LEGAL DESCRIPTION

NE-19-24-05
TAX PARCELL # 143870-0150
LOT # 15
DIV. # CAY HILLS ADD.
9419 SE 54th ST
MERCER ISLAND, WA 98040
KING COUNTY
ZONED R-15

CAY HILLS ADD & UND INT IN PRIVATE RD
PLat Block:
Plat Lot: 15

THIS RESIDNECE IS DESIGNED PER THE:
1. 2018 INTERNATIONAL RESIDENTIAL CODE
2. 2018 INTERNATIONALN ENERGY CONSERVATION CODE of the STATE of WASHINGTON
3. 2018 INTERNATIONAL MECHANICAL CODE
4. 2018 INTERNATIONAL PLUMBING CODE

LOT COVERAGE BY STRUCTURE

AREA SUMMARY:

PROPOSED BLDG FOOTPRINT
TOTAL HOUSE = 2,436 SQ. FT.
EXISTING LOT SQUARE FOOTAGE
TOTAL = 19,817 SQ. FT.

2,436 / 19,817 = 12.29 %

BUILDING AREA SUMMARY:

MAIN FLOOR AREA	=	2,235	S.F.
UPPER FLOOR AREA	=	2,331	S.F.
BASEMENT FLR AREA	=	2,186	S.F.
TOTAL LIVING AREA	=	6,852	S.F.
GARAGE AREA	=	727	S.F.
*COVR'D PORCH / PATIO & GAZEEBO		*568	*S.F.
SUN PATIO	=	455	S.F.
DRIVEWAY AREA	=	1,648	S.F.
LOT COVERAGE BY STRUCTURE	=	5,750	S.F.
MAX COVERAGE BY STRUCTURE	=	6,935.9	S.F.

(MAIN FLOOR AREA + UPPER FLOOR AREA) = 4,666 S.F.

* BSMNT PATIO = 58 SFT / PORCH = 50 SQ FT / GARAGE PATIO = 40 SQ FT
* GREAT ROOM PATIO = 280 SFT / GAZEBO DECK = 140 SQ FT

IMPERVIOUS SURFACES

AREA SUMMARY:

BUILDING & ROOF OVERHANGS GREATER THAN 18"
TOTAL HOUSE = 2,436 SQ. FT.
IMPERV. PATIO/DRIVEWAY/WALKS
TOTAL = 961 SQ. FT.
EXISTING ACCESS EASEMENT SURFACE
TOTAL = N/A SQ. FT.
TOTAL ALL IMPERVIOUS SURF.
TOTAL (ALL) = 3,397 SQ. FT.
EXISTING LOT SQUARE FOOTAGE
TOTAL = 19,817 SQ. FT.

3,397 / 19,817 = 17.14 %

TOTAL LOT AREA = 19,817 S.F.
TOTAL FLOOR AREA = 5,488 S.F.

5,488 S.F. / 19,817 S.F. = 0.2769
F.A.R.= 27.7%

FIRE SPRINKLERS REQUIRED

VICINITY MAP n.t.s.

RESIDENTIAL DESIGN CONSULTANT:
MDB RESIDENTIAL DESIGN ASSOCIATES / MARK D BATSON
8801 SAINT THOMAS DRIVE #25
PASCO, WA 99301
425-830-6713

STRUCTURAL ENGINEER OF RECORD:
CK ENGINEERING / PASKO KESOVIJA P.E.
19229 38th PL NE
LAKE FOREST PARK, WA 98155
206-417-0670

CIVIL ENGINEER:
CORE DESIGN / MICHAEL A. MOODY PE
12100 NE 195th St
BOTHELL, WA 98011
425-885-7877

GEOTECHNICAL CONSULTANT:
ASSOCIATED EARTH SCIENCES / STEPHEN A. SIEBERT P.E.
911 5th AVE
KIRKLAND, WA 98033
425-827-7701

ARBORIST:
SHOFFNER CONSULTING / TONY SHOFFNER ISA CERIFIED ARBORIST
1015 10th ST
MUKILTEO, WA 98275
206-755-9407

BIOLOGIST:
MARK HECKERT / BEAVER CREEK ENVIRONMENTAL SERVICES
P.O. BOX 731695
PUYALLUP WA 98373
235-732-6515

RESIDENTIAL
DESIGN ASSOCIATES
8801 SAINT THOMAS DR
SPACE #222
PASCO, WA
425-830-6713

PROJECT: 9419 SE 54th ST, MERCER ISLAND WA 98040
TAX PARCEL 143870-0150
ELITE HOMES NW, LLC
COVER SHEET / DRAWING INDEX

DATE: 08-16-23

FILE NO: 22-002

SHEET
A1 INDEX

TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING# 20220504001275)

LOT 15, CAY HILLS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 70 OF PLATS, PAGES 95 AND 96, RECORDS OF KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

ACCEPTED A BEARING OF N 51°40'27" W, BETWEEN IRON PIPES FOUND AND SHOWN HEREON AS CALCULATED PER PLAT.

REFERENCES

R1. CAY HILLS, VOL. 70, OF PLATS, PGS. 95 & 96, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

NAVD 88 PER GPS OBSERVATIONS

SURVEYOR'S NOTES

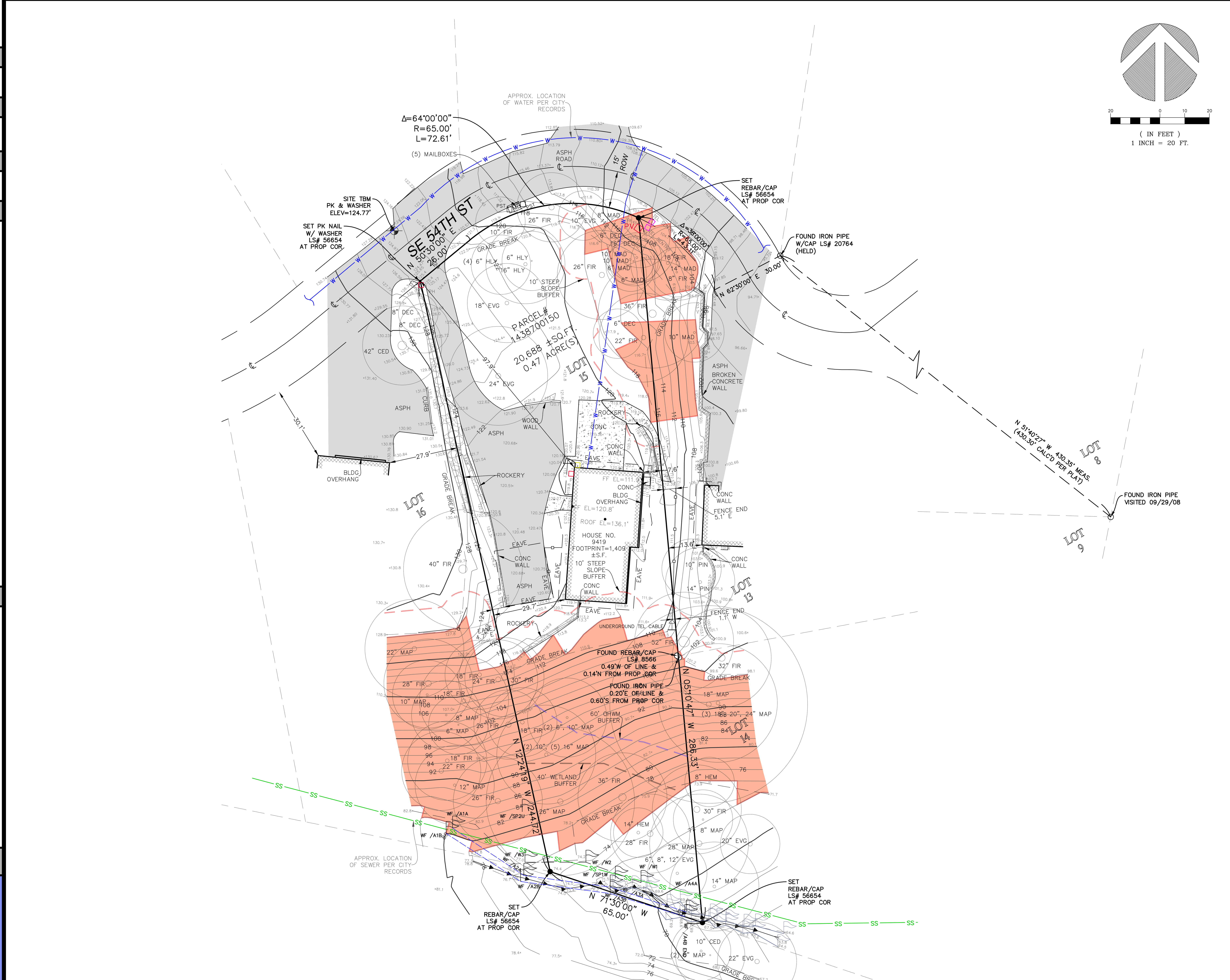
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN JUNE OF 2022. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 143870-0150.
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 20,688 ±S.F. (0.47 ACRES)
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. EXISTING STRUCTURE(S) LOCATION AND DIMENSIONS ARE MEASURED FROM THE FACE OF THE SIDING UNLESS OTHERWISE NOTED.
8. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

LEGEND

- ASPHALT SURFACE
- BENCHMARK
- BUILDING
- CENTERLINE ROW
- CONCRETE SURFACE
- DECK
- DITCH (FLOWLINE)
- FENCE LINE (WOOD)
- GAS METER
- NAIL AS NOTED
- POST
- REBAR AS NOTED (FOUND)
- STEEP SLOPE BUFFER
- WETLAND BUFFER
- OHWM BUFFER
- POWER HAND HOLE
- POWER METER
- POWER VAULT
- REBAR & CAP (SET)
- RETAINING WALL
- ROCKERY
- SIGN (AS NOTED)
- TELEPHONE SENTRY
- TREE (AS NOTED)
- WATER LINE
- WETLAND FLAGS 2023
- WETLAND FLAGS 2022
- STEEP SLOPE AREA
- WETLAND
- OHWM

VICINITY MAP

N.T.S.



STEEP SLOPE/BUFFER DISCLAIMER:

THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

INDEXING INFORMATION

SW 1/4 NE 1/4
SECTION: 19
TOWNSHIP: 24N
RANGE: 05E, W.M.
COUNTY: KING

We are the measure | terrane.net

TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 1438700150

ELITE HOMES NW

9419 SE 54TH ST
MERCER ISLAND, WA 98040

TERRANE
10801 Main Street, Suite 102
Bellevue, WA 98004
p: 425-458-4488 | e: info@terrane.net

JOB NUMBER:	160118
DATE:	06/17/22
DRAFTED BY:	IDV/GKD
CHECKED BY:	TBH/JGM
SCALE:	1" = 20'

REVISION HISTORY	
06/07/23	WETLANDS & ECA
	BUFFERS

SHEET NUMBER

1 OF 1

LEGAL DESCRIPTION

NE-19-24-05
TAX PARCELL # 143870-0150
LOT # 15
DIV. # CAY HILLS ADD.
9413 SE 54th ST
MERCER ISLAND, WA 98040
KING COUNTY
ZONED R-15

LOT COVERAGE BY STRUCTURE

AREA SUMMARY:

PROPOSED BLDG FOOTPRINT		
TOTAL HOUSE	= 3,433	SQ. FT.
EXISTING LOT SQUARE FOOTAGE		
TOTAL	= 19,817	SQ. FT.

3,433 / 19,817 = 17.63 %

IMPERVIOUS SURFACES

AREA SUMMARY:

BUILDING & ROOF		
TOTAL HOUSE	= 3,072	SQ. FT.
COVERED PATIO OVER ROOF		
TOTAL HOUSE	= 280	SQ. FT.
IMPERV. PATIO/DRIVEWAY/WALKS		
TOTAL	= 2,132	SQ. FT.
EXISTING ACCESS EASEMENT SURFACE		
TOTAL	= N/A	SQ. FT.
TOTAL ALL IMPERVIOUS SURF.		
TOTAL (ALL)	= 5,484	SQ. FT.
EXISTING LOT SQUARE FOOTAGE		
TOTAL	= 19,817	SQ. FT.

= 3,352 SQ. FT.

DRIVEWAY 1,667 = SQ. FT.
PATIO 465 = SQ. FT.

5,484 / 19,817 = 27.67 %

VICINITY MAP n.t.s.

CAY HILLS ADD & UND INT IN PRIVATE RD
PLat Block:
Plat Lot: 15

TOTAL LOT AREA = 19,817 S.F.
TOTAL FLOOR AREA = 7,098.4 S.F.

7,098.4 S.F. / 19,817 S.F. = 0.358
F.A.R.= 35.8%

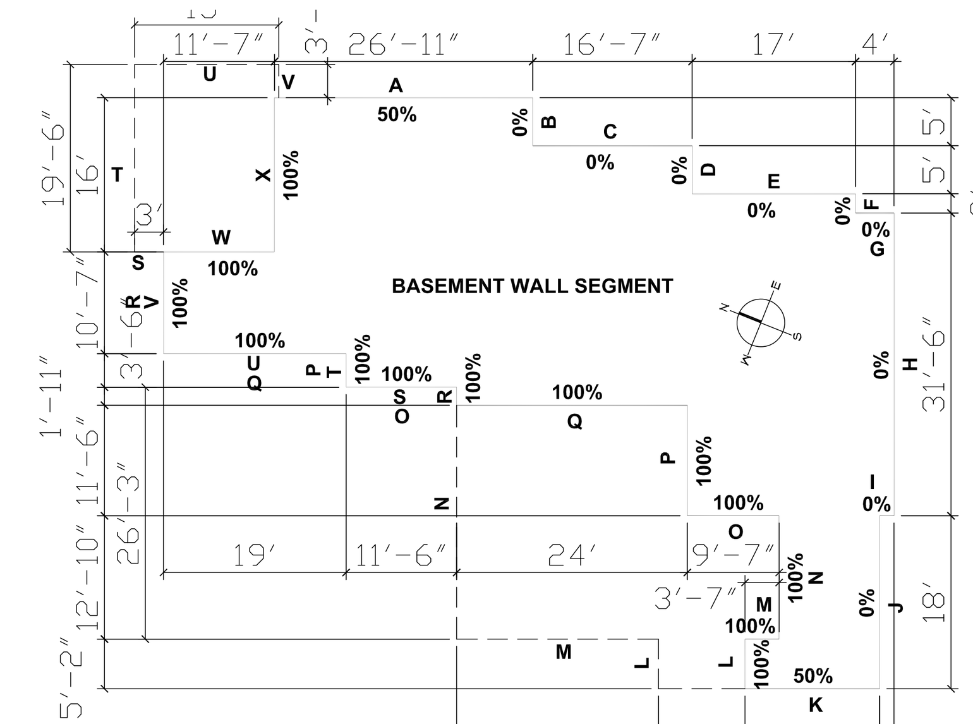
AREA SUMMARY:				F.A.R. AREAS
MAIN FLOOR AREA	=	2,235	S.F.	+ 556.5 S.F. = 2,791.5 S.F. (22' CEILING AREA)
UPPER FLOOR AREA	=	2,331	S.F.	= 2,331 S.F.
BASEMENT FLR AREA	=	2,186	S.F.	× 57.13% = 1,248.9 S.F. (BSMNT SEGMENT)
TOTAL LIVING AREA	=	6,852	S.F.	
GARAGE AREA	=	727	S.F.	= 727 S.F.
*COVR'D PORCH / PATIO & GAZEEBO	=	*568	*S.F.	
SUN PATIO	=	455	S.F.	TOTAL F.A.R. = 7,098.4 S.F.
DRIVEWAY AREA	=	1,648	S.F.	
LOT COVERAGE BY STRUCTURE	=	5,750	S.F.	(INC DRIVEWAY & PATIO)
MAX COVERAGE BY STRUCTURE	=	6,935.9	S.F.	

