



Rear Elevation



Side Elevation

# Milestone NW Mercer Island Lot 3

7623 SE 22nd ST. Mercer Island, WA 98040

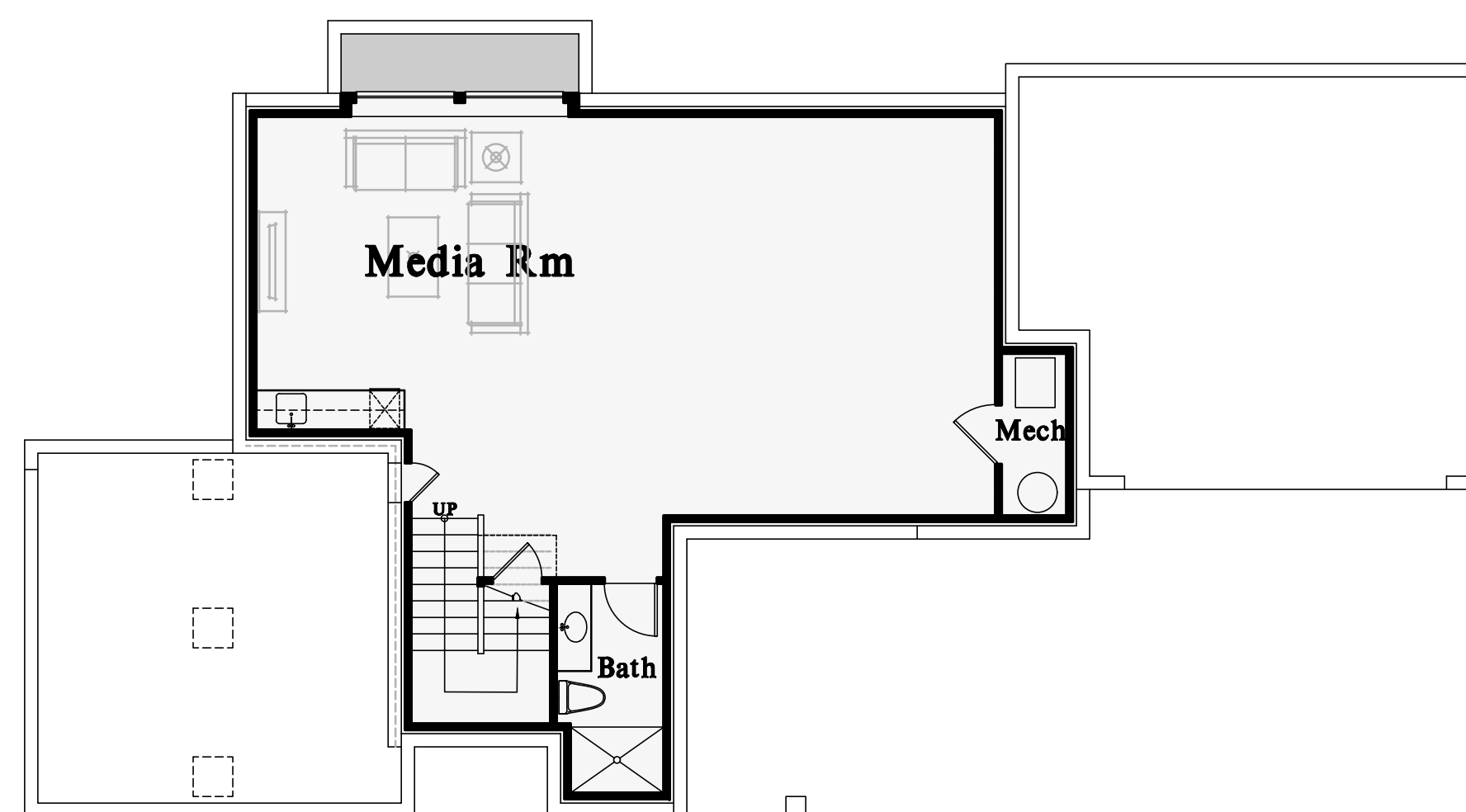
### SQUARE FOOTAGE

MAIN FLOOR	1425 SF
UPPER FLOOR	1415 SF
LOWER	983 SF
TOTAL	3823 SF
GARAGE	476 SF
COV'D PORCH	84 SF
COV'D PATIO	249 SF

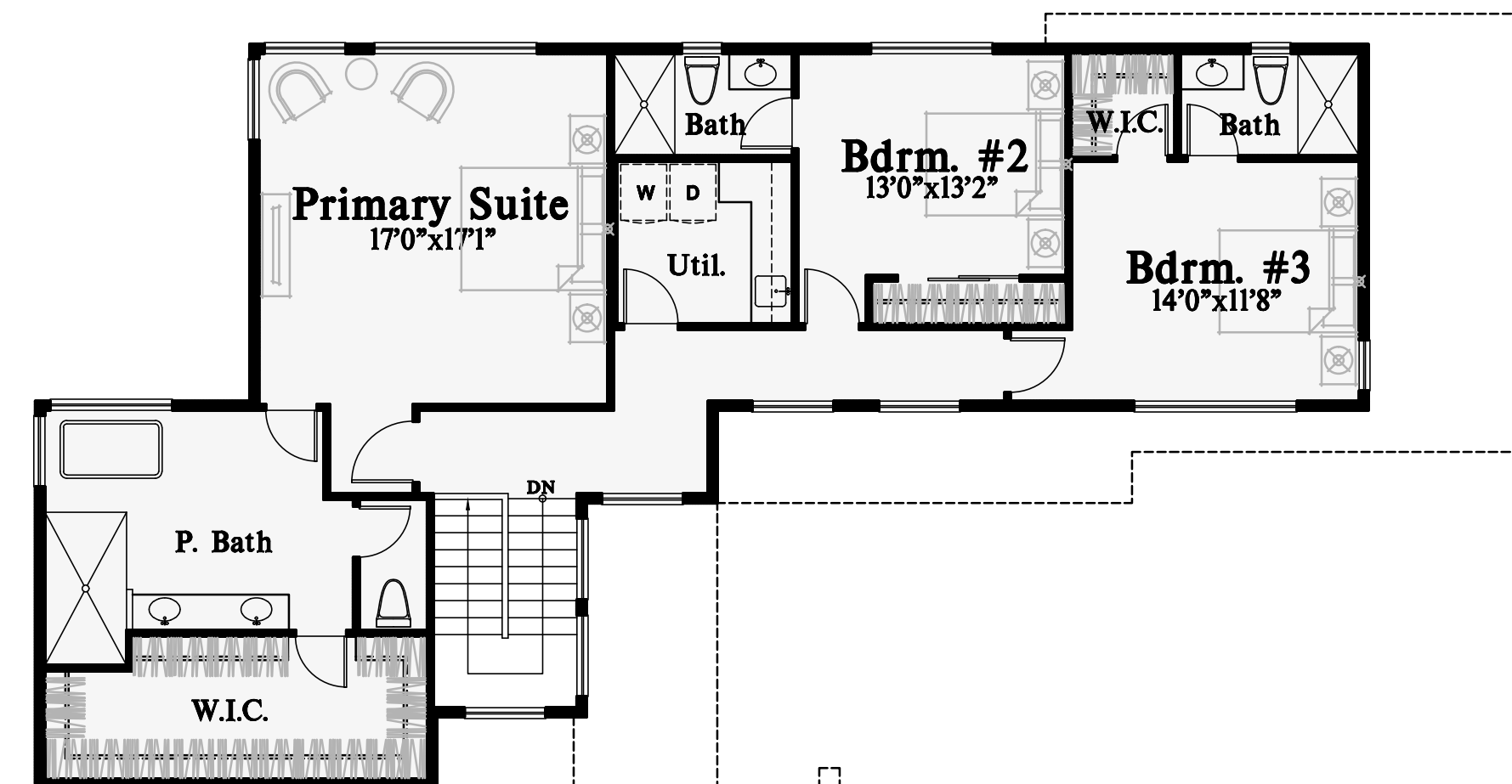
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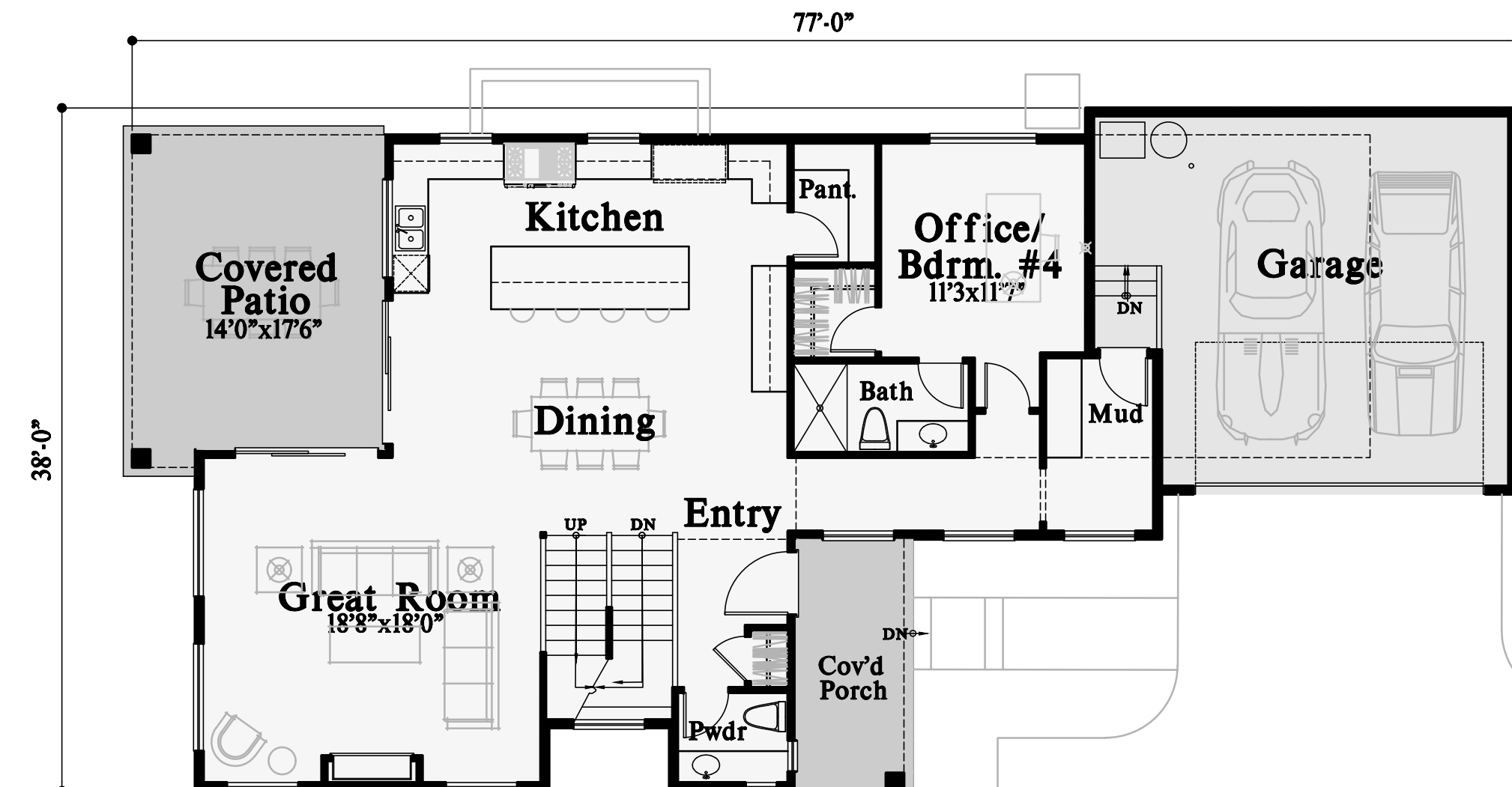
1. A NFA 72-CHAPTER 29 MONITORED FIRE ALARMS SYSTEM IN COMPLIANCE WITH NFPA 72 AND CoMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED.
2. A NFPA 13R FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13R AND CoMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. SEPARATE PERMIT IS REQUIRED.
3. SPRINKLER SYSTEM REQUIRES A MINIMUM OF 15" WATER METER AND 2" WATER SUPPLY LINE.



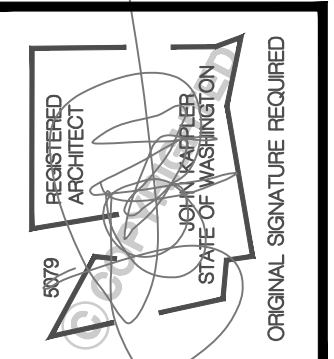
Lower Floor Plan



Upper Floor Plan



Main Floor Plan



Date	By	Description
10/22/24	AG	PERMIT SET

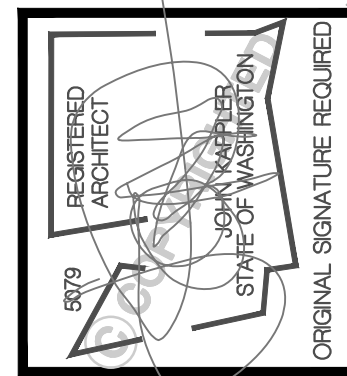
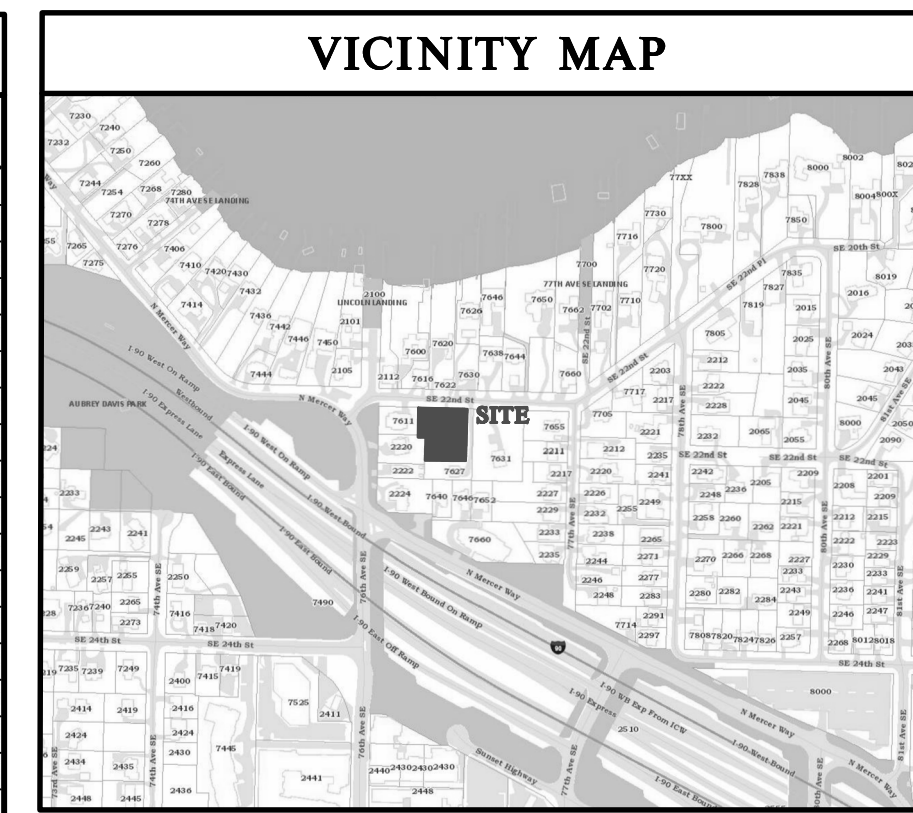
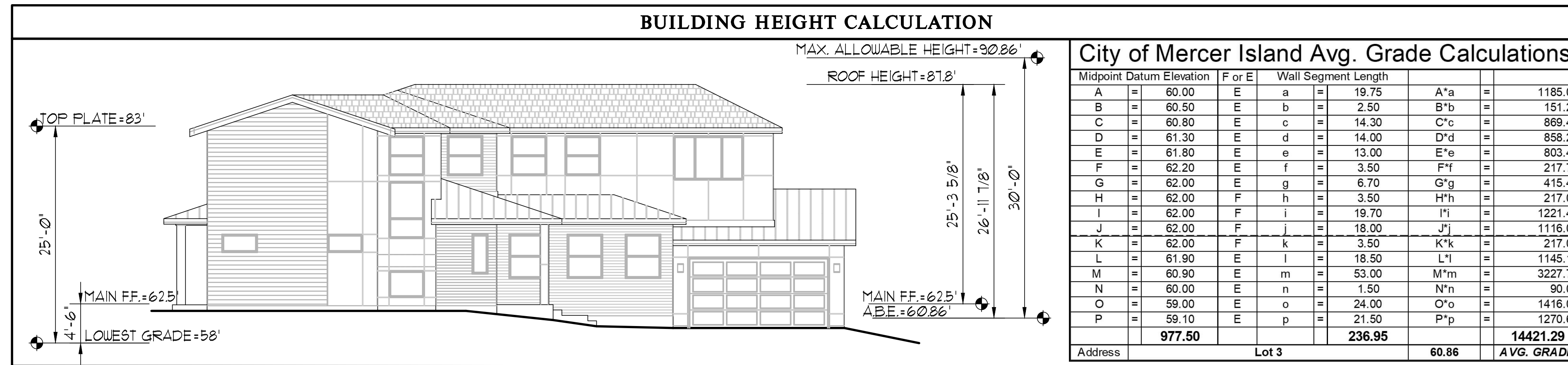
Milestone NW  
Mercer Island Lot 3  
7623 SE 22nd ST. Mercer Island, WA 98040  
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Forward Thinking Design Solutions For Your Environment  
14311 SE 16th St.  
Bellevue, WA 98007  
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TITLE	
JOB NO.:	21024.05
STARTING NO.:	21024.03

SHEET  
**COVER SHEET**





Date	By	Description
07/29/25	AG	PERMIT SET

### SITE INFO

**STREET ADDRESSES:**  
7623 SE 22nd Street, Mercer Island, WA 98040

**PARCEL NUMBER:**  
531501848

**LEGAL DESCRIPTION:**  
MC OILYRAS ISLAND ADD LOT 3 OF MERCER ISLAND SP #5UR21-006 REC #20251016000003 SD SP BEING A POR OF LOTS 1 & 2 BLK 24 OF SD ADD

### ZONING

**ZONING:** R 84  
**SINGLE FAMILY RESIDENTIAL SETBACKS:**  
FRONT YARD - 20'-0"  
REAR YARD - 25'  
SIDE YARD - 7'-0" MIN. / 15'-0" COMBINED

**HEIGHT LIMIT:**  
30' ABOVE AVERAGE BUILDING ELEVATION  
30' DOWNHILL HIGHEST PLATE

**LOT COVERAGE:**  
40% MAX OF GROSS LOT AREA  
**HARDSCAPE COVERAGE:**  
5% MAX OF GROSS LOT AREA  
**G.F.A.:**  
5,000SF OR 40% MAX OF NET LOT AREA, WHICHEVER IS LESS

### City of Mercer Island GFA Calculations

Lower Level Area Calculation (Lot 3)				Lot Size = 8,400 SF x 40% = 3,360 SF		
Wall	Length	Percentage	Finish or Existing	Result		
A	7	100.0%	E	7.0	Main Floor	1425
B	3.5	100.0%	E	3.5	Garage	476
C	8	100.0%	E	8.0	Upper Floor	1415 (1494-79)
D	14.8	100.0%	E	14.8	Lower Floor	43 (983-940) EXCLUDED
E	7.8	100.0%	E	7.8		
F	18.2	99.5%	E	18.1		
G	38.3	95.2%	E	36.5		
H	12	89.2%	F	10.7		
I	3.6	86.3%	F	3.1		
J	9.2	86.6%	F	8.0		
K	20.3	91.3%	F	18.5		
L	14	100.0%	E	14.0		
Total Average Result				150.0		
Flr				Sq Ft	Result	Excluded Area
983				0.9571315		940.8602265

### TREE RETENTION SCHEDULE

#	TREE SPECIES	SCIENTIFIC NAME	DBH	COND.	RETAIN
8	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	30	FAIR-GOOD	YES
9	DEODAR CEDAR	CEDRUS DEODARA	11	GOOD	YES
10	DEODAR CEDAR	CEDRUS DEODARA	12	GOOD	YES
11	DEODAR CEDAR	CEDRUS DEODARA	12	GOOD	YES
12	WESTERN RED CEDAR	THUJA PLICATA	29	GOOD	YES
25	DOUGLAS FIR	PSEUDOTSUGA MENZIESII	30	FAIR-GOOD	YES
102	WESTERN RED CEDAR	THUJA PLICATA	13	GOOD	YES

### REPLACEMENT TREE LEGEND

DESIGNATION	SPECIES	QUANTITY
(N)	WESTERN RED CEDAR (6' tall)	6

### SITE CALCULATIONS

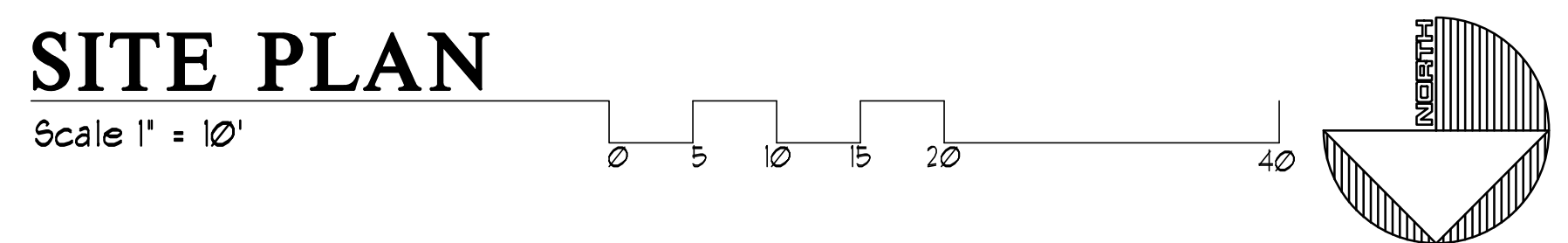
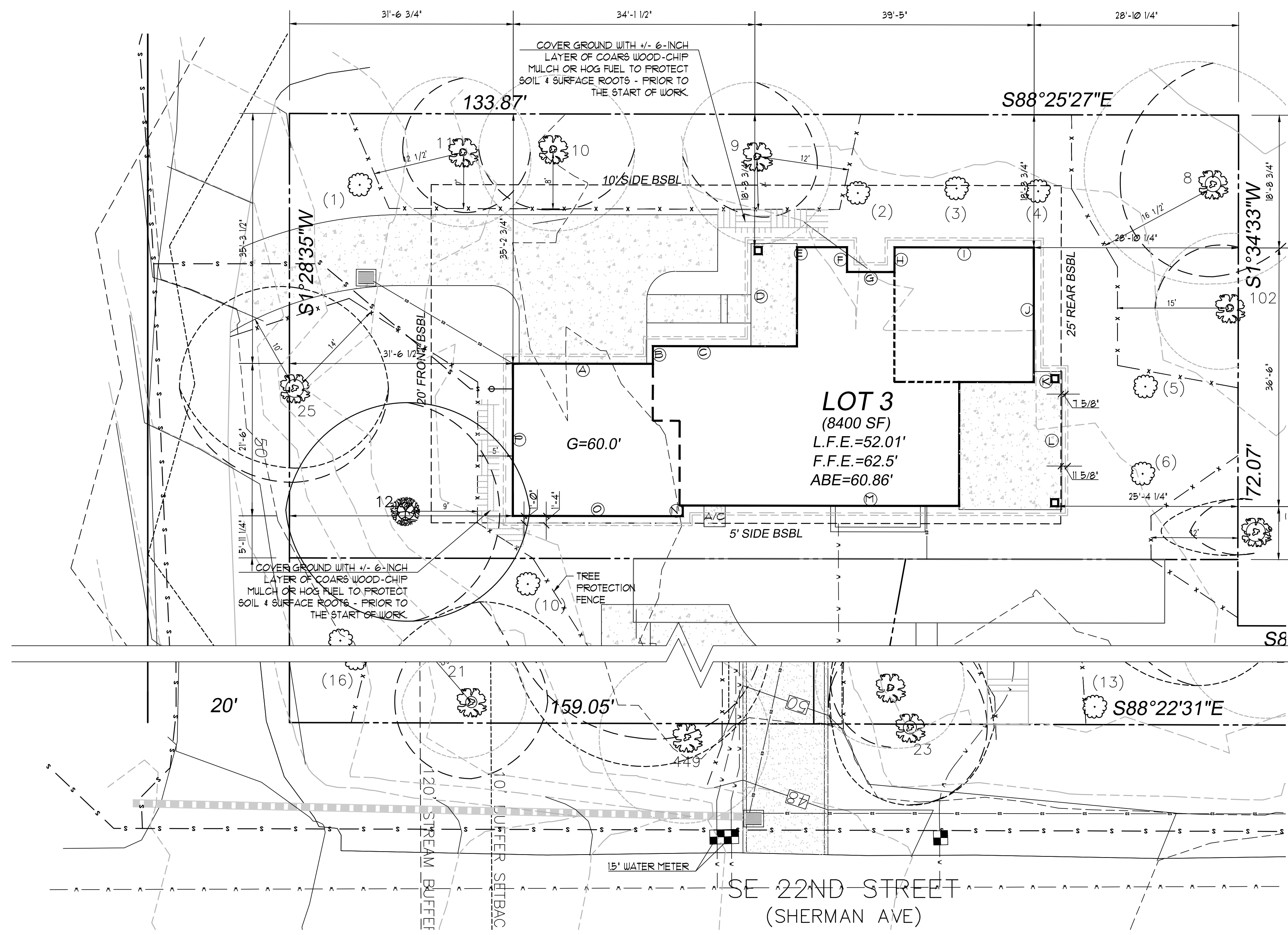
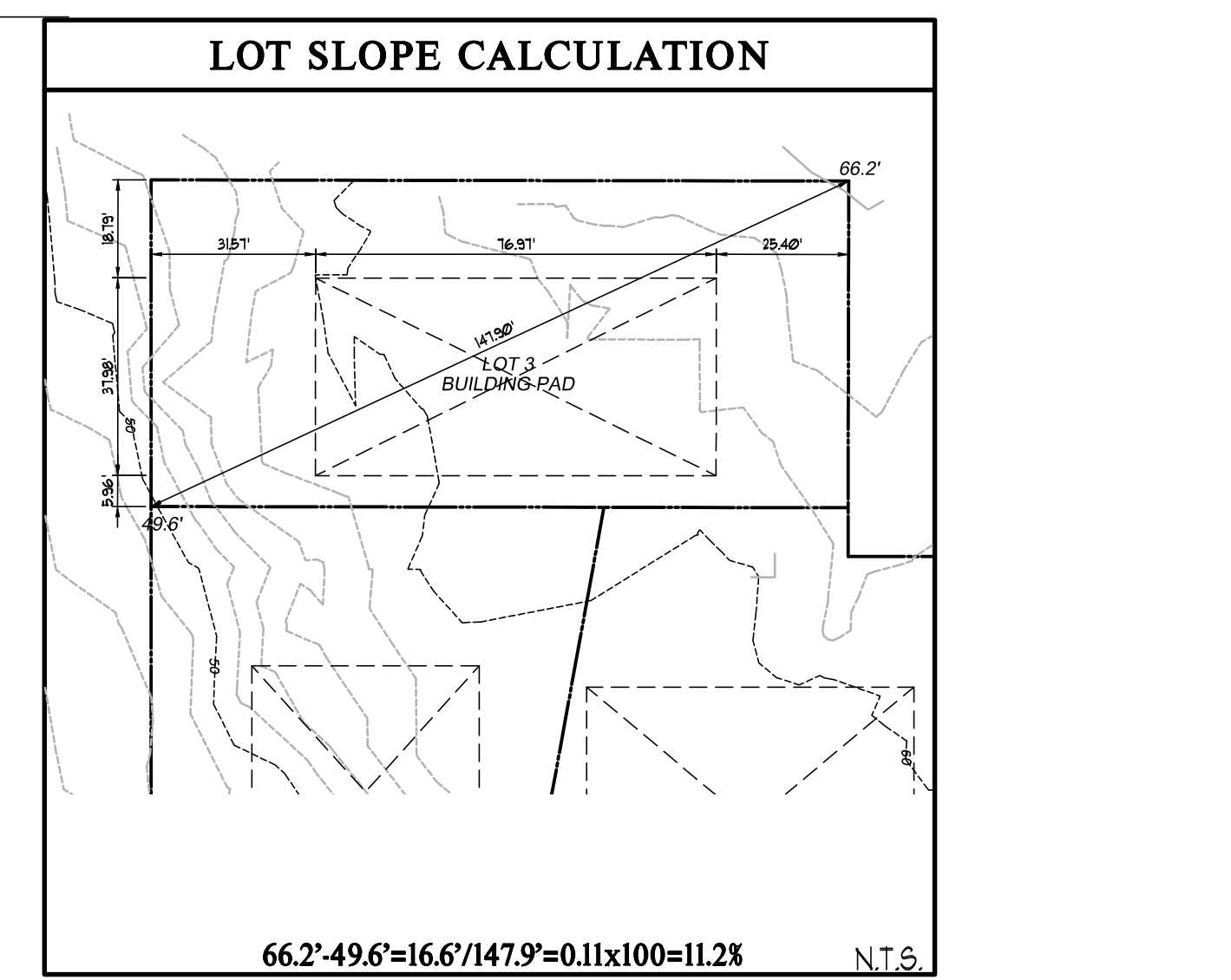
LOT AREA	GROSS LOT AREA
8,400 SF	
x 40%	
3,360 SF	
COVERAGE CALCULATION	
8,400 SF	LOT AREA
x 40%	
3,360 SF	ALLOWABLE IMPERVIOUS COVERAGE
2,502 SF	HOUSE ROOF (includes gutters)
788 SF	DRIVEWAY (excludes area under eaves)
3,270 SF / 38.9%	TOTAL COVERAGE
HARDSCAPE COVERAGE CALCULATION	
8,400 SF	LOT AREA
x 5%	
756 SF	ALLOWABLE HARDSCAPE COVERAGE
55 SF	FRONT WALK (excludes portion w/ eaves)
43 SF	A/C PAD (excludes portion w/ eaves)
593 SF / 0.7%	TOTAL HARDSCAPE COVERAGE

### GFA CALCULATIONS

LOT AREA	GROSS LOT AREA
8,400 SF	
x 40%	
3,360 SF	
1,425 SF	MAIN FLOOR (1,494-79)
43 SF	LOWER FLOOR (983-940) EXCLUDED
476 SF	GARAGE
3,339 SF / 39.9%	

### LEGEND

- v — v — DESIGNATES WATER
- s — s — DESIGNATES SEWER
- = — = — DESIGNATES STORM
- — — — — DESIGNATES EXISTING GRADE
- — — — — DESIGNATES FINISHED GRADE
- — — — — DESIGNATES TREE DRIFLINE
- — — — — DESIGNATES TREE DRIFLINE (EXCEPTIONAL TREE)
- — — — — DESIGNATES LIMITS OF DISTURBANCE
- x — x — DESIGNATES TREE FENCING
- — — — — DESIGNATES EXISTING WOOD FENCE
- — — — — EXISTING FENCE TO BE REMOVED



**Milestone NW**  
**Mercer Island 3-Lot**  
 Lot 3  
**7623 SE 22nd Street**  
**Mercer Island, WA**  
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TITLE
JOB NO.: 2001202
STARTING NO.:

SHEET  
**A1.1**

WATER AND SEWER CALLOUTS

- (I) 6" SIDE SEWER  
IE-48.28±
- (J) EXISTING 6" PVC SIDE SEWER @2.00%
- (K) EX 6" STUB  
IE-48.90  
6"X45° BEND  
IE-48.90
- (L) 6"X25LF PVC @2.00%
- (M) 6"X45° BEND  
IE-49.32
- (N) 6" SIDE SEWER, HOUSE CONNECTION, CLEANOUT, AND MARKER POST PER COMI STD S-17, S-18, S-19, AND S-20.  
IE-49.44 AT HOUSE
- (O) 1.5" WATER METER INSTALLATION PER COMI STD NO. W-14
- (P) WATER METER PLACEMENT WITH NO SIDEWALKS PER COMI STD NO. W-16. PLACE 2' FROM EDGE OF PAVEMENT AND 2' FROM OLD METER BOX
- (Q) 2" SERVICE LINE
- (R) 2" SUPPLY LINE

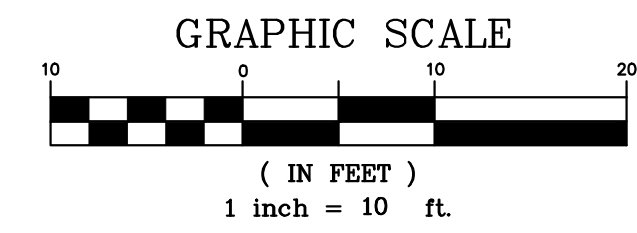
NOTE: THE EXISTING UTILITIES AS SHOWN ARE ONLY APPROXIMATE. OTHER EXISTING UTILITIES MAY EXIST ALONG THIS PROPOSED ALIGNMENT. IT SHALL BE THE CONTRACTOR AND OR OWNERS RESPONSIBILITY TO VERIFY THE SIZE TYPE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION

Call Before You Dig 811

LOT INFORMATION					
LOT #	GROSS LOT AREA	MAX GFA 40%	NET LOT AREA	MAX. LOT COVERAGE (40%)	MAX. HARDSCAPE (9%)
ENTIRE	8401	3360.40	8401	3360.40	756.1

# RAND-MILESTONE LOT 3 GRADING AND DRAINAGE PLAN

LOT 3 BUILDING PERMIT  
SE 1/4 OF SEC.1, T.24N., R.4E., W.M.  
CITY OF MERCER ISLAND, WASHINGTON



CLEANOUT INVERT ELEVATIONS

STATION	ELEVATION	SIZE	SLOPE
A	46.81	4"	2.00%
B	47.27	4"	2.00%
C	47.78	4"	2.00%
D	47.81	4"	2.00%
E	48.57	4"	2.00%
F	48.92	4"	2.00%
G	49.12	4"	2.00%
H	47.21	4"	2.00%
I	47.26	4"	2.00%
J	47.66	4"	2.00%
K	47.94	4"	2.00%
L	48.12	4"	2.00%
M	48.19	4"	2.00%
N	48.28	4"	2.00%
O	48.35	4"	2.00%
P	48.79	4"	2.00%

ROOF DRAIN INVERT ELEVATIONS

NUMBER	ELEVATION	SIZE	SLOPE
1	56.14	4"	2.00%
2	56.58	4"	2.00%
3	57.14	4"	2.00%
4	58.00	4"	2.00%
5	54.88	4"	2.00%
6	55.44	4"	2.00%
7	56.00	4"	2.00%
8	56.45	4"	2.00%

TOPOGRAPHY SURVEY NOTES:

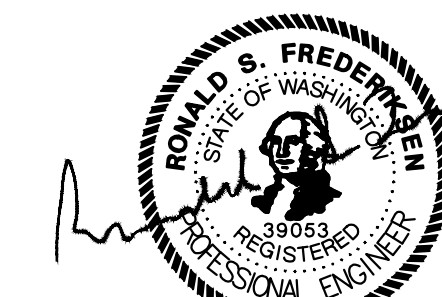
- BASIS OF BEARINGS IS THE WASHINGTON STATE PLANE COORDINATE SYSTEM, N.A.D. 1983/2011, BASED ON GPS TIES TO THE WASHINGTON STATE REFERENCE NETWORK (WSRN).
- ELEVATION DATUM IS N.A.V.D. 1988 BASED ON GPS TIES TO THE WSRN.
- FIELD WORK WAS DONE IN FEBRUARY OF 2020 USING A TRIMBLE R8 GNSS GPS RECEIVER, AND A SPECTRA PRECISION FOCUS 35 ROBOTIC TOTAL STATION IN ACCORDANCE WITH W.A.C. 332-130.
- THE PURPOSE OF THIS SURVEY IS TO PROVIDE A BASE MAP FOR CIVIL ENGINEERING DESIGN.
- THE CONTOURS SHOWN ARE DERIVED FROM DIRECT FIELD OBSERVATIONS. THE CONTOUR INTERVAL IS 2.0 FEET AND THE CONTOUR ACCURACY IS ONE HALF OF THE INTERVAL (±1.0 FEET).
- PROPERTY LINES SHOWN ARE PER UNRECORDED SHORT PLAT BY JONES, BASSI & ASSOCIATES DATED 1/16/1974.
- THE UNDERGROUND UTILITIES SHOWN ARE BASED ON A COMBINATION OF PAINT MARKS PROVIDED BY APPLIED PROFESSIONAL SERVICES, INC. AND THE SURVEYED LOCATION OF OBVIOUS SURFACE FEATURES. ADDITIONAL UNDERGROUND UTILITIES MAY EXIST ON AND AROUND THIS SITE.
- THE LEGAL DESCRIPTION AS SHOWN HEREON IS PER STEWART TITLE INSURANCE COMPANY FILE No. 561998. COMMITMENT DATE: OCTOBER 8, 2019.
- ARBORIST REPORT PROVIDED BY LAYTON TREE CONSULTING LLC
- THE FOLLOWING SURVEYS OF RECORD WERE USED TO CALCULATE AND/OR ASCERTAIN THE BOUNDARY AS SHOWN HEREON:  
THE PLAT OF MCILVRA'S ISLAND ADDITION VOLUME 16, PAGE 68 UNRECORDED SHORT PLAT BY JONES, BASSI & ASSOCIATES DATED 1/16/1974 RECORD OF SURVEY VOLUME 402, PAGE 142

- CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH LOCAL SPECIFICATION.
- ALL CUT AND FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDING FOR ALL NATURAL AND PAVED AREAS AND SHALL GRADE ALL AREAS TO PRECLUDE PONDING OF WATER.
- ALL POLLUTANTS OTHER THAN SEDIMENT ON-SITE DURING CONSTRUCTION SHALL BE HANDLED AND DISPOSED OF IN A MANNER THAT DOES NOT CAUSE CONTAMINATION OF STORMWATER. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORMWATER DISCHARGE ASSOCIATED -TH CONSTRUCTION ACTIVITIES.
- PROPERTIES AND WATERWAYS DOWNSTREAM OF THE SITE SHALL BE PROTECTED FROM EROSION DUE TO INCREASES IN THE VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FROM PROJECT SITE.
- CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
- CONTRACTOR TO REMOVE UNSUITABLE SOILS LOCATED WITHIN THE BUILDINGS FOOTING AREA.
- FOR BOUNDARY AND TOPOGRAPHIC INFORMATION REFER TO SHET 3
- ALL GRADING, SITE PREPARATION, AND EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL ENGINEERING REPORT.
- ALL EXISTING TREES THAT CAN FEASIBLY BE RETAINED WILL BE PRESERVED. CONTRACTOR -LL WORK -TH CITY ARBORIST AND OTHER STAFF TO MAXIMIZE TREE RETENTION.
- THE TOTAL IMPERVIOUS SURFACE ON LOT WILL NOT EXCEED THE NET MAXIMUM LOT COVERAGE AREA.

SHEET INDEX:

SHEET NO.	DESCRIPTION
1	WATER, SEWER, AND DRAINAGE PLAN
2	DRIVEWAY AND GRADING PLAN
3	EXISTING BOUNDARY AND TOPOGRAPHY SURVEY
4	WATER DETAILS

INDEX LOCATION:  
SEC.24 T.24N.R. 4E. W.M.



12/4/2025

PROJECT NO.: 2412-106 SUB2 MILESTONE-WCMI LLC

REVISIONS	BY	DATE

**WATER, SEWER, AND DRAINAGE PLAN**

MILESTONE NORTHWEST, LLC  
8 CRESCENT KEY  
BELLEVUE, WA 98006  
CONTACT: GREG ARMS  
PHONE: (206) 817-4192

**ENGINEERS - SURVEYORS**  
**EASTSIDE CONSULTANTS, INC.**  
1320 N.W. WALL ST., SUITE 8  
ISSAQUAH, WASHINGTON 98027  
PH: (425) 392-5351 FAX: 392-6676

JOB NO. 20025  
DATE 01/2025  
SCALE 1"=10'  
DESIGNED ADP  
DRAWN ADP  
CHECKED RSF  
APPROVED RSF

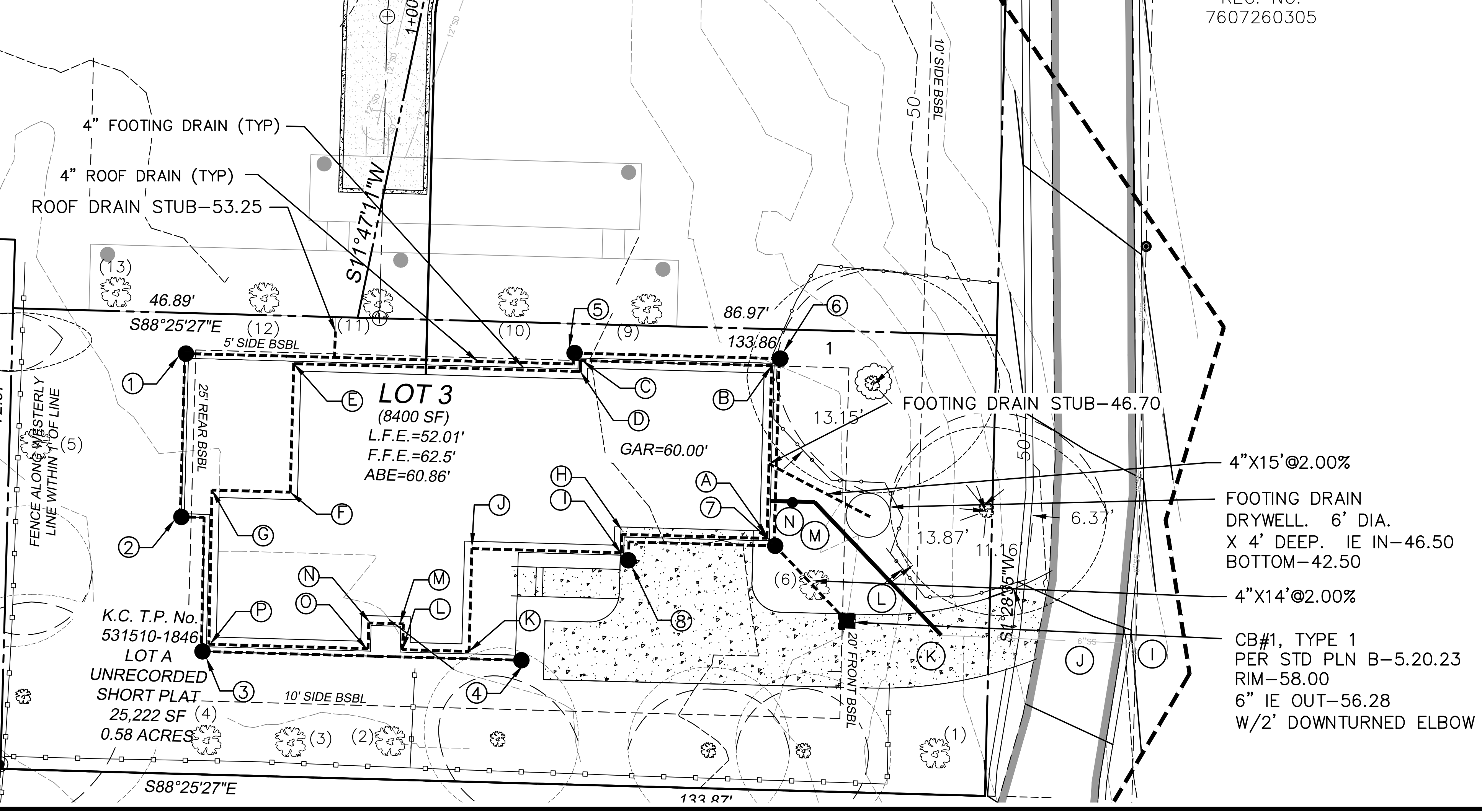
SHEET 1 OF 4

FOUND #4 REBAR LS CAP No. 34670 NO RECORD FOUND 8' NORTH OF CALCULATED POSITION.

FOUND #4 REBAR W/LS CAP No. 17663 PER ROS 402/141. 0.6' NORTH OF CALCULATED POSITION.

