFICATION SYSTEM, GROUP I SOILS, AS DETAILED IN TABLE R405.1.
EGRESS DOOR (SECTION R311.2): AT LEAST ONE EGRESS DOOR SHALL BE PROVIDED FOR EACH DWELLING UNIT. THE EGRESS DOOR SHALL BE SIDE-HINGED, AND SHALL PROVIDE A MINIMUM CLEAR WIDTH OF 32 INCHES WHEN MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES. THE MINIMUM CLEAR HEIGHT OF THE DOOR OPENING SHALL NOT BE LESS THAN 78 INCHES IN HEIGHT MEASURED FROM THE TOP OF THE THRESHOLD TO THE BOTTOM OF THE STOP. OTHER DOORS SHALL NOT BE REQUIRED TO COMPLY WITH THESE MINIMUM DIMENSIONS. EGRESS DOORS SHALL BE READILY OPENABLE FROM INSIDE THE DWELLING WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
HALLWAYS SECTION R311.6): THE MINIMUM WIDTH OF A HALLWAY SHALL BE NOT LESS THAN 3 FEET.
STORY ABOVE GRADE PLANE DEFINITION: ANY STORY HAVING ITS FINISHED FLOOR SURFACE ENTIRELY ABOVE GRADE PLANE, OR IN WHICH THE FINISHED SURFACE OF THE FLOOR NEXT ABOVE IS:
1. MORE THAN 6 FEET ABOVE GRADE PLANE; OR
2. MORE THAN 12 FEET ABOVE THE FINISHED GROUND LEVEL AT ANY POINT.

GLAZING
IDENTIFICATION (SECTION R308.1): EXCEPT AS INDICATED IN SECTION R308.1.1, EACH PANE OF GLAZING INSTALLED IN HAZARDOUS LOCATIONS AS DEFINED IN SECTION R308.4 SHALL BE PROVIDED WITH A MANUFACTURER'S DESIGNATION SPECIFYING WHO APPLIED THE DESIGNATION, DESIGNATING THE TYPE OF GLASS AND THE SAFETY GLASS STANDARD WITH WHICH IT COMPLIES, WHICH IS VISIBLE IN THE FINAL INSTALLATION. THE DESIGNATION SHALL BE ACID ETCHED, SANDBLASTED, CERAMIC FIRED, LASER ETCHED, EMBOSSED, OR BE OF A TYPE WHICH ONCE APPLIED CANNOT BE REMOVED WITHOUT BEING DESTROYED. A LABEL SHALL BE PERMITTED IN LIEU OF THE MANUFACTURER'S DESIGNATION.
R308.4 HAZARDOUS LOCATIONS: THE FOLLOWING SHALL BE CONSIDERED SPECIFIC HAZARDOUS LOCATIONS FOR THE PURPOSES OF GLAZING:
GLAZING IN DOORS (SECTION R308.4.1): GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BIFOLD DOORS.
EXCEPTIONS:
1. GLAZED OPENINGS OF A SIZE THROUGH WHICH A 3-INCH DIAMETER SPHERE IS UNABLE TO PASS.
2. DECORATIVE GLAZING
GLAZING IN ADJACENT DOORS (SECTION R308.4.2): GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE OF THE GLAZING IS WITHIN A 24-INCH ARC OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR OR WALKING SURFACE.
EXCEPTIONS:
1. DECORATIVE GLAZING.
2. WHEN THERE IS AN INTERVENING WALL OR OTHER PERMANENT BARRIER BETWEEN THE DOOR AND THE GLAZING
3. GLAZING IN WALLS ON THE LATCH SIDE OF AND PERPENDICULAR TO THE PLANE OF THE DOOR IN A CLOSED POSITION.
4. GLAZING ADJACENT TO A DOOR WHERE ACCESS THROUGH THE DOOR IS TO A CLOSET OR STORAGE AREA 3 FEET OR LESS IN DEPTH
5. GLAZING THAT IS ADJACENT TO THE FIXED PANEL OF PATIO DOORS
GLAZING IN WINDOWS (SECTION R308.4.3): GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS:
1. THE EXPOSED AREA OF AN INDIVIDUAL PANE IS LARGER THAN 9 SQUARE FEET; AND
2. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 INCHES ABOVE THE FLOOR; AND
3. THE TOP EDGE OF THE GLAZING IS MORE THAN 36 INCHES ABOVE THE FLOOR; AND
4. ONE OR MORE WALKING SURFACES ARE WITHIN 36 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING.
EXCEPTIONS:
4.1. DECORATIVE GLAZING
4.2. WHEN A HORIZONTAL RAIL IS INSTALLED ON THE ACCESSIBLE SIDE(S) OF THE GLAZING 34 TO 38 INCHES ABOVE THE WALKING SURFACE. THE RAIL SHALL BE CAPABLE OF WITHSTANDING A HORIZONTAL LOAD OF 50 POUNDS PER LINEAL FOOT WITHOUT CONTACTING THE GLASS AND BE A MINIMUM OF 1-1/2 INCHES IN CROSS SECTIONAL HEIGHT
4.3. OUTBOARD PANES IN INSULATING GLASS UNITS AND OTHER MULTIPLE GLAZED PANELS WHEN THE BOTTOM EDGE OF THE GLASS IS 25 FEET OR MORE ABOVE GRADE, A ROOF, WALKING SURFACES OR OTHER HORIZONTAL SURFACE ADJACENT TO THE GLASS EXTERIOR.
GLAZING IN GUARDS AND RAILINGS (SECTION R308.4.4): GLAZING IN GUARDS AND RAILINGS, INCLUDING STRUCTURAL BALUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS, REGARDLESS OF AREA OR HEIGHT ABOVE A WALKING SURFACE SHALL BE CONSIDERED A HAZARDOUS LOCATION.
GLAZING AND WET SURFACES (R308.4.5): GLAZING IN WALLS, ENCLOSURES OR FENCES CONTAINING OR FACING HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS AND INDOOR OR OUTDOOR SWIMMING POOLS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE SHALL BE CONSIDERED A HAZARDOUS LOCATION. THIS SHALL APPLY TO SINGLE GLAZING AND ALL PANES IN MULTIPLE GLAZING.
EXCEPTION: GLAZING THAT IS MORE THAN 60 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, FROM THE WATERS EDGE..
GLAZING ADJACENT STAIRS AND RAMPS (R308.4.6): GLAZING WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 36 INCHES ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE OF STAIRWAYS, LANDINGS BETWEEN FLIGHTS OF STAIRS AND RAMPS SHALL BE CONSIDERED A HAZARDOUS LOCATION.
EXCEPTIONS:
1. WHEN A RAIL IS INSTALLED ON THE ACCESSIBLE SIDE(S) OF THE GLAZING 34 TO 38 INCHES ABOVE THE WALKING SURFACE. THE RAIL SHALL BE CAPABLE OF WITHSTANDING A HORIZONTAL LOAD OF 50 POUNDS PER LINEAL FOOT WITHOUT CONTACTING THE GLASS AND BE A MINIMUM OF 1-1/2 INCHES IN CROSS SECTIONAL HEIGHT.
2. GLAZING 36 INCHES OR MORE MEASURED HORIZONTALLY FROM THE WALKING SURFACE.
GLAZING ADJACENT TO THE BOTTOM STAIR LANDING (SECTION R308.4.7: GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF A STAIRWAY WHERE THE GLAZING IS LESS THAN 36 INCHES ABOVE THE LANDING AND WITHIN 60 INCHES HORIZONTALLY OF THE BOTTOM TREAD SHALL BE CONSIDERED A HAZARDOUS LOCATION.
EXCEPTIONS: THE GLAZING IS PROTECTED BY A GUARD COMPLYING WITH SECTION 312 AND THE PLANE OF THE GLASS IS MORE THAN 18 INCHES FROM THE GUARD.

ELEVATORS AND PLATFORM LIFTS (R321)
ELEVATORS: WHERE PROVIDED, PASSENGER ELEVATORS, LIMITED-USE/LIMITED-APPLICATION ELEVATORS OR PRIVATE RESIDENCE ELEVATORS SHALL COMPLY WITH ASME A17.1/CSA B44.

ENERGY CODE NOTES

INSULATION LEVELS PROVIDED:
- ATTICS — N/A
- VAULTED CEILINGS — R-38 (MIN) 2" CLOSED CELL SPRAY FOAM (R-6/IN = R-18) + 5.25" FIBERGLASS BATT (R-4/IN = R-21) PER R402.2.1
- ABOVE GRADE WALLS — R-21 FIBERGLASS BATTS
- BELOW GRADE WALLS — R-5 RIGID + R-13 (MIN.) BATTS
- FLOORS OVER UNCOND. SPACE — R-30 (MIN) 2" CLOSED CELL SPRAY FOAM (R-6/IN R-18) + 3.5" FIBERGLASS BATT (R-4/IN = R-14) PER R402.2.1
- SLAB ON GRADE FLOORS — N/A - EXISTING CONDITIONS TO REMAIN.

MAXIMUM GLAZING FACTORS (NEW WINDOWS):
- VERTICAL GLAZING: — U = 0.24
- VERTICAL GLAZING SHGC: — NO REQUIREMENT
- OVERHEAD GLAZING: — N/A

MAXIMUM DOOR FACTORS:
- WOOD DOOR IN WOOD FRAME: — U = 0.46

PROVIDE 4 MIL POLY VAPOR BARRIER ON WARM SIDE OF WALLS
PROVIDE 6 MIL POLY VAPOR BARRIER AT WARM SIDE OF CEILINGS

R402.4 AIR LEAKAGE AND TESTING (MANDATORY)
THE BUILDING ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS R402.4.1 THROUGH R402.4.4

THE DWELLING UNIT SHALL BE TESTED AND VERIFIED AS HAVING AN AIR CHANGE LEAKAGE RATE OF NOT EXCEEDING 2 AIR CHANGES PER HOUR. TESTING SHALL BE CONDUCTED WITH A BLOWER DOOR AT A PRESSURE OF 0.2 INCHES W.G. (50 PASCALS). WHERE REQUIRED BY THE CODE OFFICIAL TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY. A WRITTEN REPORT OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL. TESTING SHALL BE PERFORMED AT ANY TIME AFTER CREATION OF ALL PENETRATIONS OF THE BUILDING ENVELOPE.

REFER TO SHEET A7.1 FOR EXTERIOR WEATHER BARRIER SPECIFICATIONS AND REQUIREMENTS.

ALL HEATING DUCTS LOCATED IN UNHEATED AREAS ARE TO BE INSULATED TO MINIMUM R-8. DUCT SEAMS ARE TO BE SEALED AND FASTENED WITH A MINIMUM OF FASTENERS.

NON-RECIRCULATING HOT & COLD WATER PIPES >1" NOMINAL PIPE SIZE LOCATED IN UNCONDITIONED AREAS SHALL BE INSULATED TO MINIMUM R-3.

A MINIMUM OF 75% OF PERMANENTLY INSTALLED LAMPS IN LIGHTING FIXTURES SHALL BE HIGH EFFICIENCY LAMPS (WSEC R404.1)

FUEL GAS LIGHTING SYSTEMS SHALL NOT HAVE CONTINUOUSLY BURNING PILOT LIGHTS (WSEC R404.1.1)

WHOLE HOUSE VENTILATION REQUIREMENTS:
PROVIDE 50 CFM MIN INTERMITTENT MECHANICAL VENTILATION UTILIZING VENTILATION RATES PER IRC TABLE M1507.3.3(2).

PROVIDE SYSTEM CONTROLS THAT ENABLE OPERATION OF WHF SYSTEM CONTINUOUSLY, INTERMITTENTLY FOR NOT LESS THAN 25-PERCENT OF EACH FOUR HOUR SEGMENT AND THAT PROVIDE MANUAL OVERRIDE.

A LABEL SHALL BE AFFIXED THAT READS "WHOLE HOUSE VENTILATION (SEE OPERATING INSTRUCTIONS)".

TABLE 406.2 CREDIT

OPTION	DESCRIPTION	CREDIT(S)
1d	EFFICIENT BUILDING ENVELOPE 1d: Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.24. Projects using this option may not use Option 1a, 1b or 1c. ...	0.50
2b	AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2b: Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 2.0 air changes per hour maximum AND All whole house ventilation requirements as determined by Section M1507.3 of the International Residential Code shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.70. ...	1.0
3d	HIGH EFFICIENCY HVAC EQUIPMENT 3d: Ductless Split System Heat Pumps, Zonal Control: In homes where the primary space heating system is zonal electric heating, a ductless heat pump system shall be installed and provide heating to the largest zone of the housing unit. Projects may only include credit from one space heating option, 3a, 3b, 3c or 3d. When a housing unit has two pieces of equipment (i.e., two furnaces) both must meet the standard to receive the credit. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency. Basis of Design: MXZ3C30NA2-U1 Multi Zone outdoor unit w/ Mitsubishi: MSZGL18NA-U1 Indoor units	1.0
5a	EFFICIENT WATER HEATING 5a: All showerhead and kitchen sink faucets installed in the house shall be rated at 1.75 GPM or less. All other lavatory faucets shall be rated at 1.0 GPM or less. Plumbing Fixtures Flow Ratings. Low flow plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following requirements: 1. Residential bathroom lavatory sink faucets: Maximum flow rate - 3.8 L/min (1.0 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1. 2. Residential kitchen faucets: Maximum flow rate □6.6 L/min (1.75 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1. 3. Residential showerheads: Maximum flow rate □ 6.6 L/min (1.75 gal/min) when tested in ...	0.5
5c	EFFICIENT WATER HEATING 5c: Water heating system shall include one of the following: Gas, propane or oil water heater with a minimum EF of 0.91 or Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum savings of 85 therms or 2000 kWh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar Water Heating Systems.or Electric heat pump water heater with a minimum EF of 2.0 and meeting the standards of NEEA's Northern Climate Specifications for Heat Pump Water Heaters. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency and, for solar water heating systems, the calculation of the minimum energy savings. Basis of Design: AO Smith Tankless Water Heater: Model ATO-140H-P	1.5

TABLE R402.1.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT

CLIMATE ZONE	5 AND MARINE 4
FENESTRATION U-FACTOR	0.30
SKYLIGHT U-FACTOR	0.50
GLAZED FENESTRATION SHGC	NR
CEILING R-VALUE[1]	49
WOOD FRAME WALL[2] R-VALUE	21 int
MASS WALL R-VALUE	21/21
FLOOR R-VALUE	30
BELOW-GRADE WALL R-VALUE	10/15/21 int + TB
SLAB R-VALUE & DEPTH	10.2 ft
NOTES :	
1. FOR SINGLE RAFTER- OR JOIST-VAULTED CEILINGS, THE INSULATION MAY BE REDUCED TO R-38.	
2. INT. (INTERMEDIATE FRAMING) DENOTES STANDARD FRAMING 16 INCHES ON CENTER WITH HEADERS INSULATED WITH A MINIMUM OF R-10 INSULATION.	
3. "10/15/21 +TB" MEANS R-10 CONTINUOUS INSULATION ON THE EXTERIOR OF THE WALL, OR R-15 CONTINUOUS INSULATION ON THE INTERIOR OF THE WALL, OR R-21 CAVITY INSULATION PLUS A THERMAL BREAK BETWEEN THE SLAB AND THE BASEMENT WALL AT THE INTERIOR OF THE BASEMENT WALL. "10/15/21 +TB" SHALL BE PERMITTED TO BE MET WITH R-13 CAVITY INSULATION ON THE INTERIOR OF THE BASEMENT WALL PLUS R-5 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE WALL. "TB" MEANS THERMAL BREAK BETWEEN FLOOR SLAB AND BASEMENT WALL.	

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

Discrepancies must be reported immediately to the Architect before proceeding. Only figured dimensons are
to be used. Contractors must check all dimensions on site. This drawing is protected by copyright.
ALL DIMENSIONS ARE SHOWN IN IMPERIAL.

M Z A
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP
WA REGISTERED ARCHITECT Ming Zhang STATE OF WASHINGTON

DRAWING TITLE
GENERAL & ENERGY CODE NOTES

DRAWN Author
DESIGNED Designer
DATE 08/16/18
GRAPHIC SCALE

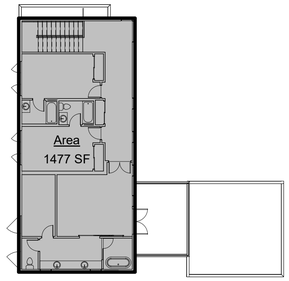
PROJECT NO. 18-009

DRAWING NO. A0.2
REVISION NO.

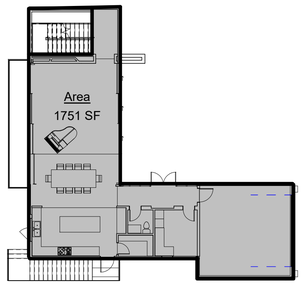
FILE NAME:
PLOT DATE:

24"x36" Arch D -SHEET SIZE

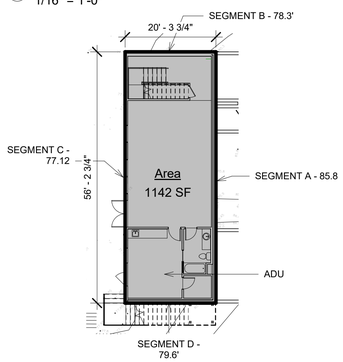
GROSS FLOOR AREA



3 UPPER LEVEL
1/16" = 1'-0"



2 ENTRY LEVEL
1/16" = 1'-0"



SEGMENT	LENGTH	WALL HT	MID-PT GRADE HT	%	WTD
A	35.25	9'	9'	100%	35.25
B	20.083	9'	78.3-77.2=1.1'	12.2%	2.45
C	35.25	9'	77.2-77.2=0'	0%	0
D	20.083	9'	79.6-77.2=2.4'	26.7%	5.36
TOTAL	110.667				43.06
				WTD / ACTUAL LENGTH	.03891
				CONDITIONED AREA	1125 SF
				AREA COUNTING TOWARD GROSS	687 SF

1 BASEMENT LEVEL
1/16" = 1'-0"

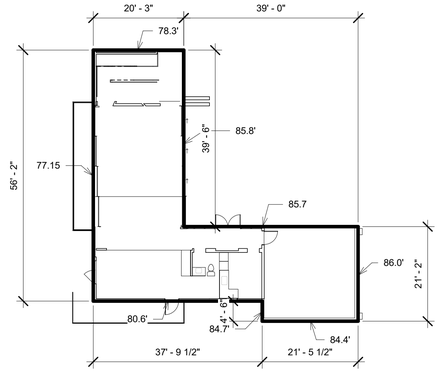
TOTAL GROSS FLOOR AREA

LEVEL	GROSS AREA	EXCLUDED AREA	NET GROSS AREA
UPPER	1477SF	0	1477SF
ENTRY	1751SF	0	1751SF
BASEMENT	1142SF	438SF	704SF
	4370SF	438SF	3932SF

MAX GROSS AREA = SITE AREA x 0.45 = 8810 SF x 0.45 = 3964.5SF

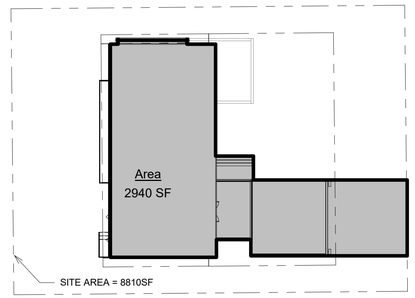
3964.5 SF MAX > 3932 SF PROPOSED, THEREFORE OK

BUILDING HEIGHT



SEGMENT	ELEVATION	LENGTH	L x ELEV.
A	77.15	56.17	4333.26
B	78.3	20.25	1585.58
C	85.8	39.50	3389.10
D	85.7	39.00	3342.30
E	86.0	21.17	1820.36
F	84.4	21.50	1814.60
G	84.7	4.50	381.15
H	80.6	37.75	3042.65
		239.83	19709.00
	AVERAGE EXISTING GRADE		82.18
	MAX HEIGHT PER CODE		30.0
	MAXIMUM BUILDING HEIGHT		112.18

LOT COVERAGE

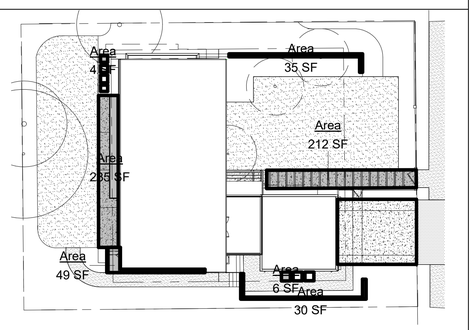


MAX LOT COVERAGE = SITE AREA x 40% = 8810sf x .40 = 3524 SF

LOT COVERAGE INCLUDES DRIVEWAYS, ROOFS AND OVERHANGS = 2940 SF

2940 SF < 3524 SF, THEREFORE OK

HARDSCAPE

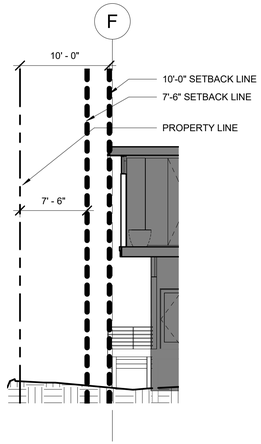


MAX HARDSCAPE = SITE AREA x 9% = 8810sf x .09 = 792.9 SF

HARDSCAPE INCLUDES PATHWAYS, DECKS, ETC OUTSIDE OF ROOF OVERHANGS = 595 SF

595 SF < 792.9 SF, THEREFORE OK

SOUTHERN SIDE YARD SETBACK LINE

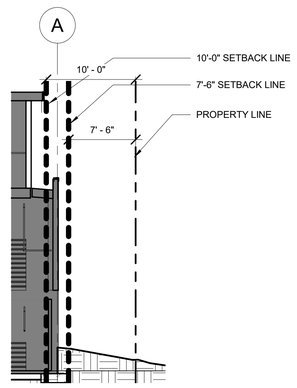


7'-6" SIDE YARD SET BACK LINE APPLY TO GARAGE ROOF SIDE

10'-0" SIDE YARD SET BACK LINE APPLY TO SLOPED ROOF SIDE

SOUTHERN ELEVATION

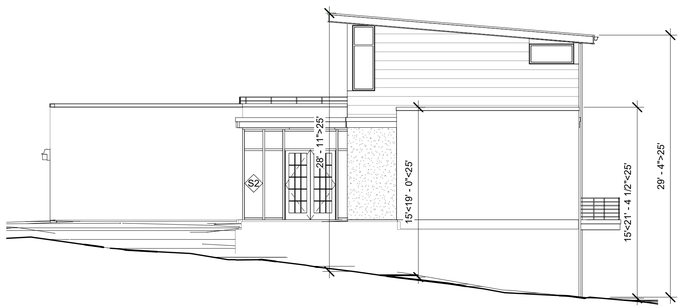
NORTHERN SIDE YARD SETBACK LINE



7'-6" SIDE YARD SET BACK LINE APPLY FLAT ROOF SIDE

10'-0" SIDE YARD SET BACK LINE APPLY TO SLOPED ROOF SIDE

NORTHERN ELEVATION



PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

MZA
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP

DRAWING TITLE
LAND USE CALCULATIONS

DRAWN
Author

DESIGNED
Designer

DATE
05/22/18

GRAPHIC SCALE
As indicated

PROJECT NO.
18-009

DRAWING NO.
A1.0

REVISION NO.

FILE NAME:
PLOT DATE:

TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING# 20180116001125)

LOTS 3 AND 4, BLOCK 21, MERCER PARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 27, RECORDS OF KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

A BEARING OF S89°56'18"E ON THE CENTERLINE OF SE 22ND ST (TEMPLE ST), PER RECORD OF SURVEY AS RECORDED IN BOOK 221 OF SURVEYS, PAGE 66, RECORDS OF KING COUNTY, WA

REFERENCES

1. RECORD OF SURVEY, BOOK 221, OF SURVEYS PAGE 66; REC#20070322900005; RECORDS OF KING COUNTY, WASHINGTON.
2. PLAT OF MERCER PARK, VOLUME 8, OF PLATS PAGE 27; RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

NAVD 88
FOUND REBAR AND CAP LS# NOT READABLE WITH TACK (DOWN 0.8'). LOCATED INTX. 80TH AVE SE & SE 22ND ST.
ELEVATION ON CAP=79.94'

SURVEYOR'S NOTES

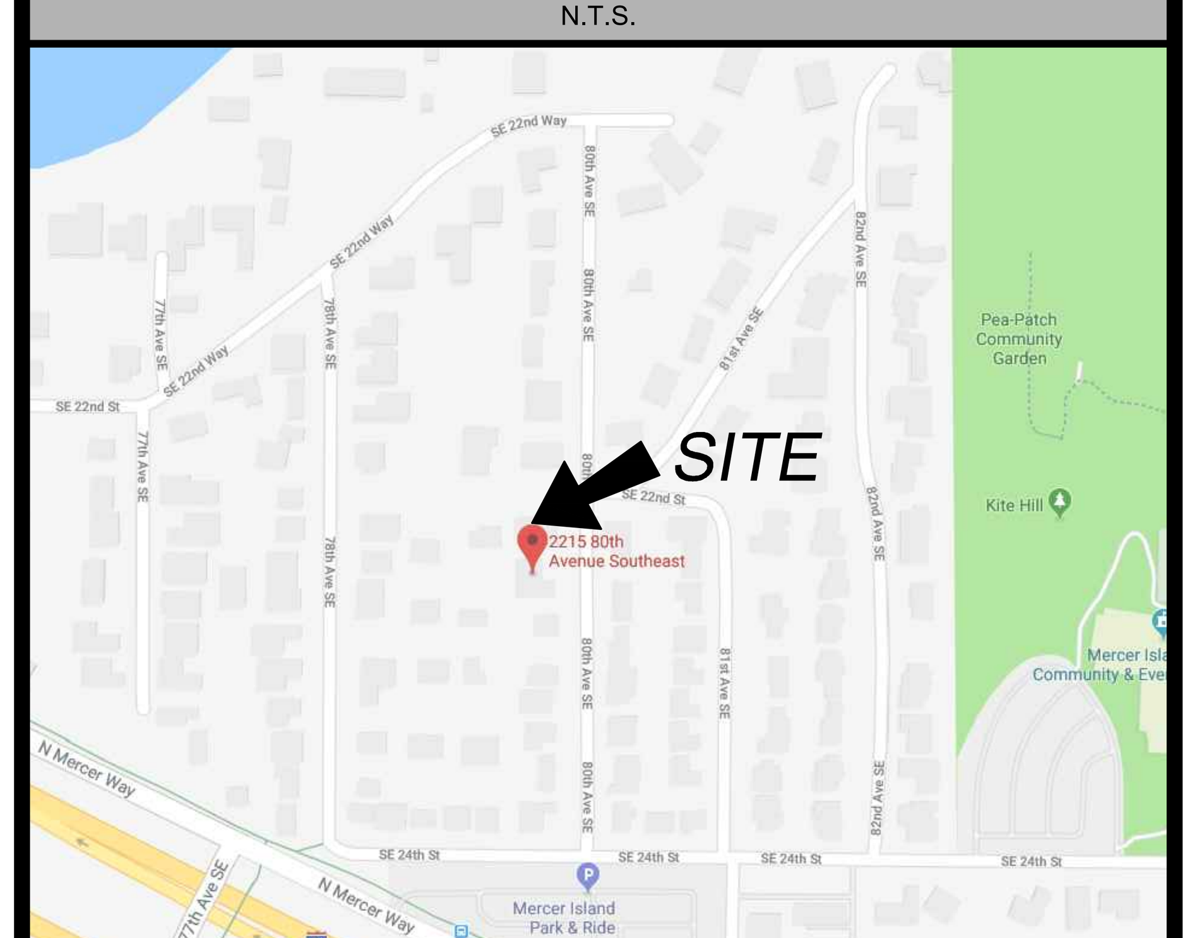
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN MARCH OF 2018. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. BURIED UTILITIES SHOWN BASED ON RECORDS FURNISHED BY OTHERS AND VERIFIED WHERE POSSIBLE IN THE FIELD. TERRANE ASSUMES NO LIABILITY FOR THE ACCURACY OF THOSE RECORDS OR ACCEPT RESPONSIBILITY FOR UNDERGROUND LINES WHICH ARE NOT MADE PUBLIC RECORD. FOR THE FINAL LOCATION OF EXISTING UTILITIES IN AREAS CRITICAL TO DESIGN CONTACT THE UTILITY OWNER/AGENCY. AS ALWAYS, CALL 1-800-424-5555 BEFORE CONSTRUCTION.
4. SUBJECT PROPERTY TAX PARCEL NO. 545230-2145
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 8,810 ±S.F. (0.20 ACRES)- 8,800 ±S.F. PER KING COUNTY ASSESSOR'S.
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

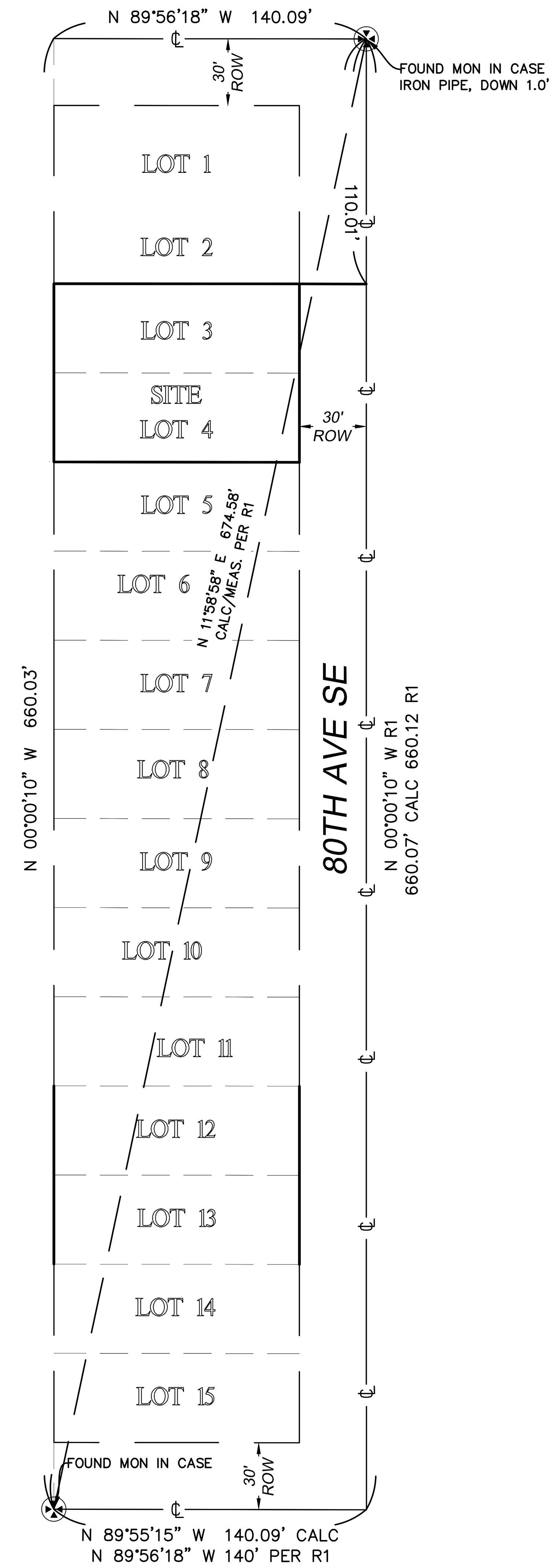
LEGEND

ASPHALT SURFACE	POWER METER
BUILDING	REBAR AS NOTED (FOUND)
CENTERLINE ROW	REBAR & CAP (SET)
CONCRETE SURFACE	SEWER LINE
RETAINING WALL	SEWER MANHOLE
DECK	SIGN (AS NOTED)
FENCE LINE (CHAIN LINK)	INLET (TYPE 1)
FENCE LINE (WOOD)	STORM DRAIN LINE
GRAVEL SURFACE	SIZE TYPE TREE (AS NOTED)
MONUMENT IN CASE (FOUND)	WATER METER
	MAILBOX (RESIDENTIAL)

VICINITY MAP

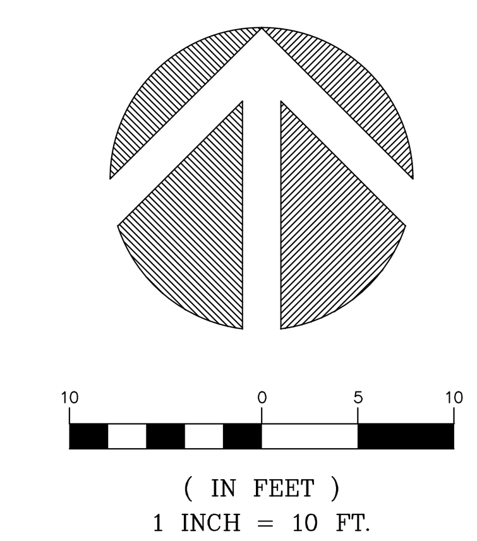
N.T.S.

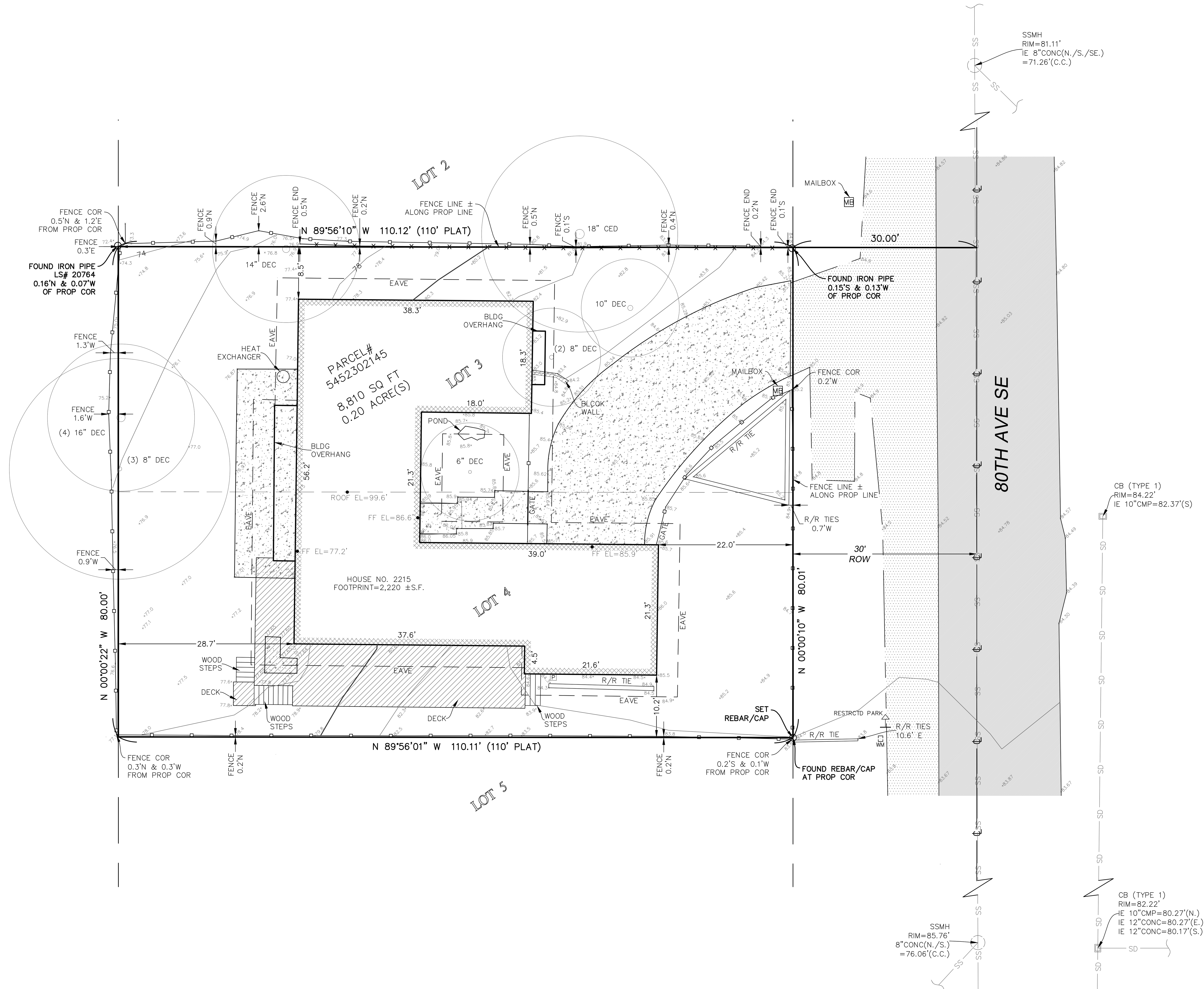


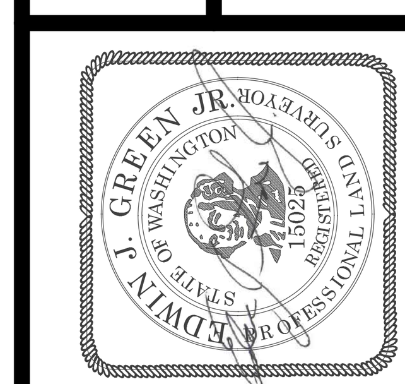


CONTROL MAP

N.T.S.







measure success

TOPOGRAPHIC & BOUNDARY SURVEY
SE 1/4 OF SE 1/4 SEC 01, TWP. 24N, RGE 04E, W.M.
PARCEL NO. 5452302145

PAEK RESIDENCE
2215 80TH AVE SE
MERCER ISLAND, WA 98040

Terrane
10801 Main Street, Suite 102, Bellevue, WA 98004
phone 425.458.4488 support@terrane.net
www.terrane.net

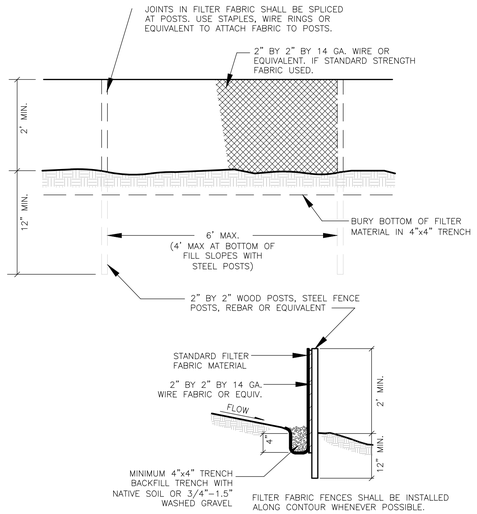
JOB NUMBER:	180407
DATE:	03/23/18
DRAFTED BY:	IDV-PSC
CHECKED BY:	EJG/TMM
SCALE:	1" = 10'

REVISION HISTORY

SHEET NUMBER

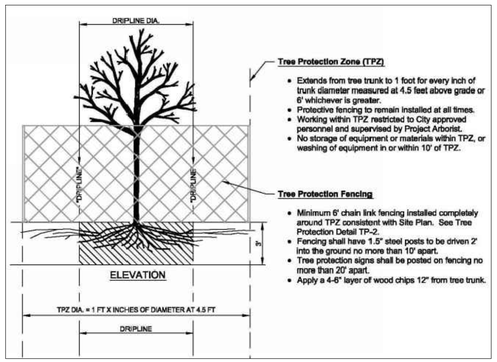
1 OF 1

A PORTION OF THE SE QUARTER OF SECTION 01, TOWNSHIP 24 N., RANGE 04 E., W.M.



TYPICAL FILTER FENCE DETAIL

NOT TO SCALE



TREE PROTECTION DETAIL

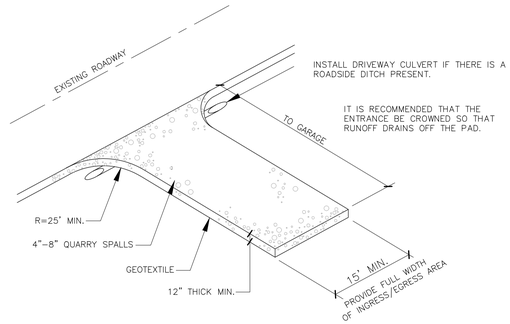
NOT TO SCALE

EROSION CONTROL NOTES

1. PROVIDE AND MAINTAIN TEMPORARY SEDIMENTATION COLLECTION FACILITIES TO ENSURE THAT SEDIMENT OR OTHER HAZARDOUS MATERIALS DO NOT ENTER THE STORM DRAINAGE SYSTEM IN ACCORDANCE WITH THE SITE'S APPROVED CSWPPP.
2. EXPOSED SOILS SHALL BE WORKED DURING THE WEEK UNTIL THEY HAVE BEEN STABILIZED. SOIL STOCKPILES SHOULD BE SHOWN WITHIN THE DISTURBED AREA SHOWN ON THE SITE PLAN. SOIL EXCAVATED FOR THE FOUNDATION SHALL BE BACKFILLED AGAINST THE FOUNDATION AND GRADED TO DRAIN AWAY FROM THE BUILDING. NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 7 DAYS FROM MAY 1 TO SEPTEMBER 30 OR MORE THAN 2 DAYS FROM OCTOBER 1 TO APRIL 30. ONCE THE DISTURBED LANDSCAPE AREAS ARE GRADED, THE GRASS AREAS ARE TO BE AMENDED PER THE SOIL AMENDMENT NOTES ON SHEET C2. ALL STOCKPILES SHOULD BE COVERED WITH PLASTIC OR BURLAP IF LEFT UNWORKED.
3. ANY AND ALL POLLUTANTS, CHEMICALS, LIQUID PRODUCTS, AND OTHER MATERIALS THAT HAVE THE POTENTIAL TO POSE A THREAT TO HUMAN HEALTH OR THE ENVIRONMENT SHALL BE COVERED, CONTAINED, AND PROTECTED FROM VANDALISM. ALL SUCH PRODUCTS SHALL BE KEPT UNDER COVER IN A SECURE LOCATION ON SITE. CONCRETE HANDLING (BMP C151), SAWCUTTING (BMP C152), MATERIAL DELIVERY, STORAGE, AND CONTAINMENT (BMP C153), AND CONCRETE WASHOUT AREAS (BMP C154) SHOULD FOLLOW BEST MANAGEMENT PRACTICES AS PROVIDED IN VOLUME II OF THE 2014 SURFACE WATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON.
4. BEST MANAGEMENT PRACTICES OR BMPs SHALL BE INSPECTED AND MAINTAINED DURING CONSTRUCTION AND REMOVED WITHIN 30 DAYS AFTER THE CITY INSPECTOR OR ENGINEER DETERMINES THAT THE SITE IS STABILIZED, PROVIDED THAT THEY MAY BE REMOVED WHEN THEY ARE NO LONGER NEEDED.

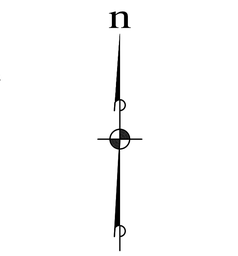
SUGGESTED SWPPP SEQUENACE

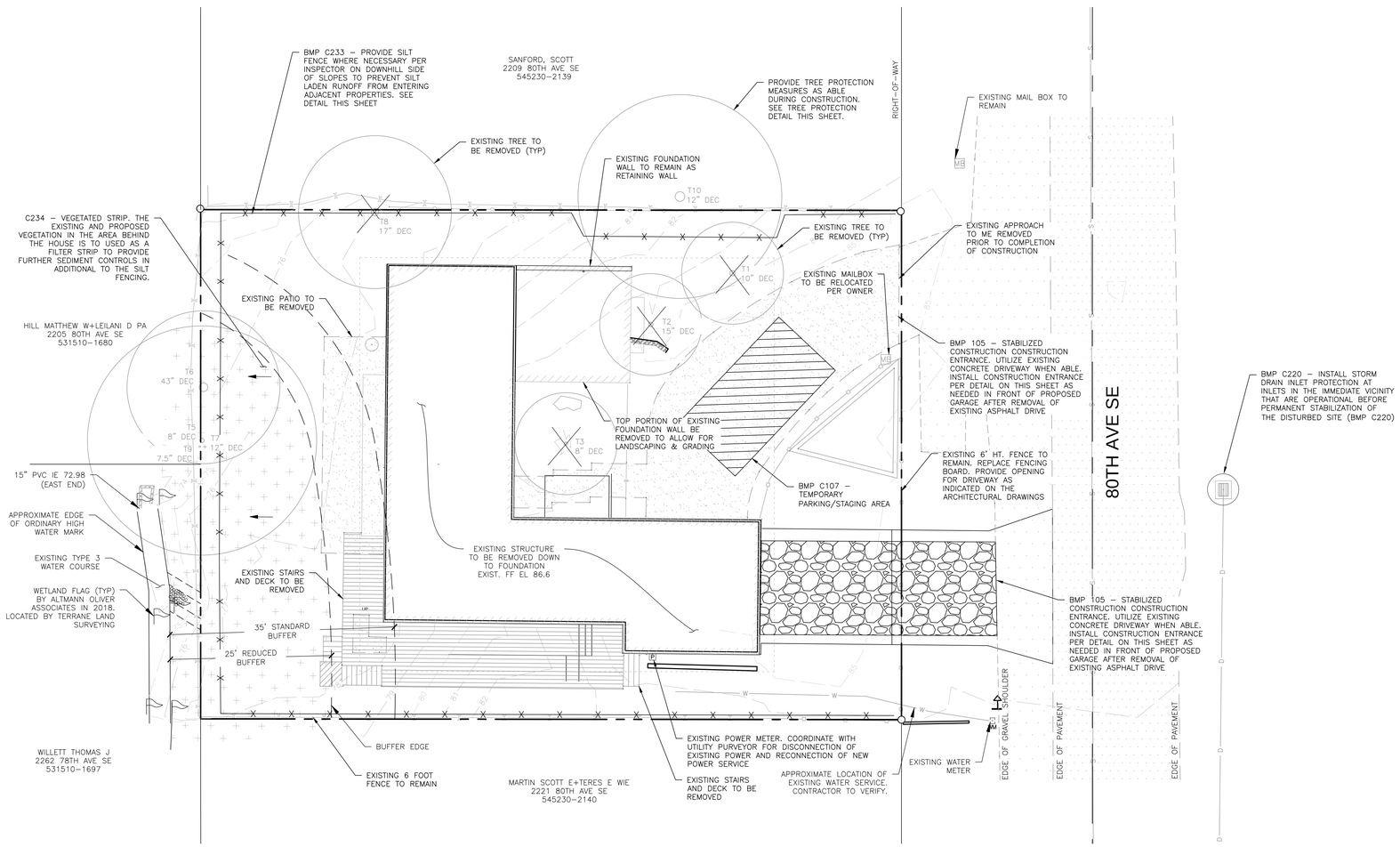
1. MARK CLEARING LIMITS, CRITICAL AREAS, AND BUFFER. THE PERIMETER OF THE AREA TO BE CLEARED SHALL BE MARKED PRIOR TO CLEARING OPERATION WITH VISIBLE FLAGGING, ORANGE PLASTIC BARRIER FENCING AND/OR ORANGE SILT FENCING AS SHOWN ON THE SWPPP SITE MAP. VEHICLE ARE ONLY ALLOWED IN THE AREAS TO BE GRADED, SO NO COMPACTION OF THE UNDEVELOPED AREAS WILL OCCUR.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE WHERE NECESSARY
3. INSTALL PROTECTION FOR EXISTING DRAINAGE SYSTEMS AND PERMANENT DRAIN INLETS
4. ESTABLISH STAGING AREAS FOR STORAGE AND HANDLING POLLUTED MATERIAL AND BMPs
5. INSTALL SEDIMENT CONTROL BMPs
6. GRADE AND INSTALL STABILIZATION MEASURES FOR DISTURBED AREAS
7. MAINTAIN BMPS UNTIL SITE STABILIZATION, AT WHICH TIME THEY MAY BE REMOVED



ROCK-LINED CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE





PERMANENT & TEMPORARY SEEDING

1. SEEDING MAY BE USED THROUGHOUT THE PROJECT ON DISTRUBED AREAS THAT HAVE REACHED FINAL GRADE OR THAT WILL REMAIN UNWORKED. SEED AND MULCH ALL DISTURBED AREAS NOT OTHERWISE VEGETATED OR STABILIZED.
2. SEED DURING SEASONS MOST CONDUCTED TO PLANT GROWTH. FOR WASHINGTON THIS IS BETWEEN APRIL 1 THROUGH JUNE 20 AND SEPTEMBER 1 THROUGH OCTOBER 1. SEEDING THAT OCCURS BETWEEN JULY 1 AND AUGUST 30 WILL REQUIRE IRRIGATION UNTIL 5 PERCENT GRASS COVER IS ESTABLISHED. SEEDING THAT OCCURS BETWEEN OCTOBER 1 AND MARCH 30 MAY REQUIRED MULCH OR PLASTIC COVER UNTIL 75 PERCENT GRASS COVER IS ESTABLISHED.
3. REFER TO BMP C120 IN THE STORMWATER MANUAL FOR WESTERN WASHINGTON: VOLUME II FOR FURTHER DETAILS.