7,579 S.F. (TOTAL LIVING AREA + GARAGE AREA)

* PORCH = 50 SQ FT / GARAGE PATIO = 40 SQ FT (COV'D BY UPPER FLR)
* GREAT ROOM PATIO = 280 SFT / GAZEBO DECK = 140 SQ FT

BASEMENT WALL SEGMENT COVERAGE

WALL SEGMENT LENGTH	LENGTH X	COVERAGE =	RESULT
A	26.917	50%	13.49
B	5.000	30%	1.5
C	16.583	30%	1.5
D	5.000	30%	1.5
E	17.000	30%	1.5
F	2.000	30%	1.5
G	4.000	30%	1.5
H	31.500	30%	1.5
I	1.500	30%	1.5
J	18.000	30%	1.5
K	14.000	50%	7
L	5.167	100%	5.167
M	3.583	100%	3.583
N	12.833	100%	12.833
O	9.583	100%	9.583
P	11.500	100%	11.5
Q	24.000	100%	24
R	1.917	100%	1.917
S	11.500	100%	11.5
T	3.500	100%	3.5
U	19.000	100%	19
V	10.583	100%	10.583
W	11.583	100%	11.583
X	16.000	100%	16
TOTALS	282.249	N/A	174.739
161.239/282.249=		57.13%	



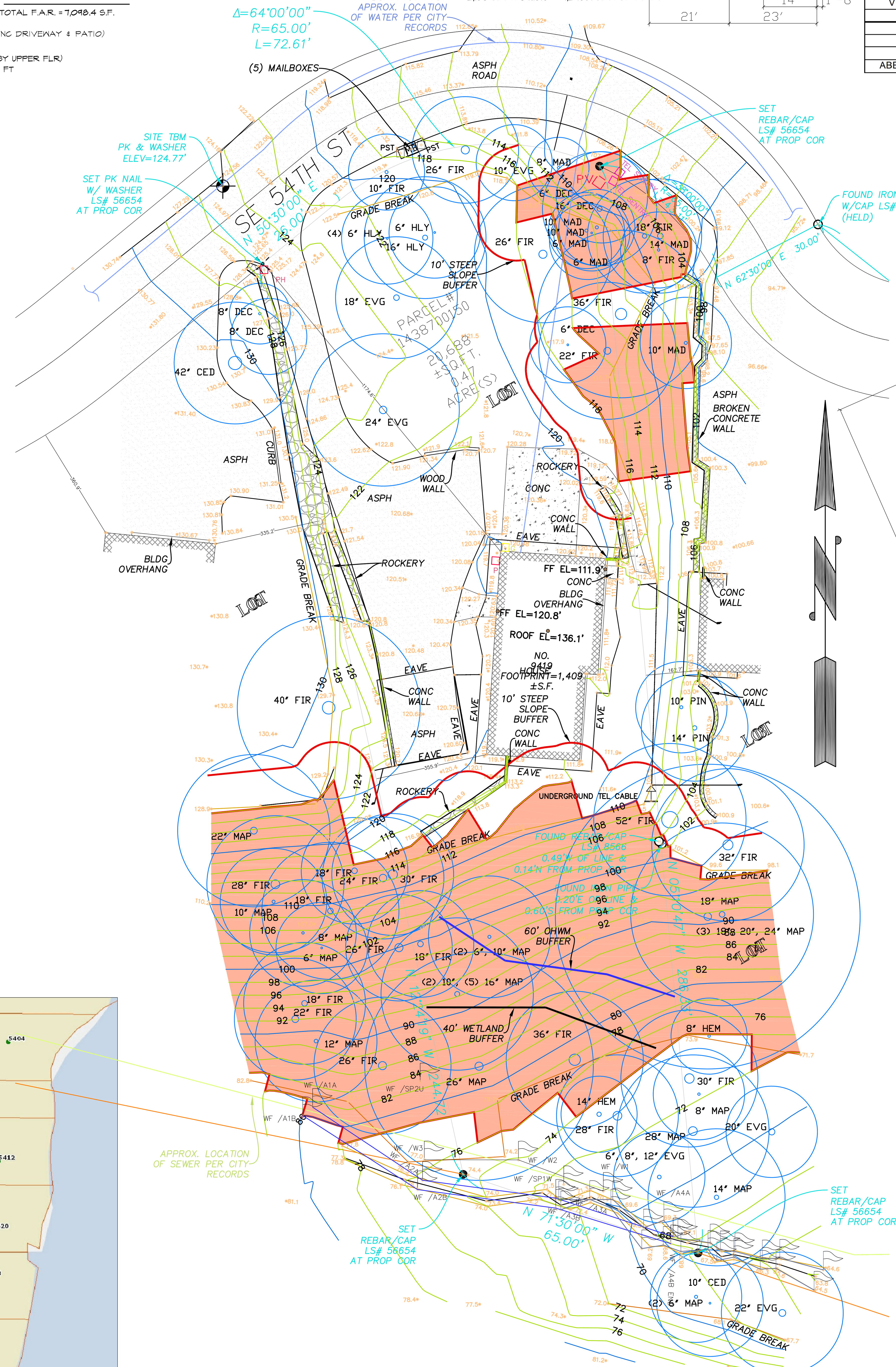
BSMNT FLR AREA = 2,186 S.F. × 57.13% = 1,248.9 S.F. FOR F.A.R.

AVERAGE HEIGHT CALCULATIONS

SEGMENT	ELEVATION	segment	LENGTH	(Axa)=
A	113.13	a	26.917	3044.986
B	113.13	b	5.000	565.625
C	113.13	c	16.583	1875.952
D	113.13	d	5.000	565.625
E	113.13	e	17.000	1923.125
F	113.13	f	2.000	226.25
G	113.13	g	4.000	452.5
H	111.00	h	31.500	3496.5
I	112.00	i	1.500	168
J	114.00	j	18.000	2052
K	116.00	k	23.000	2668
L	120.00	l	5.167	620.04
M	120.00	m	21.000	2520
N	120.00	n	26.250	3150
O	120.00	o	11.500	1380
P	120.00	p	3.500	420
Q	120.00	q	19.000	2280
R	120.00	r	10.583	1269.96
S	120.00	s	3.000	360
T	120.00	t	19.500	2340
U	116.00	u	15.000	1740
V	114.00	v	3.500	399
	2554.88		288.500	33517.56
ABE=	33300.69 /	2550 =	116.178726	

LOT SLOPE CALCULATINS:

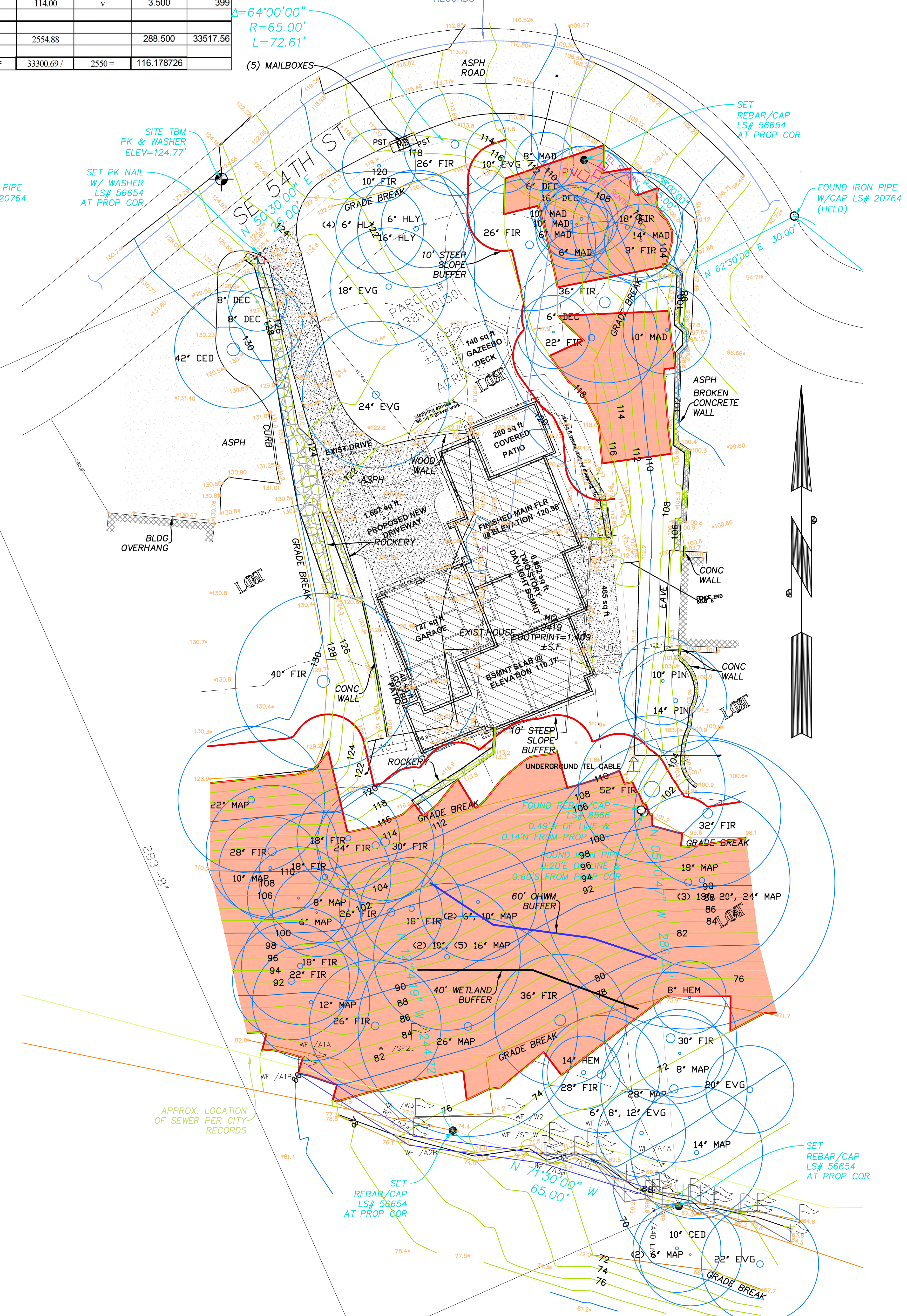
HIGHEST LOT ELEVATION POINT @ 125.40'
LOWEST LOT ELEVATION POINT @ 68.04'
ELEVATION LOT DIFFERENCE = 57.36'
DISTANCE BETWEEN POINTS = 283.667'
57.36 / 283.667 = 0.2022 (20.22%)



EXISTING AS-BUILT SITE PLAN

1" = 20'-0"

SCALE 0 5 10 20 40



PROPOSED NEW SFR SITE PLAN

1" = 20'-0"

SCALE 0 5 10 20 40

MDB RESIDENTIAL
DESIGN ASSOCIATES
8801 SAINT THOMAS DR
SPACE #25
PASCO, WA
425-830-6713

PROJECT: 9419 SE 54th ST, MERCER ISLAND WA 98040
TAX PARCEL 143870-0150
ELITE HOMES NW, LLC
SITE PLAN

DATE:
11-30-22
03-14-23

FILE NO:
22-002

SHEET
SITE

LEGAL DESCRIPTION

NE-19-24-05
TAX PARCELL # 143870-0150
LOT # 15
DIV. # CAY HILLS ADD.
9419 SE 54th ST
MERCER ISLAND, WA 98040
KING COUNTY
ZONED R-15

LOT COVERAGE BY STRUCTURE

AREA SUMMARY:

PROPOSED BLDG FOOTPRINT			
TOTAL HOUSE	=	3,493	SQ. FT.
EXISTING LOT SQUARE FOOTAGE			
TOTAL	=	19,817	SQ. FT.

3,493 / 19,817 = 17.63 %

IMPERVIOUS SURFACES

AREA SUMMARY:

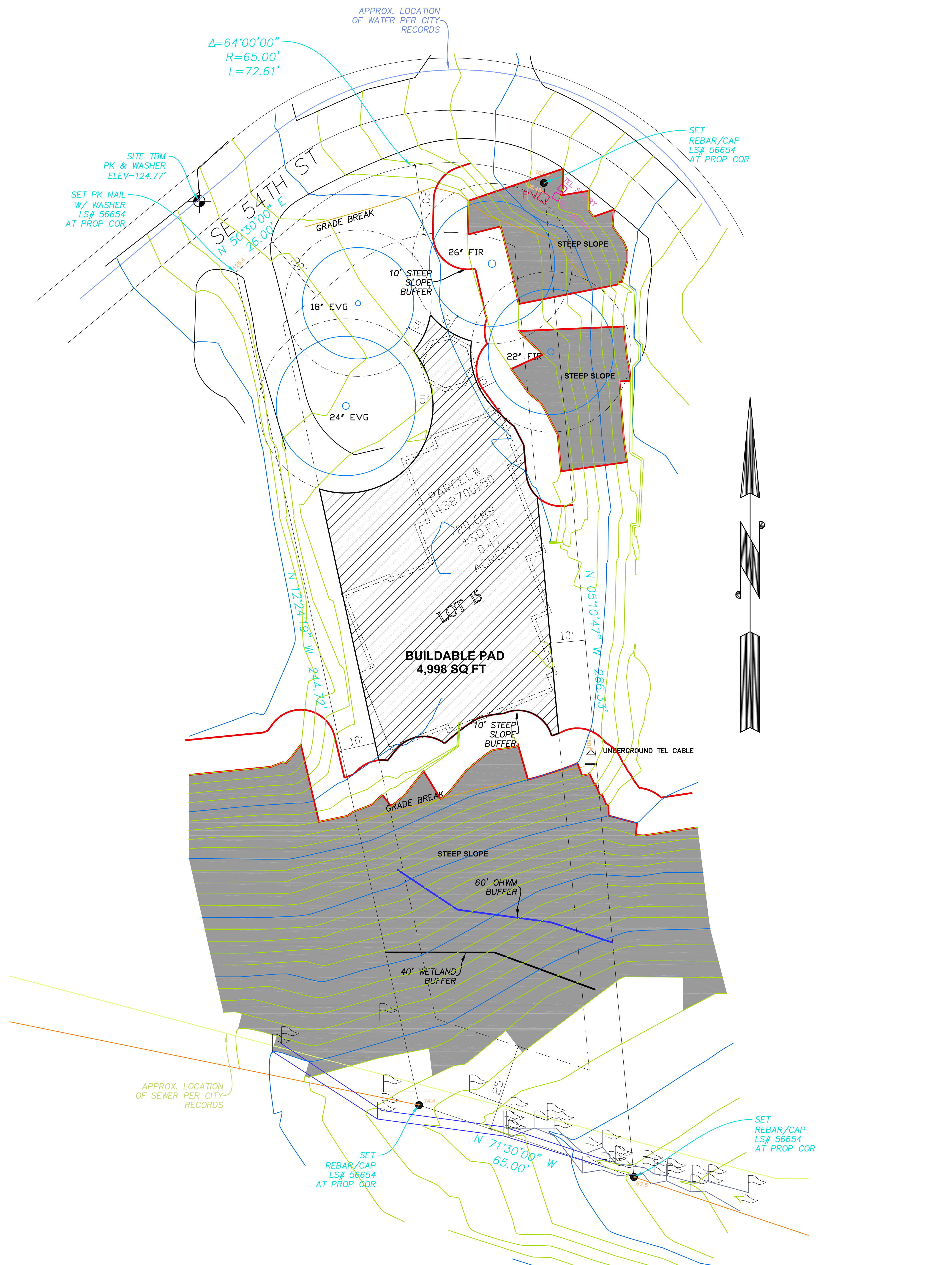
BUILDING & ROOF			
TOTAL HOUSE	=	3,072	SQ. FT.
COVERED PATIO OVER ROOF			
TOTAL HOUSE	=	280	SQ. FT.
IMPERV. PATIO/DRIVEWAY/WALKS			
TOTAL	=	2,132	SQ. FT.
EXISTING ACCESS EASEMENT SURFACE			
TOTAL	=	N/A	SQ. FT.
TOTAL ALL IMPERVIOUS SURF.			
TOTAL (ALL)	=	5,484	SQ. FT.
EXISTING LOT SQUARE FOOTAGE			
TOTAL	=	19,817	SQ. FT.

= 3,352 SQ. FT.

DRIVEWAY 1,667 = SQ. FT.
PATIO 465 = SQ. FT.

5,484 / 19,817 = 27.67 %

VICINITY MAP n.t.s.