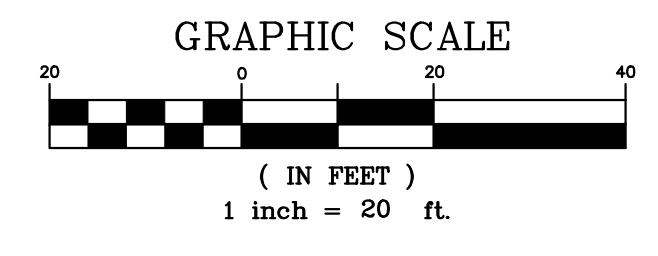
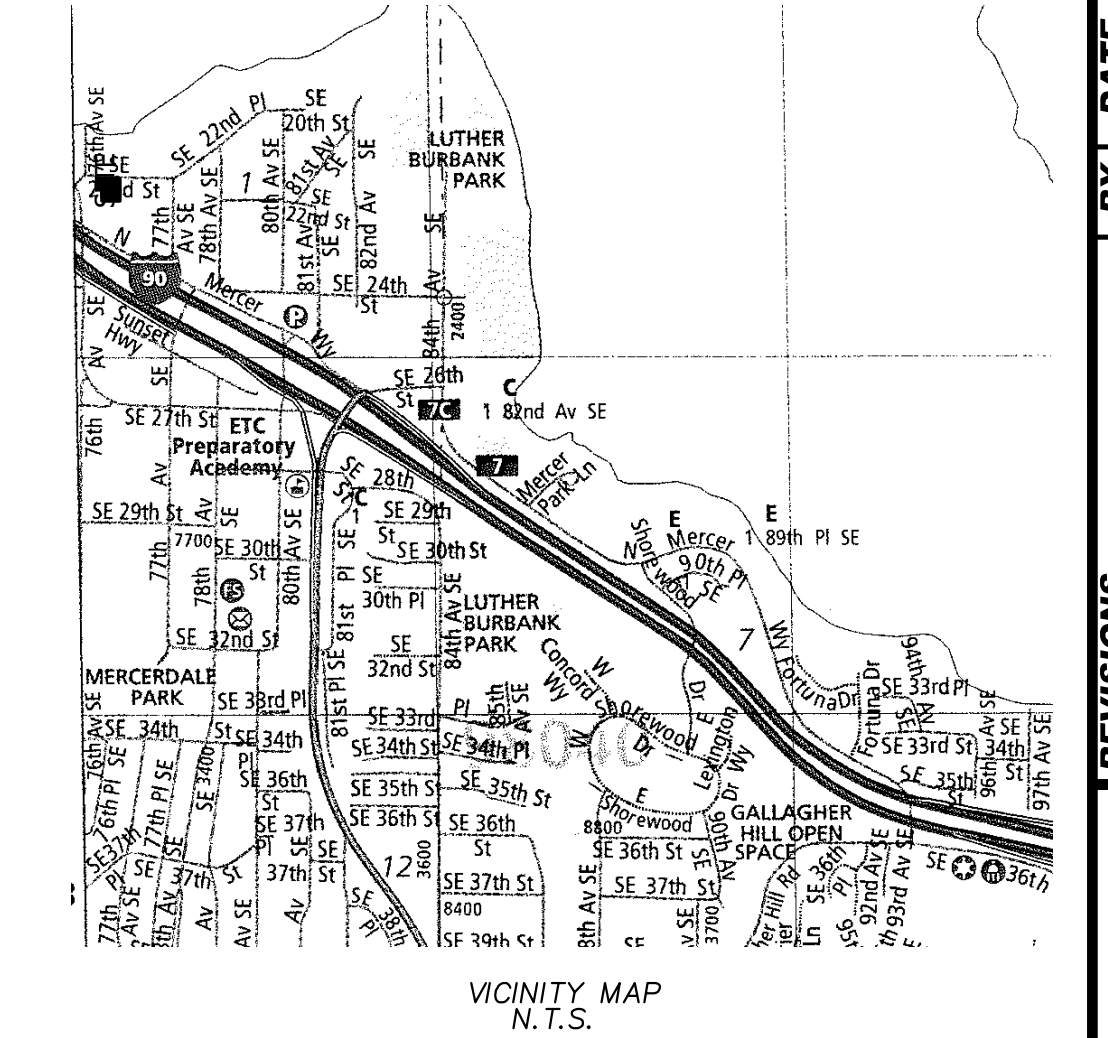
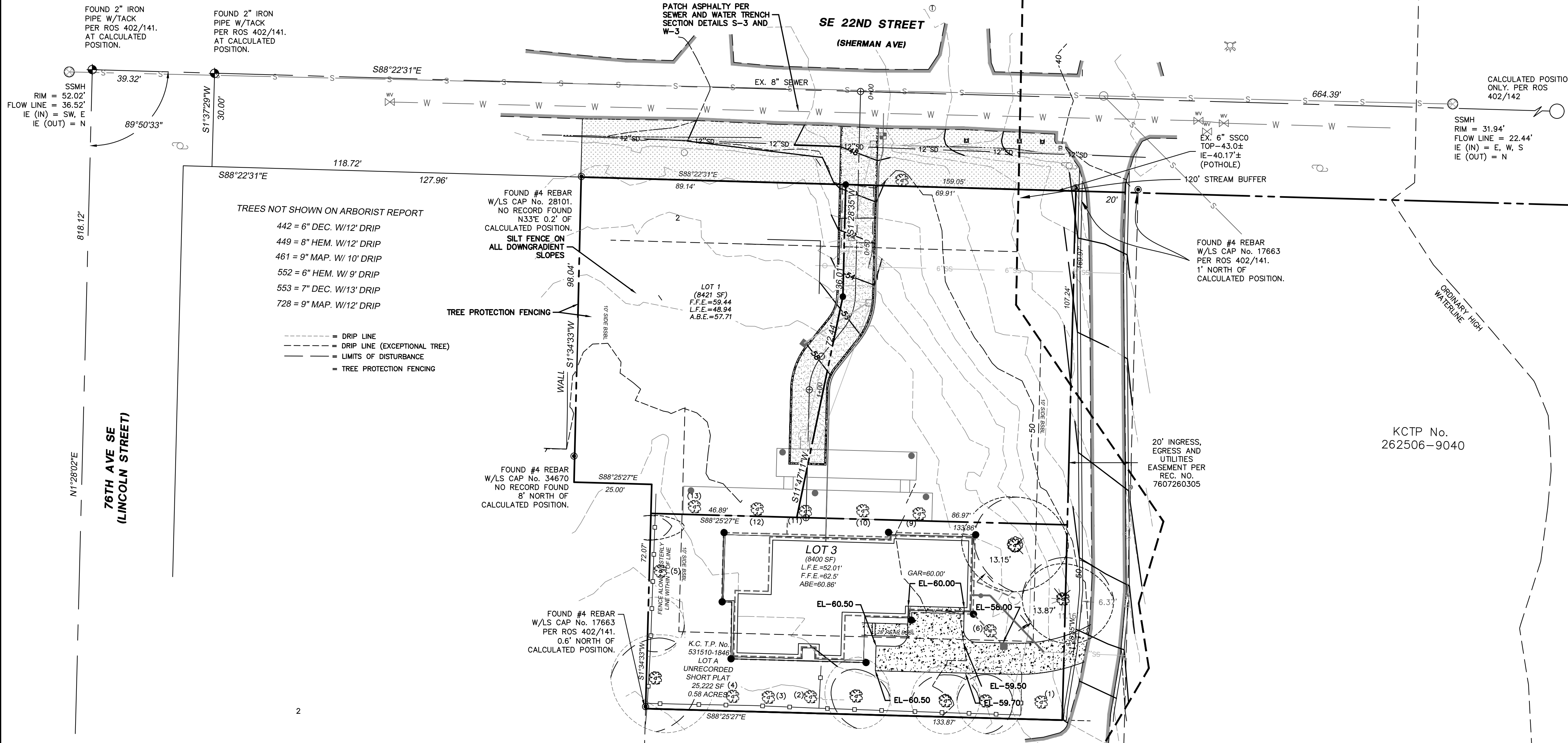
FENCE ALONG WESTERLY LINE WITHIN 10' OF LINE

K.C. T.P. No. 531510-1846 LOT A UNRECORDED SHORT PLAT 25,222 SF (4) 0.58 ACRES



# RAND-MILESTONE LOT 3 GRADING AND DRAINAGE PLAN

## LOT 3 BUILDING PERMIT SE 1/4 OF SEC.1, T.24N., R.4E., W.M. CITY OF MERCER ISLAND, WASHINGTON



- TREES NOT SHOWN ON ARBORIST REPORT
- 442 = 6" DEC. W/12" DRIP
  - 449 = 8" HEM. W/12" DRIP
  - 461 = 9" MAP. W/ 10" DRIP
  - 552 = 6" HEM. W/ 9" DRIP
  - 553 = 7" DEC. W/13" DRIP
  - 728 = 9" MAP. W/12" DRIP

- - - - - DRIP LINE
- - - - - DRIP LINE (EXCEPTIONAL TREE)
- - - - - LIMITS OF DISTURBANCE
- - - - - TREE PROTECTION FENCING

76TH AVE SE  
(LINCOLN STREET)

2

Tree/Tag #	Species Common	Species Scientific	DBH (inches)	Height (feet)	DripLine/Limit of Disturbance (feet)				Condition	Exceptional Yes/No	Comments	Proposal
					N	S	E	W				
1	Douglas fir	<i>Pseudotsuga menziesii</i>	30	120	12/12	12/12	15/10	12	Fair-good	Yes	topped in past	Remove
2	Douglas fir	<i>Pseudotsuga menziesii</i>	28	113	8/10	15/12	10/10	16	Fair-good	No	topped in past, crook, regenerated top, cambial rupture	Save
3	Deodar cedar	<i>Cedrus deodara</i>	23	96	10/10	17/12	20/12	6	Good	No	asymmetric crown to southeast	Remove
4	Douglas fir	<i>Pseudotsuga menziesii</i>	18	79	7/8	12/10	13/10	0	Fair	No	asymmetric crown, somewhat suppressed	Save
5	Douglas fir	<i>Pseudotsuga menziesii</i>	40	116	17/12	16/12	16/12	18	Good	Yes	topped in past	Save
6	bigleaf maple	<i>Acer macrophyllum</i>	18	30	14/10	12/10	0/10	18	Fair	No	trunk forks at 4 feet, asymmetric crown to west	Save
7	Scoulers willow	<i>Salix scouleriana</i>	9	32	2/6	11/8	6/6	4	Fair-poor	Yes	decay at root crown, suppressed	Save
8	Douglas fir	<i>Pseudotsuga menziesii</i>	26	93	13/12	16	17/12	14	Fair-good	No	large crook, large exposed surface roots, good vigor	Save
9	Deodar cedar	<i>Cedrus deodara</i>	11	44	12/8	10	10	10/8	Good	No	young, no concerns	Save
10	Deodar cedar	<i>Cedrus deodara</i>	12	45	11/8	10	10	11	Good	No	young, no concerns	Save
11	Deodar cedar	<i>Cedrus deodara</i>	12	46	10/8	10	11/8	9	Good	No	young, no concerns	Save
12	Western red cedar	<i>Thuja plicata</i>	29	70	14/14	14/14	16	16/12	Good	Yes, Grove	exposed surface roots, good vigor	Save
13	Douglas fir	<i>Pseudotsuga menziesii</i>	38	101	16/16	15/15	15	13/5	Fair-good	Yes	topped in past, large cambial rupture, 4 feet to house	Save
14	bigleaf maple	<i>Acer macrophyllum</i>	18	60	6/8	18/12	8	14/8	Fair	Yes, Grove	asymmetric crown to south	Remove
15	Douglas fir	<i>Pseudotsuga menziesii</i>	21	95	6/10	11/11	6	10/10	Fair	Yes, Grove	natural lean south, topped in past	Remove
16	Douglas fir	<i>Pseudotsuga menziesii</i>	27	62	7/10	12/12	12	5/10	Fair	Yes, Grove	broken top, small crown	Save
17	Douglas fir	<i>Pseudotsuga menziesii</i>	26	103	14/10	8/10	12	8/10	Fair	Yes, Grove	topped in past, crook, regenerated top	Save
18	bigleaf maple	<i>Acer macrophyllum</i>	9,7 (11)	51	12/8	8/8	14	6/8	Fair	Yes, Grove	poor taper, some dead cambium on 12 inch stem	Save
19	horse chestnut	<i>Aesculus hippocastanum</i>	14	47	15/10	12/10	8/8	16/10	Fair-good	No	decent form	Remove
20	bigleaf maple	<i>Acer macrophyllum</i>	12,9,8 (17)	61	12/10	4/10	18/10	8/10	Fair	No	somewhat suppressed	Save
21	Douglas fir	<i>Pseudotsuga menziesii</i>	19	86	7/10	7/10	9/10	7/10	Fair	No	narrow crown, large cambial rupture	Save
22	Douglas fir	<i>Pseudotsuga menziesii</i>	40	94	16/12	15/15	16/16	17/16	Fair-good	Yes	topped in past, crook, regenerated top	Save
24	Western red cedar	<i>Thuja plicata</i>	10	20	8/8	12/12	10/8	10/10	Fair	No	suppressed, under pine	Save
25	Douglas fir	<i>Pseudotsuga menziesii</i>	30	118	10/12	13/13	16	12/12	Fair-good	Yes	topped in past, good vigor	Save
NEIGHBORING TREES												
23	shore pine	<i>Pinus contorta</i>	22	65	10/10	16/12	10/10	11/10	Fair	Yes	forked tops	Save
101	Western red cedar	<i>Thuja plicata</i>	32	88	2/0	NA	12/8	NA	Fair-good	Yes	sparse top foliage, sound	Protect
102	Western red cedar	<i>Thuja plicata</i>	13	45	8	10	10/8	NA	Good	No	boundary line tree, good vigor	Protect

Drip-Line measurements from face of trunk  
Measurements for neighboring trees from property line  
Calculated DBH: the DBH in parenthesis is the square root of the sum of the dbh for each individual stem squared (example with 3 stems: dbh = square root [(stem1)² + (stem2)² + (stem3)²]).  
TBD - to be determined

SE COR. S.1  
FOUND 3.5" BRASS  
CAP W/PUNCH &  
LS No. 32429  
PER ROS 402/141.  
AT CALCULATED  
POSITION.

S. 1/4 S. 1  
FOUND 3.5" BRASS  
CAP W/PUNCH &  
LS No. 32429  
PER ROS 402/141.  
AT CALCULATED  
POSITION.

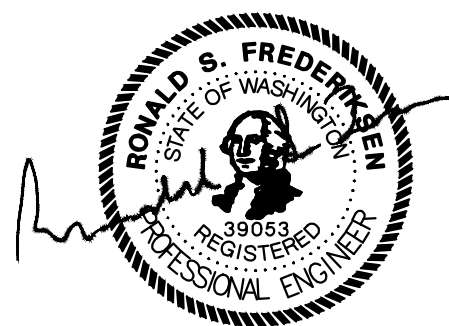
- ARBORIST NOTE:
- ARBORIST TO BE ON SITE FOR ALL EXCAVATION OF FOUNDATIONS.
  - TREE PROTECTION FENCE WILL BE 6' CHAIN LINK FENCE. THIS IS TO BE PLACED AT THE ARBORIST GIVEN LIMITS OF ALLOWABLE DISTURBANCE.
  - LIMITS OF EXCAVATION FOR FUTURE DETENTION SYSTEM WILL NOT ENCROACH INTO TREE 13'S TREE PROTECTION ZONE.
  - A QUALIFIED ARBORIST SHALL BE ON SITE FOR ALL EXCAVATION WITHIN SAVED TREES DRIP LINES WITH AIR EXCAVATION TO LOCATE AND CLEAN-CUT ROOTS ENCOUNTERED AT LIMITS OF DISTURBANCE.
  - SEE TREE PROTECTION DETAIL ON PAGE 10 OF SDP PLANS

- TOPOGRAPHY SURVEY NOTES:
- BASIS OF BEARINGS IS THE WASHINGTON STATE PLANE COORDINATE SYSTEM, N.A.D. 1983/2011, BASED ON GPS TIES TO THE WASHINGTON STATE REFERENCE NETWORK (WSRN).
  - ELEVATION DATUM IS N.A.V.D. 1988 BASED ON GPS TIES TO THE WSRN.
  - FIELD WORK WAS DONE IN FEBRUARY OF 2020 USING A TRIMBLE R8 GNSS GPS RECEIVER, AND A SPECTRA PRECISION FOCUS 35 ROBOTIC TOTAL STATION IN ACCORDANCE WITH W.A.C. 332-130.
  - THE PURPOSE OF THIS SURVEY IS TO PROVIDE A BASE MAP FOR CIVIL ENGINEERING DESIGN.
  - THE CONTOURS SHOWN ARE DERIVED FROM DIRECT FIELD OBSERVATIONS. THE CONTOUR INTERVAL IS 2.0 FEET AND THE CONTOUR ACCURACY IS ONE HALF OF THE INTERVAL (±1.0 FEET).
  - PROPERTY LINES SHOWN ARE PER UNRECORDED SHORT PLAT BY JONES, BASSI & ASSOCIATES DATED 1/16/1974.
  - THE UNDERGROUND UTILITIES SHOWN ARE BASED ON A COMBINATION OF PAINT MARKS PROVIDED BY APPLIED PROFESSIONAL SERVICES, INC. AND THE SURVEYED LOCATION OF OBVIOUS SURFACE FEATURES. ADDITIONAL UNDERGROUND UTILITIES MAY EXIST ON AND AROUND THIS SITE.
  - THE LEGAL DESCRIPTION AS SHOWN HEREON IS PER STEWART TITLE INSURANCE COMPANY FILE NO. 561998, COMMITMENT DATE: OCTOBER 8, 2019.
  - ARBORIST REPORT PROVIDED BY LAYTON TREE CONSULTING LLC
  - THE FOLLOWING SURVEYS OF RECORD WERE USED TO CALCULATE AND/OR ASCERTAIN THE BOUNDARY AS SHOWN HEREON:  
THE PLAT OF MCGILVRA'S ISLAND ADDITION VOLUME 16, PAGE 58 UNRECORDED SHORT PLAT BY JONES, BASSI & ASSOCIATES DATED 1/16/1974  
RECORD OF SURVEY VOLUME 402, PAGE 142

NOTE: THE EXISTING UTILITIES AS SHOWN ARE ONLY APPROXIMATE. OTHER EXISTING UTILITIES MAY EXIST ALONG THIS PROPOSED ALIGNMENT. IT SHALL BE THE CONTRACTOR AND OR OWNERS RESPONSIBILITY TO VERIFY THE SIZE TYPE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION

Call Before You Dig 811

INDEX LOCATION:  
SEC. 1 T. 24N. R. 4E. W.M.



1
---

PROJECT NO.: 2412-106 SUB2 MILESTONE-WCMI LLC

REVISIONS	BY	DATE

DRIVEWAY AND  
GRADING PLAN

MILESTONE NORTHWEST, LLC  
8 CRESCENT KEY  
BELLEVUE, WA 98006  
CONTACT: GREG ARMS  
PHONE: (206) 817-4192

ENGINEERS - SURVEYORS  
EASTSIDE CONSULTANTS, INC.  
1320 N.W. WALL ST., SUITE B  
ISSAQUAH, WASHINGTON 98027  
PH: (425) 392-5351 FAX: 392-4676

JOB NO. 20025  
DATE 12/22  
SCALE 1"=20'  
DESIGNED RSF  
DRAWN RSF  
CHECKED RSF  
APPROVED RSF

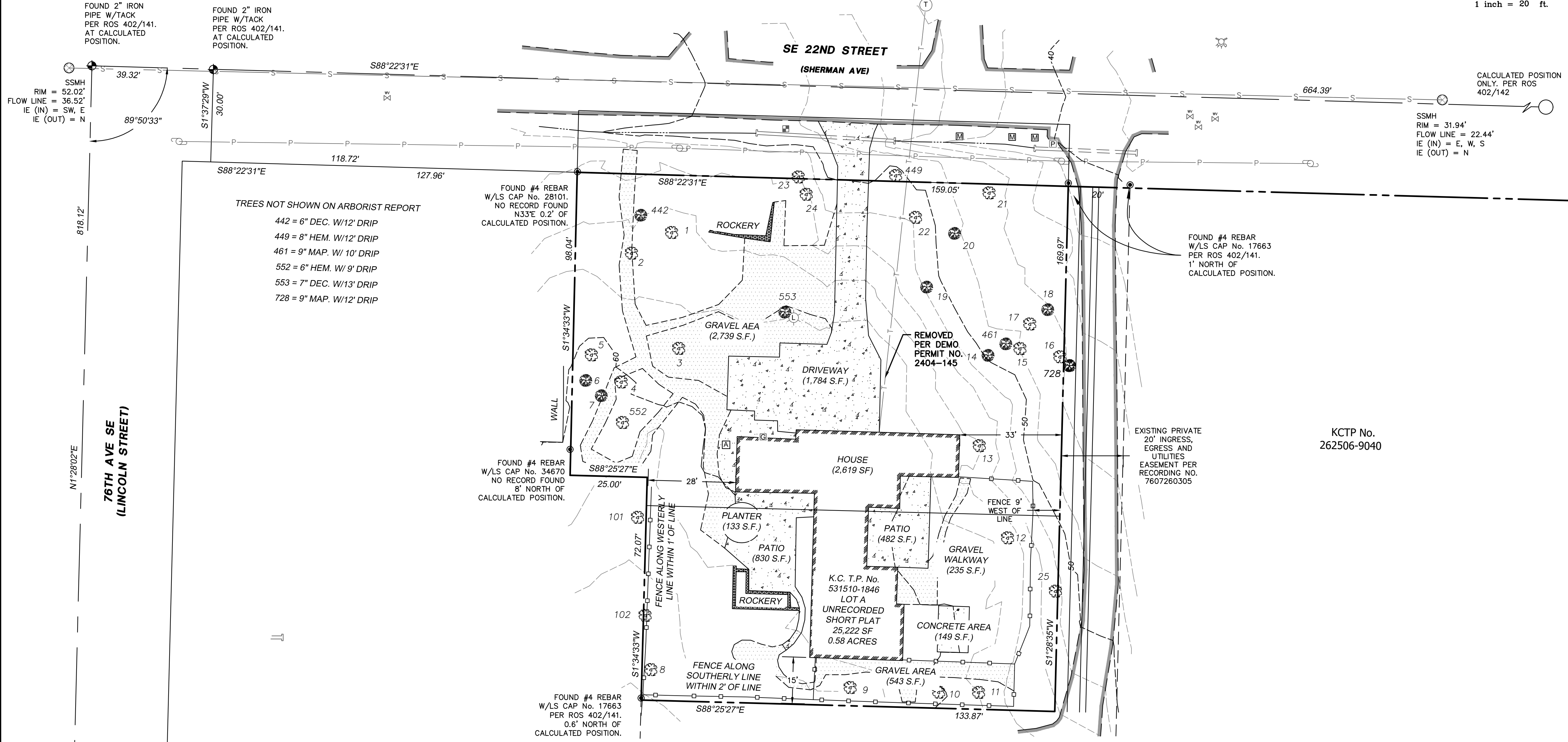
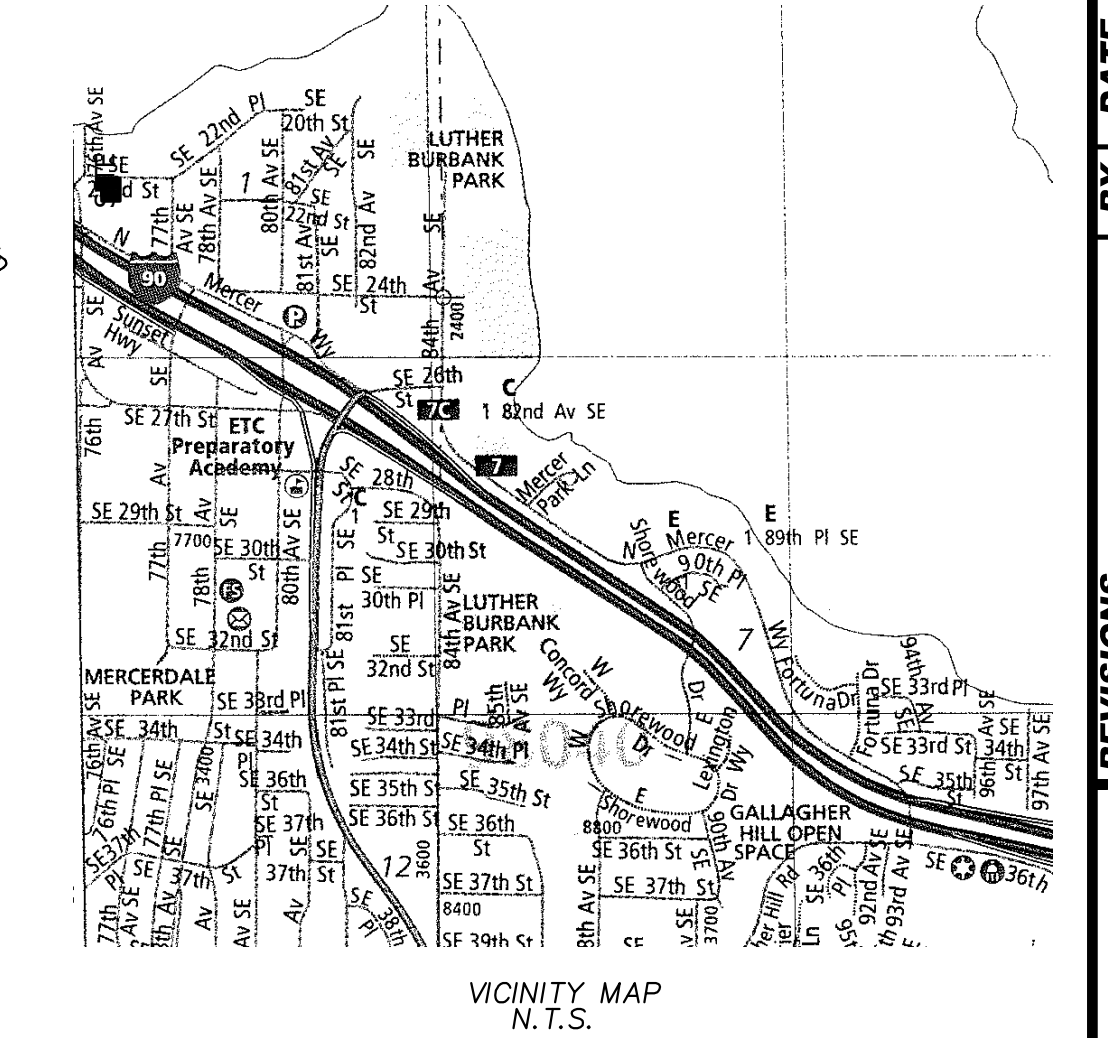
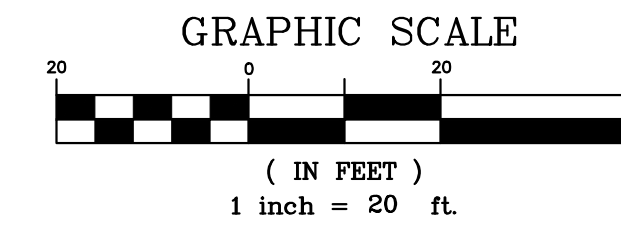
SHEET 2 OF 4

# RAND-MILESTONE LOT 3 GRADING AND DRAINAGE PLAN

## LOT 3 BUILDING PERMIT

### SE 1/4 OF SEC.1, T.24N., R.4E., W.M.

### CITY OF MERCER ISLAND, WASHINGTON



TREES NOT SHOWN ON ARBORIST REPORT

- 442 = 6" DEC. W/12' DRIP
- 449 = 8" HEM. W/12' DRIP
- 461 = 9" MAP. W/10' DRIP
- 552 = 6" HEM. W/9' DRIP
- 553 = 7" DEC. W/13' DRIP
- 728 = 9" MAP. W/12' DRIP

**DEVELOPER/AGENT**  
MILESTONE-WCM, LLC  
8 CRESCENT KEY  
BELLEVUE, WA 98009

**SURVEYOR/ENGINEER:**  
EASTSIDE CONSULTANTS, INC.  
1320 NW MALL ST., STE B  
ISSAQUAH WA 98027

**ZONING:**  
R-8.4

**PROPERTY OWNER:**  
MILESTONE-WCM, LLC  
8 CRESCENT KEY  
BELLEVUE, WA 98006

**PROPERTY ADDRESS:**  
7621 SE 22ND STREET  
MERCER ISLAND, WA 98040

**TAX ACCOUNT NO.**  
531510-1846

**LOT SIZE:**  
25,221 S.F. / 0.579 ACRES

**LEGAL DESCRIPTION:**  
THE WEST 158.97 FEET OF THE EAST 178.97 FEET OF LOT 1, AND THE WEST 133.97 FEET OF THE EAST 153.97 FEET OF LOT 2, BLOCK 24, MCGILVRA'S ISLAND ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 16 OF PLATS, PAGE 58, IN KING COUNTY, WASHINGTON.

- TOPOGRAPHY SURVEY NOTES:**
1. BASIS OF BEARINGS IS THE WASHINGTON STATE PLANE COORDINATE SYSTEM, N.A.D. 1983/2011, BASED ON GPS TIES TO THE WASHINGTON STATE REFERENCE NETWORK (WSRN).
  2. ELEVATION DATUM IS N.A.V.D. 1988 BASED ON GPS TIES TO THE WSRN.
  3. FIELD WORK WAS DONE IN FEBRUARY OF 2020 USING A TRIMBLE R8 GNSS GPS RECEIVER, AND A SPECTRA PRECISION FOCUS 35 ROBOTIC TOTAL STATION IN ACCORDANCE WITH W.A.C. 332-130.
  4. THE PURPOSE OF THIS SURVEY IS TO PROVIDE A BASE MAP FOR CIVIL ENGINEERING DESIGN.
  5. THE CONTOURS SHOWN ARE DERIVED FROM DIRECT FIELD OBSERVATIONS. THE CONTOUR INTERVAL IS 2.0 FEET AND THE CONTOUR ACCURACY IS ONE HALF OF THE INTERVAL (±1.0 FEET).
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  7. THE UNDERGROUND UTILITIES SHOWN ARE BASED ON A COMBINATION OF PAINT MARKS PROVIDED BY APPLIED PROFESSIONAL SERVICES, INC. AND THE SURVEYED LOCATION OF OBVIOUS SURFACE FEATURES. ADDITIONAL UNDERGROUND UTILITIES MAY EXIST ON AND AROUND THIS SITE.
  8. THE LEGAL DESCRIPTION AS SHOWN HEREON IS PER STEWART TITLE INSURANCE COMPANY FILE No. 561998, COMMITMENT DATE: OCTOBER 6, 2019.
  9. ARBORIST REPORT PROVIDED BY LAYTON TREE CONSULTING LLC
  10. THE FOLLOWING SURVEYS OF RECORD WERE USED TO CALCULATE AND/OR ASCERTAIN THE BOUNDARY AS SHOWN HEREON...  
THE PLAT OF MCGILVRA'S ISLAND ADDITION VOLUME 16, PAGE 58  
UNRECORDED SHORT PLAT BY JONES, BASSI & ASSOCIATES DATED 1/16/1974  
RECORD OF SURVEY VOLUME 402, PAGE 142

**"FOR REFERENCE ONLY"**

Tree/Tag #	Species Common	Species Scientific	DBH (inches)	Height (feet)	DripLine/Limit of Disturbance (feet)				Condition	Exceptional Yes/No	Comments	Proposal
					N	S	E	W				
1	Douglas fir	<i>Pseudotsuga menziesii</i>	30	120	12/12	12/12	15/10	12	Fair-good	Yes	topped in past	Remove
2	Douglas fir	<i>Pseudotsuga menziesii</i>	28	113	8/10	15/12	10/10	16	Fair-good	No	topped in past, crook, regenerated top, cambial rupture	Save
3	Deodar cedar	<i>Cedrus deodara</i>	23	96	10/10	17/12	20/12	6	Good	No	asymmetric crown to southeast	Remove
4	Douglas fir	<i>Pseudotsuga menziesii</i>	18	79	7/8	12/10	13/10	6	Fair	No	asymmetric crown, somewhat suppressed	Save
5	Douglas fir	<i>Pseudotsuga menziesii</i>	40	116	17/12	16/12	16/12	18	Good	Yes	topped in past	Save
6	bigleaf maple	<i>Acer macrophyllum</i>	18	30	14/10	12/10	0/10	18	Fair	No	trunk forks at 4 feet, asymmetric crown to west	Save
7	Scoulers willow	<i>Salix scouleriana</i>	9	32	2/6	11/8	6/6	4	Fair-poor	Yes	decay at root crown, suppressed	Save
8	Douglas fir	<i>Pseudotsuga menziesii</i>	26	93	13/12	16	17/12	14	Fair-good	No	large crook, large exposed surface roots, good vigor	Save
9	Deodar cedar	<i>Cedrus deodara</i>	11	44	12/8	10	10/8	10	Good	No	young, no concerns	Save
10	Deodar cedar	<i>Cedrus deodara</i>	12	45	11/8	10	10	11	Good	No	young, no concerns	Save
11	Deodar cedar	<i>Cedrus deodara</i>	12	46	10/8	10	11/8	9	Good	No	young, no concerns	Save
12	Western red cedar	<i>Thuja plicata</i>	29	70	14/14	14/14	16	16/12	Good	Yes	Grove exposed surface roots, good vigor	Save
13	Douglas fir	<i>Pseudotsuga menziesii</i>	38	101	16/16	15/15	15	13/5	Fair-good	Yes	topped in past, large cambial rupture, 4 feet to house	Save
14	bigleaf maple	<i>Acer macrophyllum</i>	18	60	6/8	18/12	8	14/8	Fair	Yes	Grove asymmetric crown to south	Remove
15	Douglas fir	<i>Pseudotsuga menziesii</i>	21	95	6/10	11/11	6	10/10	Fair	Yes	Grove natural lean south, topped in past	Remove
16	Douglas fir	<i>Pseudotsuga menziesii</i>	27	62	7/10	12/12	12	5/10	Fair	Yes	Grove broken top, small crown	Save
17	Douglas fir	<i>Pseudotsuga menziesii</i>	26	103	14/10	8/10	12	8/10	Fair	Yes	Grove topped in past, crook, regenerated top	Save
18	bigleaf maple	<i>Acer macrophyllum</i>	9.7 (11)	51	12/8	8/8	14	6/8	Fair	Yes	Grove poor taper, some dead cambium on 12 inch stem	Save
19	horse chestnut	<i>Aesculus hippocastanum</i>	14	47	15/10	12/10	8/8	16/10	Fair-good	No	decent form	Remove
20	bigleaf maple	<i>Acer macrophyllum</i>	12.9.8 (17)	61	12/10	4/10	18/10	8/10	Fair	No	somewhat suppressed	Save
21	Douglas fir	<i>Pseudotsuga menziesii</i>	19	86	7/10	7/10	9/10	7/10	Fair	No	narrow crown, large cambial rupture	Save
22	Douglas fir	<i>Pseudotsuga menziesii</i>	40	94	16/12	15/15	16/16	17/16	Fair-good	Yes	topped in past, crook, regenerated top	Save
24	Western red cedar	<i>Thuja plicata</i>	10	20	8/8	12/12	10/8	10/10	Fair	No	suppressed, under pine	Save
25	Douglas fir	<i>Pseudotsuga menziesii</i>	30	118	10/12	13/13	16	12/12	Fair-good	Yes	topped in past, good vigor	Save
NEIGHBORING TREES												
23	shore pine	<i>Pinus contorta</i>	22	65	10/10	16/12	10/10	11/10	Fair	Yes	forked tops	Save
101	Western red cedar	<i>Thuja plicata</i>	32	88	2/0	NA	12/8	NA	Fair-good	Yes	sparse top foliage, sound	Protect
102	Western red cedar	<i>Thuja plicata</i>	13	45	8	10	10/8	NA	Good	No	boundary line tree, good vigor	Protect

Drip-Line measurements from face of trunk  
Measurements for neighboring trees from property line  
Calculated DBH: the DBH in parenthesis is the square root of the sum of the dbh for each individual stem squared (example with 3 stems: dbh = square root [(stem1)² + (stem2)² + (stem3)²]).  
TBD - to be determined

Percent Retained 19/24 79.17 %

FOUND 2" IRON PIPE W/TACK PER ROS 402/141, AT CALCULATED POSITION.

FOUND 2" IRON PIPE W/TACK PER ROS 402/141, AT CALCULATED POSITION.

FOUND #4 REBAR W/LS CAP No. 28101, NO RECORD FOUND N33°E 0.2' OF CALCULATED POSITION.

FOUND #4 REBAR W/LS CAP No. 17663 PER ROS 402/141, 1' NORTH OF CALCULATED POSITION.

FOUND #4 REBAR W/LS CAP No. 34670 NO RECORD FOUND 8' NORTH OF CALCULATED POSITION.

FOUND #4 REBAR W/LS CAP No. 17663 PER ROS 402/141, 0.6' NORTH OF CALCULATED POSITION.

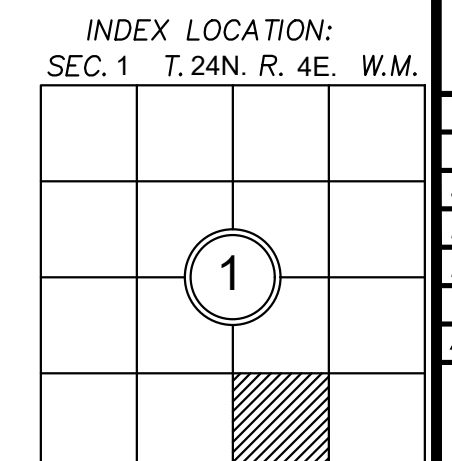
S. 1/4 S. 1 FOUND 3.5" BRASS CAP W/PUNCH & LS No. 32429 PER ROS 402/141, AT CALCULATED POSITION.

SE COR. S.1 FOUND 3.5" BRASS CAP W/PUNCH & LS No. 32429 PER ROS 402/141, AT CALCULATED POSITION.

**NOTE: THE EXISTING UTILITIES AS SHOWN ARE ONLY APPROXIMATE. OTHER EXISTING UTILITIES MAY EXIST ALONG THIS PROPOSED ALIGNMENT. IT SHALL BE THE CONTRACTOR AND OR OWNERS RESPONSIBILITY TO VERIFY THE SIZE TYPE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION**

Call Before You Dig 811

PROJECT NO.: 2412-106 SUB2 MILESTONE-WCM LLC



REVISIONS	BY	DATE

**BOUNDARY AND TOPOGRAPHY MAP**

MILESTONE WCM, LLC  
8 CRESCENT KEY  
BELLEVUE, WA 98006  
CONTACT: GREG ARMS  
PHONE: (206) 817-4192

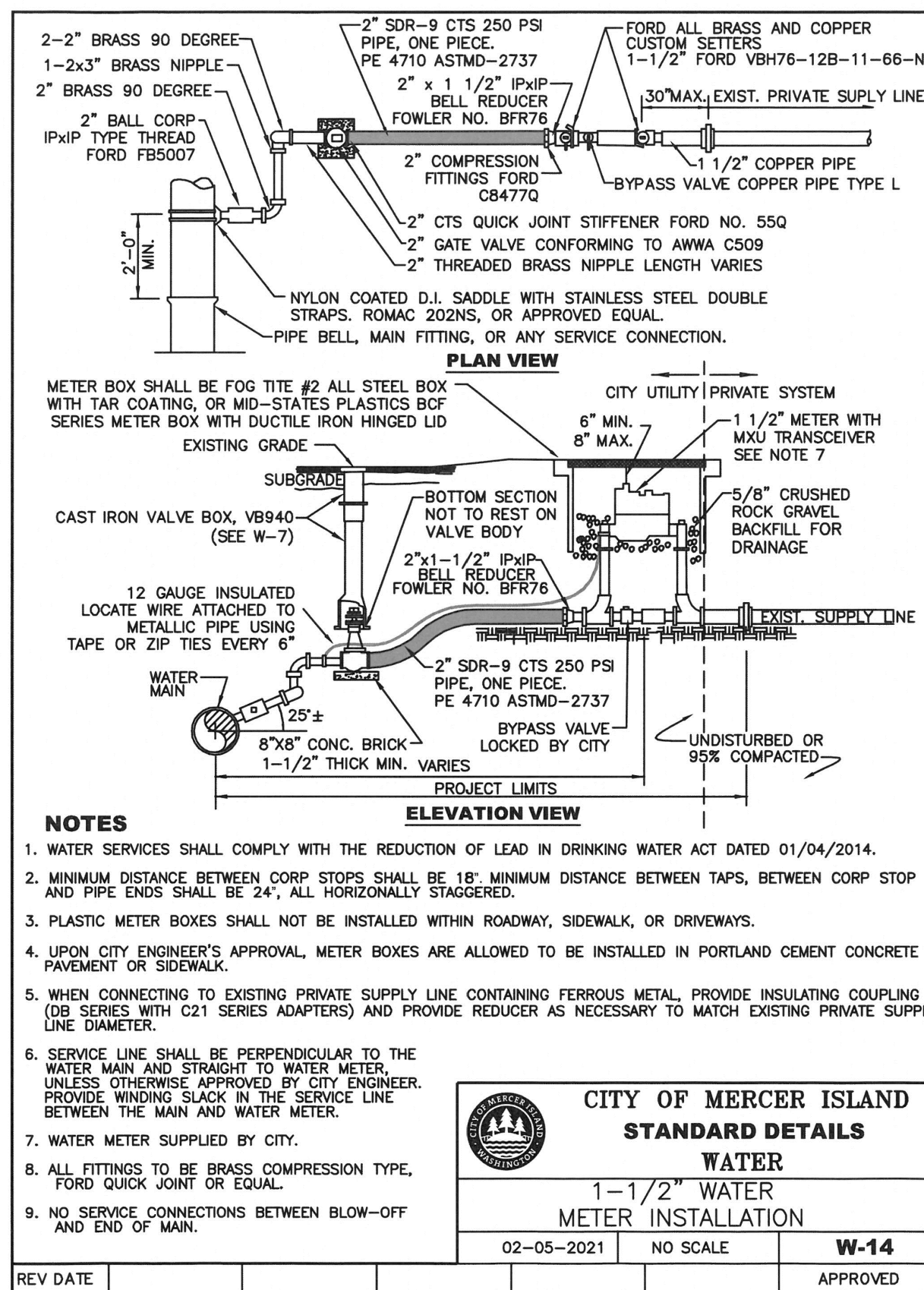
**ENGINEERS - SURVEYORS**  
**EASTSIDE CONSULTANTS, INC.**  
1320 NW MALL ST., SUITE B  
ISSAQUAH, WASHINGTON 98027  
PH: (425) 392-5351 FAX: 392-6676

JOB NO. 20025  
DATE 6/21  
SCALE 1"=20'  
DESIGNED RSF  
DRAWN RSF  
CHECKED RSF  
APPROVED RSF

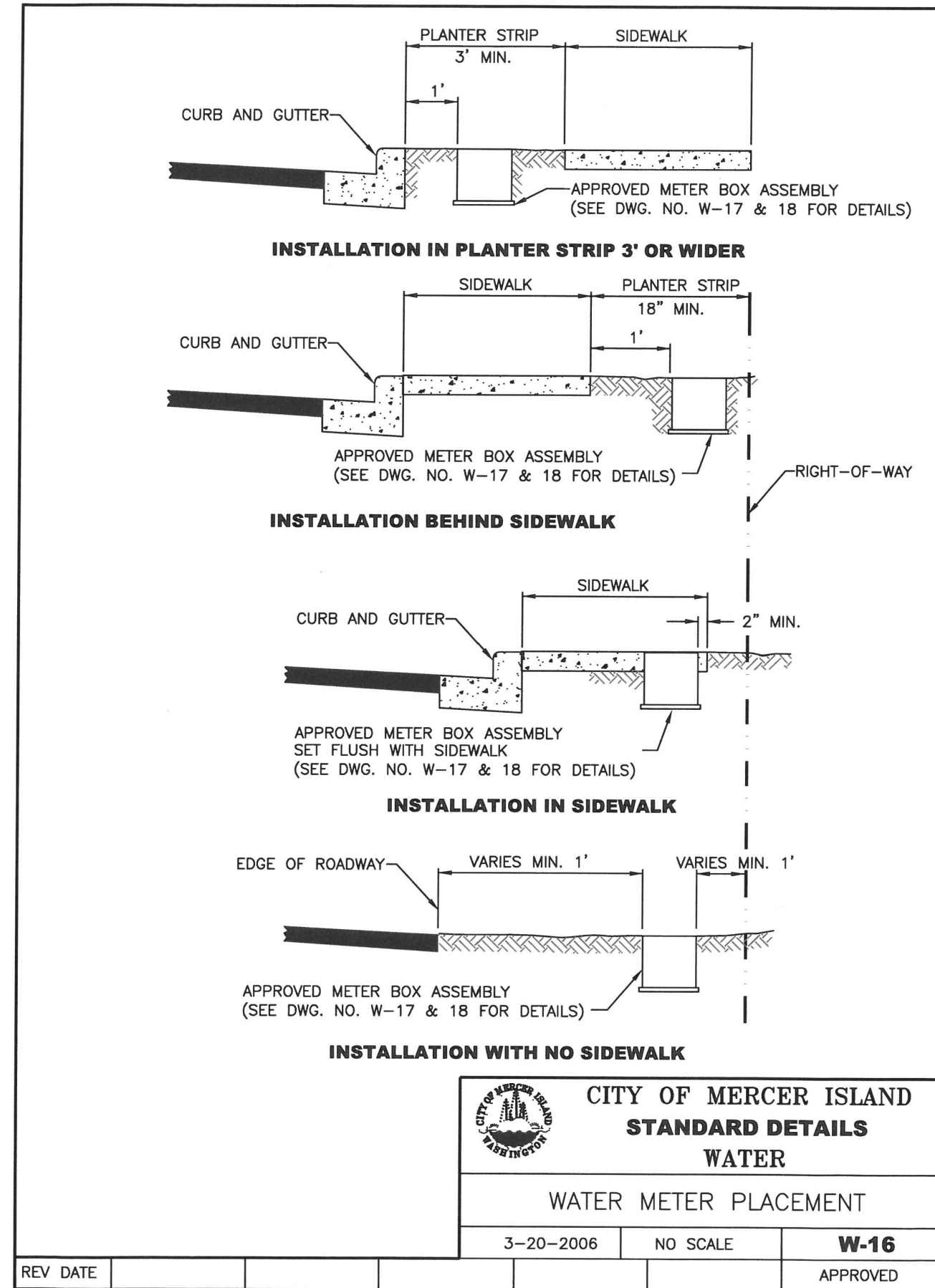
SHEET 3 OF 4

# RAND-MILESTONE LOT 3 GRADING AND DRAINAGE PLAN

LOT 3 BUILDING PERMIT  
SE 1/4 OF SEC.1, T.24N., R.4E., W.M.  
CITY OF MERCER ISLAND, WASHINGTON



CITY OF MERCER ISLAND  
STANDARD DETAILS  
WATER  
1-1/2" WATER  
METER INSTALLATION  
02-05-2021 NO SCALE W-14



CITY OF MERCER ISLAND  
STANDARD DETAILS  
WATER  
WATER METER PLACEMENT  
3-20-2006 NO SCALE W-16

REVISIONS	BY	DATE

## WATER DETAILS

MILESTONE WCM, LLC  
8 CRESCENT KEY  
BELLEVUE, WA 98006  
CONTACT: GREG ARMS  
PHONE: (206) 817-4192

ENGINEERS - SURVEYORS  
**EASTSIDE CONSULTANTS, INC.**  
1320 N.W. WALL ST., SUITE B  
ISSAQUAH, WASHINGTON 98027  
PH: (425) 392-5351 FAX: 392-4676



JOB NO. 20025  
DATE 12/22  
SCALE 1"=20'  
DESIGNED RSF  
DRAWN RSF  
CHECKED RSF  
APPROVED RSF

12/17/2025

### CRAWL SPACE VENTS

1. CRAWL SPACE AREA = 364 SF
2. CRAWL SPACE AREA / 3000 = .121 SF OF VENT AREA REQUIRED
3. TYPICAL VENT SIZE = 14"x8"x15" (75% EFFICIENCY) = .58 SF PER VENT NET FREE AREA
4. VENT AREA / .58 = 208 VENTS REQUIRED
5. 3 VENTS SHOWN (SEE PLAN FOR LOCATION)
6. 3 VENTS x .58 = 1.74 SF OF VENT AREA PROVIDED
7. VENTS SHALL BE COVERED WITH CORROSION RESISTANT WIRE MESH WITH OPENINGS OF 1/4" MAX.
8. VENTS LOCATED IN RIM JOIST MUST BE PERMANENTLY BAFFLED, USEC 502.14.7

### GENERAL FRAMING NOTES

1. SEE TYPICAL MATERIALS LIST ON SECTION SHEET
2. SEE SHEET A-1 FOR ALL GENERAL NOTES AND FOR ALL REQUIREMENTS CONCERNING MECHANICAL, PLUMBING, AND ELECTRICAL.
3. TRUSS DESIGN BY MFG. TRUSS PLAN SHOWN IS FOR GENERAL LAYOUT ONLY. SEE DIV. 6/02 SHEET A-1
  - TRUSS LOADING: SEE DIV. 0100/10A SHEET A-1
  - TRUSS SPAN PER FLOOR PLAN
  - TRUSS TYPE PER ROOF FRAMING PLAN
4. ROOF FRAMING SPACING: 24" O.C. U.O.
5. ROOF FITCH: EXTERIOR PER ELEVATION INTERIOR PER SECTION.
6. RAFTER TAIL 2x4. VERIFY.
7. ROOF TAIL AND RAKE OVERHANG PER ROOF PLAN.
8. ALL HEADERS ARE 4x10 DF #2 UNO. PROVIDE (1) TRIMMER STUD UP TO 4'-0" SPAN AND (2) TRIMMER STUDS OVER 4'-0" UNO. SEE DIV. 06100 SHEET A-1. HEADERS TO BE INSULATED W/ MIN. R-10 INSULATION
9. STUD NOTCHING AND BORING PER I.R.C. SECT. R602.6
  - BEARING OR EXTERIOR WALL: MAXIMUM NOTCH 25%, BORING 40%
  - 60% MAXIMUM BORING IF DOUBLED WITH NOT MORE THAN (2) SUCCESSIVE STUDS BORED.
  - NON-BEARING: MAXIMUM NOTCH 40%, BORING 60%.
  - HOLES NO CLOSER THAN 5/8" TO FACE OF STUD.