MAPPING NOTES

1. SITE BOUNDARY AND CONTOURS PROVIDED BY TERRANE SURVEYING, MAPS DATED 01/07/19.
2. HOUSE, SITE LAYOUT, WATERCOURSE LOCATION WITH ASSOCIATED BUFFER PROVIDED BY MZA ARCHITECTURE ON 01/17/19.
3. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION OF SPECIFIC UTILITY.
4. CONTRACTOR SHALL KEEP DETAILED NOTES FOR USE DURING ASBUILT DRAWING PREPARATION.
5. TREE NUMBERS PER ARBORISTS NW, LLC REPORT

CALL 48 HOURS BEFORE YOU DIG 811

REVISIONS

NO.	DESCRIPTION/DATE	BY

BRANDON MICHAEL LOUCKS — STATE OF WASHINGTON — 50085 — REGISTERED PROFESSIONAL ENGINEER — 3/14/2019

CONSULTING ENGINEERS LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9900
www.esmcivil.com
Civil Engineering, Land Planning, Public Works, Landscape Architecture, Land Surveying, Project Management

MZA ARCHITECTURE

PAEK RESIDENCE

DEMO & TESC PLAN

CITY OF MERCER ISLAND, WASHINGTON

JOB NO.:	1954-003-018
DWG. NAME:	
DESIGNED BY:	BML
DRAWN BY:	BML
CHECKED BY:	
DATE:	03/14/2019
DATE OF PRINT:	

C1

OF SHEETS

File: D:\Autosave\1954003018-Paek Residence CIVIL_2019-03-15_1_14034_0571.dwg
Plotted By: Brandon Loucks
Plotted: 3/14/2019 4:18 PM

A PORTION OF A PORTION OF THE SE QUARTER OF SECTION 01, TOWNSHIP 24 N., RANGE 04 E., W.M.

SOIL QUALITY GUIDLINES

2014 SWMMW, BMP T5.13

- SOIL RETENTION. RETAIN, IN A UNDISTURBED STATE THE DUFF LAYER AND NATIVE TOPSOIL TO THE MAXIMUM EXTENT PRACTICABLE. IN ANY AREAS REQUIRING GRADING REMOVE AND STOCK–PILE THE THE DUFF LAYER AND TOPSOIL, IF ANY, ON SITE IN A DESIGNATED, CONTROLLED AREA, NOT ADJACENT TO PUBLIC RESOURCES AND CRITICAL AREAS, TO BE REAPPLIED TO OTHER PORTIONS OF THE SIT WHERE FEASIBLE.

- SOIL QUALITY. ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT PROJECT COMPLETION, DEMONSTRATE THE FOLLOWING:

  1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 5–10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A Ph FROM 6.0 TO 8.0 OR MATCHING THE pH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.

  2. MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL

  3. USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
     A. THE ORGANIC CONTENT FOR "PRE–APPROVED" AMENDMENT RATES CAN ONLY BE MET USING COMPOST MEETING THE COMPOST SPECIFICATION FOR BIORETENTION WITH THE EXCEPTION THAT THE COMPOST MUST HAVE AN ORGANIC MATTER CONTENT OF 40 PERCENT TO 65 PERCENT, AND A CARBON TO NITROGEN RATIO BETWEEN 25:1. THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTING COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.

     B. CALCULATED AMENDMENT RATES MAY BE ME THROUGH USE OF COMPOSTED MATERIALS AS DEFINED ABOVE, OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAMINANT LIMITS IDENTIFIED IN TABLE 220–B, TESTING PARAMETERS, IN WAC 173–350–220

SOIL AMENDMENT OPTIONS

2014 SWMMW, BMP T5.13

IMPLEMENTATION OPTIONS: THE SOIL QUALITY DESIGN GUIDELINES LISTED ON THIS SHEET CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW:

OPTION 1: LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION.

OPTION 2: AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PRE–APPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF THE SOIL AND AMENDMENT.

OPTION 3: STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST ALSO BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT "PRE–APPROVED"RATE OR AT A CUSTOM CALCULATED RATE.

OPTION 4: IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS.

MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED.

STORMWATER PUMPING NOTES

THE PUMPING BASIN SHALL CONSIST OF DUEL ALTERNATING PUMPS WITHIN A FIBERGLASS PUMP CHAMBER WITH BACK UP POWER. PUMPING COMPONENTS SHALL BE THE FOLLOWING, OR APPROVED SIMILAR.

SPECIFICATIONS:

PUMP:	MYERS SRM4 SERIES (PART SRM4M2C) (2x)
CONTROL PANEL:	SJR RHOMBUS MODEL 122
WETWELL:	AK INDUSTRIES PACKAGED FREE–FLO DUPLEX 1 1/4–2, 36"ø x72"H W/ANTI–FLOATATION COLLAR AND CONCRETE BALLAST

FLOAT ELEVATIONS:

PUMP OFF:	71.50 (6" FROM BOTTOM)
PUMP ON:	72.25 (15" FROM BOTTOM)
ALARM:	73.00 (24" FROM BOTTOM)

SIZING CRITERIA:

TRIBUTARY BASIN:	2,495 SF (0.057 AC)
2–YEAR FLOW:	0.0217 CFS (10 GPM)
100–YEAR FLOW:	0.0442 CFS (20 GPM)
STATIC HEAD:	11 FEET
TDH:	15 FEET

BUOYANCY & BALLAST CALCULATIONS

PHYSICAL CONSTRAINTS:

DENSITY OF WATER:	62.4 LB/FT^3
DENSITY OF CONCRETE:	150 LB/FT^3 (IN AIR)
DENSITY OF CONCRETE:	87.6 LB/FT^3 (IN WATER)
DENSITY OF BACKFILL:	110 LB/FT^3
DENSITY OF SATURATED BACKFILL:	70 LB/FT^3
TANK HEIGHT:	72 INCHES (6 FT)
TANK WEIGHT:	137 LBS
TANK DIAMETER:	36 INCHES (3 FT)
TANK VOLUME:	42.41 FT^3
BALLAST DIAMETER:	48 INCHES (4 FT)

BUOYANT FORCE

$F_{BUOYANT}$ =(DENSITY OF WATER)(VOLUME OF STATION)
=(62.4)(42.41) = 2,646 LBS

$F_{NET-BUOYANT}$ $=F_{buoyant}-$TANK WEIGHT
=2,646–137 = 2,509 LBS

BALLAST FORCE

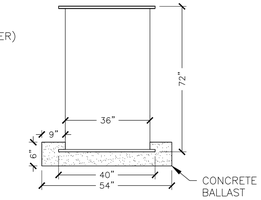
$VOLUME_{CONCRETE}$ $=$(HEIGHT)(AREA)
$=(0.5)[\pi(4.5^2-3.0^2)/4]=4.42$ FT^3

$VOLUME_{SOIL}$ $=$(HEIGHT)(AREA)
$=(6)[\pi(4.5^2-3.0^2)/4]=53.01$ FT^3

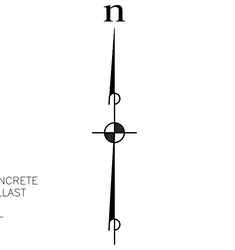
$BALLAST_{TOTAL}$ $=BALLAST_{CONC}+BALLAST_{SOIL}$
$=(V_{CONC})(CONC_{WATER})+(V_{SOIL})(SOIL_{WATER})$
=(4.42)(87.6)+(53.01)(70) = 4,098 LBS

FINAL CONDITION

FINAL CONDITION =BALLAST FORCE – BUOYANT FORCE
=4,098–2,509 = 1,589 LBS



36"x72" FIBERGLASS PUMP CHAMBER
W/ROUND ANTI–FLOATATION COLLAR



SITE DATA

PARCEL NUMBER:	545230–2145
SITE ADDRESS:	2215 80TH AVE SE MERCER ISLAND, WA 98040
SITE AREA:	8,800 SF (RECORDED) 8,810 SF (SURVEYED)
ZONING:	R–8.5

REQUIRED SETBACKS:

FRONT/GARAGE:	20 FT
BACK:	25 FT
INTERIOR:	10 FT EA (15 FT TOTAL)

ON-SITE IMPERVIOUS

NEW PLUS REPLACED

TRIBUTARY TO DETENTION TANK

SINGLE FAMILY ROOFTOP	2,495 SF (0.057 AC TO PUMP)
CONCRETE DRIVE	437 SF
TOTAL	2,932 SF (0.067 AC)

SHEET FLOW DISPERSION

EXPOSED WALKWAYS	517 sf

PROJECT IMPACTS

EXISTING (ALL TO BE REMOVED)	
SINGLE FAMILY ROOFTOP	3,629 SF
SIDEWALK	0 SF
BACK PATIO	112 SF
DECK	317 SF
SITE DRIVEWAY	850 SF
TOTAL	4,908 SF

REPLACED	
SINGLE FAMILY ROOFTOP	2,495 SF
SIDEWALK	233 SF
BACK PATIO	235 SF
DECK	49 SF
TOTAL REPLACED	3,012 SF

NEW	
DRIVEWAY	437 SF
TOTAL NEW	437 SF

NEW + REPLACED 3,449 SF

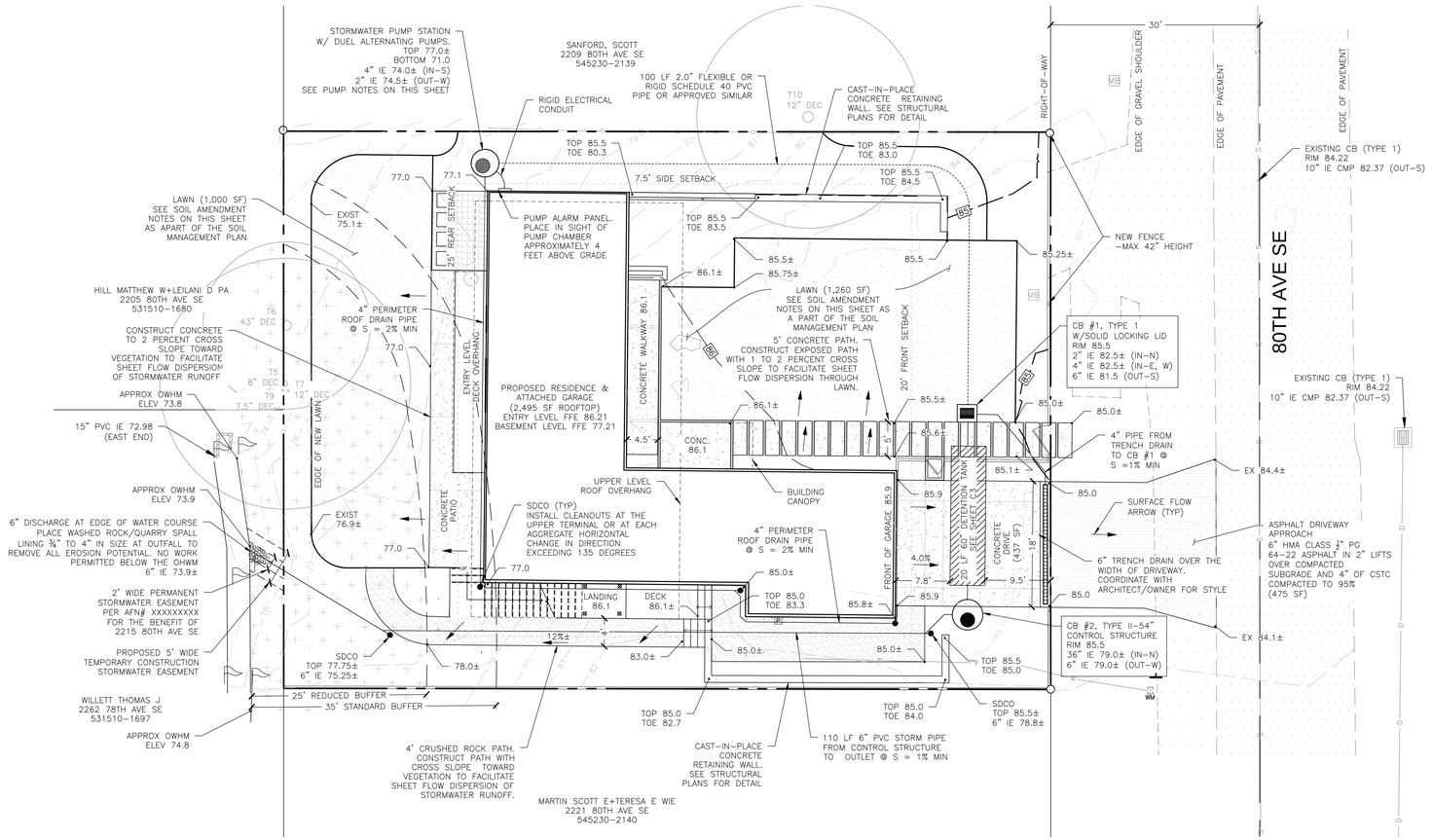
EARTHWORK QUANTITIES

CUT	0 CY
FILL	80 CY
NET	80 CY (FILL)

EARTHWORK VOLUMES SHOWN ARE ESTIMATES ONLY. CONTRACTOR SHALL VERIFY VOLUMES AS NEEDED.

FOOTING DRAIN NOTE

ALL FOOTING WALLS SHALL BE PROVIED WITH A DRAIN AT THE BASE OF THE FOOTING ELEVATION. DRAINS SHOULD CONSIST OF RIGID PVC PIPE SURROUNDED BY WASHED PEA GRAVEL. THE LEVEL OF THE PERFORATIONS IN THE PIPE SHOULD BE SET AT OR SLIGHTLY BELOW THE BOTTOM OF THE FOOTING AND THE DRAINS SHOULD BE CONSTRUCTION WITH SUFFICIENT GRADIENT TO ALLOW GRAVITY DISCHARGE AWAY FROM THE BUILDING. DAYLIGHT FOOTING DRAIN DOWNSTREAM FROM HOUSE SEPARATE FROM THE PROPOSE FLOW CONTROL BMPS AND AFTER THE DETENTION SYSTEM.



LEGAL DESCRIPTION

PER STATUTORY WARRANTY DEED RECORDING# 20180116001125

LOTS 3 AND 4, BLOCK 21, MERCER PARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 8 OF PLATS, PAGE 27, RECORDS OF KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

SEE THE TOPOGRAPHY MAP PREPARED BY TERRANE LAND SURVEYING FOR THIS PROJECT FOR FURTHER PROJECT DESCRIPTION, CONTROL, AND EXISTING TOPOGRAPHY INFORMATION.

CALL 48 HOURS BEFORE YOU DIG 811

REVISIONS

NO.	DESCRIPTION/DATE	BY

BRANDON MICHAEL LOUCKS — STATE OF WASHINGTON — 50085 — REGISTERED PROFESSIONAL ENGINEER — 3/14/2019

ESM CONSULTING ENGINEERS LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
(253) 838–6113
(425) 297–9900
FEDERAL WAY
EVERETT
www.esmcivil.com
Civil Engineering
Public Works
Land Planning
Landscape Architecture
Land Surveying
Project Management

MZA ARCHITECTURE

PAEK RESIDENCE

DRAINAGE & GRADING PLAN

CITY OF MERCER ISLAND, WASHINGTON

JOB NO.:	1954–003–018
DWG. NAME:	
DESIGNED BY:	BML
DRAWN BY:	BML
CHECKED BY:	
DATE:	03/14/2019
DATE OF PRINT:	

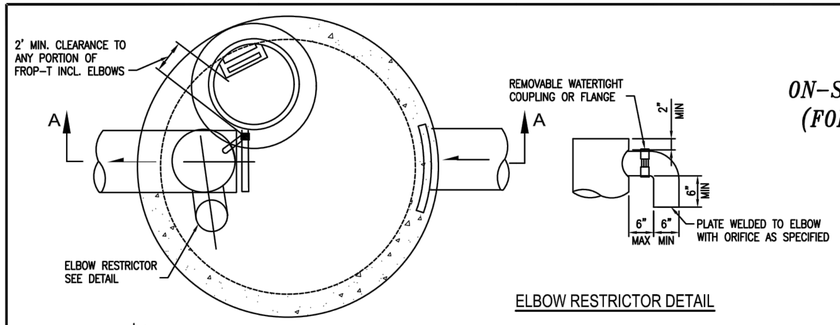
C2

OF SHEETS

File: D:\Autosave\1954003018–Paek Residence CIVIL_2019–03–15_1_14034_0571.dwg
Plotted By: Brandon Loucks
Plotted: 3/14/2019 4:18 PM

A PORTION OF A PORTION OF THE SE QUARTER OF SECTION 01, TOWNSHIP 24 N., RANGE 04 E., W.M.

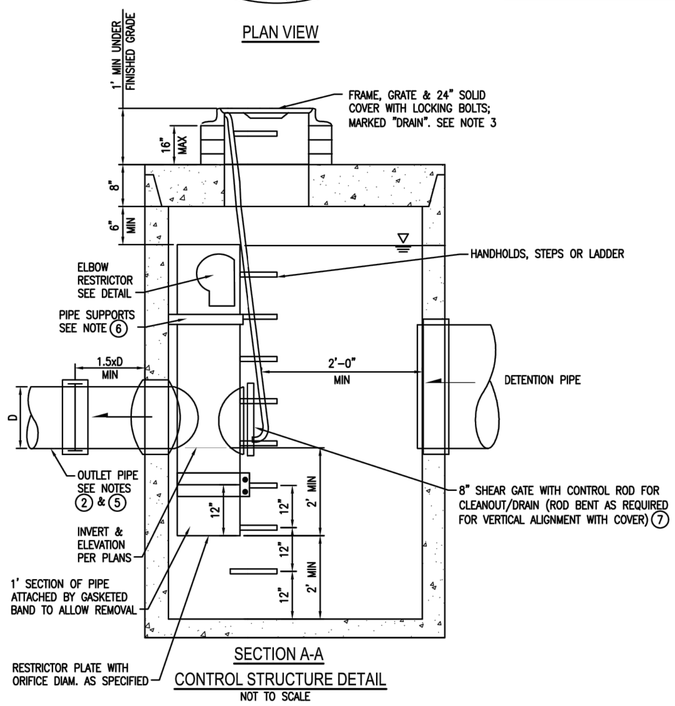
ATTACHMENT 1
CITY OF MERCER ISLAND
ON-SITE DETENTION SYSTEM WORKSHEET
(FOR NEW PLUS REPLACED IMPERVIOUS AREA OF 9,500 SF OR LESS)



PLAN VIEW

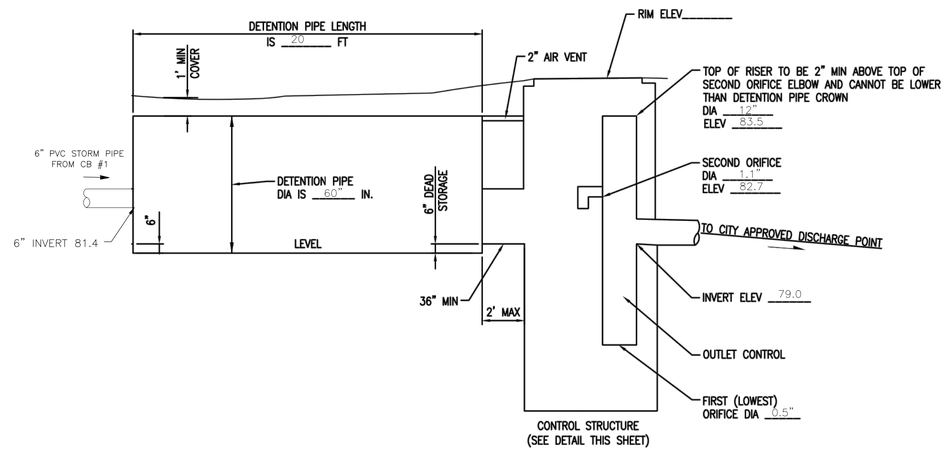
ELBOW RESTRICTOR DETAIL

OWNER: TIM & ELLEN PAEK	ADDRESS: 2215 80TH AVE SE	PREPARED BY: ESM CONSULTING ENGINEERS
PERMIT #:	MERCER ISLAND, 98040	PHONE: (253) 838-6113
		DATE: 01/29/2019
NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): 2,891 (TRIBUTARY)	DETENTION PIPE DIA (INCH): 60"	DETENTION PIPE LENGTH (FT): 20'
SOIL TYPE: C	PIPE MATERIAL: CMP	ORIFICE #1 DIA 0.5 INCH, ELEV 77.0
		ORIFICE #2 DIA 1.1 INCH, ELEV 82.7



SECTION A-A

CONTROL STRUCTURE DETAIL
NOT TO SCALE



ON-SITE DETENTION SYSTEM
NOT TO SCALE (ENGINEER TO FILL IN BLANKS)

CONTROL STRUCTURE NOTES:

1. USE A MINIMUM OF A 54 IN. DIAM. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.
2. OUTLET PIPE: MIN. 6 INCH.
3. METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
4. FRAME AND LADDER OR STEPS OFFSET SO:
   A. CLEANOUT GATE IS VISIBLE FROM TOP;
   B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE;
   C. FRAME IS CLEAR OF CURB.
5. IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
6. PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3'-0" VERTICAL SPACING).
7. THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION ZG32A; OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B.
   THE LIFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION), IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED.
   A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED.
   THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT.
   ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.
8. THE UPPER CATCH BASIN IS REQUIRED IF THE LENGTH OF THE DETENTION PIPE IS GREATER THAN 50 FT.

ON-SITE DETENTION SYSTEM NOTES:

1. CALL DEVELOPMENT SERVICES (206-275-7605) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
2. RESPONSIBILITY FOR OPERATION AND MAINTANANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS RESPONSIBILITY OF THE PROPERTY OWNER. MATERIAL ACCUMULATED IN THE STORAGE PIPE MUST BE REMOVED FROM CATCH BASINS TO ALLOW PROPER OPERATION. THE OUTLET CONTROL ORIFICE MUST BE KEPT OPEN AT ALL TIMES.
3. PIPE MATERIAL, JOINT, AND PROTECTIVE TREATMENT SHALL BE IN ACCORDANCE WITH SECTION 7.04 AND 9.05 OF THE WSDOT STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST VERSION. SUCH MATERIALS INCLUDE THE FOLLOWING, LINED CORRUGATED POLYETHYLENE PIPE (LCPE), ALUMINIZED TYPE 2 CORRUGATED STEEL PIPE AND PIPE ARCH (MEETS AASHTO DESIGNATIONS M274 AND M36), CORRUGATED OR SPIRAL RIB ALUMINUM PIPE, OR REINFORCED CONCRETE PIPE. CORRUGATED STEEL PIPE IS NOT ALLOWED.
4. FOOTING DRAINS SHALL NOT BE CONNECTED TO THE DETENTION SYSTEM.

REVISIONS

NO.	DESCRIPTION/DATE	BY

BRANDON MICHAEL LOUCKS — 50085 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON
3/5/2019

ESM CONSULTING ENGINEERS LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9900
www.esmcivil.com
Civil Engineering, Public Works, Land Planning, Landscape Architecture, Land Surveying, Project Management

MZA ARCHITECTURE

PAEK RESIDENCE

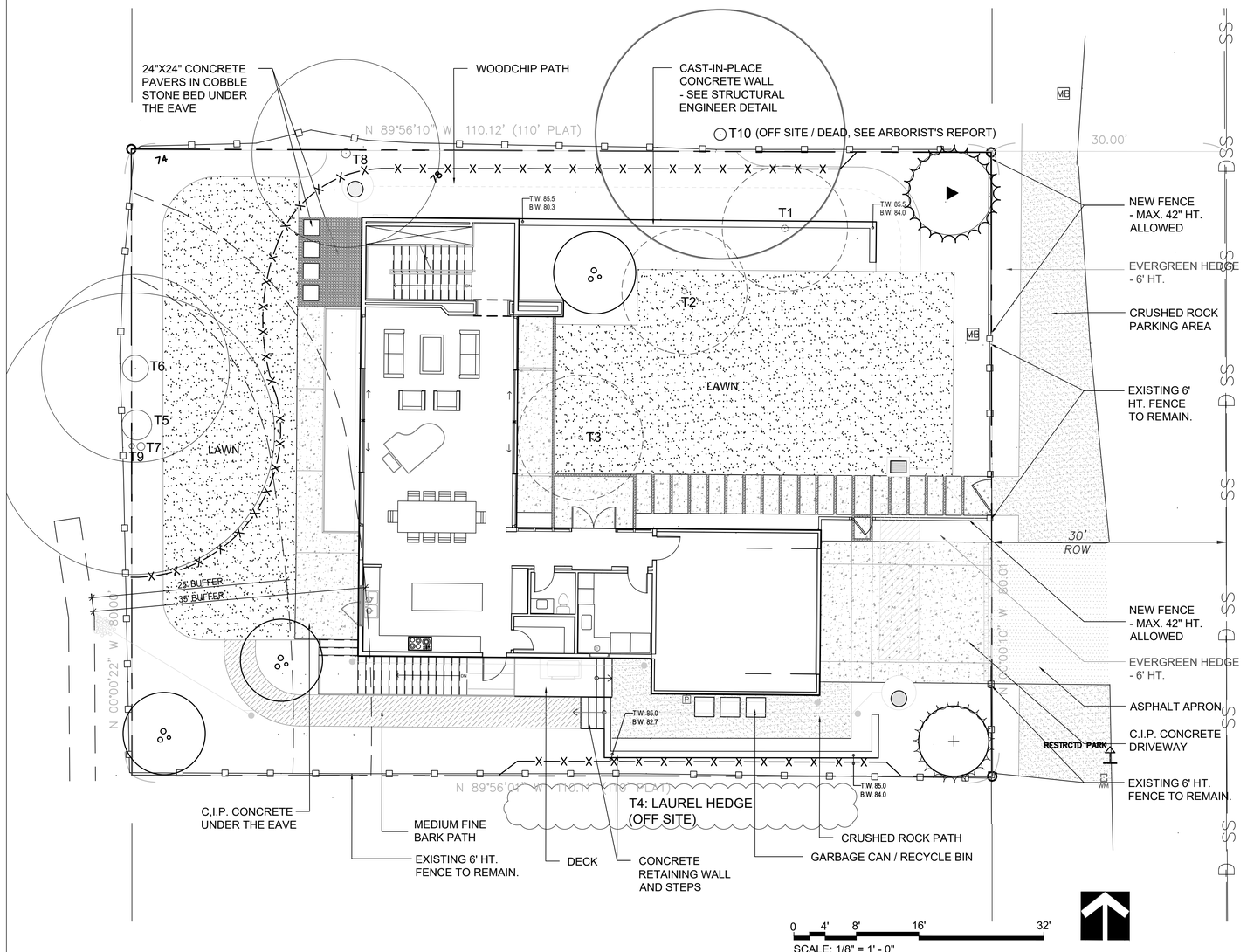
CITY OF MERCER ISLAND, WASHINGTON

NOTES & DETAILS

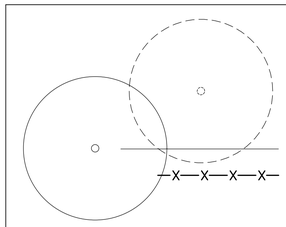
JOB NO.:	1954-003-018
DWG. NAME:	
DESIGNED BY:	BML
DRAWN BY:	BML
CHECKED BY:	
DATE:	
DATE OF PRINT:	

C3

OF SHEETS



LEGEND



TREE PROTECTION FENCING SHOULD BE USED FOR ALL RETAINED TREES ON THE SITE AND ON ADJACENT PROPERTY THAT WILL BE AFFECTED BY CONSTRUCTION. THERE SHOULD BE NO FOOT OR VEHICLE TRAFFIC, OR STORAGE INSIDE THE TREE PROTECTION FENCING. FENCING TO BE IN PLACE BEFORE CONSTRUCTION BEGINS.

TOTAL EXISTING TREES ON SITE

KEY #	DBH / TYPE	CLASSIFICATION	STATUS	# OF REPLACEMENT TREE REQUIRED
T1	10" DBH MALUS SP. / APPLE	LARGE	REMOVE	2
T2	15" DBH MALUS SP. / APPLE	LARGE	"	2
T3	8" DBH PRUNUS SP. /CHERRY	SMALL	"	1
T5	47" DBH POPLUS NIGRA / LOMBARDY POPLAR	EXCEPTIONAL	RETAIN	
T6	43" DBH POPLUS NIGRA / LOMBARDY POPLAR	EXCEPTIONAL	"	
T7	12" DBH FRAXINUS SP. / ASH	LARGE	"	
T8	17" DBH PRUNUS LAUROCERASUS / LAUREL	LARGE	"	
T9	7.5" DBH ACER MACROPHYLUM / BIG LEAF MAPLE	LARGE	"	
TOTAL # OF REPLACEMENT TREE REQUIRED:				5

TOTAL EXISTING LARGE / EXCEPTIONAL TREES ON SITE: 7 TREES

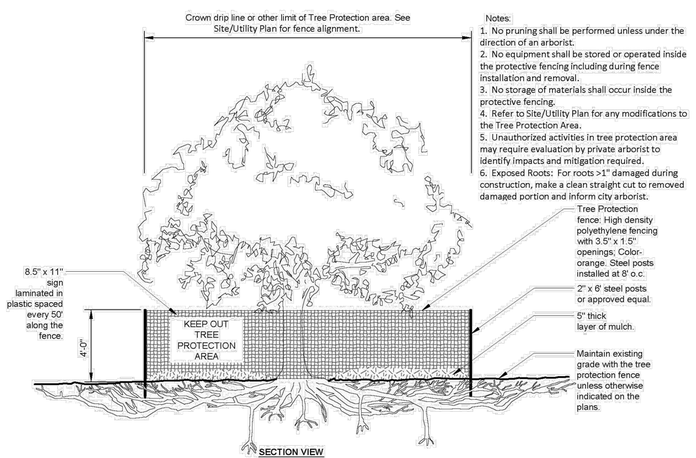
TOTAL EXISTING LARGE / EXCEPTIONAL TREES TO BE RETAINED: 5 TREES
(5/7*100 = 71.4% RETAINED)
MIN. 30% REQUIRED. THEREFORE OK

REPLACEMENT TREE SCHEDULE

SYMBOL	BOTANICAL/COMMON NAME	SIZE	QYT.	REMARKS
	TREES			
	Acer circinatum Vine Maple	Min. 1.5" Cal. at base of trunk	3	Multi-trunk, full habit, well branched
	Pinus contorta var. contorta Shore Pine	Min. 6' HT.	1	Single straight trunk, full habit, well branched
	Thuja plicata Western Red Cedar	Min. 6' HT.	1	Single straight trunk, full habit, well branched

TOTAL 5 TREES

5 TREES REQUIRED, THEREFORE OK



A TREE PROTECTON FENCE DETAIL
SCALE: NTS

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

Discrepancies must be reported immediately to the Architect before proceeding. Only figured dimensons are to be used. Contractors must check all dimensions on site. This drawing is protected by copyright.
ALL DIMENSIONS ARE SHOWN IN IMPERIAL.

ANR LANDSCAPE DESIGN
22310 98th Ave. W
Edmonds, WA 98020
p. 206.818.3610

STATE OF WASHINGTON
REGISTERED LANDSCAPE ARCHITECT
ANRI N. RAPELJE
CERTIFICATE NO. 1055

STAMP

DRAWING TITLE
LANDSCAPE PLAN

DRAWN ANR | DESIGNED ANR

DATE 02/28/19

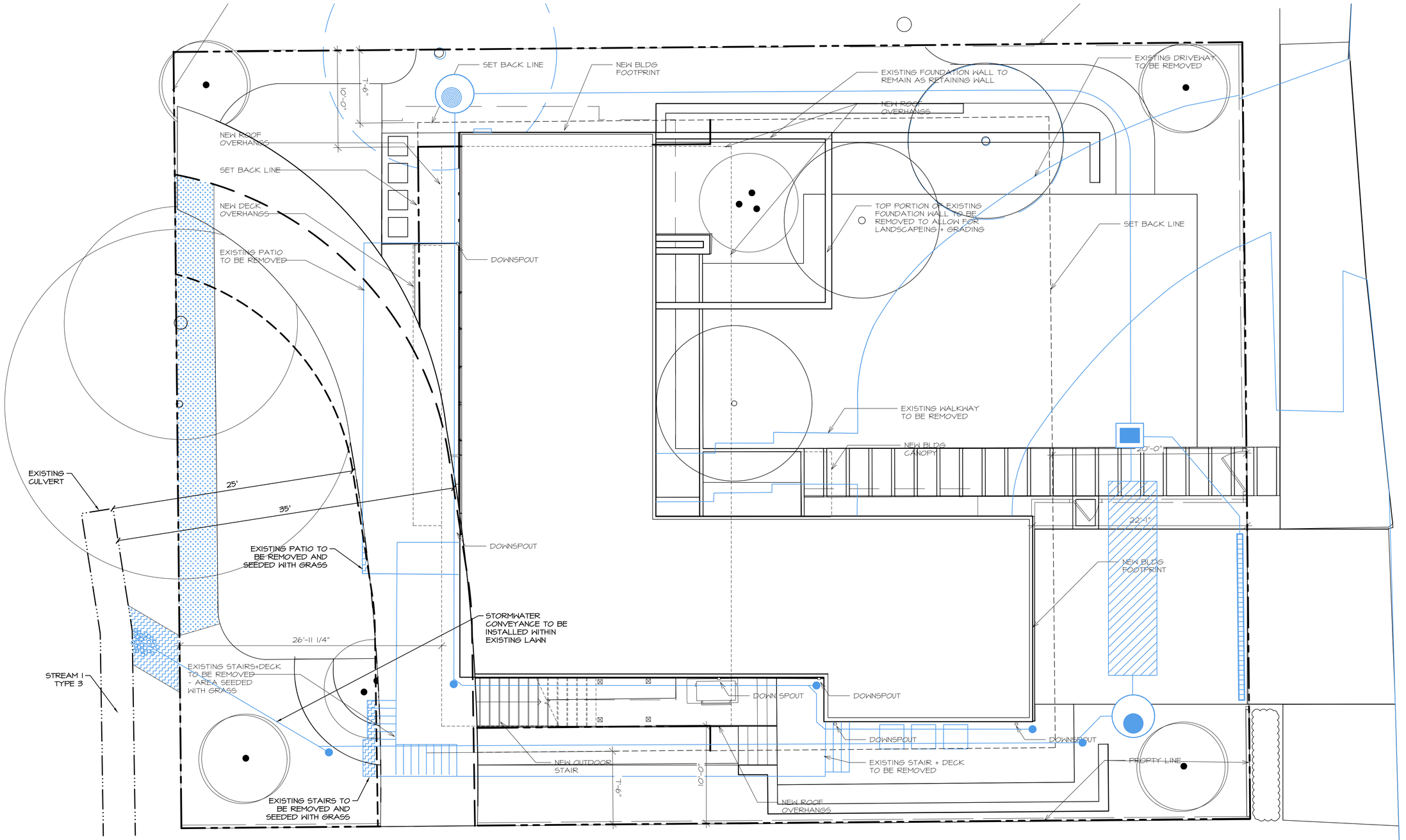
GRAPHIC

SCALE As indicated

PROJECT NO. 18-009

DRAWING NO. L1.0 | REVISION NO.

FILE NAME
PLOT
DATE



PLAN LEGEND

- PROPERTY LINE
- ORDINARY HIGH WATER LINE OF TYPE 3 STREAM
- 35' STANDARD STREAM BUFFER
- 25' REDUCED STREAM BUFFER

IMPACT LEGEND

TEMPORARY STREAM BUFFER IMPACT	39 SF

MITIGATION LEGEND

STREAM BUFFER RESTORATION	39 SF
STREAM BUFFER ENHANCEMENT	187 SF

GRAPHIC SCALE (IN FEET)

0 2.5 5 7.5 10 15

SCALE: 1:5

N

GENERAL NOTES

1. BASE INFORMATION PROVIDED BY MZA ARCHITECTURE, 600 108TH AVE NE, SUITE 108, BELLEVUE, WA 98004, (425) 559-7888.

Altmann Oliver Associates, LLC | AOA
Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509

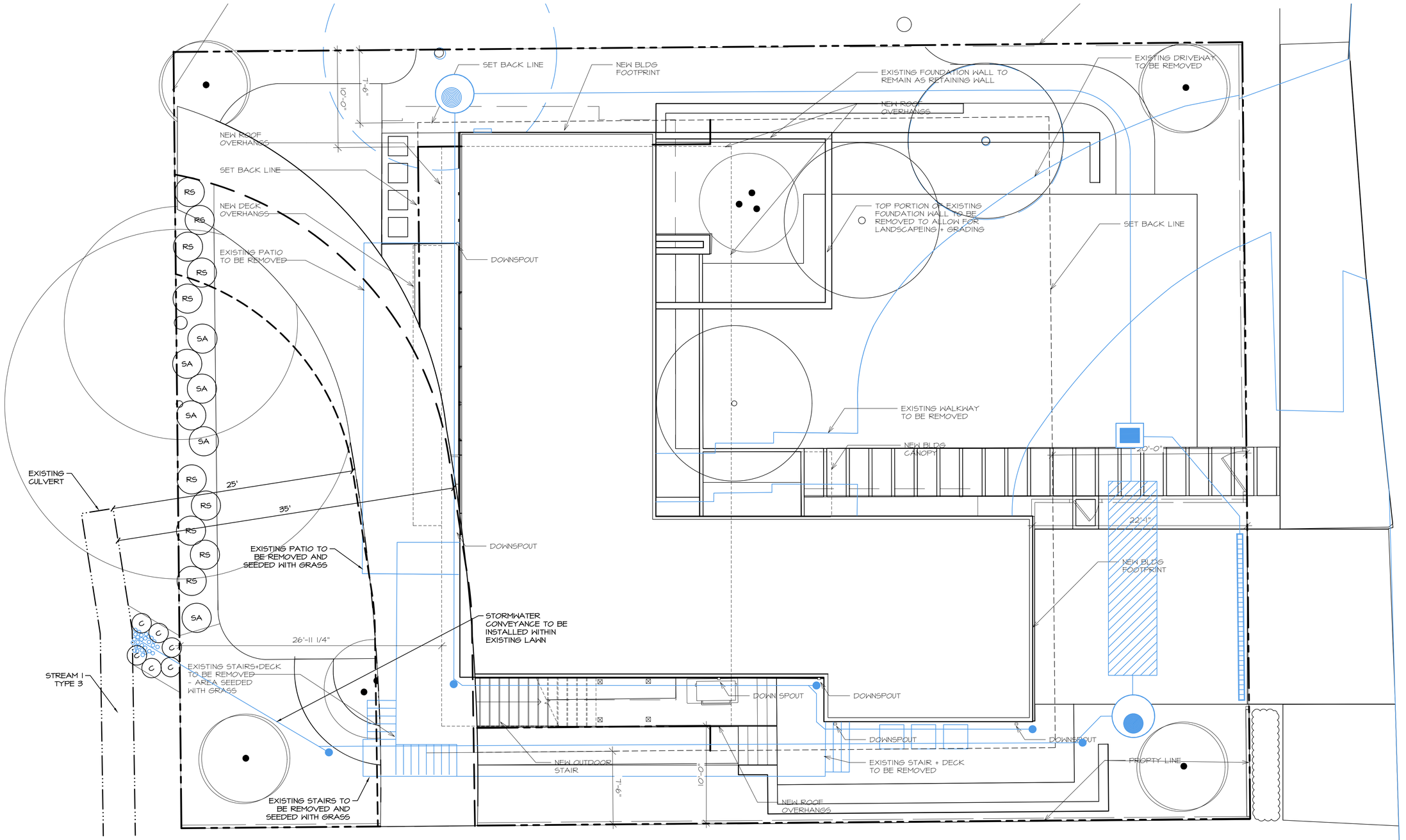
BUFFER RESTORATION PLAN
PAEK RESIDENCE
2215 80TH AVE SE
MERCER ISLAND, WA 98040

Revisions	Date	By

Date 01-28-19
Scale AS NOTED
Project# 5800

Sheet # W-1

5800-MIT-01-28-19.dwg



PLANT SCHEDULE

SHRUBS

KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES
C	CORNUS SERICEA	RED-OSIER DOGWOOD	2' O.C.	6	4' CUTTING	1/2" DIA., BARK INTACT
RS	RIBES SANGUINEUM	RED CURRANT	3' O.C.	10	1 GAL.	MULTI-STEM (3 MIN.)
SA	SYMPHORICARPOS ALBUS	SNOWBERRY	3' O.C.	6	1 GAL.	MULTI-STEM (3 MIN.)

GRAPHIC SCALE
(IN FEET)
0 2.5 5 7.5 10 15
SCALE: 1:5

N

GENERAL NOTES

1. BASE INFORMATION PROVIDED BY MZA ARCHITECTURE, 600 108TH AVE NE, SUITE 108, BELLEVUE, WA 98004, (425) 554-7888.

Altmann Oliver Associates, LLC | AOA
Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509

PLANTING PLAN
PAEK RESIDENCE
2215 80TH AVE SE
MERCER ISLAND, WA 98040

Revisions | Date | By

Date 01-28-19
Scale AS NOTED
Project# 5200

Sheet # W-2

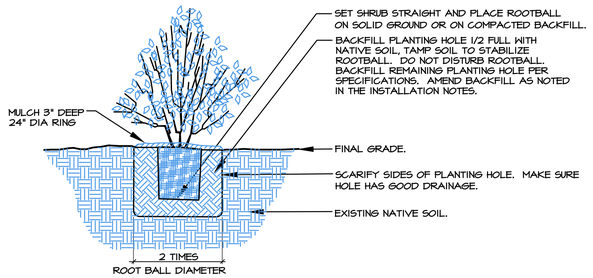
CONSTRUCTION SPECIFICATIONS

1. ALL PLANTS SHOULD BE INSTALLED BETWEEN DECEMBER 1ST AND MARCH 15TH, UNLESS SUPPLEMENTAL IRRIGATION IS PROVIDED.
2. INTERMEDIATE INSPECTIONS. ALL PLANTS SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE DESIGNER AND/OR WETLAND BIOLOGIST PRIOR TO INSTALLATION. CONDITION OF ROOTS OF A RANDOM SAMPLE OF PLANTS WILL BE INSPECTED, AS WELL AS ALL ABOVEGROUND GROWTH ON ALL PLANTS. ROOTS OF ANY BARE ROOT PLANTS, IF PERMITTED FOR USE, WILL BE INSPECTED. PLANT MATERIAL MAY BE APPROVED AT THE SOURCE, AT THE DISCRETION OF THE LANDSCAPE DESIGNER AND THE WETLAND BIOLOGIST, BUT ALL MATERIAL MUST BE RE-INSPECTED AND APPROVED ON THE SITE PRIOR TO INSTALLATION. PLANT LOCATIONS SHALL ALSO BE INSPECTED AND APPROVED PRIOR TO PLANTING.
3. ALL PLANTS SHALL BE PIT-PLANTED IN PLANTING PITS EXCAVATED 2X THE DIAMETER OF THE PLANT. PITS SHALL BE BACKFILLED WITH A 30/70 MIX OF STEERCO TO NATIVE SOIL. PITS SHALL BE AMENDED WITH A HYDRATED SOIL POLYMER (INSTALLED AT RATES PER MANUFACTURER'S SPECIFICATIONS). PLANTS SHALL BE INSTALLED 3" HIGH AND SURFACED MULCHED TO A DEPTH OF 3" WITH PACIFIC GARDEN MULCH PLACED CONTINUOUSLY THROUGHOUT THE PLANTING BED.
4. ALL PLANTS SHALL BE NURSERY GROWN (IN WESTERN WA OR OR) FOR AT LEAST 1 YEAR FROM PURCHASE DATE, FREE FROM DISEASE OR PESTS, WELL-ROOTED, BUT NOT ROOT-BOUND AND TRUE TO SPECIES.
5. PLANT LAYOUT SHALL BE APPROVED BY AOA PRIOR TO INSTALLATION AND APPROVED UPON COMPLETION OF PLANTING.
6. UPON COMPLETION OF PLANTING, ALL PLANTS SHALL BE THOROUGHLY WATERED.
7. UPON APPROVAL OF PLANTING INSTALLATION BY AOA, THE CITY OF MERCER ISLAND WILL BE NOTIFIED TO CONDUCT A SITE REVIEW FOR FINAL APPROVAL OF CONSTRUCTION.
8. MAINTENANCE SHALL BE IMPLEMENTED ON A REGULAR BASIS ACCORDING TO THE SCHEDULE BELOW.

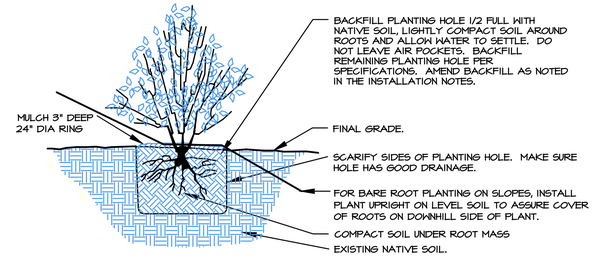
ANNUAL MAINTENANCE SCHEDULE

MAINTENANCE ITEM	J	F	M	A	M	J	J	A	S	O	N	D
WATERING - YEARS 1 & 2							8	8	8	8		
WEED CONTROL			1		1		1			1		
GENERAL MAINT.			1		1		1			1		

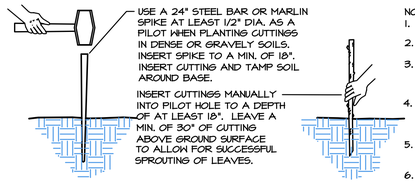
1-8 = NUMBER OF TIMES TASK SHALL BE PERFORMED PER MONTH.