PROPOSED NEW SFR SITE BUILDABLE PAD

1" = 20'-0"

0 5 10 20 40
SCALE

MB RESIDENTIAL
DESIGN ASSOCIATES
8801 SAINT THOMAS DR
SPACE #25
PASCO WA
425-830-6713

PROJECT: 9419 SE 54th ST, MERCER ISLAND WA 98040
TAX PARCEL 143870-0150
ELITE HOMES NW, LLC
BUILDABLE PAD SITE PLAN

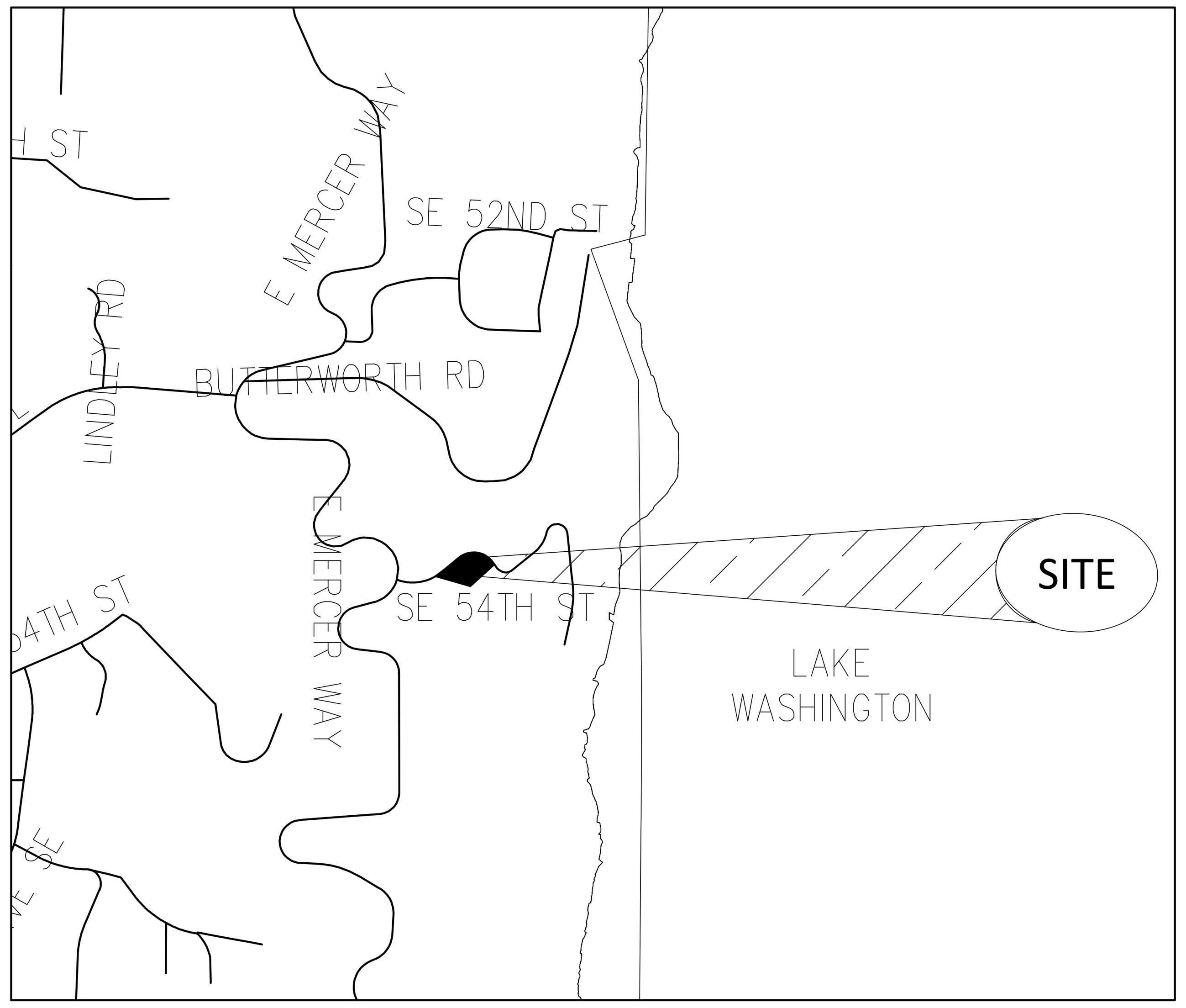
DATE: 06-28-23

FILE NO: 22-002

SHEET SITE

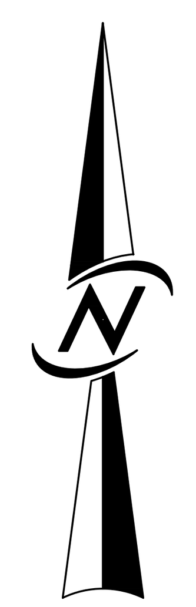
9419 54TH ST

9419 54TH ST
MERCER ISLAND, WASHINGTON



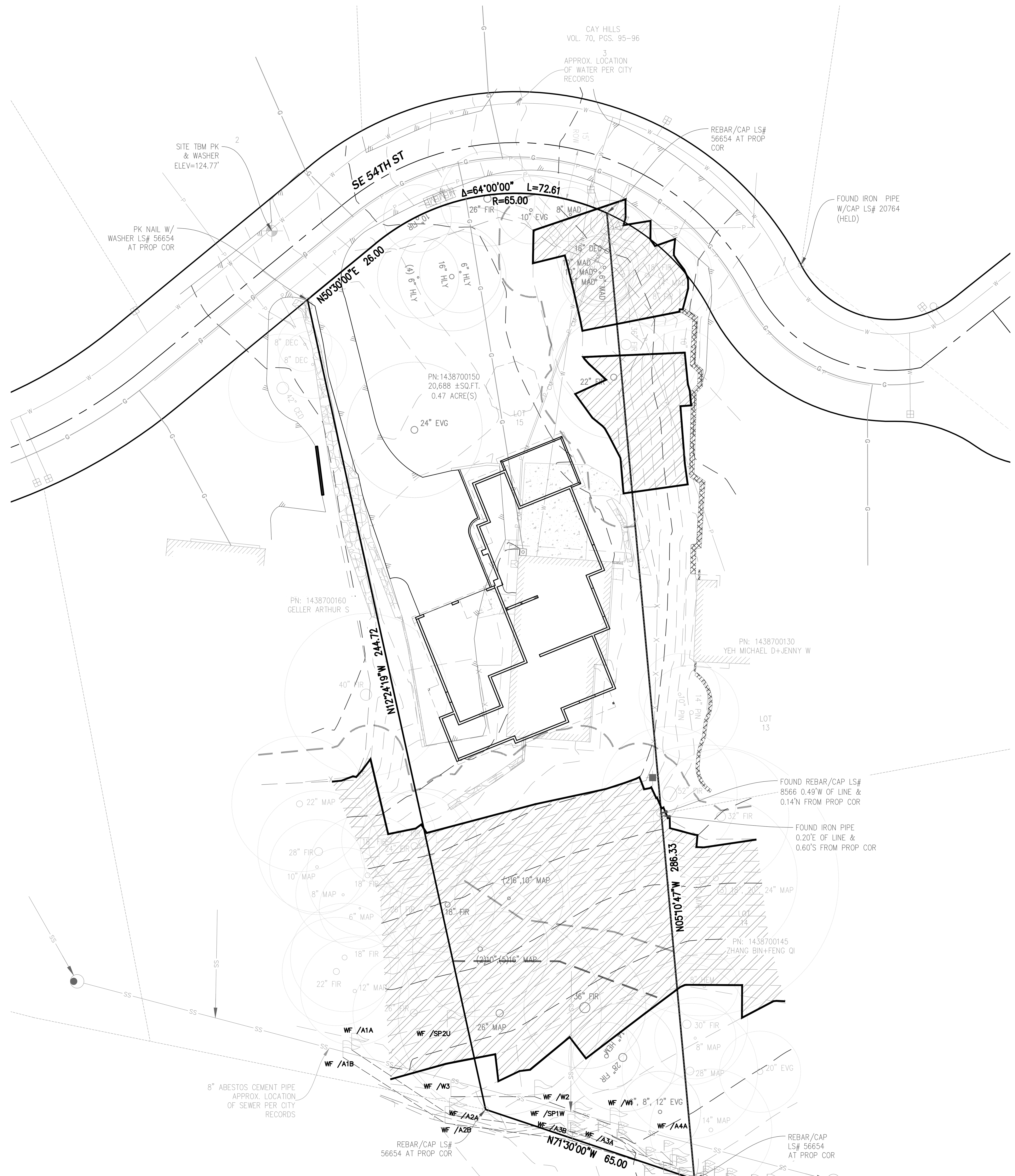
VICINITY MAP

1" =500'



SCALE: 1" = 20'

0 10 20 40



BASIS OF BEARINGS

ACCEPTED A BEARING OF N 51°40'27" W, BETWEEN IRON PIPES FOUND AND SHOWN HEREON AS CALCULATED PER PLAT.

REFERENCES

1. CAY HILLS, VOL. 70, OF PLATS, PGS. 95 & 96, RECORDS OF KING COUNTY, WASHINGTON.
2. PSE GAS MAP Q198081
3. PSE POWER MAP A2405E073
4. WATER, SEWR AND STORM PROVIDED CITY OF MERCER ISLAND GIS PORTAL.

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING# 20220504001275)

LOT 15, CAY HILLS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 70 OF PLATS, PAGES 95 AND 96, RECORDS OF KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

EXCEPTIONS CONTAINED IN TITLE

THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.

STEEP SLOPE/BUFFER DISCLAIMER

THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE OR CORE DESIGN CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

NOTE

DEVELOPMENT PROPOSALS FOR A NEW SINGLE-FAMILY HOME SHALL REMOVE JAPANESE KNOTWEED (POLYGONUM CUSPIDATUM) AND REGULATED CLASS A, REGULATED CLASS B, AND REGULATED CLASS C WEEDS IDENTIFIED ON THE KING COUNTY NOXIOUS WEED LIST, AS AMENDED, FROM REQUIRED LANDSCAPING AREAS ESTABLISHED PURSUANT TO SUBSECTION 19.02.020(F)(3)(a). NEW LANDSCAPING ASSOCIATED WITH NEW SINGLE-FAMILY HOME SHALL NOT INCORPORATE ANY WEEDS IDENTIFIED ON THE KING COUNTY NOXIOUS WEED LIST, AS AMENDED. PROVIDED, THAT REMOVAL SHALL NOT BE REQUIRED IF THE REMOVAL WILL RESULT IN INCREASED SLOPE INSTABILITY OR RISK OF LANDSLIDE OR EROSION.

OWNER:

VADIM SCERBININ
9419 SE 54TH ST
MERCER ISLAND, WA 98040

ENGINEER/ SURVEY:

CORE DESIGN INC
14711 NE 29TH PL, SUITE 101
BELLEVUE, WASHINGTON 98007
(425) 885-7877
CONTACT : MICHAEL A. MOODY, P.E.
GLENN R. SPRAGUE, P.L.S.

VERTICAL DATUM

NAVD 88 PER GPS OBSERVATIONS

BENCHMARKS

BENCH MARK TEXT

SHEET INDEX

SITE STATISTICS

ZONING:	R-15 (RESIDENTIAL-SINGLE FAMILY)
SITE AREA:	±20,688 SF (±0.475 ACRES)
NET LOT AREA:	15,215 SF (0.349 ACRES)
LOTS PROPOSED:	1
TAX PARCEL	143870-0150
DWELLING UNITS:	1
LOT WIDTH:	87'
FRONT SETBACK:	20'
BACK SETBACK:	25'
SIDE SETBACK:	20' COMBINED
SIDE SETBACKS PROPOSED:	10' (WESTERN SETBACK)
	10' (EASTERN SETBACK)
IMPERVIOUS AREA:	3,760 SF (24.7%)

811
Know what's **below.**
Call before you dig.

UTILITY CONFLICT NOTE:

CAUTION:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, CONTACTING ALL UTILITY COMPANIES, POTHOLING THE UTILITIES, AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-555 AND THEN POTHOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR,THE CONTRACTOR SHALL CONSULT CORE DESIGN, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE

MICHAEL A. MOODY — STATE OF WASHINGTON — 41843 — REGISTERED PROFESSIONAL ENGINEER
08-15-23

CORE DESIGN
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
SURVEYING
12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877

COVER SHEET
9419 54TH ST- MERCER ISLAND
VADIM SCHERBININ
9419 SE 54TH ST
MERCER ISLAND, WA 98040

DATE	SEE STAMP DATE
DESIGNED	CHRISTIAN VANDERHOEVEN
DRAWN	CHRISTIAN VANDERHOEVEN
APPROVED	MICHAEL MOODY, PE

MICHAEL MOODY, PE
PROJECT MANAGER

SHEET	OF
C1.01	6

PROJECT NUMBER
23008

SCALE: 1" = 20'

0 10 20 40

VERTICAL DATUM

NAVD 88 PER GPS OBSERVATIONS

ORIGINATING BENCHMARK

BENCHMARK TEXT

PROJECT BENCHMARKS

TEXT FOR BENCHMARKS ESTABLISHED

HORIZONTAL DATUM

HORIZONTAL DATUM

BASIS OF BEARINGS

ACCEPTED A BEARING OF N 51°40'27" W, BETWEEN IRON PIPES FOUND AND SHOWN HEREON AS CALCULATED PER PLAT.

REFERENCES

1. CAY HILLS, VOL. 70, OF PLATS, PGS. 95 & 96, RECORDS OF KING COUNTY, WASHINGTON.
2. PSE GAS MAP Q198081
3. PSE POWER MAP A2405E073
4. WATER, SEWR AND STORM PROVIDED CITY OF MERCER ISLAND GIS PORTAL.

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING# 20220504001275)

LOT 15, CAY HILLS, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 70 OF PLATS, PAGES 95 AND 96, RECORDS OF KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

EXCEPTIONS CONTAINED IN TITLE

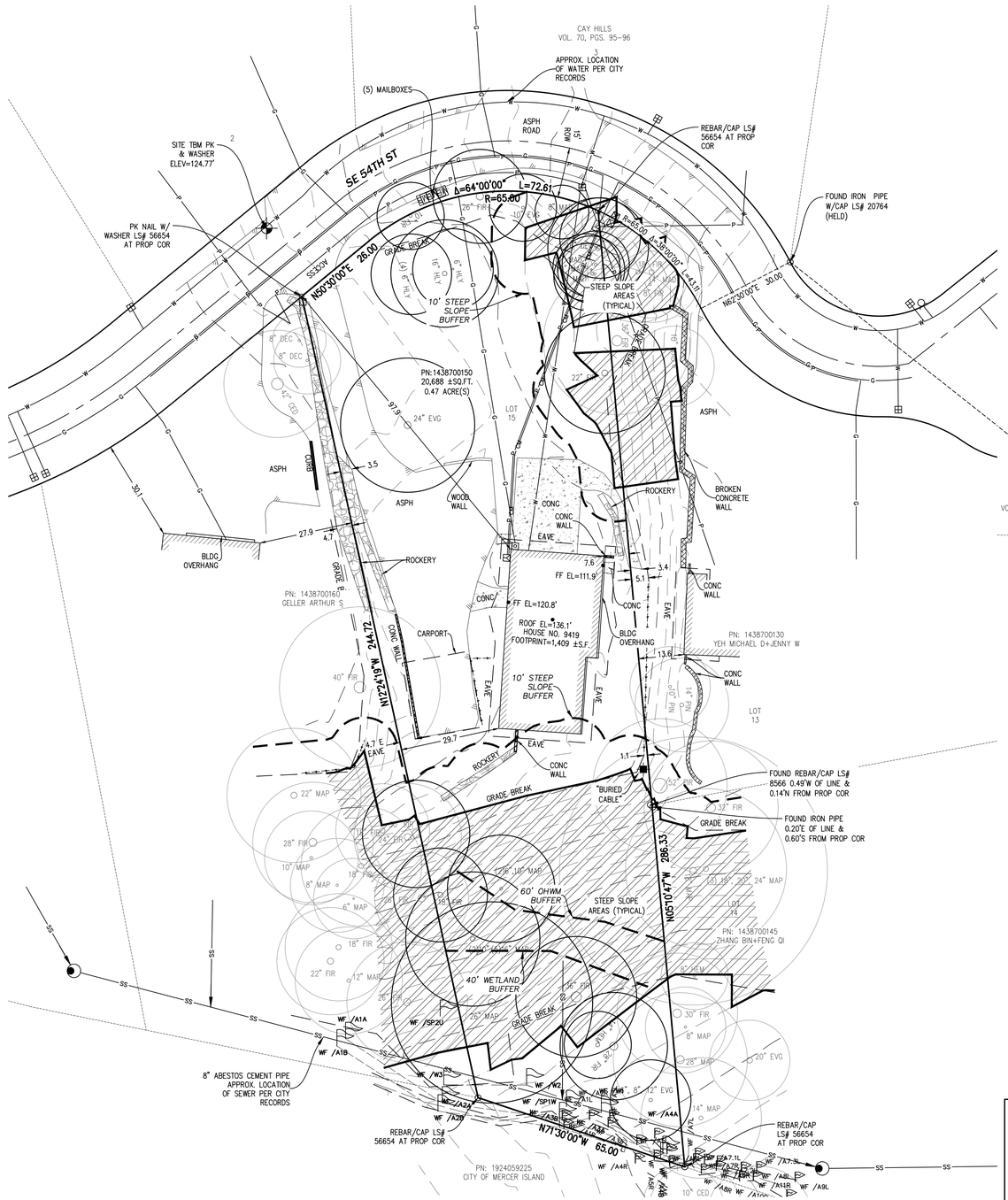
THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.