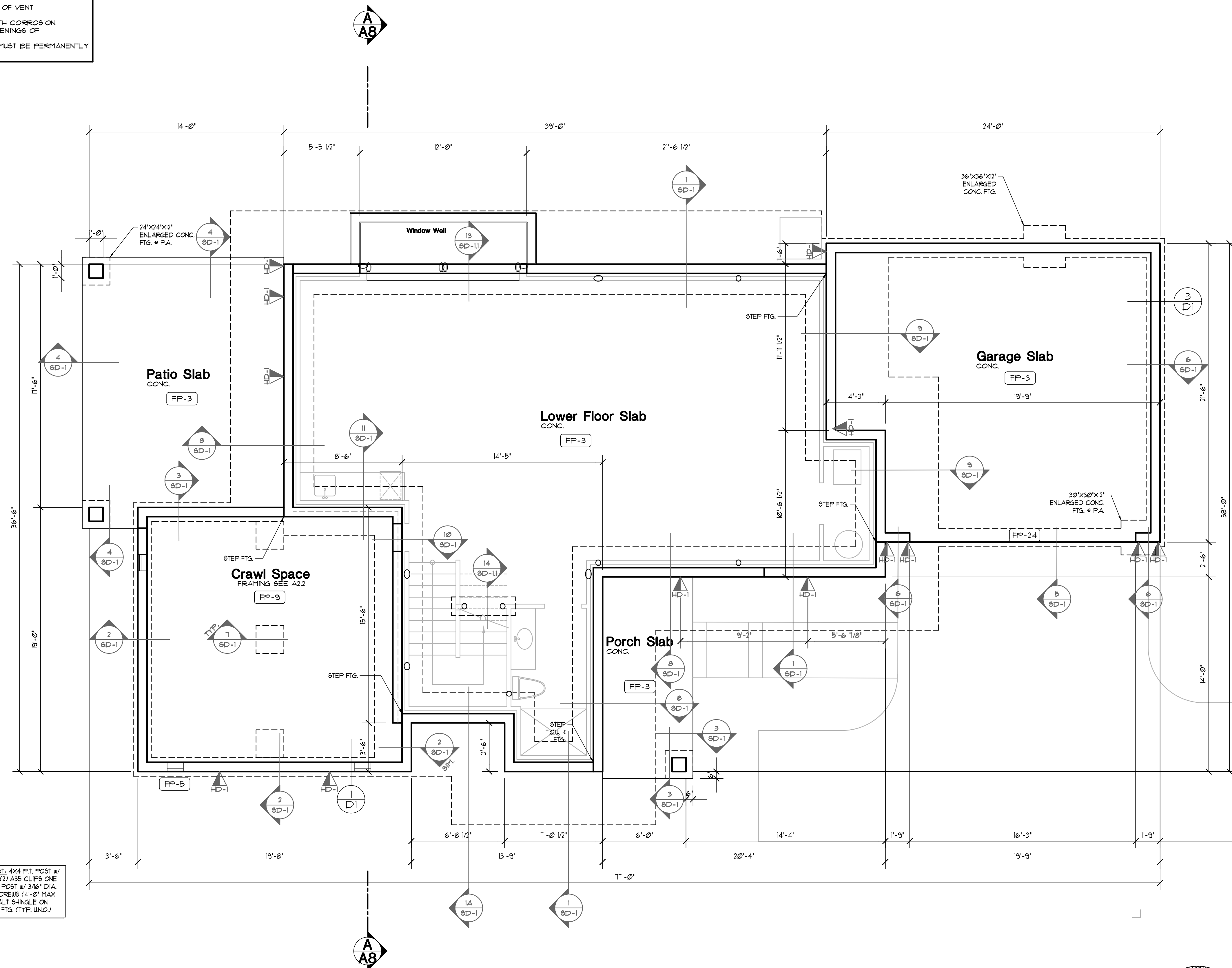
### FOUNDATION KEYNOTES

- FP-1 CONCRETE STEM WALL 8" WIDE WITH MIN. 16"x12" FOOTING. SEE DETAILS FOR ADDITIONAL INFORMATION. SEE DIV. 3 SHEET A-1
- FP-3 4" CONC. SLAB ON 10 MIL VAPOR BARRIER ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL
- FP-5 CRAWL SPACE VENT. SEE CALCULATION. SEE DIV. 1 SHEET A-1
- FP-6 ALL CRIPPLE WALLS ARE 2x4 OR 3x4 @ 16" O.C. UNO. 14" MIN STUD LENGTH PER IRC. SEE DIV. 6 SHEET A-1
- FP-9 6 MIL BLACK POLYETHYLENE GROUND COVER ON GRADE. SEE DIV. 7 SHEET A-1
- FP-10 ELECTRICAL SERVICE: PROVIDE (1) 1/2" SCHEDULE 80 PVC CONDUIT FOR ELECTRICAL SERVICE AND (1) 5/8"x20" LONG GALVANIZED ROD FOR ELECTRICAL GROUNDING. SEE DIV. 16 AND VERIFY W/ SITE CONDITIONS
- FP-11 BLOCK OUT IN STEM WALL FOR DOORS, HVAC, ETC. AS REQUIRED.
- FP-12 18"x24" CRAWL SPACE ACCESS. INSULATE AND WEATHER STRIP. SEE DIV. 0100/21 SHEET A-1
- FP-13 PRESSURE BLOCKING OF SAME SIZE AS ADJACENT JOIST.
- FP-15 30"x30"x12" ENLARGED CONC. FTG.
- FP-16 36"x36"x12" ENLARGED CONC. FTG.
- FP-17 STUD STEEL 12" INTO SLAB @ 12" O.C.
- FP-18 FLOOR JOIST SEE DIV. 6 SHEET A-1
- FP-20 PROVIDE SOLID BLOCKING THRU JOIST SYSTEM TO PROVIDE SAME AREA OF BEAM SUPPORT AS ABOVE AND BELOW. SEE DIV. 6 SHEET A-1
- FP-21 MIN. 1" CLEARANCE FROM CONCRETE AT END OF BEAMS
- FP-22 EXTEND PIER MIN 18" BELOW SURROUNDING GRADE
- FP-24 EDGE OF CONCRETE

### SYMBOLS & LEGEND

- POINT LOADS FROM ABOVE
- POINT LOADS FROM ABOVE W/ LOADING
- POINT LOAD TRANSFERRING DOWN
- POINT LOAD TRANSFERRING DOWN W/ LOADING
- HANGER
- POINT LOAD TRANSFERRED BY KICKER
- HOLD DOWN WITH SIZE DESIGNATION
- VERTICAL STRAP WITH SIZE DESIGNATION TO BE USED ON FLOOR BELOW
- HORIZONTAL STRAP WITH SIZE DESIGNATION
- INDICATES BEAM CALCULATION WITH INDEXED NUMBER
- WALL ABOVE
- WALL BELOW

NOTE: UNLESS OTHERWISE NOTED, ENGINEERING AND CALCULATIONS ARE NOT PROVIDED IN THESE DRAWINGS.



TYP. CRAWL SPACE POST: 4X4 FT. POST W/ 2X4 CLEATS EA. SIDE & (2) A35 CLIPS ONE ON EA. SIDE @ BASE OF POST @ 3/8" DIA. X 1 1/4" LONG TAMPON SCREWS @ 14" O.C. MAX. POST HEIGHT ON ASPHALT SHINGLE ON 24"x24"x8" PLAN CONC. FTG. (TYP. UNO.)

## FOUNDATION PLAN

Scale 1/4"=1'-0"

Date	By	Description
10/20/20	AG	PERMIT SET

Milestone NW  
 Mercer Island Lot 3

7623 SE 22nd ST. Mercer Island, WA 98040

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ARCHITECTURAL INNOVATIONS, P.S.  
 Forward Thinking Design Solutions For Your Environment  
 14311 SE 16th St.  
 Bellevue, WA 98007  
 1-800-888-4517  
 www.kapellechanceplans.com

TITLE
JOB NO.: 21024.05
STARTING NO.: 21024.03

SHEET
A2.0

**SYMBOLS AND LEGEND**

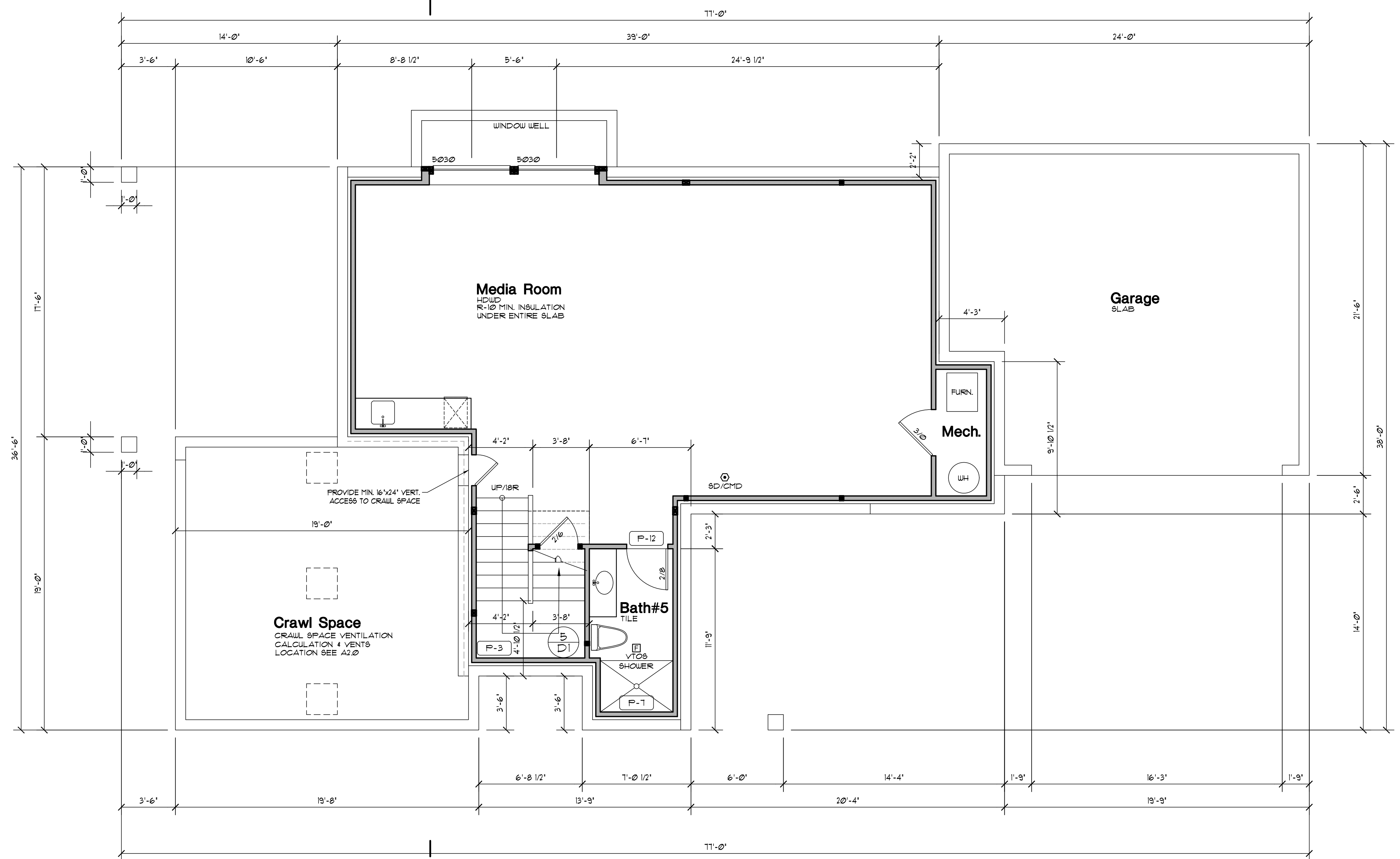
- FAN-DIRECT VENT TO OUTSIDE  
-BATHROOM/LAUNDRY 50 CFM MIN.  
-KITCHEN EXHAUST HOOD OVER A COMBUSTION RANGE TO BE MIN. OF 250CFM. IF EXHAUST HOOD EXCEEDS 400 CFM MAKE UP AIR MUST BE PROVIDED PER SECTION M1503.6.
  - WHOLE-HOUSE FAN TO RUN CONTINUOUS & CONFORM TO IRC, M1505.4. FAN SIZE PER PLAN. FAN RATE TO BE ADJUSTED BY A FACTOR OF 1.5 FOR A NON-BALANCED NON-DISTRIBUTED SYSTEM. FRESH AIR TO BE PROVIDED BY THE FORCED AIR SYSTEM DUCTS PER SECTION M1505.4.1.
  - THERMOSTAT @ 5'-0" ABOVE FLOOR
  - 10'-0" SMOKE ALARM PER IRC, R314 WITH BATTERY BACKUP INTERCONNECTED PER R314.4 & R315.5. USE A COMBINATION SMOKE/CARBON MONOXIDE ALARM WHEN NOTED.
  - HEAT DETECTOR OR HEAT ALARM RATED FOR THE AMBIENT OUTDOOR TEMPERATURES & HUMIDITY PER IRC, R314.
- MECHANICAL, PLUMBING, AND ELECTRICAL SYSTEM FOR UNITS; PER DIV. 15.16 SEE SHEET A1
- FURN. (circle with FURN)  
WH (circle with WH)
- A. PROVIDE 6" DIAMETER FRESH AIR INTAKE FROM OUTSIDE TO RETURN AIR PLENUM AT FURNACE WITH MOTORIZED FLOW DAMPERS.
  - B. PROVIDE THERMAL EXPANSION TANK AT WATER HEATER.
  - C. STRAP WATER HEATER TO FRAMING TOP AND BOTTOM.
  - D. PROVIDE PRESSURE RELIEF LINE PLUMBED TO OUTSIDE.

**GENERAL PLAN NOTES**

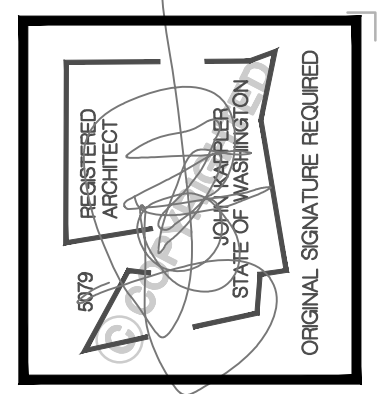
1. SEE SHEET A-1 FOR ALL GENERAL NOTES AND REQUIREMENTS.
2. ENERGY AND AIR QUALITY INFORMATION SEE DIV. 11 SHEET A-1
3. SEE BUILDING ELEVATION FOR WINDOW OPERATION SEE DIV. 8 SHEET A-1
4. SEE TYP. MATERIALS LIST ON SECTION SHEET
5. SEE SHEET A-1 FOR ALL NOTES AND REQUIREMENTS CONCERNING MECHANICAL, PLUMBING, AND ELECTRICAL.

**FLOOR PLAN KEY NOTES**

- P-1 OCCUPANCY SEPARATION: APPLY (1) LAYER OF 1/2" GIBB. TO GARAGE SIDE OF RESIDENCE, ATTIC SPACES, AND TO ALL BEAMS AND POSTS SUPPORTING A FLOOR-CEILING ASSEMBLY. APPLY (1) LAYER OF 3/4" TYPE 'X' GIBB. TO GARAGE CEILING WHEN UNDER HABITABLE ROOMS. DUCTS THROUGH WALL OR CEILING COMMON TO HOUSE SHALL HAVE MINIMUM 26 GAUGE STEEL SEE DIV. 02022.6 & SHEET A-1
- P-2 1 1/2" MIN. SELF-CLOSING SOLID WOOD CORE, HONEY-COMB CORE STEEL, OR 20-MINUTE FIRE RATED DOOR SEE DIV. 02022.6.B, SHEET A-1
- P-3 STAIR ASSEMBLY NOTES; PER IRC, SECTION R301.5  
A. HEADROOM MIN. 6'-8", WIDTH MIN. 3'-0".  
B. TREADS 10" MIN. DEPTH AND MIN. WIDTH OF 36" ABOVE HANDRAIL HEIGHT, RISERS 3/4" MAX. HT. TREAD NOSING TO BE MINIMUM 3/4" AND A MAXIMUM OF 1 1/4" ON STAIRS WITH SOLID RISERS.  
C. HANDRAIL MIN. 34" TO MAX 38" ABOVE TREAD NOSING. HANDRAIL TYPE I CIRCULAR TO HAVE 1 1/2" MIN. TO 2" MAX. CROSS SECTION DIMENSION AND 1 1/2" MIN. CLEAR FROM WALL. RETURN RAIL ENDS. HANDRAILS SHALL BE STRONG ENOUGH TO RESIST A 200 POUND POINT LOAD IN ANY DIRECTION PER IRC, TABLE R301.5  
D. INSTALL FIRE BLOCKING BETWEEN STRINGERS AT THE TOP AND BOTTOM OF EACH RUN PER IRC, SECTION R302.11.  
E. COVER USABLE SPACE UNDER STAIR W/ 1/2" GIBB. PER IRC, SECTION R302.1.  
F. INTERMEDIATE BALUSTERS SHALL BE SPACED W/ LESS THAN 4" BETWEEN BALUSTERS.  
G. PROVIDE STAIRWAY ILLUMINATION PER IRC, SECTION R302.1.  
SEE DIV. 02022.1 SHEET A-1
- P-4 SAFETY GLAZING PER IRC, SECTION R308  
A. WINDOWS WITHIN 18" OF FLOOR  
B. WINDOWS WITHIN A 24" ARC OF DOORS  
C. WINDOWS AT TUBS AND SHOWERS  
D. GLAZING IN DOORS  
E. LESS THAN 60" HORIZ. FROM THE BOT. STAIR TREAD NOSING, & BOT. EDGE OF GLAZING IS LESS THAN 36" ABV. LANDING/WALKING SURFACE SEE DIV. 02022.1 SHEET A-1
- P-5 EGRESS WINDOW PER IRC, SECTION R310 SEE DIV. 02022.1 SHEET A-1
- P-6 IGNITERS FOR GAS FIRED APPLIANCES IN GARAGE TO BE 18" MIN. ABOVE TOP OF SLAB. SEE DIV. 15 SHEET A-1
- P-7 COVER WALLS ADJACENT TO TUBS AND SHOWERS WITH NON-ABSORBENT MATERIAL TO 12" ABOVE DRAIN INLETS, PER IRC, SECTION 3012. SEE DIV. 02022.1 SHEET A-1
- P-8 (2) LAYERS OF FLOOR SHEATHING OVER FRAMING.
- P-9 3/4" MAX. RISER WITH 10" MIN. RUN, IF MORE THAN (3) RISERS, HANDRAIL REQUIRED PER IRC, SECTION R311.7.8. SEE DIV. 02022.1 SHEET A-1
- P-10 18"x24" CRAWL SPACE ACCESS, INSULATE AND WEATHER STRIP. SEE DIV. 02022.1 SHEET A-1
- P-11 22"x30" ATTIC SPACE ACCESS W/ 30" HEAD CLEARANCE, INSULATE AND WEATHER STRIP. SEE DIV. 02022.2 SHEET A-1
- P-12 FLOOR MATERIAL BREAK LINE
- P-13 WALL LINE ABOVE
- P-14 WALL LINE BELOW
- P-15 FIREPLACE ASSEMBLY NOTES:  
A. DIRECT VENT GAS FIREPLACES, MUST BE LISTED, LABELED & INSTALLED PER MFG. SPECIFICATIONS, SHALL CONFORM TO IRC REQUIREMENTS. SEE DIV. 02022.12 SHEET A-1  
B. ZERO CLEARANCE FIREPLACES SHALL CONFORM TO IRC REQUIREMENTS. SEE DIV. 02022.12 SHEET A-1  
C. HEARTH SHALL CONFORM TO IRC REQUIREMENT SEE DIV. 02022.12  
D. FIREBLOCK OPENINGS AROUND PENETRATIONS @ EACH FLOOR PER IRC, SECTION R1003.13.  
E. FIREPLACE MUST COMPLY WITH UL 121 TESTING  
SEE SITE PLAN FOR EXTENT OF WALKS & DRIVEWAYS
- P-16 3" DIAMETER STEEL POST
- P-17 36" GUARDRAIL PER IRC, SECTION R302 & TABLE R301.5 CONTRACTOR TO VERIFY TO INSPECTOR THAT ALL GUARDS & RAILINGS ARE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION.
- P-18 'B' VENT FOR MECHANICAL, 1" CLEARANCE ALL SIDES PER IRC, SECTION R302.11. SEE DIV. 15 SHEET A-1
- P-19 PLANT SHELF
- P-20 UPPER AND LOWER LINEN CABINETS
- P-21 SOFFIT AREA
- P-22 INTEGRATED MAKE UP AIR
- P-24 2x6 STUDS W/ R-21 INSULATION MIN.



**LOWER FLOOR PLAN**  
Scale 1/4"=1'-0"



Date	By	Description
10/22/20	AG	PERMIT SET

**Milestone NW**  
**Mercer Island Lot 3**  
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STARTING NO.: 21024.03

SHEET  
**A2.1**

**NOTE #2 \* STEEL P.M.**  
 PROVIDE SOLID 2X12 LVL WEB PACKOUT FASTENED TO WEB w/ 1/2" DIA THRU BOLTS @ 24" OC STAGGERED. PROVIDE 2X TOP PLATE FASTENED w/ TO TOP FLANGE OF STEEL BEAMS w/ P.A.P.S. (HILTI X-U PINS OR EQUAL @ 8" DIA X 2" LONG MIN) @ 16" OC STAGGERED OR 1/2" DIA BOLTS @ 28" OC STAGGERED)

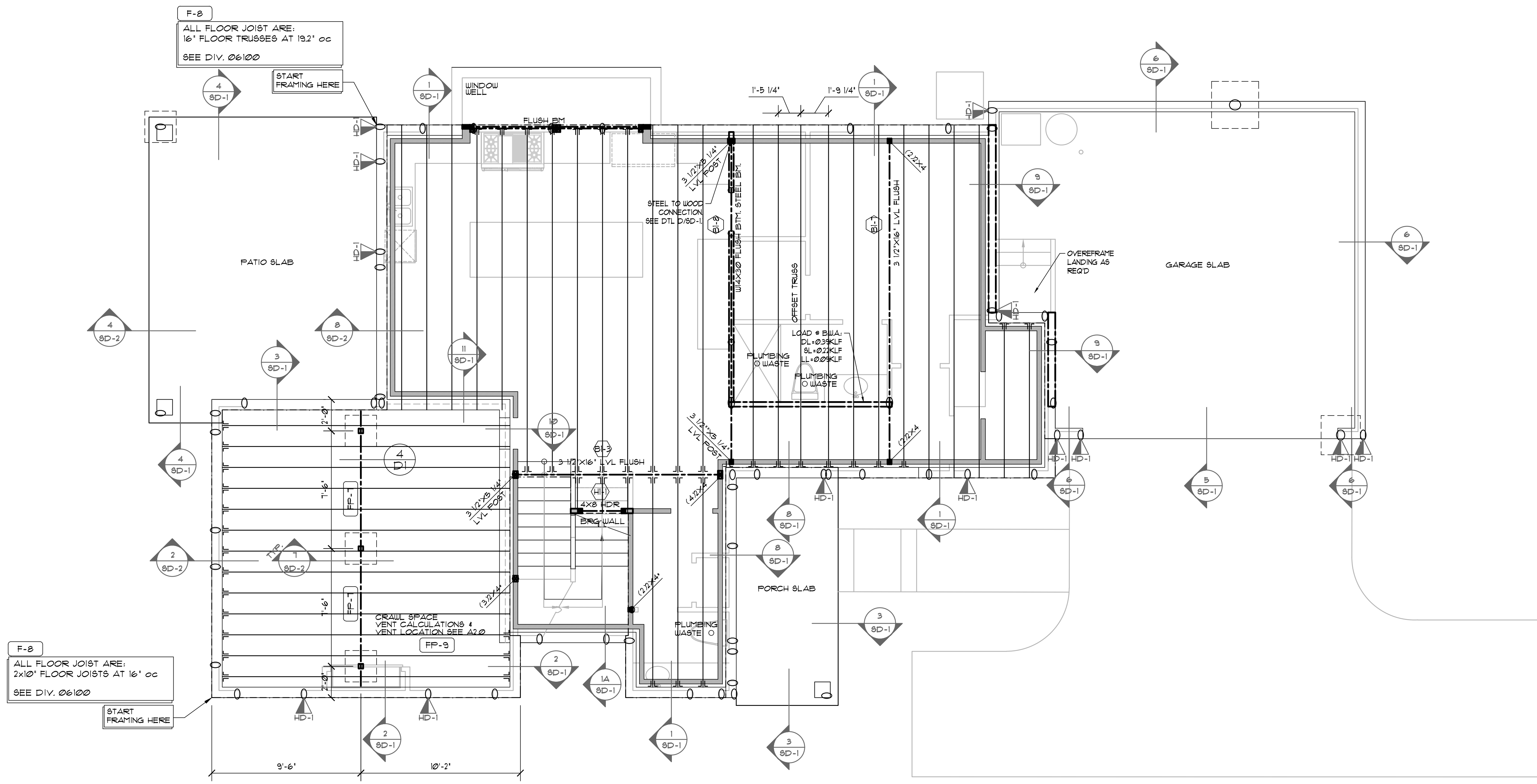
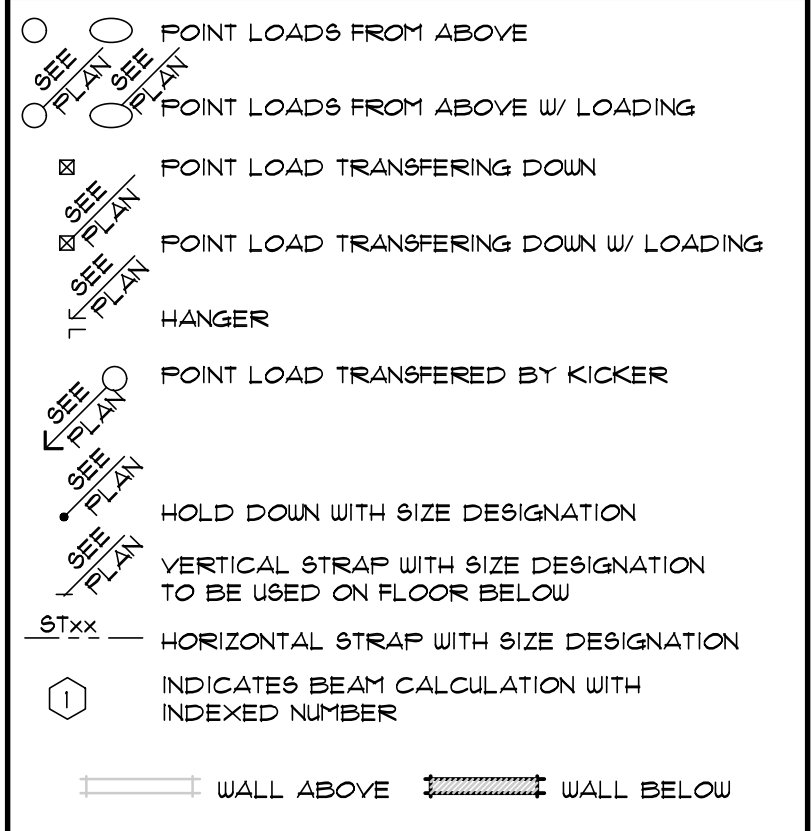
**GENERAL FRAMING NOTES**

- SEE TYPICAL MATERIALS LIST ON SECTION SHEET
- SEE SHEET A-1 FOR ALL GENERAL NOTES AND FOR ALL REQUIREMENTS CONCERNING MECHANICAL, PLUMBING, AND ELECTRICAL.
- TRUSS DESIGN BY MFG. TRUSS PLAN SHOWN IS FOR GENERAL LAYOUT ONLY. SEE DIV. 6/200 SHEET A-1
  - TRUSS LOADING. SEE DIV. 2/100/10A SHEET A-1
  - TRUSS SPAN PER FLOOR PLAN
  - TRUSS TYPE PER ROOF FRAMING PLAN
- ROOF FRAMING SPACING, 24" OC UNO.
- ROOF PITCH- EXTERIOR PER ELEVATION INTERIOR PER SECTION.
- RAFTER TAIL 2x4. VERIFY.
- ROOF TAIL AND RAKE OVERHANG PER ROOF PLAN.
- ALL HEADERS ARE 4x8 DF #2 UNO. PROVIDE (1) TRIMMER STUD UP TO 4'-0" SPAN AND (2) TRIMMER STUDS OVER 4'-0" UNO. SEE DIV. 2/6100 SHEET A-1. HEADERS TO BE INSULATED w/ MIN. R-10 INSULATION
- STUD NOTCHING AND BORING PER I.R.C. SECT. R602.6
  - BEARING OR EXTERIOR WALL MAXIMUM NOTCH 25%, BORING 40%
  - 60% MAXIMUM BORING IF DOUBLED WITH NOT MORE THAN (2) SUCCESSIVE STUDS BORED.
  - NON-BEARING MAXIMUM NOTCH 40%, BORING 60%.
  - HOLES NO CLOSER THAN 5/8" TO FACE OF STUD.

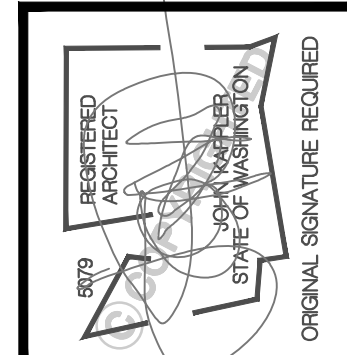
**FRAMING PLAN KEYNOTES**

- F-1 BACK FRAMING AND SOFFIT AREA AS REQUIRED TO ALLOW FOR HYAC DUCTING. SEE DIV/5 SHEET A-1
- F-2 RAKED PONY WALL ON TOP OF LOWER ROOF FRAMING MEMBERS SUPPORTING UPPER ROOF FRAMING MEMBERS.
- F-3 ALIGN EDGE OF JOIST WITH FACE OF WALL
- F-4 ALIGN INSIDE FACE OF BEAM WITH OUTSIDE FACE OF WALL
- F-5 UPSET - BOTTOM OF BEAM EVEN w/ BOTTOM OF JOIST AND TOP OF BEAM EXTENDS UP ABOVE JOISTS
- F-6 TOP OF BEAM IS FLUSH WITH BOTTOM OF JOIST WITH NO TOP PLATE. CUT ADJACENT FRAMING MEMBERS INTO BEAM FOR ADEQUATE SUPPORT.
- F-7 ATTIC SPACE VENT SEE CALCULATION SEE DIV. 2/100/3.B SHEET A-1
- F-8 FLOOR JOIST - SEE SCHEDULE DWG. SEE DIV. 2/6100 SHEET A-1
- F-9 SEE ELEVATIONS AND SECTIONS FOR PLATE HEIGHT
- F-10 PRESSURE BLOCKING SEE DIV. 2/6100 SHEET A-1
- F-11 FLUSH - BOTTOM OF BEAM EVEN w/ BOTTOM OF JOISTS
- F-12 TOP OF BEAM FLUSH w/ TOP OF JOIST AND BEAM EXTENDS DOWN BELOW JOISTS
- F-13 TOP OF BEAM 3" BELOW TOP OF FLOOR TRUSS. FLOOR TRUSSES TO BE TOP CHORD BEARING.
- F-14 2x OVERFRAMING @ 24" OC. PROVIDE 2x6 STRONGBACK FURLINS AND 2x KICKERS AT 6'-0" OC TO TRUSSES BELOW.
- F-15 2x6 CEILING JOISTS @ 24" OC

**SYMBOLS & LEGEND**



**MAIN FLOOR FRAMING PLAN**  
 Scale 1/4"=1'-0"



Date	By	Description
10/22/25	AG	PERMIT SET

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STARTING NO.: 21024.03

SHEET  
**A2.2**

**SYMBOLS AND LEGEND**

- FAN - DIRECT VENT TO OUTSIDE  
- BATHROOM/LAUNDRY 50 CFM MIN.  
- KITCHEN EXHAUST HOOD OVER A COMBUSTION RANGE TO BE MIN. OF 250CFM. IF EXHAUST HOOD EXCEEDS 400 CFM MAKE UP AIR MUST BE PROVIDED PER SECTION M1003.6.
- WHOLE-HOUSE FAN TO RUN CONTINUOUS & CONFORM TO IRC, M1005.4. FAN SIZE PER PLAN. FAN RATE TO BE ADJUSTED BY A FACTOR OF 1.5 FOR A NON-BALANCED NON-DISTRIBUTED SYSTEM. FRESH AIR TO BE PROVIDED BY THE FORCED AIR SYSTEM DUCTS PER SECTION M1005.4.1.
- WHOLE-HOUSE FAN TO RUN CONTINUOUS & CONFORM TO IRC, M1005.4. FAN SIZE PER PLAN. FAN RATE TO BE ADJUSTED BY A FACTOR OF 1.5 FOR A NON-BALANCED NON-DISTRIBUTED SYSTEM. FRESH AIR TO BE PROVIDED BY THE FORCED AIR SYSTEM DUCTS PER SECTION M1005.4.1.
- THERMOSTAT @ 5'-0" ABOVE FLOOR
- 10'-0" SMOKE ALARM PER IRC, R314 WITH BATTERY BACKUP INTERCONNECTED PER R314.4 & R315.3. USE A COMBINATION SMOKE/CARBON MONOXIDE ALARM WHEN NOTED.
- HEAT DETECTOR OR HEAT ALARM RATED FOR THE AMBIENT OUTDOOR TEMPERATURES & HUMIDITY PER IRC, R314.

**MECHANICAL, PLUMBING, AND ELECTRICAL SYSTEM FOR UNITS; PER DIV. 15.16 SEE SHEET A1**

- FURN
- WH
- A. PROVIDE 6" DIAMETER FRESH AIR INTAKE FROM OUTSIDE TO RETURN AIR FLENUM AT FURNACE WITH MOTORIZED FLOW DAMPERS.
- B. PROVIDE THERMAL EXPANSION TANK AT WATER HEATER.
- C. STRAP WATER HEATER TO FRAMING TOP AND BOTTOM.
- D. PROVIDE PRESSURE RELIEF LINE PLUMBED TO OUTSIDE.

**NOTE 5:**  
PROVIDE 1/8" OSB OR 5/32" PLYWOOD FABRICATED PER TYP. EXT. WALL SHEATHING SPEC. (SEE NOTES ON 5-00)

**GENERAL PLAN NOTES**

1. SEE SHEET A-1 FOR ALL GENERAL NOTES AND REQUIREMENTS.
2. ENERGY AND AIR QUALITY INFORMATION SEE DIV. 11 SHEET A-1
3. SEE BUILDING ELEVATION FOR WINDOW OPERATION SEE DIV. 8 SHEET A-1
4. SEE TYP. MATERIALS LIST ON SECTION SHEET
5. SEE SHEET A-1 FOR ALL NOTES AND REQUIREMENTS CONCERNING MECHANICAL, PLUMBING, AND ELECTRICAL.

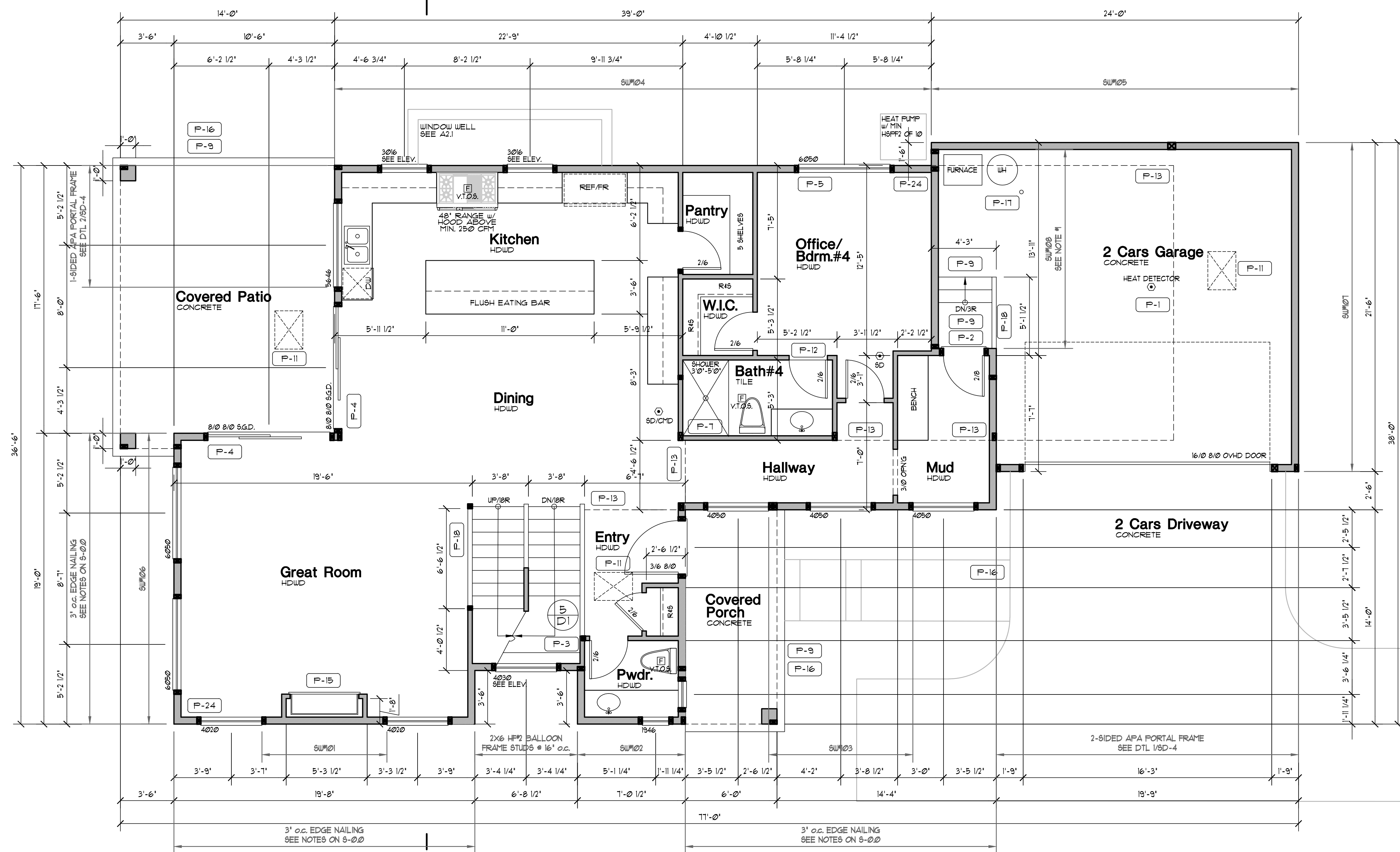
**FLOOR PLAN KEY NOTES**

- P-1 OCCUPANCY SEPARATION: APPLY (1) LAYER OF 1/2" G.I.B. TO GARAGE SIDE OF RESIDENCE, ATTIC SPACES, AND TO ALL BEAMS AND POSTS SUPPORTING A FLOOR-CEILING ASSEMBLY. APPLY (1) LAYER OF 3/4" TYPE 'X' G.I.B. TO GARAGE CEILING WHEN UNDER HABITABLE ROOMS. DUCTS THROUGH WALL OR CEILING COMMON TO HOUSE SHALL HAVE MINIMUM 26 GAUGE STEEL SEE DIV. 02022.4 SHEET A-1
- P-2 1 1/2" MIN. SELF CLOSING SOLID WOOD CORE, HONEY-COMB CORE STEEL, OR 20-MINUTE FIRE RATED DOOR SEE DIV. 02022.6 SHEET A-1
- P-3 STAIR ASSEMBLY NOTES; PER IRC, SECTION R311.5 A. HEADROOM MIN. 6'-8", WIDTH MIN. 3'-0". B. TREADS 10" MIN. DEPTH AND MIN. WIDTH OF 36" ABOVE HANDRAIL HEIGHT, RISERS 1/4" MAX. HT. TREAD NOSING TO BE MINIMUM 3/4" AND A MAXIMUM OF 1 1/4" ON STAIRS WITH SOLID RISERS. C. HANDRAIL MIN. 34" TO MAX 38" ABOVE TREAD NOSING. HANDRAIL TYPE I CIRCULAR TO HAVE 1 1/4" MIN. TO 2" MAX. CROSS SECTION DIMENSION AND 1 1/2" MIN. CLEAR FROM WALL. RETURN RAIL ENDS, HANDRAILS SHALL BE STRONG ENOUGH TO RESIST A 200 POUND POINT LOAD IN ANY DIRECTION PER IRC, TABLE R301.5 D. INSTALL FIRE BLOCKING BETWEEN STRINGERS AT THE TOP AND BOTTOM OF EACH RUN PER IRC, SECTION R302.11. E. COVER USABLE SPACE UNDER STAIR W/ 1/2" G.I.B. PER IRC, SECTION R302.1. F. INTERMEDIATE BALUSTERS SHALL BE SPACED W/ LESS THAN 4" BETWEEN BALUSTERS. G. PROVIDE STAIRWAY ILLUMINATION PER IRC, SECTION R302.1. SEE DIV. 02022.1 SHEET A-1
- P-4 SAFETY GLAZING PER IRC, SECTION R308 A. WINDOWS WITHIN 18" OF FLOOR B. WINDOWS WITHIN A 24" ARC OF DOORS C. WINDOWS AT TUBS AND SHOWERS D. GLAZING IN DOORS E. LESS THAN 60" HORIZ. FROM THE BOT. STAIR TREAD NOSING, & BOT. EDGE OF GLAZING IS LESS THAN 36" ABV. LANDING/WALKING SURFACE SEE DIV. 02022 SHEET A-1
- P-5 EGRESS WINDOW PER IRC, SECTION R310 SEE DIV. 02022 SHEET A-1
- P-6 IGNITERS FOR GAS FIRED APPLIANCES IN GARAGE TO BE 18" MIN. ABOVE TOP OF SLAB. SEE DIV. 15 SHEET A-1
- P-7 COVER WALLS ADJACENT TO TUBS AND SHOWERS WITH NON-ABSORBENT MATERIAL TO 12" ABOVE DRAIN INLETS, PER IRC, SECTION 3012. SEE DIV. 02020 SHEET A-1
- P-8 (2) LAYERS OF FLOOR SHEATHING OVER FRAMING.
- P-9 1/4" MAX. RISER WITH 10" MIN. RUN, IF MORE THAN (3) RISERS, HANDRAIL REQUIRED PER IRC, SECTION R311.7. SEE DIV. 02021 SHEET A-1
- P-10 18"x24" CRAWL SPACE ACCESS, INSULATE AND WEATHER STRIP. SEE DIV. 02021 SHEET A-1
- P-11 22"x30" ATTIC SPACE ACCESS W/ 30" HEAD CLEARANCE, INSULATE AND WEATHER STRIP. SEE DIV. 02022 SHEET A-1
- P-12 FLOOR MATERIAL BREAK LINE
- P-13 WALL LINE ABOVE
- P-14 WALL LINE BELOW
- P-15 FIREPLACE ASSEMBLY NOTES: A. DIRECT VENT GAS FIREPLACES, MUST BE LISTED, LABELED & INSTALLED PER MFG. SPECIFICATIONS, SHALL CONFORM TO IRC REQUIREMENTS. SEE DIV. 02021.2 SHEET A-1 B. ZERO CLEARANCE FIREPLACES SHALL CONFORM TO IRC REQUIREMENTS. SEE DIV. 02021.2 SHEET A-1 C. HEARTH SHALL CONFORM TO IRC REQUIREMENT SEE DIV. 02021.2 D. FIREBLOCK OPENINGS AROUND PENETRATIONS @ EACH FLOOR PER IRC, SECTION R1003.13. E. FIREPLACE MUST COMPLY WITH UL 121 TESTING SEE SITE PLAN FOR EXTENT OF WALKS & DRIVEWAYS
- P-16 3" DIAMETER STEEL POST
- P-17 36" GUARDRAIL PER IRC, SECTION R312 & TABLE R301.5 CONTRACTOR TO VERIFY TO INSPECTOR THAT ALL GUARDS & RAILINGS ARE CAPABLE OF RESISTING 200LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION.
- P-18 'B' VENT FOR MECHANICAL, 1" CLEARANCE ALL SIDES PER IRC, SECTION R302.11. SEE DIV. 15 SHEET A-1
- P-19 PLANT SHELF
- P-20 UPPER AND LOWER LINEN CABINETS
- P-22 SOFFIT AREA
- P-23 INTEGRATED MAKE UP AIR
- P-24 2x6 STUDS W/ R-21 INSULATION MIN.

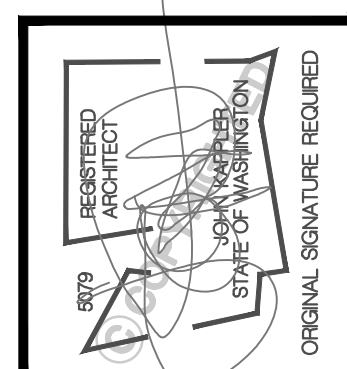
**SQUARE FOOTAGE**

MAIN FLOOR	1425 SF
UPPER FLOOR	1415 SF
LOWER	983 SF
<b>TOTAL</b>	<b>3823 SF</b>
<b>GARAGE</b>	<b>476 SF</b>
<b>COV'D PORCH</b>	<b>84 SF</b>
<b>COV'D PATIO</b>	<b>249 SF</b>

SQUARE FOOTAGE IS MEASURED TO THE OUTSIDE FACE OF WALLS, STAIRS ARE COUNTED ONCE IN CALCULATIONS, OPEN TO BELOW SPACES AND GARAGES ARE NOT INCLUDED IN CALCULATIONS.



**MAIN FLOOR PLAN**  
Scale 1/4"=1'-0"



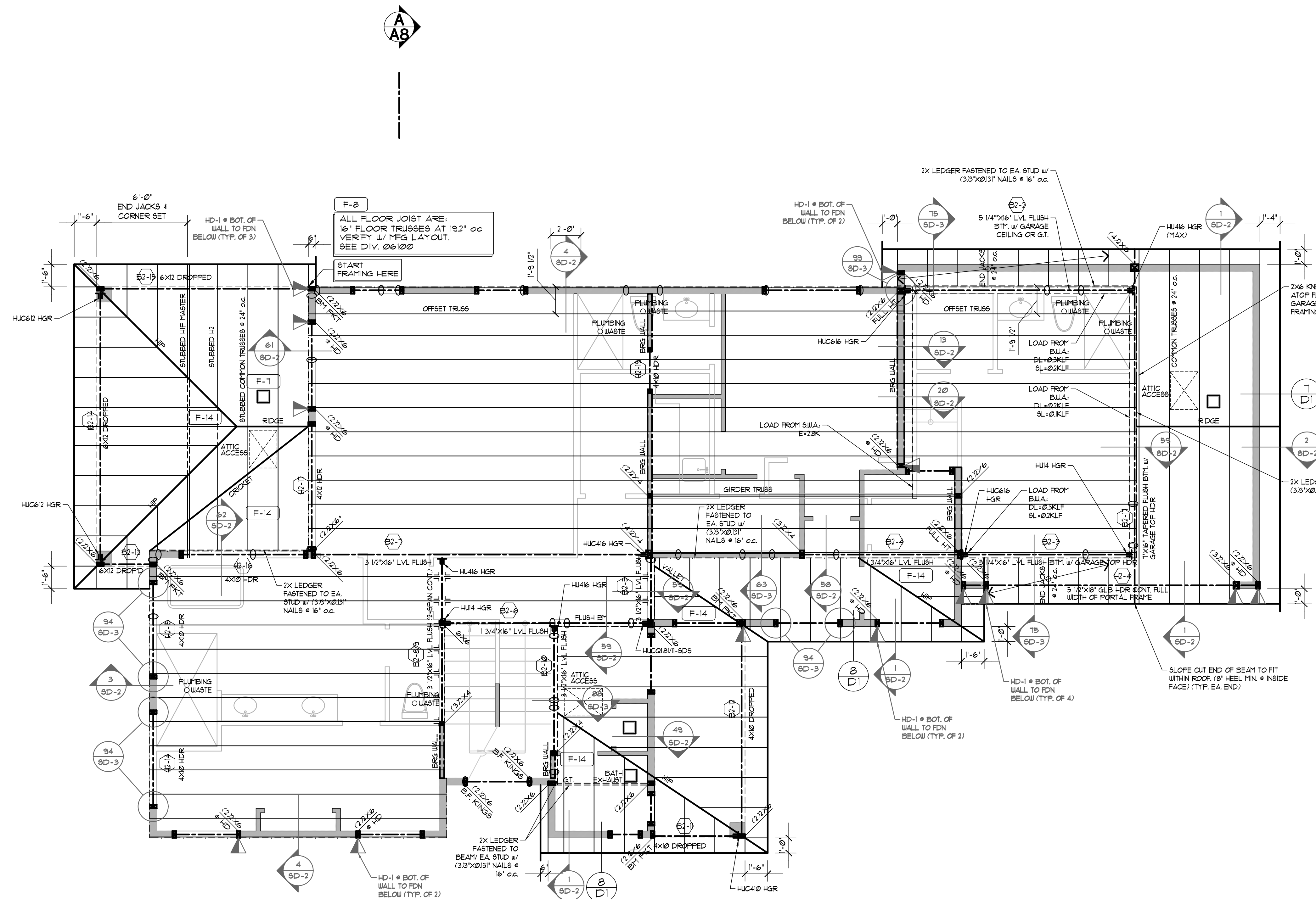
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JOB NO.:	21024.05
STARTING NO.:	21024.03

SHEET  
**A3**



**GENERAL FRAMING NOTES**

- SEE TYPICAL MATERIALS LIST ON SECTION SHEET
- SEE SHEET A-1 FOR ALL GENERAL NOTES AND FOR ALL REQUIREMENTS CONCERNING MECHANICAL, PLUMBING, AND ELECTRICAL.
- TRUSS DESIGN BY MFG. TRUSS PLAN SHOWN IS FOR GENERAL LAYOUT ONLY. SEE DIV. 6100 SHEET A-1
  - TRUSS LOADING. SEE DIV. 0100/10A SHEET A-1
  - TRUSS SPAN PER FLOOR PLAN
  - TRUSS TYPE PER ROOF FRAMING PLAN
- ROOF FRAMING SPACING, 24" o.c. U.N.O.
- ROOF PITCH- EXTERIOR PER ELEVATION INTERIOR PER SECTION.
- RAFTER TAIL 2x4. VERIFY.
- ROOF TAIL AND RAKE OVERHANG PER ROOF PLAN.
- ALL HEADERS ARE 4x8 DF #2 U.N.O. PROVIDE (1) TRIMMER STUD UP TO 4'-0" SPAN AND (2) TRIMMER STUDS OVER 4'-0" U.N.O. SEE DIV. 06100 SHEET A-1
- HEADERS TO BE INSULATED W/ MIN. R-10 INSULATION
- STUD NOTCHING AND BORING PER I.R.C. SECT. R602.6
  - BORING 40%
  - BEARING OR EXTERIOR WALL MAXIMUM NOTCH 25%
  - 60% MAXIMUM BORING IF DOUBLED WITH NOT MORE THAN (2) SUCCESSIVE STUDS BORED.
  - NON-BEARING MAXIMUM NOTCH 40% BORING 60%.
  - HOLES NO CLOSER THAN 5/8" TO FACE OF STUD.