1 CONTAINER PLANTING DETAIL (TYP.)
SCALE: NTS



2 BARE-ROOT PLANTING DETAIL (TYP.)
SCALE: NTS



NOTES:
1. CUTTINGS SHALL BE SPECIES AS NOTED IN THE PLANT SCHEDULE.
2. CUTTINGS SHALL BE AT LEAST 1/2" DIA. AND 4' (min) IN LENGTH.
3. CUTTINGS MUST BE ALIVE WITH SIDE BRANCHES CLEARLY REMOVED AND BARK INTACT. CUTTINGS SHALL BE PLANTED WITHIN 24 HOURS OF CUTTING.
4. THE BUTT ENDS SHOULD BE CLEANLY CUT AT AN ANGLE FOR EASY INSERTION INTO THE SOIL. THE TOP SHOULD BE CUT SQUARE OR BLUNT.
5. CUTTINGS MUST BE FRESH AND KEPT MOIST AFTER CUTTING. THEY SHOULD BE PRUNED AND INSTALLED THE SAME DAY.
6. DIP BOTTOM OF CUTTING IN A PLANT ROOTING HORMONE PRIOR TO INSERTION INTO THE SOIL.

3 CUTTING INSTALLATION (TYP.)
SCALE: NTS

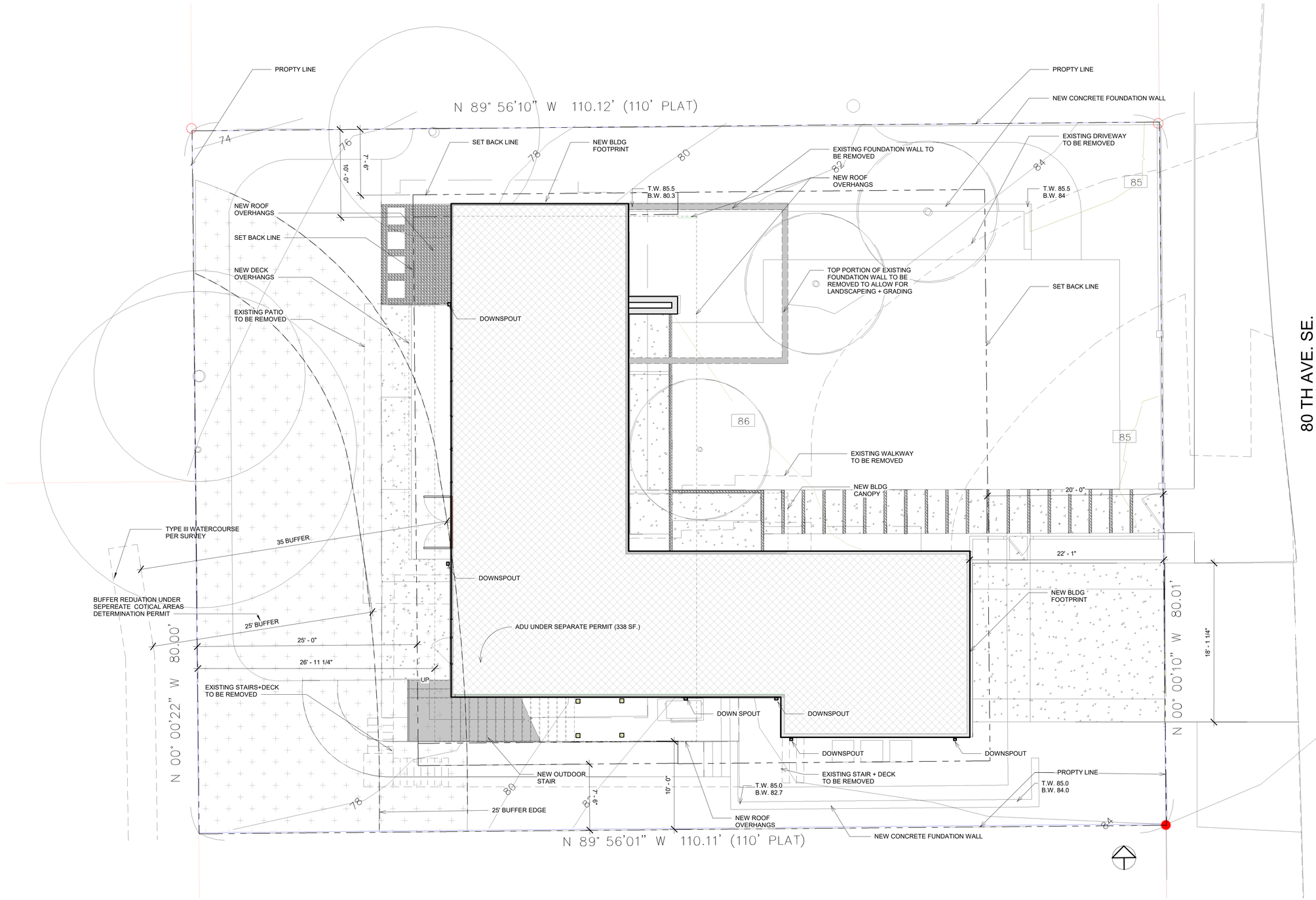
Altmann Oliver Associates, LLC
AOA Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509

SPECIFICATIONS & DETAILS
PAEK RESIDENCE
2215 80TH AVE SE
MERCER ISLAND, WA 98040

Revisions | Date | By

Date 01-28-19
Scale AS NOTED
Project# 5800

Sheet # W-3



1 Site_02
3/16" = 1'-0"

PROJECT NAME
PAEK RESIDENCE

PROJECT ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

16930 SE 32ND PLACE
BELLEVUE, WA 98008
T: 206.228.9404

NO.	DESCRIPTION:	DATE:

REVISIONS

CONSULTANTS

CIVIL ENGINEER
GREEN LAKE ENGINEERING
6045 4TH AVE NE
SEATTLE, WA 98115
T: 206.525.5332

LANDSCAPE ARCHITECT
ALTMANN OLIVER ASSOC., LLC
PO BOX 578
CARNATION, WA 98014
T: 425.333.4535

STRUCTURAL ENGINEER
LUND OPSAHL
1201 FIRST AVE. S, STE 310
SEATTLE, WA 98134
T: 206.402.5156

DRAWING STATUS

Discrepancies must be reported to the Architect before proceeding. Only figured dimensions are to be used. Contractors must check all dimensions on site. This drawing is protected by copyright.

ALL DIMENSIONS ARE SHOWN IN IMPERIAL.

MZA
ARCHITECTURE
600 108th Ave. NE, Suite 108
Bellevue, WA 98004
T: 425.559.7888, www.mza-us.com

STAMP
6446 REGISTERED ARCHITECT Ming Zhang STATE OF WASHINGTON

NORTH ARROW
N

DRAWING TITLE
SITE PLAN

DRAWN	CHECKED
Author	Checker
SCALE @ ARCH D	DATE
3/16" = 1'-0"	01/11/19

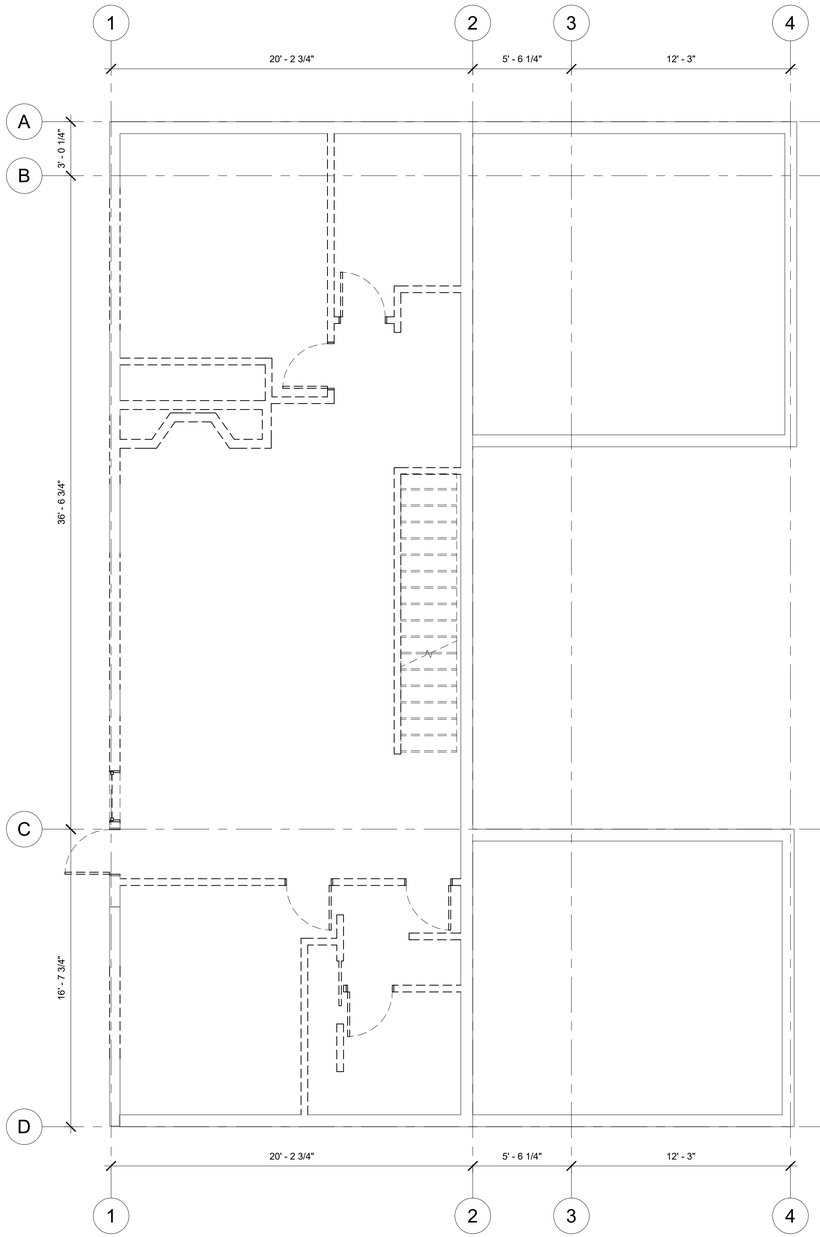
GRAPHIC SCALE
0 4 8 16 24
SCALE IN FEET

PROJECT NO.
18-009

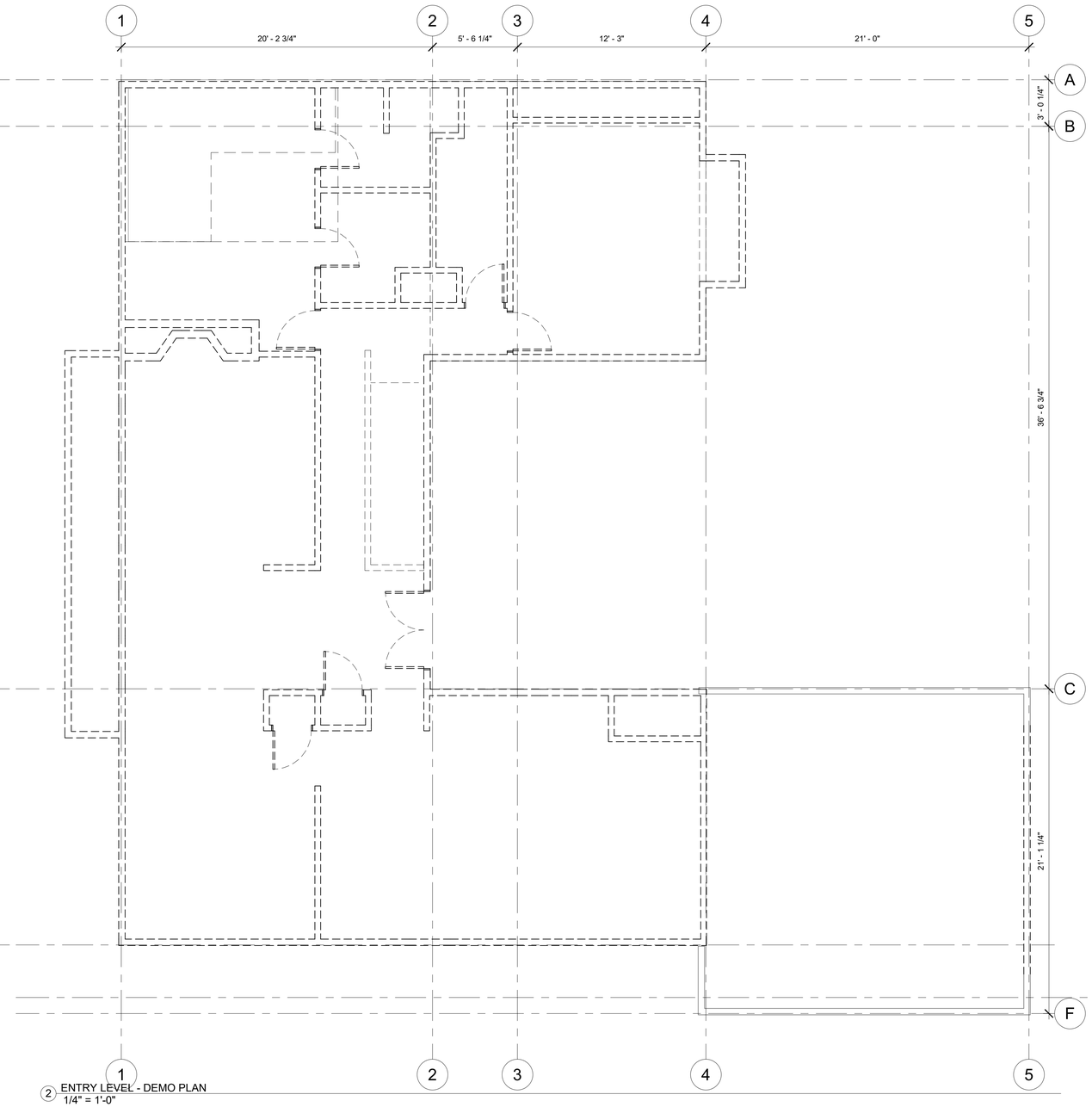
DRAWING NO.
A1.1

REVISION NO.

24"x36" Arch D -SHEET SIZE



1 BASEMENT LEVEL - DEMO PLAN
1/4" = 1'-0"



2 ENTRY LEVEL - DEMO PLAN
1/4" = 1'-0"

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

M Z A
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP
REGISTERED ARCHITECT
Ming Zhang
STATE OF WASHINGTON

DRAWING TITLE
FLOOR PLANS

DRAWN
Author

DESIGNED
Designer

DATE
07/06/17

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

PROJECT NO.
18-009

DRAWING NO.
A2.0

REVISION NO.

FILE NAME:
PLOT DATE:

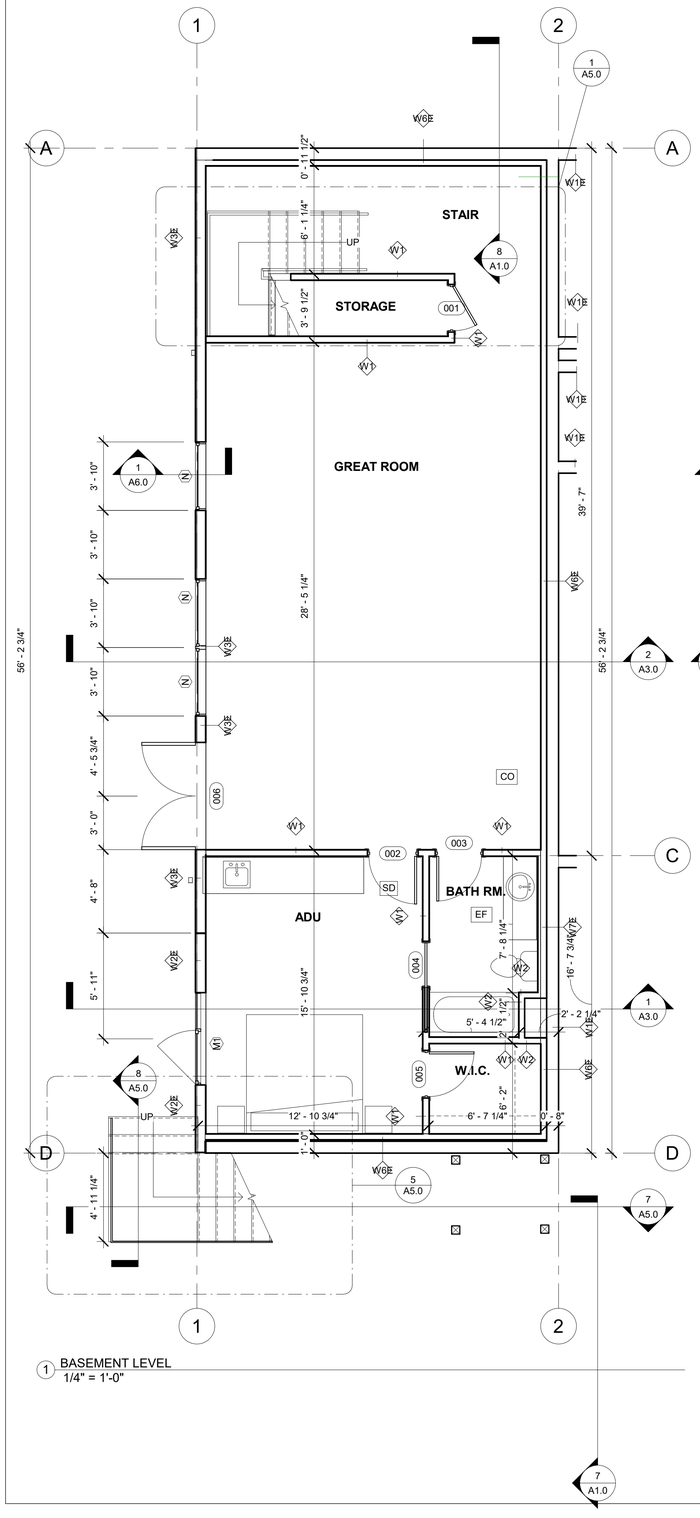
24"x36" Arch D -SHEET SIZE

1. ALL WINDOWS SHALL COMPLY W/ WSEC FRAMERS TO VERIFY R.O.
2. VENT ALL FANS AND DRYER EXHAUST TO OUTSIDE. PROVIDE 2x BLOCKING EACH SIDE OF FAN. HOLD BLOCKING 1/4" UP FROM GWB.
3. TOILET PAPER DISPENSERS TO BE MOUNTED @ 27" AFF (TYP.)
4. ALL TOWEL BARS MOUNTED @ 42" AFF. UNO.
5. PROVIDE TEMPORARY BRACING AS REQUIRED UNTIL ALL CONNECTIONS AND STIFFENERS HAVE BEEN INSTALLED.
6. WRITTEN DIMENSIONS ARE PRECEDENCE OVER SCALED DIMs. VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD.
7. FIREBLOCK IN ACCORDANCE W/ 2015 IRC R302.11
8. LIMIT SHOWER FLOW TO 2.5 GPM
9. SHOWER WALLS SHALL BE WATERPROOF TO A MIN. 72" AFF
10. ALL BATHROOM GLAZING INCLUDING WINDOWS WITHIN 60" OF A STANDING OR WALKING SURFACE SHALL HAVE SAFETY GLAZING.

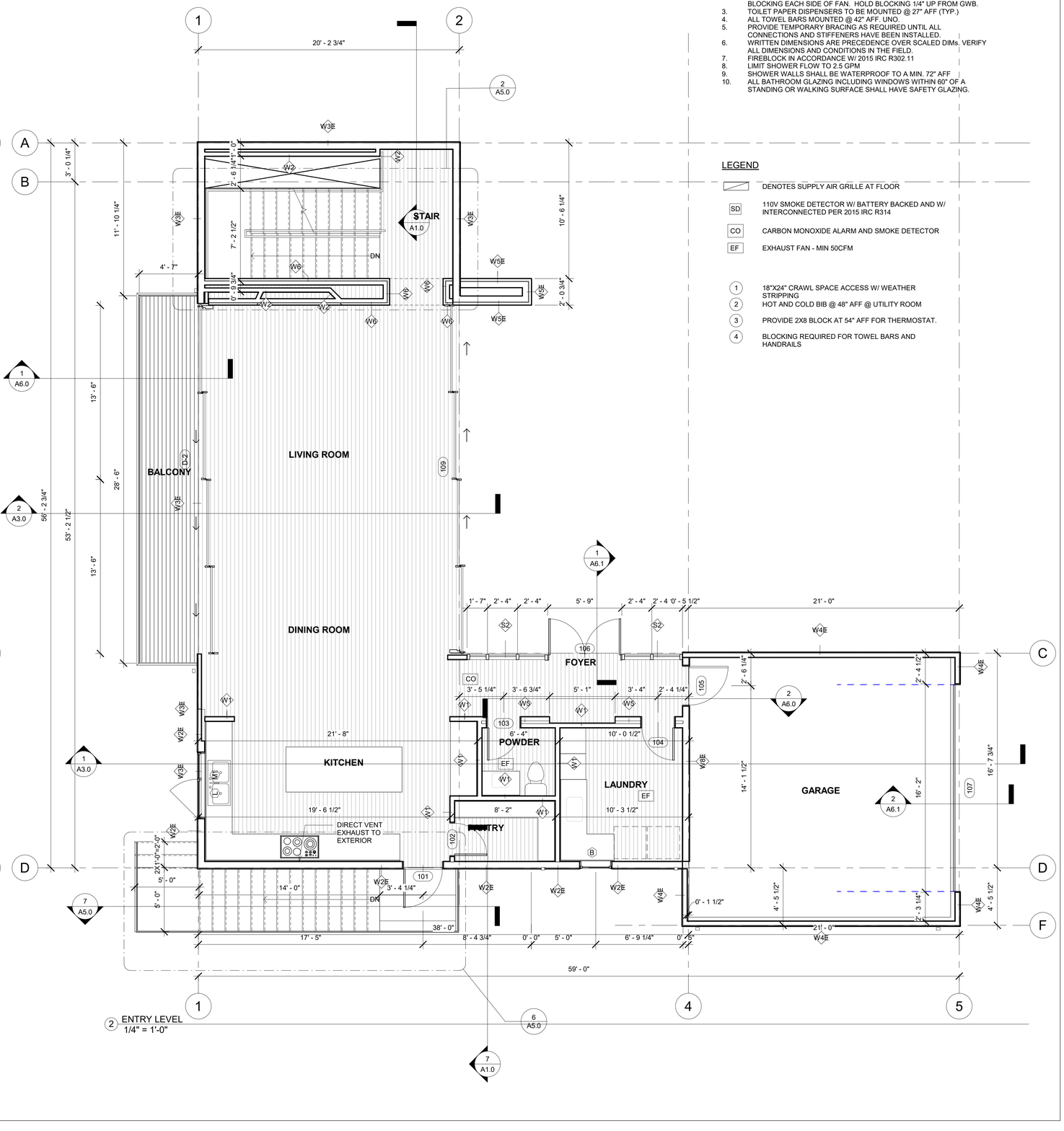
LEGEND

- DENOTES SUPPLY AIR GRILLE AT FLOOR
- SD — 110V SMOKE DETECTOR W/ BATTERY BACKED AND W/ INTERCONNECTED PER 2015 IRC R314
- CO — CARBON MONOXIDE ALARM AND SMOKE DETECTOR
- EF — EXHAUST FAN - MIN 50CFM

1. 18"X24" CRAWL SPACE ACCESS W/ WEATHER STRIPPING
2. HOT AND COLD BIB @ 48" AFF @ UTILITY ROOM
3. PROVIDE 2X8 BLOCK AT 54" AFF FOR THERMOSTAT.
4. BLOCKING REQUIRED FOR TOWEL BARS AND HANDRAILS



1 BASEMENT LEVEL
1/4" = 1'-0"



2 ENTRY LEVEL
1/4" = 1'-0"

PROJECT	PAEK RESIDENCE
ADDRESS	2215 80TH AVE SE MERCER ISLAND, WA 98040
CLIENT	TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

MZA
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

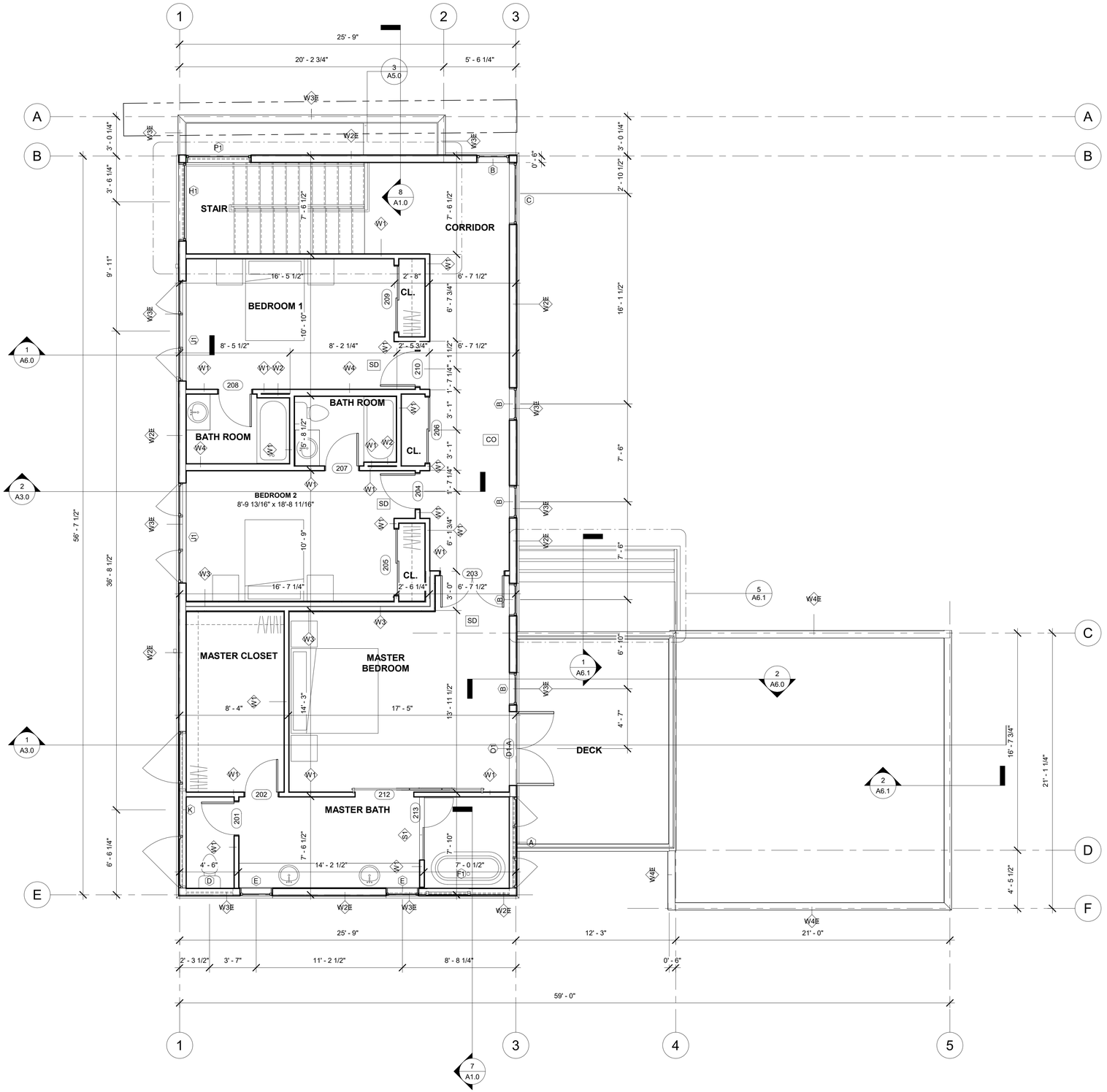
STAMP

REGISTERED ARCHITECT
Ming Zhang
STATE OF WASHINGTON

DRAWING TITLE	BASEMENT & GROUND FLOOR PLANS
DRAWN	Author
DESIGNED	Designer
DATE	06/05/18
GRAPHIC SCALE	As indicated
PROJECT NO.	18-009
DRAWING NO.	A2.1
REVISION NO.	

FILE NAME:
PLOT DATE:

24"x36" Arch D -SHEET SIZE



1 UPPER LEVEL
1/4" = 1'-0"

1. ALL WINDOWS SHALL COMPLY W/ WSEC FRAMERS TO VERIFY R.O.
2. VENT ALL FANS AND DRYER EXHAUST TO OUTSIDE. PROVIDE 2x BLOCKING EACH SIDE OF FAN. HOLD BLOCKING 1/4" UP FROM GWB.
3. TOILET PAPER DISPENSERS TO BE MOUNTED @ 27" AFF (TYP.)
4. ALL TOWEL BARS MOUNTED @ 42" AFF. UNO.
5. PROVIDE TEMPORARY BRACING AS REQUIRED UNTIL ALL CONNECTIONS AND STIFFENERS HAVE BEEN INSTALLED.
6. WRITTEN DIMENSIONS ARE PRECEDENCE OVER SCALED DIMs. VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD.
7. FIREBLOCK IN ACCORDANCE W/ 2015 IRC R302.11
8. LIMIT SHOWER FLOW TO 2.5 GPM
9. SHOWER WALLS SHALL BE WATERPROOF TO A MIN. 72" AFF
10. ALL BATHROOM GLAZING INCLUDING WINDOWS WITHIN 60" OF A STANDING OR WALKING SURFACE SHALL HAVE SAFETY GLAZING.

LEGEND

- DENOTES SUPPLY AIR GRILLE AT FLOOR
- SD — 110V SMOKE DETECTOR W/ BATTERY BACKED AND W/ INTERCONNECTED PER 2015 IRC R314
- CO — CARBON MONOXIDE ALARM AND SMOKE DETECTOR
- EF — EXHAUST FAN - MIN 50CFM

1. 18"X24" CRAWL SPACE ACCESS W/ WEATHER STRIPPING
2. HOT AND COLD BIB @ 48" AFF @ UTILITY ROOM
3. PROVIDE 2X8 BLOCK AT 54" AFF FOR THERMOSTAT.
4. BLOCKING REQUIRED FOR TOWEL BARS AND HANDRAILS

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

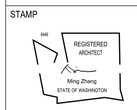
REVISIONS

DRAWING STATUS

Discrepancies must be reported immediately to the Architect before proceeding. Only figured dimensons are
to be used. Contractors must check all dimensions on site. This drawing is protected by copyright.
ALL DIMENSIONS ARE SHOWN IN IMPERIAL.

MZA
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP



DRAWING TITLE
UPPER LEVEL PLAN

DRAWN: Author
DESIGNED: Designer

DATE: 06/05/18

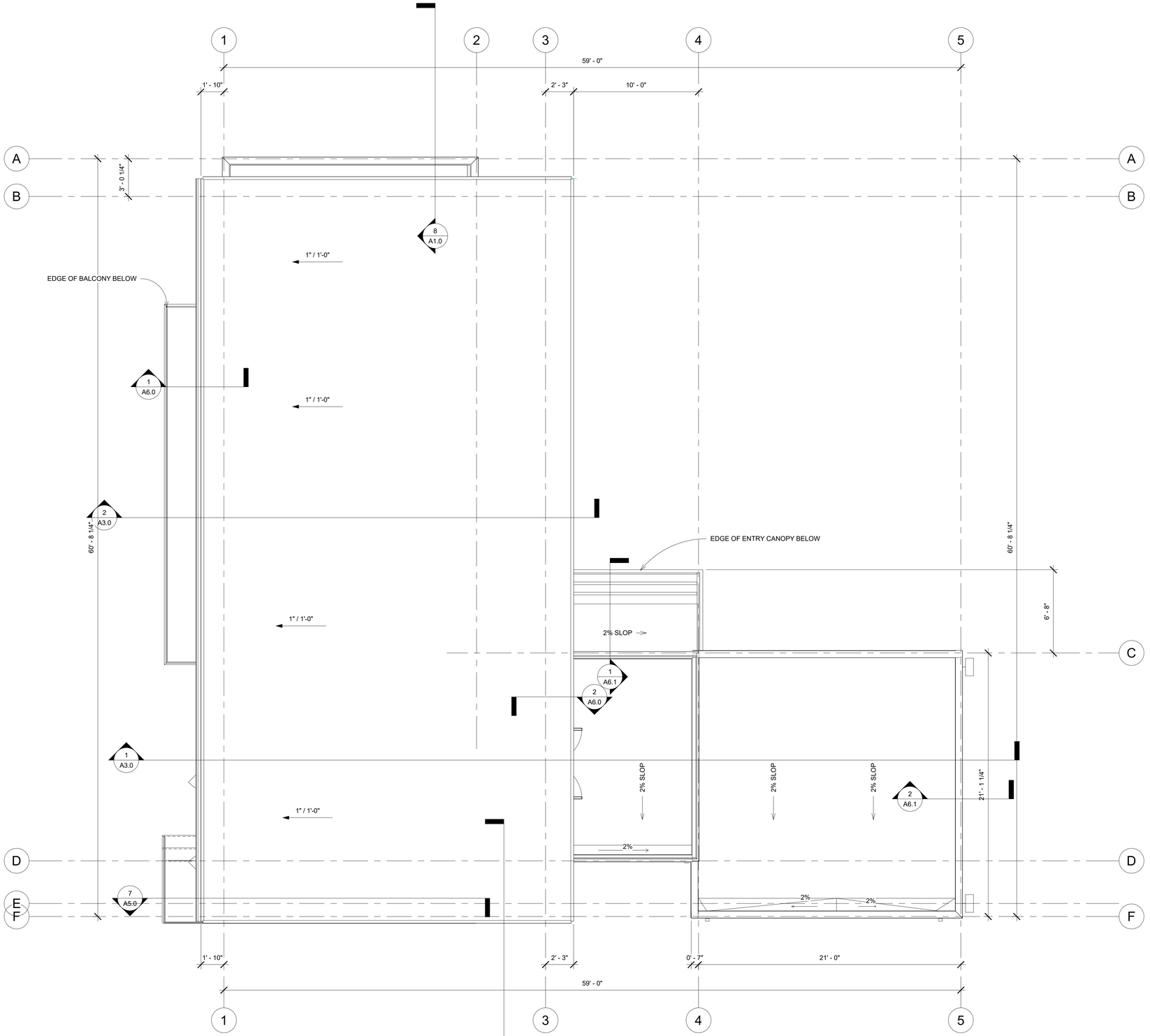
GRAPHIC SCALE: As indicated

PROJECT NO.
18-009

DRAWING NO.
A2.2

REVISION NO.

FILE NAME:
PLOT DATE:



1 ROOF LEVEL
1/4" = 1'-0"

1. ALL WINDOWS SHALL COMPLY W/ WSEC FRAMERS TO VERIFY R.O.
2. VENT ALL FANS AND DRYER EXHAUST TO OUTSIDE. PROVIDE 2x BLOCKING EACH SIDE OF FAN. HOLD BLOCKING 1/4" UP FROM GWB.
3. TOILET PAPER DISPENSERS TO BE MOUNTED @ 27" AFF (TYP.)
4. ALL TOWEL BARS MOUNTED @ 42" AFF. UNO.
5. PROVIDE TEMPORARY BRACING AS REQUIRED UNTIL ALL CONNECTIONS AND STIFFENERS HAVE BEEN INSTALLED.
6. WRITTEN DIMENSIONS ARE PRECEDENCE OVER SCALED DIMs. VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD.
7. FIREBLOCK IN ACCORDANCE W/ 2015 IRC R302.11
8. LIMIT SHOWER FLOW TO 2.5 GPM.
9. SHOWER WALLS SHALL BE WATERPROOF TO A MIN. 72" AFF
10. ALL BATHROOM GLAZING INCLUDING WINDOWS WITHIN 60" OF A STANDING OR WALKING SURFACE SHALL HAVE SAFETY GLAZING.

LEGEND

	DENOTES SUPPLY AIR GRILLE AT FLOOR
SD	110V SMOKE DETECTOR W/ BATTERY BACKED AND W/ INTERCONNECTED PER 2015 IRC R314
CO	CARBON MONOXIDE ALARM AND SMOKE DETECTOR
EF	EXHAUST FAN - MIN 50CFM
1	18"X24" CRAWL SPACE ACCESS W/ WEATHER STRIPPING
2	HOT AND COLD BIB @ 48" AFF @ UTILITY ROOM
3	PROVIDE 2X8 BLOCK AT 54" AFF FOR THERMOSTAT.
4	BLOCKING REQUIRED FOR TOWEL BARS AND HANDRAILS

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

M Z A
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP
REGISTERED ARCHITECT
Ming Zhang
STATE OF WASHINGTON

DRAWING TITLE
ROOF PLAN

DRAWN
Author

DESIGNED
Designer

DATE
08/16/18

GRAPHIC SCALE
As indicated

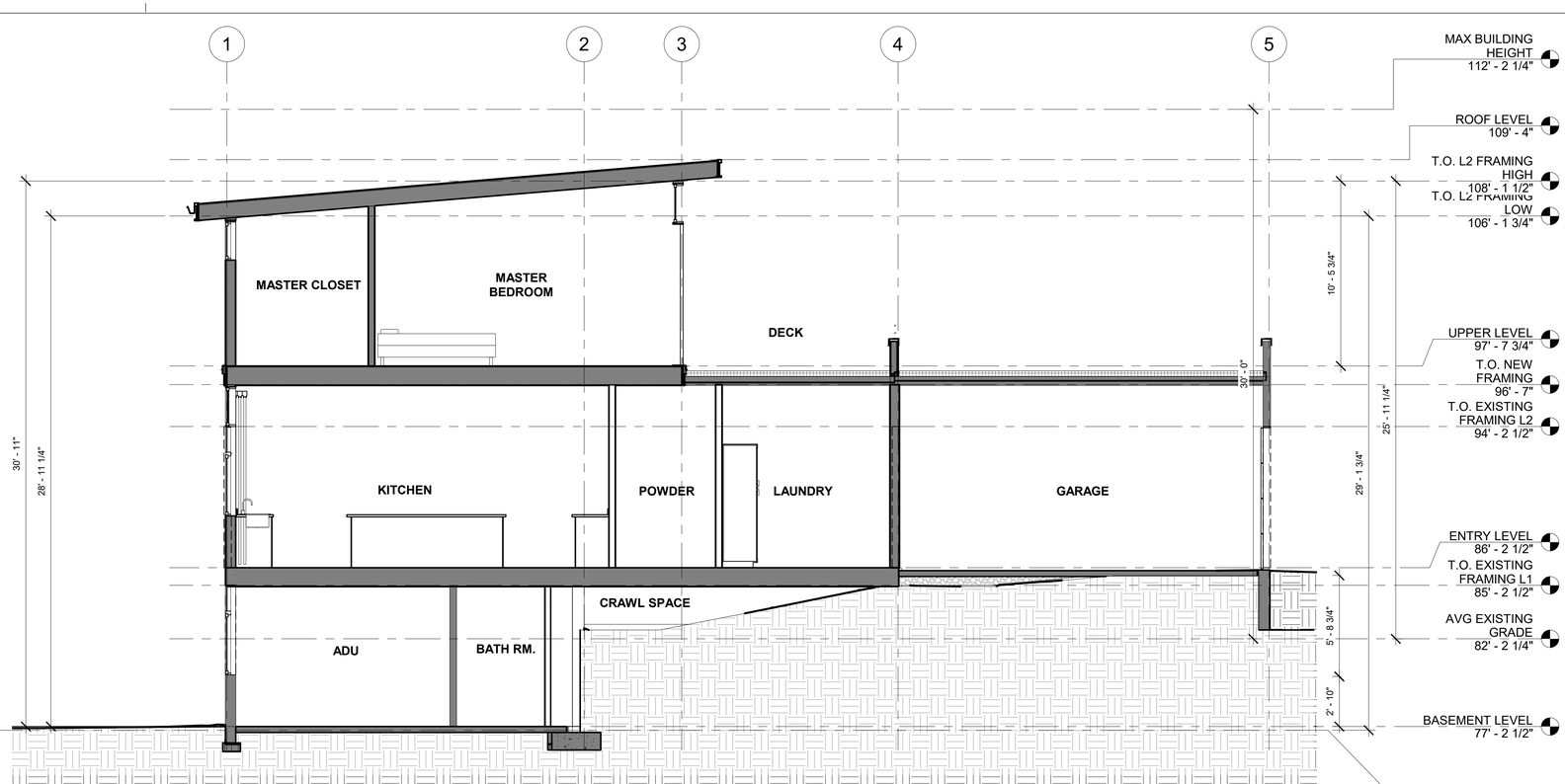
PROJECT NO.
18-009

DRAWING NO.
A2.3

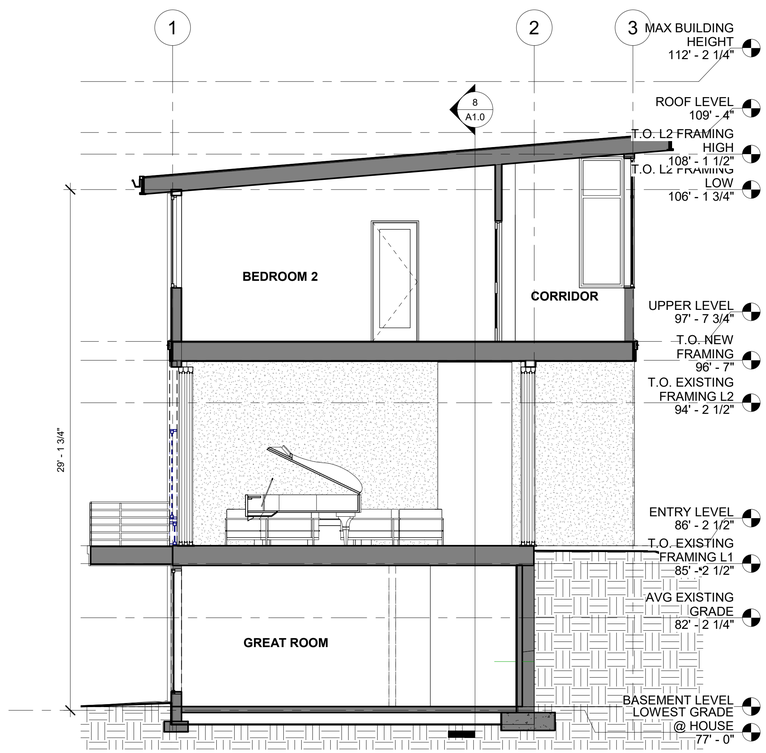
REVISION NO.

FILE NAME:
PLOT DATE:

24"x36" Arch D -SHEET SIZE



1 Section A-A
1/4" = 1'-0"



2 Section B-B
1/4" = 1'-0"

FILE NAME:
PLOT DATE:

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

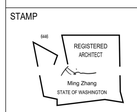
NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

M Z A
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP



DRAWING TITLE
SECTION

DRAWN
Author

DESIGNED
Designer

DATE
07/06/17

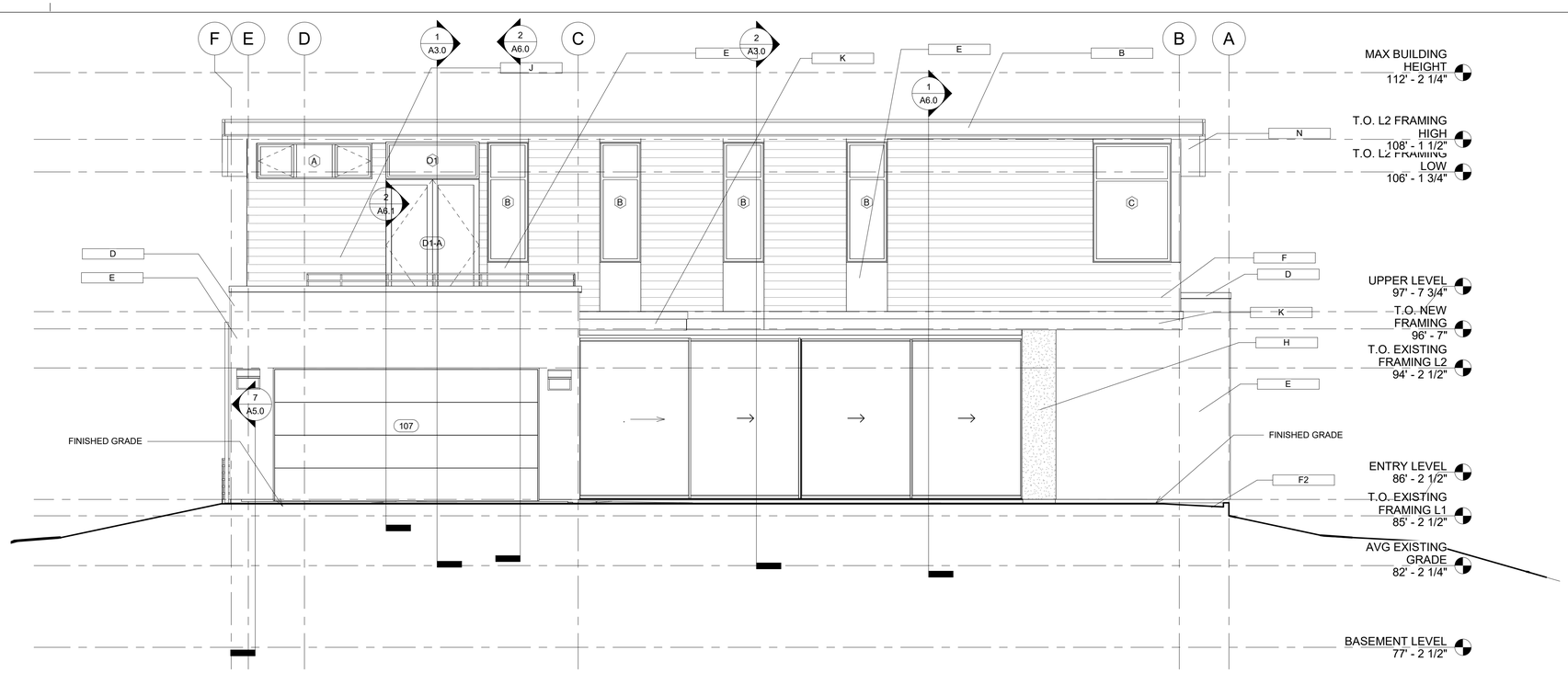
GRAPHIC SCALE
1/4" = 1'-0"

PROJECT NO.
18-009

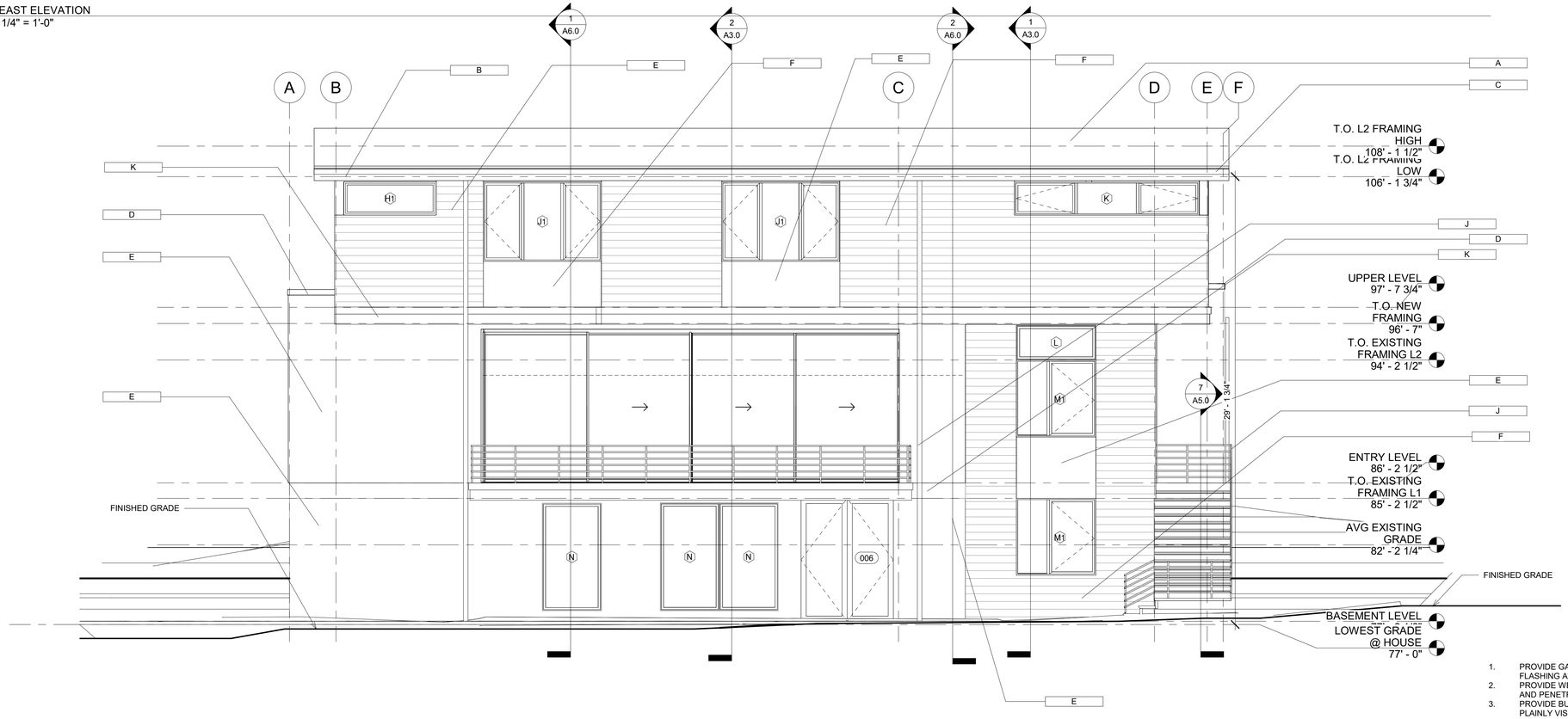
DRAWING NO.
A3.0

REVISION NO.