NOTES

1. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
2. THIS SURVEY REPRESENTS VISIBLE PHYSICAL IMPROVEMENT CONDITIONS EXISTING ON FEBRUARY 3RD, 2023. ALL SURVEY CONTROL INDICATED AS "FOUND" WAS RECOVERED FOR THIS PROJECT IN JUNE, 2022.
3. PROPERTY AREA = 20,688± SQUARE FEET (.4749± ACRES).
4. ALL DISTANCES ARE IN US FEET AT GROUND LEVEL. [TO CONVERT GROUND TO GRID DISTANCES, MULTIPLY BY THE PROJECT COMBINED SCALE FACTOR = _____.]
5. CONTOUR INTERVAL = 2 FEET.
6. ELEVATION AND/OR CONTOUR INFORMATION SHOWN HEREON IS GENERATED FROM DIRECT FIELD OBSERVATION. SAID INFORMATION MEETS US NATIONAL MAPPING STANDARDS AND IS ACCURATE TO WITHIN ONE-HALF THE CONTOUR INTERVAL.
7. BOUNDARY INFORMATION SHOWN HEREON IS FROM PLAT OF CAY HILLS, VOL. 70, OF PLATS, PGS. 95 & 96, RECORDS OF KING COUNTY, WASHINGTON, RECORDING NUMBER 19620829547310O. TOPOGRAPHIC INFORMATION SHOWN HEREON IS RELATED TO THE BOUNDARY BY DIRECT FIELD OBSERVATION FROM CONTROLLING MONUMENTATION AS SHOWN IN THE BOUNDARY AND TOPOGRAPHIC SURVEY BY TERRANE
8. THIS IS A COMBINED FIELD TRAVERSE AND GPS/GNSS SURVEY. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090. THE SURVEY WAS BY TERRANE, DATED 6-18-2022.
9. UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THIS SITE. ONLY THOSE UTILITIES WITH EVIDENCE OF THEIR INSTALLATION VISIBLE AT GROUND SURFACE OR AS MARKED BY 811 OR OTHER UTILITY LOCATING PROVIDERS ARE SHOWN HEREON. UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY. UNDERGROUND CONNECTIONS ARE SHOWN AS STRAIGHT LINES BETWEEN SURFACE EVIDENCE OF UTILITY LOCATIONS BUT MAY CONTAIN BENDS OR CURVES NOT SHOWN. SOME UNDERGROUND LOCATIONS SHOWN HEREON MAY HAVE BEEN TAKEN FROM PUBLIC RECORDS. CLIENT UNDERSTANDS THAT CORE DESIGN ASSUMES NO LIABILITY FOR THE ACCURACY OF PUBLIC RECORDS OR PAINTED UTILITY LOCATIONS.
10. EXISTING STRUCTURE(S) LOCATION AND DIMENSIONS ARE MEASURED FROM THE FACE OF THE SIDING UNLESS OTHERWISE NOTED.

STEEP SLOPE/BUFFER DISCLAIMER:

THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS. AS SUCH, TERRANE OR CORE DESIGN CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.



LEGEND

- FOUND SURVEY MONUMENT, AS NOTED
- FOUND SURVEY MARKER, AS NOTED
- BENCHMARK, AS NOTED
- SEWER MANHOLE
- FIRE HYDRANT
- WATER VALVE
- WATER METER
- GAS METER
- POWER METER
- POWER TRANSFORMER
- TELECOM PEDESTAL
- TREE
- DEC DECIDUOUS
- EVG EVERGREEN
- MAP MAPLE
- FIR FIR
- HEM HEMLOCK
- MAD MADRONA
- HLY HOLLY
- PIN PINE
- MAP MAPLE
- WOOD FENCE
- SS SEWER LINE
- W WATER LINE
- G GAS LINE
- P BURIED POWER LINE
- CM BURIED COMMUNICATIONS LINE
- EDGE OF ASPHALT
- ASPHALT SURFACE
- CONCRETE
- GRAVEL
- ROCKERY
- WETLAND FLAG, AS NOTED
- SIGN, AS NOTED
- MB MAILBOX

Know what's below. Call before you dig.

UTILITY CONFLICT NOTE:

CAUTION:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, CONTACTING ALL UTILITY COMPANIES, POTHOLING THE UTILITIES, AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-555 AND THEN POTHOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT CORE DESIGN, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE

08-15-23

CORE DESIGN
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
SURVEYING
12100 NE 195th St, Suite 300 Bothell, Washington 98011 | 425.885.7877

TOPOGRAPHIC SURVEY
9419 54TH ST- MERCER ISLAND
VADIM SCHERBININ
9419 SE 54TH ST
MERCER ISLAND, WA 98040

DATE	SEE STAMP DATE
DESIGNED	CHRISTIAN VANDERHOEVEN
DRAWN	CHRISTIAN VANDERHOEVEN
APPROVED	MICHAEL MOODY, PE
	MICHAEL MOODY, PE — PROJECT MANAGER

SHEET C1.02 OF 6

PROJECT NUMBER 23008

8/15/2023 11:18 AM\ \2023\23008\ENGINEERING\FINAL\SHEETS\23008 C1.02.DWG

BMP T5.13: Post-Construction Soil Quality and Depth

Purpose and Definition

Naturally occurring (undisturbed) soil and vegetation provide important stormwater functions including: water infiltration; nutrient, sediment, and pollutant adsorption; sediment and pollutant biofiltration; water interflow storage and transmission; and pollutant decomposition. These functions are largely lost when development strips away native soil and vegetation and replaces it with minimal topsoil and sod. Not only are these important stormwater functions lost, but such landscapes themselves become pollution generating pervious surfaces due to increased use of pesticides, fertilizers and other landscaping and household/industrial chemicals, the concentration of pet wastes, and pollutants that accompany roadside litter.

Establishing soil quality and depth regains greater stormwater functions in the post development landscape, provides increased treatment of pollutants and sediments that result from development and habitation, and minimizes the need for some landscaping chemicals, thus reducing pollution through prevention.

Applications and Limitations

Establishing a minimum soil quality and depth is not the same as preservation of naturally occurring soil and vegetation. However, establishing a minimum soil quality and depth will provide improved on-site management of stormwater flow and water quality.

Soil organic matter can be attained through numerous materials such as compost, composted woody material, biosolids, and forest product residuals. It is important that the materials used to meet the soil quality and depth BMP be appropriate and beneficial to the plant cover to be established. Likewise, it is important that imported topsoils improve soil conditions and do not have an excessive percent of clay fines.

This BMP can be considered infeasible on till soil slopes greater than 33 percent.

Design Guidelines

- Soil retention. Retain, in an undisturbed state, the duff layer and native topsoil to the maximum extent practicable. In any areas requiring grading remove and stockpile the duff layer and topsoil on site in a designated, controlled area, not adjacent to public resources and critical areas, to be reapplied to other portions of the site where feasible.
- Soil quality. All areas subject to clearing and grading that have not been covered by impervious surface, incorporated into a drainage facility or engineered as structural fill or slope shall, at project completion, demonstrate the following:
    1. A topsoil layer with a minimum organic matter content of 10% dry weight in planting beds, and 5% organic matter content in turf areas, and a pH from 6.0

to 8.0 or matching the pH of the undisturbed soil. The topsoil layer shall have a minimum depth of eight inches except where tree roots limit the depth of incorporation of amendments needed to meet the criteria. Subsoils below the topsoil layer should be scarified at least 4 inches with some incorporation of the upper material to avoid stratified layers, where feasible.

2. Mulch planting beds with 2 inches of organic material
3. Use compost and other materials that meet these organic content requirements:
    a. The organic content for "pre-approved" amendment rates can be met only using compost meeting the compost specification for BMP T7.30: Bioretention Cells, Swales, and Planter Boxes (p.959), with the exception that the compost may have up to 35% biosolids or manure.

       The compost must also have an organic matter content of 40% to 65%, and a carbon to nitrogen ratio below 25:1.

       The carbon to nitrogen ratio may be as high as 35:1 for plantings composed entirely of plants native to the Puget Sound Lowlands region.

    b. Calculated amendment rates may be met through use of composted material meeting (a.) above; or other organic materials amended to meet the carbon to nitrogen ratio requirements, and not exceeding the contaminant limits identified in Table 220-B, Testing Parameters, in WAC 173-350-220.

The resulting soil should be conducive to the type of vegetation to be established.

- Implementation Options: The soil quality design guidelines listed above can be met by using one of the methods listed below:
    1. Leave undisturbed native vegetation and soil, and protect from compaction during construction.
    2. Amend existing site topsoil or subsoil either at default "pre-approved" rates, or at custom calculated rates based on tests of the soil and amendment.
    3. Stockpile existing topsoil during grading, and replace it prior to planting. Stockpiled topsoil must also be amended if needed to meet the organic matter or depth requirements, either at a default "pre-approved" rate or at a custom calculated rate.
    4. Import topsoil mix of sufficient organic content and depth to meet the requirements.

More than one method may be used on different portions of the same site. Soil that already meets the depth and organic matter quality standards, and is not compacted, does not need to be amended.

Planning/Permitting/Inspection/Verification Guidelines & Procedures

Local governments are encouraged to adopt guidelines and procedures similar to those recommended in Guidelines and Resources For Implementing Soil Quality and Depth BMP T5.13 in WDOE Stormwater Management Manual for Western Washington. This document is available at: http://www.soilsforsalmon.org/pdf/Soil_BMP_Manual.pdf

Maintenance

- Establish soil quality and depth toward the end of construction and once established, protect from compaction, such as from large machinery use, and from erosion.
- Plant vegetation and mulch the amended soil area after installation.
- Leave plant debris or its equivalent on the soil surface to replenish organic matter.
- Reduce and adjust, where possible, the use of irrigation, fertilizers, herbicides and pesticides, rather than continuing to implement formerly established practices.

Runoff Model Representation

Areas meeting the design guidelines may be entered into approved runoff models as "Pasture" rather than "Lawn."

Flow reduction credits can be taken in runoff modeling when BMP T5.13: Post-Construction Soil Quality and Depth is used as part of a dispersion design under the conditions described in:

- BMP T5.10B: Downspout Dispersion Systems (p.905)
- BMP T5.11: Concentrated Flow Dispersion (p.905)
- BMP T5.12: Sheet Flow Dispersion (p.908)
- BMP T5.18: Reverse Slope Sidewalks (p.937)
- BMP T5.30: Full Dispersion (p.939) (for public road projects)

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SURVEYING
CORE DESIGN
12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877

DATE
REVISIONS
NO.

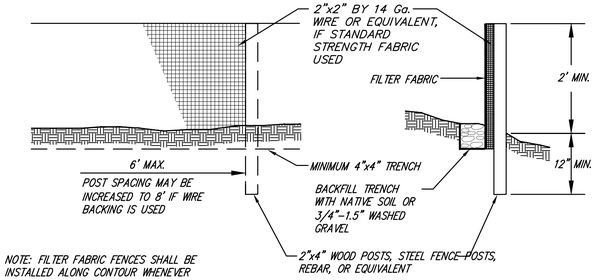
08-15-23

BMP NOTES
9419 54TH ST- MERCER ISLAND
VADIM SCHERBININ
9419 SE 54TH ST.
MERCER ISLAND, WA 98040

DATE SEE STAMP DATE
DESIGNED CHRISTIAN VANDERHOEVEN
DRAWN CHRISTIAN VANDERHOEVEN
APPROVED MICHAEL MOODY, PE
MICHAEL MOODY, PE
PROJECT MANAGER

SHEET C1.03
OF 6
PROJECT NUMBER 23008

JOINTS IN FILTER FABRIC SHALL BE SPLICED AT POSTS. USE STAPLES, WIRE RINGS, OR EQUIVALENT TO ATTACH FABRIC TO POSTS.



NOTE: FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE

FILTER FABRIC FENCE DETAIL

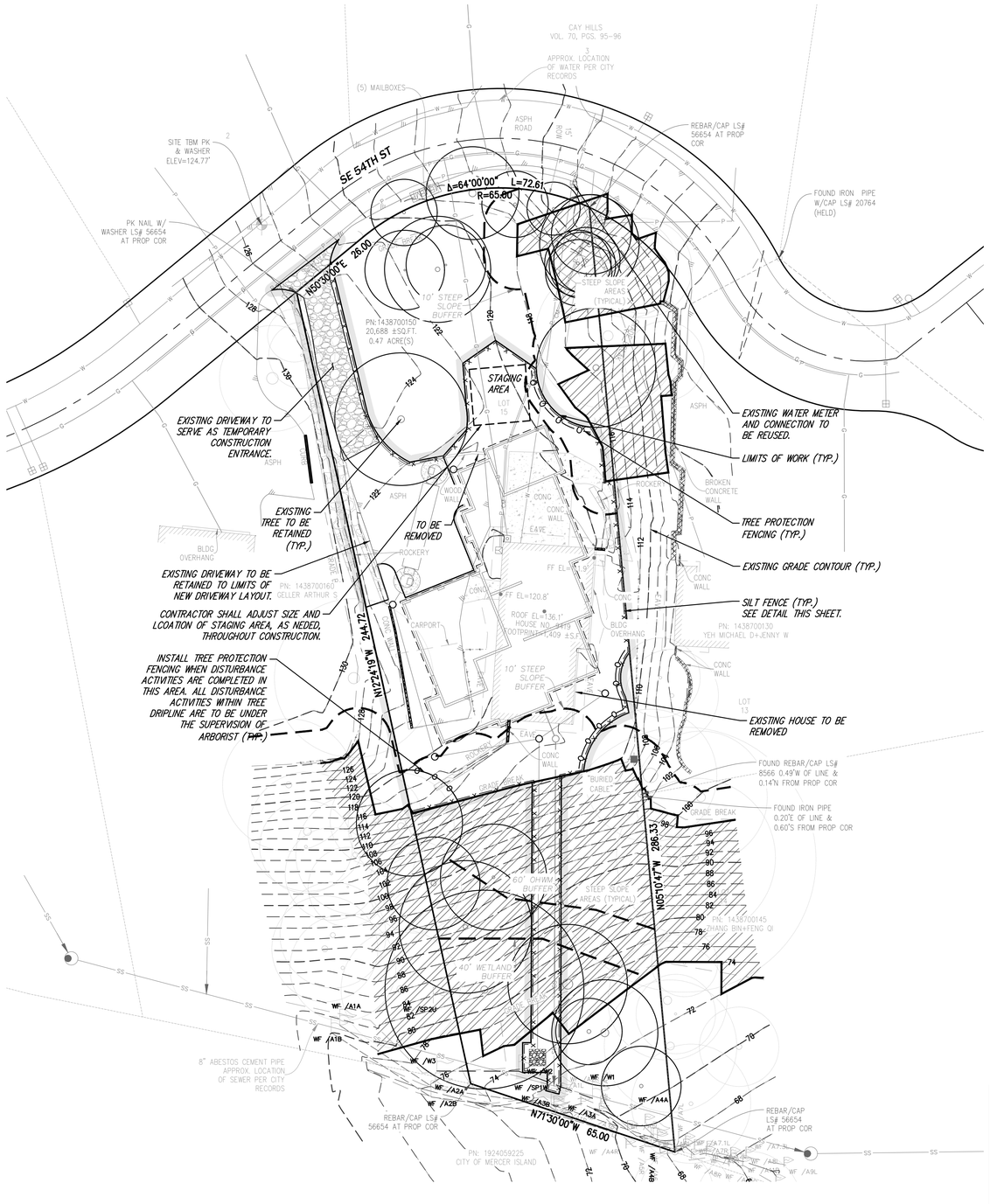
NO SCALE

SCALE: 1" = 20'

0 10 20 40

LEGEND

- BUILDING OVERHANG
- LOT LINES
- DRIVEWAY BOUNDARY
- PROPERTY BOUNDARY
- BUILDING EDGE
- SURVEY ALIGNMENT
- PAVEMENT EDGE
- FOUND MONUMENT AS DESCRIBED
- FOUND PIPE/REBAR AS DESCRIBED
- M MADRONA O OAK
- FIG FIG
- D DOGWOOD
- CLF CHAIN LINK FENCE
- VBF VERTICAL BOARD FENCE
- ROCKERY
- INLET FILTER (W.S.D.O.T. STD DTL. I-40.20-00)
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE DOE STD DTL. BMP 205
- CLEARING LIMITS
- TREE PROTECTION FENCE
- x x x FILTER FABRIC FENCE
- 110 EXISTING CONTOUR
- 110 PROPOSED CONTOUR
- ONSITE TREE TO BE REMOVED



CONSTRUCTION SEQUENCE

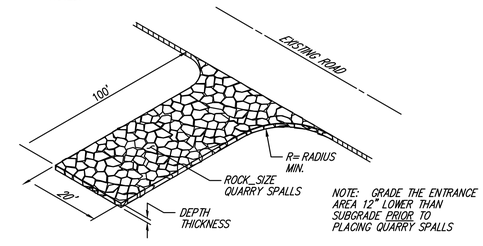
1. PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SCHEDULE AND ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF MERCER ISLAND BY PHONING (206)-275-7726.
2. FLAG LIMITS OF CLEARING IN FIELD AS INDICATED ON SHEET C2.01.
3. CLEAR FOR AND CONSTRUCT THE ROCKED CONSTRUCTION ACCESS.
4. CONSTRUCT PERIMETER FILTER FABRIC FENCES.
5. CONSTRUCT DOWNSTREAM DISCHARGE SYSTEM, INTERCEPTOR SWALES, ROCK CHECK DAMS, STORM DRAINAGE PIPES, RIP RAP PADS.
6. CLEAR & GRADE SITE WHILE EXTENDING TEMPORARY INTERCEPTOR SWALE AS CONSTRUCTION PROCEEDS. ALL SILT-LADEN RUNOFF SHALL BE DIRECTED TO SEDIMENT RETENTION FACILITIES.
7. CLEAR FOR AND CONSTRUCT DETENTION TANK FOR USE FOR SEDIMENT RETENTION AND CONSTRUCT DISCHARGE SYSTEM.
8. CONSTRUCT SANITARY SEWER, WATER, & REMAINING STORM DRAINAGE FACILITIES PER THE APPROVED PLANS.
9. FINE GRADE AND PAVE THE DRIVEWAY.
10. UPON COMPLETION OF GRADING ACTIVITIES, STABILIZE ALL DISTURBED AREAS, REMOVE EXCESS SEDIMENT FROM THE TANK AND REMOVE ALL TEMPORARY EROSION/ SEDIMENTATION CONTROL FACILITIES.