**FRAMING PLAN KEYNOTES**

- F-1 BACK FRAMING AND SOFFIT AREA AS REQUIRED TO ALLOW FOR HVAC DUCTING. SEE DIV.18 SHEET A-1
- F-2 RAKED PONY WALL ON TOP OF LOWER ROOF FRAMING MEMBERS SUPPORTING UPPER ROOF FRAMING MEMBERS.
- F-3 ALIGN EDGE OF JOIST WITH FACE OF WALL
- F-4 ALIGN INSIDE FACE OF BEAM WITH OUTSIDE FACE OF WALL
- F-5 UPSET - BOTTOM OF BEAM EVEN W/ BOTTOM OF JOIST AND TOP OF BEAM EXTENDS UP ABOVE JOISTS
- F-6 TOP OF BEAM IS FLUSH WITH BOTTOM OF JOIST WITH NO TOP PLATE. CUT ADJACENT FRAMING MEMBERS INTO BEAM FOR ADEQUATE SUPPORT.
- F-7 ATTIC SPACE VENT SEE CALCULATION SEE DIV. 0100/3.3B SHEET A-1
- F-8 FLOOR JOIST - SEE SCHEDULE DWG. SEE DIV. 06100 SHEET A-1
- F-9 SEE ELEVATIONS AND SECTIONS FOR PLATE HEIGHT
- F-10 PRESSURE BLOCKING SEE DIV. 06100 SHEET A-1
- F-11 FLUSH - BOTTOM OF BEAM EVEN W/ BOTTOM OF JOISTS
- F-12 TOP OF BEAM FLUSH W/ TOP OF JOIST AND BEAM EXTENDS DOWN BELOW JOISTS
- F-13 TOP OF BEAM 3" BELOW TOP OF FLOOR TRUSS. FLOOR TRUSSES TO BE TOP CHORD BEARING.
- F-14 2x OVERFRAMING @ 24" o.c. PROVIDE 2x6 STRONGBACK FURLINS AND 2x KICKERS AT 6'-0" o.c TO TRUSSES BELOW.
- F-15 2x6 CEILING JOISTS @ 24" o.c

**ROOF VENT CALCULATION**

TOTAL ROOF AREA	740	SF	246	SF	OF VENT AREA REQ
40% MIN. AT 36" MAX BELOW RIDGE	=	098	SF	MIN.	
50% MAX. AT 36" MAX BELOW RIDGE	=	123	SF	MAX.	
3 ROOF JACKS AT 50 SQ. IN. EACH	=	150	SQ. IN.	=	104 SF
(36" MAX. BELOW RIDGE)					
1262 L.F. OF EAVE VENTS AT 3.3" SQ. IN./L.F.	=	4164	SQ. IN.	=	289 SF
<b>TOTAL SF OF VENTILATION PROVIDED</b>	<b>=</b>	<b>339</b>	<b>SF</b>		

**SYMBOLS & LEGEND**

- POINT LOADS FROM ABOVE
- POINT LOADS FROM ABOVE W/ LOADING
- POINT LOAD TRANSFERING DOWN
- POINT LOAD TRANSFERING DOWN W/ LOADING
- HANGER
- POINT LOAD TRANSFERED BY KICKER
- HOLD DOWN WITH SIZE DESIGNATION
- VERTICAL STRAP WITH SIZE DESIGNATION TO BE USED ON FLOOR BELOW
- HORIZONTAL STRAP WITH SIZE DESIGNATION
- INDICATES BEAM CALCULATION WITH INDEXED NUMBER
- WALL ABOVE
- WALL BELOW

NOTE, UNLESS OTHERWISE NOTED, ENGINEERING AND CALCULATIONS ARE NOT PROVIDED IN THESE DRAWINGS.

**UPPER FLOOR/LOWER ROOF FRAMING PLAN**

Scale 1/4"=1'-0"



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10/22/20	AG	PERMIT SET

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SHEET  
**A4**

**SYMBOLS AND LEGEND**

- FAN-DIRECT VENT TO OUTSIDE  
-BATHROOM/LAUNDRY 50 CFM MIN.  
-KITCHEN EXHAUST HOOD OVER A COMBUSTION RANGE TO BE MIN. OF 250CFM. IF EXHAUST HOOD EXCEEDS 400 CFM MAKE UP AIR MUST BE PROVIDED PER SECTION M1003.6.
- WHOLE-HOUSE FAN TO RUN CONTINUOUS & CONFORM TO IRC, M1005.4. FAN SIZE PER PLAN. FAN RATE TO BE ADJUSTED BY A FACTOR OF 1.5 FOR A NON-BALANCED NON-DISTRIBUTED SYSTEM. FRESH AIR TO BE PROVIDED BY THE FORCED AIR SYSTEM DUCTS PER SECTION M1005.4.1.
- THERMOSTAT @ 5'-0" ABOVE FLOOR
- 110V SMOKE ALARM PER IRC, R314 WITH BATTERY BACKUP INTERCONNECTED PER R314.4 & R315.3. USE A COMBINATION SMOKE/CARBON MONOXIDE ALARM WHEN NOTED.
- HEAT DETECTOR OR HEAT ALARM RATED FOR THE AMBIENT OUTDOOR TEMPERATURES & HUMIDITY PER IRC, R314.

**MECHANICAL, PLUMBING, AND ELECTRICAL SYSTEM FOR UNITS; PER DIV. 15.16 SEE SHEET A1**

- FURN
- WH
- A. PROVIDE 6" DIAMETER FRESH AIR INTAKE FROM OUTSIDE TO RETURN AIR FLENUM AT FURNACE WITH MOTORIZED FLOW DAMPERS.
- B. PROVIDE THERMAL EXPANSION TANK AT WATER HEATER.
- C. STRAP WATER HEATER TO FRAMING TOP AND BOTTOM.
- D. PROVIDE PRESSURE RELIEF LINE PLUMBED TO OUTSIDE.

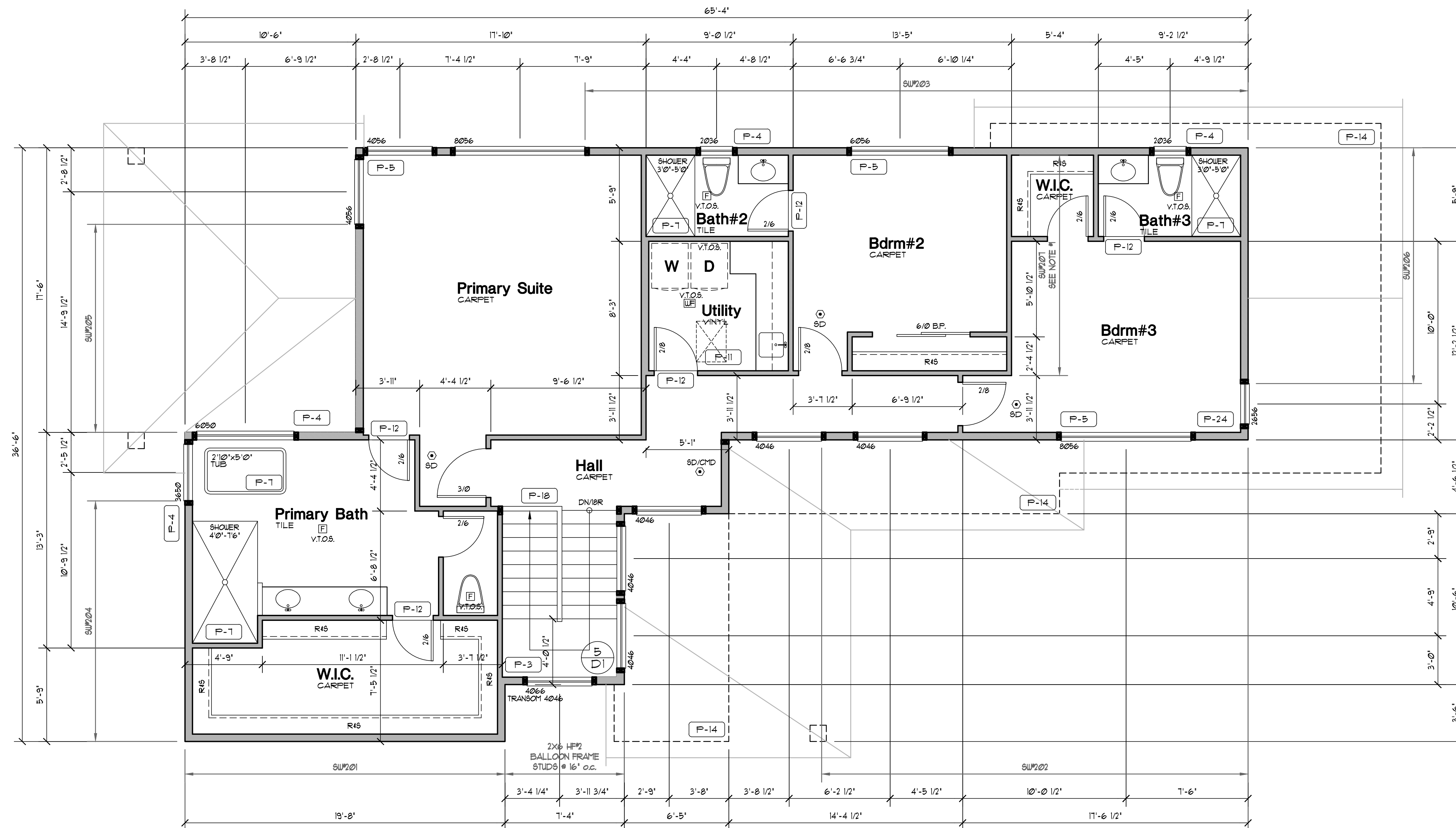
**NOTE 1:**  
PROVIDE 1/8" OSB OR 1/2" PLYWOOD FASTENED PER TYP. EXT. WALL SHEATHING SPEC. (SEE NOTES ON 9-02)

**GENERAL PLAN NOTES**

1. SEE SHEET A-1 FOR ALL GENERAL NOTES AND REQUIREMENTS.
2. ENERGY AND AIR QUALITY INFORMATION SEE DIV. 11 SHEET A-1.
3. SEE BUILDING ELEVATION FOR WINDOW OPERATION SEE DIV. 8 SHEET A-1.
4. SEE TYP. MATERIALS LIST ON SECTION SHEET.
5. SEE SHEET A-1 FOR ALL NOTES AND REQUIREMENTS CONCERNING MECHANICAL, PLUMBING, AND ELECTRICAL.

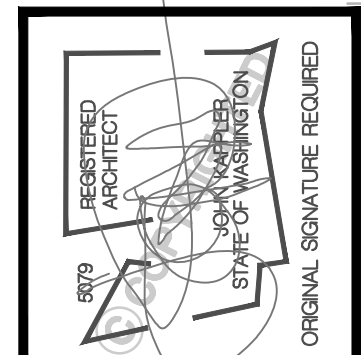
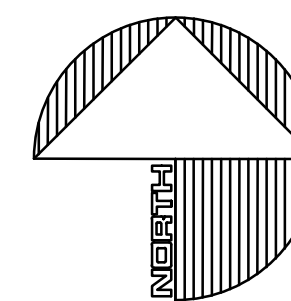
**FLOOR PLAN KEY NOTES**

- P-1 OCCUPANCY SEPARATION: APPLY (1) LAYER OF 3/4" G.I.B. TO GARAGE SIDE OF RESIDENCE, ATTIC SPACES, AND TO ALL BEAMS AND POSTS SUPPORTING A FLOOR-CEILING ASSEMBLY. APPLY (1) LAYER OF 3/4" TYPE 'X' G.I.B. TO GARAGE CEILING WHEN UNDER HABITABLE ROOMS. DUCTS THROUGH WALL OR CEILING COMMON TO HOUSE SHALL HAVE MINIMUM 26 GAUGE STEEL SEE DIV. 01002.6 & SHEET A-1.
- P-2 1 3/4" MIN. SELF-CLOSING SOLID WOOD CORE, HONEY-COMB CORE STEEL, OR 20-MINUTE FIRE RATED DOOR SEE DIV. 01002.6 B, SHEET A-1.
- P-3 STAIR ASSEMBLY NOTES; PER IRC, SECTION R301.5  
A. HEADROOM MIN. 6'-8", WIDTH MIN. 3'-0".  
B. TREADS 10" MIN. DEPTH AND MIN. WIDTH OF 36" ABOVE HANDRAIL HEIGHT, RISERS 3/4" MAX. HT. TREAD NOSING TO BE MINIMUM 3/4" AND A MAXIMUM OF 1 1/4" ON STAIRS WITH SOLID RISERS.  
C. HANDRAIL MIN. 34" TO MAX. 38" ABOVE TREAD NOSING. HANDRAIL TYPE 'I' CIRCULAR TO HAVE 1 1/4" MIN. TO 2" MAX. CROSS SECTION DIMENSION AND 1 1/2" MIN. CLEAR FROM WALL. RETURN RAIL ENDS. HANDRAILS SHALL BE STRONG ENOUGH TO RESIST A 200 POUND POINT LOAD IN ANY DIRECTION PER IRC, TABLE R301.5 D. INSTALL FIRE BLOCKING BETWEEN STRINGERS AT THE TOP AND BOTTOM OF EACH RUN PER IRC, SECTION R302.11.  
E. COVER USABLE SPACE UNDER STAIR W/ 1/2" G.I.B. PER IRC, SECTION R302.1.  
F. INTERMEDIATE BALUSTERS SHALL BE SPACED W/ LESS THAN 4" BETWEEN BALUSTERS.  
G. PROVIDE STAIRWAY ILLUMINATION PER IRC, SECTION R302.1.  
SEE DIV. 01002.1 SHEET A-1.
- P-4 SAFETY GLAZING PER IRC, SECTION R308  
A. WINDOWS WITHIN 18" OF FLOOR  
B. WINDOWS WITHIN A 24" ARC OF DOORS  
C. WINDOWS AT TUBS AND SHOWERS  
D. GLAZING IN DOORS  
E. LESS THAN 60" HORIZ. FROM THE BOT. STAIR TREAD NOSING, & BOT. EDGE OF GLAZING IS LESS THAN 36" ABV. LANDING/WALKING SURFACE SEE DIV. 02800 SHEET A-1.
- P-5 EGRESS WINDOW PER IRC, SECTION R310 SEE DIV. 02600 SHEET A-1.
- P-6 IGNITERS FOR GAS FIRED APPLIANCES IN GARAGE TO BE 18" MIN. ABOVE TOP OF SLAB. SEE DIV. 15 SHEET A-1.
- P-7 COVER WALLS ADJACENT TO TUBS AND SHOWERS WITH NON-ABSORBENT MATERIAL TO 1" ABOVE DRAIN INLETS, PER IRC, SECTION 3012. SEE DIV. 02950 SHEET A-1.
- P-8 (2) LAYERS OF FLOOR SHEATHING OVER FRAMING.
- P-9 3/4" MAX. RISER WITH 10" MIN. RUN, IF MORE THAN (3) RISERS, HANDRAIL REQUIRED PER IRC, SECTION R311.8. SEE DIV. 01002.1 SHEET A-1.
- P-10 18"x24" CRAWL SPACE ACCESS, INSULATE AND WEATHER STRIP. SEE DIV. 01002.1 SHEET A-1.
- P-11 22"x30" ATTIC SPACE ACCESS W/ 30" HEAD CLEARANCE, INSULATE AND WEATHER STRIP. SEE DIV. 01002.2 SHEET A-1.
- P-12 FLOOR MATERIAL BREAK LINE
- P-13 WALL LINE ABOVE
- P-14 WALL LINE BELOW
- P-15 FIREPLACE ASSEMBLY NOTES:  
A. DIRECT VENT GAS FIREPLACES, MUST BE LISTED, LABELED & INSTALLED PER MFG. SPECIFICATIONS, SHALL CONFORM TO IRC REQUIREMENTS. SEE DIV. 01002.12 SHEET A-1.  
B. ZERO CLEARANCE FIREPLACES SHALL CONFORM TO IRC REQUIREMENTS. SEE DIV. 01002.12 SHEET A-1.  
C. HEARTH SHALL CONFORM TO IRC REQUIREMENT SEE DIV. 01002.12.  
D. FIREBLOCK OPENINGS AROUND PENETRATIONS @ EACH FLOOR PER IRC, SECTION R1003.13.  
E. FIREPLACE MUST COMPLY WITH UL 121 TESTING  
SEE SITE PLAN FOR EXTENT OF WALKS & DRIVEWAYS
- P-16 3" DIAMETER STEEL POST
- P-17 36" GUARDRAIL PER IRC, SECTION R302 & TABLE R301.5 CONTRACTOR TO VERIFY TO INSPECTOR THAT ALL GUARDS & RAILINGS ARE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION.
- P-18 'B' VENT FOR MECHANICAL, 1" CLEARANCE ALL SIDES PER IRC, SECTION R302.11. SEE DIV. 15 SHEET A-1
- P-20 PLANT SHELF
- P-21 UPPER AND LOWER LINEN CABINETS
- P-22 SOFFIT AREA
- P-23 INTEGRATED MAKE UP AIR
- P-24 2x6 STUDS W/ R-21 INSULATION MIN.



**UPPER FLOOR PLAN**

Scale 1/4"=1'-0"



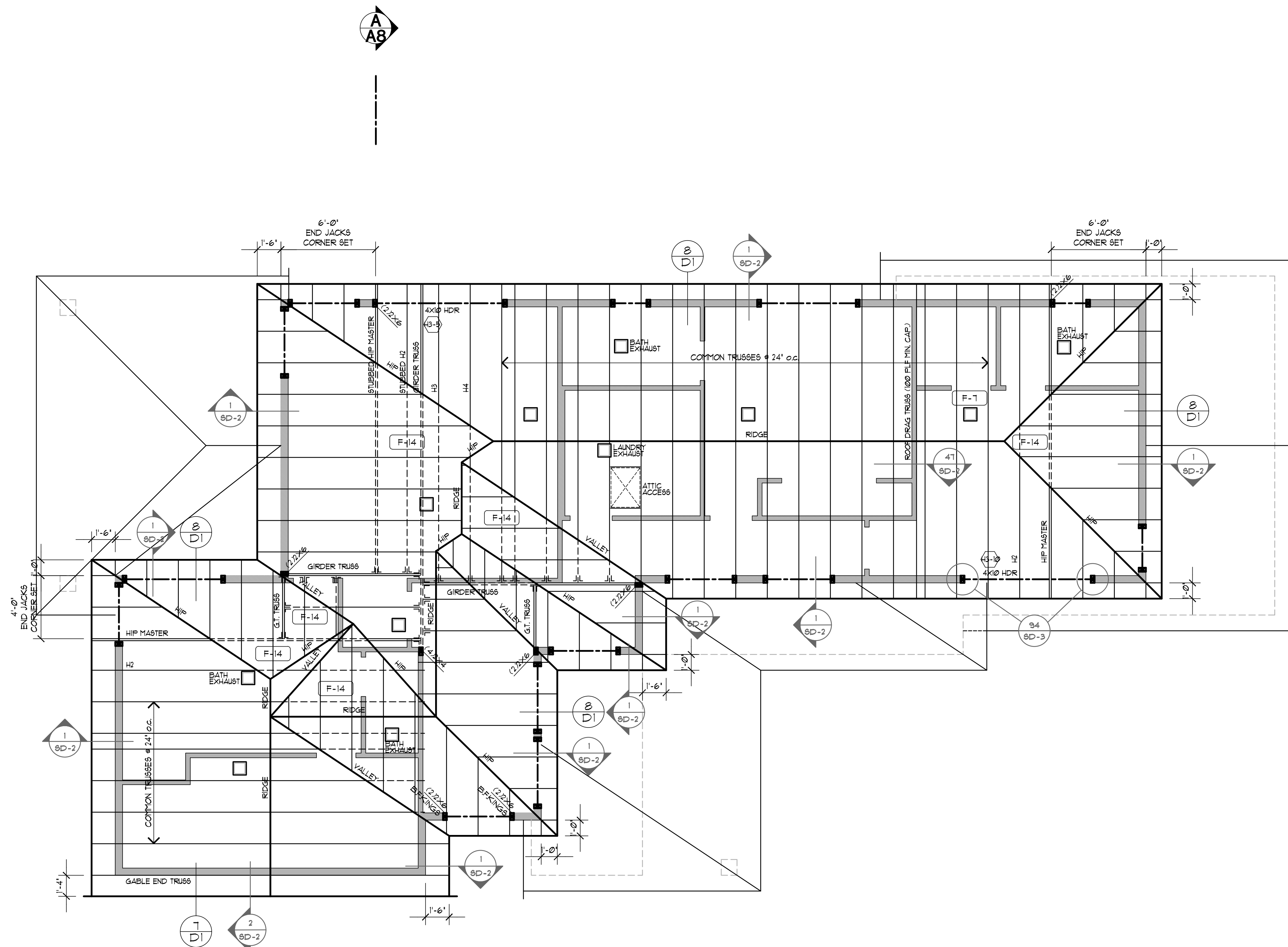
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STARTING NO.:	21024.03

SHEET  
**A5**



# UPPER ROOF FRAMING PLAN

SCALE 1/4"=1'-0"

## GENERAL FRAMING NOTES

- SEE TYPICAL MATERIALS LIST ON SECTION SHEET
- SEE SHEET A-1 FOR ALL GENERAL NOTES AND FOR ALL REQUIREMENTS CONCERNING MECHANICAL, PLUMBING, AND ELECTRICAL.
- TRUSS DESIGN BY MFG. TRUSS PLAN SHOWN IS FOR GENERAL LAYOUT ONLY. SEE DIV. 6/20 SHEET A-1
  - TRUSS LOADING. SEE DIV. 6/20/10A SHEET A-1
  - TRUSS SPAN PER FLOOR PLAN
  - TRUSS TYPE PER ROOF FRAMING PLAN
- ROOF FRAMING SPACING, 24' O.C. UNO.
- ROOF PITCH- EXTERIOR PER ELEVATION  
INTERIOR PER SECTION.
- RAFTER TAIL 2x4. VERIFY.
- ROOF TAIL AND RAKE OVERHANG PER ROOF PLAN.
- ALL HEADERS ARE 4x8 DF #2 UNO.  
PROVIDE (1) TRIMMER STUD UP TO 4'-0" SPAN (B2)  
AND (2) TRIMMER STUDS OVER 4'-0" UNO.  
SEE DIV. 6/100 SHEET A-1  
HEADERS TO BE INSULATED W/ MIN. R-10 INSULATION
- STUD NOTCHING AND BORING PER I.R.C. SECT. R602.6
  - BEARING OR EXTERIOR WALL MAXIMUM NOTCH 25% BORING 40%
  - 60% MAXIMUM BORING IF DOUBLED WITH NOT MORE THAN (2) SUCCESSIVE STUDS BORED.
  - NON-BEARING MAXIMUM NOTCH 40% BORING 60%.
  - HOLES NO CLOSER THAN 5/8" TO FACE OF STUD.

## FRAMING PLAN KEYNOTES

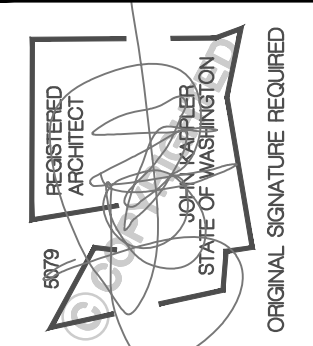
- F-1 BACK FRAMING AND SOFFIT AREA AS REQUIRED TO ALLOW FOR HVAC DUCTING. SEE DIV/5 SHEET A-1
- F-2 RAKED PONY WALL ON TOP OF LOWER ROOF FRAMING MEMBERS SUPPORTING UPPER ROOF FRAMING MEMBERS.
- F-3 ALIGN EDGE OF JOIST WITH FACE OF WALL
- F-4 ALIGN INSIDE FACE OF BEAM WITH OUTSIDE FACE OF WALL
- F-5 UPSET - BOTTOM OF BEAM EVEN W/ BOTTOM OF JOIST AND TOP OF BEAM EXTENDS UP ABOVE JOISTS
- F-6 TOP OF BEAM IS FLUSH WITH BOTTOM OF JOIST WITH NO TOP PLATE. CUT ADJACENT FRAMING MEMBERS INTO BEAM FOR ADEQUATE SUPPORT.
- F-7 ATTIC SPACE VENT  
SEE CALCULATION  
SEE DIV. 6/20/3B SHEET A-1
- F-8 FLOOR JOIST - SEE SCHEDULE DWG.  
SEE DIV. 6/100 SHEET A-1
- F-9 SEE ELEVATIONS AND SECTIONS FOR PLATE HEIGHT
- F-10 PRESSURE BLOCKING  
SEE DIV. 6/100 SHEET A-1
- F-11 FLUSH - BOTTOM OF BEAM EVEN W/ BOTTOM OF JOISTS
- F-12 TOP OF BEAM FLUSH W/ TOP OF JOIST AND BEAM EXTENDS DOWN BELOW JOISTS
- F-13 TOP OF BEAM 3" BELOW TOP OF FLOOR TRUSS. FLOOR TRUSSES TO BE TOP CHORD BEARING.
- F-14 2x OVERFRAMING @ 24' O.C. PROVIDE 2x6 STRONGBACK FURLING AND 2x KICKERS AT 6'-0" O.C TO TRUSSES BELOW.
- F-15 2x6 CEILING JOISTS @ 24' O.C

## ROOF VENT CALCULATION

TOTAL ROOF AREA, 1494	SF/300	= 498	SF OF VENT AREA REQ
40% MIN. AT 36" MAX BELOW RIDGE	= 199	SF MIN.	
50% MAX. AT 36" MAX BELOW RIDGE	= 249	SF MAX.	
6	ROOF JACKS AT 50 SQ. IN. EACH	= 300	SQ. IN. = 208 SF
(36" MAX. BELOW RIDGE)			
184	L.F. OF EAVE VENTS AT 3.3 SQ. IN./L.F.	= 6072	SQ. IN. = 421 SF
TOTAL SF OF VENTILATION PROVIDED			= 629 SF

## SYMBOLS & LEGEND

- POINT LOADS FROM ABOVE
  - POINT LOADS FROM ABOVE W/ LOADING
  - POINT LOAD TRANSFERING DOWN
  - POINT LOAD TRANSFERING DOWN W/ LOADING
  - POINT LOAD TRANSFERRED BY KICKER
  - HOLD DOWN WITH SIZE DESIGNATION
  - VERTICAL STRAP WITH SIZE DESIGNATION TO BE USED ON FLOOR BELOW
  - HORIZONTAL STRAP WITH SIZE DESIGNATION
  - INDICATES BEAM CALCULATION WITH INDEXED NUMBER
  - WALL ABOVE
  - WALL BELOW
- NOTE: UNLESS OTHERWISE NOTED, ENGINEERING AND CALCULATIONS ARE NOT PROVIDED IN THESE DRAWINGS.



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**A6**



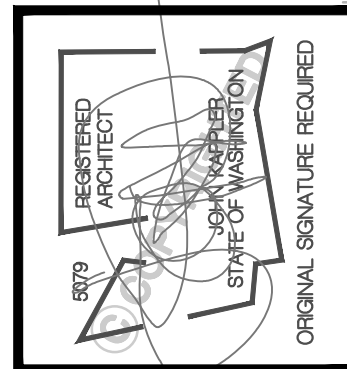
**SOUTH ELEVATION**  
Scale 1/4"=1'-0"



**WEST ELEVATION**  
Scale 1/4"=1'-0"



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



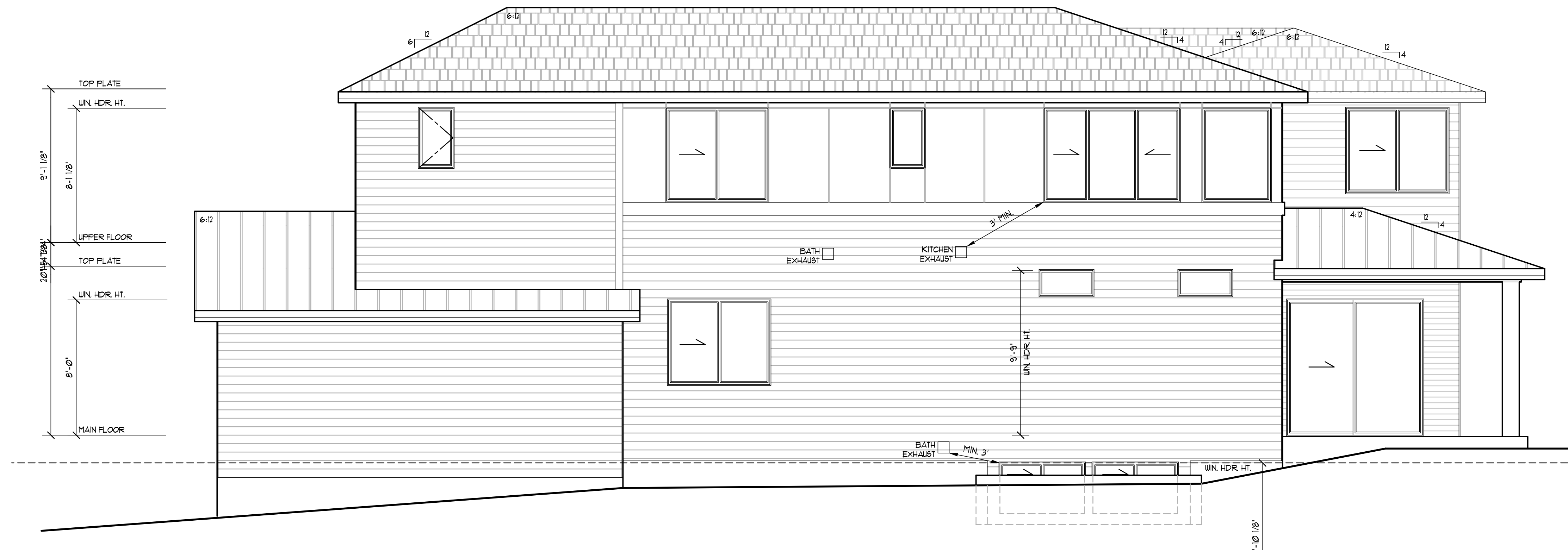
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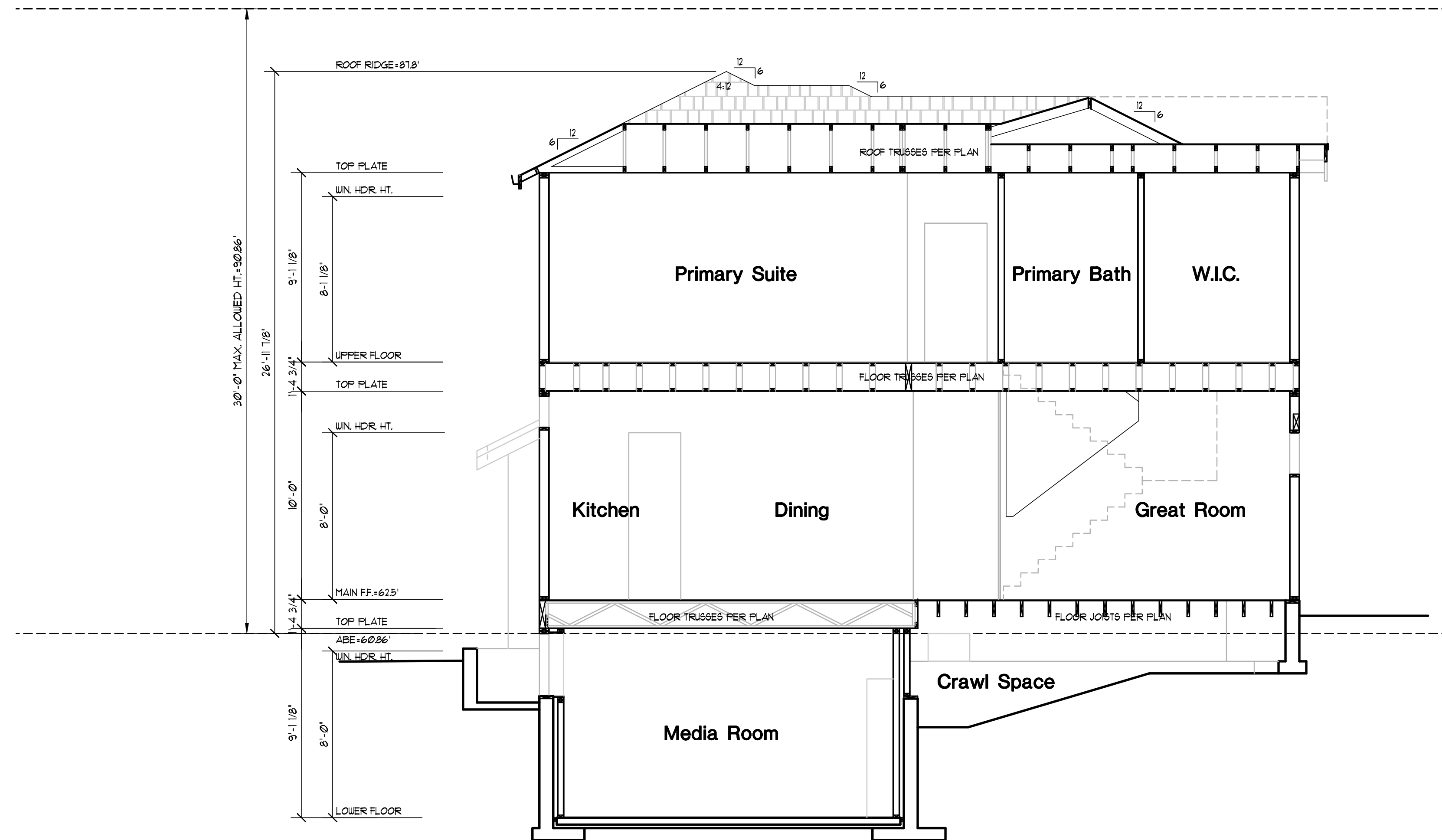
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SHEET  
**A7**



**NORTH ELEVATION**

Scale 1/4"=1'-0"



**BUILDING SECTION A-A**

Scale 1/4"=1'-0"

**TYPICAL BUILDING MATERIALS**

**ROOF CONSTRUCTION**

- ROOFING: (DIV. 7) SHINGLES (DIV. 0100.5)
- BUILDING PAPER: (DIV. 7) 30# BUILDING PAPER
- SHEATHING: (DIV. 6) 7/16" O.S.B. OR EQUAL
- FRAMING: (DIV. 6) PER PLAN
- INSULATION: (DIV. 7) R-60 BLOWN-IN
- SOFFIT: (DIV. 7) PER SPEC.
- GWB: (DIV. 5) 5/8" GWB

**EXTERIOR WALL CONSTRUCTION**

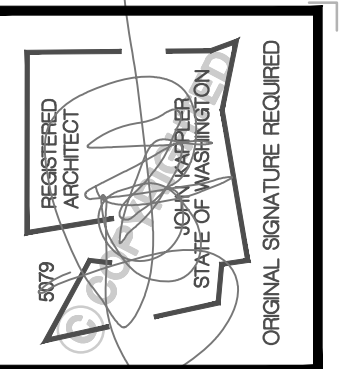
- SIDING MATERIAL: (DIV. 7) WOOD SIDING (DIV. 0100.5)
- BUILDING WRAP: (DIV. 7) 15# BUILDING PAPER
- SHEATHING: (DIV. 6) 1/2" CDX PLYWOOD OR EQUAL
- FRAMING: (DIV. 6) 2 X 6 STUDS AT 16" OC
- INSULATION: (DIV. 7) R-21 BATT W/ INTEGRAL VAPOR BARRIER
- GWB: (DIV. 9) PROVIDE CLASS II VAPOR RETARDER IN MARINE ZONE 4

**FLOOR CONSTRUCTION**

- FLOORING: (DIV. 9) FINISH PER PLANS (DIV. 0100.5)
- SUBFLOOR: (DIV. 6) 3/4" T&G (PLYWD, COMPLY, OR EQ)
- FRAMING: (DIV. 6) PER PLAN
- INSULATION: (DIV. 7) R-38 BATT
- SOFFIT: (DIV. 7) PER SPEC.

**TRIM: (DIV. 6)**

- WINDOW: (WITH NO BRICK MOLD) HEAD: METAL FLUSHING
- JAMB: METAL FLUSHING
- SILL: METAL FLUSHING
- CORNER BOARDS: INSIDE: METAL CORNER
- FASCIA: OUTSIDE: METAL CORNER



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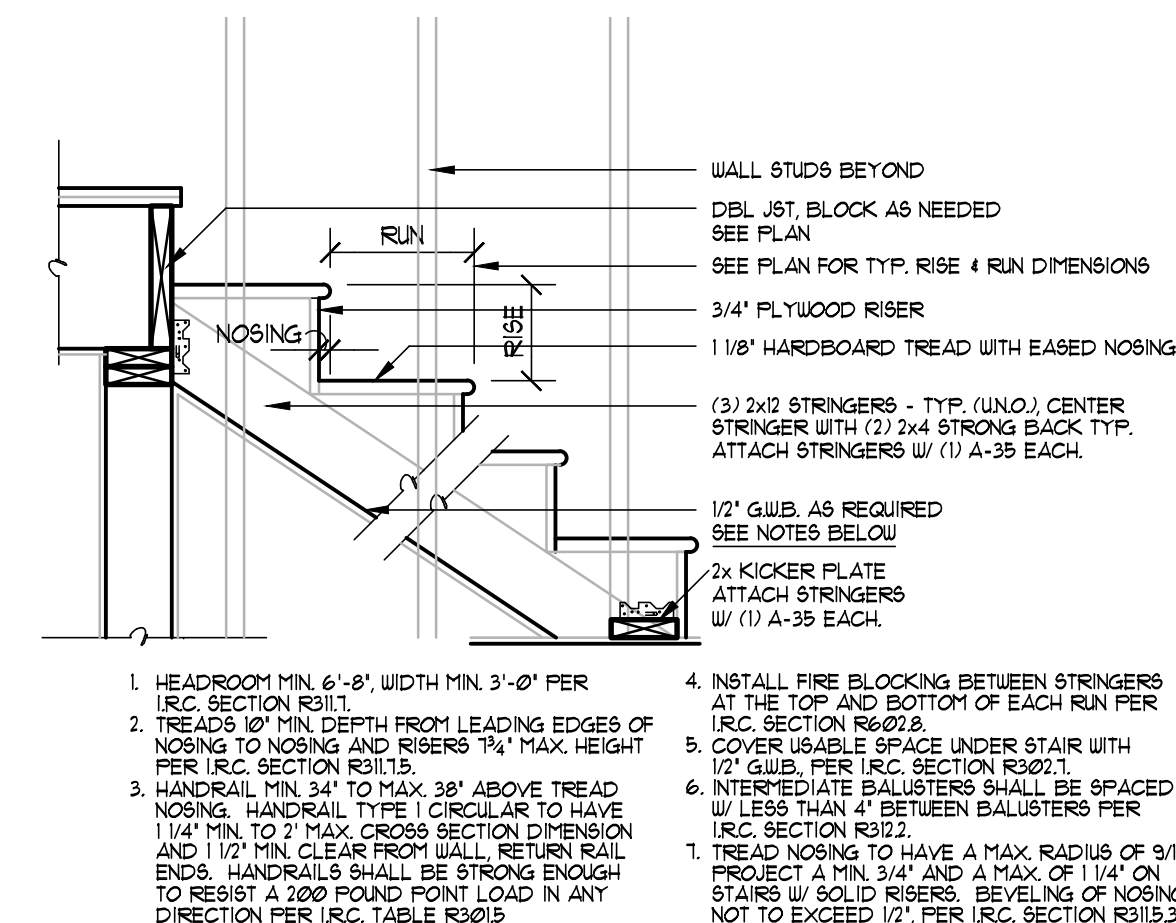
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**A8**

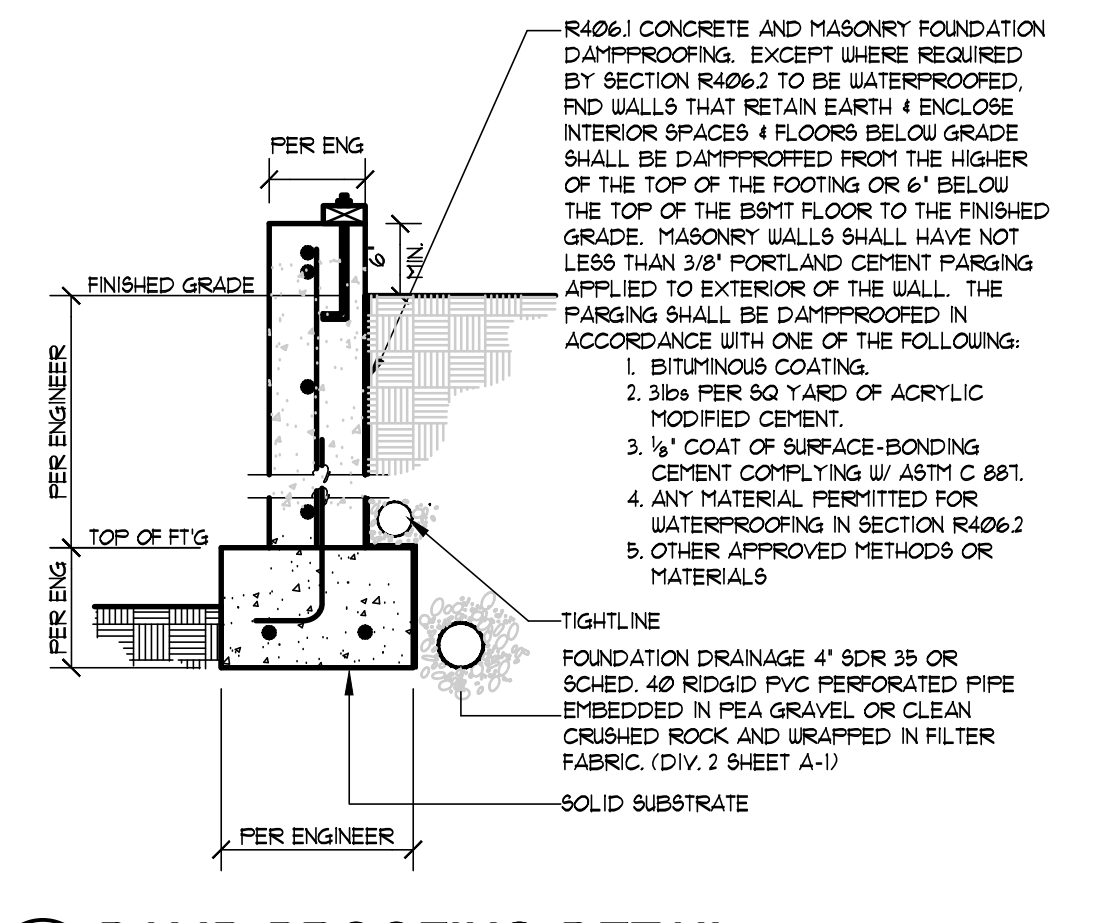
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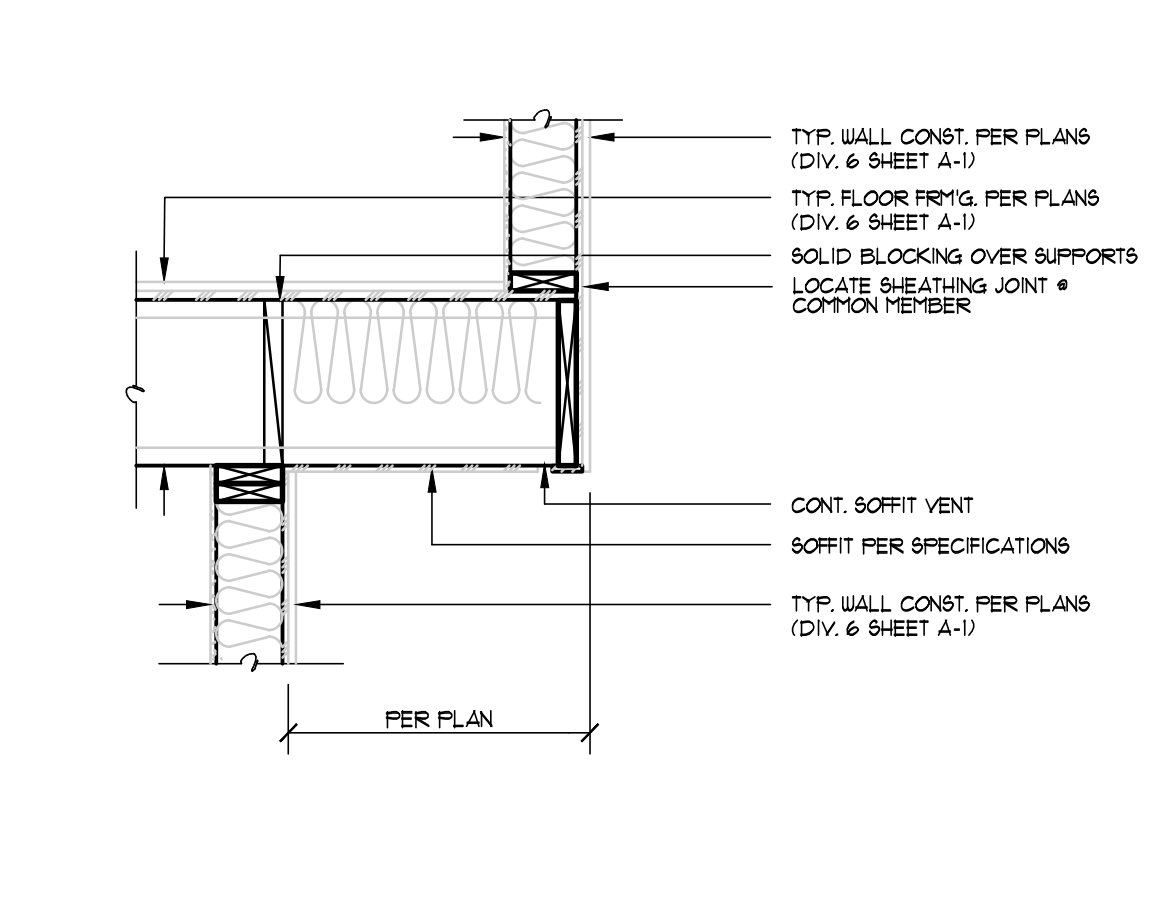
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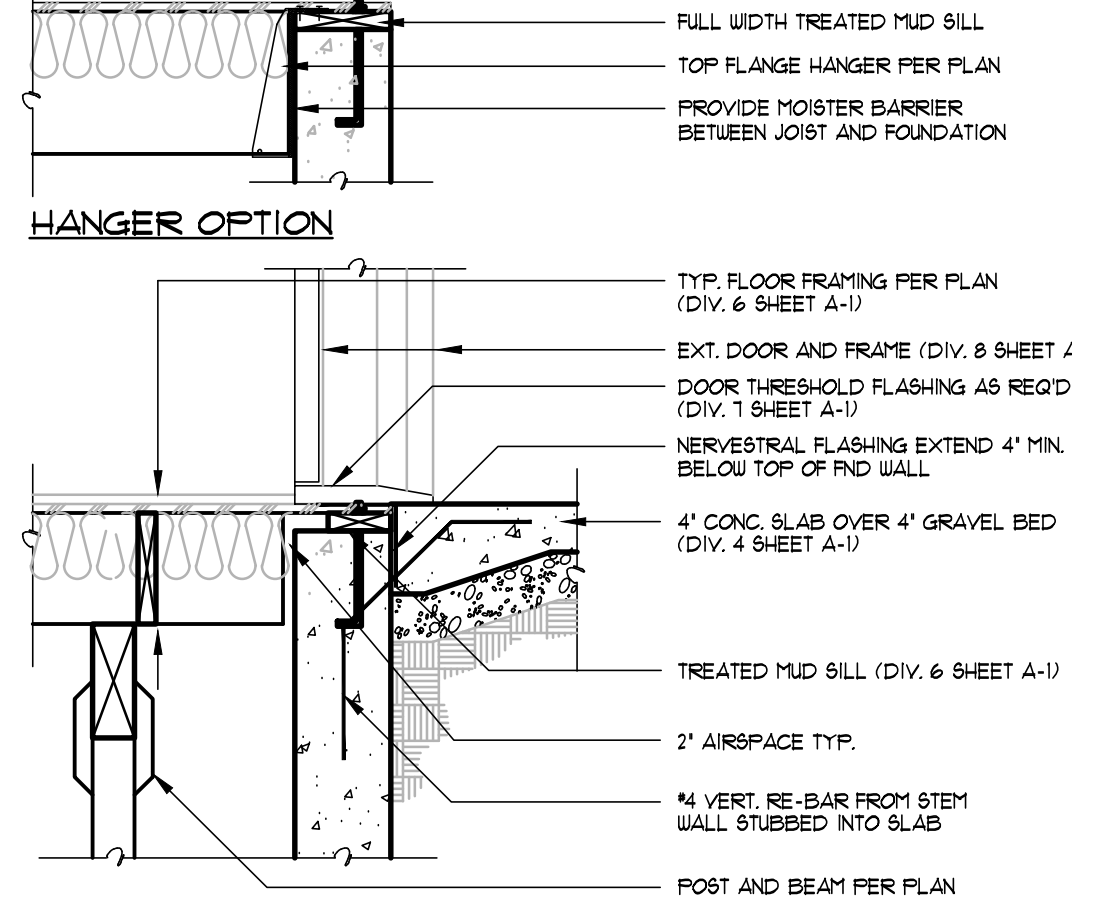
**5 STAIR SECTION DETAIL**  
3/4"=1'-0" 08200-08100-01