24"x36" Arch D -SHEET SIZE



1 EAST ELEVATION
1/4" = 1'-0"



2 WEST ELEVATION
1/4" = 1'-0"

KEYNOTES

(A) **ASPHALT SHINGLE ROOFING**
25 YEAR ARCHITECTURAL COMPOSITION ROOFING: *Certainteed, Presidential Solaris 'Weathered Wood'*

(B) **WHITEWOOD FASCIA**
PRE-PRIMED WHITEWOOD 5/4x8 NOMINAL, COLOR: *Benjamin Moore, BM1596 'Nightfall'*

(C) **ALUMINUM GUTTER/DOWNSPOUT**
PRE-FINISHED ALUMINUM GUTTER
COLOR: TO MATCH FASCIA

(D) **METAL COPING OVER WOOD TRIM**
MANUFACTURED METAL COPING O/ 5/4" x 10" NOMINAL WOOD TRIM WITH PAINTED FINISH
COLOR: *Benjamin Moore, BM1596 'Nightfall'*

(E) **FIBER CEMENT PANEL & BATTEN SIDING**
4/4" x 2" HARDI TRIM BATTENS AT 1'-0" O.C. OVER 5/16" SMOOTH FIBER CEMENT PANELS, PAINTED FINISH
COLOR: *Benjamin Moore, BM1497 'Rolling Hills'*

(F) **FIBER CEMENT LAP SIDING (ACCENT COLOR)**
6.00" SELECT CEDARMILL EXPOSURE, ACCENT PAINTED FINISH
COLOR: *Benjamin Moore, BM1498 'Forest Floor'*

(G) **CONCRETE WALL**
CASTINPLACE CONCRETE
COLOR TO MATCH: *Benjamin Moore, BM296 'Almond Bisque'*

(H) **ADHERED MANUFACTURED STONE VENEER**
DRYSTACK STONE VENEER WITH MATCHING WAINSCOT SILL CAP
Eldorado Stone, 'Alderwood'

(J) **METAL RAILING**
PREMADE, METAL RAILING

(K) **HARDI TRIM, 6"**
5/4" x 6", PAINTED FINISH
THROUGH-WALL FLASHING AT TOP EDGE AT ALL HORIZONTAL CONDITIONS
COLOR: *Benjamin Moore, BM1503 'Texas Sage'*

(L) **TIMBER / WOOD ACCENTS**
PAINTED WOOD ACCENTS, ASSEMBLY PER RELATED ARCHITECTURAL DETAILS
COLOR: *Benjamin Moore, BM1085 'Vero Beach Tan'*

1. PROVIDE GALVANIZED SHEET METAL FLASHING AND COUNTER FLASHING AT ALL ROOF PENETRATIONS
2. PROVIDE WEATHER STRIPPING AT ALL DOORS. CAULK ALL JOINTS AND PENETRATIONS IN EXTERIOR WALLS.
3. PROVIDE BUILDING IDENTIFICATION ADDRESS NUMBERS THAT ARE PLAINLY VISIBLE FROM THE STREET OR ROAD COMPLIANT WITH 2015 IRC SECTION R319.1

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

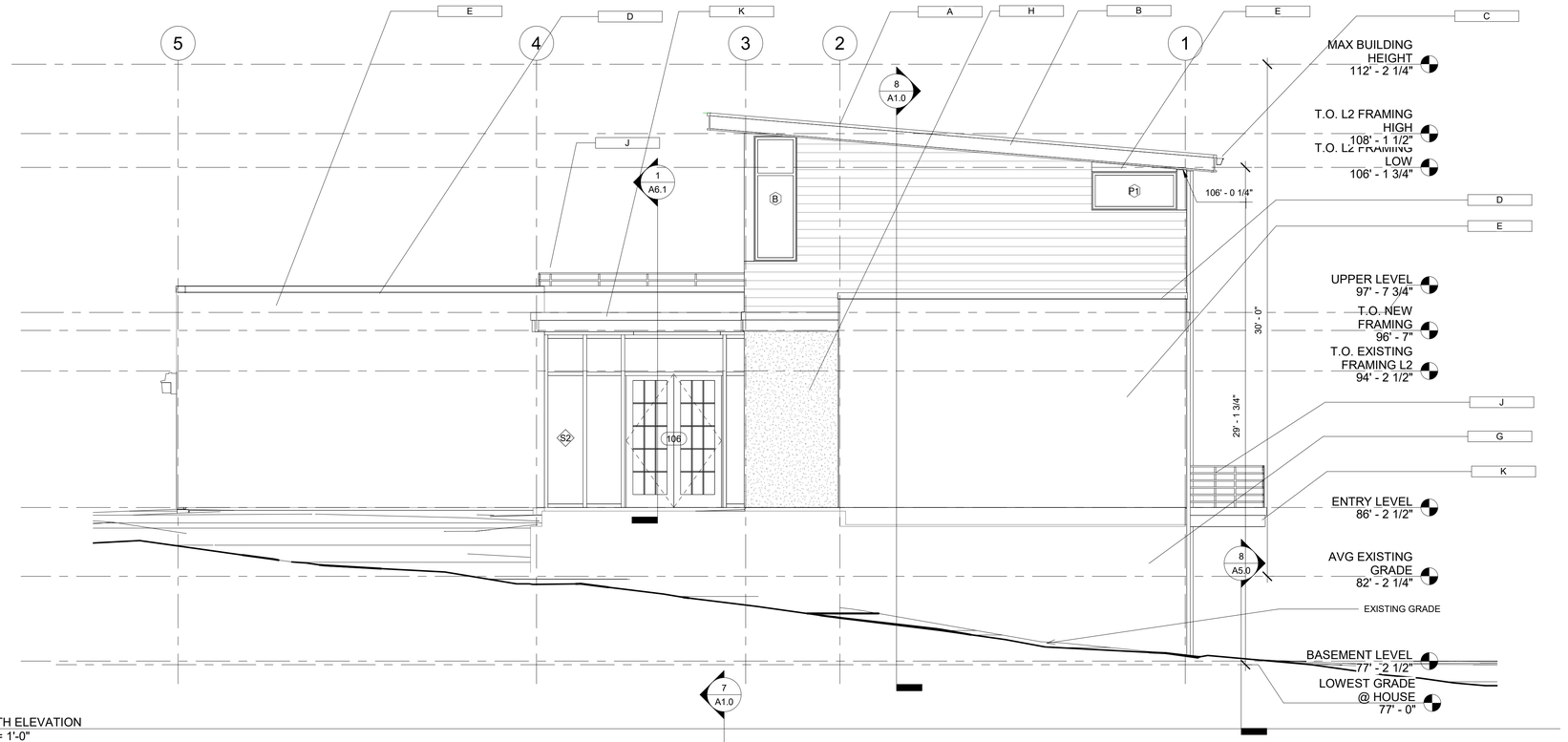
M Z A
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP
REGISTERED ARCHITECT
Ming Zhang
STATE OF WASHINGTON

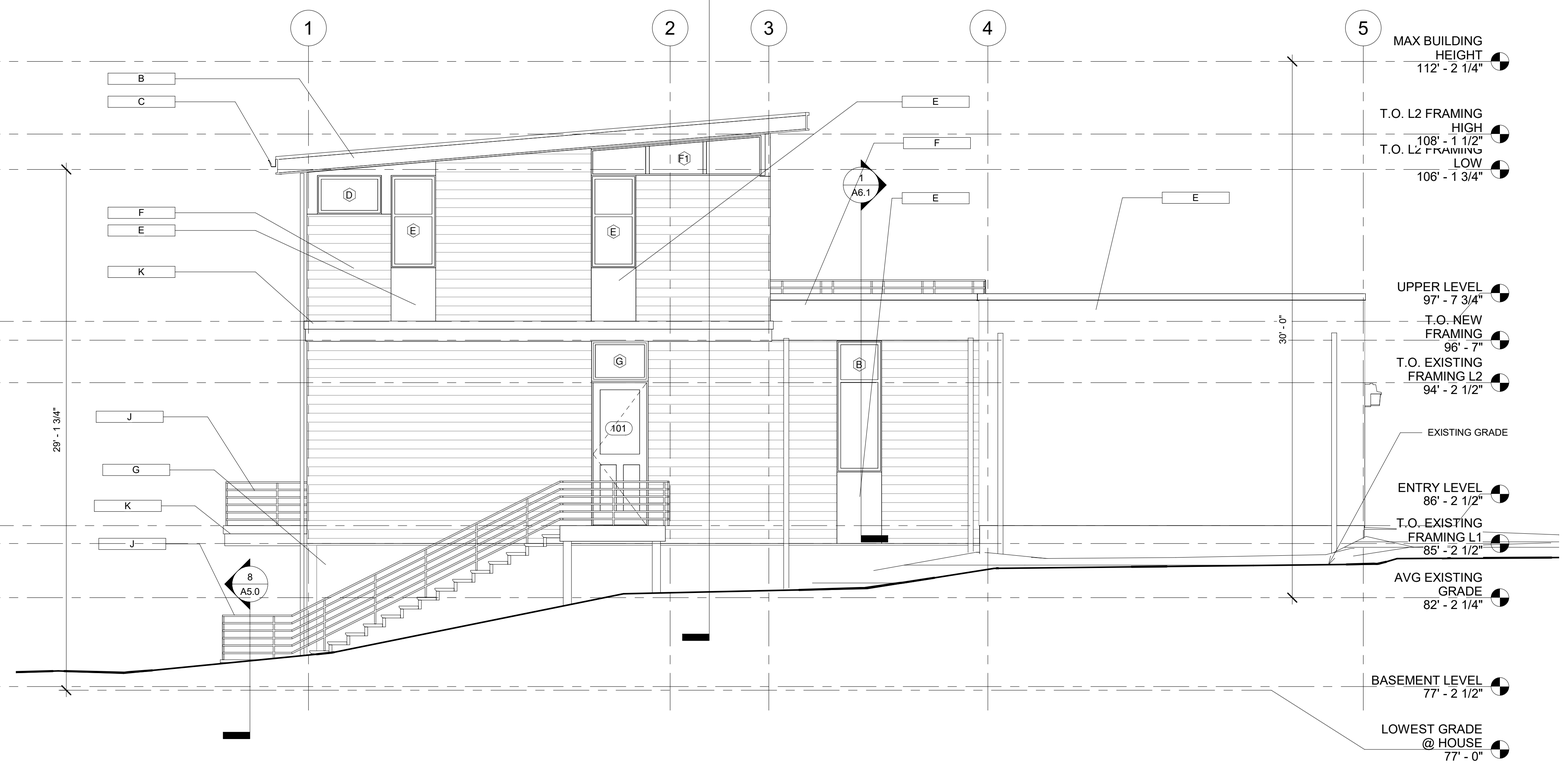
DRAWING TITLE
EAST & WEST ELEVATIONS

DRAWN: Author
DESIGNED: Designer
DATE: 08/02/18
GRAPHIC SCALE: As indicated
PROJECT NO.: 18-009
DRAWING NO.: A4.0
REVISION NO.:

FILE NAME:
PLOT DATE:



1 NORTH ELEVATION
1/4" = 1'-0"



2 SOUTH ELEVATION
1/4" = 1'-0"

KEYNOTES

(A) **ASPHALT SHINGLE ROOFING**
25 YEAR ARCHITECTURAL COMPOSITION
ROOFING: *Certainteed, Presidential Solaris "Weathered Wood"*

(B) **WHITEWOOD FASCIA**
PRE-PRIMED WHITEWOOD 5/4x8 NOMINAL,
COLOR: *Benjamin Moore, BM1596 'Nightfall'*

(C) **ALUMINUM GUTTER/DOWNSPOUT**
PRE-FINISHED ALUMINUM GUTTER
COLOR: TO MATCH FASCIA

(D) **METAL COPING OVER WOOD TRIM**
MANUFACTURED METAL COPING O/ 5/4" x 10" NOMINAL WOOD TRIM WITH PAINTED FINISH
COLOR: *Benjamin Moore, BM1596 'Nightfall'*

(E) **FIBER CEMENT PANEL & BATTEN SIDING**
4/4" x 2" HARDI TRIM BATTENS AT 1'-0" O.C. OVER 5/16" SMOOTH FIBER CEMENT PANELS, PAINTED FINISH
COLOR: *Benjamin Moore, BM1497 'Rolling Hills'*

(F) **FIBER CEMENT LAP SIDING (ACCENT COLOR)**
6.00" SELECT CEDARMILL EXPOSURE, ACCENT PAINTED FINISH
COLOR: *Benjamin Moore, BM1498 'Forest Floor'*

(G) **CONCRETE WALL**
CASTINPLACE CONCRETE
COLOR TO MATCH: *Benjamin Moore, BM296 'Almond Bisque'*

(H) **ADHERED MANUFACTURED STONE VENEER**
DRYSTACK STONE VENEER WITH MATCHING WAINSCOT SILL CAP
Eldorado Stone, 'Alderwood'

(J) **METAL RAILING**
PREMADE, METAL RAILING

(K) **HARDI TRIM, 6"**
5/4" x 6", PAINTED FINISH
THROUGH-WALL FLASHING AT TOP EDGE AT ALL HORIZONTAL CONDITIONS
COLOR: *Benjamin Moore, BM1503 'Texas Sage'*

(L) **TIMBER / WOOD ACCENTS**
PAINTED WOOD ACCENTS, ASSEMBLY PER RELATED ARCHITECTURAL DETAILS
COLOR: *Benjamin Moore, BM1085 'Vero Beach Tan'*

1. PROVIDE GALVANIZED SHEET METAL FLASHING AND COUNTER FLASHING AT ALL ROOF PENETRATIONS
2. PROVIDE WEATHER STRIPPING AT ALL DOORS. CAULK ALL JOINTS AND PENETRATIONS IN EXTERIOR WALLS.
3. PROVIDE BUILDING IDENTIFICATION ADDRESS NUMBERS THAT ARE PLAINLY VISIBLE FROM THE STREET OR ROAD COMPLIANT WITH 2015 IRC SECTION R319.1

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

MZA
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

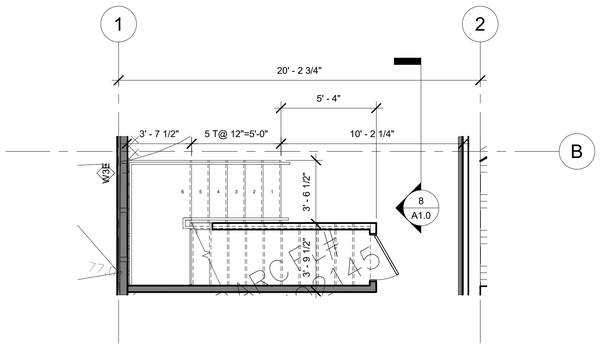
STAMP
REGISTERED ARCHITECT
Ming Zhang
STATE OF WASHINGTON

DRAWING TITLE
NORTH & SOUTH ELEVATIONS

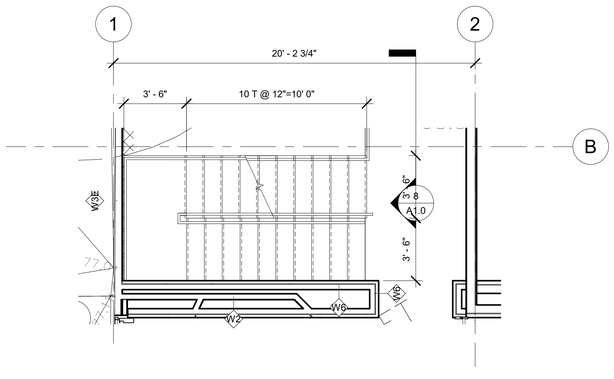
DRAWN Author
DESIGNED Designer
DATE 08/02/18
GRAPHIC SCALE As indicated
PROJECT NO. 18-009
DRAWING NO. A4.1
REVISION NO.

24"x36" Arch D -SHEET SIZE
FILE NAME:
PLOT DATE:

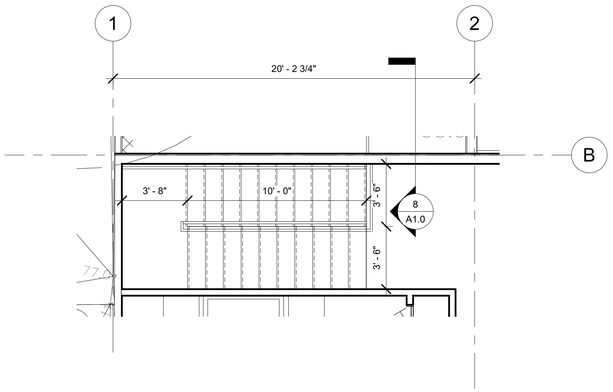
24"x36" Arch D -SHEET SIZE



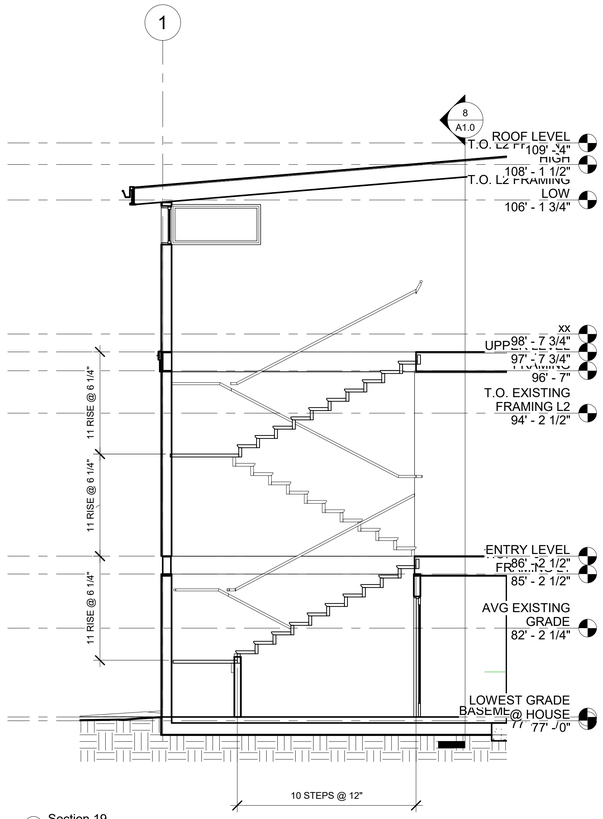
1 BASEMENT LEVEL - STAIR 1
1/4" = 1'-0"



2 ENTRY LEVEL - STAIR 1
1/4" = 1'-0"

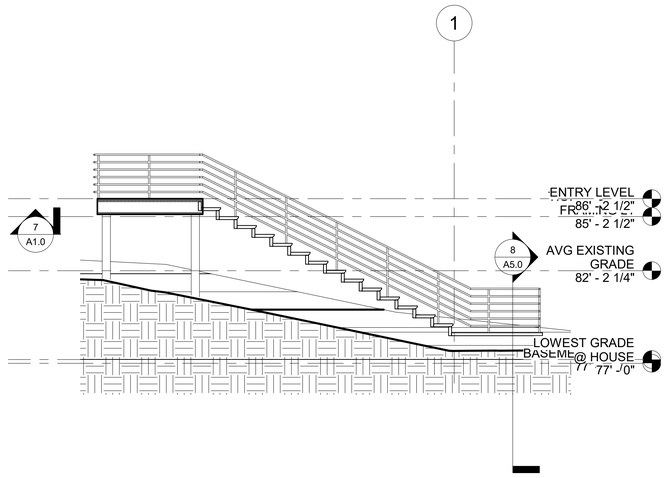


3 UPPER LEVEL - STAIR 1
1/4" = 1'-0"

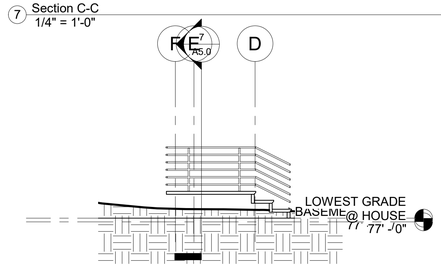


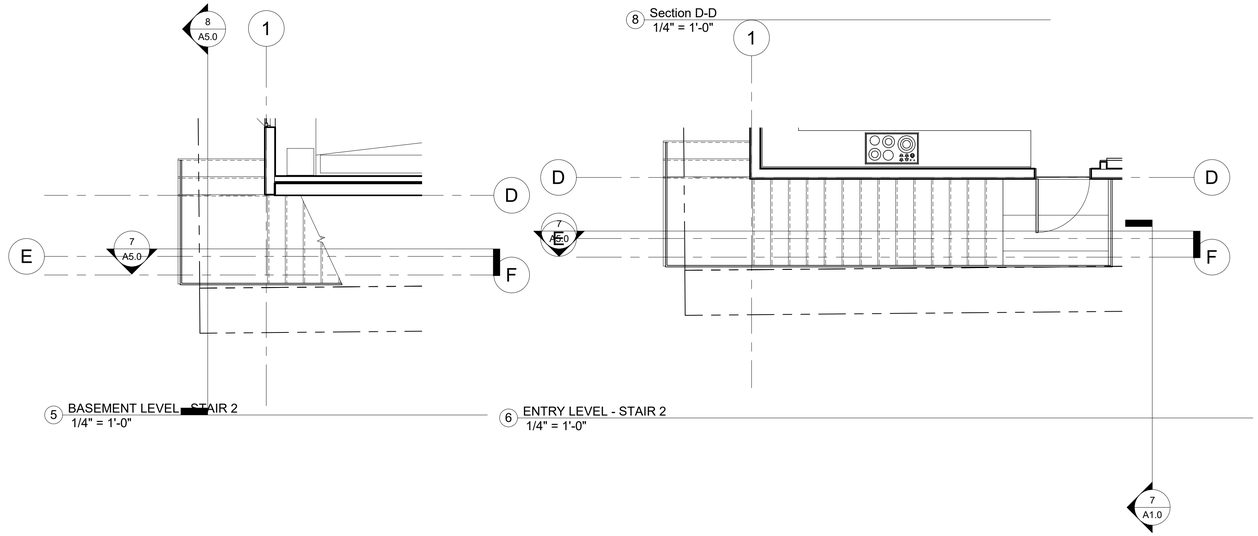
4 Section 19
1/4" = 1'-0"

5 BASEMENT LEVEL - STAIR 2
1/4" = 1'-0"



7 Section C-C
1/4" = 1'-0"





6 ENTRY LEVEL - STAIR 2
1/4" = 1'-0"

FILE NAME:
PLOT:
DATE:

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

Discrepancies must be reported immediately to the Architect before proceeding. Only figured dimensons are
to be used. Contractors must check all dimensions on site. This drawing is protected by copyright.
ALL DIMENSIONS ARE SHOWN IN IMPERIAL.

MZA
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP
REGISTERED ARCHITECT
Ming Zhang
STATE OF WASHINGTON

DRAWING TITLE
VERTICAL CIRCULATION

DRAWN
Author

DESIGNED
Designer

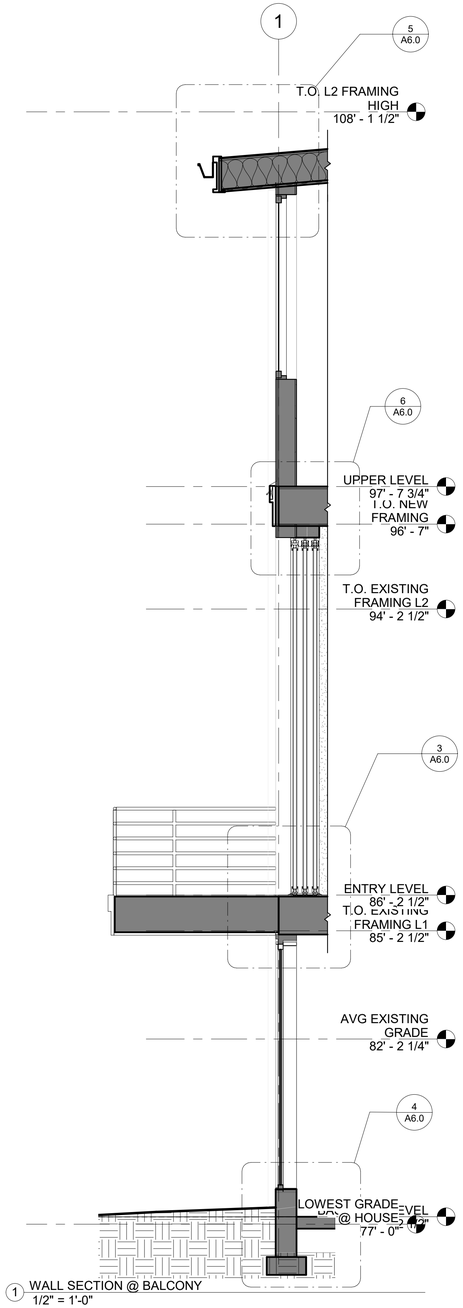
DATE
07/06/17

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

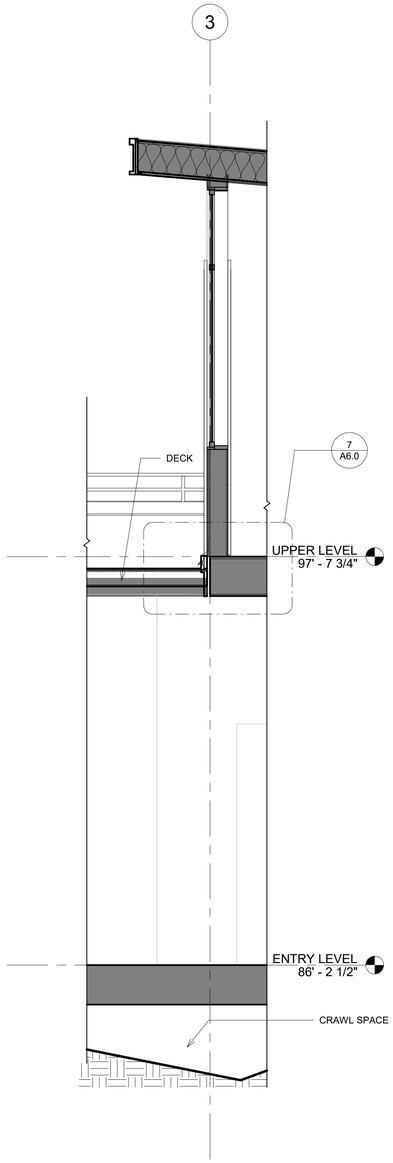
PROJECT NO.
18-009

DRAWING NO.
A5.0

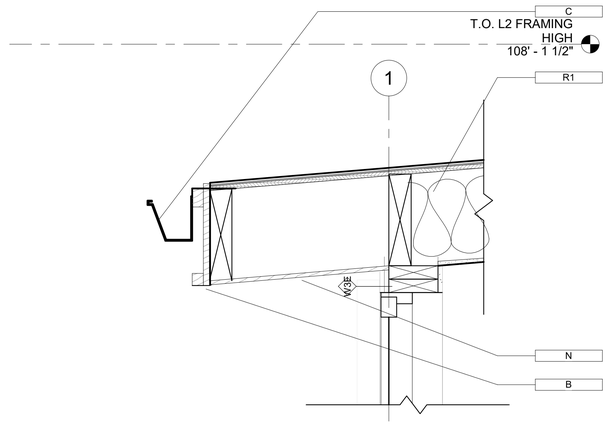
REVISION NO.



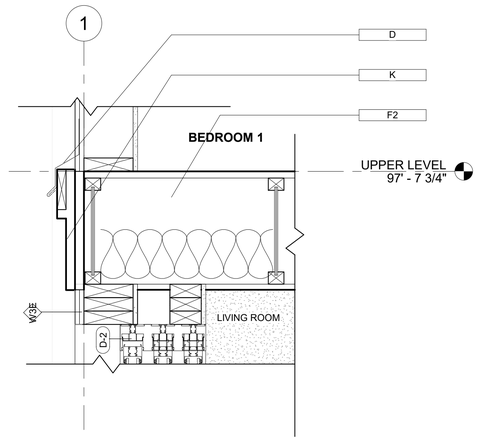
1 WALL SECTION @ BALCONY
1/2" = 1'-0"



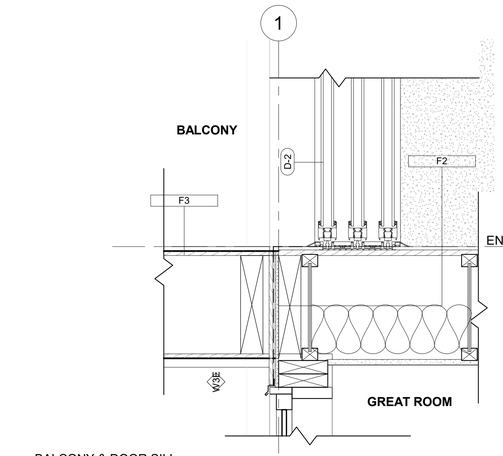
2 WALL SECTION @ DECK
1/2" = 1'-0"



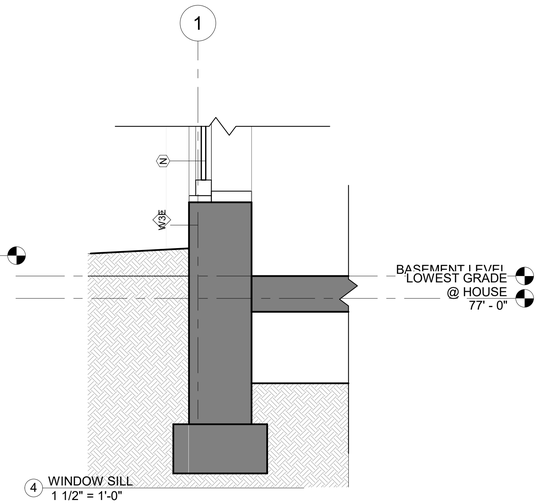
5 ROOF OVERHANG
1 1/2" = 1'-0"



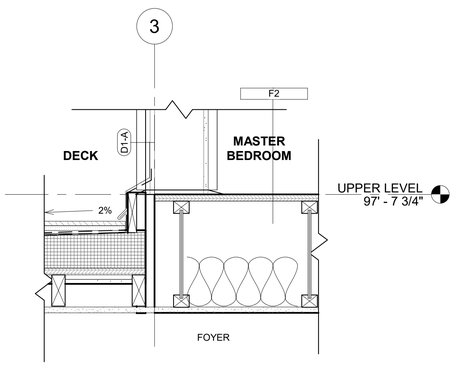
6 DOOR HEAD@ ENTRY LEVEL
1 1/2" = 1'-0"



3 BALCONY & DOOR SILL
1 1/2" = 1'-0"



4 WINDOW SILL
1 1/2" = 1'-0"



7 DOOR SILL @ DECK
1 1/2" = 1'-0"

FILE NAME:
PLOT:
DATE:

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

M Z A
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP
MAE REGISTERED ARCHITECT Ming Zhang STATE OF WASHINGTON

DRAWING TITLE
WALL SECTIONS & DETAILS

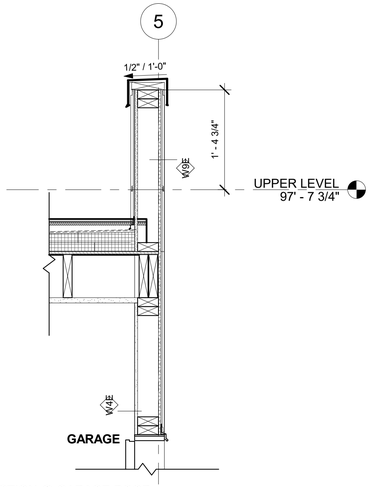
DRAWN	DESIGNED
Author	Designer

DATE
07/06/17

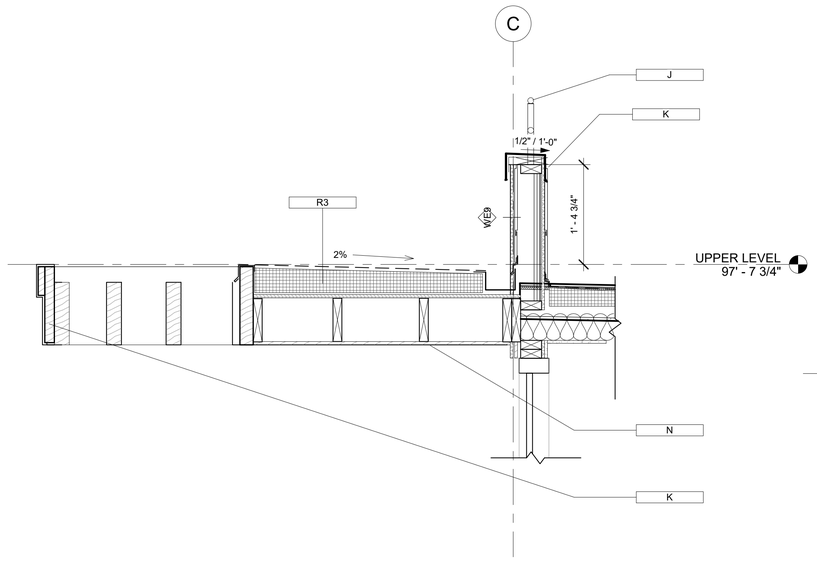
GRAPHIC SCALE
As indicated

PROJECT NO.
18-009

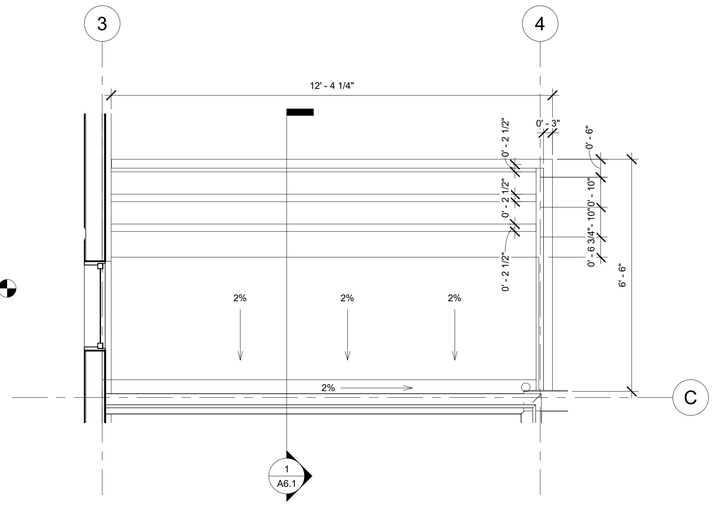
DRAWING NO.	REVISION NO.
A6.0	



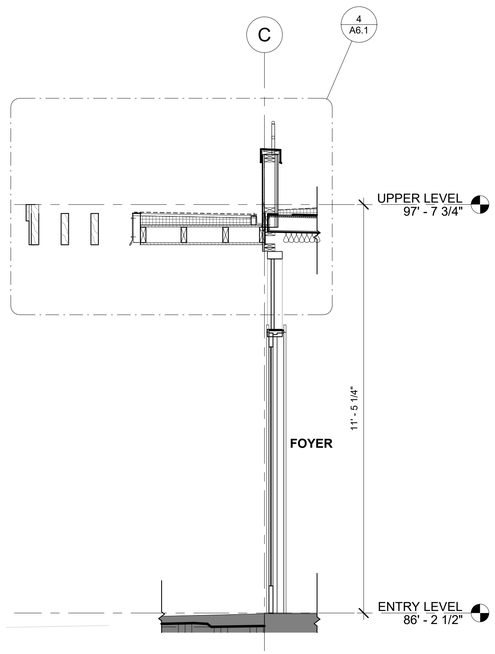
3 WALL SECTION @ GARAGE DOOR - Callout 1
1" = 1'-0"



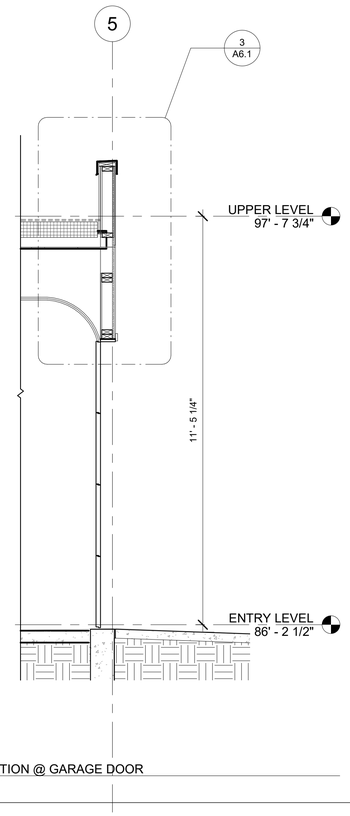
4 ENTRY CNOPY SCETION
1" = 1'-0"



5 ENTRY CANOPY PLAN
1/2" = 1'-0"



1 WALL SECTION @ ENTRY
1/2" = 1'-0"



2 WALL SECTION @ GARAGE DOOR
1/2" = 1'-0"

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

M Z A
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP
REGISTERED ARCHITECT
Ming Zhang
STATE OF WASHINGTON

DRAWING TITLE
WALL SECTIONS & DETAILS

DRAWN
Author

DESIGNED
Designer

DATE
08/16/18

GRAPHIC SCALE
As indicated

PROJECT NO.
18-009

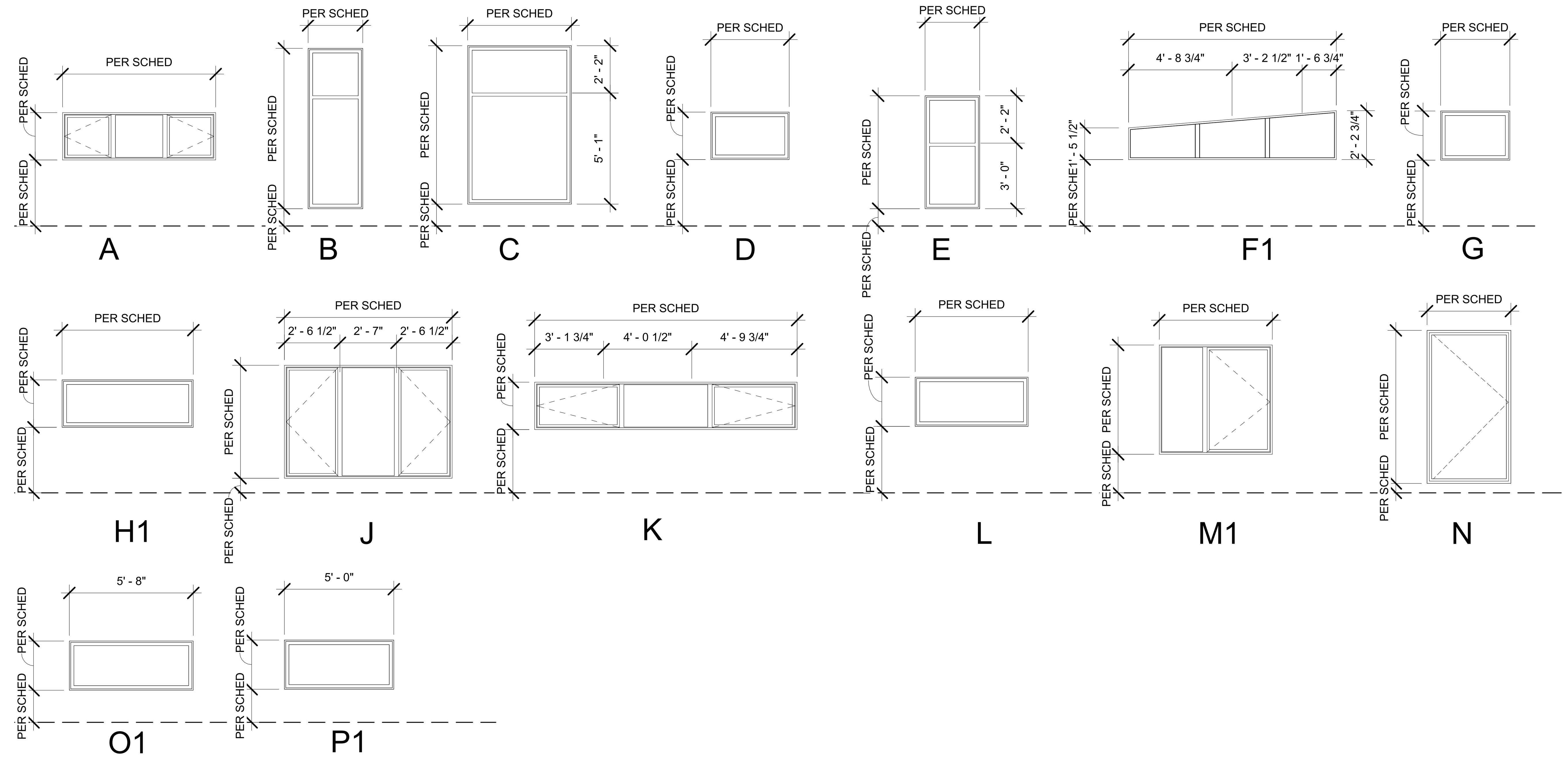
DRAWING NO.
A6.1

REVISION NO.