TREE PROTECTION NOTES

1. CONTRACTOR SHALL COORDINATE WITH ARBORIST ON GRADING AROUND RETAINED TREES AND ROOTS.
2. ARBORIST TO BE ONSITE TO VERIFY PRESERVATION OF RETAINED TREES

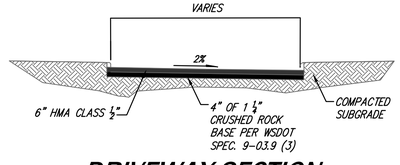
NOTES

1. ALL EXISTING STRUCTURES ONSITE TO BE REMOVED UNLESS OTHERWISE NOTED.
2. ALL WALLS AND ROCKERIES TO BE RETAINED UNLESS OTHEWISE NOTED.



TEMPORARY CONSTRUCTION ACCESS

NO SCALE



DRIVEWAY SECTION

NO SCALE

811 Know what's below. Call before you dig.

UTILITY CONFLICT NOTE:

CAUTION:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, CONTACTING ALL UTILITY COMPANIES, POTHOLING THE UTILITIES, AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-555 AND THEN POTHOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT CORE DESIGN, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

NO.	REVISIONS	DATE

08-15-23

CORE DESIGN
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PLANNING
SURVEYING
12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877

EROSION CONTROL PLAN
9419 54TH ST- MERCER ISLAND
VADIM SCHERBININ
9419 SE 54TH ST.
MERCER ISLAND, WA. 98040

DATE	SEE STAMP DATE	
DESIGNED	CHRISTIAN VANDERHOEVEN	
DRAWN	CHRISTIAN VANDERHOEVEN	
APPROVED	MICHAEL MOODY, PE	
	MICHAEL MOODY, PE	PROJECT MANAGER

SHEET	OF
C2.01	6

PROJECT NUMBER 23008

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GENERAL NOTES

1. CONTRACTOR IS TO OBTAIN PERMITS AND GUARANTEES.
2. ALL DAMAGE TO ADJACENT PROPERTIES OR PUBLIC RIGHTS-OF-WAY RESULTING FROM CONSTRUCTION (E.G., SILTATION, MUD, WATER, RUNOFF, ROADWAY DAMAGE CAUSED BY CONSTRUCTION EQUIPMENT OR HAULING) SHALL BE EXPEDITIOUSLY MITIGATED AND REPAIRED BY THE CONTRACTOR, AT NO EXPENSE TO THE CITY. FAILURE TO MITIGATE AND REPAIR SAID DAMAGE OR TO COMPLY WITH THE APPROVED CONSTRUCTION PLANS, THE PERMITS ISSUED BY THE CITY OR THE CITY REQUIREMENT FOR CORRECTIVE ACTION SHALL BE CAUSE FOR THE ISSUANCE OF A "STOP WORK" ORDER, FORECLOSURE ON THE PLAT BOND/ SECURITY, AND/OR OTHER MEASURES DEEMED APPROPRIATE BY THE CITY ENGINEER OR CODE OFFICIAL TO ENSURE QUALITY CONSTRUCTION AND PROTECT THE PUBLIC SAFETY.
3. CONSTRUCTION OF ALL IMPROVEMENTS FOR ACCESS, UTILITIES, STORM DRAINAGE AND SITE WORK SHALL COMPLY WITH CURRENT CITY ORDINANCES AND THE REQUIREMENTS OF THE CITY ENGINEER.
4. ALL SHORT PLAT IMPROVEMENTS SHALL BE COMPLETED PRIOR TO FINAL APPROVAL AND RECORDING OF THE SHORT PLAT MYLAR DOCUMENTS OR BONDED AND COMPLETED PRIOR TO ISSUANCE OF BUILDING PERMITS WHEN APPROVED BY THE CITY ENGINEER. AN ACCURATELY PREPARED AS-BUILT DRAWING THAT SHOWS ALL UTILITIES AND SHORT PLAT IMPROVEMENTS SHALL BE SUBMITTED TO THE CITY UPON COMPLETION OF THE WORK PROVIDED TWO PAPER COPIES, ONE MYLAR AND ONE DXF AUTOCAD FILE. SUBMIT USING MERCER ISLAND'S DATUM AN TIE THE PLAT TO AT LEAST TWO MONUMENTS.

STORM DRAINAGE GENERAL NOTES

1. ALL NEW CATCH BASINS SHALL CONFORM TO THE APWA WSDOT STANDARD DETAILS.
2. THE FOOTING DRAINAGE SYSTEM AND THE ROOF DOWNSPOUT SYSTEM SHALL NOT BE INTERCONNECTED.
3. PROVIDE AND MAINTAIN TEMPORARY SEDIMENTATION FILTER AND SILT REMOVAL FACILITIES TO ENSURE THAT SEDIMENT OR OTHER HAZARDOUS MATERIALS DO NOT ENTER THE STORM DRAINAGE SYSTEM. FOR ALL CONSTRUCTION DURING THE RAINY SEASON, DOWNHILL BASINS AND INLETS MUST BE PROTECTED WITH CATCH BASINS INSERTS. PLACEMENT OF FILTER FABRIC UNDER GRATE IS NOT ACCEPTABLE.
4. PRIOR TO FINAL INSPECTION AND ACCEPTANCE OF STORM DRAINAGE WORK, PIPES AND STORM DRAIN STRUCTURES SHALL BE CLEANED AND FLUSHED. ANY OBSTRUCTIONS TO FLOW WITHIN THE STORM DRAINAGE SYSTEM (SUCH AS RUBBLE, MORTAR, AND WEDGED DEBRIS) SHALL BE REMOVED AT THE NEAREST STRUCTURE. WASH WATER OF ANY SORT SHALL NOT BE DISCHARGED TO THE STORM DRAIN SYSTEM OR SURFACE WATER.
5. ON-SITE DRAINAGE SYSTEM WILL BE PRIVATELY OWNED AND MAINTAINED.
6. SEE FOUNDATION PLAN FOR FOOTING DRAIN LOCATIONS.

SCALE: 1" = 20'

0 10 20 40

SEWER GENERAL NOTES

1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE DEVELOPER EXTENSION AGREEMENT, THE STANDARD SPECIFICATIONS, STANDARD DETAILS OF THE CITY OF MERCER ISLAND.

UTILITY LOCATES
2 THE APPROXIMATE LOCATIONS OF EXISTING UTILITIES ARE SHOWN ON PLANS AND PROFILES FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF UTILITY LOCATIONS SHOWN AND FOR DISCOVERY OF POSSIBLE ADDITIONAL UTILITIES NOT SHOWN ON PLANS.
3 IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE LOCATED, BY APPROPRIATE UTILITY DISTRICTS OR COMPANIES, ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
4 FOR UTILITY LOCATES IN KING COUNTY, CALL 1-800-424-5555 PRIOR TO DIGGING.

PERMITS
5 THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL REGULATORY PERMITS.
6 ALL WORK IN RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PERMITTING AGENCY.

PRE-CON
7 A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD AT THE CITY OF MERCER ISLAND'S OFFICE PRIOR TO THE START OF CONSTRUCTION. DISTRICT STAFF WILL NOTIFY THE APPROPRIATE AGENCIES OR REPRESENTATIVES.

SURVEYING
8 PRIOR TO CONSTRUCTING ANY SEWER MAINS, THE STREET CENTERLINES OF THE DEVELOPMENT, CENTER OF CUL-DE-SACS, ALL SEWER LINE EASEMENTS AND ALL LOT CORNERS SHALL BE STAKED. THE MAXIMUM STATIONING INTERVAL SHALL BE 50 FEET WITH THE STATION NUMBER ON EACH STAKE
9 HORIZONTAL CONTROL DATA SHALL BE NAD '83/'91. VERTICAL CONTROL SHALL BE NAVD-88 DATUM.
10 AT THE CONCLUSION OF CONSTRUCTION, THE DEVELOPER'S REGISTERED PROFESSIONAL SURVEYOR SHALL PREPARE A DRAWING BASED ON THE SURVEYED LOCATION OF ALL AT-GRADE APPURTENANCES INSTALLED, INCLUDING BUT NOT LIMITED TO, LOCATION OF EXISTING MANHOLES INCLUDING RIM & ALL INVERT ELEVATIONS AND NEW MANHOLE LOCATIONS INCLUDING RIM & ALL INVERT ELEVATIONS. THE DRAWING SHALL BE PROVIDED TO THE DISTRICT IN AUTOCAD FORMAT, R 2000 OR NEWER. IN ADDITION, ALL SEWER EASEMENTS SHALL BE STAKED AND FLAGGED AT THEIR INTERSECTION WITH PROPERTY LINES AND AT 25 FOOT STATIONS ALONG THE EASEMENT LINES.

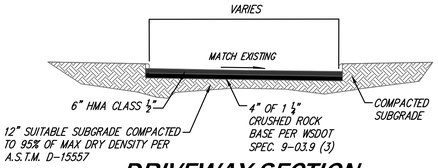
CONSTRUCTION
11 THE SEWER MAIN SHALL BE PLACED FIVE (5) FEET SOUTH OR WEST FROM THE CENTERLINE OF THE ROADWAY, UNLESS OTHERWISE SHOWN ON THE PLAN.
12 A MINIMUM TEN (10) FOOT HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN THE SANITARY SEWER LINE AND THE WATER MAIN.
13 AFTER TRENCH BACKFILL AND COMPACTION, PVC SANITARY SEWER MAINS SHALL BE TESTED FOR DEFLECTION AS SPECIFIED IN SECTION 7-17.3(2)G OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION TEST OBSERVATION AND INSPECTION BY NORTHSHORE

UTILITY DISTRICT.
14 WHENEVER SANITARY SEWER CROSSES BELOW A WATER MAIN, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER LINE IS AT LEAST EIGHTEEN (18) INCHES BELOW THE BOTTOM OF THE WATER MAIN.
15 ALL MANHOLES SHALL HAVE A MINIMUM DROP OF ONE-TENTH (0.10) FOOT AND FIVE-TENTHS (0.50) FOOT MAXIMUM DROP BETWEEN INVERT IN AND INVERT OUT.
16 MANHOLES IN THE PUBLIC RIGHT-OF-WAY SHALL BE A MINIMUM OF EIGHT (8) FEET IN DEPTH OR PER APPROVED PLANS.
17 MANHOLES NOT IN PAVED PUBLIC RIGHT-OF-WAY TO HAVE LOCKING LIDS AND ALL FRAMES SHALL BE LOCKING TYPE PER THE STANDARD DETAILS.
18 FOR PIPE SLOPES GREATER THAN 20% RESTRAINED-JOINT DUCTILE IRON PIPE SHALL BE USED FOR EVERY JOINT.
19 SIDE SEWER STUBS SHALL HAVE A MINIMUM OF TWO (2) PERCENT SLOPE AND MAXIMUM OF FORTY-FIVE (45) DEGREE SLOPE. STUBS SHALL BE 6" MINIMUM DIAMETER. FOR ALL STUBS LESS THAN EIGHT (8) FEET IN DEPTH: INSTALL A THREE (3) INCH WIDE GREEN METALLIC DETECTOR TAPE 12" ABOVE THE PIPE, THE ENTIRE LENGTH OF THE STUB CONTINUING UP THE 2X4 SIDE SEWER MARKER POST. IDENTIFICATION ON THE TAPE SHALL INCLUDE THE WORDS "SANITARY SEWER".

MATERIALS
20 SANITARY SEWER PIPE LESS THAN EIGHTEEN (18) FEET IN DEPTH AND LESS THAN 20% SLOPE SHALL BE PVC CONFORMING TO ASTM D-3034, SDR-35 AND SHALL BE BEDDED WITH CLEAN, GRANULAR MANUFACTURED PEA GRAVEL FROM 4" UNDER TO 6" OVER THE PIPE. SANITARY SEWER PIPE EIGHTEEN (18) FEET DEEP AND GREATER, OR ON A SLOPE OF 20% DUCTILE-IRON PIPE MUST MEET THE REQUIREMENTS OF AWWA C-151.
21 HIGH-DENSITY POLYETHYLENE (HDPE) SHALL BE SDR-11 MINIMUM.

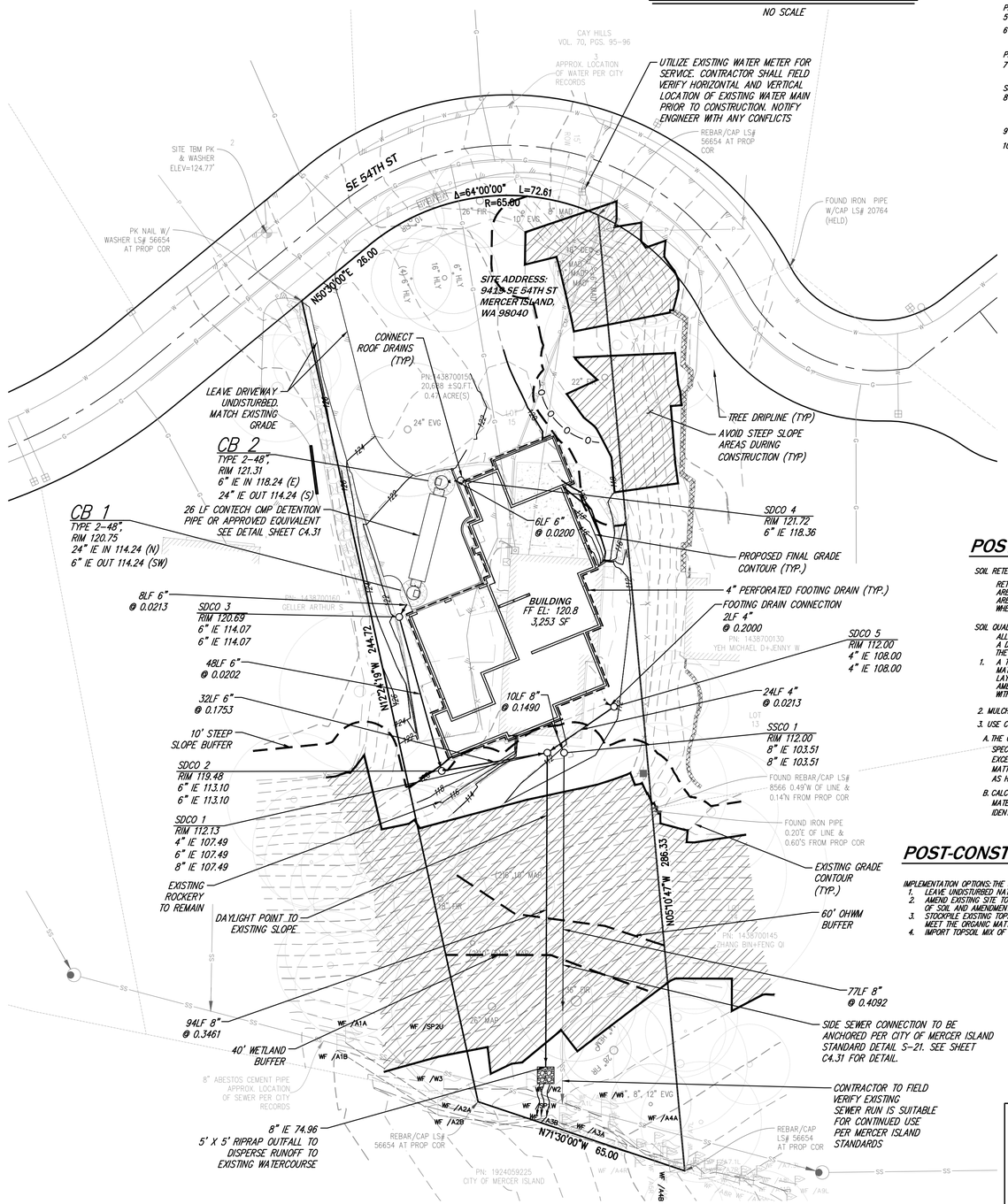
TREE PROTECTION NOTES

1. CONTRACTOR SHALL COORDINATE WITH ARBORIST ON GRADING AROUND RETAINED TREES AND ROOTS.
2. ARBORIST TO BE ONSITE TO VERIFY PRESERVATION OF RETAINED TREES



DRIVEWAY SECTION

NO SCALE



WATER GENERAL NOTES

1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE DEVELOPER EXTENSION AGREEMENT, THE STANDARD SPECIFICATIONS AND THE STANDARD DETAILS OF THE CITY OF MERCER ISLAND.