**1 DAMP PROOFING DETAIL**  
3/4"=1'-0" 08300-0710



**6 CANTILEVER FLOOR**  
3/4"=1'-0" 08100-03300-02\_T11

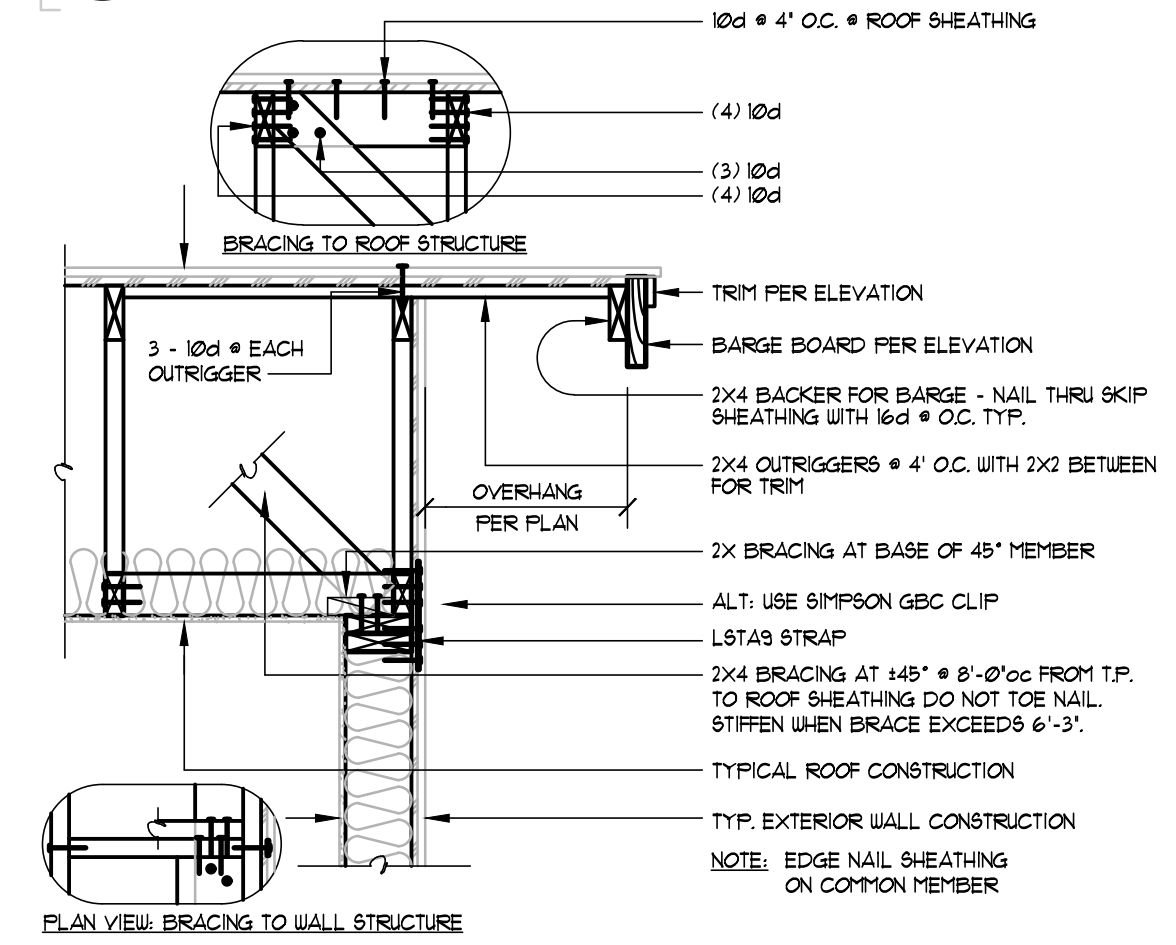


**2 EXT. DOOR THRESHOLD DETAIL**  
3/4"=1'-0" 08100-03300-06\_1

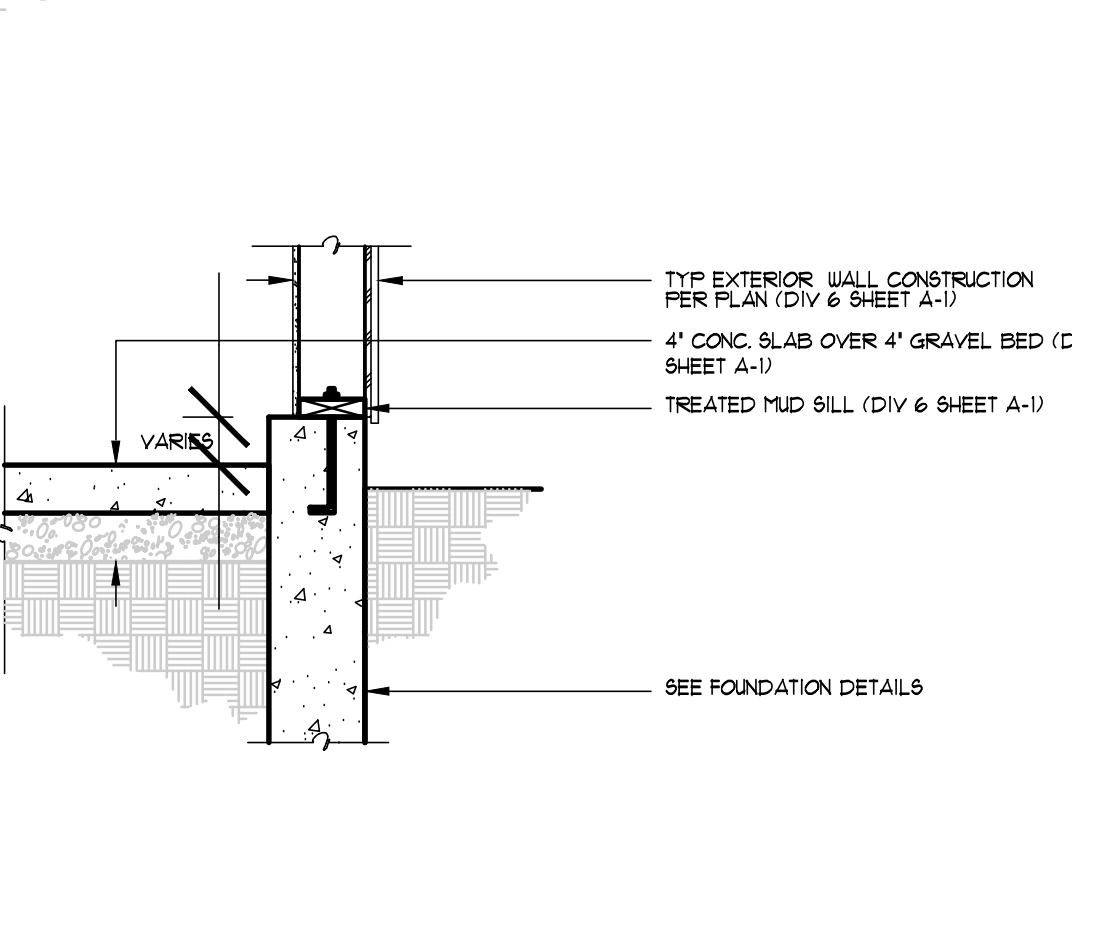
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**7 GABLE END DETAIL**  
3/4"=1'-0" 08100-07300-12

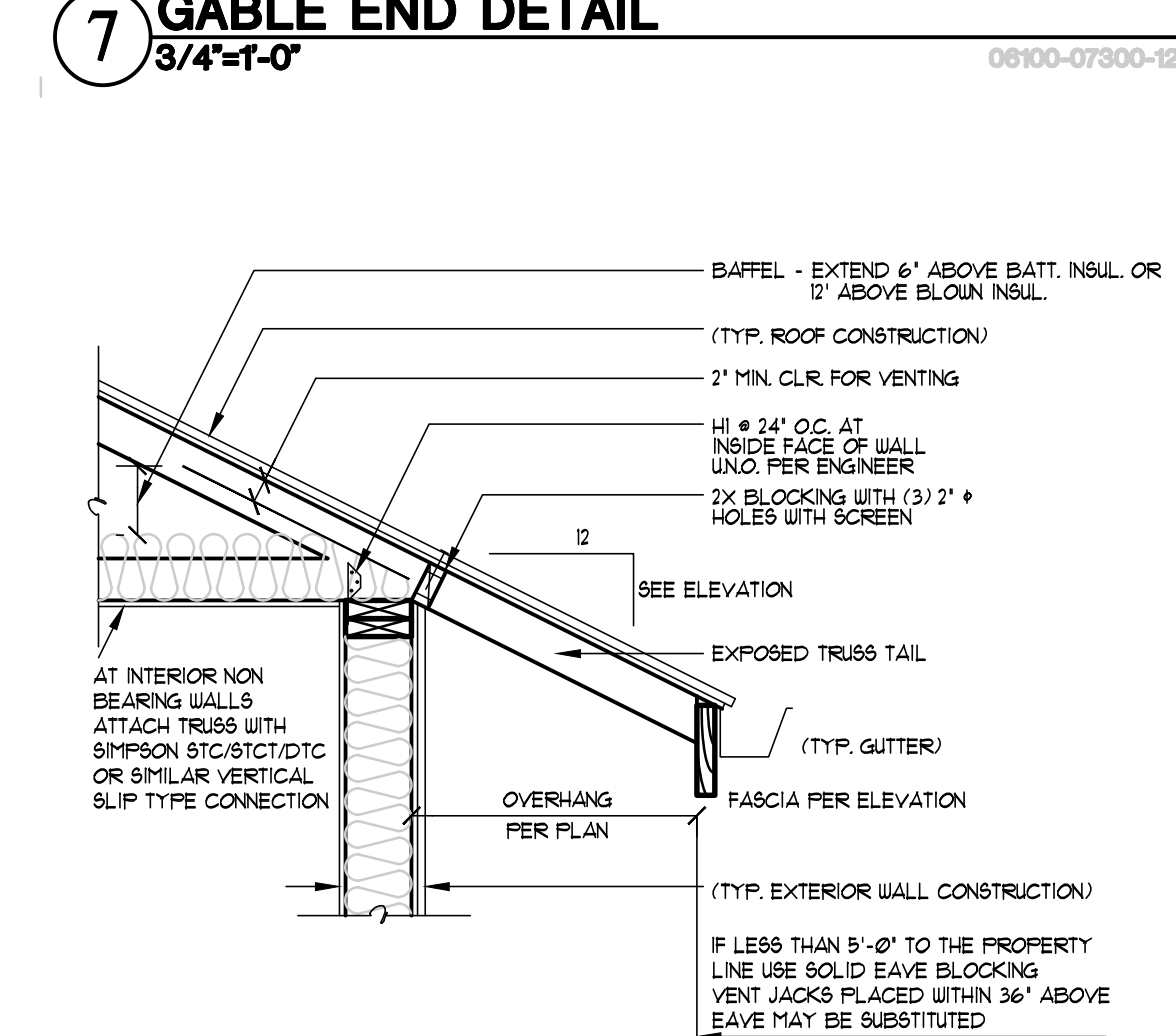


**3 SLAB & STEM WALL**  
3/4"=1'-0" 08100-07300-10

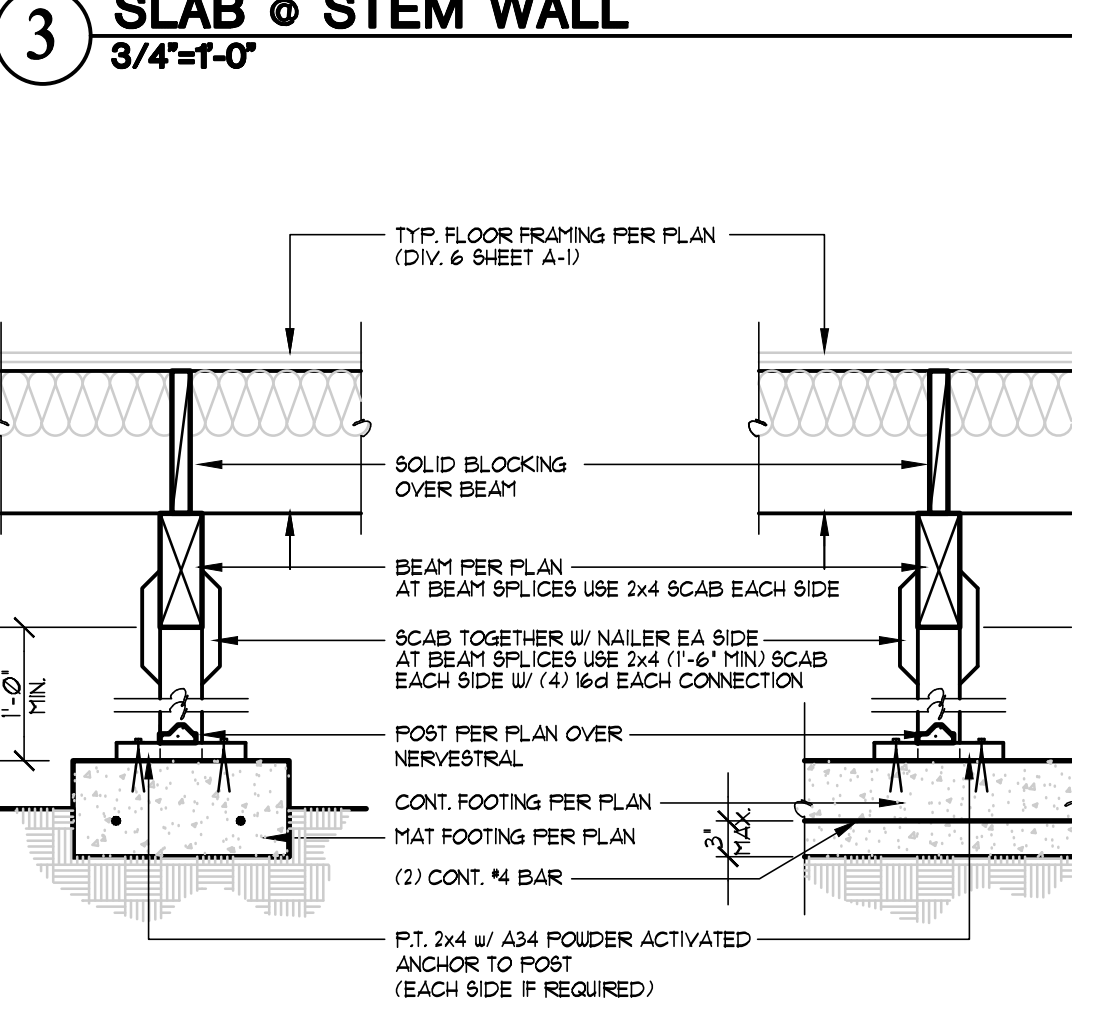
19

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11



**8 EAVE DETAIL**  
3/4"=1'-0" 08100-07300-01

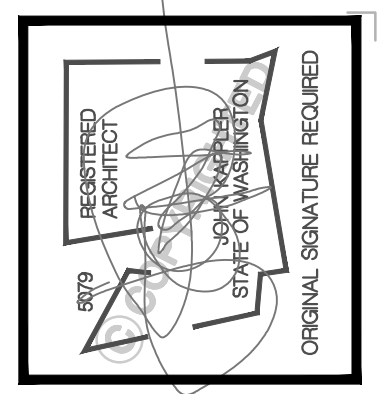


**4 POST/FOOTING CONNECTION**  
3/4"=1'-0" 08100-03300-10\_1

20

16

12



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SHEET  
**D1**

**Project Information**

Milestone NW LLC  
Mercer Island - Lot 3  
7623 SE 22nd St, Mercer Island, WA 98040

**Contact Information**

Architectural Innovations, P.S.  
14311 SE 16th St., Bellevue, WA 98007  
425-641-5320

**Messages / Comments \*** RESULT: PASS

UA Reduction = 2.65, Proposed UA is better than baseline by 0%

Vertical glazing area of proposed design exceeds 15% of floor area. Baseline window area set to 15% of floor area

Whole House Mechanical Ventilation Airflow Rate: 120 CFM with Run Time Percent of 100%, Unbalanced, Not Distributed

Maximum allowable total measured duct leakage: 155 CFM25

\*Results assume your inputs are complete and correct. Results do not constitute an approval. Analysis should be reviewed by your ARI.

**ANALYSIS SET UP**

What code compliance pathway are you using? **Total UA Alternative, Whole Building Trade Off Analysis**

Project Building Type? **New Construction**

Occupancy Type? **R3 Single family dwellings and townhouses**

Code Version? **WSEC 2021**

Classification? **Medium Dwelling Unit - 3823 sq. ft.**

Baseline Description: **Code Baseline - Maximum baseline window area is 15% of floor area**

About Your Selection: **No exempt window or door areas**

**RESULTS - Comparison of Baseline and Proposed Design \*\***

Component Performance, R occupancies			Baseline Design			Proposed Design			
	U'	Area	UA	U	Area	UA	U	Area	UA
Doors U+	0.300	49	14.1	0.300	49	14.8	0.300	49	14.8
Overhead Glazing U+	0.500	0	0.0	0.250	0	0.0	0.250	0	0.0
Vertical Glazing U+	0.300	573	172.0	0.025	760	19.0	0.025	760	19.0
Floor/Vaulted Ceilings U+	0.024	1,893	46.4	0.025	1,665	42.1	0.025	1,665	42.1
Wall (above grade) U+	0.056	3,175	177.8	0.054	2,988	161.4	0.054	2,988	161.4
Floors over Crawlspace U+	0.029	617	17.9	0.025	617	15.4	0.025	617	15.4
Slab on Grade F+	0.540	0	0.0	0.064	0	0.0	0.064	0	0.0
Below Grade Wall U+	0.640	1,360	87.0	0.324	1,360	88.0	0.324	1,360	88.0
Below Grade Slab F+	0.560	156	87.4	0.324	156	50.5	0.324	156	50.5

\* Values from Table R402.1.2 (Table 2023)

Baseline UA Total	565.0
Proposed UA Total	562.3
Required Credits	8.0
Proposed Credits	7.6
UA Percent Reduction	0%
UA Reduction	2.6

\*\*Results assume your inputs are complete and correct. Results do not constitute an approval. Analysis should be reviewed by your ARI.

**Table R406.2 Energy Equalization Credits**

System No.	Full Description	Select System Type	Fuel Normalization Credits (406.2)	Energy Credits (406.3)	Total Credits (406.2 & 406.3)
4	For heating system using a heat pump that meets federal standards for the equipment listed in Table C403.3.2(9) or Table C403.3.2(9) OR Air to Water heat pump units that are configured to provide both heating and cooling and are rated in accordance with ASHRAE 90.1-2019.	Variable Refrigerant Heat Pump or Air-to-Water Heat Pump	3.0	5.0	8.0

**Table R406.3 Energy Credits**

Option No.	Category	Select Options	Energy Credits	Brief Description of Selected Options
1	Efficient Building Envelope	Not Selected	0.0	-
2	Air Leakage Control and Efficient Ventilation	Option 2.2	1.5	Per Section R402.4.1.2 (1) 5' ACH50 / For R-2, 0.20 dpm per ft <sup>2</sup> at 50 Pa / HV 1 with min SHR; eff of 0.75 per IRC Section M1505.5 or IRC Section 403.8
3.1-3.10	High Efficiency HVAC	Option 3.4	1.5	Closed-loop ground source or open loop water source Heat Pump, Min COP 3.3 for GSHP or 3.6 for WSPH w/ Max 150 FT Hydraulic Head.
3.11	High Efficiency HVAC - Smart Thermostat	Not Selected	NA	-
4	High Efficiency HVAC Distribution System	Not Selected	0.0	-

5.1	Efficient Water Heating - Drain Heat Recovery	Not Selected	0.0	-
5.2	Efficient Water Heating - Compact Hot Water Distribution	Not Selected	0.0	-
5.3-5.6	Efficient Water Heating	Option 5.6	2.0	Electric heat pump water heater meeting NEEA Tier 3.
6	Renewable Electric Energy	Not Selected	0.0	-
7	Appliance Package	Not Selected	0.0	-

**Energy Credits 5.0**

\*Refer to WSEC 2021 Table R406.3 for complete option descriptions and requirements

Link to WSEC 2021 Table R406.3 for complete option descriptions and requirements

**THERMAL ENVELOPE DETAILS - Proposed Design**

Conditioned Floor Area, Proposed Design: 3823 sq. ft.

Classification: Medium Dwelling Unit

Notes:

**Exterior Doors**

Plan ID	Component Description	Ref.	Door U	Qt	Feet	Width	Height	Area	UA
Mud	Code Baseline, U=0.30	-	0.30	1	3	8	21	6.4	6.4
Entry	Code Baseline, U=0.30	-	0.30	1	3	8	21	6.4	6.4
Sum of Area and UA									12.8
Exterior Doors Area Weighted U									0.300

**Overhead Glazing**

Plan ID	Component Description	Ref.	Glazing U	Qt	Feet	Width	Height	Area	UA
Sum of Area and UA									0.0
Overhead Glazing Area Weighted U									0.0

**Vertical Glazing Schedule**

Plan ID	Component Description	Ref.	Glazing U	Qt	Feet	Width	Height	Area	UA
1	Mud Rm	U=0.25 (2021 1.2, 2018 1.4)	0.25	2	4	3	4	36.0	9.0
2	Stairway	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	4	3	3	12.0	3.0
3	Entry	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	4	3	5	6.5	1.6
4	Great Rm	U=0.25 (2021 1.2, 2018 1.4)	0.25	2	4	2	2	16.0	4.0
5	Great Rm	U=0.25 (2021 1.2, 2018 1.4)	0.25	2	4	2	2	16.0	4.0
6	Great Rm	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	3	3	5	44.0	11.0
7	Dining	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	3	3	8	64.0	16.0
8	Kitchen	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	5	4	4	24.8	6.2
9	Kitchen	U=0.25 (2021 1.2, 2018 1.4)	0.25	2	3	1	1	9.0	2.25
10	Porch	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	4	5	5	30.0	7.50
11	Mud	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	4	3	5	20.0	5.00
12	Hallway	U=0.25 (2021 1.2, 2018 1.4)	0.25	2	4	5	5	40.0	10.00
13	Shwr	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	1	4	1	7.9	1.97
14	Stairway	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	4	5	5	29.0	7.25
15	Stairway	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	4	4	4	16.0	4.00
16	P Bath	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	3	3	5	17.5	4.38
17	P Bath	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	3	3	5	17.5	4.38
18	P Suite	U=0.25 (2021 1.2, 2018 1.4)	0.25	2	4	5	5	44.0	11.00
19	P Suite	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	3	3	5	17.5	4.38
20	Bath#2	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	3	3	3	7.0	1.75
21	Bath#2	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	3	3	5	17.5	4.38
22	Bath#2	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	3	3	3	7.0	1.75
23	Bath#2	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	3	3	5	17.5	4.38
24	Bath#3	U=0.25 (2021 1.2, 2018 1.4)	0.25	1	3	3	5	17.5	4.38
25	Unit	U=0.25 (2021 1.2, 2018 1.4)	0.25	5	4	4	4	30.0	7.50

Sum of Area and UA: 780.4

Vertical Glazing Area Weighted U: 0.250

Vertical Glazing and Doors Area Weighted U: 0.263

**Floor/Vaulted Ceilings**

Plan ID	Component Description	Ref.	Attic U	Area	UA
R01	blown Attic STD baffled	10.7	0.025	1,893	42.1
Sum of Area and UA					42.1
Area Weighted U-Value					0.025

**Walls (Above Grade)**

Plan ID	Component Description	Ref.	Wall U	Area	UA
R01	cavity R0 foam INT 2X6W Lap (Code Baseline)	10.5	0.054	2,988	161
Sum of Net Area and UA					161
Gross Wall Area					3,786
Area Weighted U-Value					0.054

**Floor (over crawl or exterior)**

Plan ID	Component Description	Ref.	Floor U	Area	UA
R08	vented Joist (2021 1.2, 1.3, 2018 1.3-1.5)	10.3	0.025	617	15
Sum of Area and UA					15
Area Weighted U-Value					0.025

**Slab on Grade (less than 2 feet below grade)**

Plan ID	Component Description	Ref.	Slab F	Slab Perim	Slab UA
Sum of Perimeter and FP					0
Area Weighted U-Value					0

**Below Grade Walls and Slabs**

Plan ID	Component Description	Ref.	Slab Depth	Wall Area	Wall UA	Slab F	Slab Perim	Slab UA	
R10	foam ext w/IR, R10 Full Underlabb	10.6	0.064	1,360	88.0	0.324	156	51	
Sum of Area, Length and UA									136.0
Weighted U and F-values									0.064

**Links to Download Forms, Checklists and Other Resources**

Compliance Certificate: [Compliance Certificate](#) | [Insulation Certificate](#) | [Duct Testing Affidavits](#)

Prescriptive Checklist for 2018 WSEC Alterations (Remodel) Worksheet: [Prescriptive Checklist](#) | [Worksheet](#)

EER SEER2 COP HSPF2 Converter: [https://www.architecturalinnovations.com/ser-ser2-cop-hspf2-converter/](#)

**Ventilation Requirements**

Conditioned Floor Area: 3823 sq. ft.

Number of Bedrooms: 4

Run-Time Percent in Each 4-Hour Segment: 100%

Is the system Balanced?  Unbalanced

Is the system Distributed?  Not Distributed

Ventilation Code Section: IRC Chapter 15

Whole House Mechanical Ventilation Airflow Rate: 120 CFM

**HVAC Thermal Distribution System**

Download RS-33 (2016): [https://www.enr.com/resources/documents/2016/05/23/rs-33-2016-hvac](#)

Is this a hydronic heating system?  No

Location of Duct:  Unconditioned Space

Location of Air Handler:  Unconditioned Space

Is Duct Testing Required?  Yes

Maximum Duct Leakage:  Yes

Maximum total measured duct leakage per square foot: 0.04 CFM25 per sq. ft.

Maximum allowable total measured duct leakage: 153 CFM25

**Heating System Sizing - Proposed Design**

Nearest Weather Station: Mercer Island

Indoor Design Temperature: 70 F

Outdoor Design Temperature: 25 F

Design Temperature Difference (ΔT): 45 F

Leave blanks to use default of 8.5 ft. ceiling height

HVAC System Type:

Location of HVAC Distribution System:

Sum of UA, including exempt door and window:

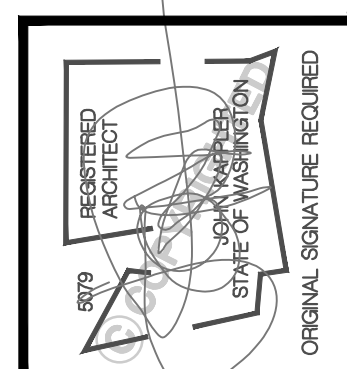
Envelope Heat Load:  Btu / Hour

Air Leakage Heat Load:  Btu / Hour

Building Design Heat Load:  Btu / Hour

Building and Duct Heat Load:  Btu / Hour

Maximum Heat Equipment Output:  Btu / Hour



Date	By	Description
10/22/24	AG	PERMIT SET

**Milestone NW**

**Mercer Island Lot 3**

**7623 SE 22nd ST. Mercer Island, WA 98040**

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TITLE
JOB NO.: 21024.05
STARTING NO.: 21024.03

SHEET

**E1**

<b>BASEMENT SLAB</b>
4" CONC. SLAB ON 10 MIL VAPOR BARRIER ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL
<b>GARAGE SLAB</b>
4" CONC. SLAB ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL
<b>PORCH SLAB</b>
4" CONC. SLAB ON GRADE ON 10 MIL VAPOR BARRIER ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL

GENERAL STRUCTURAL NOTES	
FOUNDATION	
<ul style="list-style-type: none"> <li>DESIGN IS BASED ON 2021 INTERNATIONAL RESIDENTIAL CODE &amp; 2021 INTERNATIONAL BUILDING CODE</li> <li>DESIGN LOADS: SOIL: 1500 PSF ALLOWABLE BEARING PRESSURE</li> <li>CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS IN 28 DAYS, UNO. <ul style="list-style-type: none"> <li><math>f_c = 3000 \text{ psi}</math> * ..... FOUNDATION WALLS</li> <li><math>3500 \text{ psi}</math> ..... FOOTINGS</li> <li><math>2500 \text{ psi}</math> ..... INTERIOR SLABS ON GRADE</li> <li><math>3500 \text{ psi}</math> * ..... GARAGE &amp; EXT. SLABS ON GRADE</li> <li><math>f_y = 60000 \text{ psi}</math></li> </ul> </li> <li>* ALL CONCRETE HAS BEEN DESIGNED FOR 2500 PSI, ANYTHING GREATER THAN THIS SPECIFICATION IS FOR WEATHERING ONLY.</li> <li>ALL CONCRETE EXPOSED TO THE WEATHER SHALL NOT HAVE LESS THAN 5% OR MORE THAN 7% AIR ENTRAINMENT.</li> <li>FOUNDATION WALL DESIGN IS BASED ON BACKFILL SOIL PRESSURE OF 55 PCF AT-REST, 35 PCF ACTIVE &amp; 7% SEISMIC SURCHARGE.</li> <li>TYPICAL REINFORCEMENT DETAILS: LAP ALL REBAR 24" MIN. BEND BARS AND LAP AT CORNERS; PROVIDE 6" HOOK INTO SUPPORTING FOOTINGS WHEN FOOTINGS INTERSECT; PROVIDE 3" MINIMUM COVER AT THE BOTTOM BARS AND 1 1/2" COVER AT THE SIDES.</li> <li>FOUNDATION WALLS SHALL BE BRACED, PRIOR TO BACKFILLING, BY EITHER ADEQUATE TEMPORARY BRACING OR INSTALLATION OF FIRST FLOOR DECK @ GRAVEL SPACE.</li> <li>ALL FOOTINGS SHALL BEAR BELOW FROST LINE. CONSULT SOILS REPORT/ LOCAL MUNICIPALITY FOR MINIMUM DEPTH BELOW GRADE.</li> <li>FOOTINGS AND SLABS ON GRADE SHALL BEAR ON VIRGIN SOIL OR 95% COMPACTED FILL.</li> <li>PROVIDE CONTROL JOINTS AT ALL INSIDE CORNERS OF SLAB EDGES, AND OTHER LOCATIONS WHERE SLAB CRACKS ARE LIKELY TO DEVELOP. (5'-0" O.C.)</li> <li>FASTEN SILL PLATES TO FOUNDATION WALLS WITH 3/8" DIA. ANCHOR BOLTS W/ MIN. 3"x3"x 1/4" PLATE WASHERS (EDGE OF WASHER TO BE LOCATED WITHIN 1/2" OF EXTERIOR EDGE OF SILL PLATE) PROVIDE A MINIMUM OF 2 ANCHORS PER PLATE, 12" MAXIMUM FROM PLATE ENDS, UNO. (SEE FND. DETAILS).</li> <li>ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT W/ CONCRETE OR MASONRY FOUNDATION SHALL BE PRESERVATIVE TREATED HEM FIR #2.</li> <li>ARCH/BUILDER TO VERIFY ALL DIMENSIONS</li> </ul>	

HOLD-DOWN SCHEDULE	
SYMBOL	SPECIFICATION
	SIMPSON 5THD14 (R.J.) HOLD-DOWN
	SIMPSON C516 STRAP TIE (14" END LENGTH)
	SIMPSON MSTC40 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM UNO.)
	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM UNO.)

MEANS & METHODS NOTES	
<p>THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS FINISHED AND ALL PLAN, DETAIL, AND NOTE SPECIFICATIONS HAVE BEEN COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS, AND TIE-DOWNS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING AND BRACING REQUIRED TO STABILIZE AND PROTECT EXISTING AND ADJACENT STRUCTURES AND SYSTEMS DURING COURSE OF DEMOLITION AND CONSTRUCTION OF THE PROJECT.</p> <p>STRUCTURAL DESIGN AND SPECIFICATIONS ASSUME THAT ALL SUPPORTING AND NON-SUPPORTING ELEMENTS IN CONTACT WITH FLOOR FRAMING ARE LEVEL, INCLUDING, BUT NOT LIMITED TO; FOUNDATIONS, SLABS ON GRADE, BEAMS, WALLS, AND NON-BEARING ELEMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LEVELNESS AND MAKE ADJUSTMENTS AS NECESSARY, INCLUDING CONSIDERATION OF THOSE AREAS THAT MAY BE WITHIN CONTRACTUAL, INDUSTRY, OR WARRANTY TOLERANCES.</p>	

ADDITIONAL NOTES FOR TRUSS & I-JOIST MANUFACTURER	
<p>ROOF TRUSS, FLOOR TRUSS AND ENGINEERED JOISTS SHALL BE DESIGNED TO MEET THE DIFFERENTIAL DEFLECTION CRITERIA BELOW UNLESS NOTED OTHERWISE ON PLAN. MULHERN &amp; KULP CANNOT BE HELD RESPONSIBLE FOR ANY STRUCTURAL ISSUES RELATED TO ANY BUILDING COMPONENT IF COMPONENT SHOP DRAWINGS ARE NOT SUBMITTED TO MK FOR REVIEW PRIOR TO FABRICATION, DELIVERY, OR INSTALLATION.</p> <p>TRUSSES SHALL BE DESIGNED SO THAT DIFFERENTIAL DEFLECTION BETWEEN ADJACENT PARALLEL TRUSSES OR GIRDER TRUSSES DOES NOT EXCEED THE FOLLOWING:</p> <p>A. ROOF TRUSSES:  1/4" DEAD LOAD  B. FLOOR TRUSSES, ATTIC TRUSSES, &amp; I-JOISTS:  1/8" DEAD LOAD  C. FLOOR TRUSSES &amp; ATTIC TRUSSES ADJACENT TO FLOOR FRAMING BY OTHERS:  LIMIT ABSOLUTE TRUSS DEFLECTION TO 3/16" DEAD LOAD. (NOT DIFFERENTIAL DEFLECTION)</p>	

LOADING AND DESIGN PARAMETERS	
<b>GRAVITY DESIGN LOADS:</b>	
DEAD LOAD (PSF):	
ROOF TRUSSES TOP CHORD:	10
ROOF TRUSSES BOTTOM CHORD:	7
FLOOR TRUSSES:	15
FLOOR JOISTS:	10
FLOOR (2X):	10
<b>LIVE LOAD (PSF):</b>	
ROOF:	20
RESIDENTIAL LIVING AREAS:	40
RESIDENTIAL SLEEPING AREAS:	30
GARAGE:	50
<b>SNOW LOAD:</b>	
GROUND SNOW LOAD (PSF):	25
FLAT ROOF SNOW LOAD (PSF):	25
SNOW EXPOSURE FACTOR (C <sub>s</sub> ):	0.9
SNOW LOAD IMPORTANCE FACTOR (I):	1.0
THERMAL FACTOR (C <sub>t</sub> ):	1.2
<b>LATERAL DESIGN LOADS:</b>	
WIND LOAD: (IBC 1609)	
SPEED (V <sub>w</sub> ) (MPH):	100
WIND RISK CATEGORY:	II
IMPORTANCE FACTOR (I <sub>w</sub> ):	1.0
EXPOSURE CATEGORY:	C
INTERNAL PRESSURE COEFF. (GC <sub>w</sub> ):	+0.18
TOPOGRAPHIC FACTOR (K <sub>z</sub> ):	1.0
<b>SEISMIC LOAD: (IBC 1601)</b>	
SEISMIC RISK CATEGORY:	II
SEISMIC IMPORTANCE FACTOR (I <sub>s</sub> ):	1.0
MAPPED SPECTRAL RESPONSE:	S <sub>s</sub> 1.085
SITE CLASS:	S <sub>s</sub> 0.483 (DEFAULT)
SPECTRAL RESPONSE COEFF.:	S <sub>m</sub> 1.008
SEISMIC DESIGN CATEGORY:	S <sub>m</sub> 0.585
BASIC SEISMIC-FORCE-RESISTING SYS.:	D
LIGHT FRAMED WALLS W/ WOOD STRUCTURAL PANELS	
ULTIMATE BASE SHEAR:	TRANS: 15 k
SEISMIC RESPONSE COEFF. (C <sub>w</sub> ):	LONG: 0.10
RESPONSE MODIFICATION FACTOR (R):	TRANS: 6.5
ANALYSIS PROCEDURE USED:	LONG: 6.5
EQUIVALENT LATERAL FORCE	

**LATERAL BRACING NOTES**

THIS HOME HAS BEEN ENGINEERED TO RESIST LATERAL FORCES RESULTING FROM: 100 MPH WIND SPEED, EXP. C (ASCE 7-16 WIND MAP, PER IRC R301.2.1.1) RISK CAT. 2 & SEISMIC CAT. D2.

**100 MPH WIND IN 2021 IRC MAP**

ENGINEERED DESIGN WAS COMPLETED PER 2021 IBC (SECTION 1604 & 1613) & ASCE 7-16, AS PERMITTED BY R301.3 OF THE 2021 IRC. ACCORDINGLY, THIS HOME, AS DOCUMENTED AND DETAILED HEREWITHIN, IS ADEQUATE TO RESIST THE CODE REQUIRED LATERAL FORCES, AND DOES NOT NEED TO CONFORM TO THE PRESCRIPTIVE PROVISIONS OF R602.10.

**STANDARD EXTERIOR WALL SHEATHING SPECIFICATIONS**  
(INTERIOR WALL SPECIFICATION WHERE NOTED ON PLANS)

• 3/8" OSB OR 1 1/2" PLYWOOD:

FASTEN SHEATHING W/ 2 1/2"x0.131" NAILS @ 6" O.C. AT ALL SUPPORTED PANEL EDGES AND 12" O.C. IN THE PANEL FIELD. ALL SHEATHING SHEET PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED PER THIS SPECIFICATION UNO. ON PLANS.

**3" O.C. EDGE NAILING**  
(WHERE NOTED ON PLANS)

• 3/8" OSB OR 1 1/2" PLYWOOD:

ONLY AT LOCATIONS INDICATED ON PLANS - SHEATHING WALL SHOWN WITH 3/8" OSB. FASTEN SHEATHING W/ 2 1/2"x0.131" NAILS @ 3" O.C. AT EDGES AND 12" O.C. AT CENTER. ALL SHEATHING SHEET PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE AND 3" O.C. FASTENING.

- NOTES:**
- LATERAL ANALYSIS ASSUMES STUD SPACING @ 16" O.C.
  - ALL SHEAR WALLS SHALL HAVE DOUBLE TOP PLATES FASTENED TOGETHER W/ 3"x0.131" NAILS @ 8" O.C. USE (2) 3/8"x0.131" NAILS AT EACH LAP SPlice, (6) EACH SIDE OF JOINT (TYP. UNO.)
  - ALL EXTERIOR WALLS ARE CONTINUOUSLY SHEATHED.
  - ALL INTERIOR SHEAR WALLS AND EXTERIOR WALLS ARE SHEATHED ABOVE AND BELOW OPENINGS.

LEGEND	
	INTERIOR BEARING WALL
	BEARING WALL ABOVE (B.W.A.), OR SHEARWALL ABOVE (S.W.A.)
	BEAM / HEADER
	INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL W/ 3" O.C. EDGE NAILING ABOVE (S.W.A.)
	AREA OF OVERFRAMING
	JL METAL HANGER
	* INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
	▶ INDICATES HOLD-DOWN.

GENERAL STRUCTURAL NOTES	
DESIGN PARAMETERS	
<ul style="list-style-type: none"> <li>DESIGN IS BASED ON 2021 INTERNATIONAL RESIDENTIAL CODE &amp; 2021 INTERNATIONAL BUILDING CODE</li> <li>WOOD FRAME ENGINEERING IS BASED ON NDS "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" - LATEST EDITION.</li> </ul>	
GENERAL FRAMING	

- EXTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. (W/ DOUBLE TOP PLATE) HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, UNO.
- INTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. (W/ DOUBLE TOP PLATE) HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, UNO.
- ALL NON-BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 2x "STUD" GRADE MEMBERS SPACED @ 24" O.C. (MAX).
- ALL WALLS TALLER THEN TYP. PLATE HEIGHT SHALL BE CONSIDERED BALLOON FRAMED & SHALL BE CONSTRUCTED FROM FLOOR TO UNDERSIDE OF FRAMING AT NEXT LEVEL. B.F. WALLS SHALL BE 2x6 HEM FIR (HF) #2 GRADE LUMBER, OR BETTER, UNO.
- ALL SHEATHING AND LEDGERS ARE TO BE DIRECTLY APPLIED AND FASTENED TO FRAMING. DO NOT PROVIDE CONTINUOUS INSULATION BETWEEN FRAMING AND SHEATHING/LEDGERS.
- ALL HEADERS SHALL BE SUPPORTED BY (1)2x JACK STUD & (1)2x KING STUD, MINIMUM.
  - THE NUMBER OF STUDS SPECIFIED AT A SUPPORT INDICATES THE NUMBER OF JACK STUDS REQUIRED, UNO.
- BUILT-UP POSTS SHALL BE 2x4 OR 2x6 HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, UNO. & SOLID WOOD COLUMNS SHALL BE SPRUCE PINE FIR (SPF) #2 GRADE LUMBER, OR BETTER, UNO.
- ALL 2x6 AND LARGER SOLID SAWN BEAMS/HEADERS SHALL BE HEM FIR #2 (HF #2) OR BETTER. ALL 4x6 AND LARGER SOLID SAWN LUMBER SHALL BE DOUG FIR #2 (DF #2) OR BETTER.
- ALL FRAMING LUMBER SHALL BE KILN DRIED TO 15% MC (KD-15).
- ALL TYP. NAIL FASTENER REQUIREMENTS ARE NOTED IN GENERAL NOTES, IN DETAILS, OR ON PLANS. ALL NAILS SPECIFIED ARE MIN. DIAMETER AND LENGTH REQUIRED FOR CONNECTION. ALL HANGER NAILS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS FOR MAX CHARTED CAPACITY. NOTE: HANGERS USE COMMON NAIL DIAMETERS NOT TYPICAL FRAMING GUN NAILS.
- FASTEN ALL BEAMS TO COLUMNS, OR FLUSH BEAMS TO SUPPORTING BEAMS, W/ (4) 3"x0.131" TOENAILS (MN), TYP. UNO.
- PROVIDE SOLID BLOCKING IN FLOOR SYSTEM UNDER ALL POSTS & HOLD-DOWNS CONTINUOUS TO FOUNDATION/BEARING. BLOCKING TO MATCH POST ABOVE.
- ENGINEERED LUMBER TO MEET OR EXCEED THE FOLLOWING:
  - LVL MEMBERS - Fb=2325 PSI; Fv=910 PSI; E=1.55x10<sup>6</sup> PSI
  - LVL MEMBERS - Fb=2600 PSI; Fv=985 PSI; E=2.0x10<sup>6</sup> PSI
  - GLB MEMBERS - Fb=2400 PSI; Fv=11850 PSI; Fv=265 PSI; E=1.8x10<sup>6</sup> PSI; DF/DF; 24F-V4 (UNO)
- ENGINEERED LUMBER POSTS TO MEET OR EXCEED THE FOLLOWING:
  - LVL MEMBERS - Fb=2400 PSI; Fv=12500 PSI; E=1.8x10<sup>6</sup> PSI
- FACE NAIL MULTI-PLY 2x BEAMS & HEADERS W/ 3-ROW OF 3"x0.131" NAILS (MN) @ 12" O.C. STAGGERED. APPLY NAILING FROM BOTH FACES @ 3-PLY OR MORE CONDITIONS. UTILIZE 2 ROWS OF NAILS FOR 2x6 & 2x8 MEMBERS.
- TRUSS SHOP DWGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF PROPOSED CONSTRUCTION SHALL BE SUBMITTED TO BUILDING DESIGNER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY IN ACCORDANCE WITH TPI-1 2.3.2.3 & 2.3.4.3.
- REFER TO IRC FASTENING SCHEDULE TABLE R602.3(1) FOR ALL CONNECTIONS, TYP. UNO.
- BUILDER RESPONSIBLE TO DETERMINE CORROSION-RESISTANCE REQUIREMENTS AND COMPATIBILITY OF HARDWARE, FASTENERS AND CONNECTORS FOR ENVIRONMENTAL EXPOSURE AND IN CONTACT W/ PRESERVATIVE-TREATED WOOD OF ACTUAL FINAL CONDITIONS AND SOURCED MATERIALS. CONTACT LUMBER & HARDWARE SUPPLIERS TO COORD. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS, NOT LESS THAN ASTM A653, TYPE G95 ZINC-COATED GALVANIZED STEEL, OR EQUIVALENT, SHALL BE USED.