FILE NAME:
PLOT DATE:

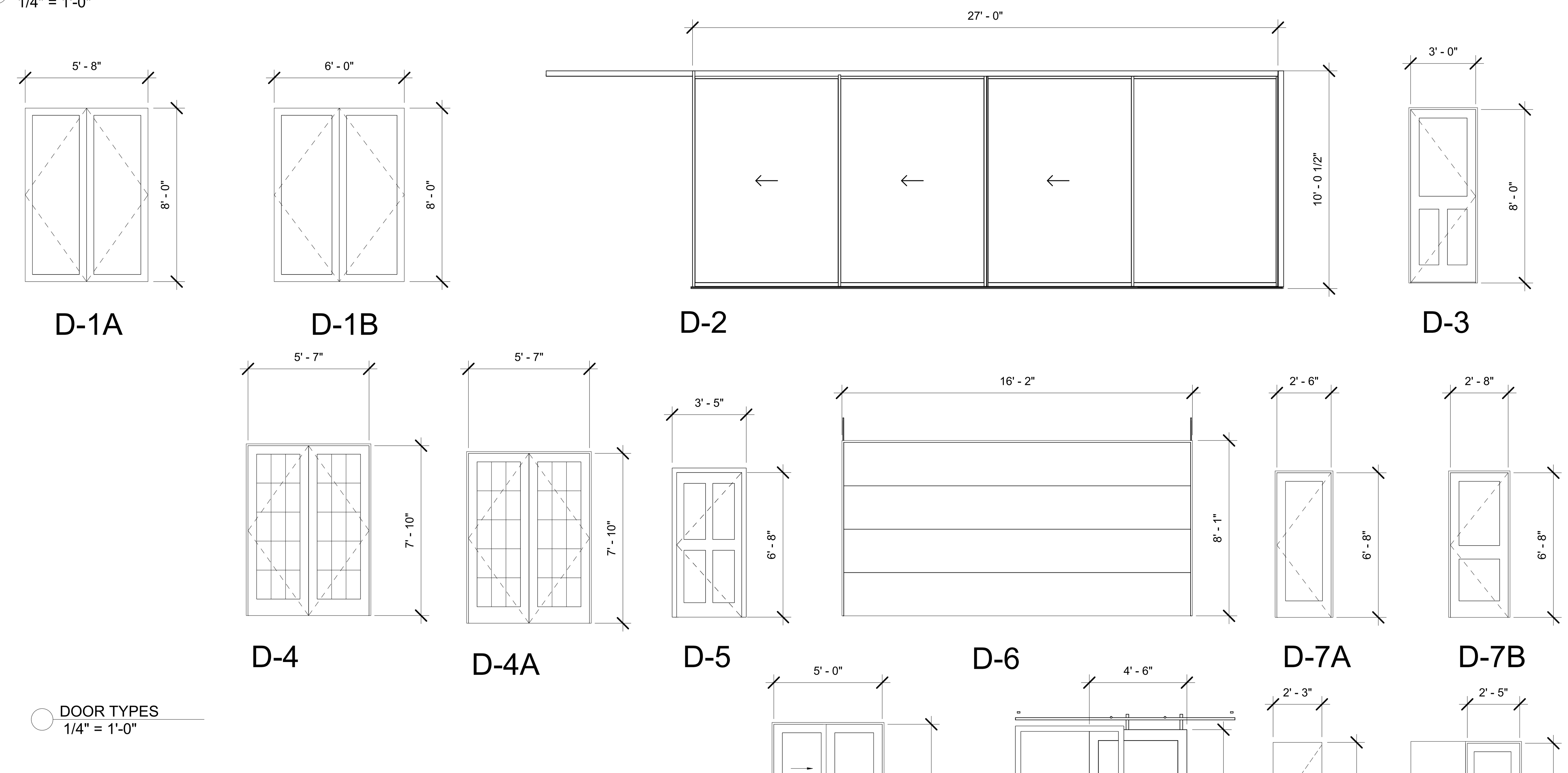
24"x36" Arch D -SHEET SIZE

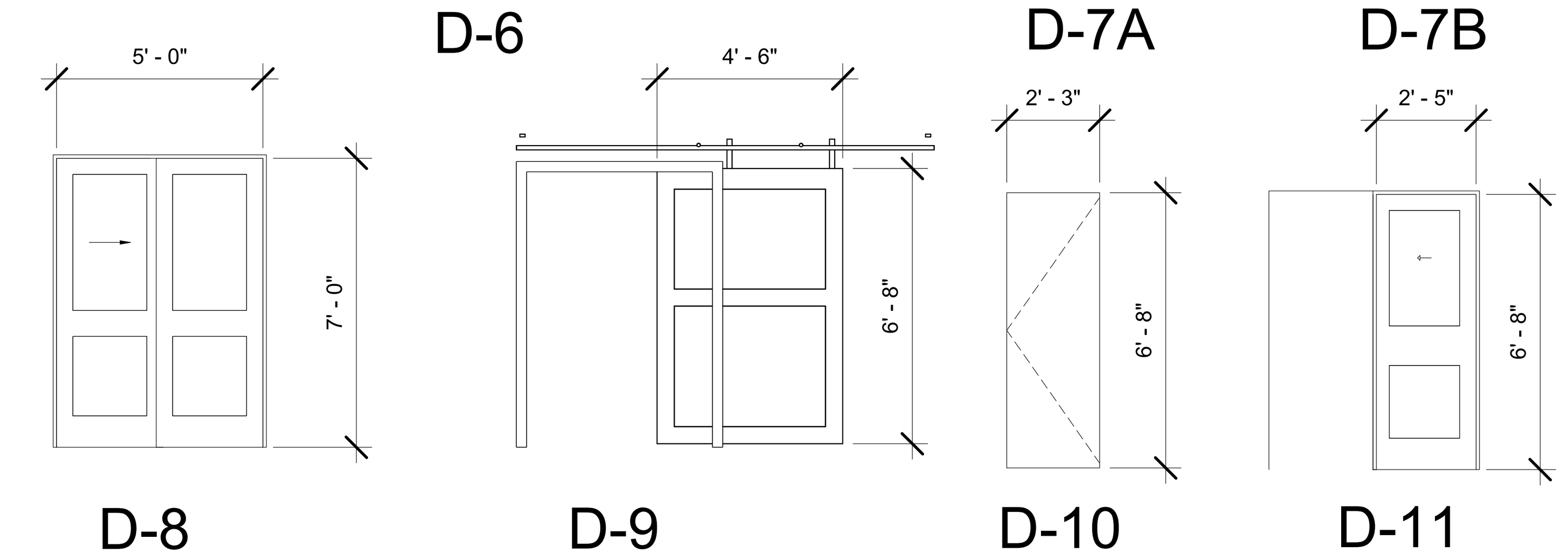
Window Schedule								
Level	Type Mark	MATERIAL	Width	Height	Sill Height	Window Area	U-Factor	UA
BASEMENT LEVEL	M1	VINYL	5' - 2"	5' - 0"	3' - 0"	26 SF	0.3	7.75
BASEMENT LEVEL	N	VINYL	3' - 10"	7' - 0"	0' - 8 1/4"	27 SF	0.3	8.05
BASEMENT LEVEL	N	VINYL	3' - 10"	7' - 0"	0' - 8 1/2"	27 SF	0.3	8.05
BASEMENT LEVEL	N	VINYL	3' - 10"	7' - 0"	0' - 8 1/2"	27 SF	0.3	8.05
ENTRY LEVEL	B	VINYL	2' - 6"	7' - 4"	3' - 0"	18 SF	0.3	5.5
ENTRY LEVEL	G	VINYL	3' - 2"	2' - 3"	8' - 1"	7 SF	0.3	2.1375
ENTRY LEVEL	L	VINYL	5' - 2"	2' - 3"	8' - 0"	12 SF	0.3	3.4875
ENTRY LEVEL	M1	VINYL	5' - 2"	5' - 0"	3' - 0"	26 SF	0.3	7.75
UPPER LEVEL	A	VINYL	7' - 0"	2' - 2"	8' - 1"	15 SF	0.3	4.55
UPPER LEVEL	B	VINYL	2' - 6"	7' - 4"	3' - 0"	18 SF	0.3	5.5
UPPER LEVEL	B	VINYL	2' - 6"	7' - 4"	3' - 0"	18 SF	0.3	5.5
UPPER LEVEL	B	VINYL	2' - 6"	7' - 4"	3' - 0"	18 SF	0.3	5.5
UPPER LEVEL	B	VINYL	2' - 6"	7' - 4"	3' - 0"	18 SF	0.3	5.5
UPPER LEVEL	B	VINYL	2' - 6"	7' - 4"	3' - 0"	18 SF	0.3	5.5
UPPER LEVEL	C	VINYL	4' - 9"	7' - 3"	3' - 0"	34 SF	0.3	10.33125
UPPER LEVEL	D	VINYL	3' - 7"	2' - 2"	6' - 0"	8 SF	0.3	2.329167
UPPER LEVEL	E	VINYL	2' - 6"	5' - 2"	3' - 0"	13 SF	0.3	3.875
UPPER LEVEL	E	VINYL	2' - 6"	5' - 2"	3' - 0"	13 SF	0.3	3.875
UPPER LEVEL	F1	VINYL	9' - 6"	2' - 2"	8' - 2"	21 SF	0.3	6.175
UPPER LEVEL	H1	VINYL	6' - 0"	2' - 2"	6' - 0"	13 SF	0.3	3.9
UPPER LEVEL	J1	VINYL	7' - 8"	5' - 2"	3' - 0"	40 SF	0.3	11.883333
UPPER LEVEL	J1	VINYL	7' - 8"	5' - 2"	3' - 0"	40 SF	0.3	11.883333
UPPER LEVEL	K	VINYL	12' - 0"	2' - 2"	6' - 0"	26 SF	0.3	7.8
UPPER LEVEL	O1	VINYL	5' - 8"	2' - 3"	8' - 1"	13 SF	0.3	3.825
UPPER LEVEL	P1	VINYL	5' - 0"	2' - 3"	6' - 0"	11 SF	0.3	3.375
						507 SF		152.077083



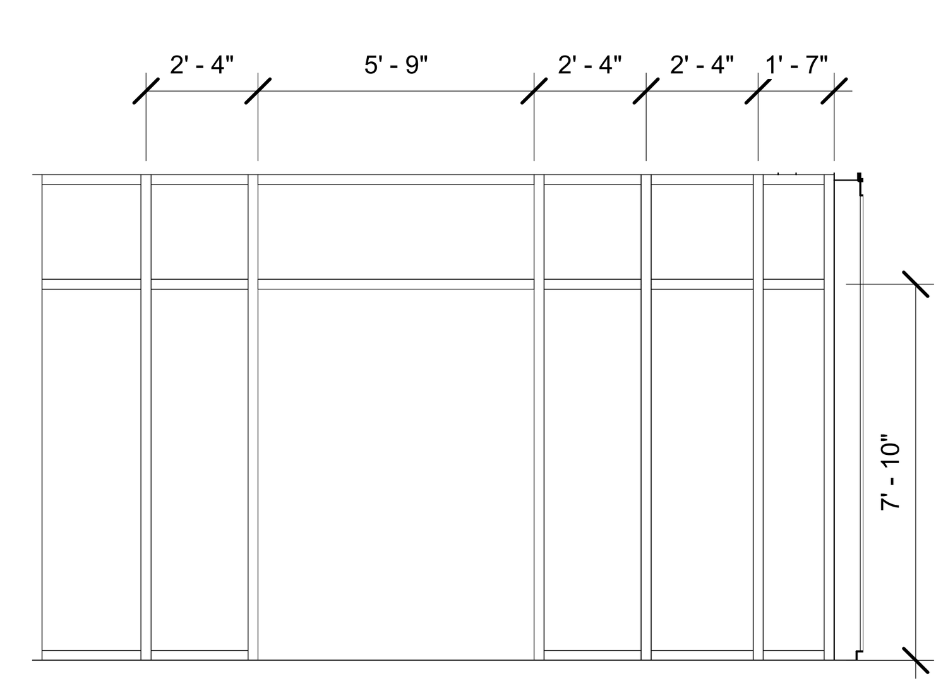
WINDOW TYPES
1/4" = 1'-0"

Door Schedule												
Level	Mark	Type Mark	Height	Width	Door Material	Door Finish	Frame Material	Frame Finish	Fire Rating	Door Area	U-Value	UA
BASEMENT LEVEL	006	D-1B	8' - 0"	6' - 0"					NR	48	0.5	24
BASEMENT LEVEL	005	D-7A	6' - 8"	2' - 6"					NR	16.67		
BASEMENT LEVEL	001	D-7A	6' - 8"	2' - 6"					NR	16.67		
BASEMENT LEVEL	003	D-7A	6' - 8"	2' - 6"					NR	16.67		
BASEMENT LEVEL	002	D-7B	6' - 8"	2' - 8"					NR	17.78		
BASEMENT LEVEL	004	D-11	6' - 8"	2' - 6"					NR	16.67		
ENTRY LEVEL	109	D-2	10' - 0"	20' - 6 1/4"					NR	205.29	0.5	102.64
ENTRY LEVEL	D-2	D-2	10' - 0"	20' - 6 1/4"					NR	205.29	0.5	102.64
ENTRY LEVEL	101	D-3	8' - 0"	3' - 0"					NR	24		
ENTRY LEVEL	106	D-4	7' - 10"	5' - 7"					NR	43.74		
ENTRY LEVEL	105	D-5	6' - 8"	3' - 0"	Finishes - Paint - White	Door - Panel	Finishes - Paint - White		20 MIN.	20		
ENTRY LEVEL	107	D-6	8' - 0"	16' - 0"					NR	128		
ENTRY LEVEL	102	D-7A	6' - 8"	2' - 6"					NR	16.67		
ENTRY LEVEL	103	D-7A	6' - 8"	2' - 6"					NR	16.67		
ENTRY LEVEL	104	D-7A	6' - 8"	2' - 6"					NR	16.67		
UPPER LEVEL	D1-A	D-1A	8' - 0"	5' - 8"					NR	45.33	0.5	22.67
UPPER LEVEL	203	D-4A	6' - 8"	4' - 10"					NR	32.22		
UPPER LEVEL	208	D-7A	6' - 8"	2' - 6"					NR	16.67		
UPPER LEVEL	207	D-7A	6' - 8"	2' - 6"					NR	16.67		
UPPER LEVEL	201	D-7A	6' - 8"	2' - 6"					NR	16.67		
UPPER LEVEL	202	D-7A	6' - 8"	2' - 6"					NR	16.67		
UPPER LEVEL	210	D-7B	6' - 8"	2' - 8"					NR	17.78		
UPPER LEVEL	204	D-7B	6' - 8"	2' - 8"					NR	17.78		
UPPER LEVEL	209	D-8	7' - 0"	5' - 0"					NR	35		
UPPER LEVEL	205	D-8	7' - 0"	5' - 0"					NR	35		
UPPER LEVEL	206	D-8	7' - 0"	5' - 0"					NR	35		
UPPER LEVEL	212	D-9	6' - 8"	4' - 6"					NR	30		
UPPER LEVEL	213	D-10	9' - 9"	2' - 3"					NR	21.96		
												251.95

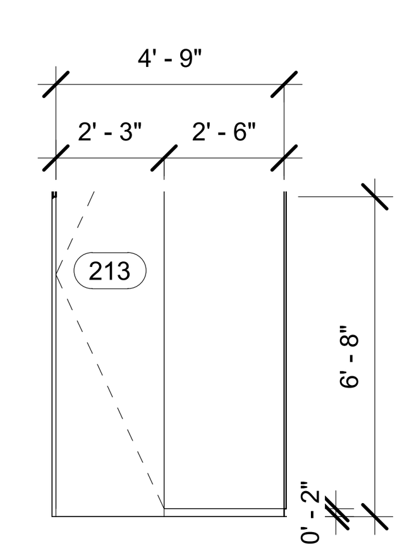




DOOR TYPES
1/4" = 1'-0"



2 S2 GLASS WALL ELEVATION
1/4" = 1'-0"



3 S1 GLASS WALL ELEVATION
1/4" = 1'-0"

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

Discrepancies must be reported immediately to the Architect before proceeding. Only figured dimensions are
to be used. Contractors must check all dimensions on site. This drawing is protected by copyright.
ALL DIMENSIONS ARE SHOWN IN IMPERIAL.

MZA
ARCHITECTURE

600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP

REGISTERED ARCHITECT
Ming Zhang
STATE OF WASHINGTON

DRAWING TITLE
WINDOW & DOOD TYPE AND SCHEDULE

DRAWN
Author

DESIGNED
Designer

DATE
07/06/17

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

PROJECT NO.
18-009

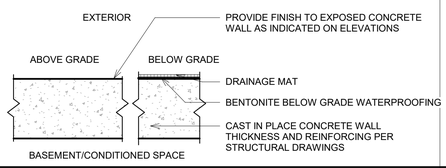
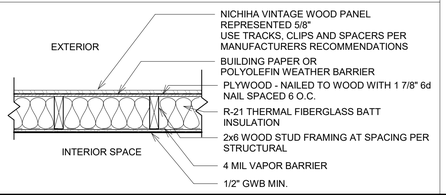
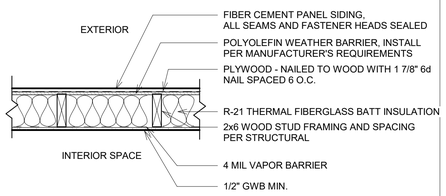
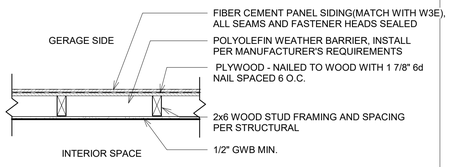
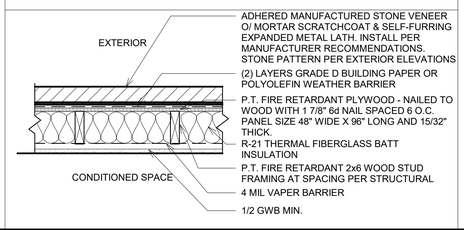
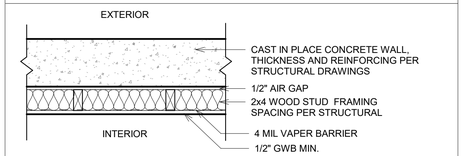
DRAWING NO.
A7.0

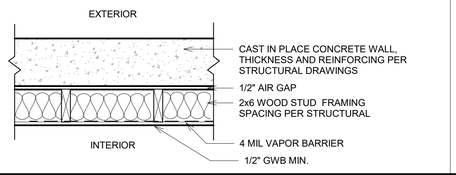
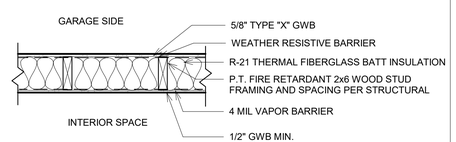
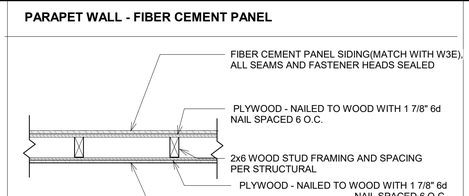
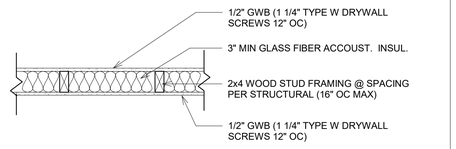
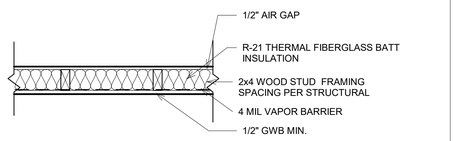
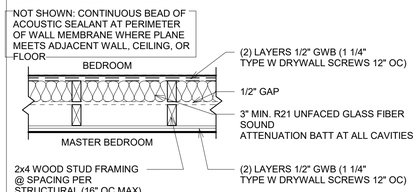
REVISION NO.

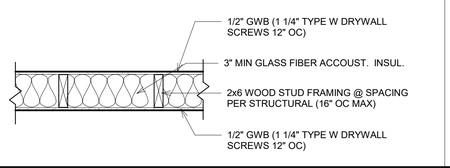
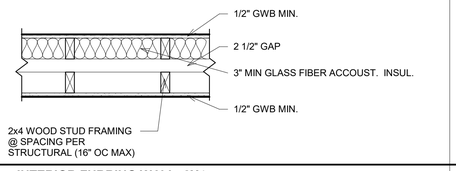
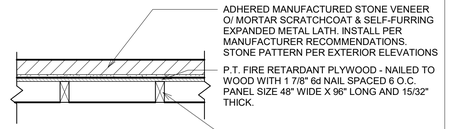
FILE NAME:
PLOT DATE:

24"x36" Arch D -SHEET SIZE

SEE EXTERIOR ELEVATIONS FOR LOCATIONS OF INTENDED CLADDING MATERIALS

MARK	WALL ASSEMBLY COMPONENTS	FIRE RATING	SOUND RATING
W1E	**EXTERIOR WALL - CAST IN PLACE CONCRETE WALL** 		
W2E	**EXTERIOR WALL - NICHIHA VINTAGE WOOD** 		
W3E	**EXTERIOR WALL - FIBER CEMENT PANEL** 		
W4E	**EXTERIOR WALL - FIBER CEMENT PANEL** 		
W5E	**EXTERIOR WALL - STONE VENEER** 		
W6E	**INSULATED CONCRETE WALLS** 		

MARK	WALL ASSEMBLY COMPONENTS	FIRE RATING	SOUND RATING
W7E	**INSULATED CONCRETE WALLS** 		
W8E	**EXTERIOR WALL - GARAGE INTERIOR WALL-2X6** 		
W9E	**PARAPET WALL - FIBER CEMENT PANEL** 		
W1	**INTERIOR WALL - TYPICAL - 2x4** 		
W2	**INTERIOR FURRING WALL - TYPICAL - 2x4** 		
W3	**INTERIOR UNIT PARTY WALL -DBL STUD-2X4** 		

MARK	WALL ASSEMBLY COMPONENTS	FIRE RATING	SOUND RATING
W4	**INTERIOR WALL - TYPICAL - 2x6** 		
W5	**INTERIOR WALL - DBL STUD-2X4** 		
W6	**INTERIOR FURRING WALL -2X4** 		

NOTES:

1.ALL INSULATION SHALL HAVE MAXIMUM FLAME SPREAD INDEX OF 25 AND MAXIMUM SMOKE DEVELOPED INDEX OF 450 IN ACCORDANCE WITH IBC 719.2.

2.PROVIDE NON-PAPER FACED, MOLD & MILDREW RESISTANT GYPSUM WALL BOARD AT ALL MOISTURE AND DAMPNESS PRONE AREAS.

3. PROVIDE TILE BACKER BOARD/(NOT GREENBOARD)/ AT ALL TILE CONDITIONS.

4. REFER TO STRUCTURAL PLANS FOR STUD SIZE AND SPACING.

5. FIRE RATING AND SOUND TRANSMISSION COEFFICIENTS ARE BASED UPON THE ASSEMBLIES SHOWN WITHOUT INSULATION, UNLESS NOTED OTHERWISE.

6. REFER TO WALL DETAILS FOR TERMINATIONS, CONNECTIONS, PENETRATIONS AND INTERSECTIONS.

7. ACOUSTIC SEALANT SHALL CONFORM TO ASTM C919-02.

8. SEPARATE BACK TO BACK ELECTRICAL OR OTHER UTILITY BOXES BY AT LEAST ONE STUD BAY IN SINGLE STUD WALLS ANT TWO STUD BAYS IN STAGGERED STUD OR DOUBLE STUD WALL ASSEMBLIES.

9. SEAL ALL DUCT, CONDUIT OR PIPING PENETRATIONS THROUGH ACOUSTICALLY RATED CONSTRUCTION TO PREVENT DIRECT CONTACT USING RESILIENT NON-HARDENING CAULK. USE FIRE-RATED ACOUSTICAL CAULK IN FIRE-RATED CONSTRUCTION.

10. REFER TO PLUMBING DRAWINGS AND SPECIFICATIONS FOR VIBRATION INSOLATION REQUIREMENTS IN AREAS WHERE PLUMBING RUNS IN PROXIMITY TO NOISE-SENSITIVE SPACES.

11. STAGGER ALL JOINTS WHENEVER TWO OR MORE LAYERS OF GWB ARE SCHEDULED.

12. SECURE BATT INSULATION TO THE STRUCTURE AS REQUIRED TO PREVENT SAGGING OR DISPLACEMENT.
13. CONFORM STRICTLY TO TESTING AGENCY ASSEMBLY DESIGNATION REQUIREMENTS NOTED FOR ALL RATED WALL TYPES.

14. ALL GYPSUM BOARD PARTITIONS SHALL BE TAPED, SPACKLED AND SANDED SMOOTH WITH NO VISIBLE JOINTS. PATCH AND REPAIR SURFACES TO MATCH ADJACENT OR ADJOINING SURFACES WHERE REQUIRED. ALL SURFACES SHALL BE ALIGNED.

15. PROVIDE SOLID WOOD BLOCKING (OR) 18 GA. BACKING/BLOCKING BEHIND ALL FIXTURES AND ACCESSORIES - TYPICAL, U.O.N.

16. REFER TO SHEET XX-XX FOR WEATHER RESISTANT BARRIER SPECIFICATION AND REQUIREMENTS.

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

MZA
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP


DRAWING TITLE
WALL TYPES

DRAWN
Author

DESIGNED
Designer

DATE
08/15/18

GRAPHIC SCALE
1" = 1'-0"

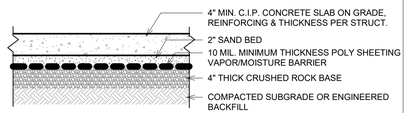
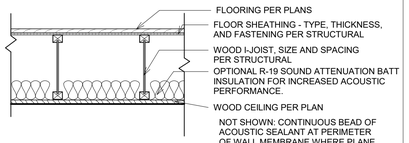
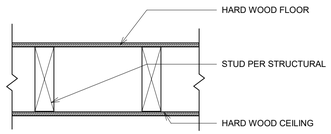
PROJECT NO.
18-009

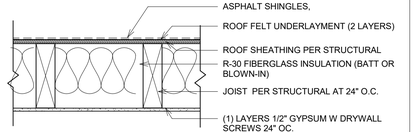
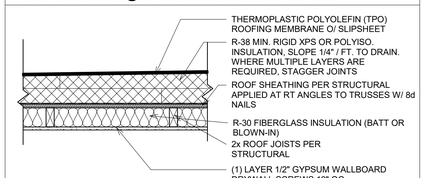
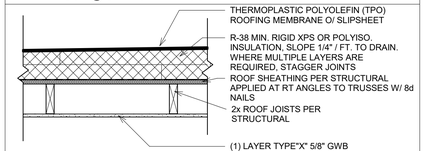
DRAWING NO.
A7.1

REVISION NO.

FILE NAME:
PLOT DATE:

24"X36" Arch D -SHEET SIZE

MARK	FLOOR/CEILING ASSEMBLY COMPONENTS	FIRE RATING	SOUND RATING
F1	**SLAB ON GRADE-BASEMENT AND GARAGE FLOOR**  **NOTE:** VERIFY SLAB & SUBGRADE DESIGN WITH STRUCTURAL & GEOTECHNICAL RECOMMENDATIONS PRIOR TO INSTALLATION		
F2	**TYPICAL FLOOR - ENTRY AND UPPER FLOOR**  NOT SHOWN: CONTINUOUS BEAD OF ACOUSTIC SEALANT AT PERIMETER OF WALL MEMBRANE WHERE PLANE MEETS ADJACENT WALLS		
F3	**TYPICAL FLOOR - ENTRY AND UPPER FLOOR**  		

MARK	ROOF/CEILING ASSEMBLY COMPONENTS	FIRE RATING	SOUND RATING
R1	**TYPICAL ROOF**  **NOTE: Joints shall have L-rating measured at .30" of water in both ambient temperature and elevated temperature tests, and shall not exceed 1 & 2 per IBC714.5**		
R2	**FLAT ROOF/DECK @ UPPER LEVEL- 2x WOOD RAFTERS**  		
R3	**FLAT ROOF @ GARAGE- 2x WOOD RAFTERS**  		

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

Discrepancies must be reported immediately to the Architect before proceeding. Only figured dimensons are
to be used. Contractors must check all dimensions on site. This drawing is protected by copyright.
ALL DIMENSIONS ARE SHOWN IN IMPERIAL.

M Z A
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP
REGISTERED ARCHITECT
Ming Zhang
STATE OF WASHINGTON

DRAWING TITLE
FLOOR & ROOF/CEILING TYPES

DRAWN Author
DESIGNED Designer

DATE 08/15/18

GRAPHIC
SCALE 1" = 1'-0"

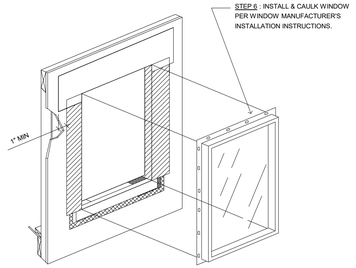
PROJECT NO. 18-009

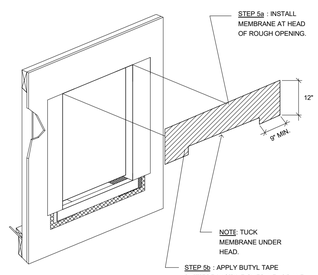
DRAWING NO. A7.2
REVISION NO.

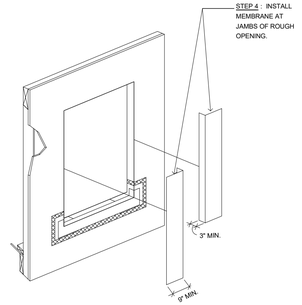
FILE NAME:
PLOT DATE:

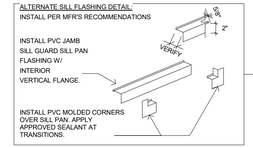
24"x36" Arch D -SHEET SIZE

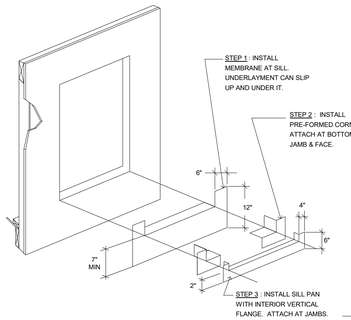
NOTES :
1. PLACE WINDOW ON 1/8" SHIMS TO PROVIDE DRAINAGE GAP BETWEEN WINDOW FRAME AND SILL PAN.
2. ATTACH WINDOW PER MANUFACTURES RECOMMENDATIONS AT SILL AND JAMBS.
3. APPLY APPROVED SEALANT BEHIND NAIL FLANGES AT HEAD AND JAMBS.

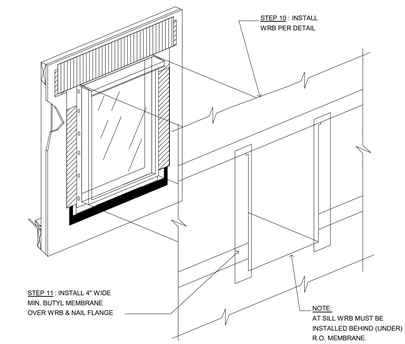


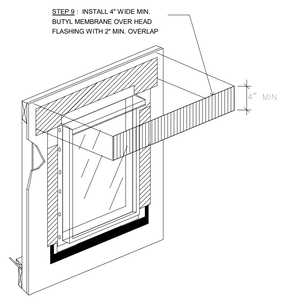


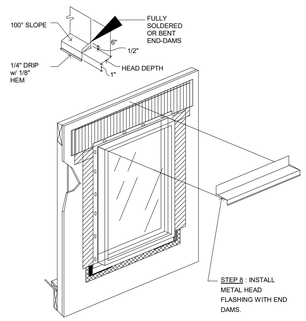


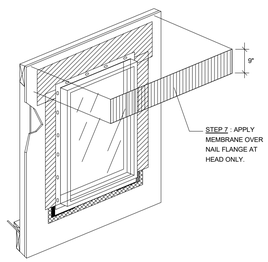






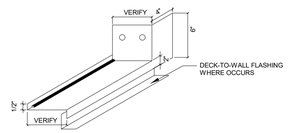




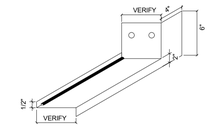


SILL PAN NOTES:
1. ALL PANS AT MASONRY TO BE STAINLESS STEEL OR 24 GA GALV. PRE-FINISHED.
2. RESIDENTIAL WINDOW WALL SYSTEMS TO HAVE ALUMINUM PANS & FLASHINGS PER DETAILS TO MATCH WINDOW FRAME COLORS.
3. SEAL OR SOLDER JOINTS AT END- & BACK DAMS TO FORM A WATERTIGHT PAN ASSEMBLY. SEAL BACK TO END DAM TRANSITIONS.
4. COORDINATE BACK DAM HEIGHT WITH THRESHOLD AND/OR INTERIOR FINISHES PER ARCH. PLANS.
5. PROVIDE HEMMED EDGE AT ALL EXPOSED EDGES.

WRAP & WRB NOTE:
1. FASTEN WINDOW/DOOR WRAP & WRB PER WP DETAILS PROVIDED HEREIN WITH STAINLESS STEEL STAPLES w/ 7/16" CROWNS.
2. WHERE STEEL STUD FRAMING OCCURS, USE APPROVED ADHESIVE TO PROPERLY ATTACH WINDOW/DOOR WRAP THERETO.
3. WHERE CONCRETE SURFACES OCCUR, USE VAPROSHIELD S.A.M. MEMBRANE FOR WINDOW/DOOR WRAPS AND WRB.
4. WRAP PENETRATION WRAP INSIDE R.O. AND TAPE TO MAINTAIN AIR-BARRIER SYSTEM.

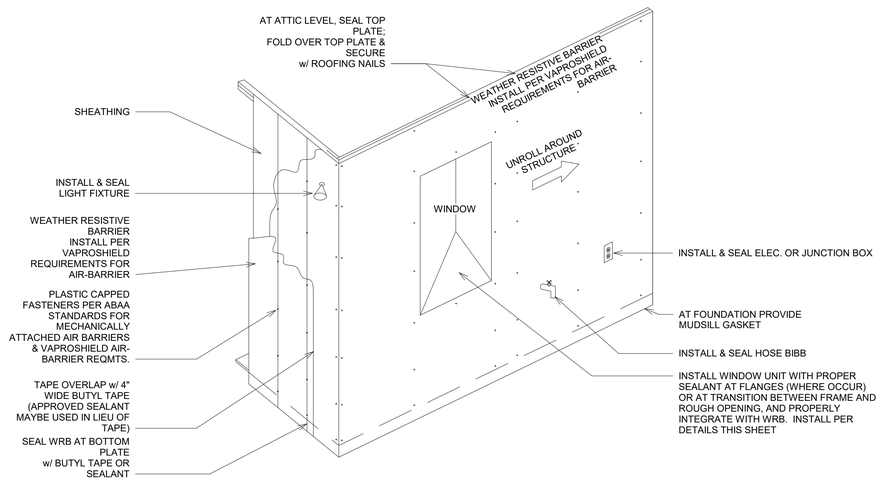


B SILL PAN AT SLIDING GLASS DOOR



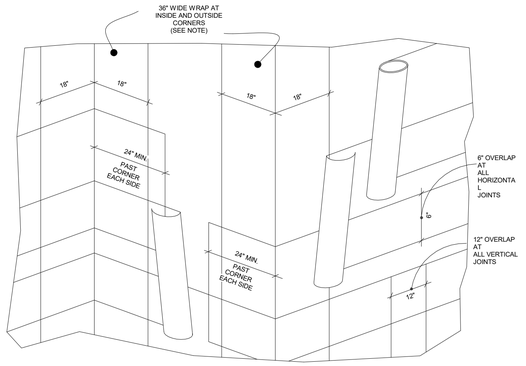
A SILL PAN AT WINDOW

PERMIT- WINDOW-WRAP
1" = 1'-0"



PERMIT-EXT-AIR-BARRIER-SYST
1 1/2" = 1'-0"

WRB NOTES:
1. INSIDE & OUTSIDE CORNER WRAP: APPLY ONE LAYER OF 36" WIDE BREATHABLE MEMBRANE FROM THE SAME MANUFACTURER AS THE WRB PER NOTES PRIOR TO INSTALLATION OF FIELD WRB.
2. INSTALL WEATHER RESISTIVE BARRIER PER NOTES IN WEATHERBOARD FASHION STARTING FROM THE BOTTOM OF THE WALL. ENSURE THAT THE EDGES OF THE LAYERS OF WRB ARE STAGGERED AT LEAST 6".
3. TAPE ALL JOINTS OF WRB WITH 3" WIDE BUTYL TAPE AS APPROVED TO CREATE A COMPLETE AIR-BARRIER SYSTEM.
4. WHERE CONCRETE SURFACES OCCUR, INSTALL VAPROSHIELD S.A.M. THROUGHOUT.



PERMIT-WRB
Scale: 1 1/2" = 1'-0"

NOTES

1. BUILDING ENVELOPE/WRB BASIS OF DESIGN:
A. "WRB": VAPRO-SHIELD 'REVEAL-SHIELD SA' SELF-ADHERED MEMBRANE INCLUDING APPROPRIATE ACCESSORIES
B. SILL FLASHING: AS APPROVED BY WRB MANUFACTURER INCLUDING APPROPRIATE ACCESSORIES
C. MUDSILL GASKET: EPDM STRUCTURAL GASKET BY CONSERVATION TECHNOLOGIES
D. LIQUID FLASHING: VAPRO-SHIELD 'VAPROLIQUI-FLASH'
E. HEAD FLASHING BED: AS APPROVED BY WRB MANUFACTURER AND PER NOTE 13 BELOW
F. FASTENERS & SEAMS: AS APPROVED BY WRB MANUFACTURER AND PER NOTE 13 BELOW
G. SEALANT: AS APPROVED BY WRB MANUFACTURER AND PER NOTE 13 BELOW

2. CONTRACTOR SHALL PERFORM ALL WORK WITHIN THIS SCOPE IN ACCORDANCE AND COMPLIANCE WITH ALL RELEVANT CITY, COUNTY, STATE AND/OR FEDERAL ORDINANCES, LAWS, REGULATIONS AND CODES. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS ESTABLISHED BY THE 2012 INTERNATIONAL RESIDENTIAL CODE (IRC) WITH APPROPRIATE STATE AND LOCAL JURISDICTION AMENDMENTS.

3. CONTRACTOR SHALL MAINTAIN THE JOBSITE IN A CLEAN AND WORKMANLIKE CONDITION. ANY DEBRIS GENERATED DURING CONSTRUCTION SHALL BE REMOVED FROM THE JOBSITE CONTINUALLY. THE JOBSITE SHALL BE LEFT IN A CLEAN AND NEAT CONDITION AT THE END OF EACH WORKDAY. DEBRIS REMOVAL FROM THE JOBSITE SHALL BE ONGOING. CONTRACTOR SHALL DISPOSE ALL MATERIALS AND DEBRIS IN A LEGAL MANNER. ALL PEDESTRIAN AND VEHICULAR ACCESS-WAYS SHALL BE MAINTAINED IN A CLEAN CONDITION THROUGHOUT THE PROJECT.

4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO CONSTRUCTION.

5. CONTRACTOR SHALL FOLLOW SPECIFIED WATERPROOFING SYSTEMS AND INCORPORATION THEREOF. CONTRACTOR SHALL VERIFY THE MATERIAL COMPATIBILITY OF ALL WATERPROOFING COMPONENTS, SUCH AS SEALANTS, CLOSED-CELL BACKER ROD, SELF-ADHERING MEMBRANE, ETC., UTILIZED IN CONJUNCTION WITH OTHER WATERPROOFING OR BUILDING SYSTEM COMPONENTS, SHOULD THE CONTRACTOR DECIDE TO REQUEST MATERIAL SUBSTITUTION FROM THOSE SPECIFIED BY THE ARCHITECT.

6. PRIOR TO PURCHASING AND INSTALLATION, THE CONTRACTOR SHALL PROVIDE THE ARCHITECT FOR THEIR APPROVAL, SHOP DRAWINGS AND SPECS FOR ALL METAL FLASHING AND COUNTER-FLASHINGS IN ORDER TO DEMONSTRATE THEIR UNDERSTANDING OF THE DETAILS.

7. CONTRACTOR IS SOLELY RESPONSIBLE FOR QUALITY CONTROL AND ASSURANCE OF THE WORK PERFORMED BY THE CONTRACTOR, ITS AGENTS, EMPLOYEES OR ANY SUBCONTRACTOR EMPLOYED OR OTHERWISE RETAINED BY THE CONTRACTOR. CONTRACTOR IS FURTHER RESPONSIBLE FOR PROPER INTEGRATION OF BUILDING COMPONENTS TO PROVIDE A WEATHER-RESISTIVE BUILDING SYSTEM AS INTENDED BY THE DETAILS PROVIDED BY ARCHITECT.

8. CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS OF WORK AND SHALL CARRY OUT ALL WORK IN COMPLIANCE WITH THE BEST INDUSTRY STANDARDS AND IN COMPLIANCE WITH PUBLISHED MANUFACTURER'S INSTALLATION INSTRUCTIONS AND STANDARDS REFERENCED IN THE SPECIFICATIONS.

9. MOCKUP(S) OF ALL BUILDING ENVELOPE COMPONENTS SUCH AS WINDOWS, DOORS, WRB, CLADDING AND PENETRATION INSTALLATION MUST BE CARRIED OUT PRIOR TO COMMENCEMENT OF EXTERIOR ENVELOPE WORK.

10. DETAILS MAY NOT BE MODIFIED, REVISED OR ELIMINATED BY THE CONTRACTOR WITHOUT PRIOR WRITTEN CONSENT

11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY AND SCHEDULE FOR INSPECTION AND APPROVAL OF THE WORK PERFORMED WITH RESPECT TO EACH OF THE WATERPROOFING COMPONENTS.

12. UNLESS OTHERWISE NOTED, ALL EXPOSED METAL FLASHINGS AND COUNTER-FLASHINGS SHALL BE MADE OF MINIMUM 24 GA PRE-FINISH SHEET METAL. METAL FLASHING SHALL CONFORM TO SMACNA, NRCA, BUILDING CODE AND OTHER RELEVANT CODES AND INDUSTRY STANDARDS. THE VERTICAL LEGS OF SAID FLASHINGS SHALL BE MINIMUM 6 INCHES LONG. THE JOINTS OF PRE-FINISH METAL FLASHINGS SHALL BE BENT IN PLACE SUCH AS TO PREVENT MOISTURE MIGRATION PAST THE END DAMS. ALL CONCEALED METAL FLASHING AND COUTER-FLASHING PIECES SHALL BE 24 GA G-90 GALVANIZED SHEET METAL OR SCHEDULE 307 STAINLESS STEEL. JOINTS OF ALL FLASHING PIECES OTHER THAN PRE-FINISH METAL MUST BE WELDED OR SOLDERED. ALL METAL FLASHING SYSTEMS SHALL BE MANUFACTURED & INSTALLED IN ACCORDANCE WITH THE ARCHITECTURAL SHEET METAL MANUAL PUBLISHED BY SMACNA. UNLESS OTHERWISE NOTED, ALL METAL HEAD FLASHINGS SHALL HAVE A MINIMUM 1/2"-TALL END-DAMS. UNLESS OTHERWISE NOTED, ALL SILL PAN FLASHINGS SHALL HAVE END- AND BACK-DAMS. UNLESS OTHERWISE NOTED ALL FLASHINGS AND COUNTER FLASHINGS (METAL AND OTHERWISE) SHALL BE SET IN A CONTINUOUS BEAD OF NON SKINNING BUTYL SEALANT OR APPROVED EQUAL.

13. UNLESS OTHERWISE NOTED, ENGINEERED SEALANT JOINTS SHALL BE 1/2-INCH MINIMUM WIDE BY 1/4-INCH MINIMUM DEEP IN AN ATTEMPT TO MAINTAIN A 2-1 RATIO. SEALANTS SHALL BE ONE-PART SILICONE SEALANT & SINGLE-PART POLYURETHANE FOR SURFACE APPLICATION AND NON-SKINNING BUTYL FOR INSTALLATION BETWEEN CONCEALED MATERIAL INTERFACES. ACCEPTABLE SEALANTS INCLUDE BUT ARE NOT LIMITED TO DOW CORNING 790 AND 795 SILICONE BUILDING SEALANT, SIKAFLEX 15 LM, AND SONOLASTIC 150 VLM.

14. WINDOW AND DOOR UNITS INSTALLED WITHIN THE EXTERIOR WALL SYSTEM MAY NEED TO BE FURRED OUT TO ALLOW FOR PROPER DRAINAGE. IF THIS IS THE CASE, THE FURRING MATERIAL SHALL BE PVC BATTENS OR PRESSURE-TREATED SOLID BLOCKING.

15. THE ROUGH OPENING FOR WINDOWS MUST BE 1/2" WIDER AND 1/2"+ TALLER THAN THE WIDTH & HEIGHT OF THE WINDOW UNIT AS THE SILL PAN WILL LIFT THE WINDOW UNITS BY APPROXIMATELY 1/8"-1/4" OFF THE SILL. REFER TO WINDOW MFR'S INSTALLATION MANUAL FOR ADDITIONAL ROUGH OPENING REQUIREMENTS.

16. UNLESS OTHERWISE NOTED ON THE PLANS, ALL WOOD BLOCKING SHALL BE PRESSURE-TREATED LUMBER. IF SUCH MATERIAL IS CUT ONSITE, CUT ENDS MUST BE TREATED WITH STANDARD WOOD PRIMERS IMMEDIATELY.

17. FURRING BATTENS SHALL BE 3/4" BY 1-7/8" PVC VAPROBATTEN (WITH APPROPRIATE ACCESSORIES) MANUFACTURED BY VAPROSHIELD LLC. FURRING BATTENS SHALL ONLY BE INSTALLED VERTICALLY. FURRING BATTENS MUST BE INSTALLED DIRECTLY OVER STUDS SPACED NO MORE THAN 16" o.c. FURRING BATTENS MUST BE SECURELY ATTACHED TO THE STUDS USING APPROVED FASTENERS. ENSURE THAT THE FASTENERS FOR SIDING INSTALLATION ARE LONG ENOUGH TO PENETRATE THROUGH THE FURRING BATTENS, SHEATHING(S) AND INTO STUDS A MINIMUM OF 1/2". WHERE DISSIMILAR MATERIALS ABUT, INSTALL FURRING BATTENS DIRECTLY BEHIND MATERIAL TRANSITIONS.

18. AT RAINSCREEN SYSTEMS INSECT SCREENS SHALL BE PROVIDED AT TOP & BOTTOM OF THE WALLS AS WELL AS TOP & BOTTOM ANY AND ALL WALL PENETRATIONS. IT SHALL BE EITHER 3/4" MIN VAPROVENT STRIP / VAPROVENT HOOK STRIP OR METAL BUG SCREEN. THE SCREEN / STRIP MUST BE INSTALLED CONTINUOUSLY.

19. WINDOW AND DOOR PENETRATION WRAPS SHALL CONSIST OF VAPROSHIELD-WRAPSHIELD MANUFACTURED BY VAPROSHIELD LLC. INSTALL PENETRATION WRAPS PER MANUFACTURER'S RECOMMENDATIONS AS WELL AS THE WATERPROOFING DETAILS. USE FACTORY PRE-FORMED CORNERS. USE APPROPRIATE PRIMER FOR APPLICATIONS AT EXTERIOR SHEATHING OR WHERE THE SURFACE TEMPERATURE IS BELOW 40-DEGREE FAHRENHEIT PURSUANT TO THE MANUFACTURER'S INSTRUCTIONS.

20. UNLESS OTHERWISE NOTED, SELF-ADHERING MEMBRANE (S.A.M.) SHALL BE MINIMUM OF 9" WIDE WRAPSHIELD S.A.M. MANUFACTURED BY VAPROSHIELD LLC; OR THERMFLASH. USE APPROPRIATE PRIMER FOR APPLICATIONS AT EXTERIOR SHEATHING OR WHERE THE SURFACE TEMPERATURE IS BELOW 40-DEGREE FAHRENHEIT PER MANUFACTURER'S RECOMMENDATIONS.

21. WHERE THROUGH WALL PENETRATIONS OCCUR (e.g., HOSE BIBS, PIPES, ELECTRICAL BOXES, LIGHT FIXTURES, ETC.) INSTALL 24 MIL THERM FLASH PENETRATION WRAP & BUTYL TAPE AS WELL AS WRB APRONS PER WATERPROOFING DETAILS.

22. THE BUILDING ENVELOPE SYSTEM SHALL BE A CONTINUOUS AIR-BARRIER SYSTEM IN ACCORDANCE WITH 2012 WASHINGTON ENERGY CODE PROVISIONS.

23. AT CONCRETE CONSTRUCTION & COLD-JOINTS APPLY APPROVED DOUBLE LOCKING HYDROPHOBIC WATERSTOP CAPABLE OF 2-TIMES EXPANSION BY VOLUME. BASIS OF DESIGN IS ULTRASEAL P-201 BY ADEKA. CONCRETE SHALL BE CLEANED, TOOLED AND PRIMED BEFORE INSTALLING WATERSTOP MEDIUM.

24. ALL FASTENERS SHALL BE EITHER STAINLESS STEEL; OR DOUBLE-DIPPED, HOT-DIPPED OR HEAVY-DIPPED GALVANIZED CONFORMING TO ASTM A153. ELECTRO-GALVANIZED FASTENERS MUST NOT BE USED UNDER ANY CIRCUMSTANCES.

25. UNDER SLAB VAPOR BARRIER AT SLAB ON GRADE AREAS SHALL BE CLASS B, 15mil GEOMEMBRANE CONFORMING TO ASTM E-1745. BASIS OF DESIGN IS STEGO WRAP 15mil WITH STEGO TAPE, MANUFACTURED BY STEGO INDUSTRIES.

26. MAINTAIN A MINIMUM OF 6" SEPARATION BETWEEN FINISH GRADE AND FRAMING AND SIDING MATERIALS.

27. SLOPE ALL WEATHER-DECKS, WALKS AND PATIOS AWAY FROM THE BUILDING WITH A MINIMUM SLOPE OF 1/4" PER FOOT. INSTALL CRICKETS ON WEATHER-DECK SURFACES, WHERE NEEDED, TO ALLOW FOR PROPER SLOPE AND DRAINAGE. AT A MINIMUM 1/4" PER 1' SLOPE (U.O.N.) MUST BE PROVIDED TOWARD ROOF DRAINS & SCUPPERS.

28. WHOLE BUILDING AIR-LEAKAGE TESTING VIA BLOWER DOOR TEST SHALL BE PERFORMED IN ACCORDANCE WITH THE 2012 WSEC. REFER TO "AIR BARRIER GENERAL NOTES" AND "ENERGY CODE NOTES" FOR ADDITIONAL INFORMATION AND REQUIREMENTS. THE OWNER SHALL ENGAGE A TESTING AGENCY TO PERFORM THE REQUIRED TESTING IN ACCORDANCE WITH 2012 WSEC. TESTING SHALL BE IN COMPLIANCE WITH ASTM E-779 OR SIMILAR APPROVED TEST METHOD.