UTILITY LOCATES
2 THE APPROXIMATE LOCATIONS OF EXISTING UTILITIES ARE SHOWN ON PLANS AND PROFILES FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF UTILITY LOCATIONS SHOWN AND FOR DISCOVERY OF POSSIBLE ADDITIONAL UTILITIES NOT SHOWN ON PLANS.
3 IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE LOCATED BY APPROPRIATE UTILITY DISTRICTS OR COMPANIES, ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
4 FOR UTILITY LOCATES IN KING COUNTY, CALL 1-800-424-5555 PRIOR TO DIGGING.

PERMITS
5 THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL REGULATORY PERMITS.
6 ALL WORK IN RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF PERMITTING AGENCY.

PRE-CON
7 A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD AT THE CITY OF MERCER ISLAND'S OFFICE PRIOR TO THE START OF CONSTRUCTION. CITY STAFF WILL NOTIFY THE APPROPRIATE AGENCIES OR REPRESENTATIVES.

SURVEYING
8 PRIOR TO CONSTRUCTING ANY WATER MAINS, THE STREET CENTERLINES OF THE DEVELOPMENT, CENTER OF CUL-DE-SACS, ALL WATER LINE EASEMENTS AND ALL LOT CORNERS SHALL BE STAKED. THE MAXIMUM STATIONING INTERVAL WILL BE 50 FEET WITH THE STATION NUMBER ON EACH STAKE.
9 HORIZONTAL CONTROL DATA SHALL BE NAD '83/'91. VERTICAL CONTROL SHALL BE NAVD-88 DATUM.
10 AT THE CONCLUSION OF CONSTRUCTION, THE DEVELOPER'S REGISTERED PROFESSIONAL SURVEYOR SHALL PREPARE A DRAWING BASED ON THE SURVEYED LOCATIONS OF ALL APPURTENANCES INSTALLED, INCLUDING BUT NOT LIMITED TO, WATER MAIN, METER BOXES, BLOWOFFS, VALVES BOXES, HYDRANTS AND BENDS. THE DISTRICT WILL PROVIDE LOCATES TO ASSIST THE SURVEYOR IN LOCATING THE WATER MAIN BETWEEN APPURTENANCES AND LOCATING THE BENDS. THE DRAWING SHALL BE PROVIDED TO THE DISTRICT IN AUTOCAD FORMAT, R 2000 OR NEWER. IN ADDITION, ALL WATER EASEMENTS SHALL BE STAKED AND FLAGGED AT THEIR INTERSECTION WITH PROPERTY LINES AND AT 25 FOOT STATIONS ALONG THE EASEMENT LINES.

POST-CONSTRUCTION SOIL QUALITY AND DEPTH NOTES

SOIL RETENTION

RETAIN, IN AN UNDISTURBED STATE, THE DUFF LAYER AND NATIVE TOPSOIL TO THE MAXIMUM EXTENT PRACTICABLE. IN ANY AREAS REQUIRING GRADING REMOVE AND STOCKPILE THE DUFF LAYER AND TOPSOIL ON SITE IN A DESIGNATED, CONTROLLED AREA, NOT ADJACENT TO PUBLIC RESOURCES AND CRITICAL AREAS, TO BE REAPPLIED TO OTHER PORTIONS OF THE SITE WHERE FEASIBLE.

SOIL QUALITY

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

1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A pH FROM 6.0 TO 8.0 OR MATCHING THE pH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYERE SHAOULD BE SCAIFED AT LEAST 4 INCHES WITH SOME INCOPROATION OF THE UPPPER MATERIAL TO AVOID STRATIFIED LAYER, WHERE FEASIBLE.
2. MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL.
3. USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
   A. THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATION FOR BMP T7.30: BIORETENTION CVELLS, SWALES, AND PLANTER BOXES (9.959 OF THE 2014 SWMMWW),, WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE. THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65% AND A CORBON TO NITROGEN RATIO BELOW 25:1. THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF THE PUGET SOUND LOWLANDS REGION.
   B. CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING (A.) ABOVE; OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE COTAMINANT LIMITS IDENTIFIED IN TABLE 220-B, TESTING PARAMETERS, IN WAC 173-350-220.

POST-CONSTRUCTION SOIL QUALITY AND DEPTH NOTES (CONT.)

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

1. LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION.
2. AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PRE-APPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF SOIL AND AMENDMENT.
3. STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT "PRE-APPROVED" RATE OR AT A CUSTOM CALCULATED RATE.
4. IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS.

811 Know what's below. Call before you dig.

UTILITY CONFLICT NOTE:

CAUTION:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DIMENSION, AND DEPTH OF ALL EXISTING UTILITIES WHETHER SHOWN ON THESE PLANS OR NOT, CONTACTING ALL UTILITY COMPANIES, POTHOLING THE UTILITIES, AND SURVEYING THE HORIZONTAL AND VERTICAL LOCATION PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE CALLING UTILITY LOCATE @ 1-800-424-555 AND THEN POTHOLING ALL OF THE EXISTING UTILITIES AT LOCATIONS OF NEW UTILITY CROSSINGS TO PHYSICALLY VERIFY WHETHER OR NOT CONFLICTS EXIST. LOCATIONS OF SAID UTILITIES AS SHOWN ON THESE PLANS ARE BASED UPON THE UNVERIFIED PUBLIC INFORMATION AND ARE SUBJECT TO VARIATION. IF CONFLICTS SHOULD OCCUR, THE CONTRACTOR SHALL CONSULT CORE DESIGN, INC. TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.

DATE / NO. / REVISIONS

08-15-23

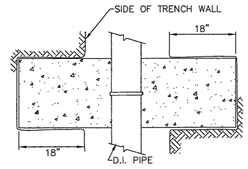
CORE DESIGN
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
SURVEYING
12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877

SITE STORM, UTILITIES & GRADING PLAN & NOTES
9419 & 9433 54TH ST- MERCER ISLAND

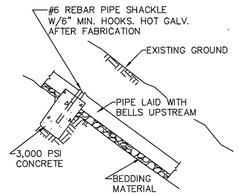
VADIM SCHERBININ
9419 SE 54TH ST.
MERCER ISLAND, WA. 98040

DATE	SEE STAMP DATE
DESIGNED	CHRISTIAN VANDERHOEVEN
DRAWN	CHRISTIAN VANDERHOEVEN
APPROVED	MICHAEL MOODY, PE
	MICHAEL MOODY, PE — PROJECT MANAGER
SHEET	C4.01
OF	6
PROJECT NUMBER	23008

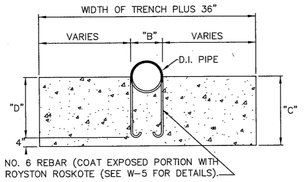
8/15/2023 11:24 AM \\2023\23008\ENGINEERING\FINAL SHEETS\23008 C4.01.DWG



PLAN



PROFILE



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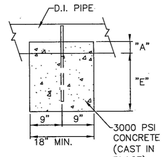


SECTION

PIPE SIZE	DIMENSIONS INCHES				
	A	B	C	D	E
4"	2.4	4.8	17	13	14.6
6"	3.5	6.9	18	14	14.5
8"	4.5	9.1	19	15	14.5
10"	5.6	11.1	20	16	14.4
12"	6.6	13.2	21	17	14.4
14"	7.7	15.3	22	18	14.3
16"	8.7	17.4	23	19	14.3
18"	9.8	19.5	24	20	14.2

NOTES

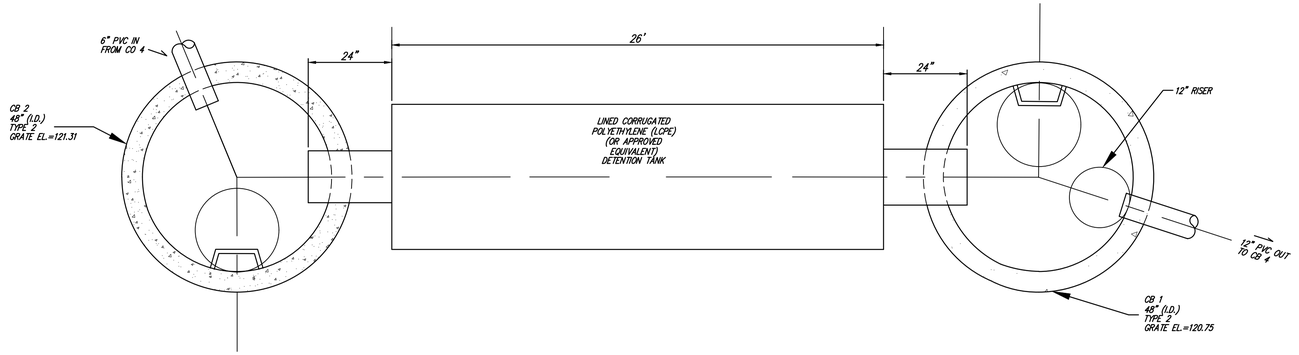
1. PIPE ANCHORS TO BE USED ONLY AS APPROVED BY THE ENGINEER.
2. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 P.S.I.
3. TIE ROD ASSEMBLIES SHALL BE COATED WITH ROYSTON ROSKOTE #612SM OR APPROVED EQUAL.

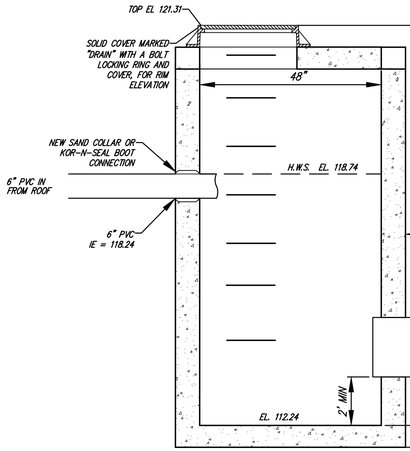
CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER

PIPE ANCHOR DETAIL

6-5-2009	NO SCALE	S-21

REV DATE | | | | | | APPROVED

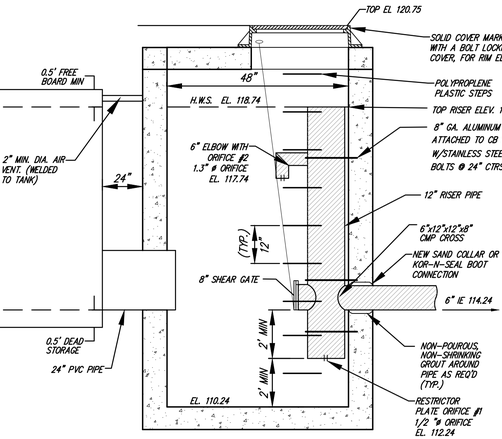




CB 2
NO SCALE

NOTES

1. ALL METAL PARTS AND SURFACES MUST BE MADE OF CORROSION RESISTANT MATERIAL OR GALVANIZED. COMPLETE CORROSION PROTECTION MUST BE ASSURED.
2. PROPOSED BUILDING SHALL BE FITTED WITH SPRINKLERS; FIRE TRUCK ACCESS IS NOT ASSUMED ON ACCESS DRIVEWAY.



CB 1
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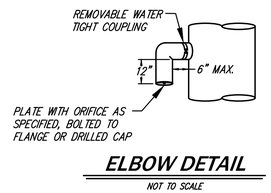


ELBOW DETAIL
NOT TO SCALE

NO.	REVISIONS	DATE

CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
SURVEYING
CORE DESIGN
12100 NE 195th St, Suite 300 Bothell, Washington 98011 425.885.7877

08-15-23

UTILITY DETAILS
9419 54TH ST- MERCER ISLAND

VADIM SCHERBININ
9419 SE 54TH ST.
MERCER ISLAND, WA 98040

DATE	SEE STAMP DATE
DESIGNED	CHRISTIAN VANDERHOEVEN
DRAWN	CHRISTIAN VANDERHOEVEN
APPROVED	MICHAEL MOODY, PE
	MICHAEL MOODY, PE — PROJECT MANAGER

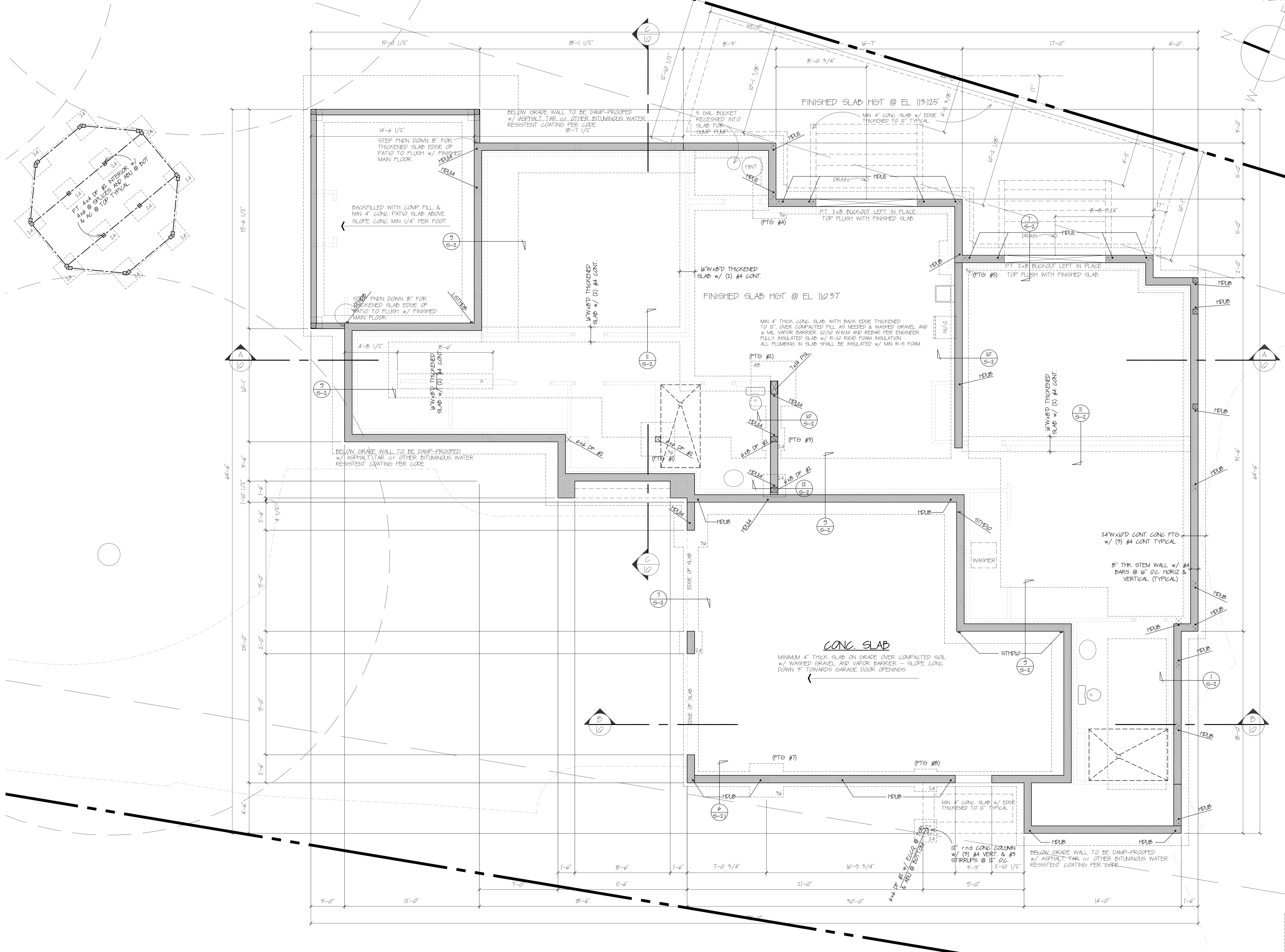
SHEET	OF
C4.31	6

PROJECT NUMBER
23008

FIRE SPRINKLERS REQUIRED
13r, NFPA 72 Monitored Fire Alarm
ALL INTERIOR WALLS & CEILINGS TO HAVE 5/8" TYPE "X" GWB TYPICAL THROUGHOUT. ALL INTERIOR DOORS TO BE 1-3/8" SOLID CORE TYPICAL THROUGHOUT

SEE ENGINEERS SHEET S2 FOR ALL BEAM TO POST CONNECTION HARDWARE AND SHEET S4 FOR SHEAR WALL SCHEDULE, HOLDOWNS, NAILING, ETC...
SEE SHEET N1 FOR GENERAL CONSTRUCTION NOTES

*– SEE ENGINEERS SHEET S1 FOR ALL PAD REINFORCING SIZE, QUANTITY AND PATTERN



FOUNDATION PLAN
1/4"=1'-0"

FOUNDATION NOTES:

- ALL FOUNDATION STEM WALLS TO BE 8" THICK U.N.O.
- ALL FTGS. TO BEAR ON UNDISTERBED SOIL MIN. 1500 lbs. P.S.F.
- SOLID BLOCKING OVER SUPPORTS.
- FOUNDATION STEEL STRUCTURAL ENGINEER – SEE "S" SHEETS
- ALL BEAMS TO BE 4x10 D.F. #2 UNLESS NOTED OTHERWISE.
- 6 MIL. BLACK VAPOR BARRIER OVER ENTIRE CRAWL AREA. 18" MIN. CLEARANCE UNDER FLOOR JOISTS.
- SEE MAIN FLOOR FRAMING PAGE FOR FOUNDATION VENTILATION
- ALL WOOD IN CONTACT w/ CONCRETE TO BE PRESSURE TREATED
- ALL METAL CONNECTORS IN CONTACT w/ PRESSURE TREADTED MATERIAL TO BE "Z-MAX" CORROSIVE RESISTANT MATERIAL OR EQUAL.
- ALL METAL FASTENERS SUCH AS NAILS, STAPLES or LAG BOLTS IN CONTACT w/ PRESSURE TREATED MATERIALS SHALL BE STAINLESS STEEL, "Z-MAX", OR HAVE PROTECTIVE RUBBER MEMBRANE or SLEAVE PROTECTOR.
- WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THE ARCHIECT/DESIGNER SHALL BE INFORMED OF ANY VARIATIONS FROM THE DIMESNIONS AND CONDITIONS SHOWN ON THE DRAWINGS PRIOR TO or DURING CONSTRUCTION.