FLOOR FRAMING	
<ul style="list-style-type: none"> <li>JOISTS/TRUSSES SHALL BE DESIGNED BY MANUF. TO MEET OR EXCEED L/480 LIVE LOAD DEFLECTION CRITERIA AND SHALL RUN CONTINUOUS OVER SUPPORTS WHEREVER POSSIBLE. ALL LOADS SHOWN ON PLAN FOR MANUF. DESIGNS ARE ASD LEVEL LOADS, UNO. (EXCLUDES STONE/MARBLE OR NET BED CONSTRUCTED FLOORS - CONTACT MK FOR EXCLUDED DESIGNS).</li> <li>ALL METAL I-JOIST/TRUSS HANGERS SHALL BE SPECIFIED BY I-JOIST/TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.</li> <li>2x FLOOR JOISTS HAVE BEEN DESIGNED TO MEET OR EXCEED L/360 LIVE LOAD DEFLECTION CRITERIA.</li> <li>TYPICAL 2x JOIST HANGERS (UNO. ON PLANS): SINGLE PLY: SIMPSON LUS20; DOUBLES: SIMPSON LUS20-2</li> <li>FLOOR SHEATHING SHALL BE 23/32" A.P.A. RATED 5/16" FLOOR 24" O.C. EXPOSURE 1 (OR APPROVED EQUAL) WITH TONGUE AND GROOVE EDGES. FASTEN TO FRAMING MEMBERS W/ GLUE AND 2 1/2" x 0.131" NAILS @ 6" O.C. @ PANEL EDGES &amp; @ 12" O.C. FIELD.</li> <li>ALL FLUSH CONNECTIONS SHALL BE CONNECTED WITH HANGER APPROPRIATE FOR MEMBER SIZE, UNO.</li> <li>FASTEN HANGERS TO SINGLE PLY FLUSH BEAMS W/ 1/2" LONG NAILS.</li> </ul>	

ROOF FRAMING	
<ul style="list-style-type: none"> <li>FASTEN EACH ROOF TRUSS TO TOP PLATE W/ (4) 3"x0.131" TOENAILS (MN) &amp; (1) SIMPSON SDW2500 SCREW @ ALL BEARING POINTS. PROVIDE (2) SIMPSON H25T CLIPS AT 2-PLY GIRDER TRUSSES, (2) SIMPSON H25T CLIPS AT 3-PLY GIRDER TRUSSES AT ALL BEARING POINTS.</li> <li>FASTEN EACH ROOF RAFTER TO TOP PLATE WITH (1) SIMPSON H25T CLIPS. PROVIDE (2) SIMPSON H25T CLIPS AT FLUSH BEAMS IN THE ROOF - AT ALL BEARING POINTS.</li> <li>ROOF SHEATHING SHALL BE 7/16" A.P.A. RATED SHEATHING 24/16 EXPOSURE 1 (OR APPROVED EQUAL). FASTEN TO FRAMING MEMBERS W/ 2 1/2" x 0.131" NAILS @ 6" O.C. AT PANEL EDGES &amp; @ 6" O.C. AT INTERMEDIATE SUPPORTS. ROOF SHEATHING SHALL EXTEND BELOW ALL INSTANCES OF OVERFRAMING. BLOCKING SHALL BE INSTALLED AS REQUIRED TO LIMIT ROOF SHEATHING SPANS TO 24" MAX.</li> <li>ALL METAL HANGERS SHALL BE SPECIFIED BY THE TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.</li> <li>ROOF TRUSS SHOP DRAWINGS &amp; CALCULATIONS SHALL BE DESIGNED FOR UNBALANCED SNOW LOADING PER ASCE 7-16, SECTION 7.6. ERECT AND INSTALL ROOF TRUSSES PER FIG. A &amp; FIG. B (S1) 1-08 (GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING &amp; BRACING OF METAL PLATE CONNECTED WOOD TRUSSES).</li> <li>FASTEN OVER-FRAMED TRUSS SETS TO TRUSSES BELOW W/ (2) 3"x0.131" TOENAILS AT EA. TRUSS.</li> <li>FASTEN ALL INTERIOR NON-BEARING PARTITION WALLS TO TRUSS BOTTOM CHORD ABOVE WITH SIMPSON 5TG CLIPS AT 24" O.C. MAX. PROVIDE BLOCKING BETWEEN THE TRUSS BOTTOM CHORDS AS REQUIRED FOR THE PARALLEL CONDITIONS.</li> </ul>	



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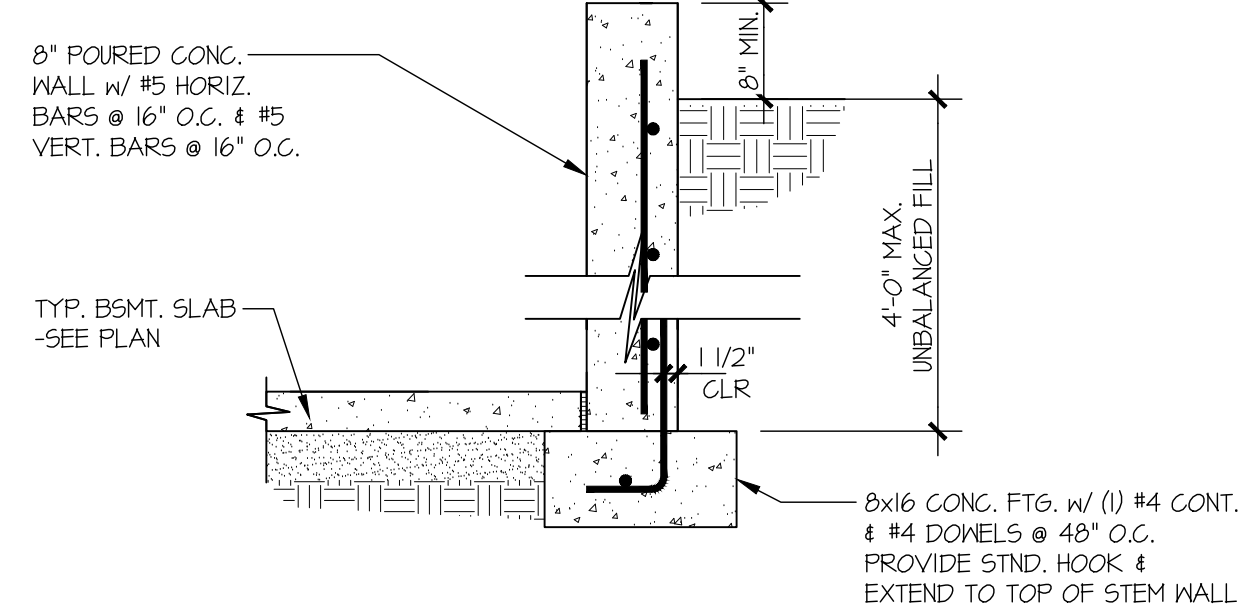
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project mgr:	NJM
drawn by:	RSC
issue date:	12-19-24
REVISIONS:	
date:	initial:

ARCHITECTURAL  
INNOVATIONS

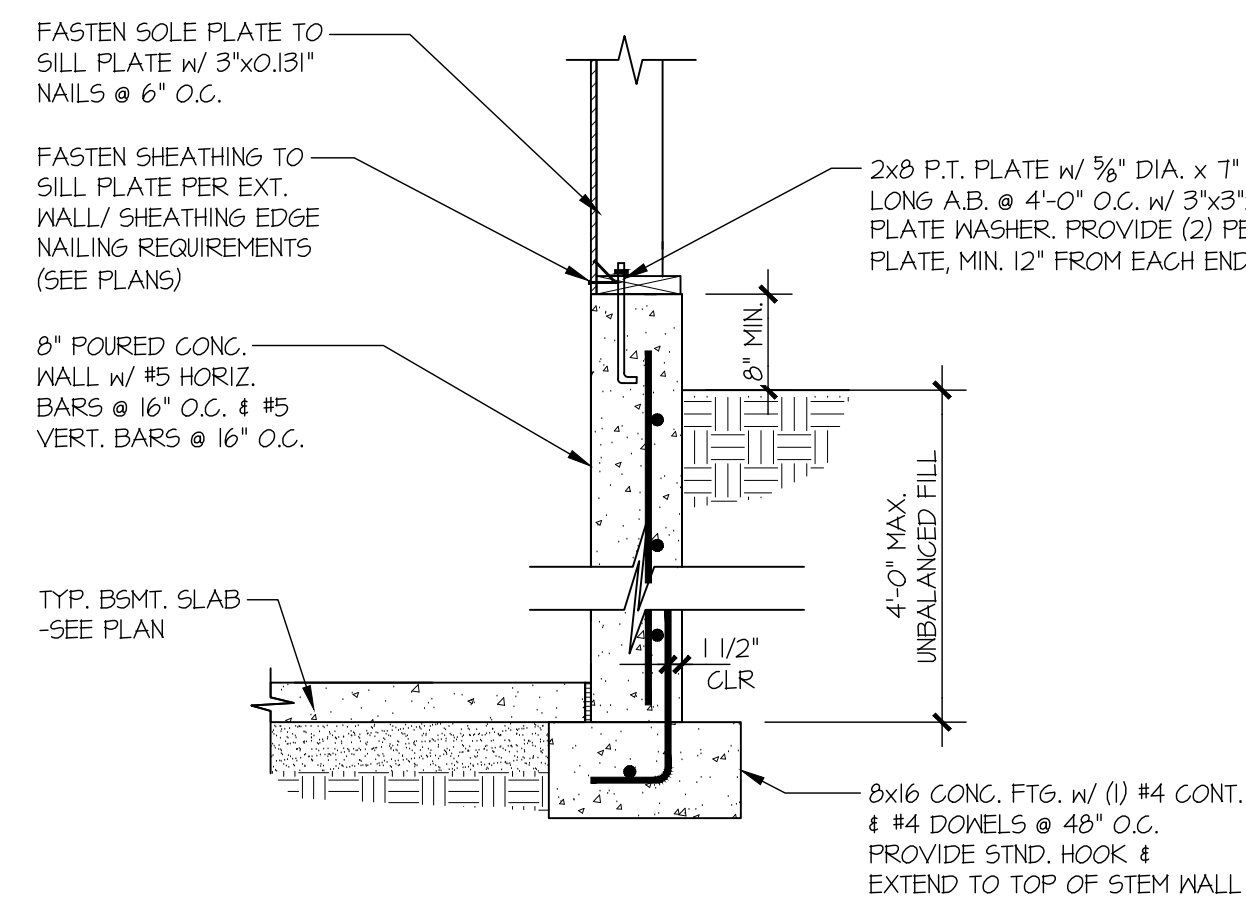
STRUCTURAL NOTES

**MERCER ISLAND - LOT 3**  
7621 SE 22ND ST  
MERCER ISLAND, WA

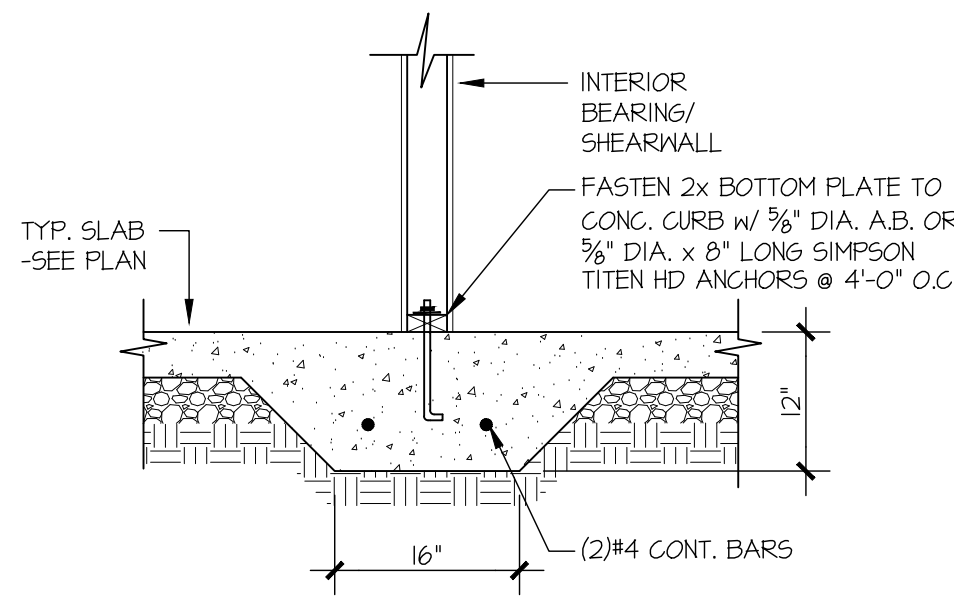
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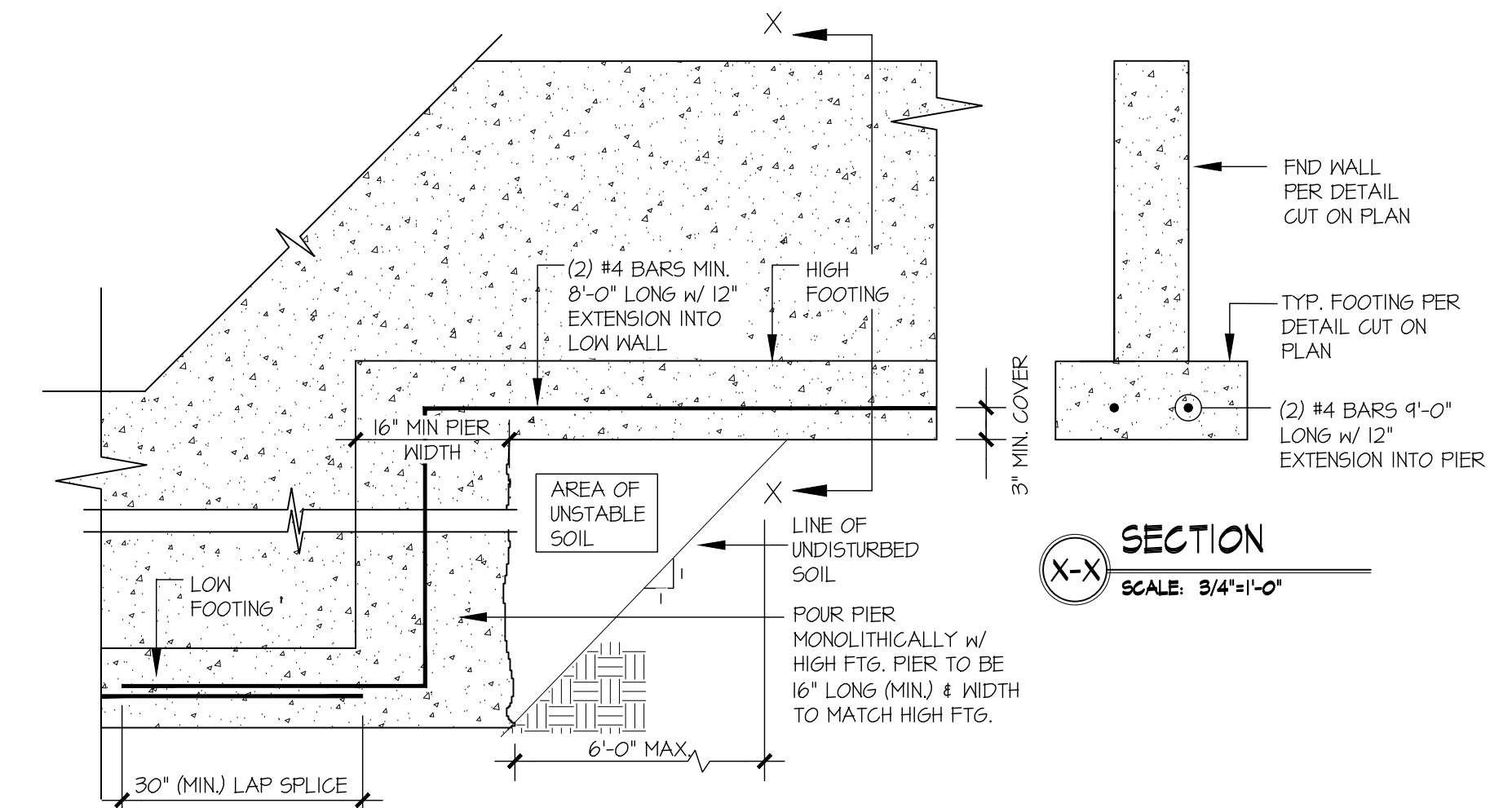
**12** RETAINING WALL @ LOW GRADE  
SCALE: 3/4"=1'-0"



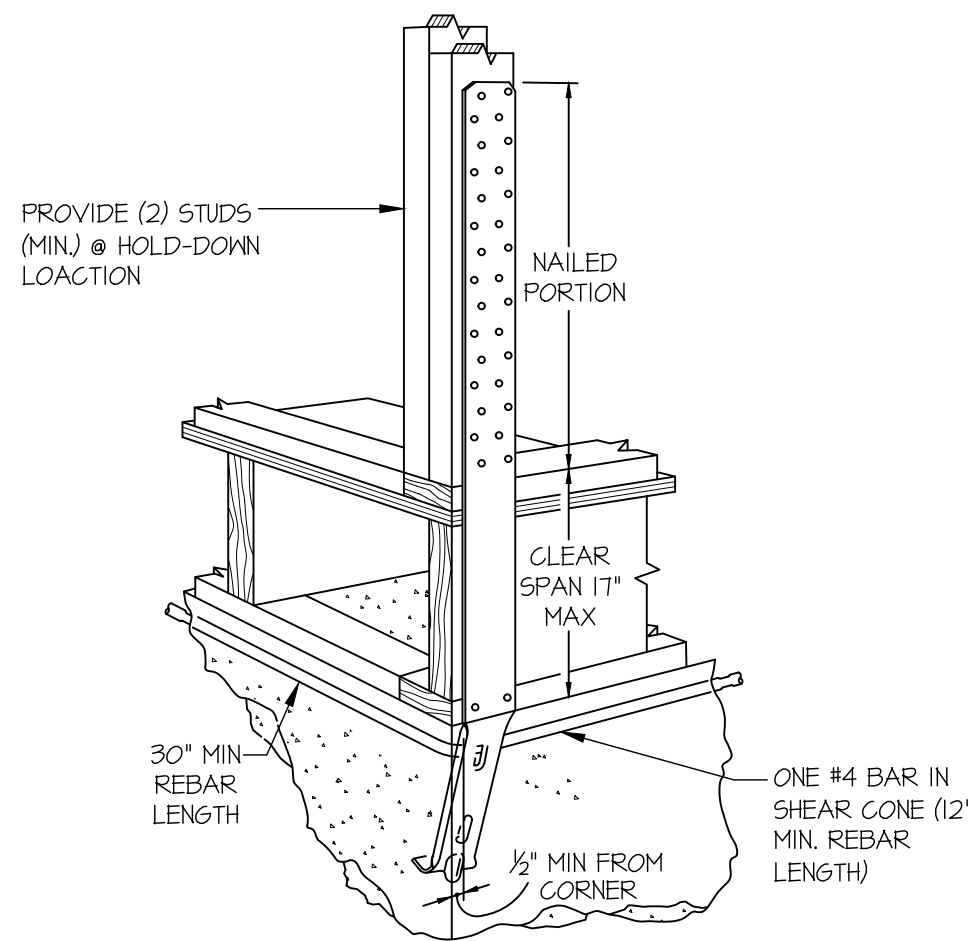
**13** RETAINING WALL @ LOW GRADE  
SCALE: 3/4"=1'-0"



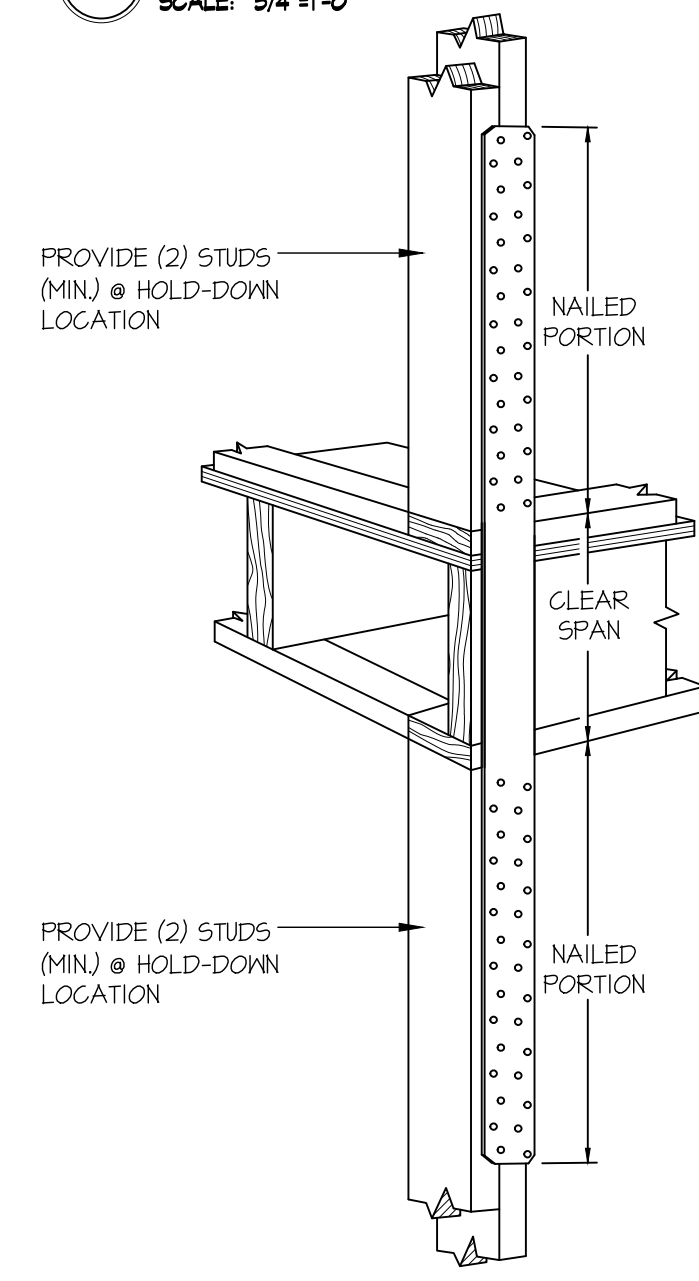
**14** TYPICAL CRAWL SPACE FOOTING DETAIL  
SCALE: 3/4"=1'-0"



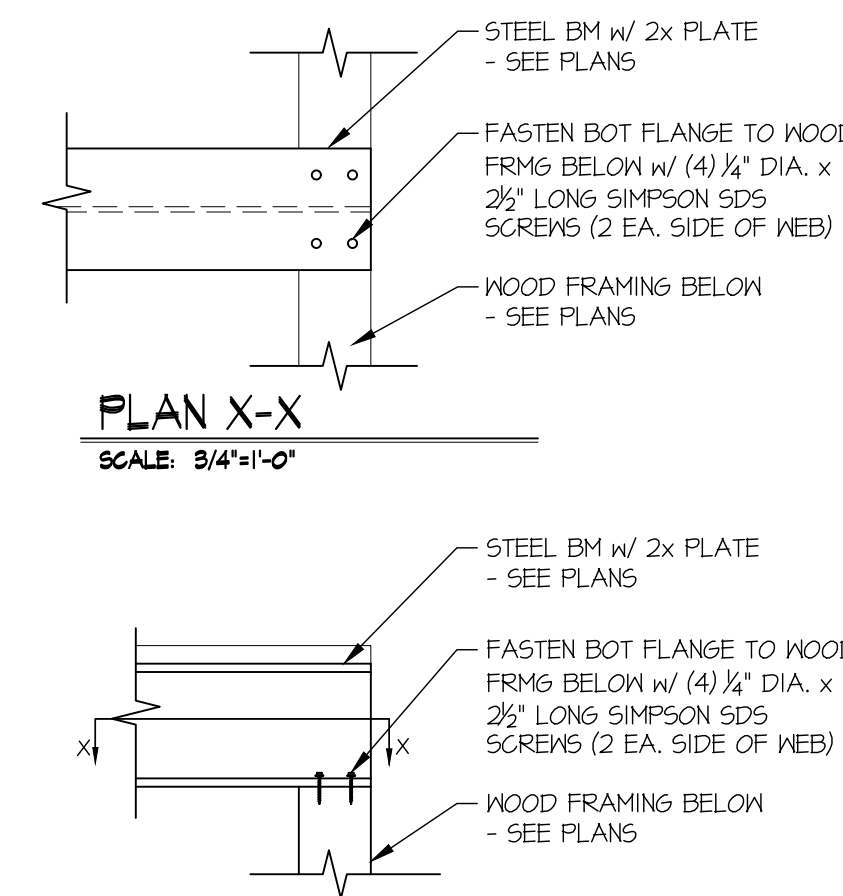
**A** TYPICAL STEPPED FOOTING  
SCALE: 3/4"=1'-0"



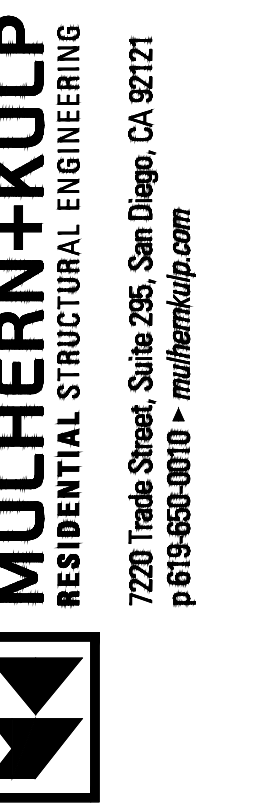
**B** TYPICAL HOLD-DOWN INSTALLATION  
NOT TO SCALE  
SIMPSON STD HD @ FLOOR FRAMING



**C** TYPICAL HOLD-DOWN INSTALLATION  
NOT TO SCALE  
SIMPSON STRAP HD @ FLOOR FRAMING



**D** STL BM TO WOOD FRMG CONNECTION  
SCALE: 3/4"=1'-0"



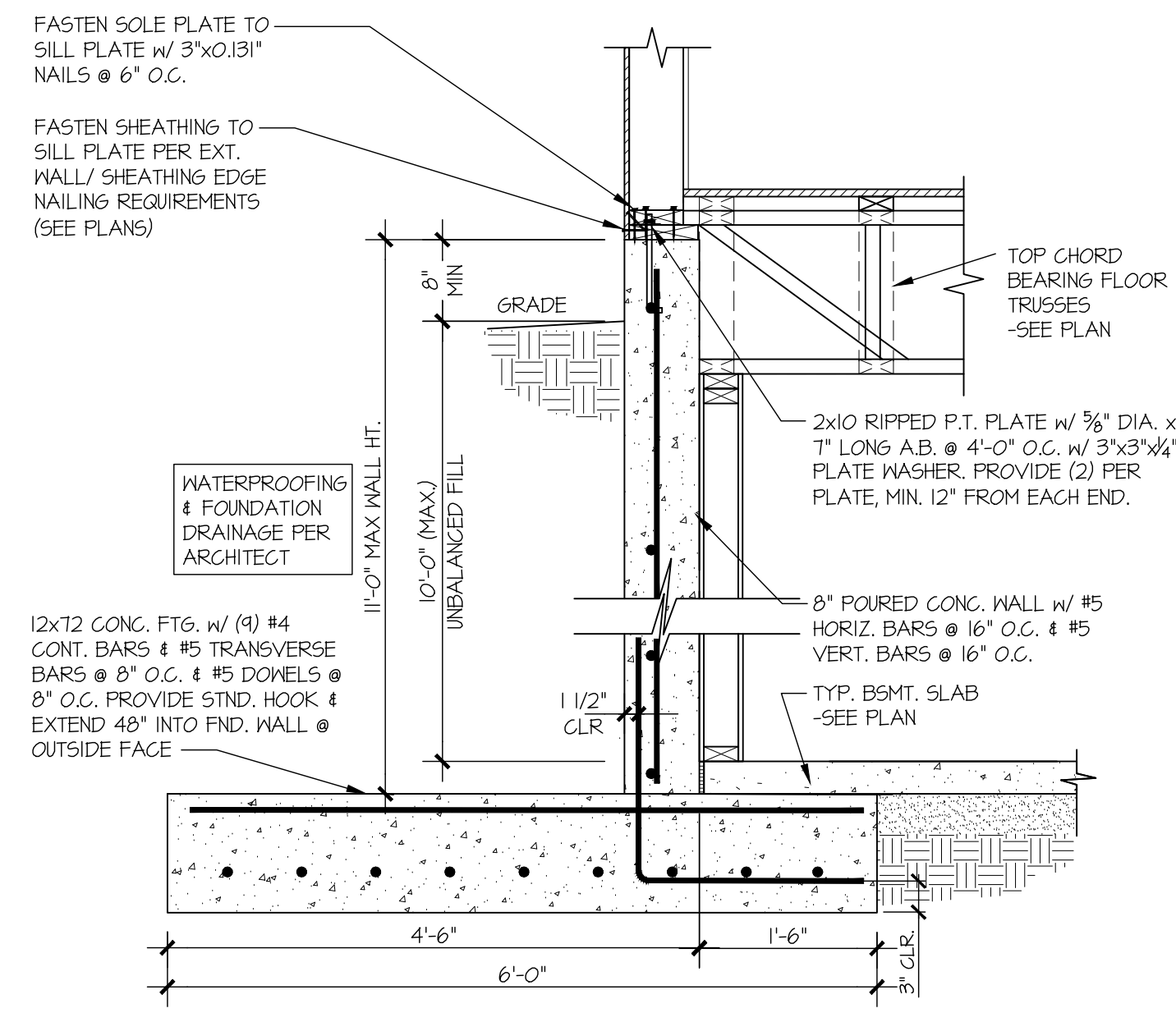
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project mgr: NJM  
drawn by: RSC  
issue date: 12-19-24

REVISIONS:  
date: initial:

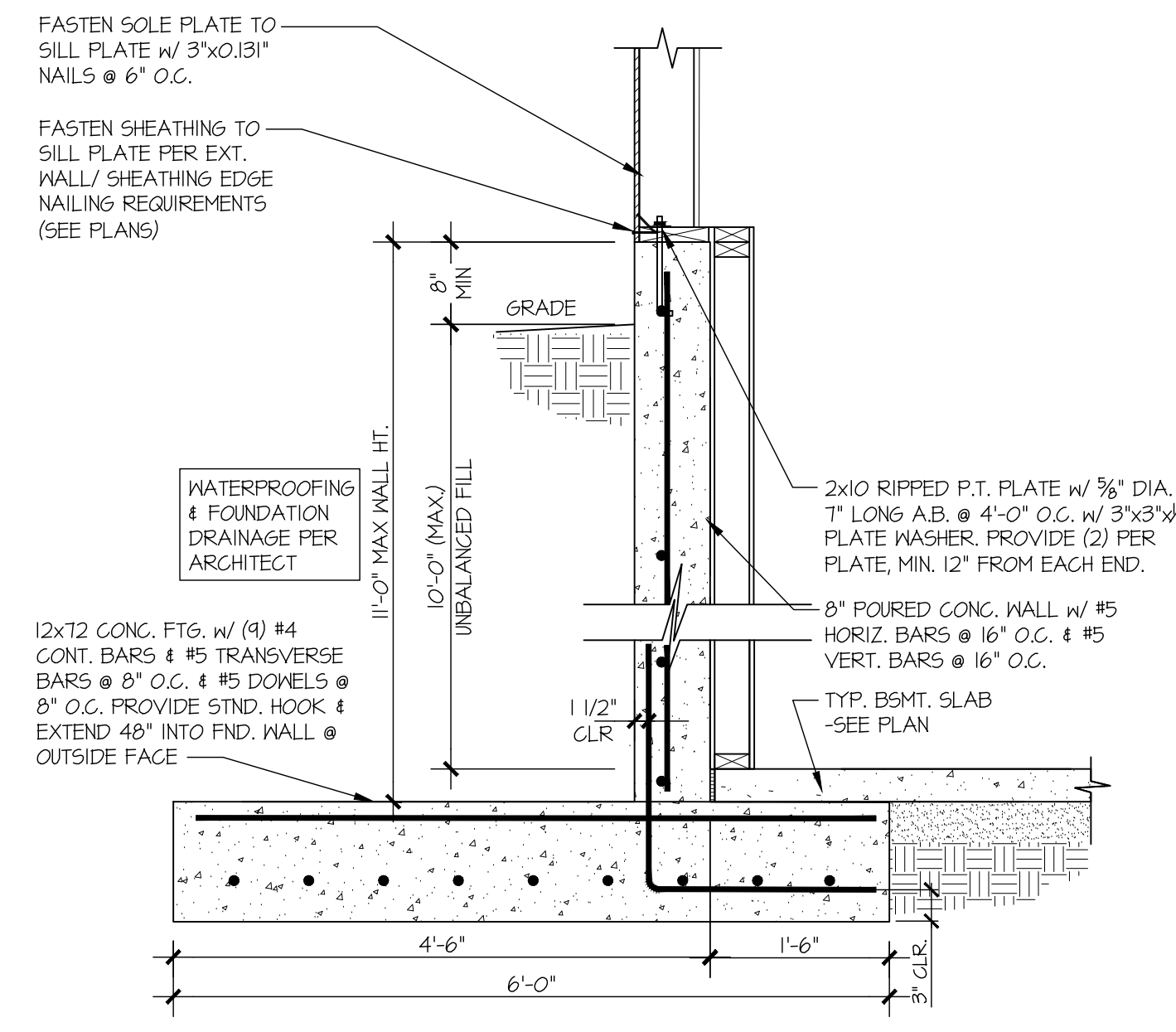
ARCHITECTURAL INNOVATIONS

STRUCTURAL DETAILS  
MERCER ISLAND - LOT 3  
7621 SE 22ND ST  
MERCER ISLAND, WA

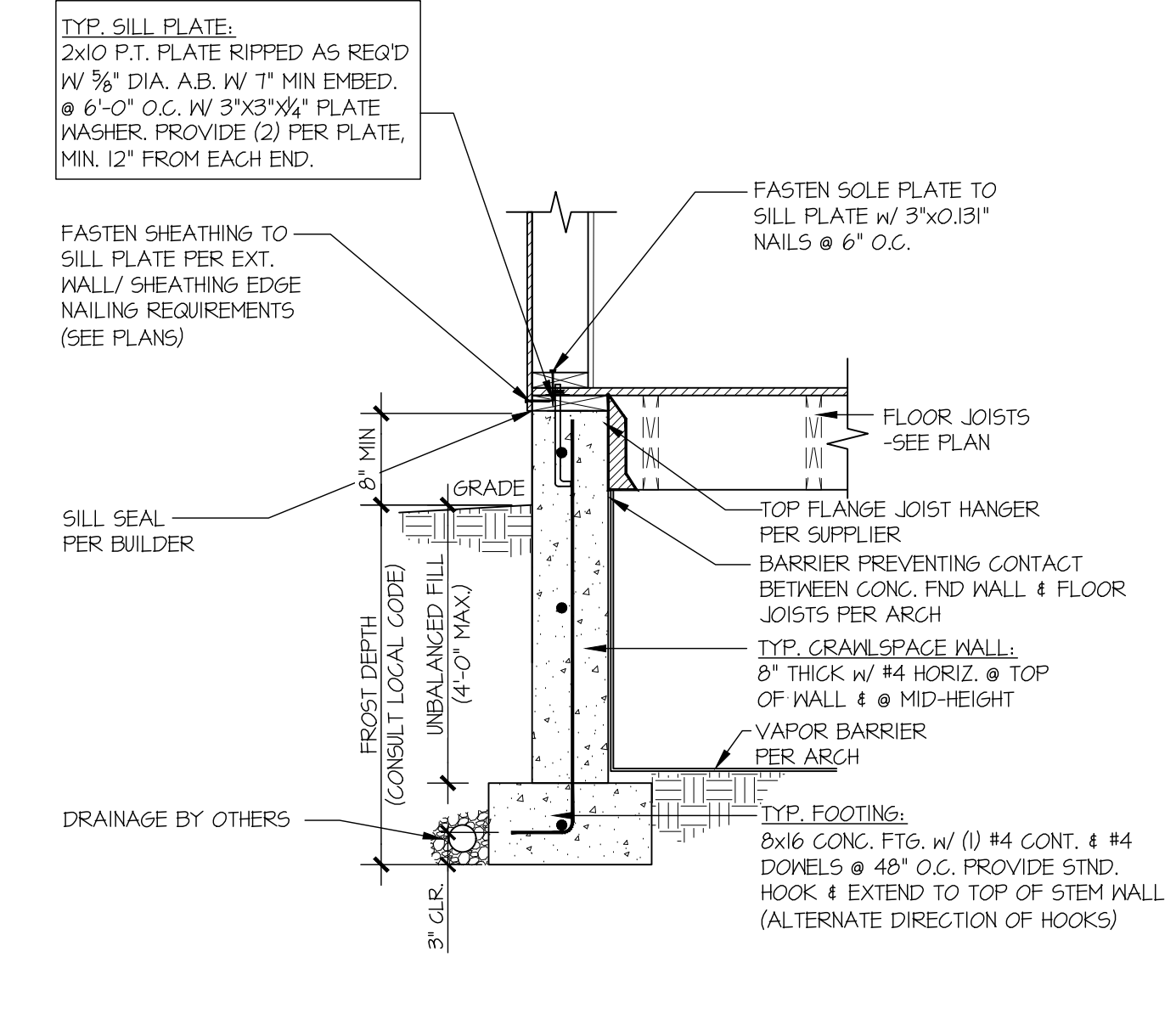
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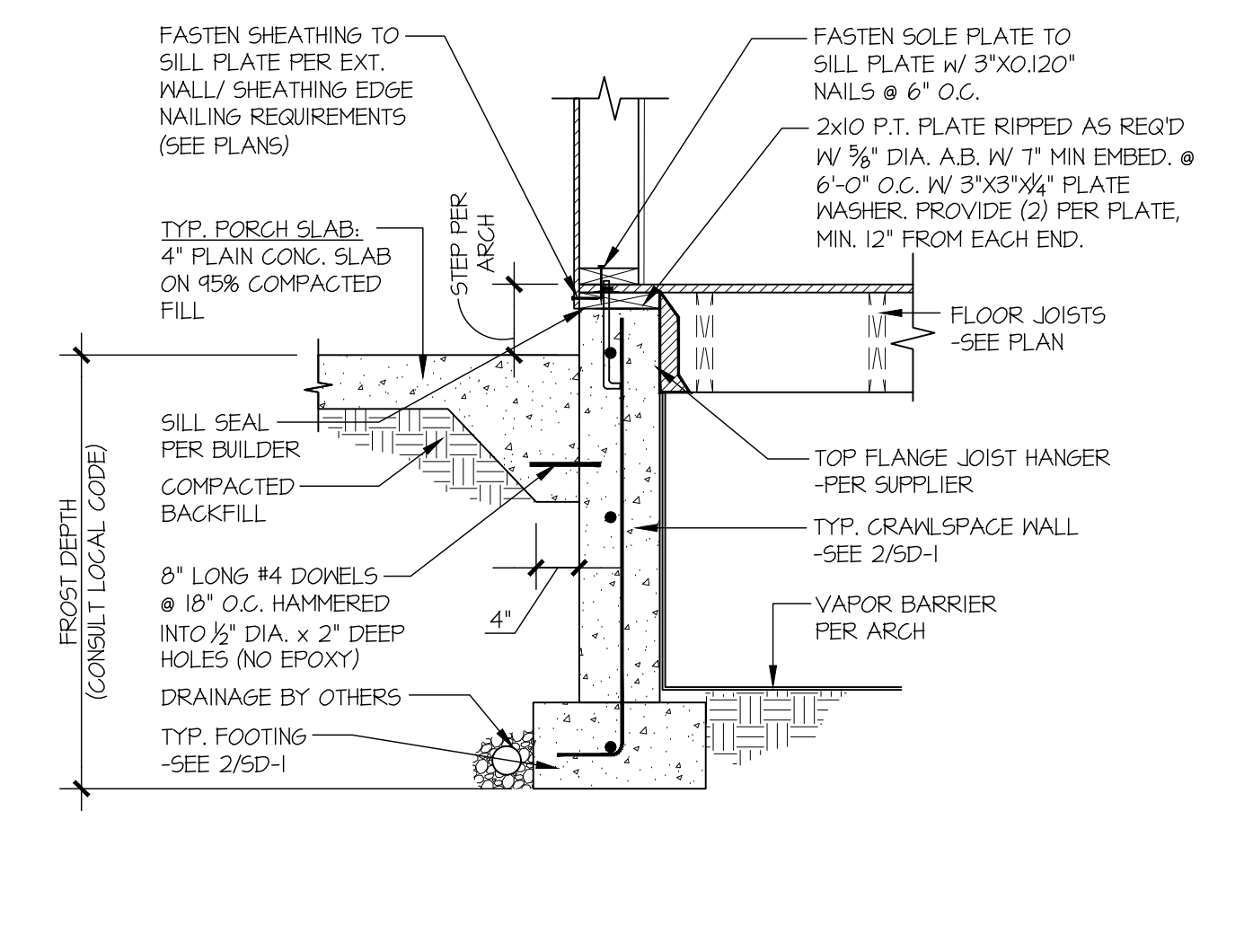
1 TYPICAL BASEMENT FOUNDATION WALL  
SCALE: 3/4"=1'-0"



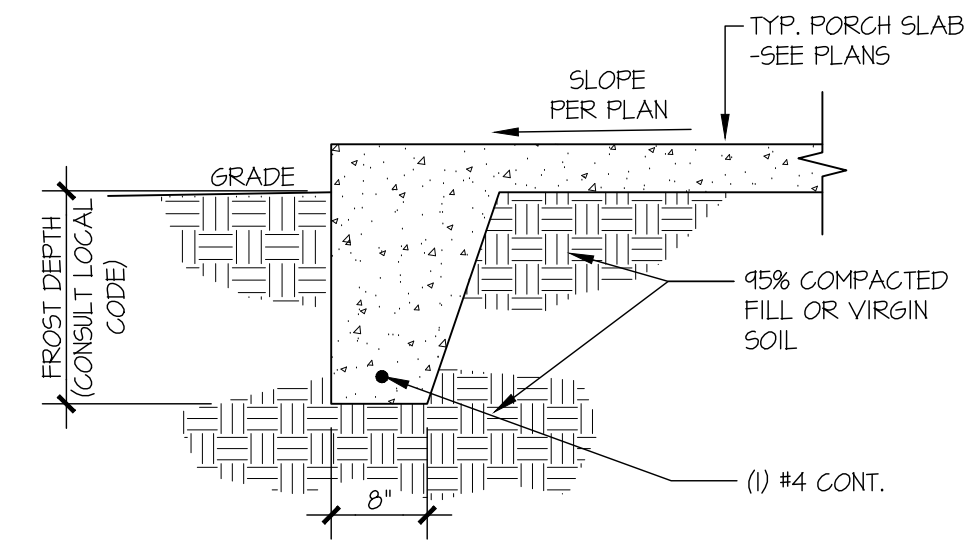
1A TYPICAL BASEMENT FOUNDATION WALL  
SCALE: 3/4"=1'-0"



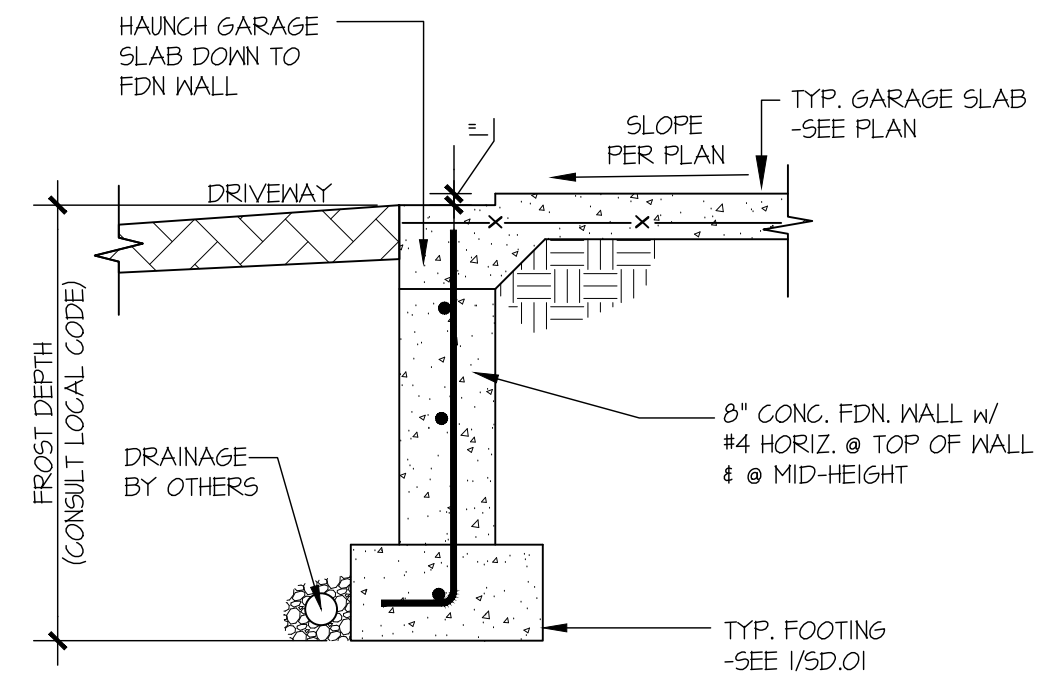
2 TYPICAL CRAWLSPACE FOUNDATION  
SCALE: 3/4"=1'-0"