29. ANY DISCREPANCY NOTED BY THE CONTRACTOR MUST BE BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY. WHERE DISCREPANCY OCCURS BETWEEN VARIOUS CONTRACT DOCUMENTS, CONTRACTOR SHALL FOLLOW THE MOST STRINGENT REQUIREMENT FOR EACH CATEGORY.

30. CONTRACTOR SHALL SUPPLY AND INSTALL FLASHINGS AND COUNTER-FLASHINGS AT ALL TRANSITIONS AND JUNCTIONS PURSUANT TO THE REQUIREMENTS OF THE BUILDING CODE, INDUSTRY STANDARDS INCLUDING SMACNA, EVEN IF SUCH FLASHING IS NOT SPECIFICALLY CALLED OUT FOR IN A DETAIL PROVIDED FOR HEREIN.

PROJECT
PAEK RESIDENCE

ADDRESS
2215 80TH AVE SE
MERCER ISLAND, WA 98040

CLIENT
TIMOTHY PAEK

NO.	ISSUED	DATE

REVISIONS

DRAWING STATUS

Discrepancies must be reported immediately to the Architect before proceeding. Only figured dimensons are to be used. Contractors must check all dimensions on site. This drawing is protected by copyright.
ALL DIMENSIONS ARE SHOWN IN IMPERIAL.

MZA
ARCHITECTURE
600 108th Ave NE
Suite 108
Bellevue WA98004
425.559.7888
contact@mza-us.com

STAMP
REGISTERED ARCHITECT
Ming Zhang
STATE OF WASHINGTON

DRAWING TITLE
BUILDING ENVELOPE DETAILS

DRAWN Author
DESIGNED Designer
DATE 08/16/18
GRAPHIC SCALE As indicated
PROJECT NO. 18-009
DRAWING NO. A8.0
REVISION NO.

FILE NAME:
PLOT DATE:

General Structural Notes

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

CRITERIA

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (2015 EDITION).

2. DESIGN LOADING CRITERIA:
   RESIDENTIAL - ONE AND TWO-FAMILY DWELLINGS
   FLOOR LIVE LOAD . . . . . 40 PSF
   MISCELLANEOUS LOADS
   DECKS . . . . . 60 PSF
   DEFLECTION CRITERIA
   LIVE LOAD DEFLECTION L/360
   TOTAL LOAD DEFLECTION L/240
   ENVIRONMENTAL LOADS
   SNOW . . . . . Ce=1.0, Is=1.0, Ct=1.1, Pg=25 PSF, Pf=20 PSF
   WIND . . . . . GCpi=0.18, 110 MPH, RISK CATEGORY II, EXPOSURE "C"
   EARTHQUAKE . ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
   LATERAL SYSTEM: LIGHT FRAMED SHEAR WALLS
   SITE CLASS=D, Ss=137, Sds=91, S1=53, SD1=53, Cs=0.140
   SDC D, Ie=1.0, R=6.5
   SEE PLANS FOR ADDITIONAL LOADING CRITERIA

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATION, THESE GENERAL NOTES AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK.

4. PRIMARY STRUCTURAL ELEMENTS NOT DIMENSIONED ON THE STRUCTURAL PLANS AND DETAILS SHALL BE LOCATED BY THE ARCHITECTURAL PLANS AND DETAILS. VERTICAL DIMENSION CONTROL IS DEFINED BY THE ARCHITECTURAL WALL SECTIONS, BUILDING SECTION, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH ARCHITECTURAL AND STRUCTURAL DRAWINGS.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.

6. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-14 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION".

7. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.

8. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. ALL TYPICAL NOTES AND DETAILS SHOWN ON DRAWINGS SHALL APPLY, UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE PLANS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO TYPICAL DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED OR REQUEST ADDITIONAL INFORMATION. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.

9. SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

   GLUED LAMINATED MEMBERS
   PLYWOOD WEB JOISTS
   STRUCTURAL STEEL

   APPROVED SETS OF ALL SHOP DRAWINGS SHALL ALSO BE SUBMITTED TO THE BUILDING DEPARTMENT.

10. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY; REPRODUCIBLE WILL BE MARKED AND RETURNED WITHIN TWO WEEKS OF RECEIPT WITH A NOTATION INDICATING THAT THE SUBMITTAL HAS BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE SUBMITTED ITEMS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

    SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

QUALITY ASSURANCE

11. SPECIAL INSPECTION SHALL BE PROVIDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND SECTIONS 110 AND 1705 OF THE INTERNATIONAL BUILDING CODE BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE ARCHITECT, AND RETAINED BY THE BUILDING OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION AND TEST RESULTS. SPECIAL INSPECTION OF THE FOLLOWING TYPES OF CONSTRUCTION IS REQUIRED UNLESS NOTED OTHERWISE.

    STRUCTURAL STEEL FABRICATION AND ERECTION PER AISC 360

    PERIODIC INSPECTION: INSPECTION SHALL BE PERFORMED AT INTERVALS NECESSARY TO CONFIRM THAT WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE WITH REQUIREMENTS.
    CONTINUOUS INSPECTION: INSPECTOR SHALL BE ONSITE AND OBSERVE THE WORK REQUIRING INSPECTION AT ALL TIMES THAT WORK IS PERFORMED.

12. STRUCTURAL OBSERVATION SHALL BE PERFORMED IN ACCORDANCE WITH SECTIONS 1704.6 OF THE INTERNATIONAL BUILDING CODE FOR THE FOLLOWING BUILDING ELEMENTS:

    LIGHT FRAMED SHEAR WALLS
    HOLDDOWNS

    THE CONTRACTOR SHALL PROVIDE THE ENGINEER OF RECORD ADEQUATE NOTICE TO SCHEDULE APPROPRIATE SITE VISITS FOR STRUCTURAL OBSERVATION.

    STRUCTURAL OBSERVATION MEANS THE VISUAL OBSERVATION OF THE STRUCTURAL SYSTEM, FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS, AT SIGNIFICANT CONSTRUCTION STAGES AND AT COMPLETION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED BY SECTION 110, 1705, OR OTHER SECTIONS OF THE INTERNATIONAL BUILDING CODE.

    THE OWNER SHALL EMPLOY THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN, TO PERFORM STRUCTURAL OBSERVATION. OBSERVED DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER'S REPRESENTATIVE, SPECIAL INSPECTOR, CONTRACTOR, AND THE BUILDING OFFICIAL. THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFYING ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

GEOTECHNICAL

13. FOUNDATION NOTES: ALLOWABLE SOIL PRESSURE AND LATERAL EARTH PRESSURE ARE ASSUMED AND THEREFORE MUST BE VERIFIED BY A QUALIFIED SOILS ENGINEER OR APPROVED BY THE BUILDING OFFICIAL. IF SOILS ARE FOUND TO BE OTHER THAN ASSUMED, NOTIFY THE STRUCTURAL ENGINEER FOR POSSIBLE FOUNDATION REDESIGN.

    FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED EARTH AT LEAST 18" BELOW ADJACENT FINISHED GRADE. UNLESS OTHERWISE NOTED, FOOTINGS SHALL BE CENTERED BELOW COLUMNS OR WALLS ABOVE.

    ALLOWABLE SOIL PRESSURE. . . . . 1500 PSF
    LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED) . . . . . 55 PCF/35 PCF
    ALLOWABLE PASSIVE EARTH PRESSURE (FS OF 1.5 INCLUDED). . . . . 300 PCF
    COEFFICIENT OF FRICTION (FS OF 1.5 INCLUDED). 0.3
    SEISMIC SURCHARGE PRESSURE (UNIFORM LOAD) . . . . . 7H PSF

RENOVATION

14. DEMOLITION: CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. SHORING SHALL BE INSTALLED TO SUPPORT EXISTING CONSTRUCTION AS REQUIRED AND IN A MANNER SUITABLE TO THE WORK SEQUENCES. DEMOLITION DEBRIS SHALL NOT BE ALLOWED TO DAMAGE OR OVERLOAD THE EXISTING STRUCTURE. LIMIT CONSTRUCTION LOADING (INCLUDING DEMOLITION DEBRIS) ON EXISTING FLOOR SYSTEMS TO 40 PSF.

15. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER IF EXISTING CONDITIONS DETERMINED DURING WORK VARY FROM THE EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS.

16. CONTRACTOR SHALL CHECK FOR DRY ROT AT ALL AREAS OF NEW WORK. ALL ROT SHALL BE REMOVED AND DAMAGED MEMBERS SHALL BE REPLACED OR REPAIRED AS DIRECTED BY THE STRUCTURAL ENGINEER OR ARCHITECT.

CONCRETE

17. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 301, INCLUDING TESTING PROCEDURES. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF f'c = 3,000 PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS. REQUIRED CONCRETE STRENGTH IS BASED ON THE DURABILITY REQUIREMENTS OF SECTION 1904 OF THE IBC. DESIGN STRENGTH IS f'c = 2,500 PSI.

18. ALL CONCRETE WITH SURFACES EXPOSED TO WEATHER OR STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318, TABLE 19.3.2.1 MODERATE EXPOSURE, F1.

19. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, FY = 60,000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.

20. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315-99 AND 318-11. LAP ALL CONTINUOUS REINFORCEMENT #5 AND SMALLER 40 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS #5 AND SMALLER 40 BAR DIAMETERS OR 2'-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318-11, CLASS B. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

    NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

21. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315-99 AND 318-11. LAP ALL REINFORCEMENTS IN ACCORDANCE WITH "THE REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE." PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

    NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

22. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

    FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . . . 3"

23. CONCRETE WALL REINFORCING--PROVIDE THE FOLLOWING UNLESS DETAILED OTHERWISE:

    6" WALLS #4 @ 16 HORIZ. #4 @ 18 VERTICAL 1 CURTAIN
    8" WALLS #4 @ 12 HORIZ. #4 @ 18 VERTICAL 1 CURTAIN

24. CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES, BOTH CAST-IN-PLACE AND PRECAST.

25. NON-SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (3000 PSI MINIMUM).

ANCHORAGE

26. EXPANSION BOLTS INTO CONCRETE SHALL BE "STRONG-BOLT 2" WEDGE ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY AND INSTALLED IN STRICT CONFORMANCE TO ICC-ES REPORT NUMBER ESR-3037, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. PERIODIC SPECIAL INSPECTION IS REQUIRED TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, ANCHOR LOCATION, TIGHTENING TORQUE, HOLE DIMENSIONS, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS.

27. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "AT-XP" AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH IAMPO REPORT NO. ER-0281. MINIMUM BASE MATERIAL TEMPERATURE IS 14 DEGREES, F. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED. PERIODIC SPECIAL INSPECTION OF INSTALLATION IS REQUIRED TO VERIFY ANCHOR OR EMBEDED BAR TYPE AND DIMENSIONS, LOCATION, ADHESIVE IDENTIFICATION AND EXPIRATION, HOLE DIMENSIONS, HOLE CLEANING PROCEDURE, ANCHOR EMBEDMENT, AND ADHERENCE TO THE INSTALLATION INSTRUCTIONS. CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR HORIZONTAL AND OVERHEAD INSTALLATIONS.

28. CONCRETE SCREW ANCHORS INTO CONCRETE AND CONCRETE MASONRY UNITS SHALL BE "TITEN HD" HEAVY DUTY SCREW ANCHOR AS MANUFACTURED BY THE SIMPSON STRONG-TIE COMPANY, INSTALLED IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2713 (CONCRETE), NO. ESR-1056 (CMU), INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. SCREW ANCHORS INTO CONCRETE MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION IS REQUIRED.

STEEL

29. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON:

    A. AISC 360 AND SECTION 2205.2 OF THE INTERNATIONAL BUILDING CODE.
    B. APRIL 14, 2010 AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES AMENDED AS FOLLOWS: AS NOTED IN THE CONTRACT DOCUMENTS, BY THE DELETION OF PARAGRAPH 4.4.1, AND REVISE REFERENCE FROM "STRUCTURAL DESIGN DRAWINGS" TO "CONTRACT DOCUMENTS" IN PARAGRAPH 3.1.
    C. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.

30. WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992, FY = 50 KSI. OTHER ROLLED SHAPES INCLUDING PLATES, SHALL CONFORM TO ASTM A36, FY = 36 KSI. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500, GRADE B, FY = 46 KSI (SQUARE AND RECTANGULAR). CONNECTION BOLTS SHALL CONFORM TO ASTM A307.

31. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SHALL CONFORM TO SECTION 10 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.

32. ALL STEEL EXPOSED TO THE WEATHER OR IN CONTACT WITH GROUND SHALL BE CORROSION PROTECTED BY GALVANIZATION OR PROVIDED WITH EXTERIOR PAINT SYSTEM, UNLESS OTHERWISE NOTED.

33. SHOP PRIME ALL STEEL EXCEPT:

    A. STEEL ENCASED IN CONCRETE.
    B. SURFACES TO BE WELDED.
    C. CONTACT SURFACES AT HIGH-STRENGTH BOLTS.
    D. MEMBERS TO BE GALVANIZED.
    E. MEMBERS WHICH WILL BE CONCEALED BY INTERIOR FINISHES.
    F. SURFACES TO RECEIVE SPRAYED FIREPROOFING.
    G. SURFACES TO RECEIVE OTHER SPECIAL SHOP PRIMERS.

34. ALL A-325N CONNECTION BOLTS NEED ONLY BE TIGHTENED TO A SNUG TIGHT CONDITION, DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PLIES IN A JOINT ARE IN FIRM CONTACT. THIS MAY BE ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH.

35. ALL ANCHORS EMBEDDED IN MASONRY OR CONCRETE SHALL BE A307 HEADED BOLTS OR A36 THREADED ROD WITH AN ASTM 563 HEAVY HEX NUT TACK WELDED ON THE EMBEDDED END.

36. ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARDS AND SHALL BE PERFORMED BY WABO CERTIFIED WELDERS USING E70XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED. ALL COMPLETE JOINT PENETRATION GROOVE WELDS SHALL BE MADE WITH A FILLER MATERIAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT-LBS AT -20 DEGREES F AND 40 FT - LBS AT 70 DEGREES F, AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION.

General Structural Notes Continued on S1.2

STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

DRAWN: SJB
DESIGN: JRC
CHECKED: RJA
APPROVED: ABB

REVISIONS:

DPD:

PROJECT TITLE:

Paek Residence
2215 80th Ave SE
Mercer Island, WA 98040

ARCHITECT:
MZA Architecture
600 108th Ave NE, Suite 108
Bellevue, WA 98004
PH 425.559.7888

ISSUE:
Permit

SHEET TITLE:
General Structural Notes

SCALE:

DATE: Sept. 4, 2018

PROJECT NO: 10604-2018-01-00

SHEET NO:
S1.1

General Structural Notes Continued

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

WOOD

37. FRAMING LUMBER SHALL BE S-DRY, KD, OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH WCLIB STANDARD "GRADING RULES FOR WEST COAST LUMBER NO. 17", OR WWPA STANDARD, "WESTERN LUMBER GRADING RULES 2011". FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS AND BEAMS	(2X & 3X MEMBERS)	HEM-FIR NO. 2 MINIMUM BASE VALUE, Fb = 850 PSI
	(4X MEMBERS)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 1000 PSI
BEAMS	(INCL. 6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 1350 PSI
POSTS	(4X MEMBERS)	DOUGLAS FIR-LARCH NO. 2 MINIMUM BASE VALUE, Fc = 1350 PSI
	(6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fc = 1000 PSI
STUDS, PLATES & MISC. FRAMING:		DOUGLAS-FIR-LARCH OR HEM-FIR NO. 2

38. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND ANSI/AITC STANDARDS. EACH MEMBER SHALL BEAR AN AITC OR APA-EWS IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC OR APA-EWS CERTIFICATE OF CONFORMANCE. ALL SIMPLE SPAN BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, Fb = 2,400 PSI, Fv =265 PSI. ALL CANTILEVERED BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb = 2400 PSI, Fv = 265 PSI. CAMBER ALL SIMPLE SPAN GLULAM BEAMS TO 3,500' RADIUS, UNLESS SHOWN OTHERWISE ON THE PLANS.

39. MANUFACTURED LUMBER, PSL, LVL, AND LSL SHOWN ON PLAN ARE BASED PRODUCTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION IN ACCORDANCE WITH ICC-ES REPORT ESR-1387. MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

PSL (2.0E)	Fb = 2900 PSI,	E = 2000 KSI,	Fv = 290 PSI
LVL (2.0E)	Fb = 2600 PSI,	E = 2000 KSI,	Fv = 285 PSI
LSL (1.55E)	Fb = 2325 PSI,	E = 1550 KSI,	Fv = 310 PSI

ALTERNATE MANUFACTURED LUMBER MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE MANUFACTURER'S PRODUCTS SHALL BE COMPATIBLE WITH THE JOIST HANGERS AND OTHER HARDWARE SPECIFIED ON PLANS, OR ALTERNATE HANGERS AND HARDWARE SHALL SUBMITTED FOR REVIEW AND APPROVAL. SUBSTITUTED ITEMS SHALL HAVE ICC-ES REPORT APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES.

MANUFACTURED LUMBER PRODUCTS SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%. EXCESSIVE DEFLECTIONS MAY OCCUR IF MOISTURE CONTENT EXCEEDS THIS VALUE.

40. PREFABRICATED PLYWOOD WEB JOIST DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE PLYWOOD WEB JOIST MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE MANUFACTURER'S PRODUCTS SHALL BE COMPATIBLE WITH THE JOIST HANGERS AND OTHER HARDWARE SPECIFIED ON PLANS, OR ALTERNATE HANGERS AND HARDWARE SHALL SUBMITTED FOR REVIEW AND APPROVAL. SUBSTITUTED ITEMS SHALL HAVE ICC-ES REPORT APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES.

41. PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH THE "NATIONAL DESIGN STANDARD FOR METAL PLATE-CONNECTED WOOD TRUSS CONSTRUCTION, ANSI/TPI 1" BY THE TRUSS PLATE INSTITUTE FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS. LOADING SHALL BE AS FOLLOWS:

TOP CHORD LIVE LOAD	25 PSF
TOP CHORD DEAD LOAD	10 PSF
BOTTOM CHORD DEAD LOAD	5 PSF
TOTAL LOAD	40 PSF
WIND UPLIFT (TOP CHORD)	10 PSF
BOTTOM CHORD LIVE LOAD (BOTTOM CHORD LIVE LOAD DOES NOT ACT CONCURRENTLY WITH THE ROOF LIVE LOAD)	10 PSF

WOOD TRUSSES SHALL UTILIZE APPROVED CONNECTOR PLATES (GANGNAIL OR EQUAL). SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMITTED DOCUMENTS SHALL BE SIGNED AND STAMPED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. PROVIDE FOR SHAPES, BEARING POINTS, INTERSECTIONS, HIPS, VALLEYS, ETC., SHOWN ON THE DRAWINGS. EXACT COMPOSITION OF SPECIAL HIP, VALLEY, AND INTERSECTION AREAS (USE OF GIRDER TRUSSES, JACK TRUSSES, STEP-DOWN TRUSSES, ETC.) SHALL BE DETERMINED BY THE MANUFACTURER UNLESS SPECIFICALLY INDICATED ON THE PLANS. PROVIDE ALL TRUSS TO TRUSS AND TRUSS TO GIRDER TRUSS CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. PROVIDE FOR ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING.

42. PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS 1 OR PS 2. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.

ROOF SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 32/16.

FLOOR AND DECK SHEATHING SHALL BE 3/4" (NOMINAL) WITH SPAN RATING 48/24.

WALL SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 24/0.

PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING.

REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.

43. ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE OR (2) LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER SHALL BE PROVIDED BETWEEN UNTREATED WOOD AND CONCRETE OR MASONRY.

44. PRESERVATIVE TREATED WOOD SHALL BE TREATED PER AWPA STANDARD U1 TO THE USE CATEGORY EQUAL TO OR HIGHER THAN THE INTENDED APPLICATION. TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO AWPA UC3B. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO AWPA UC4A. WOOD FOR USE IN PERMANENT FOUNDATIONS SHALL BE TREATED TO AWPA UC4B.

45. FASTENERS AND TIMBER CONNECTORS USED WITH TREATED WOOD SHALL HAVE CORROSION RESISTANCE AS INDICATED IN THE FOLLOWING TABLE, UNLESS OTHERWISE NOTED.

WOOD TREATMENT	CONDITION	PROTECTION
HAS NO AMMONIA CARRIER	INTERIOR DRY	G90 GALVANIZED
CONTAINS AMMONIA CARRIER	INTERIOR DRY	G185 OR A185 HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653
CONTAINS AMMONIA CARRIER	INTERIOR WET	TYPE 304 OR 316 STAINLESS
CONTAINS AMMONIA CARRIER	EXTERIOR	TYPE 304 OR 316 STAINLESS
AZCA	ANY	TYPE 304 OR 316 STAINLESS

INTERIOR DRY CONDITIONS SHALL HAVE WOOD MOISTURE CONTENT LESS THAN 19%. WOOD MOISTURE CONTENT IN OTHER CONDITIONS (INTERIOR WET, EXTERIOR WET, AND EXTERIOR DRY) IS EXPECTED TO EXCEED 19%. CONNECTORS AND THEIR FASTENERS SHALL BE THE SAME MATERIAL. COMPLY WITH THE TREATMENT MANUFACTURERS RECOMMENDATIONS FOR PROTECTION OF METAL.

46. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-2015. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICC-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER FOR MAXIMUM LOAD CARRYING CAPACITY. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

ALL 2X JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL TJI JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "ITS" SERIES JOIST HANGERS. ALL DOUBLE-JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MIT" SERIES JOIST HANGERS.

WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER.

ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

47. WOOD FASTENERS

A. NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER
8d	2-1/2"	0.131"
10d	3"	0.148"
16d BOX	3-1/2"	0.135"

IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL.

NAILS - PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED. TOE-NAILS SHALL BE DRIVEN AT AN ANGLE OF 30 DIGRESS WITH THE MEMBER AND STARTED 1/3 THE LENGTH OF THE NAIL FROM THE MEMBER END.

B. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG BOLTS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION WITH A LEAD BORE HOLE OF 60 TO 70 PERCENT OF THE SHANK DIAMETER. LEAD HOLES ARE NOT REQUIRED FOR 3/8" AND SMALLER LAG SCREWS.

48. NOTCHES AND HOLES IN WOOD FRAMING:

A. NOTCHES ON THE ENDS OF SOLID SAWN JOISTS AND RAFTERS SHALL NOT EXCEED ONE-FOURTH THE JOIST DEPTH. NOTCHES IN THE TOP OR BOTTOM OF SOLID SAWN JOISTS SHALL NOT EXCEED ONE-SIXTH THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE THIRD OF THE SPAN. HOLES BORED IN SOLID SAWN JOISTS AND RAFTERS SHALL NOT BE WITHIN 2 INCHES OF THE TOP OR BOTTOM OF THE JOIST, AND THE DIAMETER OF ANY SUCH HOLE SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE JOIST.

B. IN EXTERIOR WALLS AND BEARING PARTITIONS, ANY WOOD STUD IS PERMITTED TO BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25 PERCENT OF ITS WIDTH. A HOLE NOT GREATER IN DIAMETER THAN 40 PERCENT OF THE STUD WIDTH IS PERMITTED TO BE BORED IN ANY WOOD STUD. IN NO CASE SHALL THE EDGE OF THE BORED HOLE BE NEARER THAN 5/8 INCH TO THE EDGE OF THE STUD. BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTION OF STUD AS A CUT OR NOTCH.

C. NOTCHES AND HOLES IN MANUFACTURED LUMBER AND PREFABRICATED PLYWOOD WEB JOISTS SHALL BE PER THE MANUFACTURERS RECOMMENDATIONS UNLESS OTHERWISE NOTED.

49. WOOD FRAMING NOTES--THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE, THE AITC "TIMBER CONSTRUCTION MANUAL" AND THE AF&PA "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION". MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO IBC TABLE 2304.10.1. COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH MECHANICAL AND ARCHITECTURAL DRAWINGS.

B. WALL FRAMING: REFER ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16" O.C. UNO. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS, AND AT BEAM OR HEADER BEARING LOCATIONS. TWO 2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT.

ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16d NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16d @ 12" O.C. AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE EIGHT 16d NAILS @ 4" O.C. EACH SIDE JOINT.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH TWO ROWS OF 16d NAILS @ 12" ON-CENTER, OR ATTACHED TO CONCRETE BELOW WITH 5/8" DIAMETER ANCHOR BOLTS @ 4'-0" ON-CENTER EMBEDDED 7" MINIMUM, UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH TWO ROWS OF 16d @12" ON-CENTER. UNLESS OTHERWISE NOTED, GYPSUM WALLBOARD SHALL BE FASTENED TO THE INTERIOR SURFACE OF ALL STUDS AND PLATES WITH NO. 6 X 1-1/4" TYPE S OR W SCREWS @ 8" ON-CENTER. UNLESS INDICATED OTHERWISE, 1/2" (NOMINAL) APA RATED SHEATHING (SPAN RATING 24/0) SHALL BE NAILED TO ALL EXTERIOR SURFACES WITH 8d NAILS @ 6" ON-CENTER AT PANEL EDGES AND TOP AND BOTTOM PLATES (BLOCK UN-SUPPORTED EDGES) AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH 8d NAILS @ 12" ON-CENTER ALLOW 1/8" SPACING AT ALL PANEL EDGES AND PANEL ENDS.

C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED. PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. TOE-NAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE. NAIL ALL MULTI JOIST BEAMS TOGETHER WITH TWO ROWS 16d @ 12" ON-CENTER.

UNLESS OTHERWISE NOTED ON THE PLANS, PLYWOOD ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH GRAIN PERPENDICULAR TO SUPPORTS AND NAILED AT 6" ON-CENTER WITH 8d NAILS TO FRAMED PANEL EDGES, STRUTS AND OVER STUD WALLS AS SHOWN ON PLANS AND @ 12" ON-CENTER TO INTERMEDIATE SUPPORTS. PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING. TOENAIL BLOCKING TO SUPPORTS WITH 16d @ 12" ON-CENTER UNLESS OTHERWISE NOTED.

SSF STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

DRAWN: SJB
DESIGN: JRC
CHECKED: RJA
APPROVED: ABB

REVISIONS:

DPD:

PROJECT TITLE:

Paek Residence
2215 80th Ave SE
Mercer Island, WA 98040

ARCHITECT:
MZA Architecture
600 108th Ave NE, Suite 108
Bellevue, WA 98004
PH 425.559.7888

ISSUE: Permit

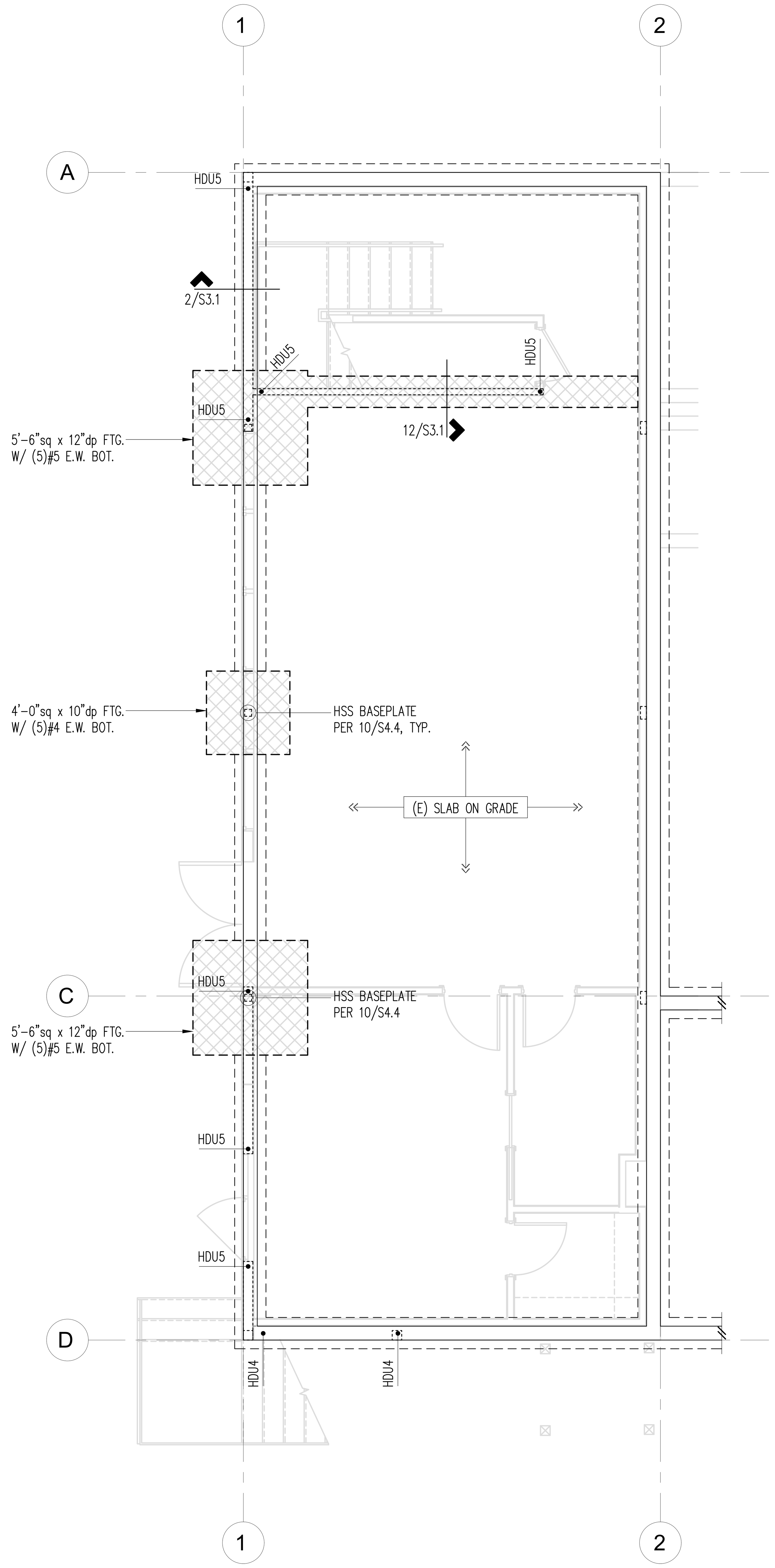
SHEET TITLE: General Structural Notes Continued

SCALE:

DATE: Sept. 4, 2018

PROJECT NO: 10604-2018-01-00

SHEET NO: S1.1



Legend

	EXISTING FOOTING BELOW
	NEW FOOTING BELOW
	STRUCTURAL WALL OR POST ABOVE
XX	HOLDOWN PER 4/S3.1

Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 18" MINIMUM BELOW GRADE.
3. PROVIDE CORNER BARS PER DETAIL 1/S3.1 AT ALL WALL AND FOOTING INTERSECTIONS.
4. PROVIDE EPOXY GROUTED #4 x 2'-4" DOWELS EMBEDDED A MINIMUM OF 4" INTO EXISTING CONCRETE TO MATCH NEW HORIZONTAL REINFORCING. TYPICAL WHERE NEW CONCRETE WALL OR FOOTING TERMINATES AT EXISTING CONCRETE. EPOXY GROUT PER GENERAL STRUCTURAL NOTES.
5. ALL POSTS ABOVE SHALL BEAR FULLY ON BEAMS OR POSTS BELOW AND SHALL HAVE CONTINUOUS FULL BEARING THROUGH FLOORS TO THE FOUNDATION.
6. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

Basement Foundation Plan

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

SSF STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

DRAWN: SJB
DESIGN: JRC
CHECKED: RJA
APPROVED: ABB

REVISIONS:

DPD:

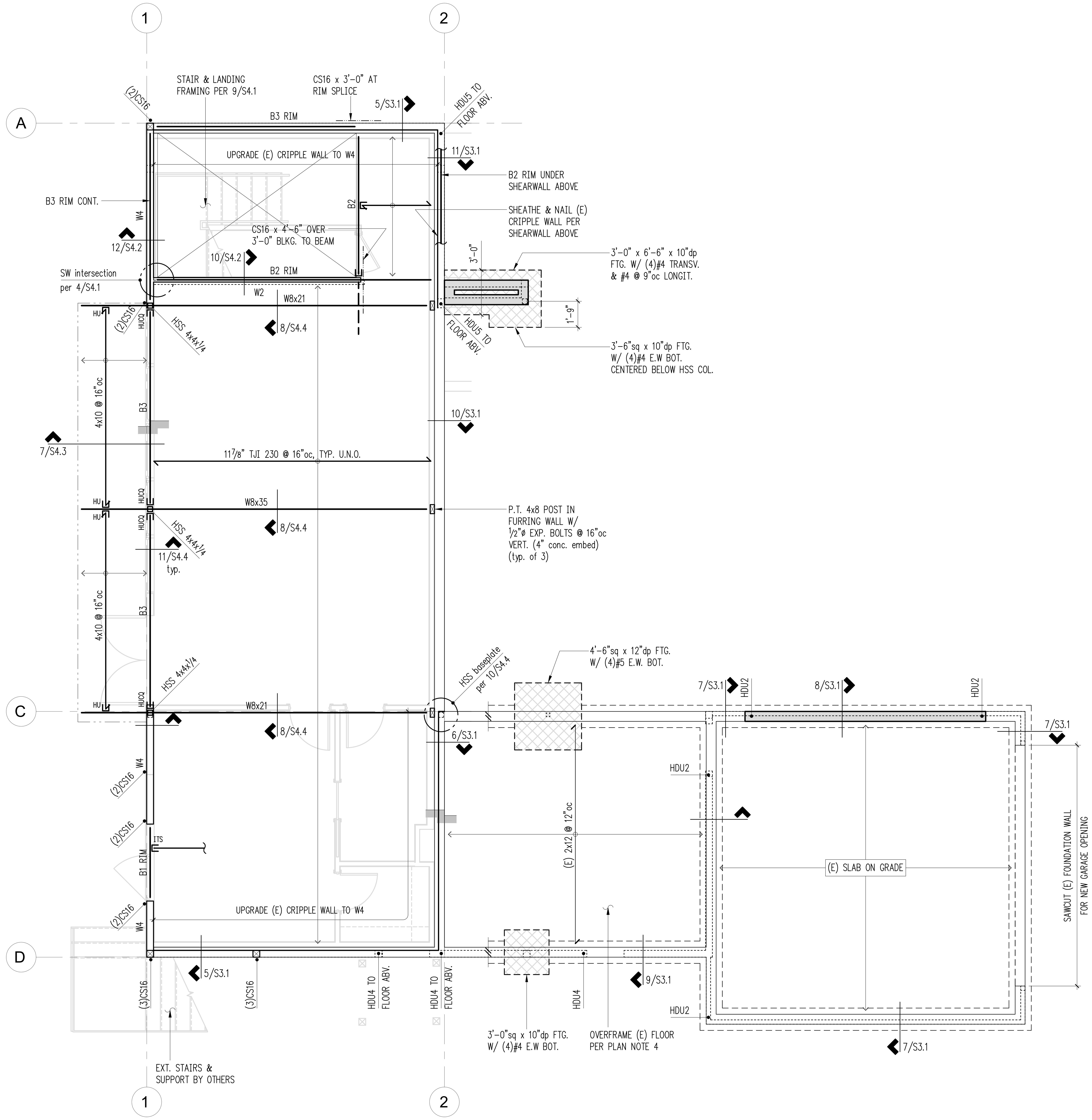
PROJECT TITLE:
Paek Residence
2215 80th Ave SE
Mercer Island, WA 98040

ARCHITECT:
MZA Architecture
600 108th Ave NE, Suite 108
Bellevue, WA 98004
PH 425.559.7888

ISSUE:
Permit

SHEET TITLE:
Basement Foundation Plan

SCALE: 1/4" = 1'-0" U.N.O.
DATE: Sept. 4, 2018
PROJECT NO: 10604-2018-01-00
SHEET NO: S2.1



Beam Schedule

MARK	BEAM	BRG. STUDS	HANGER
B1	LSL 1 3/4x11 7/8	2	HU11
B2	LSL 3 1/2x11 7/8	3	HHUS410
B3	PSL 5 1/4x11 7/8	4	HHUS5.50/10

Legend

- STRUCTURAL WALL BELOW
- NON-STRUCTURAL WALL BELOW
- STRUCTURAL WALL OR POST ABOVE
- Wx — SHEARWALL PER 12/S4.1
- SPAN DIRECTION
- EXTENT OF JOISTS
- HEADER/BEAM PER PLAN
- HANGER
- CHANGE IN SHEATHING ELEVATION
- HDU — HOLDOWN PER 4/S3.1
- (x)CS16 — HOLDOWN STRAP PER 5/S4.1
- EXISTING FOOTING BELOW
- NEW FOOTING BELOW
- NEW STEM WALL BELOW

Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. THE BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE 18" MINIMUM BELOW GRADE.
3. NEW FLOOR AND ACCESSIBLE DECK SHEATHING SHALL BE 3/4" A.P.A. RATED PANELS (EXPOSURE 1, SPAN RATING 48/24). NAIL AT ALL FRAMED PANEL EDGES WITH 8D AT 6" O.C. AND TO ALL INTERMEDIATE FRAMING (FIELD) AT 12" O.C.
4. NEW FLOOR JOISTS SHALL BE 11-7/8"TJI 230 @ 16"oc.. OVER-FRAME EXISTING 2x12 JOISTS WITH 5/8"PLYWOOD TO MATCH NEW AND EXISTING FLOOR LEVELS.
5. HEADERS OVER DOOR AND WINDOW OPENINGS SHALL BE FRAMED WITH FLUSH LSL 1-3/4 X 11-7/8 RIM. DO NOT SPLICE RIM OVER OPENING. HANG JOISTS FROM RIM OVER OPENINGS WITH ITS SERIES HANGERS. PROVIDE (2) TRIMMER STUDS (MINIMUM) AT EACH END OF ALL RIMS UNLESS NOTED OTHERWISE ON PLANS.
6. PROVIDE (2) STUDS (MINIMUM) AT EACH END OF ALL BEAMS UNLESS NOTED OTHERWISE ON PLANS. BEAR BEAM FULLY ON BUILT UP COLUMN AND PROVIDE AC, PC, OR LPC CAP.
7. W# INDICATES SHEAR WALL. SEE SHEARWALL SCHEDULE, 12/S4.1, FOR CONSTRUCTION REQUIREMENTS. ALL EXTERIOR WALLS SHALL BE W6, UNLESS NOTED OTHERWISE ON PLANS.
8. (X)CS16 INDICATES VERTICAL HOLDOWN STRAP AT END OF SHEAR WALL ABOVE. (X) INDICATES STRAP QUANTITY. SEE DETAIL 5/S4.1 FOR INSTALLATION REQUIREMENTS.
9. HDUx INDICATES VERTICAL HOLD-DOWN FROM POST ABOVE WITH A36 ALL-THREAD EPOXY GROUTED PER ANCHOR BOLT DIAMETER AND EMBED DEPTH IN HOLDOWN SCHEDULE.
10. MANUFACTURED LUMBER PRODUCTS (LSL, LVL, PSL, GL) SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%.
11. ALL POSTS ABOVE SHALL BEAR FULLY ON BEAMS OR POSTS BELOW AND SHALL HAVE CONTINUOUS VERTICAL GRAIN BLOCKING TO MATCH POST ABOVE FOR FULL BEARING THROUGH FLOORS TO THE FOUNDATION.
12. SPLICE ALL TOP PLATE SPLICES PER DETAIL 10/S4.1.
13. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

Main Floor Framing/Crawl Space Foundation Plan

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

SSF STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

DRAWN: SJB
DESIGN: JRC
CHECKED: RJA
APPROVED: ABB

REVISIONS:

DPD:

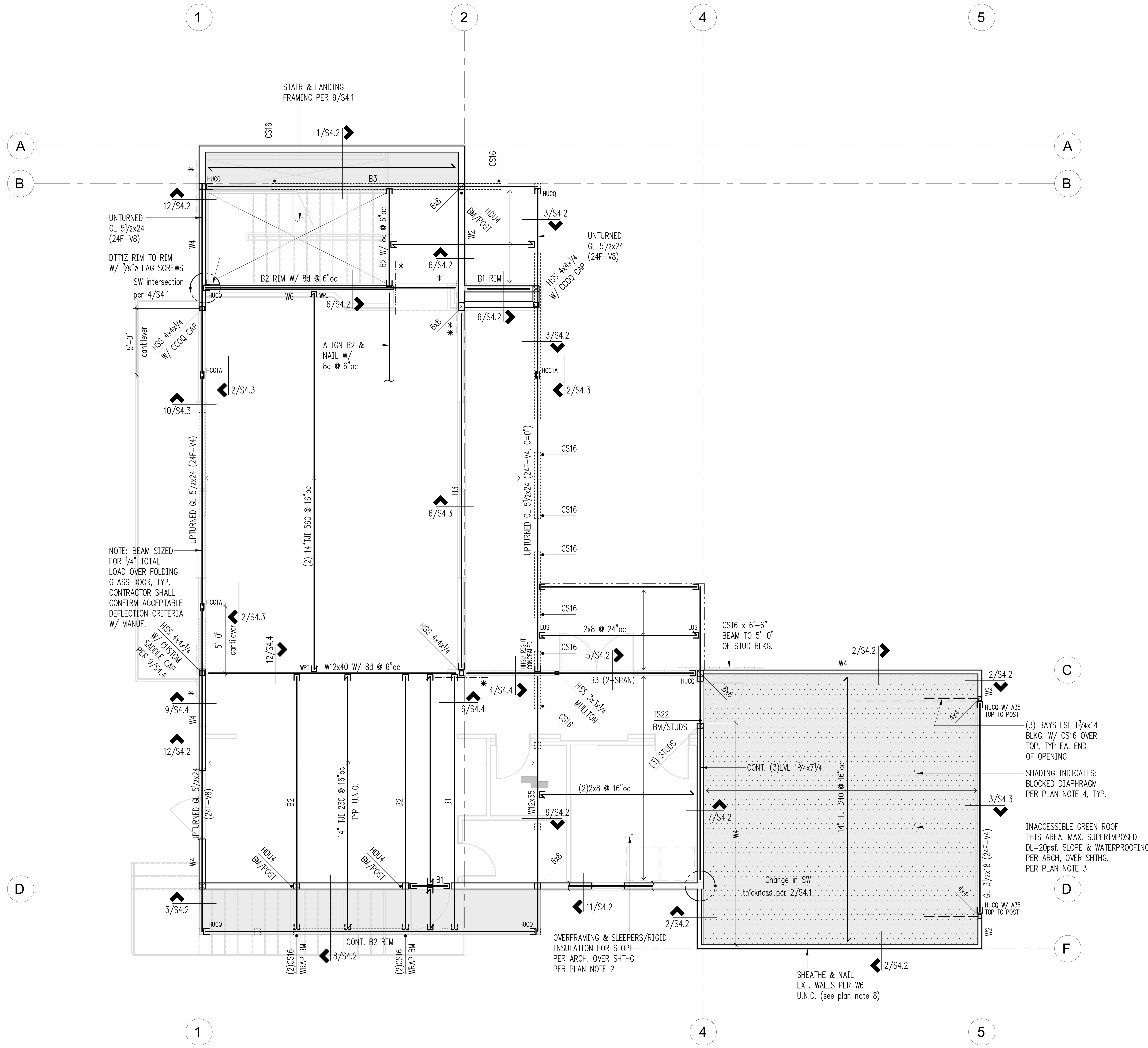
PROJECT TITLE:
Paek Residence
2215 80th Ave SE
Mercer Island, WA 98040

ARCHITECT:
MZA Architecture
600 108th Ave NE, Suite 108
Bellevue, WA 98004
PH 425.559.7888

ISSUE: Permit

SHEET TITLE: Main Floor Framing & Crawl Space Foundation Plan

SCALE: 1/4" = 1'-0" U.N.O.
DATE: Sept. 4, 2018
PROJECT NO: 10604-2018-01-00
SHEET NO: S2.2



Beam Schedule

MARK	BEAM	BRG. STUDS	HANGER
B1	LSL 1¾x14	2	HU14
B2	LSL 3½x14	3	HHUS410
B3	PSL 5½x14	4	HHUS5.50/10

Legend

	STRUCTURAL WALL BELOW
	NON-STRUCTURAL WALL BELOW
	STRUCTURAL WALL OR POST ABOVE
Wx	SHEARWALL PER 12/S4.1
	SPAN DIRECTION
	EXTENT OF JOISTS
	HEADER/BEAM PER PLAN
	HANGER (INVERTED)
	CHANGE IN ELEVATION
(X)CS16	HOLDOWN PER 5/S4.1
*	CS16 x 4'-0" FRAMING MEMBER TO NO. OF ASTERISKS = NO. OF STUDS

Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. FLOOR AND ACCESSIBLE ROOF DECK SHEATHING SHALL BE 3/4" A.P.A. RATED PANELS (EXPOSURE 1, SPAN RATING 48/24). NAIL AT ALL FRAMED PANEL EDGES WITH 8d AT 6"oc AND TO ALL INTERMEDIATE FRAMING (FIELD) AT 12"oc.
3. GREEN ROOF SHEATHING SHALL BE 1/2" A.P.A. RATED PANELS (EXPOSURE 1, SPAN RATING 32/16), FACE GRAIN PERPENDICULAR TO SUPPORTS OVER ROOF FRAMING PER PLAN. NAIL SHEATHING AT ALL FRAMED PANEL EDGES WITH 8d AT 6"oc AND TO ALL INTERMEDIATE FRAMING AT 12"oc.
4. AREAS SHADED ON PLAN INDICATED BLOCKED FLOOR DIAPHRAGM. PROVIDE 2x4 FLAT BLOCKING AT ALL UNFRAMED PANEL EDGES. NAIL ALL PANEL EDGES TO FLAT BLOCKING, FRAMING MEMBERS OR BOUNDARY MEMBERS (RIMS, DRAG STRUTS) WITH 8d AT 4"oc AND TO ALL INTERMEDIATE FRAMING (FIELD) AT 12"oc.
5. FLOOR JOISTS SHALL BE 14"TJI 230 @ 16"oc.
6. HEADERS OVER DOOR AND WINDOW OPENINGS SHALL BE FRAMED WITH FLUSH LSL 1-3/4 X 11-7/8 RIM, MINIMUM. DO NOT SPLICE RIM OVER OPENING. HANG JOISTS FROM RIM OVER OPENINGS WITH ITS SERIES HANGERS. PROVIDE (2) TRIMMER STUDS (MINIMUM) AT EACH END OF ALL RIMS UNLESS NOTED OTHERWISE ON PLANS.
7. PROVIDE (2) STUDS (MINIMUM) AT EACH END OF ALL BEAMS UNLESS NOTED OTHERWISE ON PLANS. BEAR BEAM FULLY ON BUILT UP COLUMN AND PROVIDE AC, PC, OR LPC CAP.
8. W# INDICATES SHEAR WALL. SEE SHEARWALL SCHEDULE, 12/S4.1, FOR CONSTRUCTION REQUIREMENTS. ALL EXTERIOR WALLS SHALL BE W6, UNLESS NOTED OTHERWISE ON PLANS.
9. (X)CS16 INDICATES VERTICAL HOLDOWN STRAP AT END OF SHEAR WALL ABOVE. (X) INDICATES STRAP QUANTITY. SEE DETAIL 5/S4.1 FOR INSTALLATION REQUIREMENTS.
10. MANUFACTURED LUMBER PRODUCTS (LSL, LVL, PSL, GL) SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%.
11. ALL POSTS ABOVE SHALL BEAR FULLY ON BEAMS OR POSTS BELOW AND SHALL HAVE CONTINUOUS VERTICAL GRAIN BLOCKING TO MATCH POST ABOVE FOR FULL BEARING THROUGH FLOORS TO THE FOUNDATION.
12. SPLICE ALL TOP PLATE SPLICES PER DETAIL 10/S4.1.
13. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