ANCHOR BOLTS AND SPACING PER ENGINEER'S "S" SHEETS

Pad	Description
24	– 24"x24"x10" CONC. PAD w/ (3) #4 BARS EA. WAY
30	– 30"x30"x10" CONC. PAD w/ (4) #4 BARS EA. WAY
36	– 36"x36"x14" CONC. PAD w/ (3) #5 BARS EA. WAY
48	– 48"x48"x36" CONC. PAD w/ (5) #5 BARS EA. WAY

MDB RESIDENTIAL DESIGN ASSOCIATES
8801 SAINT THOMAS DRIVE
SPACE #222
PASCO, WA 99301
425-830-6713

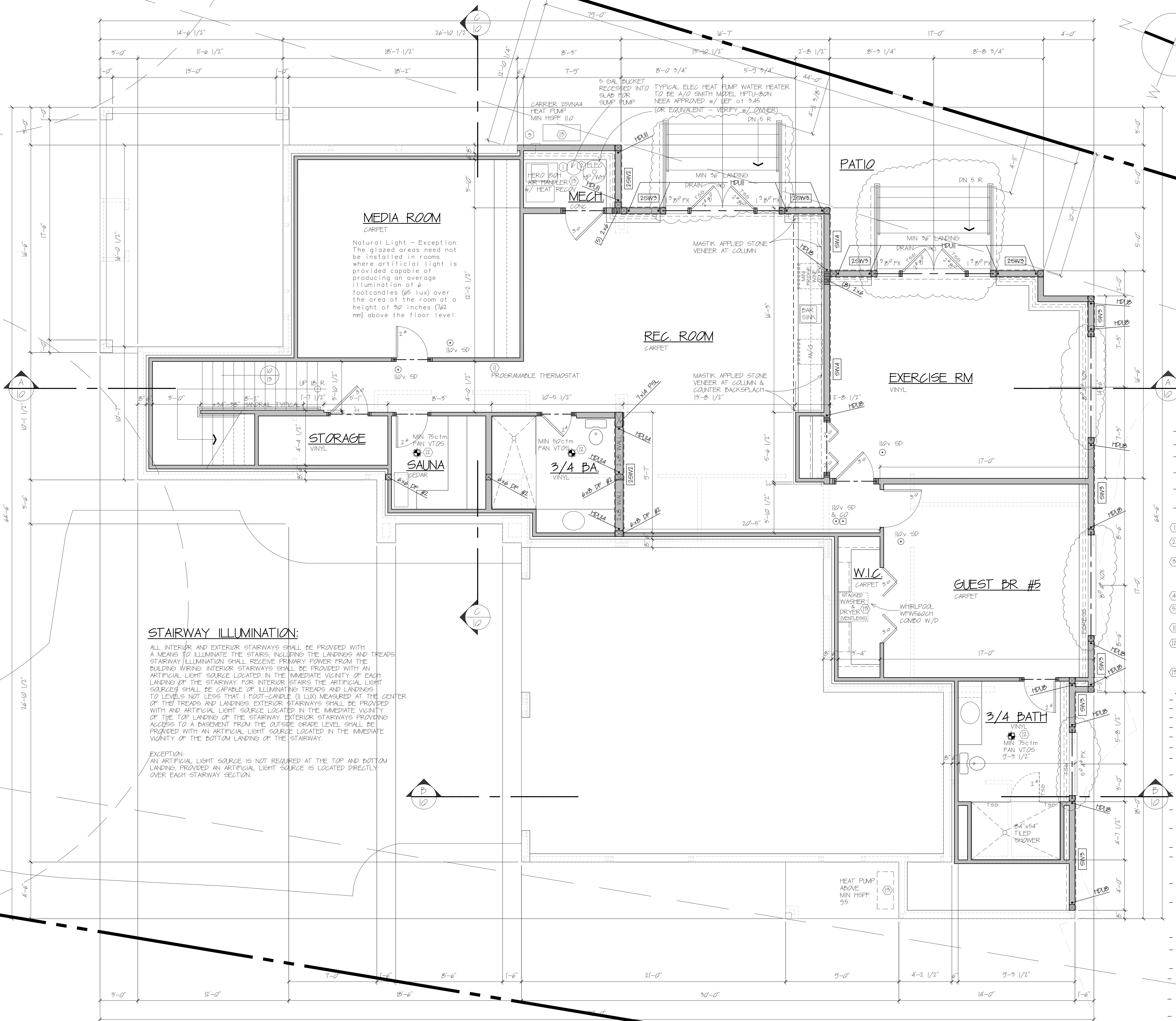
PROJECT: 9419 SE 54th ST
ELITE HOMES NW
PARCEL # 143870-0150

FOUNDATION PLAN

ENG FILE#:	
ENG BY:	
DWG DATE:	05.05.23
DRAWN BY:	MDB
REV. BY:	
REV. DATE:	
FILE NUMBER	22-002
SHEET NUMBER	OF 2

FIRE SPRINKLERS REQUIRED
13r, NFPA 72 Monitored Fire Alarm
ALL INTERIOR WALLS & CEILINGS TO HAVE 5/8" TYPE "X" GWB TYPICAL THROUGHOUT. ALL INTERIOR DOORS TO BE 1-3/8" SOLID CORE TYPICAL THROUGHOUT

SEE ENGINEERS SHEET S2 FOR ALL BEAM TO POST CONNECTION HARDWARE AND SHEET S4 FOR SHEAR WALL SCHEDULE, HOLDOWNS, NAILING, ETC...
SEE SHEET N1 FOR GENERAL CONSTRUCTION NOTES



STAIRWAY ILLUMINATION:

ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS TO ILLUMINATE THE STAIRS, INCLUDING THE LANDINGS AND TREADS. STAIRWAY ILLUMINATION SHALL RECEIVE PRIMARY POWER FROM THE BUILDING WIRING. INTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF EACH LANDING OF THE STAIRWAY. FOR INTERIOR STAIRS THE ARTIFICIAL LIGHT SOURCES SHALL BE CAPABLE OF ILLUMINATING TREADS AND LANDINGS TO LEVELS NOT LESS THAT 1 FOOT-CANDLE (11 LUX) MEASURED AT THE CENTER OF THE TREADS AND LANDINGS. EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AND ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF THE STAIRWAY. EXTERIOR STAIRWAYS PROVIDING ACCESS TO A BASEMENT FROM THE OUTSIDE GRADE LEVEL SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE BOTTOM LANDING OF THE STAIRWAY.

EXCEPTION:
AN ARTIFICIAL LIGHT SOURCE IS NOT REQUIRED AT THE TOP AND BOTTOM LANDING, PROVIDED AN ARTIFICIAL LIGHT SOURCE IS LOCATED DIRECTLY OVER EACH STAIRWAY SECTION.

BASEMENT FLOOR PLAN
1/4"=1'-0"   9'-1" CLG

FIRE BLOCKING NOTES:

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

1. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS AS FOLLOWS:

1.1. VERTICALLY AT THE CEILING AND FLOOR LEVELS.

1.2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET.

2. AT ALL INTER CONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS.
3. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SEDCTION R311.2.2.
4. AT OPENINGS AROUND VENTS, PIPES, AND DUCTS AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAMES AND PRODUCTS OF COMBUSTION.
5. FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES, SEE SECTION R1001.16.
6. FIREBLOCKING OF CORNICES OF A TWO-FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING UNIT SEPARATION.

TUBS & SHOWERS:

- FIREBLOCK BETWEEN STUDS.
- LIMIT SHOWER FLOW TO 3 G.P.M.
- WALLS SHALL BE WATERPROOF TO MIN. 72" ABOVE DRAIN INLET.
- ALL GLAZING INCLUDING WINDOWS WITHIN 72" OF DRAIN INLET TO BE SAFETY GLASS.
- AN AIR BARRIER SHALL BE INSTALLED AT EXTERIOR WALLS ADJACENT TO TUBS AND SHOWERS.
- ANY AND ALL HOT WATER PIPING SHALL BE INSULATED WITH A MINIMUM R-3 PIPE INSULATION.

(1) INSTALL PER MFR INSTRUCTIONS – VERIFY w/ OWNER / CONTRACTOR

(2) IGNITION SOURCE AND HEATING ELEMENT TO BE MIN 18" ABOVE FINISHED FLOOR

(3) PRESSURIZED SYSTEM w/ OUTSIDE FRESH AIR DUCT (NO WHOLE HOUSE FAN REQUIRED WITH THIS OPTION) IF WINDOWS IN HOUSE HAVE VENTS A WHOLE HOUSE FAN IS REQUIRED.

(4) PROVIDE MINIMUM 6" DIA. DUCT FOR COMBUSTION AIR. AS NEEDED

(5) PROVIDE ALARM AND SENSOR IF PROPANE GAS IS USED FOR HEAT AND COOKING SOURCE.

(11) PROGRAMABLE THERMOSTAT LOCATION (ONE PER FLOOR TYPICAL) SEE PLANS

(12) EXHAUST VENT FROM FAN (PER CODE REQUIRED MINIMUM DUCTING) VENT CAP TERMINATION TO MINIMUM 36" HORIZ AND 60" VERT FROM ANY OPERABLE WINDOW

(13) ALL APPLINACES TO BE APPROVED ENERGY STAR RATED EQUIPMENT.

BASEMENT NOTES:

- ALL BEAMS & HEADERS TO BE 4x12 H.F. #2 U.N.O.
- ALL GLU-LAM BEAMS TO BE ASSUMED 24F-V4 U.N.O.
- TYPICAL PLATE TO BE 9'-1 1/8" U.N.O.
- TOP OF WINDOWS TO BE @ 8'-0" U.N.O.
- ALL EXTERIOR WALLS TO BE 2x6 @ 16" O.C. UNLESS NOTED OTHERWISE
- ALL EXTERIOR WALLS TO BE INSULATED w/ R-21 INSULATION.
- DENOTES DOUBLE TRIMMERS AT EACH END OF HEADER THAT SPANS 6'-0" OR GREATER
- DENOTES MULTIPLE STUDS UNDER POINT LOADS SEE PLAN FOR NUMBER OF STUDS REQUIRED
- ALL SMOKE DETECTORS TO BE HOT WIRED AND INTERCONNECTED w/ BATTERY BACKUP IN NEW CONSTRUCTION
- CO DETECTORS TO BE HOT WIRED AND INTERCONNECTED w/ BATTERY BACKUP IN NEW CONSTRUCTION
- SMOKE DETECTOR TO BE ON THE CEILING INSIDE THE DOOR OF EACH BEDROOM BUT A MINIMUM 12" FROM ANY WALL.
- SMOKE ALARMS TO BE AUDIBLE IN ALL BEDROOMS AND SLEEPING AREAS.
- A CARBON MONOXIDE DETECTOR or COMBINATION CO / SMOKE ALARM MUST BE LOCATED OUTSIDE OF BEDROOMS OR IN HALLS SERVING BEDROOMS AND THERE MUST BE A MINIMUM OF ONE PER FLOOR
- MINIMUM OF ONE ADDITIONAL SMOKE DETECTOR PER FLOOR. SMOKE DETECTORS TO BE PLACED CENTRALLY IN HALLWAYS SERVING BEDROOMS.
- VAULTED CEILINGS GREATER THAN 30" ABOVE HALLS TO BEDROOMS AND STARIWELLS OFF OF HALLWAYS SERVING SLEEPING ROOMSTO HAVE A SMOKE DETECTOR PLACED 12" DOWN FROM HIGHEST POINT, (BUT NOT IN-SKYLT WELLS), AND A MINIMUM OF 12" FROM ANY WALL.
- SMOKE ALARMS TO BE AUDIBLE IN ALL BEDROOMS AND SLEEPING AREAS.
- ALL HOUSE/GARAGE COMMON WALLS TO BE SHEATHED w/ 1/2" G.W.B. 5/8" TYPE "X" ON GARAGE CEILINGS w/ LIVING SPACE ABOVE.
- ALL ENCLOSED USEABLE SPACE UINDER STAIRS TO BE SHEATHED w/ 1/2" G.W.B.
- ALL WINDOWS WITHIN 18" OF THE FLOOR OR WITHIN 24" OF DOOR SWINGS, TUBS, AND SHOWERS, TO BE TEMPERED SAFETY GLASS.
- DOOR BETWEEN HOUSE & GARAGE TO BE 1 3/8" SOLID CORE 1 HR RATED FIRE DOOR
- FIRE BLOCKING REQUIRED AT 10'-0" INTERVALS VERTICALLY IN WALLS.
- FIRE BLOCK AT ALL PLUMBING PENETRATIONS
- HANDRAIL @ 34"-38" ABV. TREAD NOSING
- INSTALL FIREPLACES PER MANUFACTURER'S SPECS.
- VENT ALL FANS & DRYER EXAUST TO OUTSIDE
- PROVIDE EGRESS WINDOWS IN ALL SLEEPING ROOMS