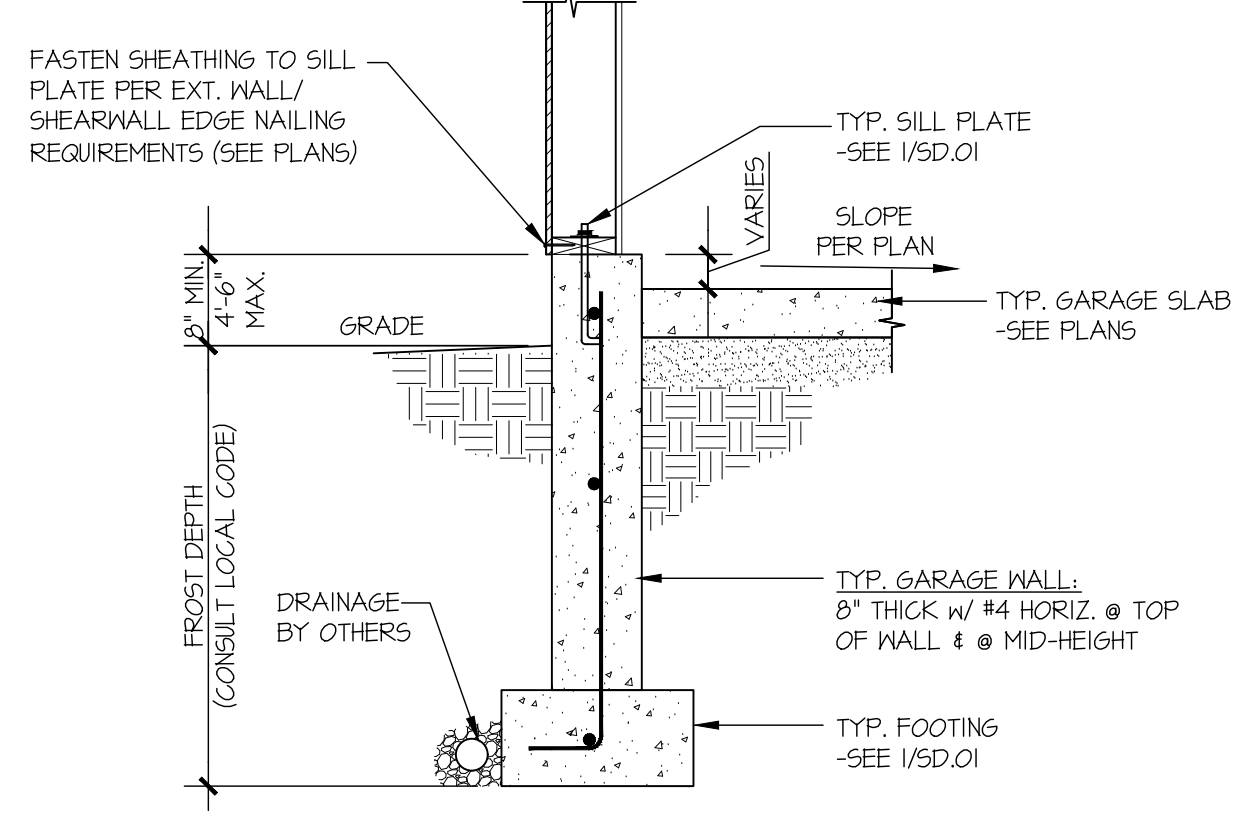
3 TYPICAL CRAWLSPACE FOUNDATION  
SCALE: 3/4"=1'-0" @ PORCH SLAB



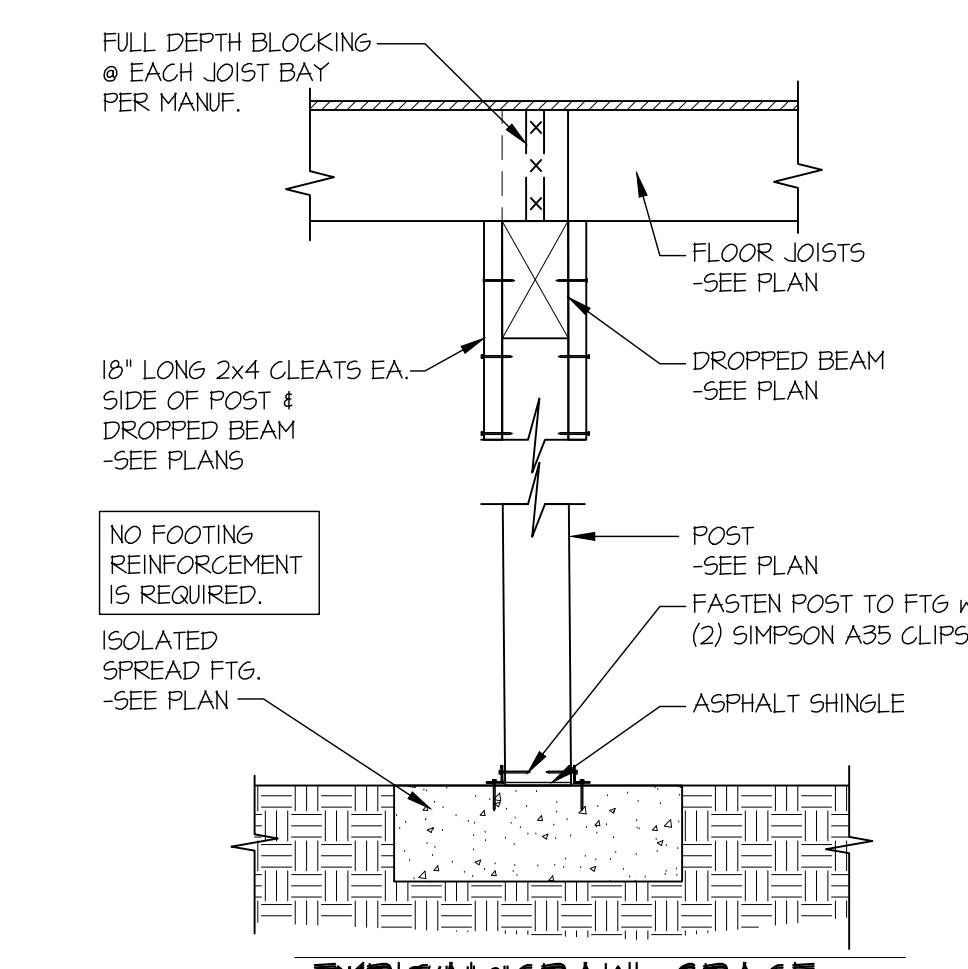
4 TYPICAL FOOTING @ PORCH SLAB  
SCALE: 3/4"=1'-0"



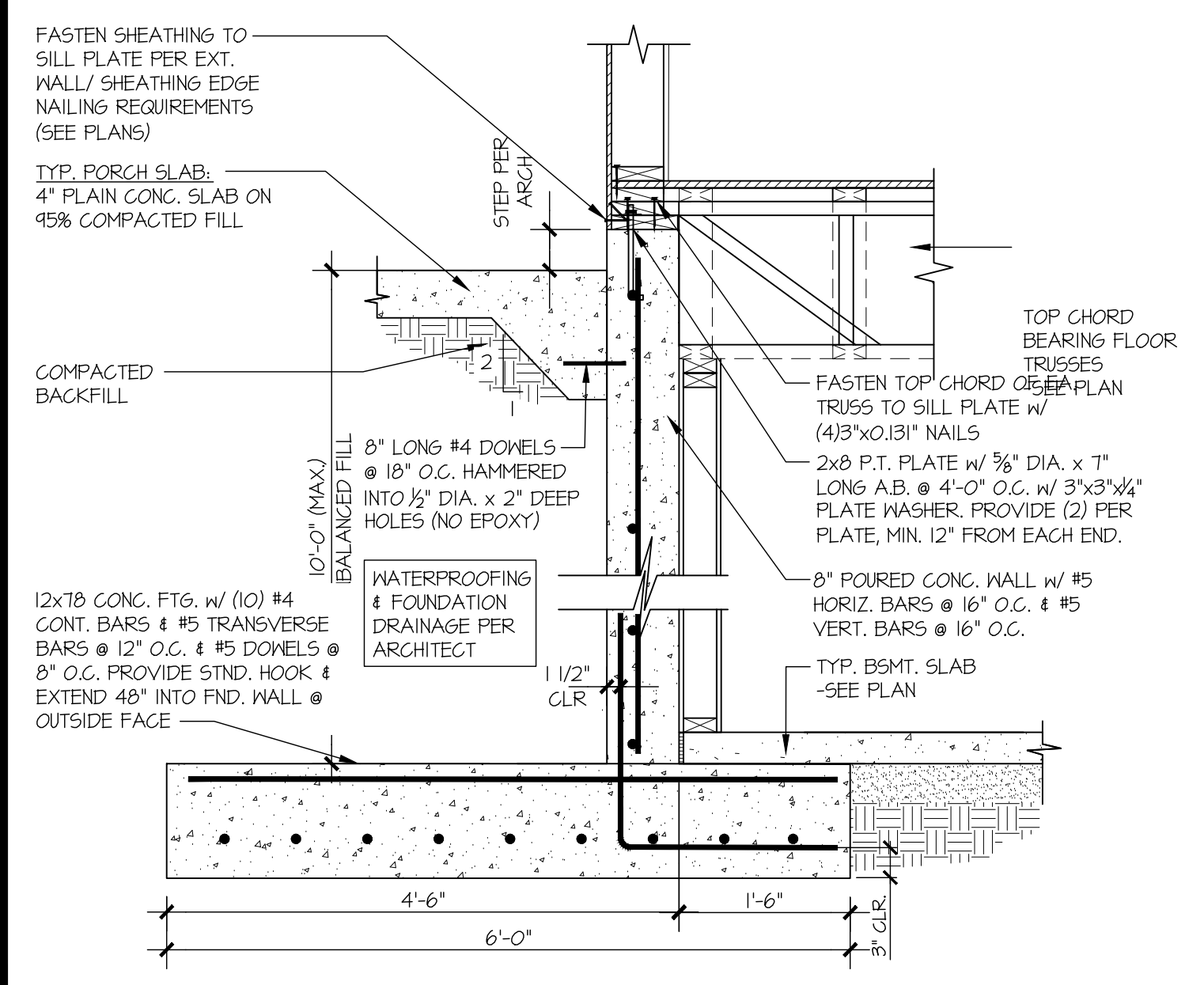
5 TYPICAL CONCRETE FOOTING @ GARAGE DOOR OPENING  
SCALE: 3/4"=1'-0"



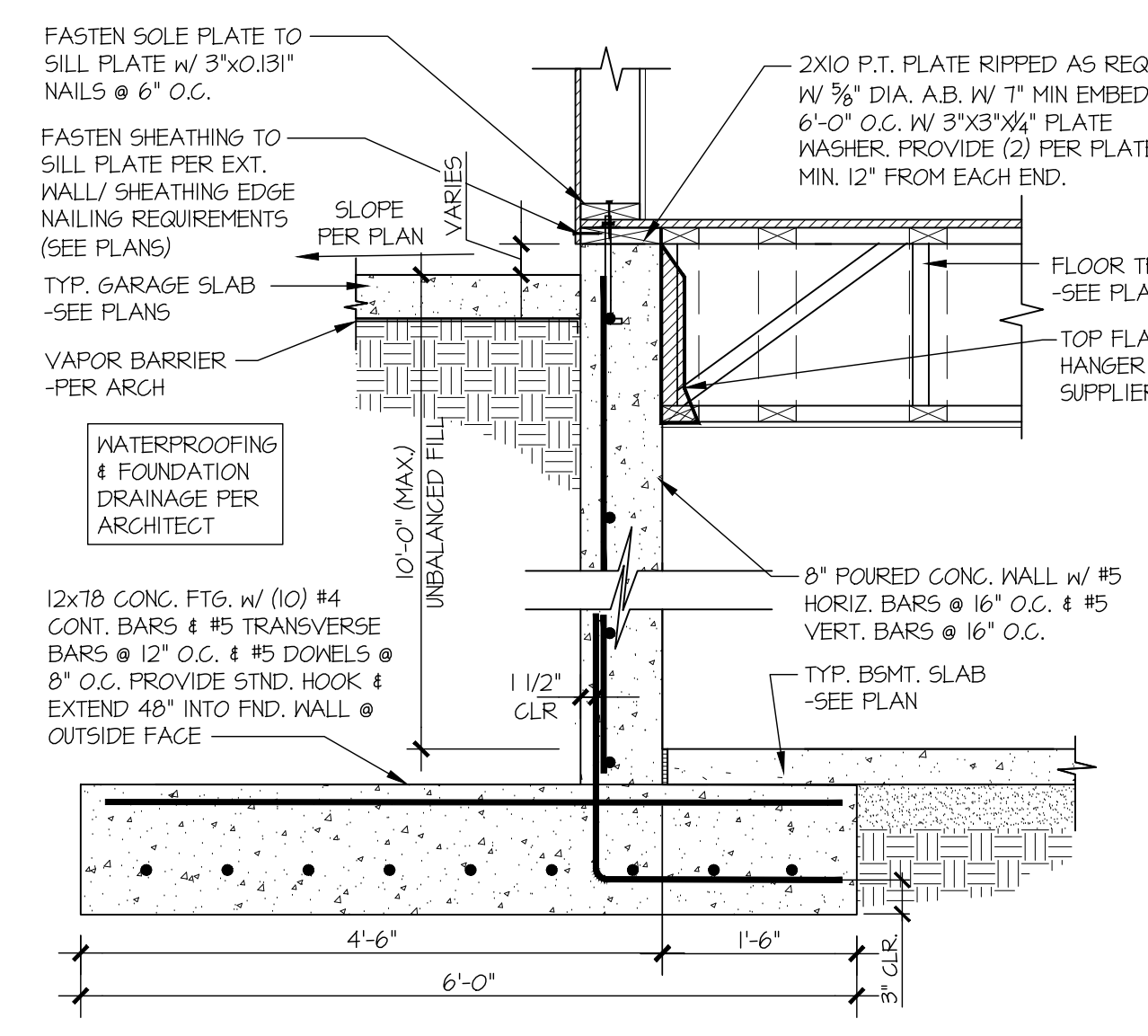
6 TYPICAL EXT. GARAGE FOUNDATION  
SCALE: 3/4"=1'-0"



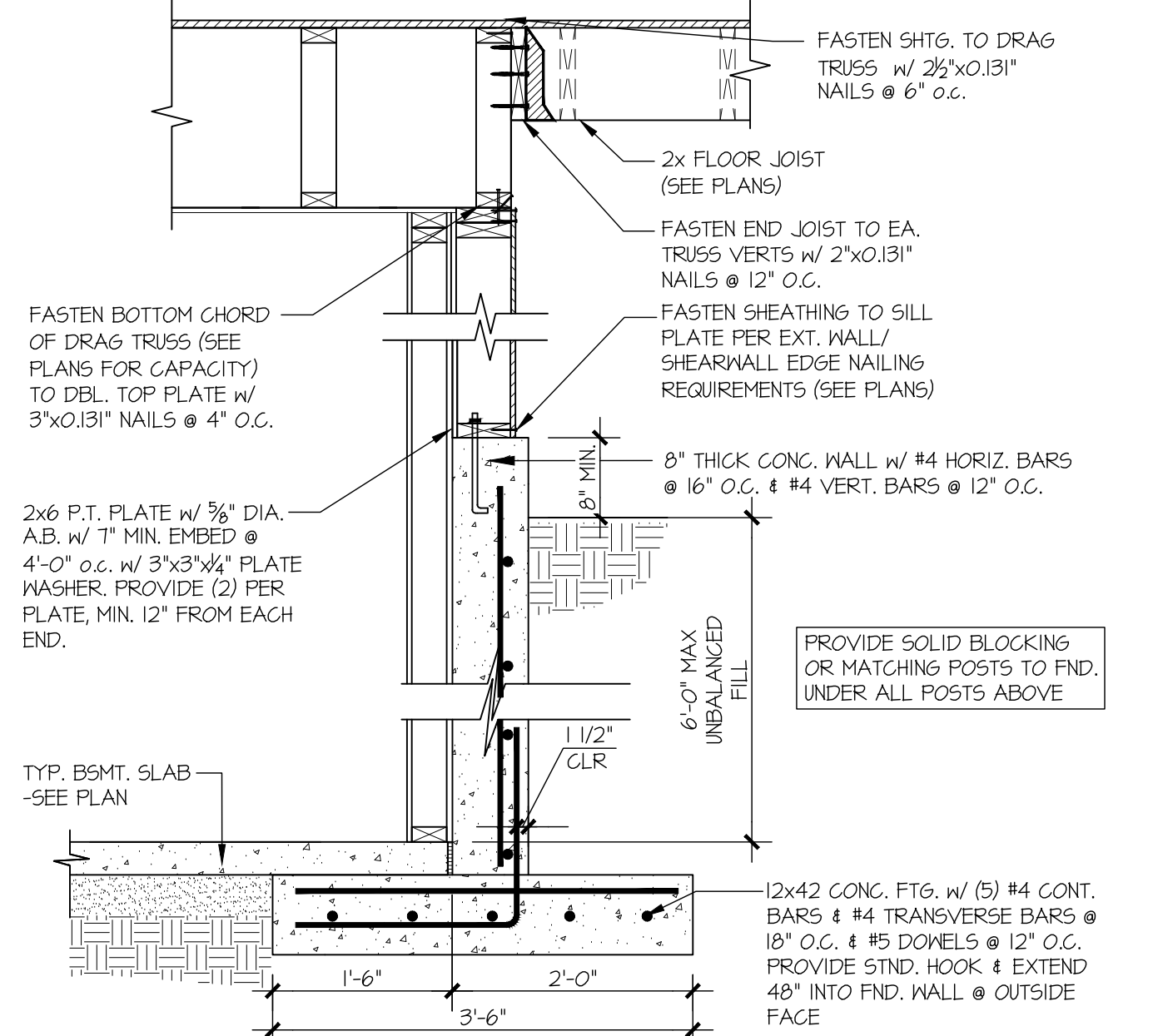
7 TYPICAL EXT. GARAGE FOUNDATION FOOTING DETAIL



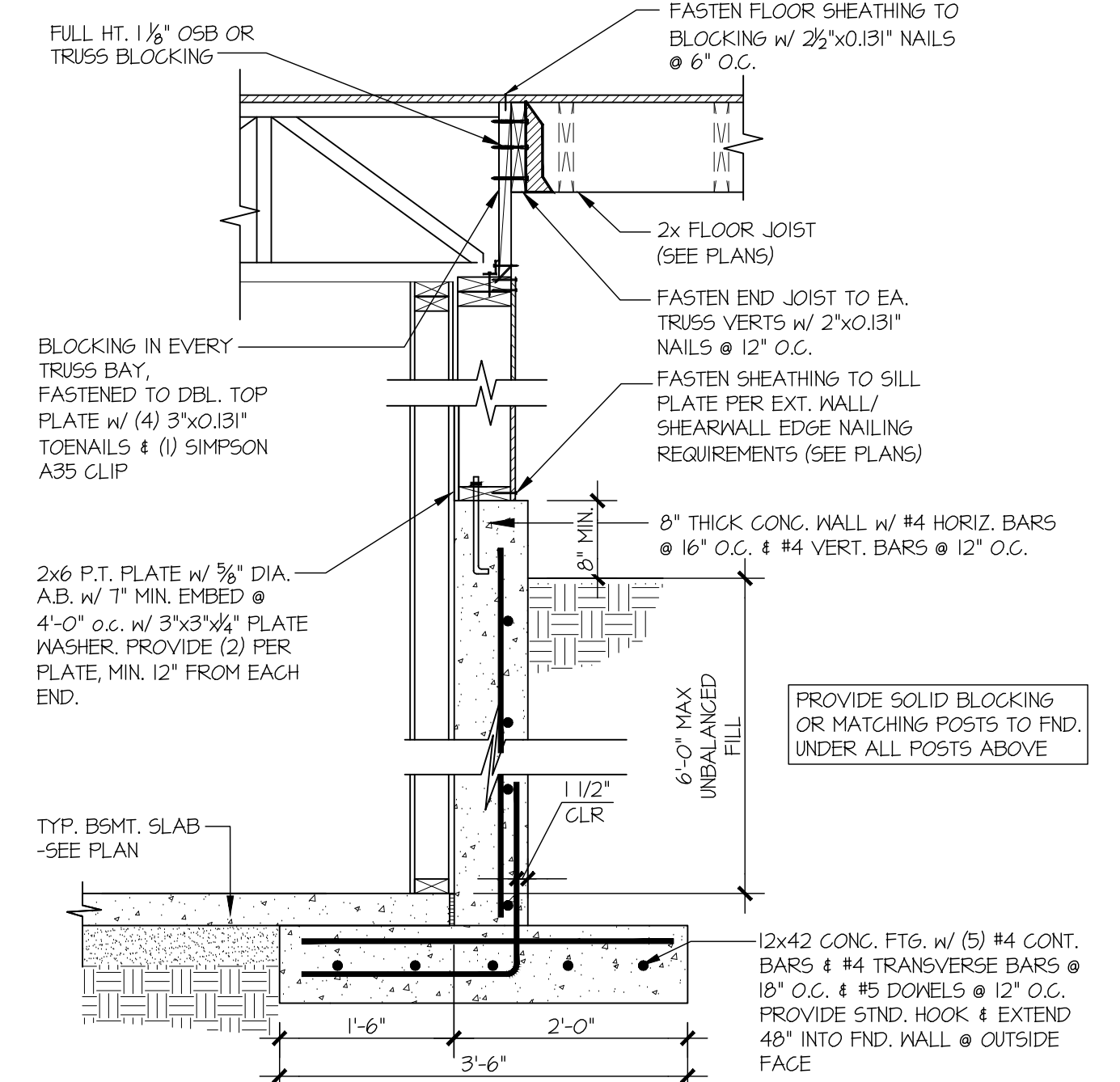
8 BASEMENT FOUNDATION WALL  
SCALE: 3/4"=1'-0"



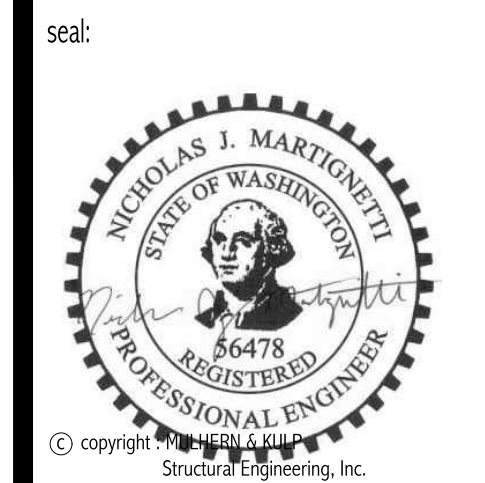
9 TYPICAL BASEMENT FDN WALL  
SCALE: 3/4"=1'-0"



10 SECTION  
SCALE: 3/4"=1'-0"



11 SECTION  
SCALE: 3/4"=1'-0"



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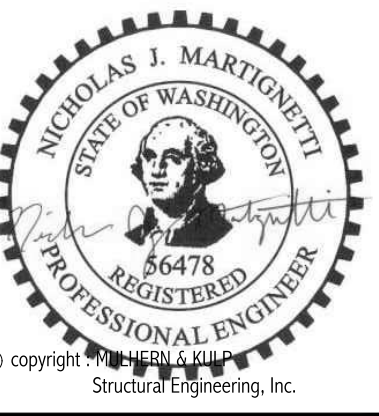
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ARCHITECTURAL INNOVATIONS

STRUCTURAL DETAILS  
MERCER ISLAND - LOT 3  
7621 SE 22ND ST  
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**SD-1**

seal:



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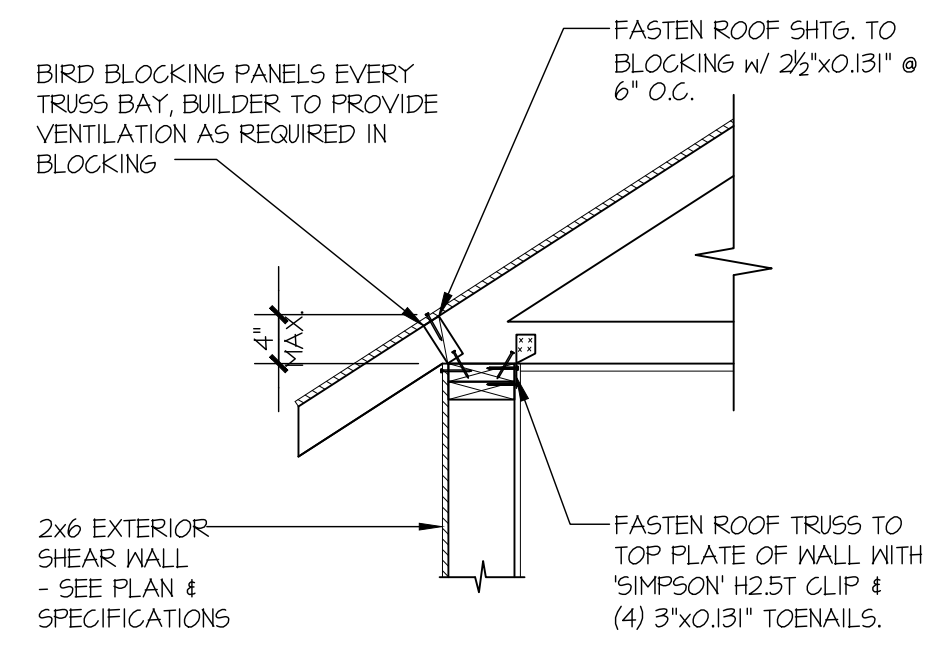
ARCHITECTURAL  
INNOVATIONS

STRUCTURAL DETAILS

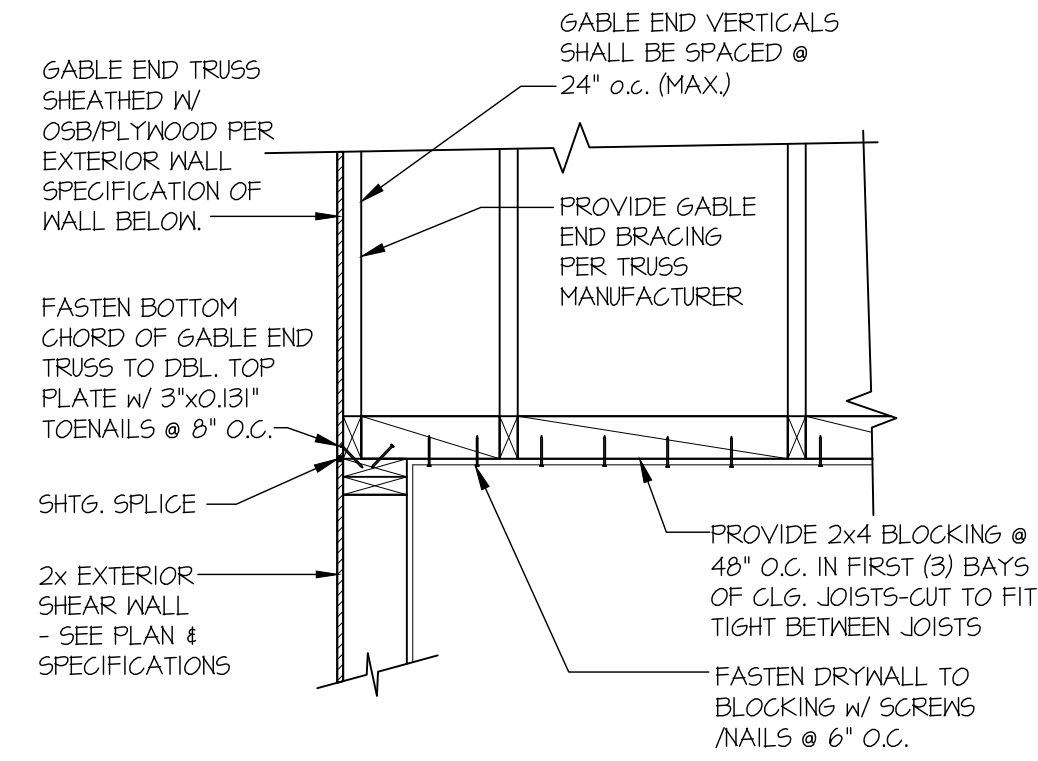
MERCER ISLAND - LOT 3  
7621 SE 22ND ST  
MERCER ISLAND, WA

sheet:

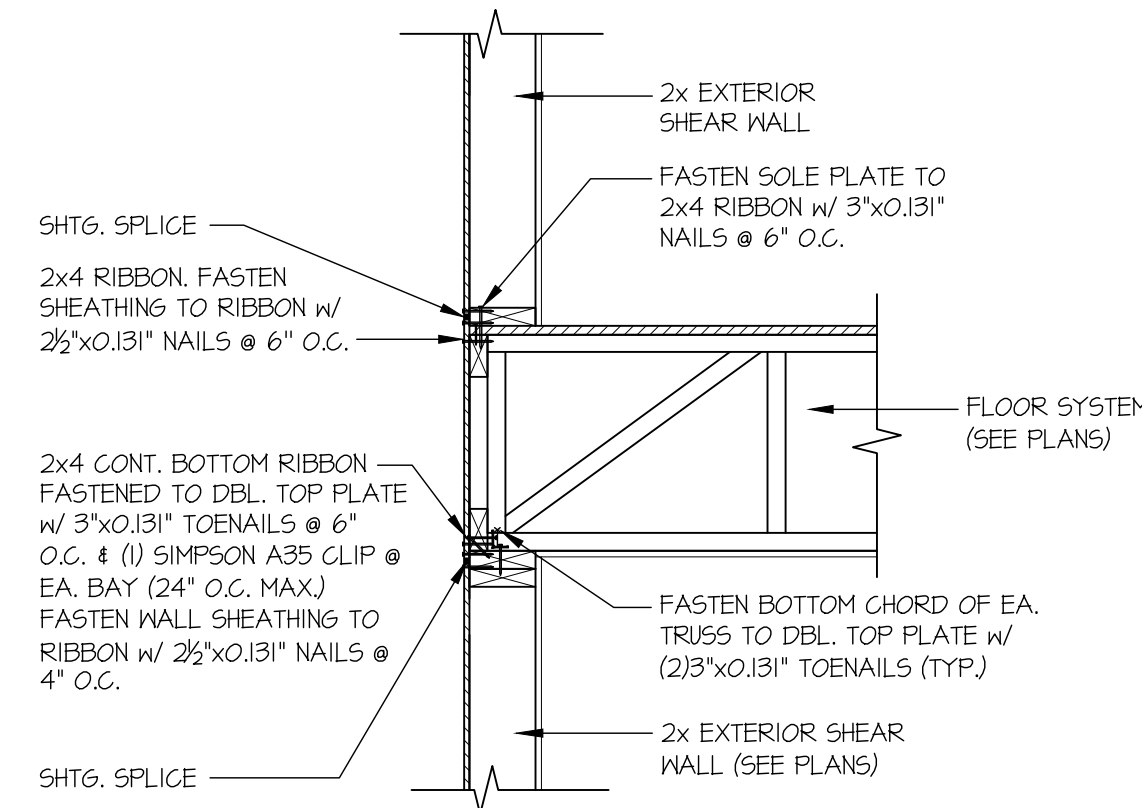
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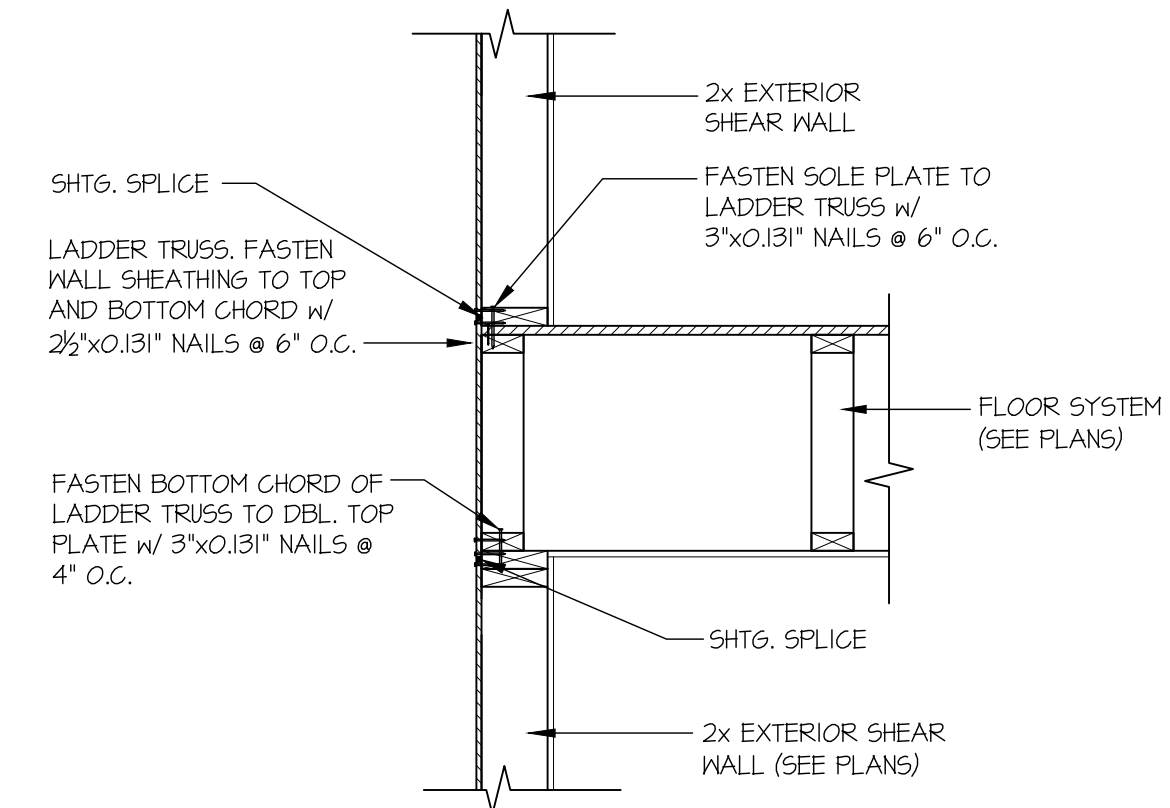
**1** TYPICAL SHEAR  
TRANSFER DETAIL @ ROOF  
SCALE: 3/4"=1'-0" HEEL HEIGHT LESS THAN 6 1/2"



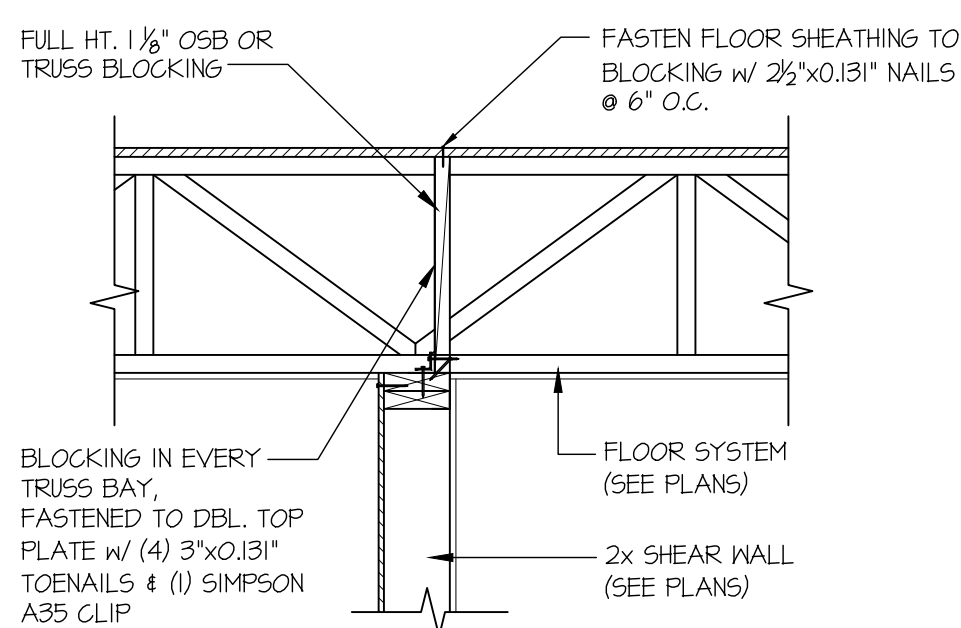
**2** TYPICAL GABLE END DETAIL  
SCALE: 3/4"=1'-0"



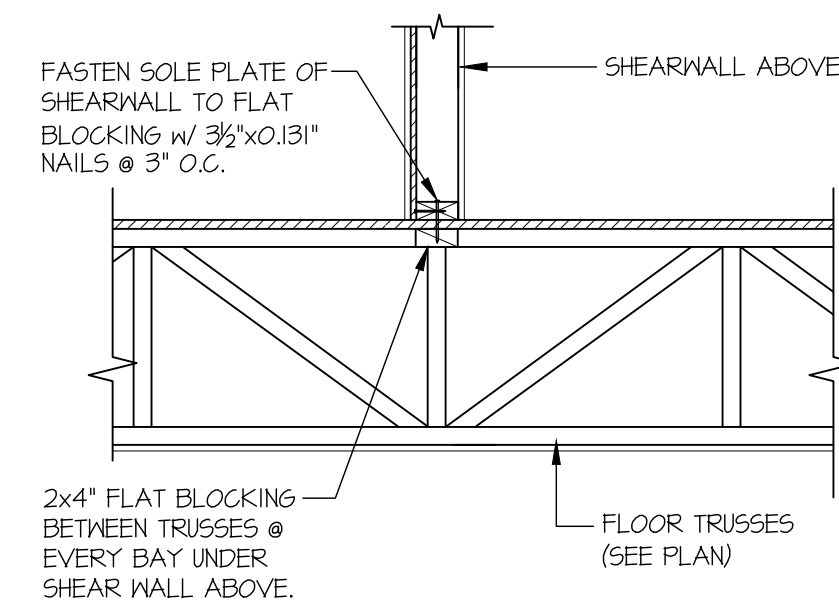
**3** TYPICAL SHEAR TRANSFER DETAIL  
BETWEEN FLOORS @ EXTERIOR WALL  
SCALE: 3/4"=1'-0" PERPENDICULAR FRAMING



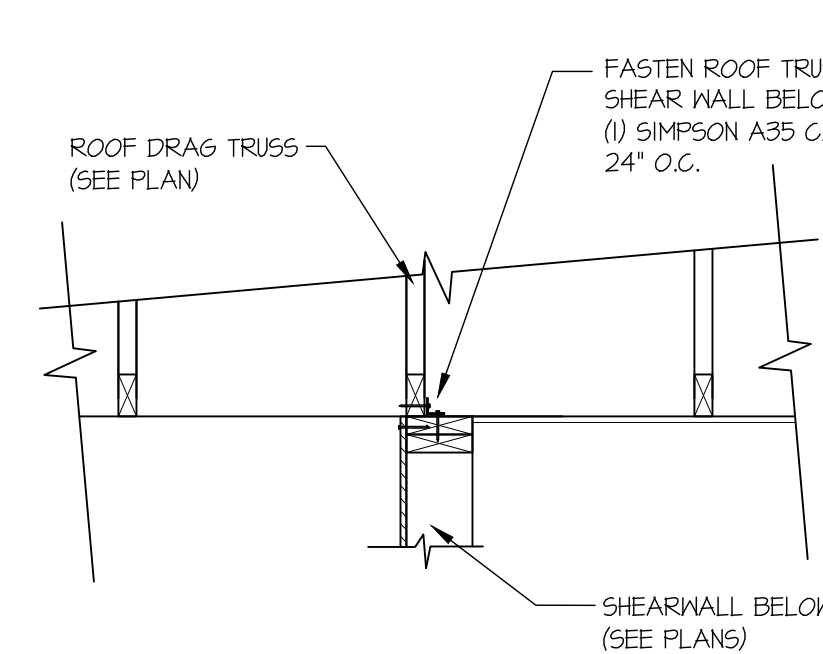
**4** TYPICAL SHEAR TRANSFER DETAIL  
BETWEEN FLOORS @ EXTERIOR WALL  
SCALE: 3/4"=1'-0" PARALLEL FRAMING



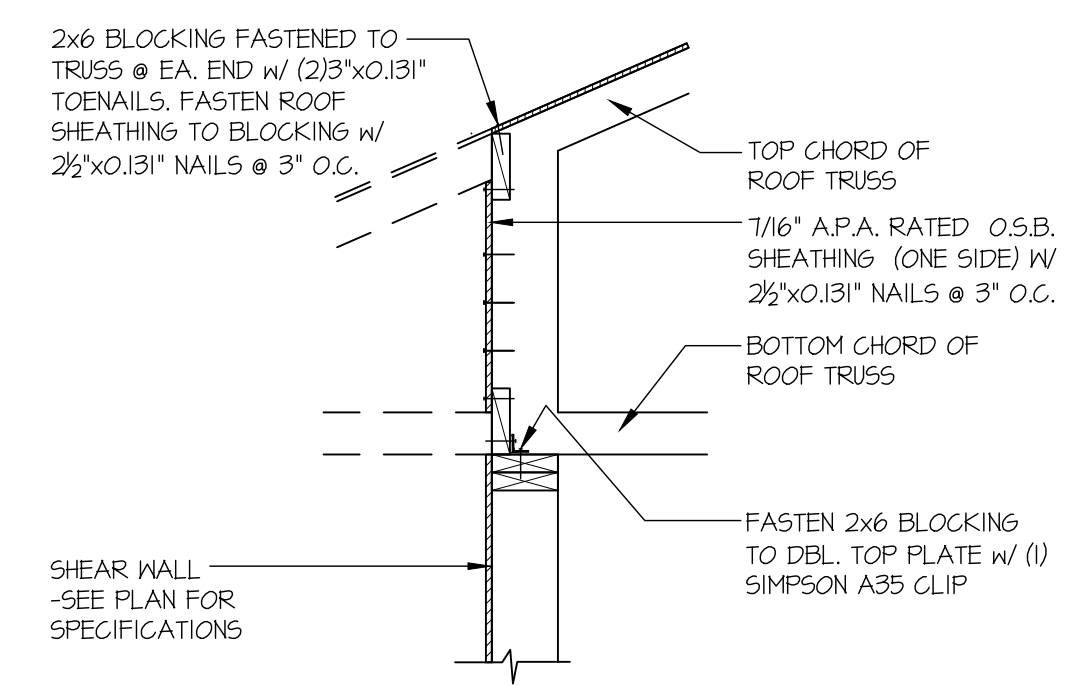
**13** SHEAR TRANSFER DETAIL  
@ SHEAR WALL BELOW  
SCALE: 3/4"=1'-0"



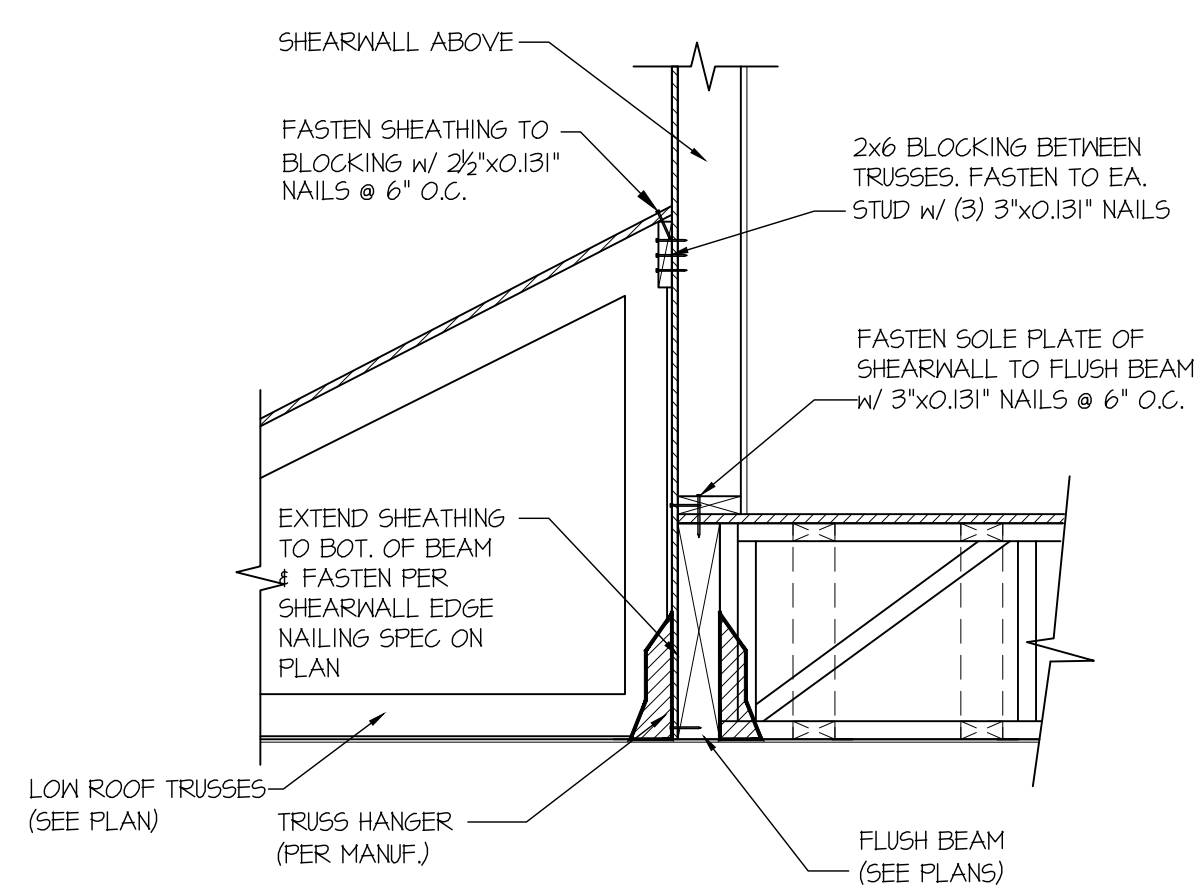
**20** SHEAR TRANSFER DETAIL  
@ INTERIOR SHEAR WALL  
SCALE: 3/4"=1'-0" PERPENDICULAR FRAMING



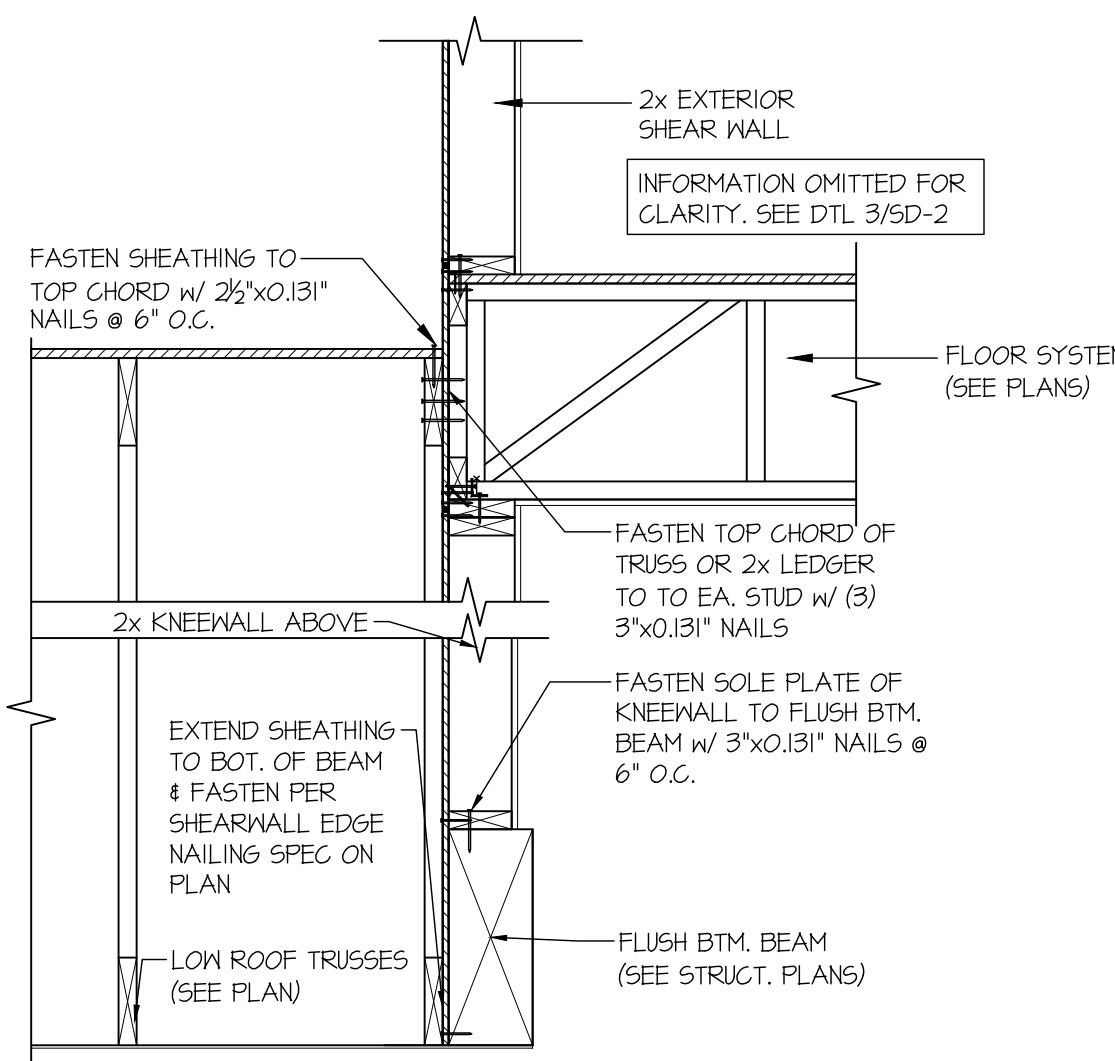
**47** SHEAR TRANSFER DETAIL @  
INTERIOR SHEARWALL BELOW  
SCALE: 3/4"=1'-0"