Upper Floor Framing Plan

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

SSF STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

DRAWN: SJB
DESIGN: JRC
CHECKED: RJA
APPROVED: ABB

REVISIONS:

DPD:

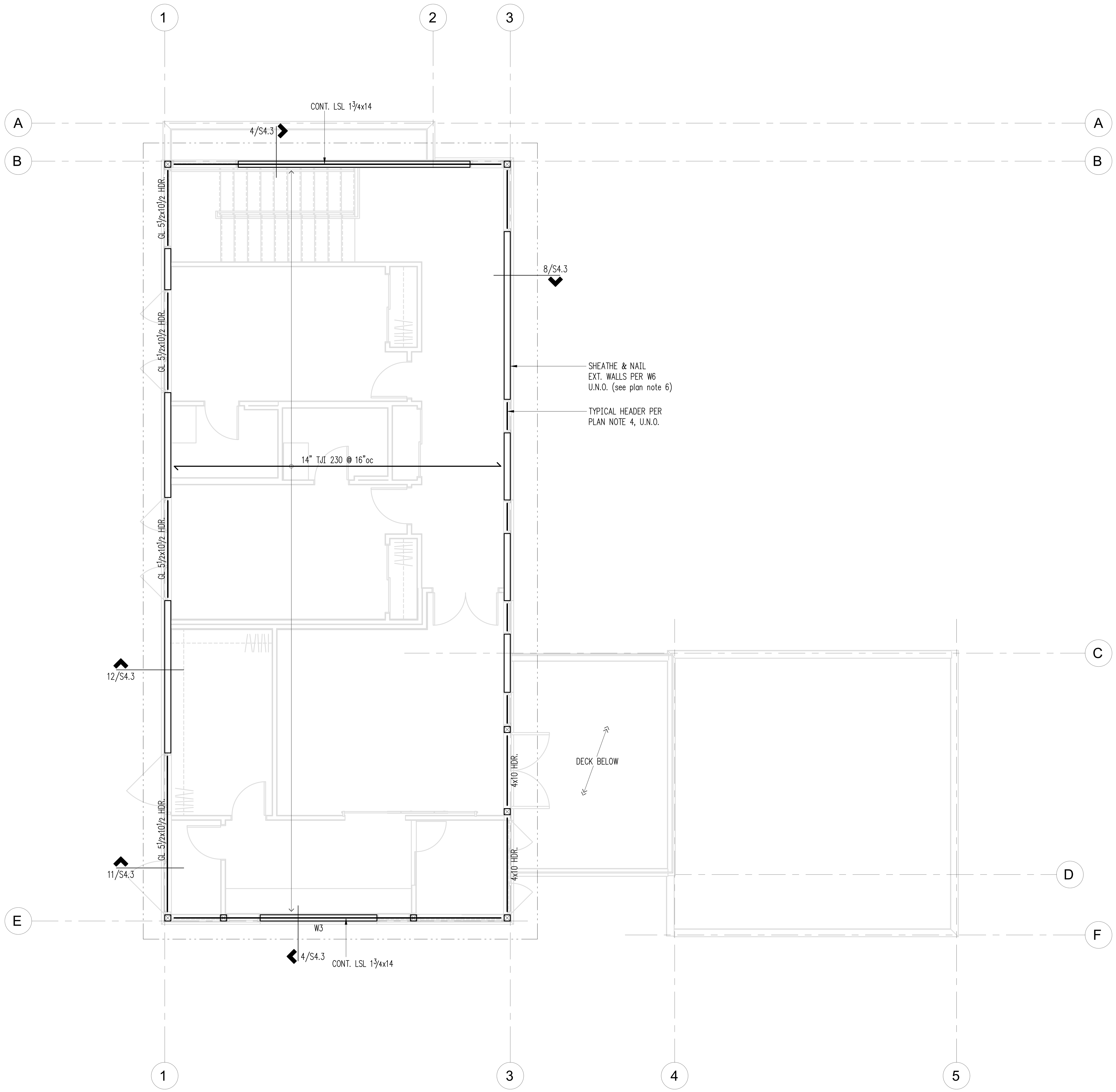
PROJECT TITLE:
Paek Residence
2215 80th Ave SE
Mercer Island, WA 98040

ARCHITECT:
MZA Architecture
600 108th Ave NE, Suite 108
Bellevue, WA 98004
PH 425.559.7888

ISSUE:
Permit

SHEET TITLE:
Upper Floor Framing Plan

SCALE: 1/4" = 1'-0" U.N.O.
DATE: Sept. 4, 2018
PROJECT NO: 10604-2018-01-00
SHEET NO: S2.3



Legend

- STRUCTURAL WALL BELOW
- NON-STRUCTURAL WALL BELOW
- Wx — SHEARWALL PER 12/S4.1
- SPAN DIRECTION
- EXTENT OF JOISTS
- HEADER/BEAM PER PLAN
- HANGER

Plan Notes

1. DO NOT SCALE DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
2. ROOF SHEATHING SHALL BE 1/2" A.P.A. RATED PANELS (EXPOSURE 1, SPAN RATING 32/16), FACE GRAIN PERPENDICULAR TO SUPPORTS OVER ROOF FRAMING PER PLAN. NAIL SHEATHING AT ALL FRAMED PANEL EDGES WITH 8d AT 6"oc AND TO ALL INTERMEDIATE FRAMING AT 12"oc.
3. ROOF FRAMING SHALL BE 14"TJI 230 @ 16"oc.
4. HEADERS OVER DOOR AND WINDOW OPENINGS SHALL BE (2) 2x10 MINIMUM. PROVIDE (2) TRIMMER STUDS (MINIMUM) AT EACH END OF ALL HEADERS UNLESS NOTED OTHERWISE ON PLANS. SEE DETAIL 6/S4.1 FOR TYPICAL INSTALLATION.
5. PROVIDE (2) STUDS (MINIMUM) AT EACH END OF ALL BEAMS UNLESS NOTED OTHERWISE ON PLANS. BEAR BEAM FULLY ON BUILT UP COLUMN AND PROVIDE AC, PC, OR LPC CAP.
6. W# INDICATES SHEAR WALL. SEE SHEARWALL SCHEDULE, 12/S4.1, FOR CONSTRUCTION REQUIREMENTS. ALL EXTERIOR WALLS SHALL BE W6, UNLESS NOTED OTHERWISE ON PLANS.
7. PROVIDE H2.5A HURRICANE TIE AT EACH TJI RAFTER WHERE IT BEARS ON EXTERIOR WALL.
8. MANUFACTURED LUMBER PRODUCTS (GL) SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%.
9. SPLICE ALL TOP PLATE SPLICES PER DETAIL 10/S4.1.
10. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL REQUIREMENTS.

Roof Framing Plan

Scale: ¼" = 1'-0"

STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

DRAWN: SJB
DESIGN: JRC
CHECKED: RJA
APPROVED: ABB

REVISIONS:

DPD:

PROJECT TITLE:
Paek Residence
2215 80th Ave SE
Mercer Island, WA 98040

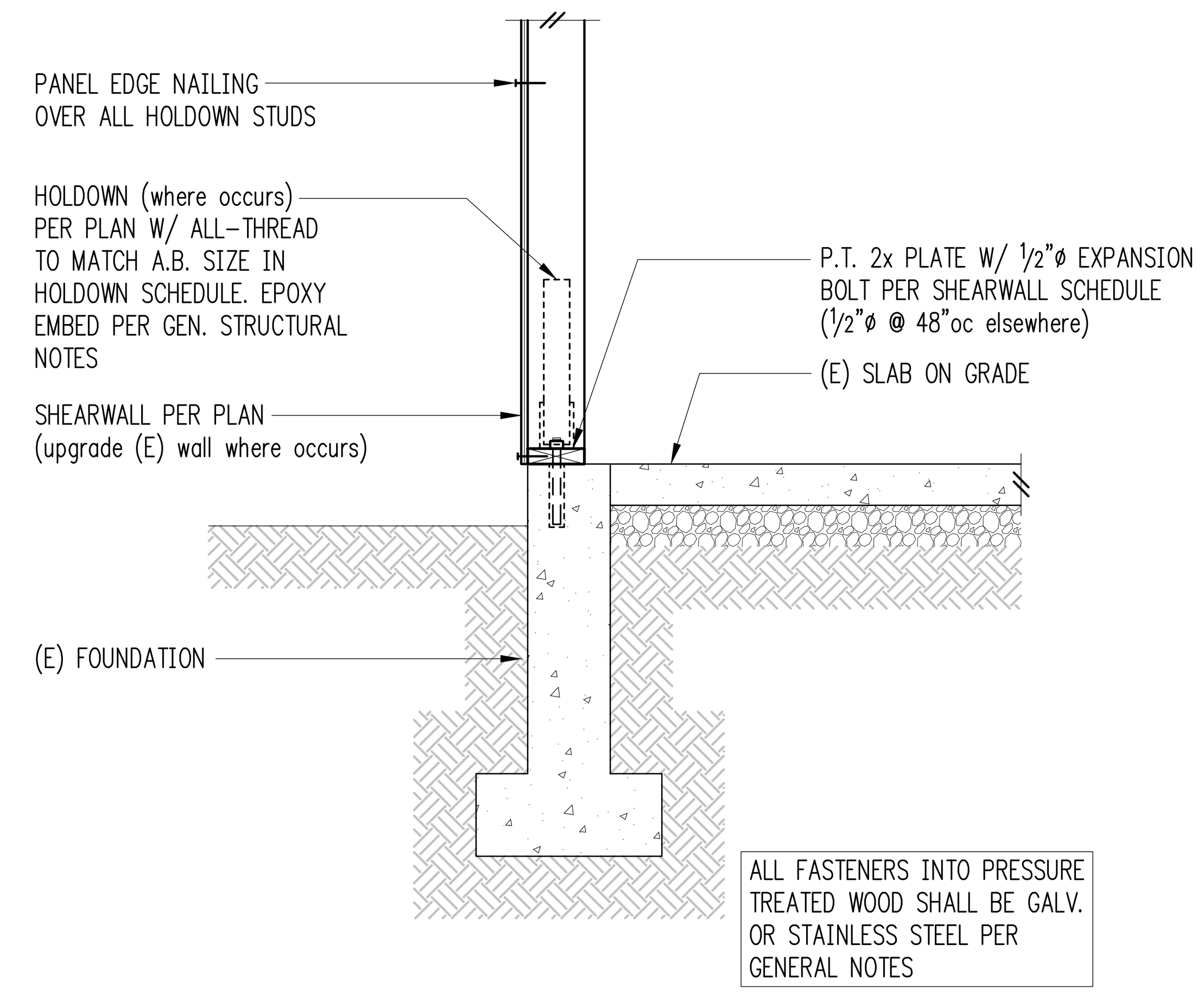
ARCHITECT:
MZA Architecture
600 108th Ave NE, Suite 108
Bellevue, WA 98004
PH 425.559.7888

ISSUE:
Permit

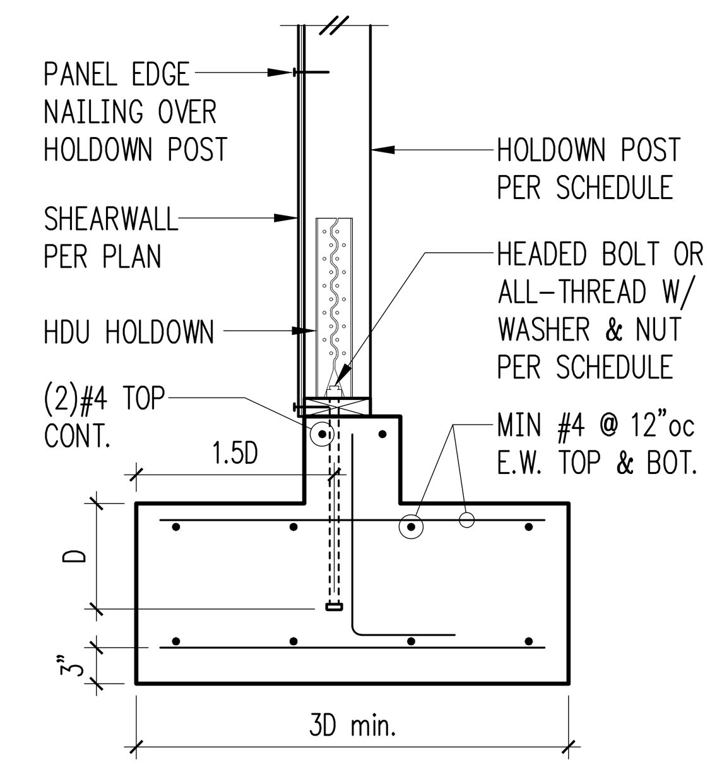
SHEET TITLE:
Roof Framing Plan

SCALE: 1/4" = 1'-0" U.N.O.
DATE: Sept. 4, 2018
PROJECT NO: 10604-2018-01-00
SHEET NO: S2.4

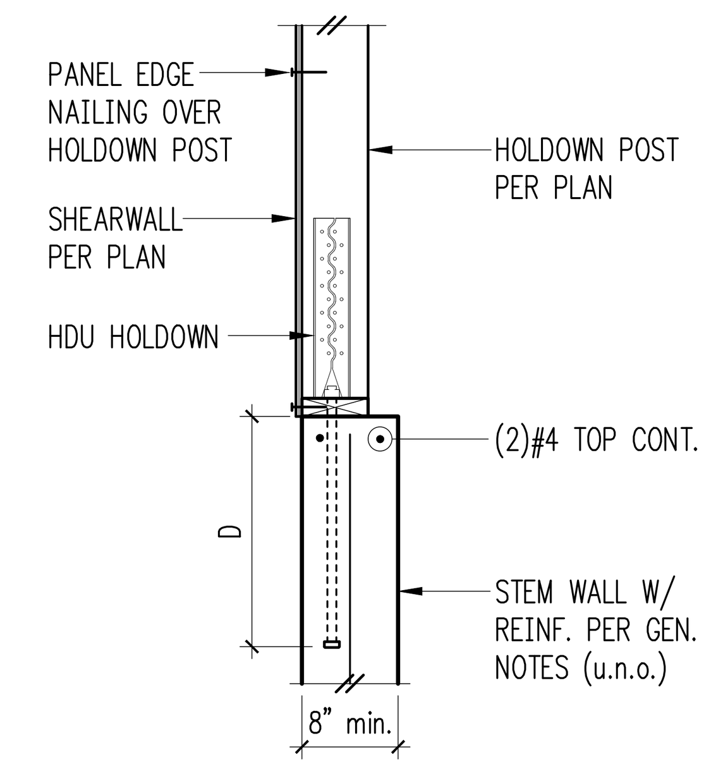
1



Exterior Wall w/ Slab on Grade 2



HDU Into Footing Option



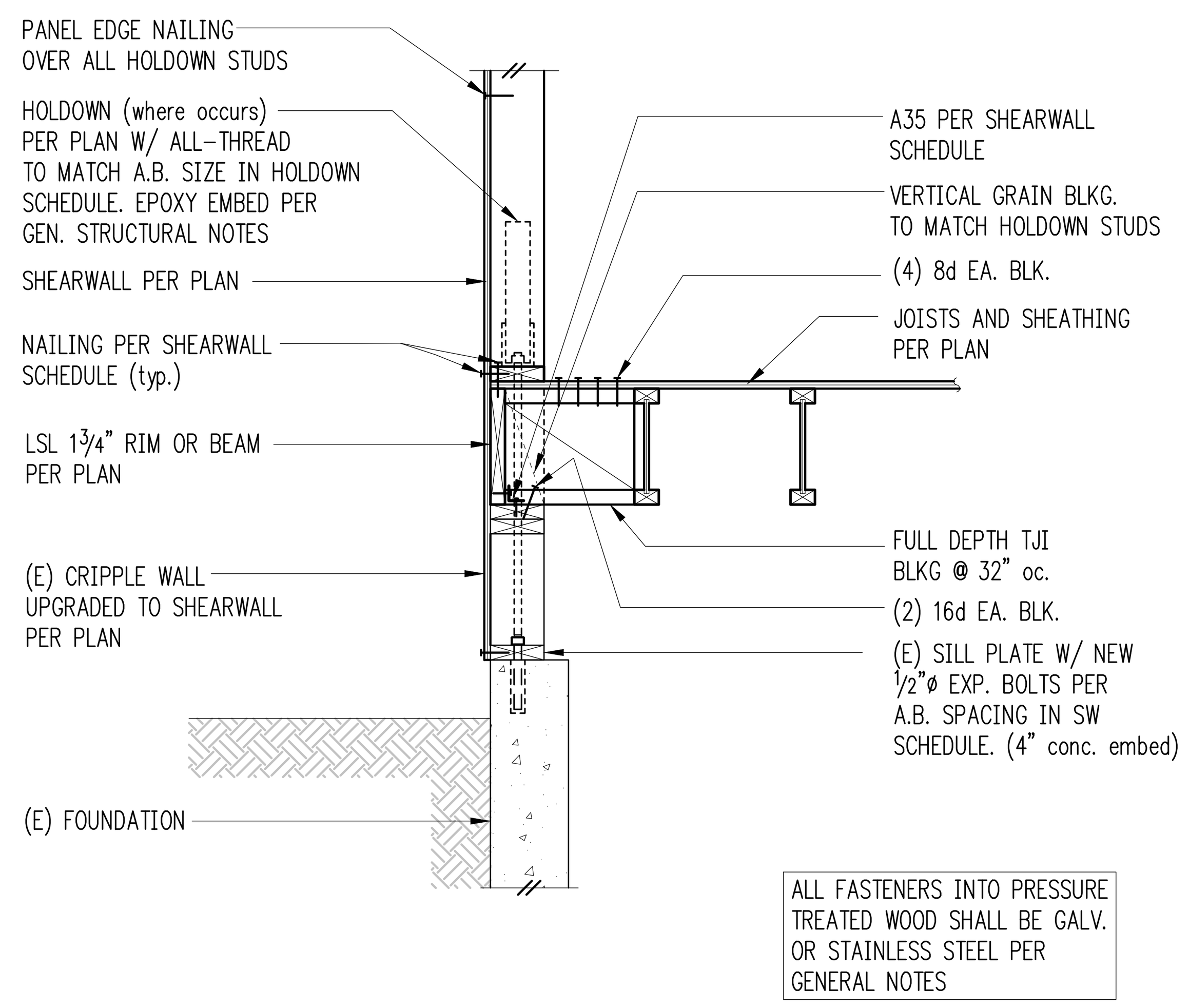
HDU Into Stem Wall Option

Holdown Schedule

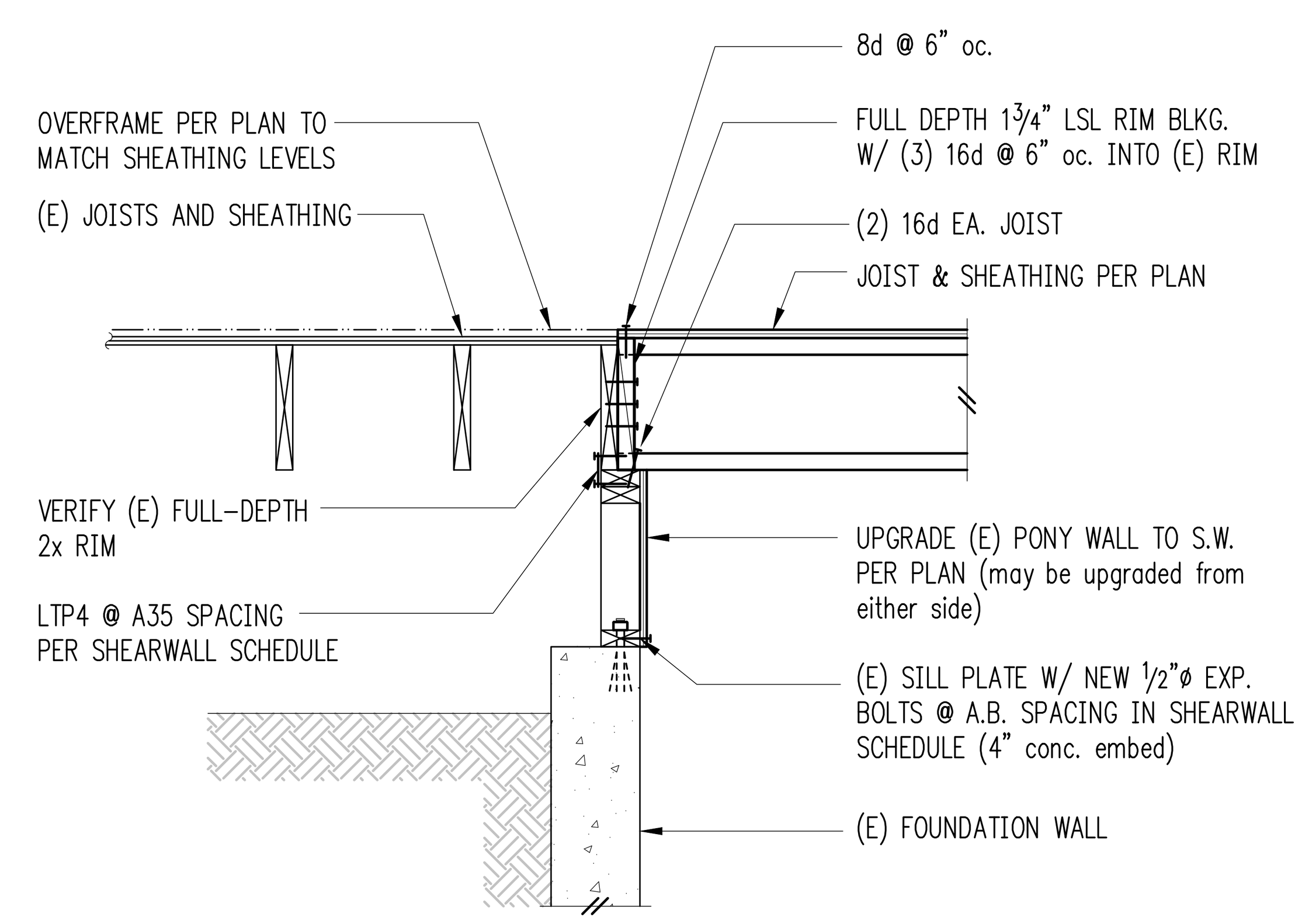
Plan Mark	Screws	Anchor Bolt	Min. A.B. Embed (D)		Holdown Post ①	
			Stem Wall	Footing	if 2x4	if 2x6
HDU2-SDS2.5	(6)SDS 1/4"x2 1/2"	5/8"ø	12"	4"	(2) 2x4	(2) 2x6
HDU4-SDS2.5	(10)SDS 1/4"x2 1/2"	5/8"ø	18"	6"	4x4	4x6
HDU5-SDS2.5	(14)SDS 1/4"x2 1/2"	5/8"ø	SB5/8x24	7"	4x4	4x6
HDU8-SDS2.5	(20)SDS 1/4"x2 1/2"	7/8"ø	SSTB28	8"	4x6	6x6
HDU11-SDS2.5	(30)SDS 1/4"x2 1/2"	1"ø	SB1x30	10"	4x8	6x6
HDU14-SDS2.5	(36)SDS 1/4"x2 1/2"	1"ø	N/A	12"	4x8	6x6

① MINIMUM SIZE OF POST AT END OF WALL UNLESS OTHERWISE NOTED ON FRAMING PLANS.

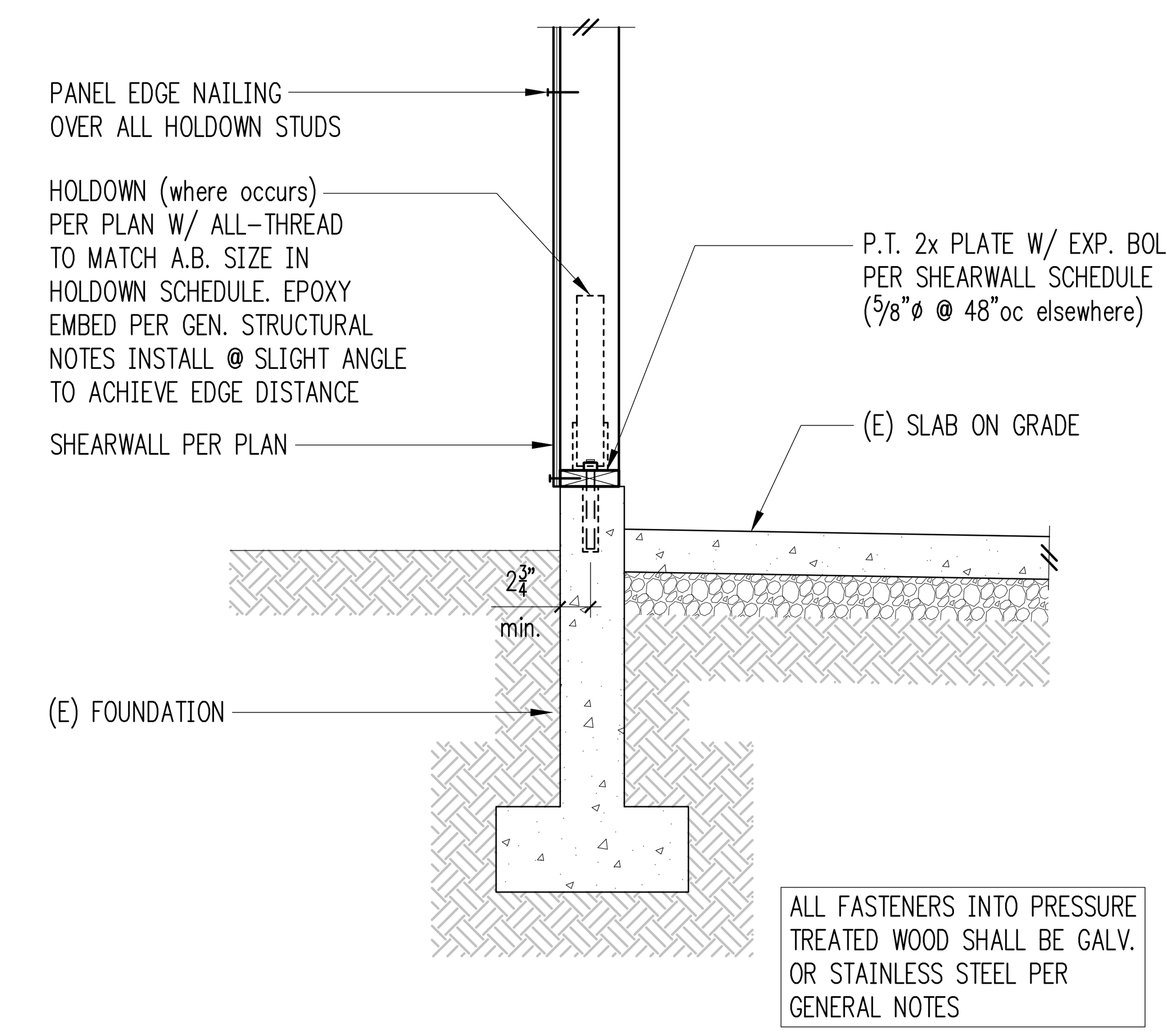
Typical HDU Holdown 4



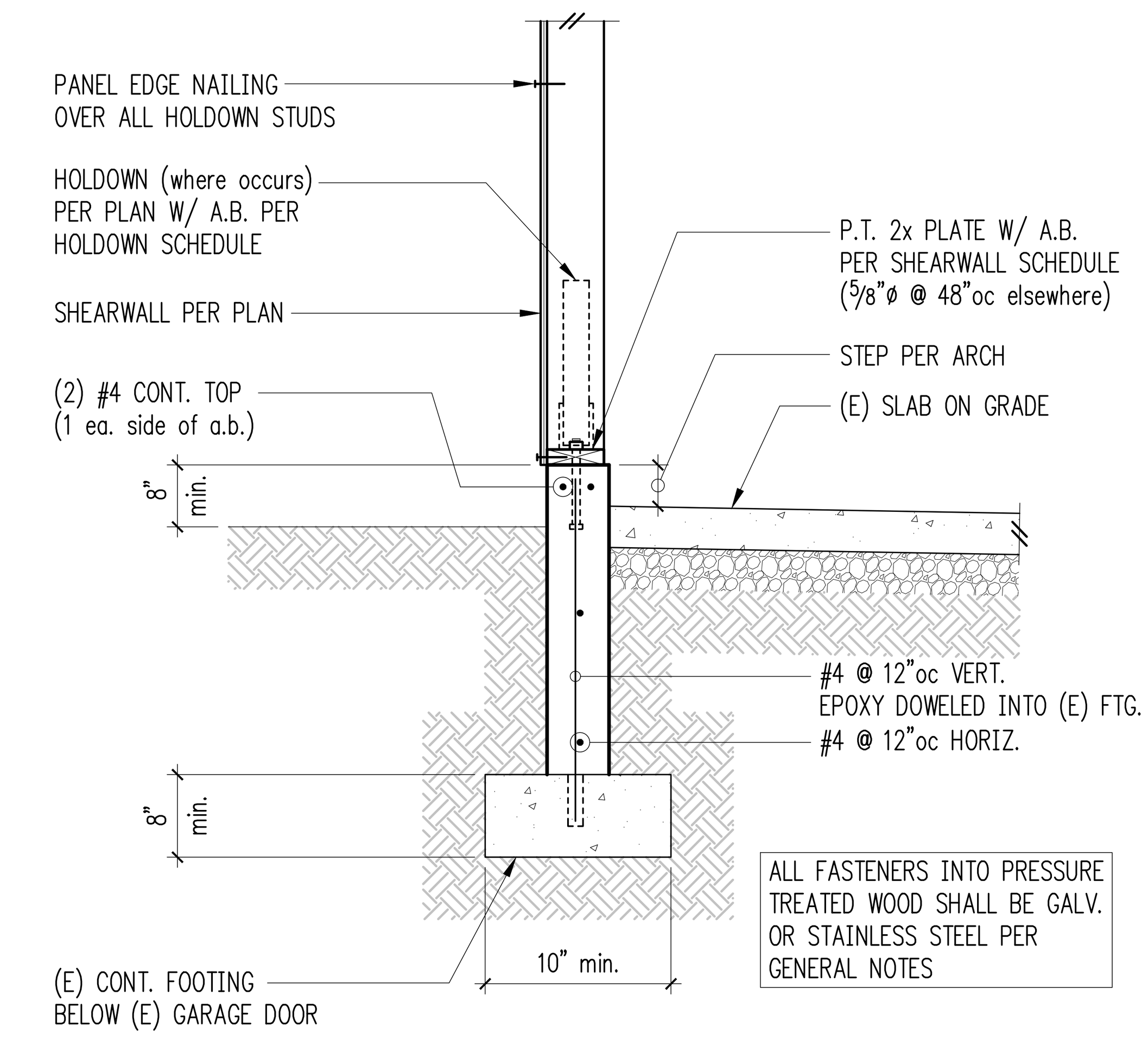
Exterior Framing at Basement w/ Cripple Wall 5



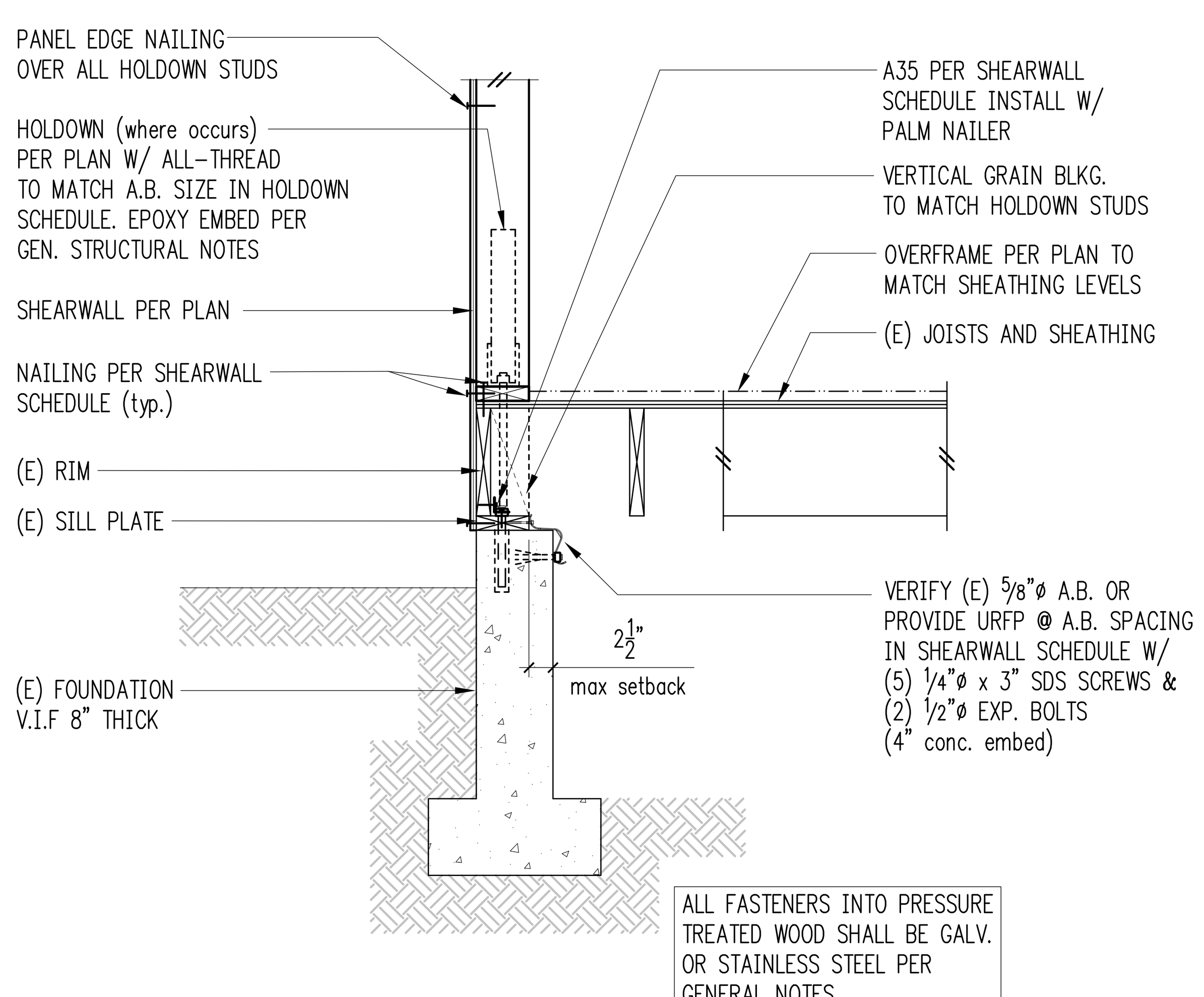
6



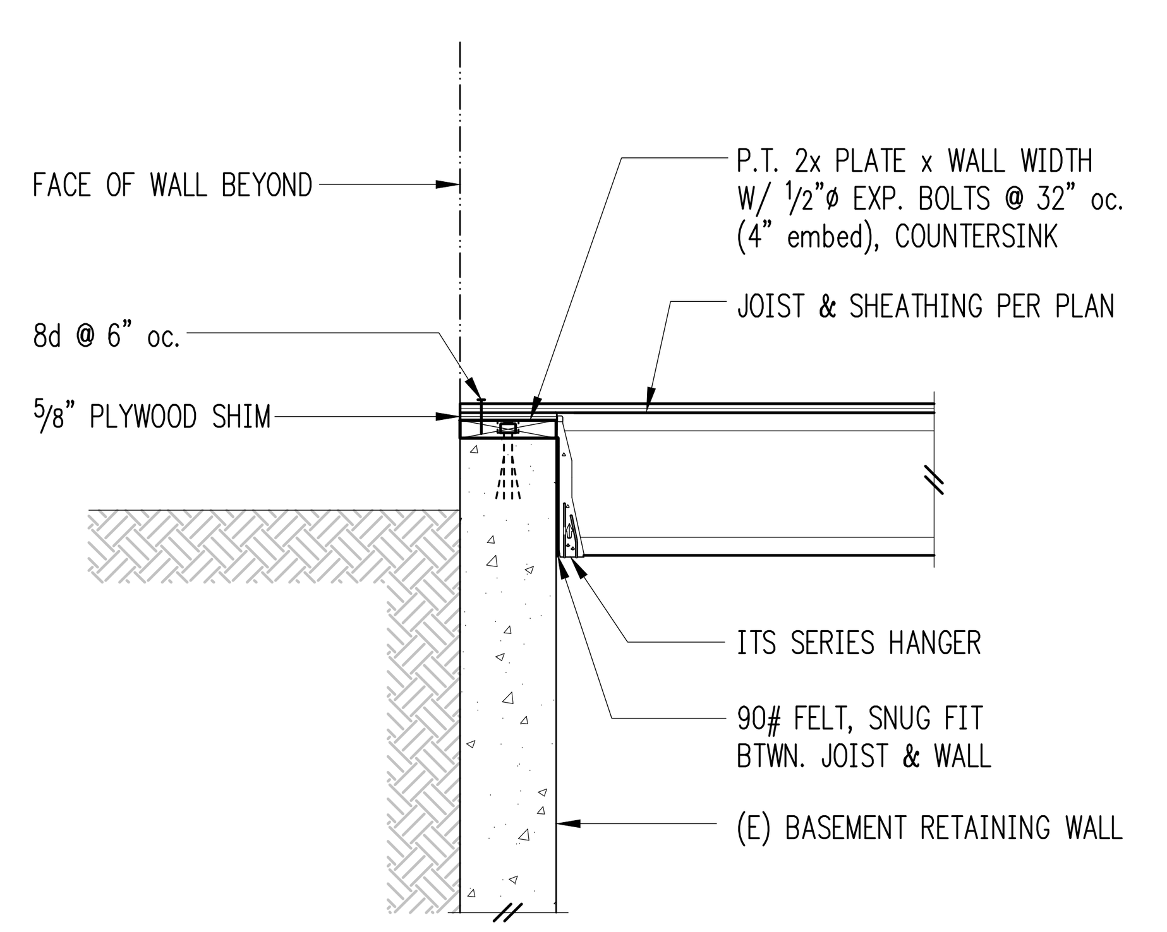
6" Garage Wall w/ Slab on Grade 7



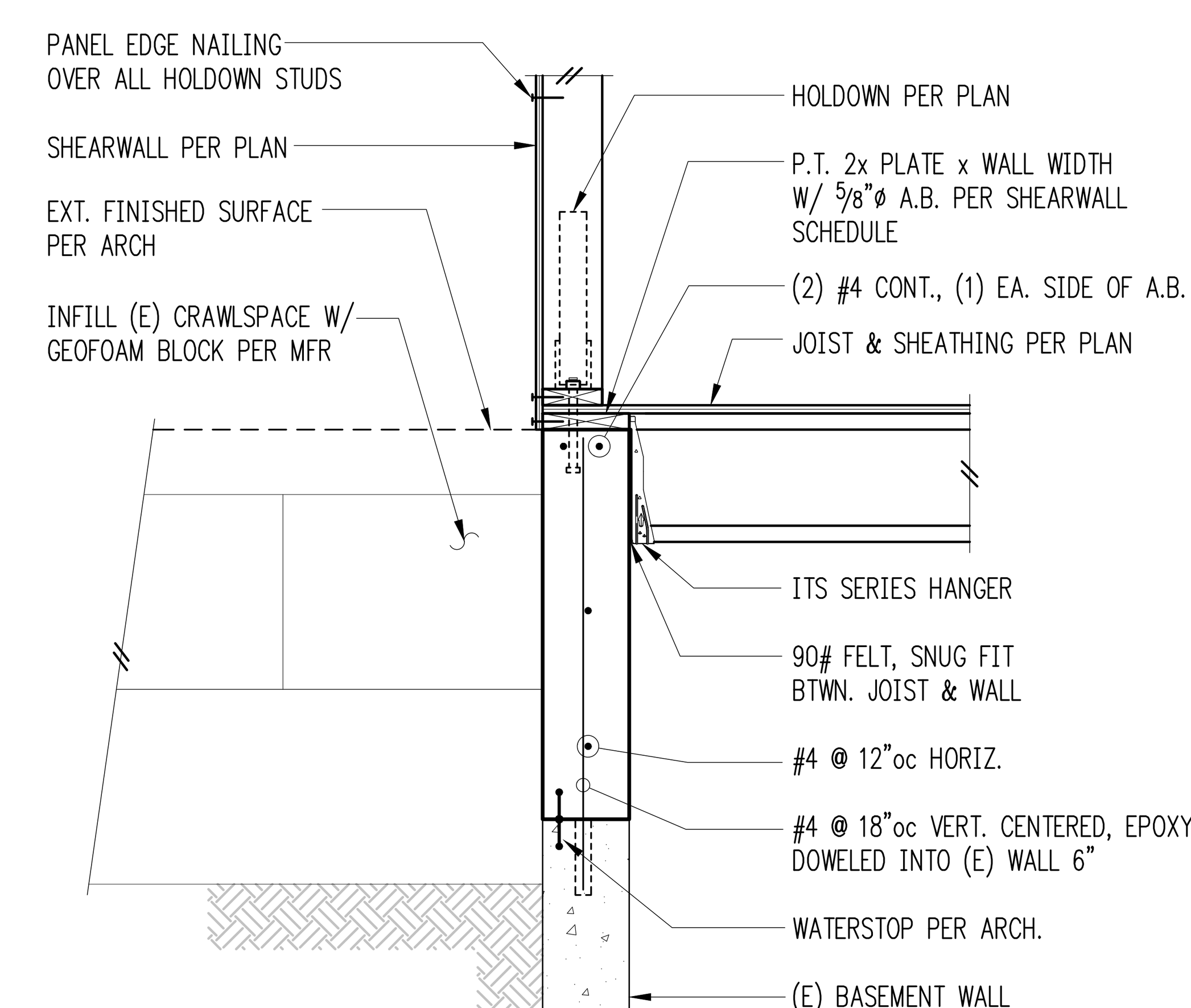
6" Garage Wall w/ Slab on Grade 8



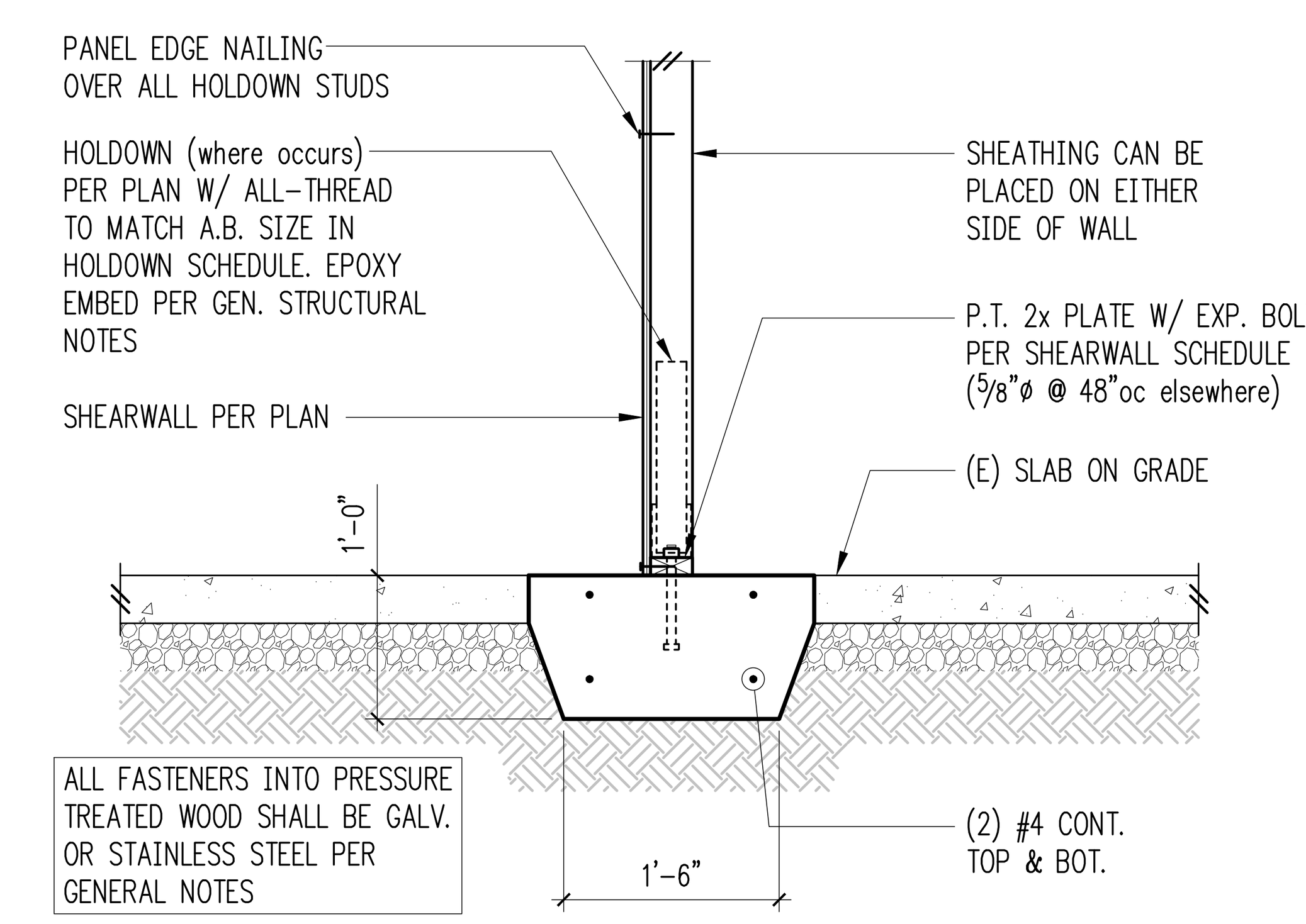
Exterior Framing at Crawl Space 9



10



11



Interior Wall w/ Thickened Slab 12

SSF STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

DRAWN: SJB
DESIGN: JRC
CHECKED: RJA
APPROVED: ABB

REVISIONS:

DPD:

PROJECT TITLE:
Paek Residence
2215 80th Ave SE
Mercer Island, WA 98040

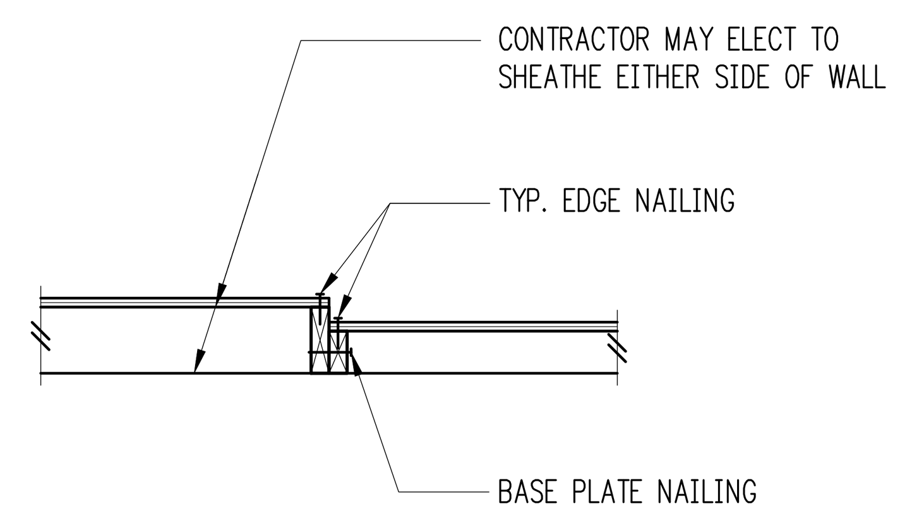
ARCHITECT:
MZA Architecture
600 108th Ave NE, Suite 108
Bellevue, WA 98004
PH 425.559.7888

ISSUE: Permit

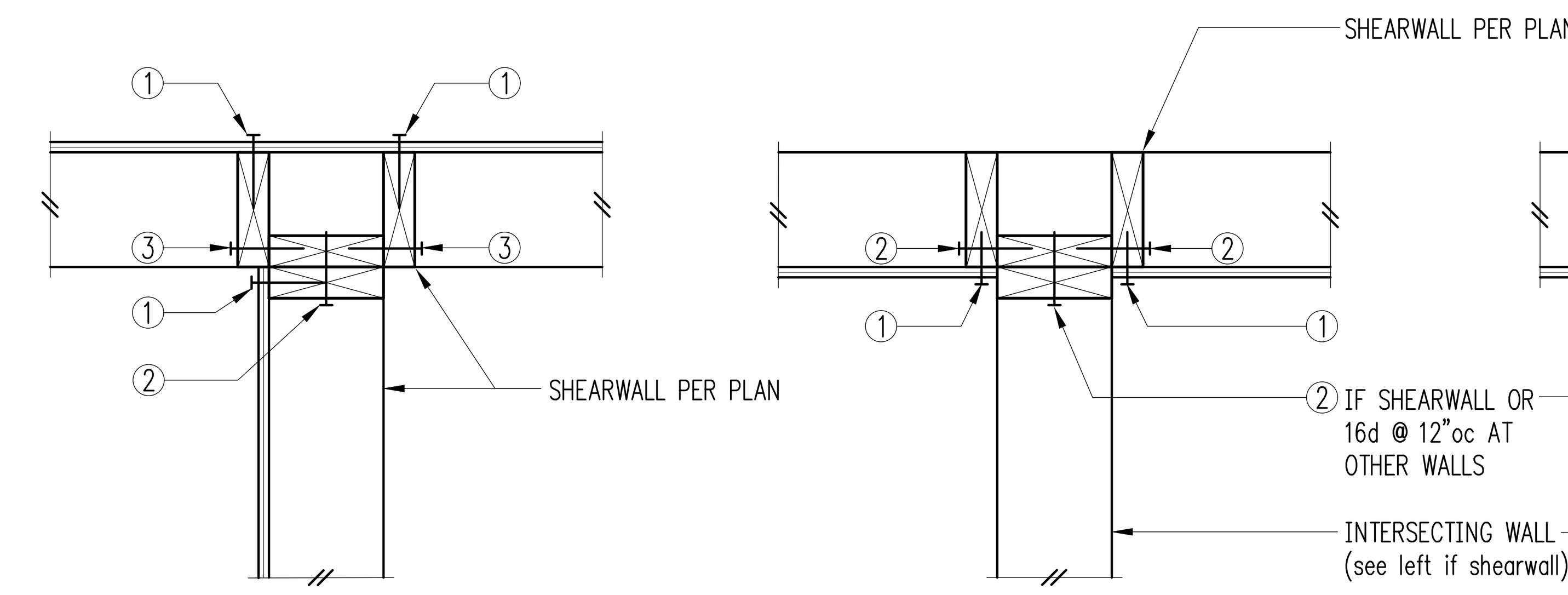
SHEET TITLE: Foundation Sections & Details

SCALE: 3/4 = 1'-0" U.N.O.
DATE: Sept. 4, 2018
PROJECT NO: 10604-2018-01-00
SHEET NO: S3.1

1



Typical Shearwall at Changing Wall Thickness 2

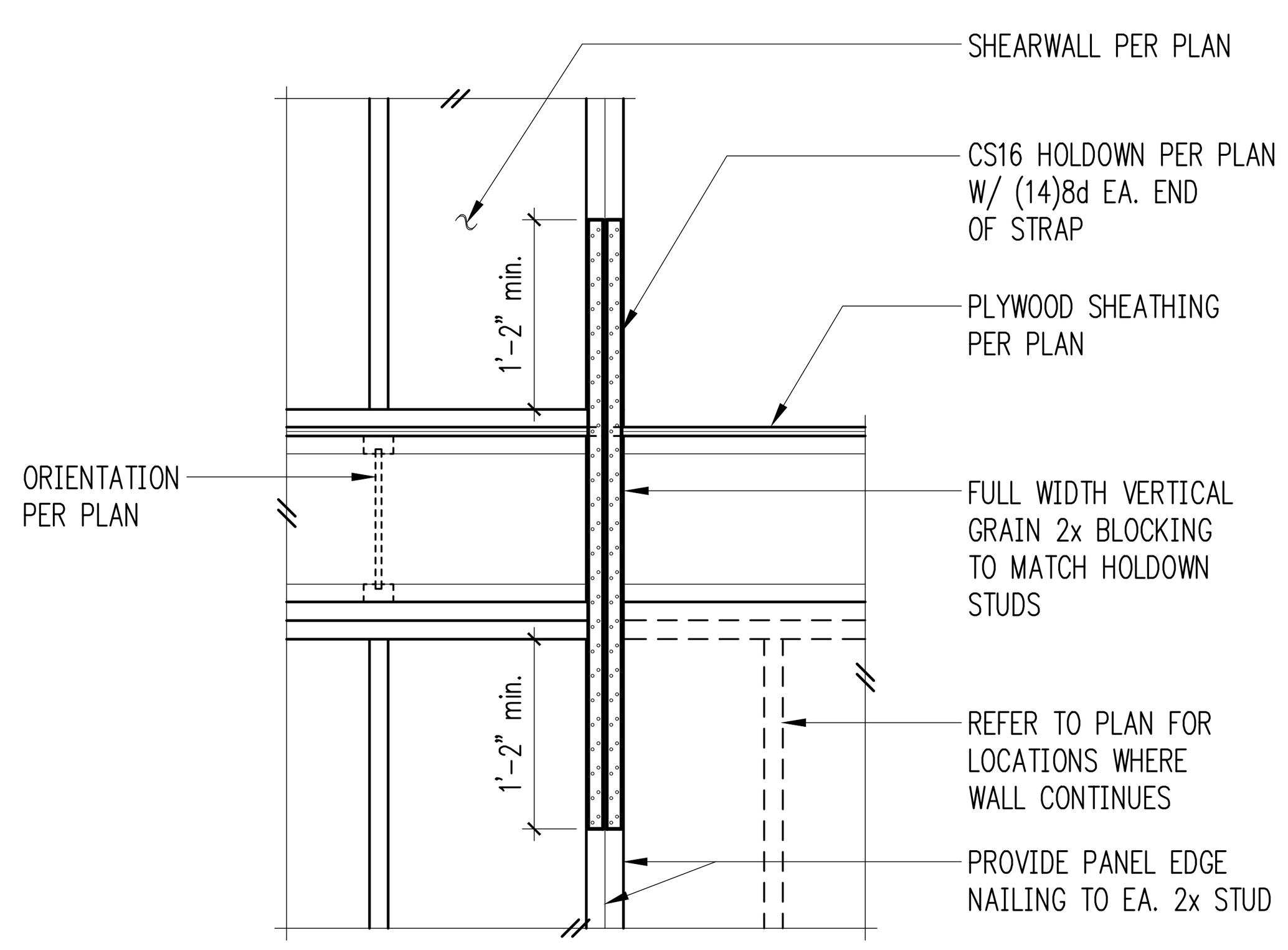


① PLYWOOD PANEL EDGE NAILING PER SHEARWALL SCHEDULE

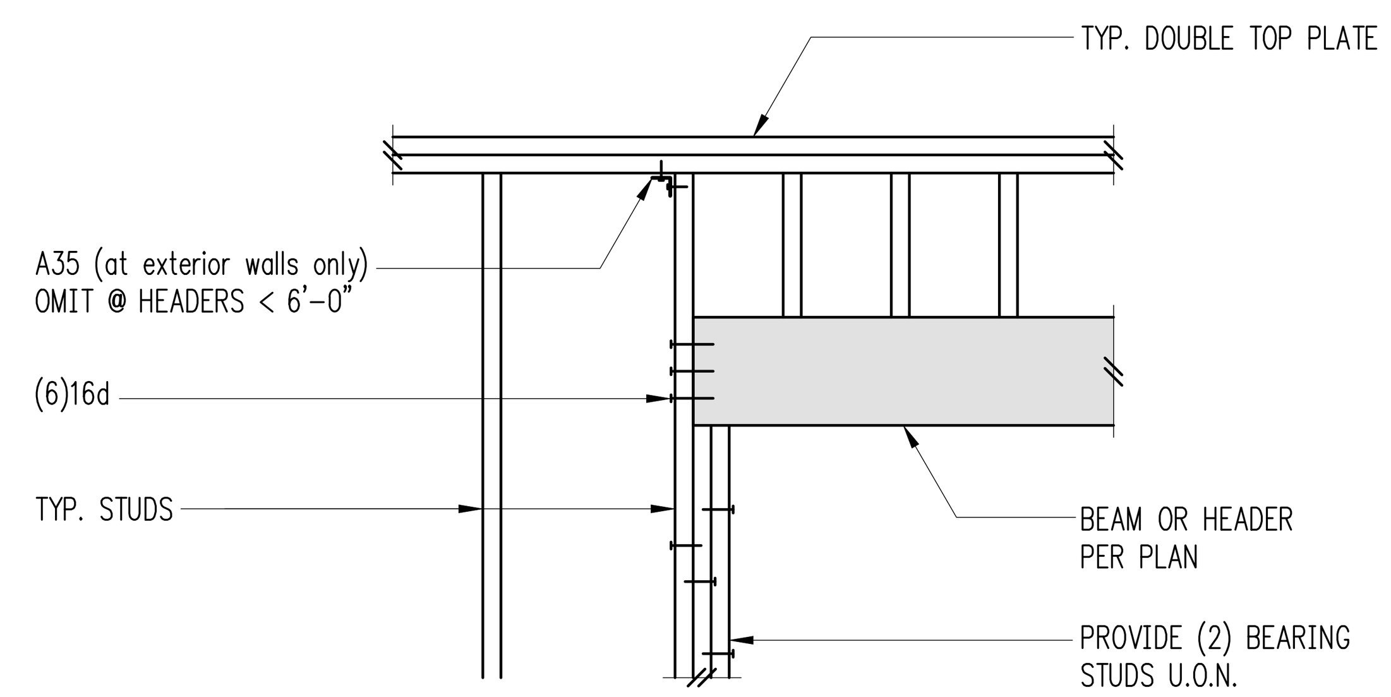
② BASE PLATE NAILING PER SHEARWALL SCHEDULE

③ 16d @ 8"oc

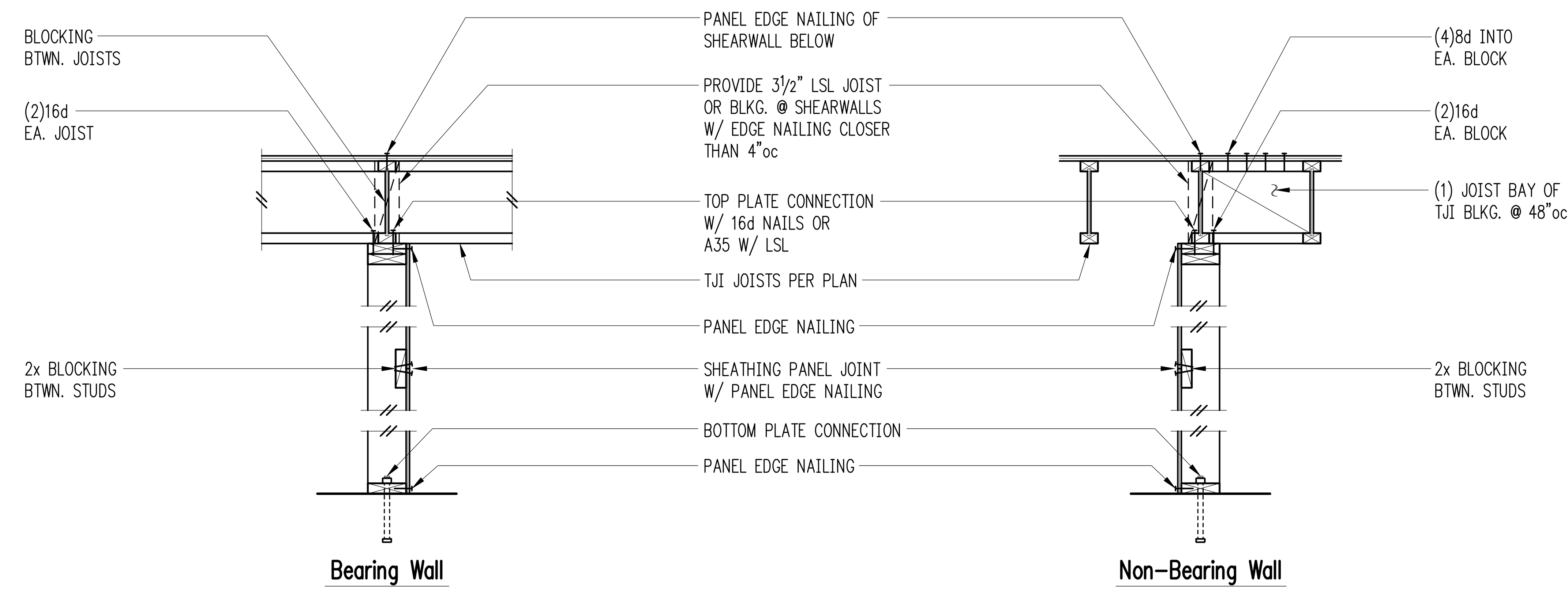
Typical Shearwall Intersections 4



Typical CS16 Holdown 5

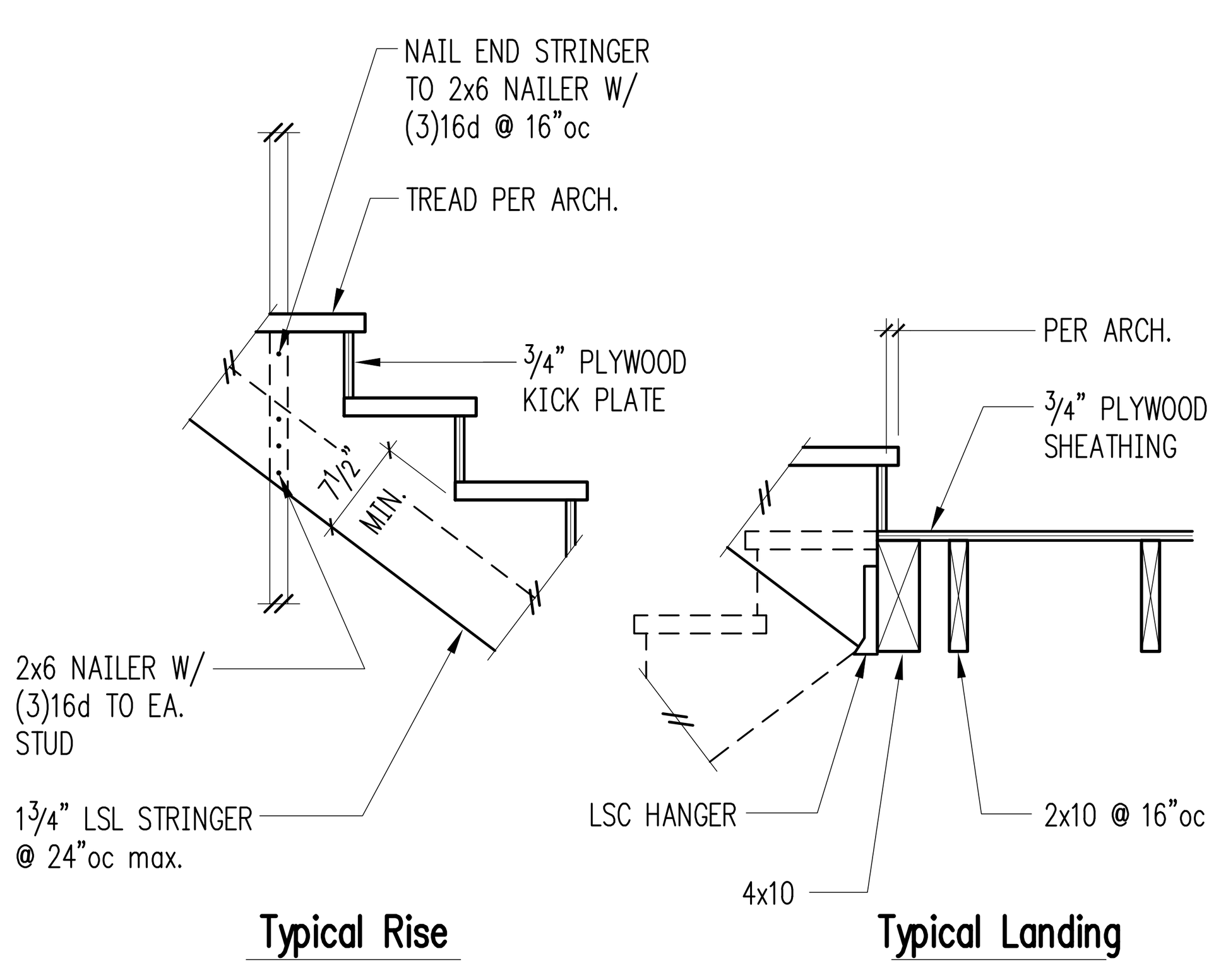


Typical Header Support w/2 Bearing Studs 6



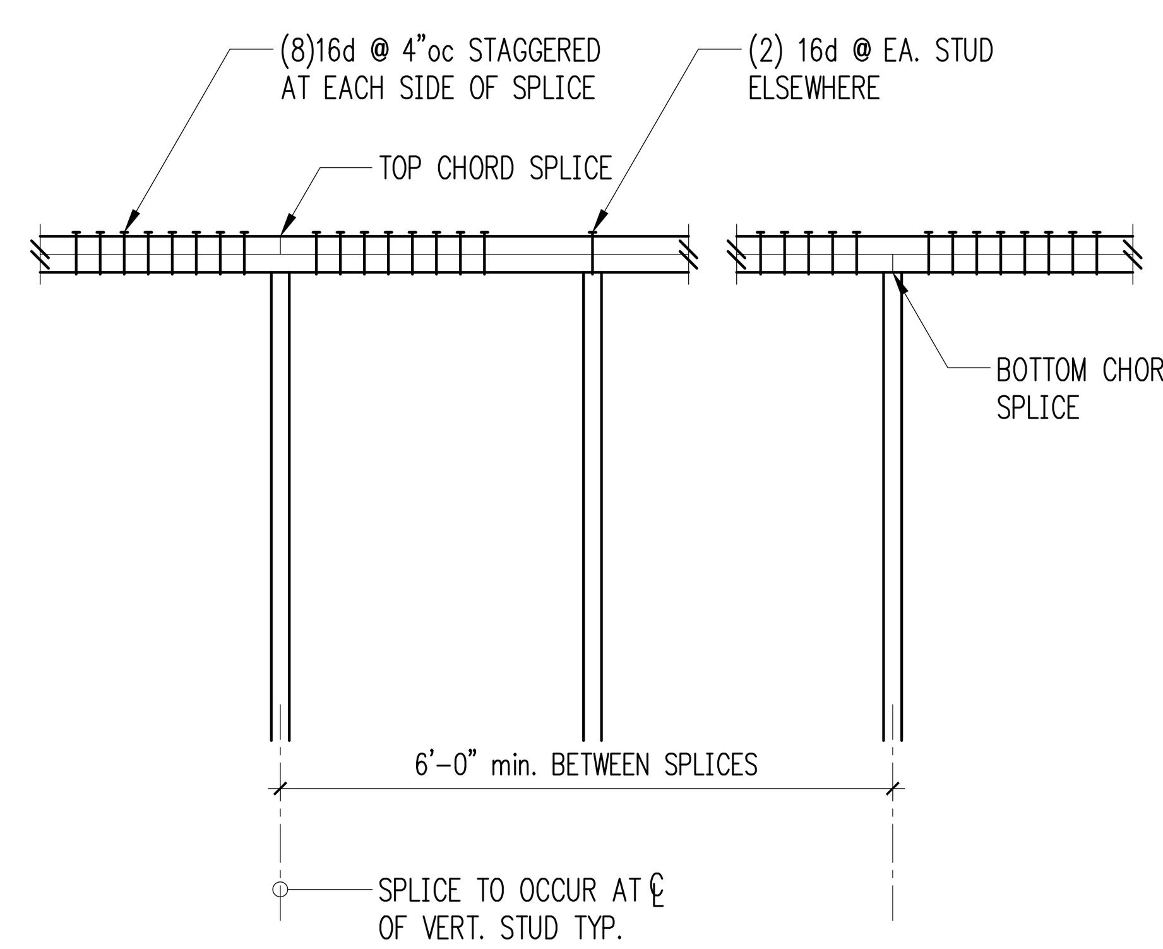
NOTE:
SEE SHEARWALL SCHEDULE FOR ALL NAILING AND CONNECTIONS, NOT OTHERWISE NOTED

Typical Shearwall Construction 8

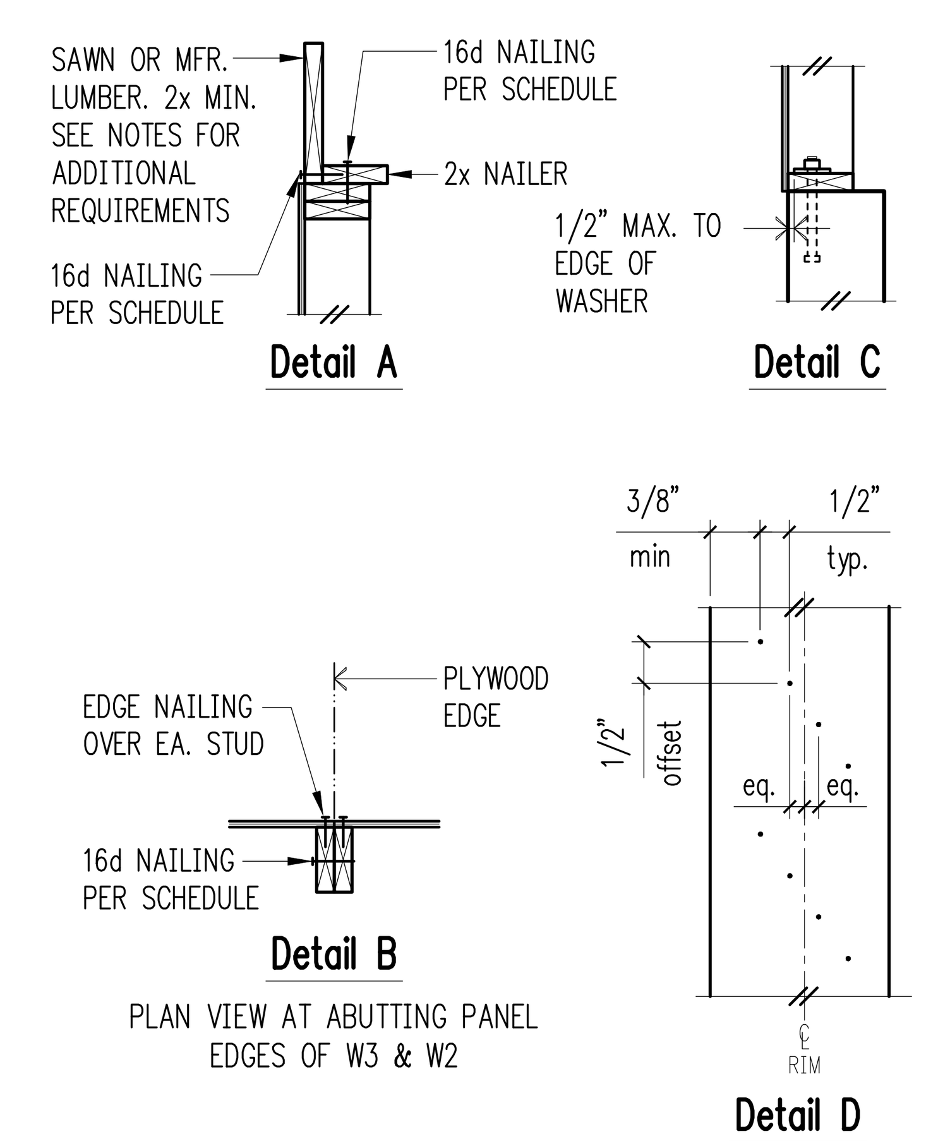


ALL TREAD AND RISER DIMENSIONS PER ARCH.

Typical Stair and Landing Detail 9



Typical Top Plate Splice 10



Shearwall Schedule ①②③⑤⑥⑦

Mark	Sheathing	Panel Edge Nailing	Top Plate Connection		Base Plate Connection	
			if TJI	if Wood ⑧⑨	at Wood ⑩	at Concrete
W6	15/32" CDX PLYWOOD	8d @ 6"oc	16d @ 6"oc	A35 @ 24"oc	16d @ 6"oc	5/8"ø A.B. @ 48"oc
W4	15/32" CDX PLYWOOD	8d @ 4"oc	16d @ 4"oc	A35 @ 16"oc	(2)rows 16d @ 6"oc	5/8"ø A.B. @ 32"oc
W3 ④	15/32" CDX PLYWOOD	8d @ 3"oc	(2)rows 16d @ 4"oc	A35 @ 12"oc	(2)rows 16d @ 6"oc	5/8"ø A.B. @ 24"oc
W2 ④	15/32" CDX PLYWOOD	8d @ 2"oc	(2)rows 16d @ 4"oc	A35 @ 9"oc	(2)rows 16d @ 4"oc ⑪	5/8"ø A.B. @ 16"oc

① BLOCK PANEL EDGES WITH 2x MIN. LAID FLAT AND NAIL PANELS TO INTERMEDIATE SUPPORTS WITH 8d @ 12"o.c.

② 8d NAILS SHALL BE 0.131"ø x 2 1/2" (common) – 16d NAILS SHALL BE 0.135"ø x 3 1/2" (box)

③ EMBED ANCHOR BOLTS AT LEAST 7". EXPANSION BOLTS MAY BE SUBSTITUTED FOR ANCHOR BOLTS WITH 4" EMBEDMENT. TITEN HD SCREW ANCHORS MAY BE SUBSTITUTED FOR ANCHOR BOLTS W/ 4" EMBEDMENT. ALL BOLTS SHALL HAVE 3" x 3" x 1/4" MIN. PLATE WASHERS. PLATE WASHERS SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE WITH SHEATHING. SEE DETAIL C.

④ 3x STUDS OR DOUBLE STUDS NAILED TOGETHER W/ BASE PLATE NAILING ARE REQUIRED AT ABUTTING PANEL EDGES OF W3 AND W2. SEE DETAIL B. WHERE 3x STUDS ARE USED FOR W2, STAGGER NAILS AT ADJOINING PANEL EDGES.

⑤ TWO STUDS MINIMUM ARE REQUIRED AT EACH END OF ALL SHEARWALLS AND ALL END STUDS SHALL RECEIVE PANEL EDGE NAILING. SEE PLANS AND HOLDOWN SCHEDULE FOR ALTERNATE REQUIREMENTS.

⑥ ALL EXTERIOR WALLS SHALL BE W6, UNLESS NOTED OTHERWISE.

⑦ 7/16" O.S.B. MAY BE SUBSITUTED FOR 15/32" CDX.

⑧ LTP4's (HORIZIONTAL ORIENTATION) W/ 8d COMMON MAY BE SUBSTITUTED FOR A35's AT CONTRACTORS OPTION.

⑨ A 2x NAILER ATTACHED W/ BASE PLATE NAILING PER DETAIL A MAY BE SUBSTITUTED FOR A35's AT CONTRACTORS OPTION.

⑩ AT MULTI-ROW NAILING, MINIMUM OFFSET BETWEEN ROWS AND ROW SPACING 1/2", SEE DETAIL D.

⑪ PROVIDE (3) ROWS 16d @ 6"oc AT LVL RIMS.

Shearwall Schedule - (Sheathed One Side) 12

SSF STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

DRAWN: SJB
DESIGN: JRC
CHECKED: RJA
APPROVED: ABB

REVISIONS:

DPD:

PROJECT TITLE:
Paek Residence
2215 80th Ave SE
Mercer Island, WA 98040

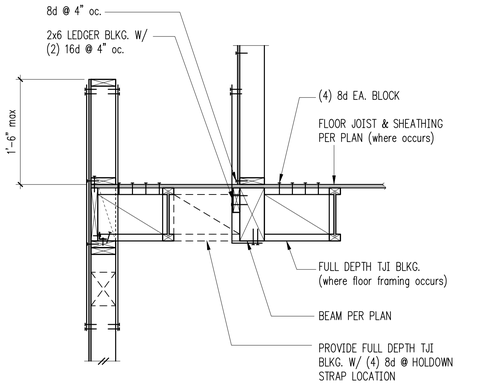
ARCHITECT:
MZA Architecture
600 108th Ave NE, Suite 108
Bellevue, WA 98004
PH 425.559.7888

ISSUE:
Permit

SHEET TITLE:
Typical Wood Sections & Details

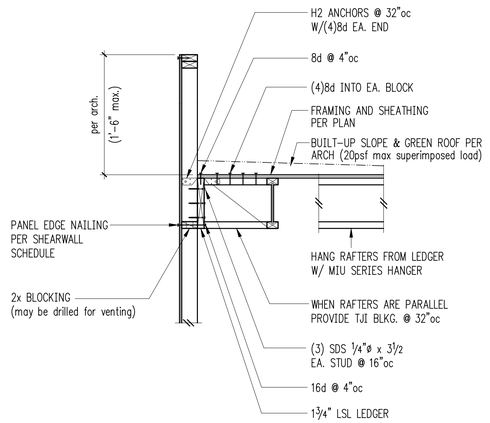
SCALE: 3/4 = 1'-0" U.N.O.
DATE: Sept. 4, 2018
PROJECT NO: 10604-2018-01-00
SHEET NO:

S4.1

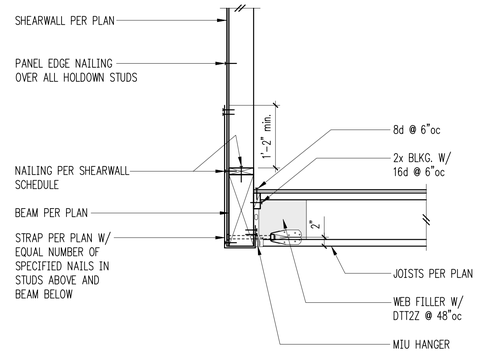


FOR CALLOUTS IN COMMON REFER 11/S4.2

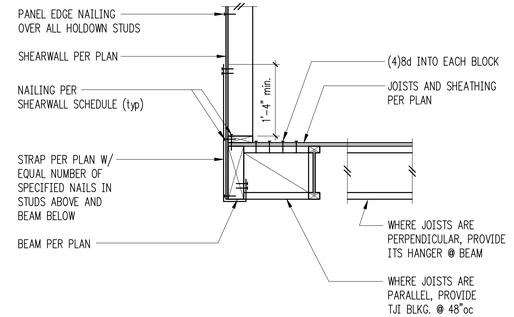
1



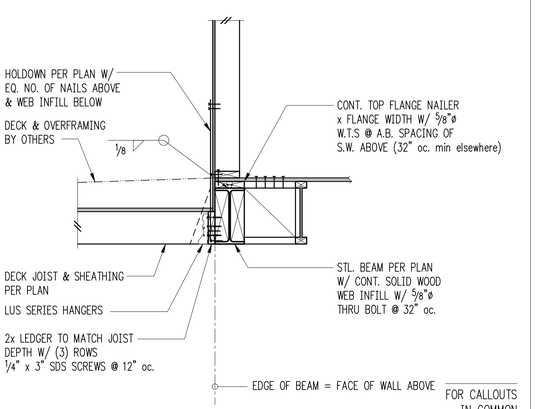
Balloon Frame Parapet 2



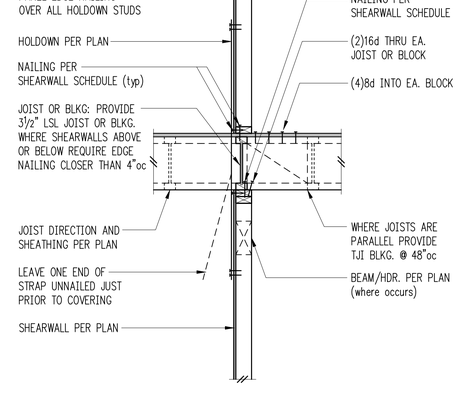
Exterior Upturned Floor Beam (W/TJI's) - Joist Perpendicular 3



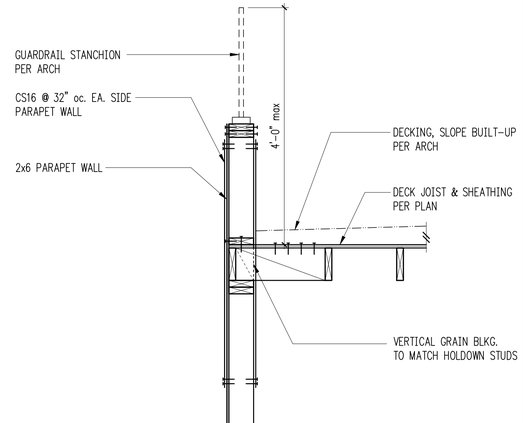
Exterior Floor Beam 4



5

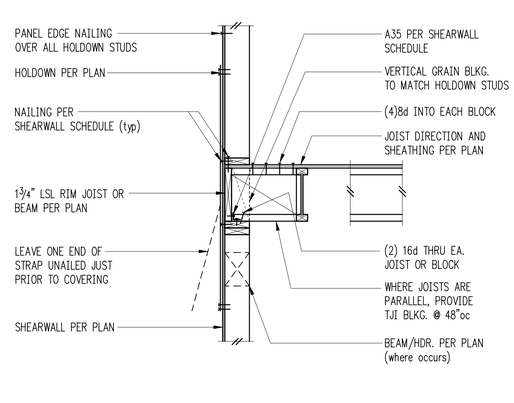


Interior Shearwall Below (W/TJI's) 6



FOR CALLOUTS IN COMMON REFER 11/S4.2

7



Exterior Framing (W/ TJI) 8

FOR CALLOUTS IN COMMON REFER 4/S4.2

9

Interior Shearwall (W/TJI's) 10

11

Exterior Floor Framing 12

STRUCTURAL ENGINEERING

2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com

934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

DRAWN: SJB
DESIGN: JRC
CHECKED: RJA
APPROVED: ABB

REVISIONS:

DPD:

PROJECT TITLE:

Paek Residence
2215 80th Ave SE
Mercer Island, WA 98040

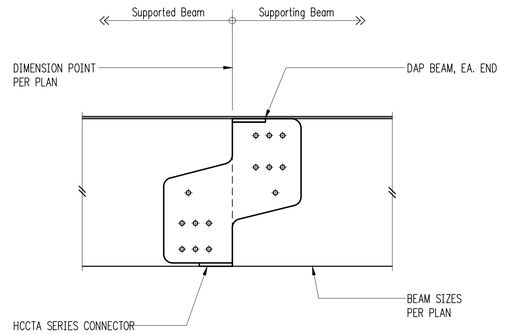
ARCHITECT:
MZA Architecture
600 108th Ave NE, Suite 108
Bellevue, WA 98004
PH 425.559.7888

ISSUE:
Permit

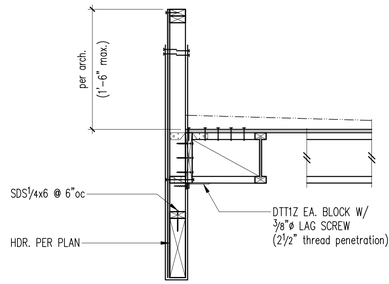
SHEET TITLE:
Wood Framing Sections & Details

SCALE: 3/4 = 1'-0" U.N.O.
DATE: Sept. 4, 2018
PROJECT NO: 10604-2018-01-00
SHEET NO:
S4.2

1

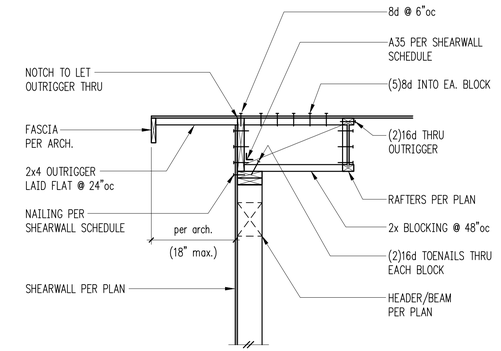


Hinge Connector 2



FOR CALLOUTS IN COMMON REFER 2/S4.2

Parapet Over Door 3

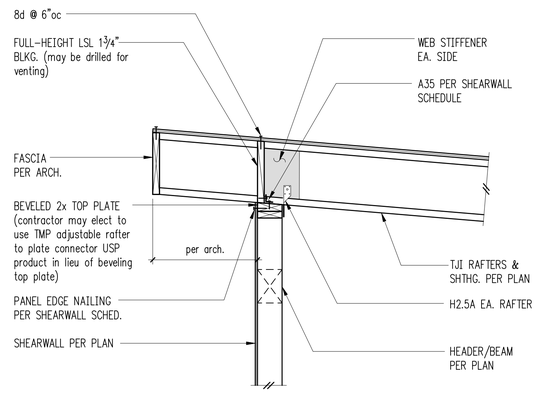


Exterior Non-Bearing Wall 4

5

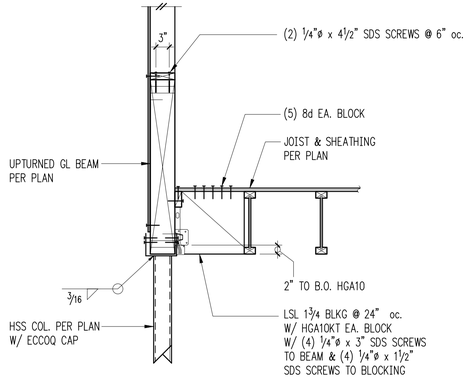
Beam Over Nana Wall 6

Deck/Balcony Framing 7

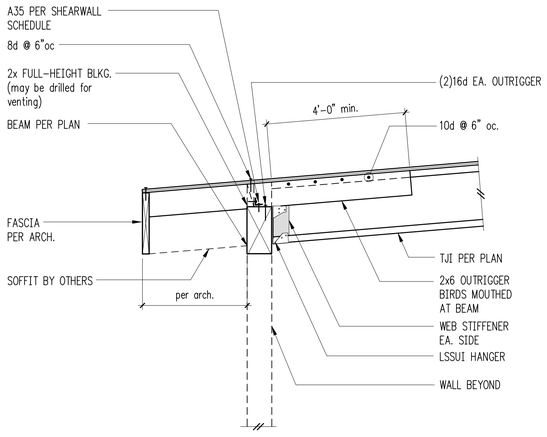


Exterior Bearing Wall 8

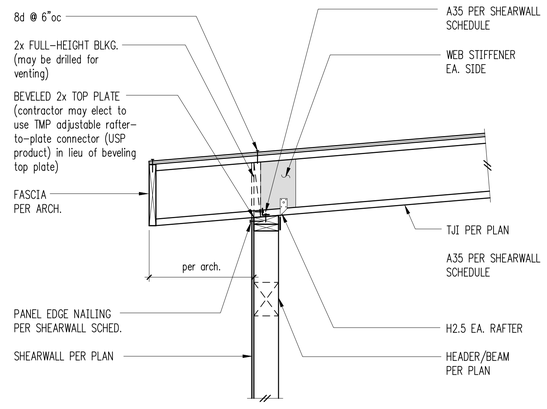
9



Upturned Beam 10



Exterior Wall at Opening 11



Exterior Bearing Wall 12

STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

DRAWN: SJB
DESIGN: JRC
CHECKED: RJA
APPROVED: ABB

REVISIONS:

DPD:

PROJECT TITLE:

Paek Residence
2215 80th Ave SE
Mercer Island, WA 98040

ARCHITECT:
MZA Architecture
600 108th Ave NE, Suite 108
Bellevue, WA 98004
PH 425.559.7888

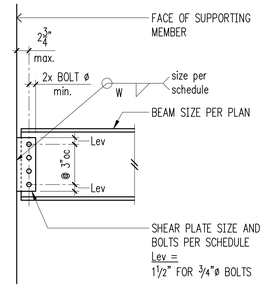
ISSUE:
Permit

SHEET TITLE:
Wood Framing Sections & Details

SCALE: 3/4 = 1'-0" U.N.O.
DATE: Sept. 4, 2018
PROJECT NO: 10604-2018-01-00
SHEET NO:
S4.3

1

2



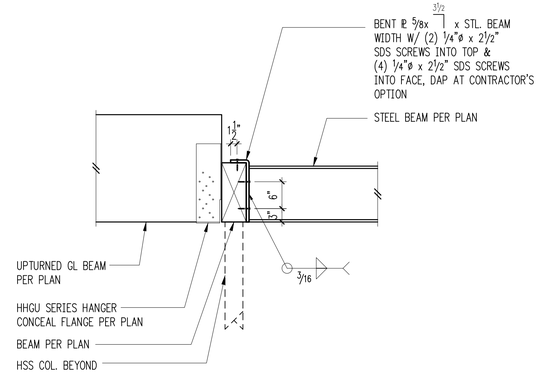
Shear Plate Schedule

Beam Size	No. of Bolts	Bolt Size	Plate Thickness	Weld Size
W12	3	¾"ø	¼"	5/16"

NOTES:

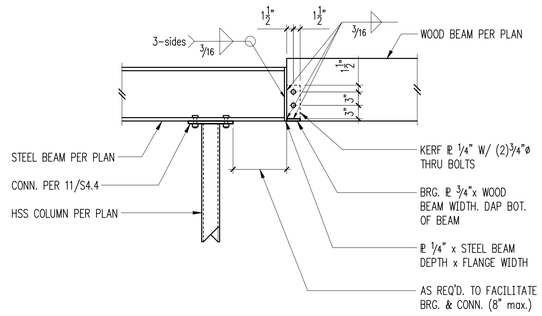
1. STANDARD OR SLOTTED HOLES MAY BE USED.
2. BOLT TYPE A325N.
3. PL MATERIAL – A36
4. SEE EXTENDED PL DETAIL FOR COLUMN WEB CONNECTIONS.

Typical Single Shear Plate Connection and Schedule 3

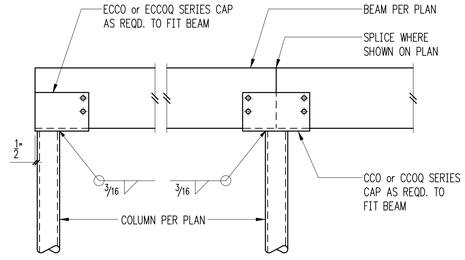


4

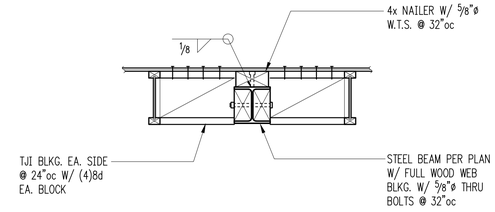
5



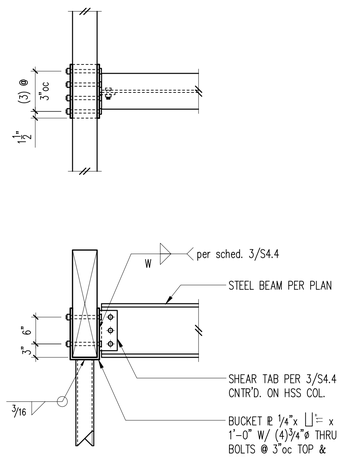
6



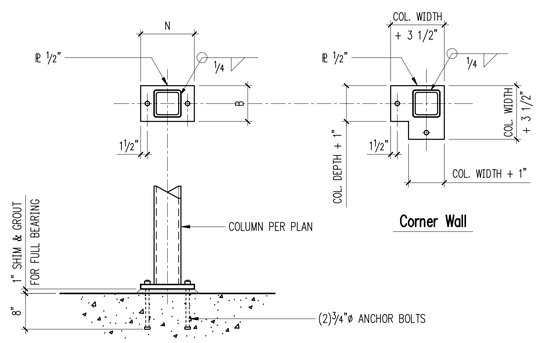
CC/CCQ Series Connection at Steel Column 7



Steel Beam (w/TJI) Parallel to Framing 8

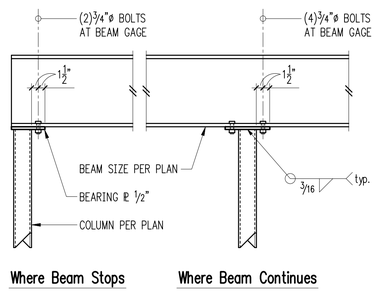


9



Corner Wall

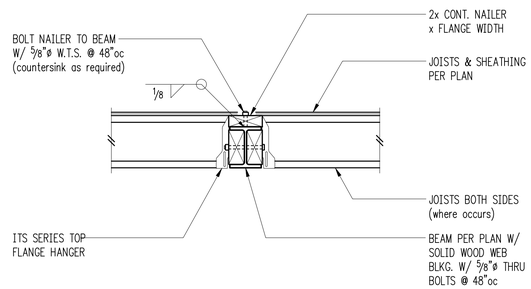
Baseplate - HSS Column 10



Where Beam Stops Where Beam Continues

NOTE:
BEARING PLATE THICKNESS SHALL BE ¾" WHERE DEPTH OF SUPPORTED MEMBER EXCEEDS 24"

Typical Beam Bearing on HSS or Pipe Column 11



Joists Hung from Steel Beam 12

SSF STRUCTURAL ENGINEERING
2124 Third Avenue - Suite 100 - Seattle, WA 98121
p: 206.443.6212 ssfengineers.com
934 Broadway - Tacoma, WA 98402
p: 253.284.9470 ssfengineers.com

DRAWN: SJB
DESIGN: JRC
CHECKED: RJA
APPROVED: ABB

REVISIONS:

DPD:

PROJECT TITLE:

Paek Residence
2215 80th Ave SE
Mercer Island, WA 98040

ARCHITECT:
MZA Architecture
600 108th Ave NE, Suite 108
Bellevue, WA 98004
PH 425.559.7888

ISSUE: Permit

SHEET TITLE: Wood Framing Sections & Details

SCALE: 3/4 = 1'-0" U.N.O.
DATE: Sept. 4, 2018
PROJECT NO: 10604-2018-01-00

SHEET NO: S4.4