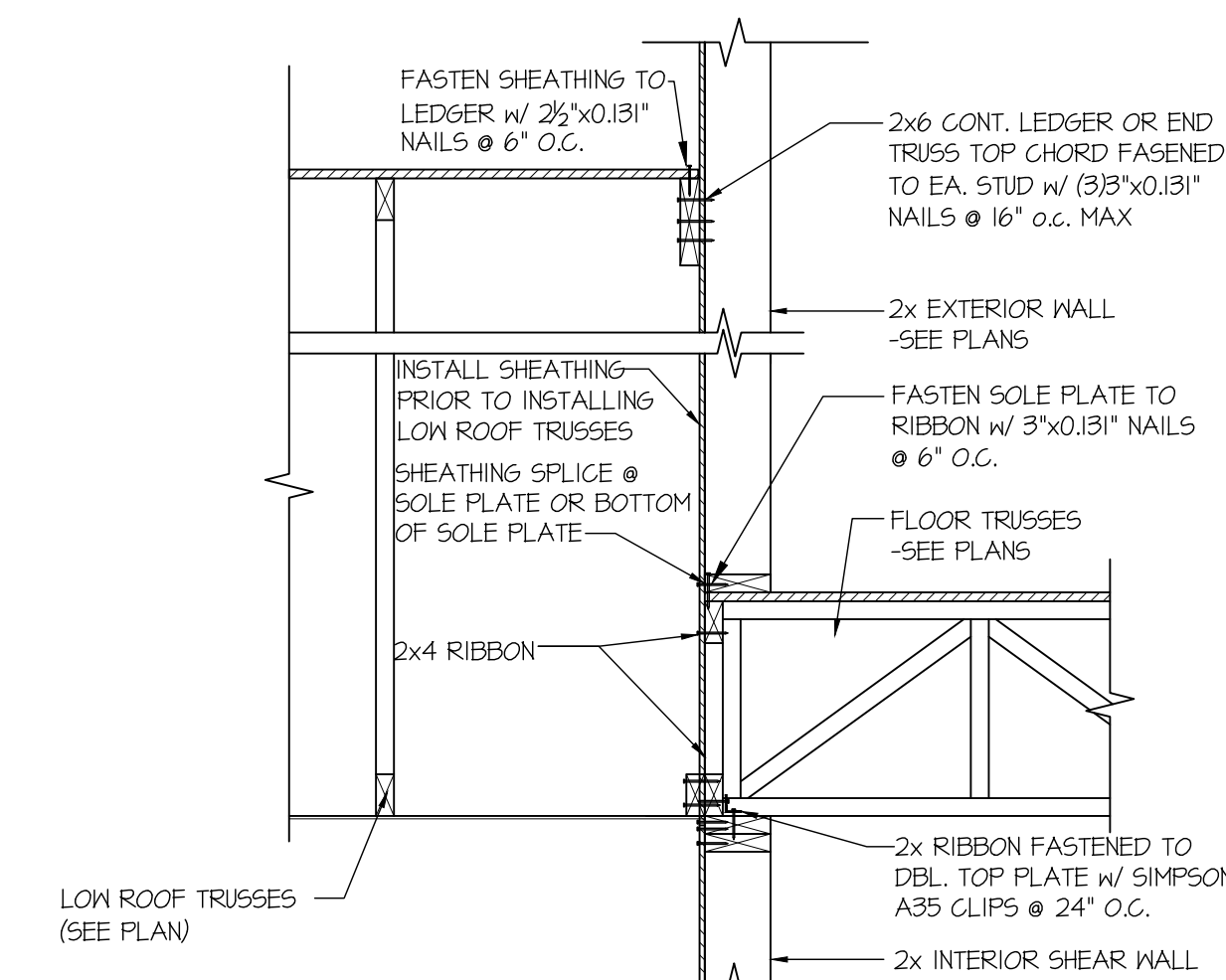
**49** SHEAR TRANSFER DETAIL @  
SHEARWALL BELOW  
SCALE: 3/4"=1'-0"



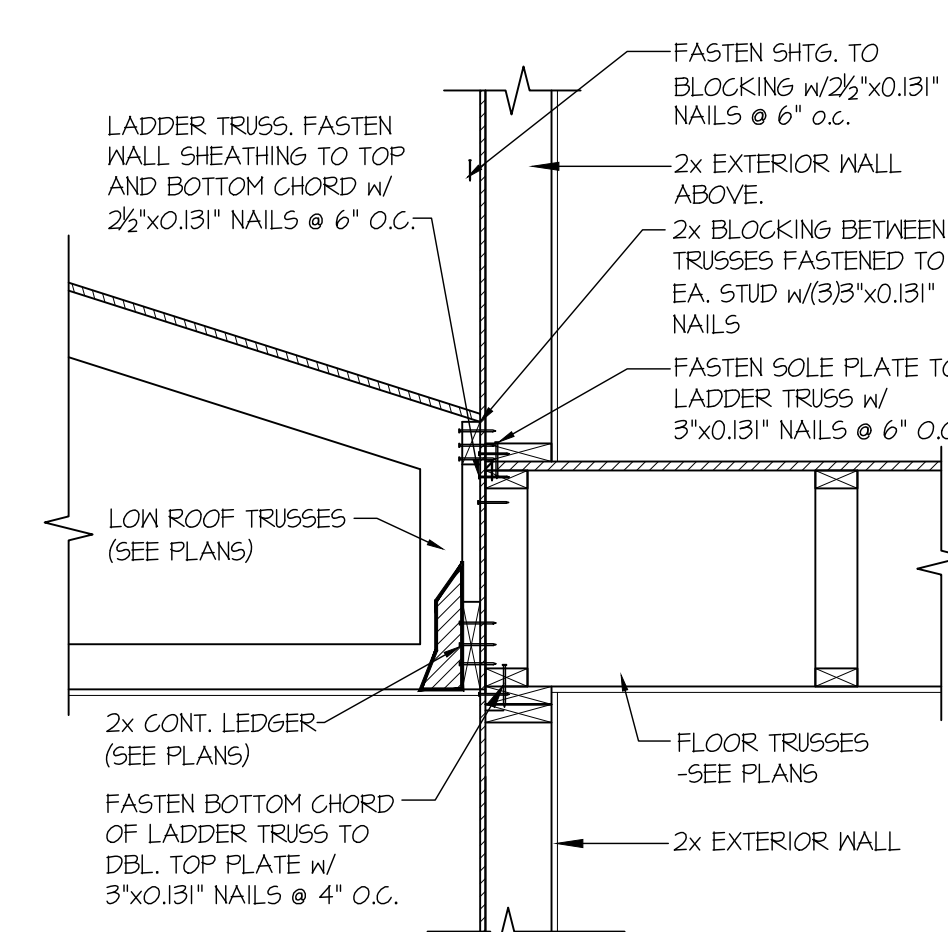
**58** SHEAR TRANSFER DETAIL @  
EXTERIOR SHEARWALL ABOVE  
SCALE: 3/4"=1'-0"



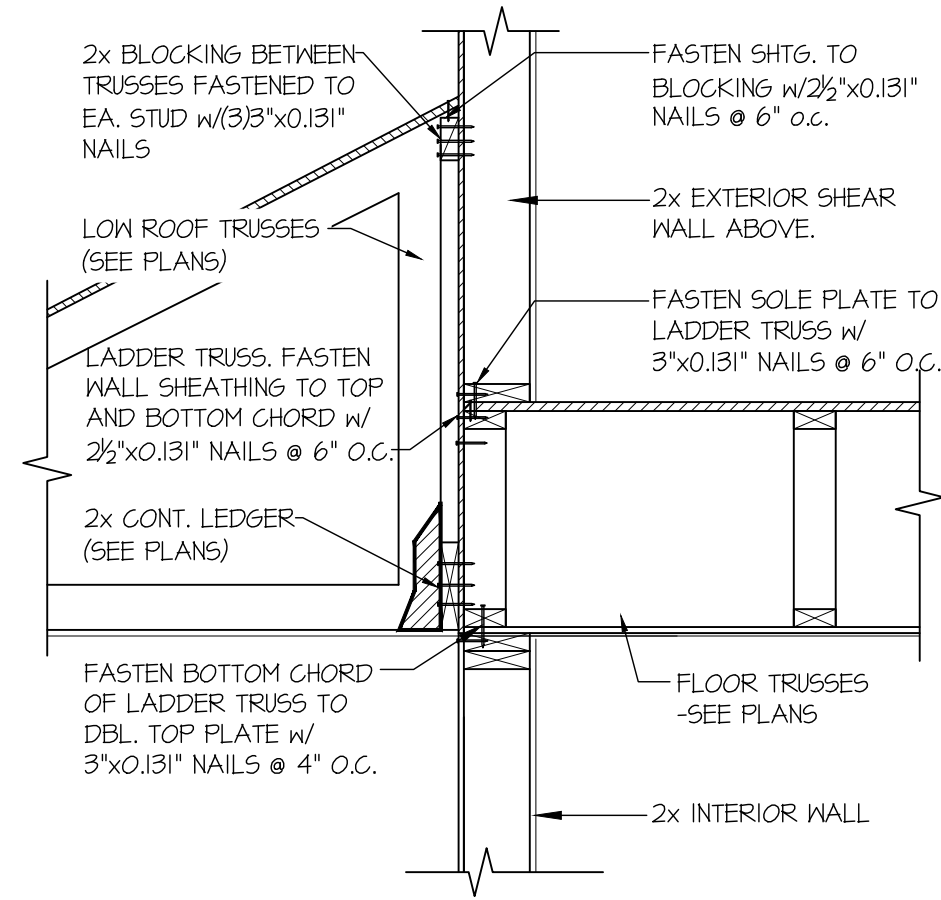
**59** SHEAR TRANSFER DETAIL @  
EXTERIOR SHEARWALL ABOVE  
SCALE: 3/4"=1'-0"



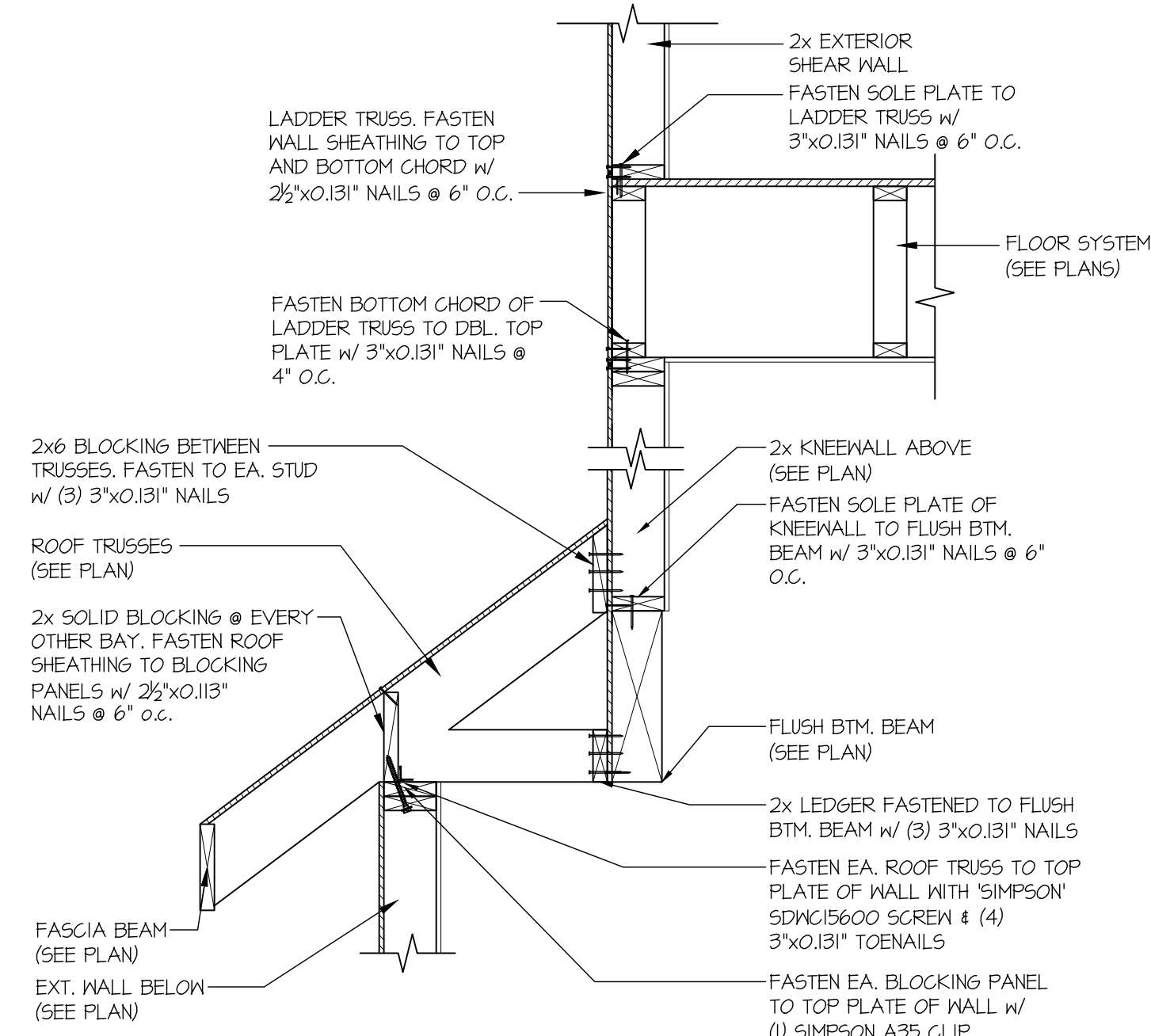
**61** TYPICAL SHEAR TRANSFER DETAIL  
BETWEEN FLOORS @ INTERIOR WALL  
SCALE: 3/4"=1'-0" PERPENDICULAR FRAMING



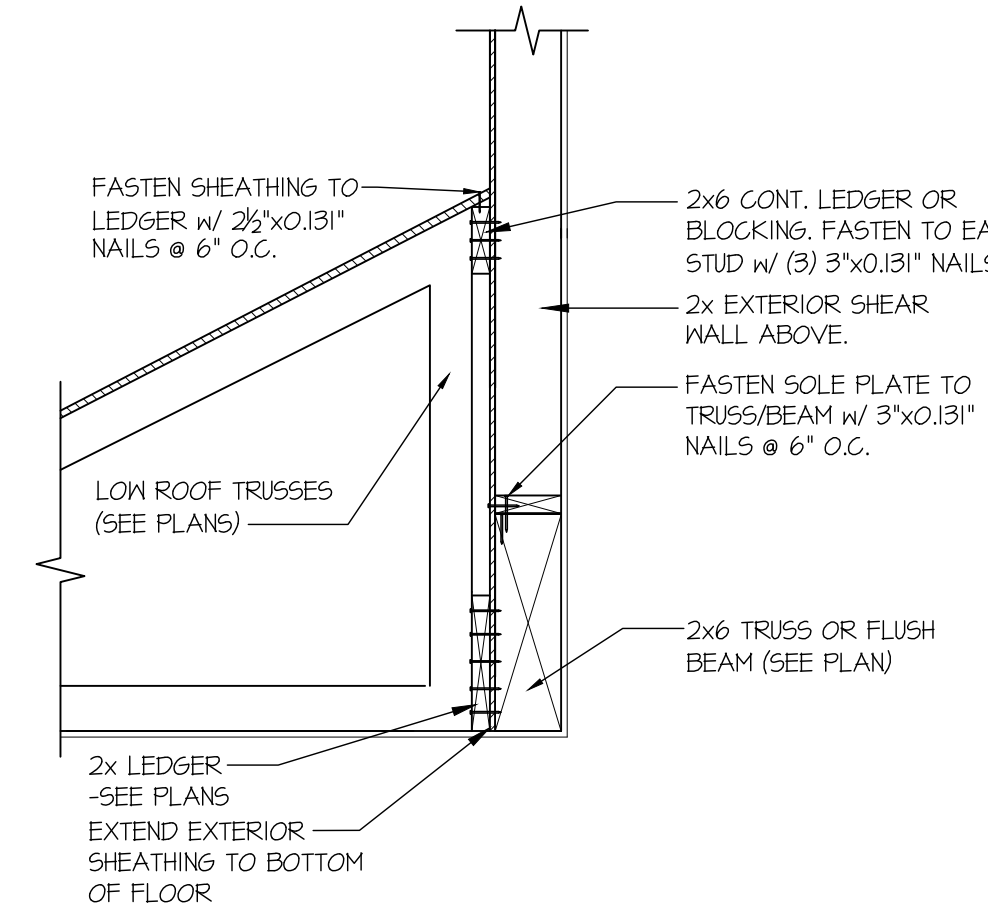
**62** TYPICAL SHEAR TRANSFER DETAIL  
BETWEEN FLOORS @ EXTERIOR WALL  
SCALE: 3/4"=1'-0" PARALLEL FRAMING



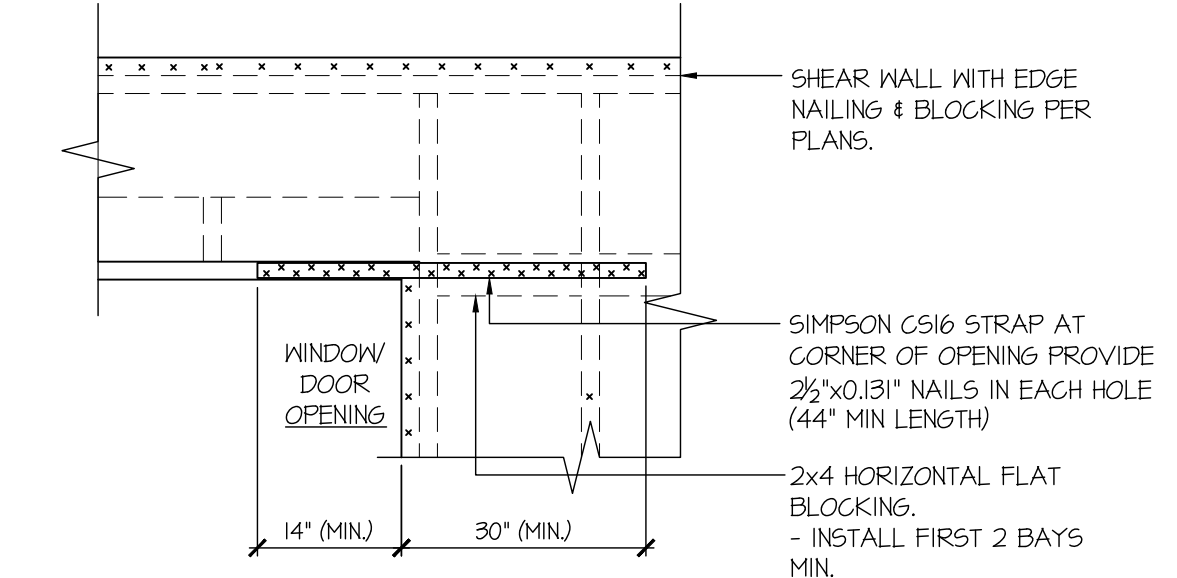
**63** TYPICAL SHEAR TRANSFER DETAIL BETWEEN FLOORS @ INTERIOR WALL  
SCALE: 3/4"=1'-0" PARALLEL FRAMING



**75** SECTION  
SCALE: 3/4"=1'-0"

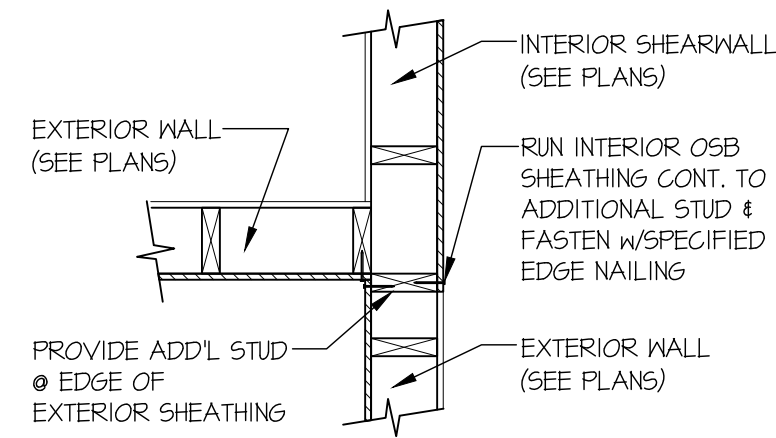


**88** SECTION  
SCALE: 3/4"=1'-0"



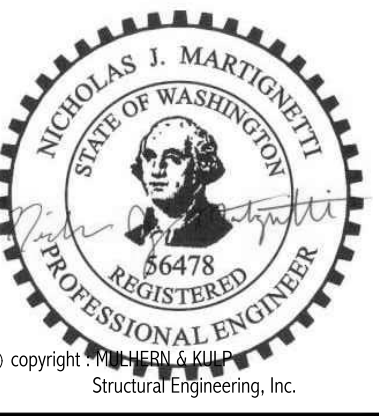
- DETAIL SIMILAR AT BOTTOM CORNERS OF WINDOWS.
- ONLY REQUIRED WHERE SPECIFIED ON STRUCTURAL PLANS
- IF MIN LENGTH IS NOT PROVIDED RUN STRAP TO END OF WALL

**94** EXT. WALL & INT. SHEARWALL OPENING ELEVATION  
SCALE: NTS

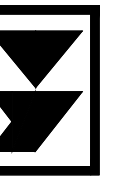


**99** SHEAR TRANSFER DETAIL @ INTERSECTING INT. SHEARWALL  
SCALE: 3/4"=1'-0" SHTS. OPPOSITE FACES

seal:



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INNOVATIONS

STRUCTURAL DETAILS

MERCER ISLAND - LOT 3  
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MERCER ISLAND, WA

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**SD-3**



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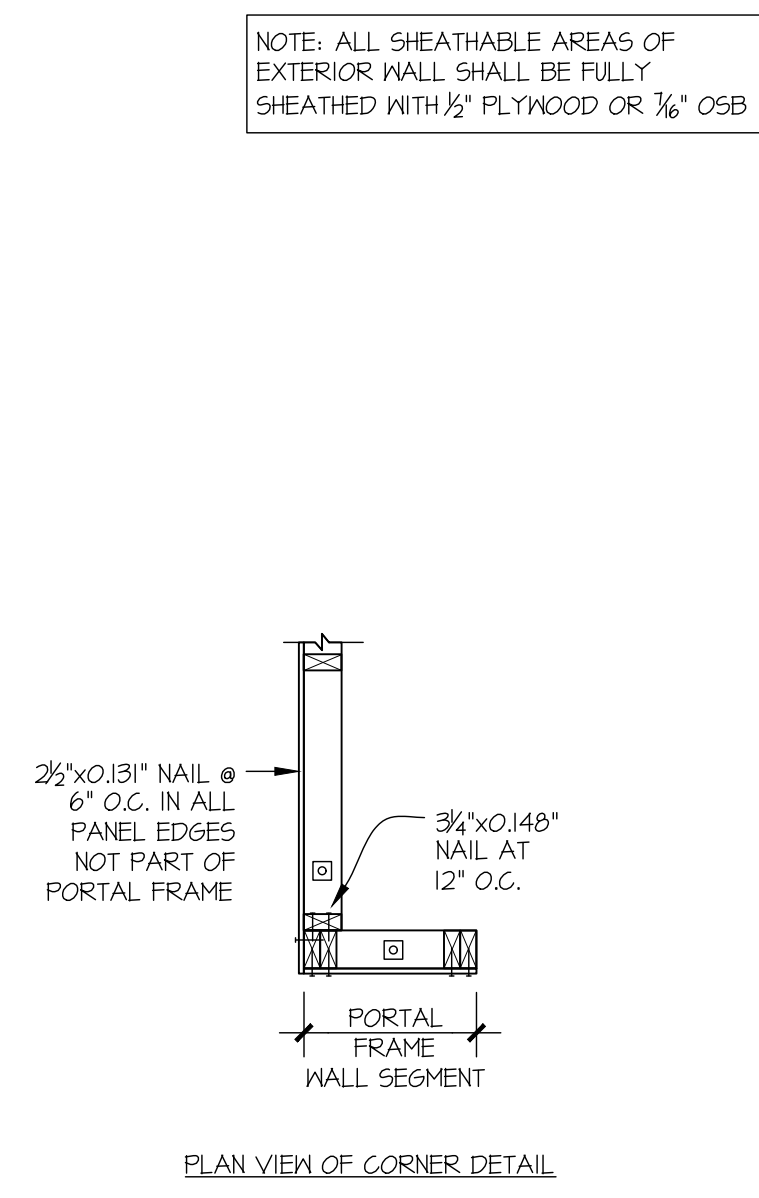
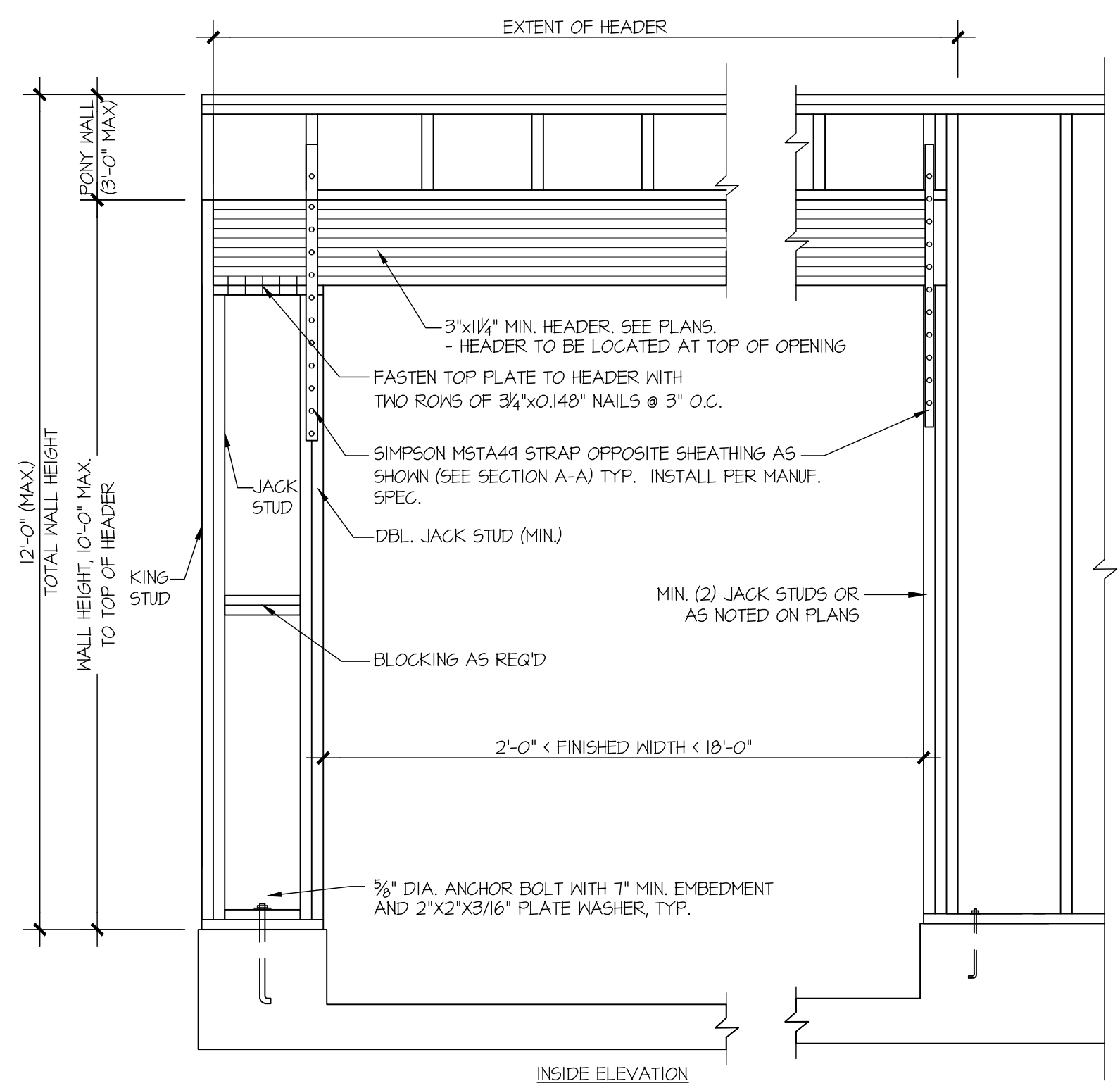
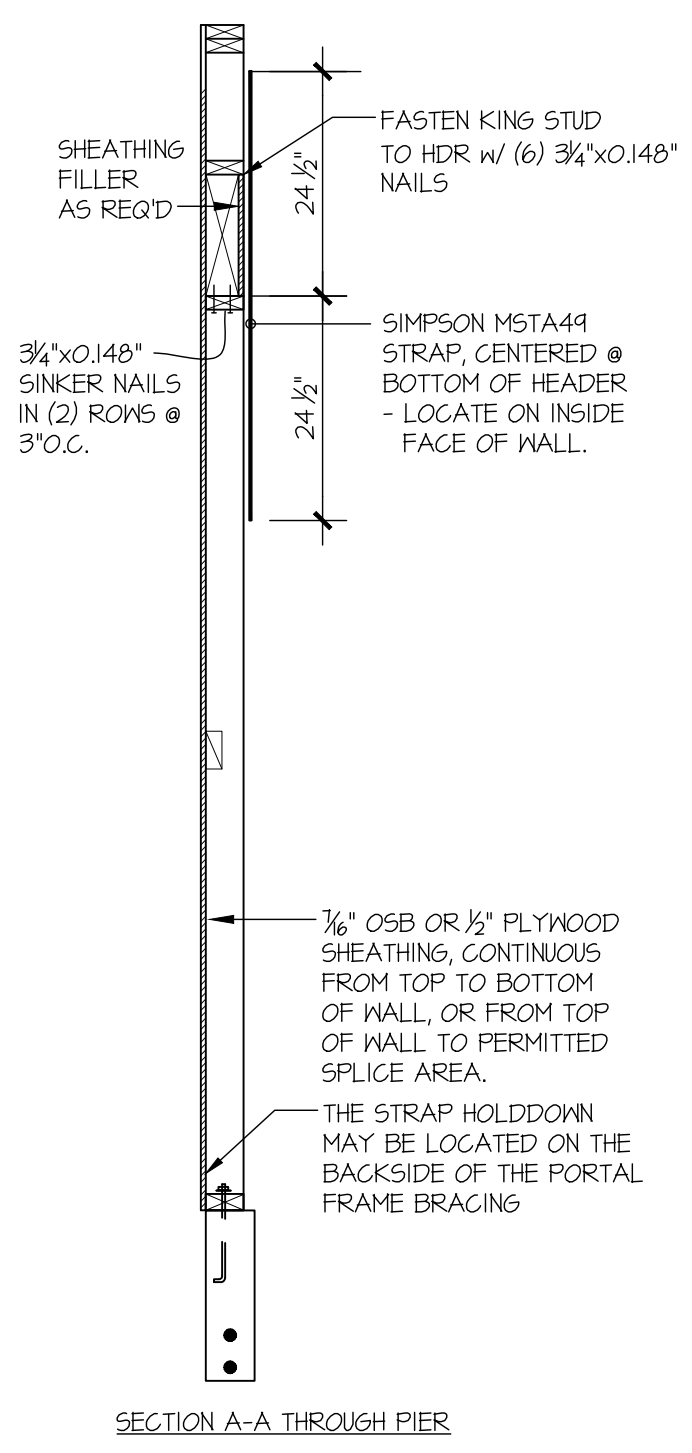
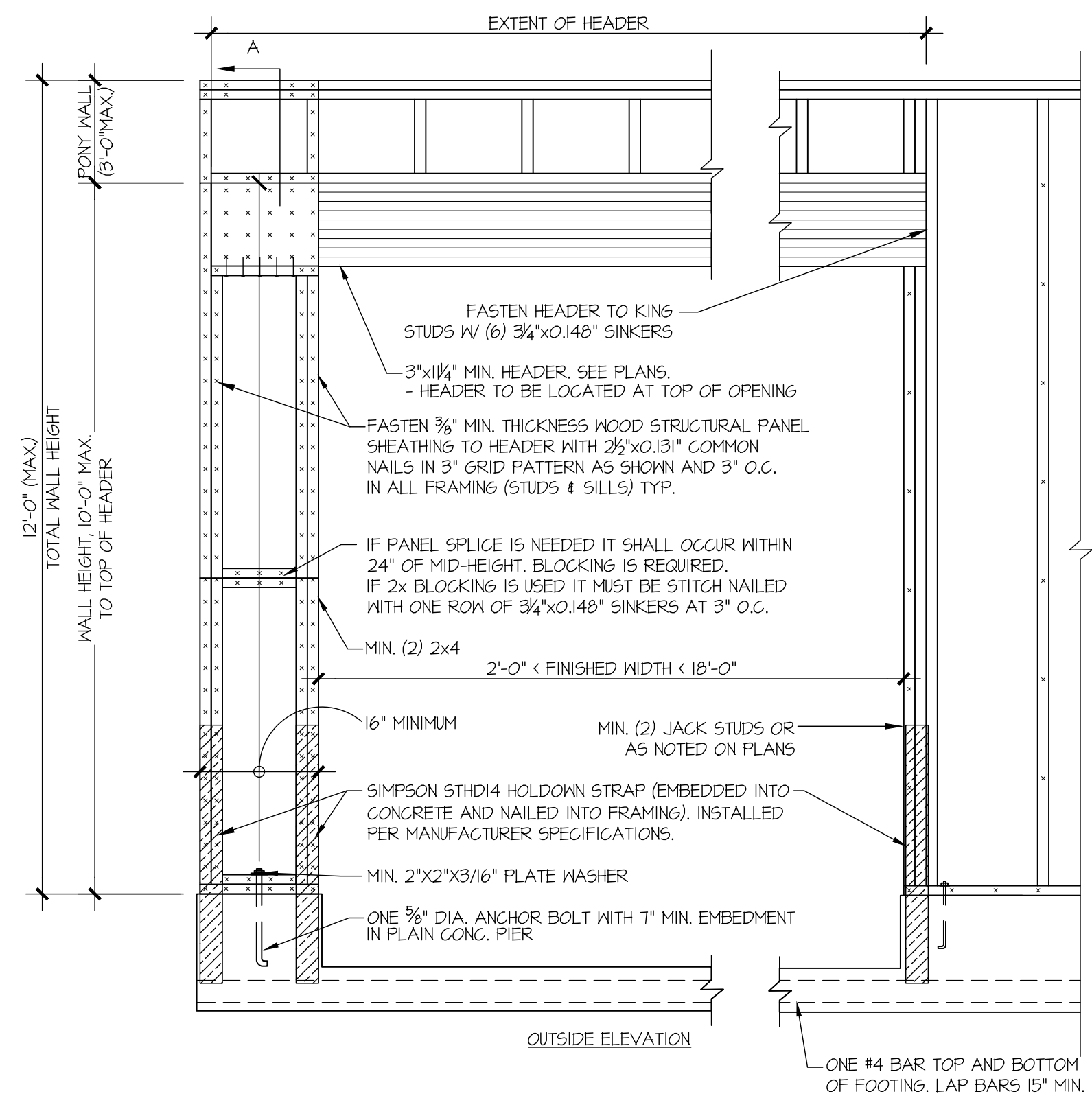
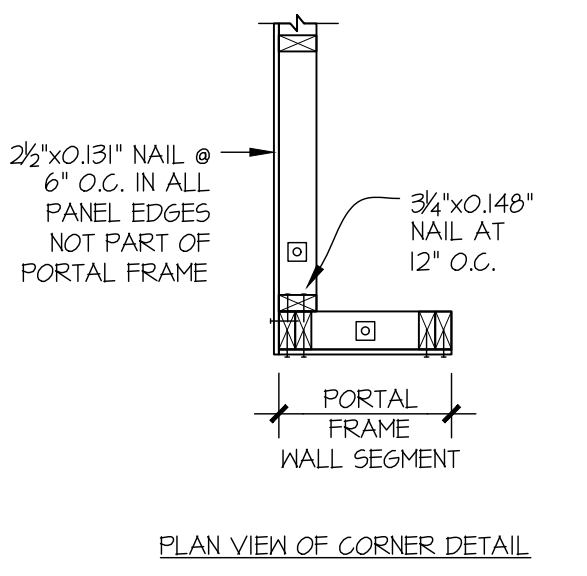
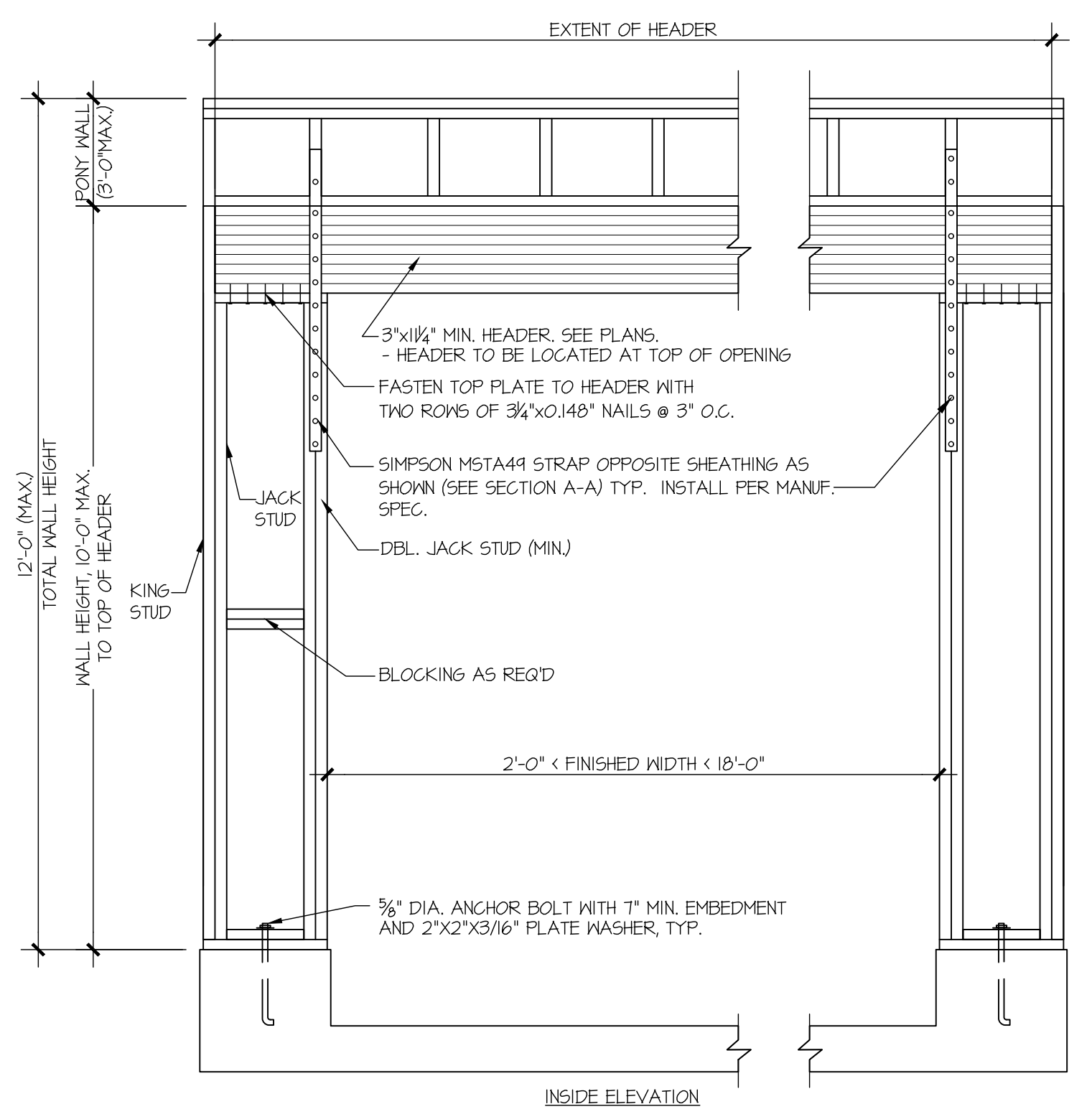
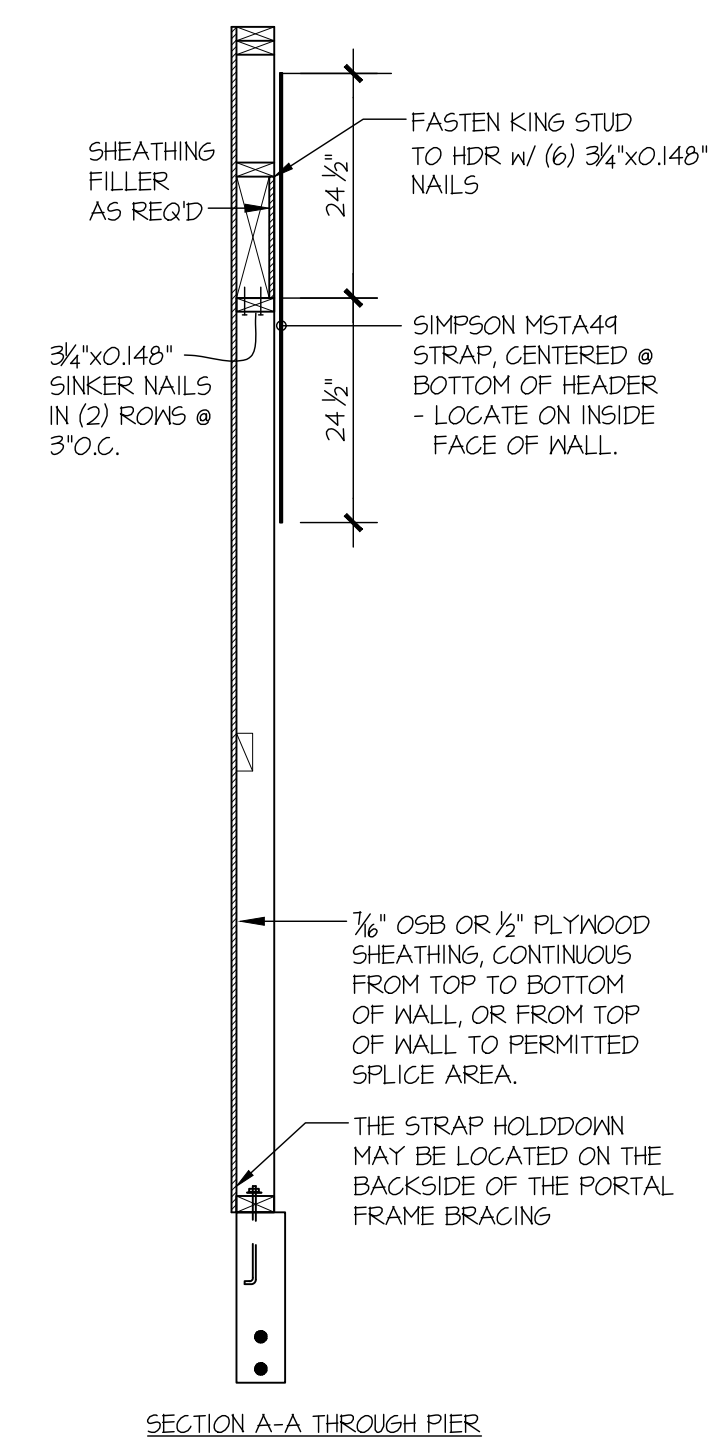
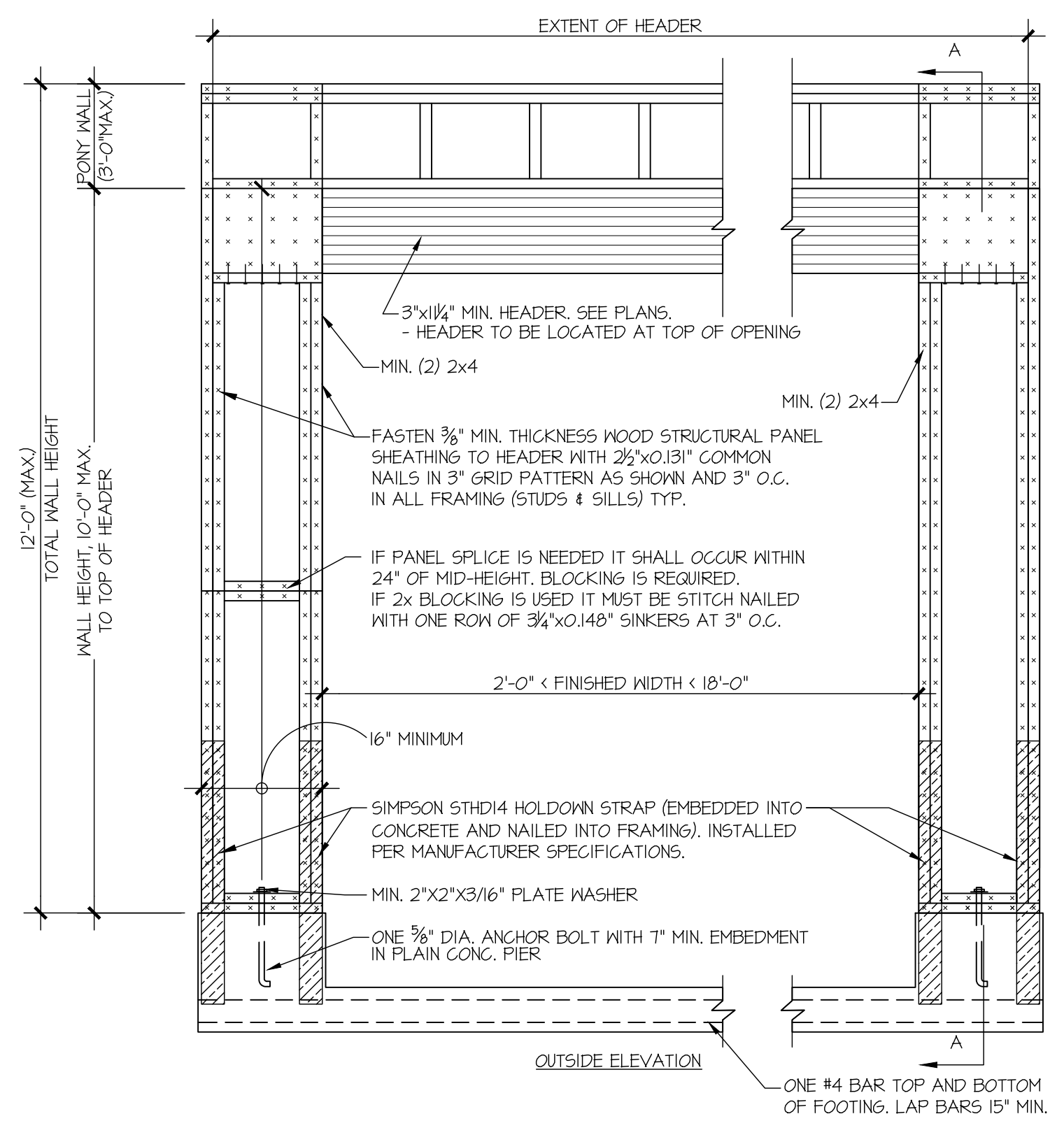
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drawn by: **RSC**  
issue date: **12-19-24**

REVISIONS:  
date: \_\_\_\_\_ initial: \_\_\_\_\_

ARCHITECTURAL  
INNOVATIONS

STRUCTURAL DETAILS  
**MERCER ISLAND - LOT 3**  
7621 SE 22ND ST  
MERCER ISLAND, WA

sheet:  
**SD-4**



1 APA PORTAL FRAME DETAIL WITH HOLDOWNS  
SCALE: N.T.S.

2 APA PORTAL FRAME DETAIL WITH HOLDOWNS  
SCALE: N.T.S.