MDB RESIDENTIAL DESIGN ASSOCIATES
8801 SAINT THOMAS DRIVE
SPACE #222
PASCO, WA 99301
425-830-6713

PROJECT: 9419 SE 54th ST
ELITE HOMES NW
PARCEL # 143870-0150

BASEMENT FLOOR FRAMING PLAN

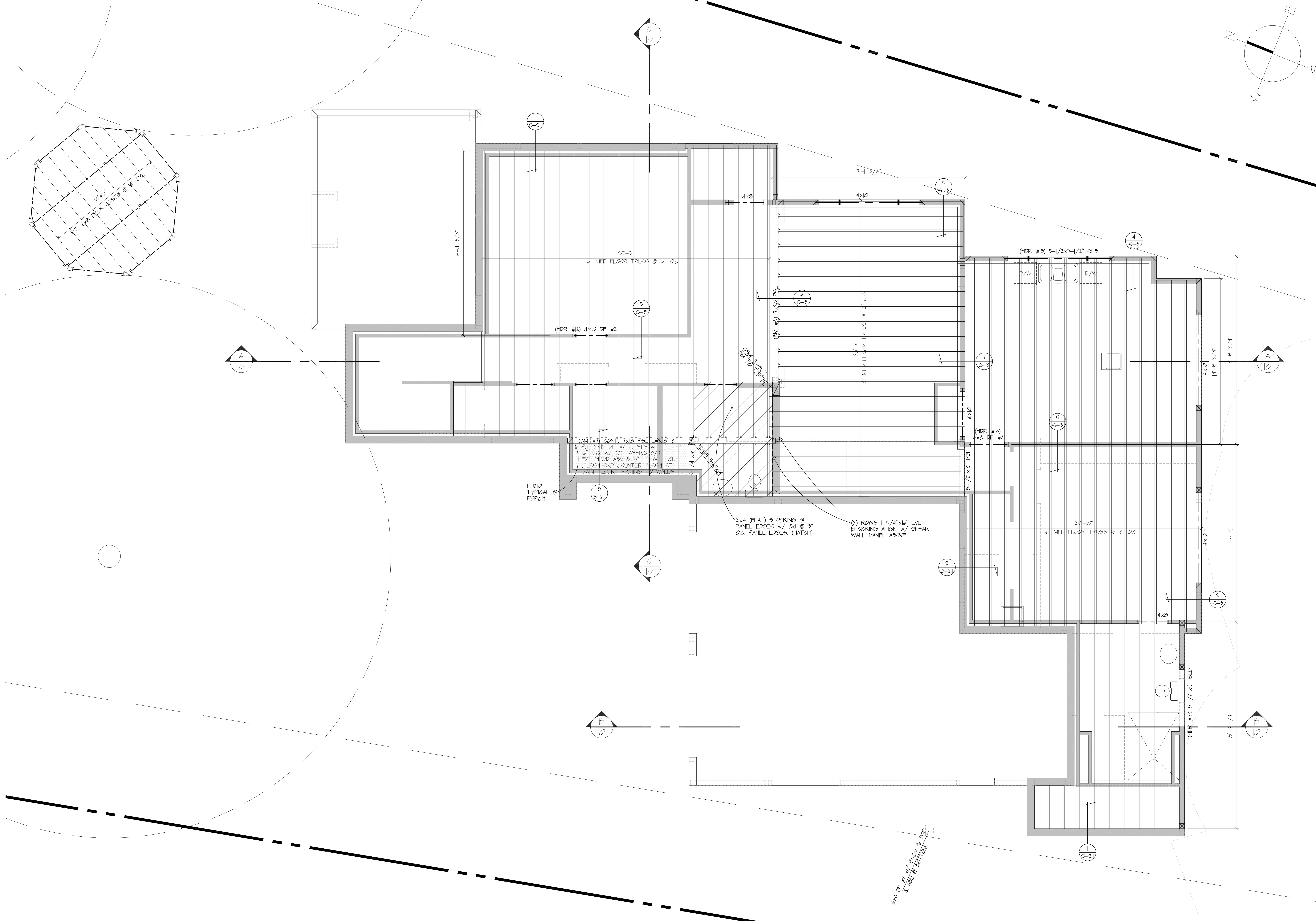
ENG FILE#:	
ENG BY:	
DWG DATE:	05.05.23
DRAWN BY:	MDB
REV. BY:	
REV. DATE:	
FILE NUMBER	22-002
SHEET NUMBER	2 OF 2

FIRE SPRINKLERS REQUIRED

13r, NFPA 72 Monitored Fire Alarm

ALL INTERIOR WALLS & CEILINGS TO HAVE 5/8" TYPE "X" GWB TYPICAL THROUGHOUT. ALL INTERIOR DOORS TO BE 1-3/8" SOLID CORE TYPICAL THROUGHOUT

SEE ENGINEERS SHEET S2 FOR ALL BEAM TO POST CONNECTION HARDWARE AND SHEET S4 FOR SHEAR WALL SCHEDULE, HOLDOWNS, NAILING, ETC...
SEE SHEET N1 FOR GENERAL CONSTRUCTION NOTES



MAIN FLOOR FRAMING PLAN

1/4"=1'-0"

M.F. FRAMING NOTES:

- ALL FLOOR TRUSSES TO BE PER PLAN.
- ALL FLR TRUSS TO BE INSTALLED & BRACED TO MANUF. SPECS. AND STAMP.
- FLR TRUSS SHALL HAVE DESIGN DETAILS & DRAWINGS ON SITE FOR INSPECTION
- 3/4" T&G PLYWOOD SUBFLOOR – GLUE & NAIL, BLOCK @ ALL UNSUPPORTED EDGES.
- SOLID BLOCKING @ BEARING POINTS.
- ALL BEAMS AND HEADERS TO BE VERIFIED WITH STAMPED ENGINEERING CALCULATIONS. THIS OFFICE MUST BE NOTIFIED WITH ANY VARIATIONS BEFORE PROCEEDING.
- ALL HANGERS AND HARDWARE TO BE PER FLOOR TRUSS M.F.R. U.N.O.
- USE MIN. R-38 INSULATION AT JOIST BELOW HEATED FLOOR AREA OVER CRAWLSPACE.

MDB RESIDENTIAL DESIGN ASSOCIATES
8801 SAINT THOMAS DRIVE
SPACE #222
PASCO, WA 99301
425-830-6713

PROJECT: 9419 SE 54th ST
ELITE HOMES NW
PARCEL # 143870-0150

MAIN FLOOR FRAMING PLAN

ENG FILE#:	
ENG BY:	
DWG DATE:	05.05.23
DRAWN BY:	MDB
REV. BY:	
REV. DATE:	

FILE NUMBER
22-002

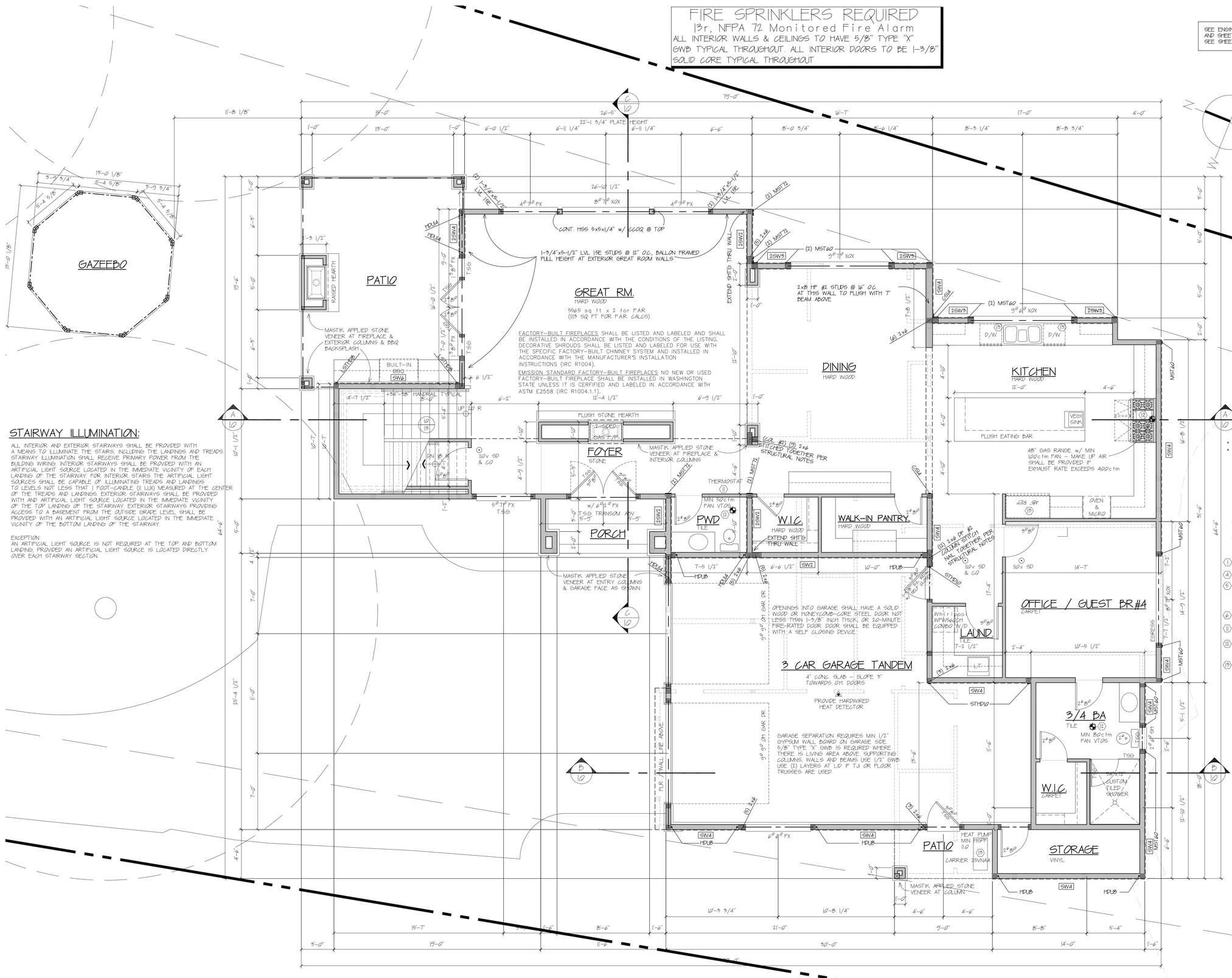
SHEET NUMBER
3 OF 12

FIRE SPRINKLERS REQUIRED

13r, NFPA 72 Monitored Fire Alarm

ALL INTERIOR WALLS & CEILINGS TO HAVE 5/8" TYPE "X" GWB TYPICAL THROUGHOUT. ALL INTERIOR DOORS TO BE 1-3/8" SOLID CORE TYPICAL THROUGHOUT

SEE ENGINEERS SHEET S2 FOR ALL BEAM TO POST CONNECTION HARDWARE AND SHEET S4 FOR SHEAR WALL SCHEDULE, HOLDOWNS, NAILING, ETC...
SEE SHEET N1 FOR GENERAL CONSTRUCTION NOTES



FACTORY-BUILT FIREPLACES SHALL BE LISTED AND LABELED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE CONDITIONS OF THE LISTING. DECORATIVE SHROUDS SHALL BE LISTED AND LABELED FOR USE WITH THE SPECIFIC FACTORY-BUILT CHIMNEY SYSTEM AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS (IRC R1004).

EMISSION STANDARD FACTORY-BUILT FIREPLACES NO NEW OR USED FACTORY-BUILT FIREPLACE SHALL BE INSTALLED IN WASHINGTON STATE UNLESS IT IS CERFIFIED AND LABELED IN ACCORDANCE WITH ASTM E2558 (IRC R1004.1.1).

OPENINGS INTO GARAGE SHALL HAVE A SOLID WOOD OR HONEYCOMB-CORE STEEL DOOR NOT LESS THAN 1-3/8" INCH THICK, OR 20-MINUTE FIRE-RATED DOOR. DOOR SHALL BE EQUIPPED WITH A SELF CLOSING DEVICE.

GARAGE SEPARATION REQUIRES MIN 1/2" GYPSUM WALL BOARD ON GARAGE SIDE. 5/8" TYPE "X" GWB IS REQUIRED WHERE THERE IS LIVING AREA ABOVE. SUPPORTING COLUMNS, WALLS AND BEAMS USE 1/2" GWB. USE (2) LAYERS AT LID IF TJI OR FLOOR TRUSSES ARE USED.

MAIN FLOOR PLAN

1/4"=1'-0"   10'-4 1/2" CLG

STAIRWAY ILLUMINATION:

ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS TO ILLUMINATE THE STAIRS, INCLUDING THE LANDINGS AND TREADS. STAIRWAY ILLUMINATION SHALL RECEIVE PRIMARY POWER FROM THE BUILDING WIRING. INTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF EACH LANDING OF THE STAIRWAY. FOR INTERIOR STAIRS THE ARTIFICIAL LIGHT SOURCES SHALL BE CAPABLE OF ILLUMINATING TREADS AND LANDINGS TO LEVELS NOT LESS THAT 1 FOOT-CANDLE (11 LUX) MEASURED AT THE CENTER OF THE TREADS AND LANDINGS. EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AND ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF THE STAIRWAY. EXTERIOR STAIRWAYS PROVIDING ACCESS TO A BASEMENT FROM THE OUTSIDE GRADE LEVEL SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE BOTTOM LANDING OF THE STAIRWAY.

EXCEPTION:
AN ARTIFICIAL LIGHT SOURCE IS NOT REQUIRED AT THE TOP AND BOTTOM LANDING, PROVIDED AN ARTIFICIAL LIGHT SOURCE IS LOCATED DIRECTLY OVER EACH STAIRWAY SECTION.

FIRE BLOCKING NOTES:

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

1. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS AS FOLLOWS:

1.1. VERTICALLY AT THE CEILING AND FLOOR LEVELS.

1.2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET.

2. AT ALL INTER CONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS.
3. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SEDCTION R311.2.2.
4. AT OPENINGS AROUND VENTS, PIPES, AND DUCTS AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAMES AND PRODUCTS OF COMBUSTION.
5. FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES, SEE SECTION R1001.16.
6. FIREBLOCKING OF CORNICES OF A TWO-FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING UNIT SEPARATION.

AREA SUMMARY:

MAIN FLOOR AREA	=	2,235	S.F.	= 4,666 S.F.
UPPER FLOOR AREA	=	2,331	S.F.	
BASEMENT FLR AREA	=	2,186	S.F.	
TOTAL LIVING AREA	=	6,852	S.F.	
GARAGE AREA	=	727	S.F.	
*COVR'D PORCH / PATIO & GAZEEBO	=	*568	*S.F.	
SUN PATIO	=	455	S.F.	
DRIVEWAY AREA	=	1,648	S.F.	
LOT COVERAGE BY STRUCTURE	=	5,750	S.F.	
MAX COVERAGE BY STRUCTURE	=	6,935.9	S.F.	

* BSMNT PATIO = 58 SFT / PORCH = 50 SQ FT / GARAGE PATIO = 40 SQ FT
* GREAT ROOM PATIO = 280 SFT / GAZEBO DECK = 140 SQ FT

TUBS & SHOWERS:

- FIREBLOCK BETWEEN STUDS.
- LIMIT SHOWER FLOW TO 3 G.P.M.
- WALLS SHALL BE WATERPROOF TO MIN. 72" ABOVE DRAIN INLET.
- ALL GLAZING INCLUDING WINDOWS WITHIN 72" OF DRAIN INLET TO BE SAFETY GLASS.
- AN AIR BARRIER SHALL BE INSTALLED AT EXTERIOR WALLS ADJACENT TO TUBS AND SHOWERS.
- ANY AND ALL HOT WATER PIPING SHALL BE INSULATED WITH A MINIMUM R-3 PIPE INSULATION.

⟨1⟩ - 22"x30" ATTIC ACCESS - N/A

⟨4⟩ - 18"x24" CRAWL ACCESS - N/A

⟨5⟩ - 0-CLEARANCE METAL OR DIRECT VENT GAS F/P. INSTALL PER MAUNFACTURER'S SPECS., PREFAB F/P TO BEAR THE STAMP OF AN APPROVED TESTING LAB. PROVIDE 6" OUTSIDE AIR, HEARTH PER BUILDER/OWNER.

⟨6⟩ - WHOLE HOUSE FAN - MIN. 150 CFM - MAX. 225 C.F.M.

⟨11⟩ PROGRAMABLE THERMOSTAT LOCATION (ONE PER FLOOR TYPICAL) SEE PLANS

⟨12⟩ EXHAUST VENT FROM FAN (PER CODE REQUIRED MINIMUM DUCTING) VENT CAP TERMINATION TO MINIMUM 36" HORIZ AND 60" VERT FROM ANY OPERABLE WINDOW

⟨13⟩ ALL APPLIANCES TO BE ENERGY STAR RATED EQUIPMENT.

NOTES:

- ALL BEAMS & HEADERS TO BE 4x10 D.F. #2 U.N.O.
- ALL GLU-LAM BEAMS TO BE ASSUMED 24F-V4 U.N.O.
- TYPICAL PLATE TO BE 10'-4 1/2" U.N.O.
- TOP OF DOOR / WINDOWS TO BE @ 8'-0" U.N.O.
- ALL EXTERIOR WALLS TO BE 2x6 @ 16" O.C. UNLESS NOTED OTHERWISE
- ALL EXTERIOR WALLS TO BE INSULATED w/ R-21 INSULATION.
- ▥ DENOTES DOUBLE TRIMMERS AT EACH END OF HEADER THAT SPANS 6'-0" OR GREATER
- ▥ DENOTES MULTIPLE STUDS UNDER POINT LOADS SEE PLAN FOR NUMBER OF STUDS REQUIRED
- ⊙ ALL SMOKE DETECTORS TO BE HOT WIRED AND INTERCONNECTED w/ BATTERY BACKUP IN NEW CONSTRUCTION
- ⊡ CO DETECTORS TO BE HOT WIRED AND INTERCONNECTED w/ BATTERY BACKUP IN NEW CONSTRUCTION
- ▲ HARD WIRED HEAT DETECTOR REQUIRED AT GARAGE
- SMOKE DETECTOR TO BE ON THE CEILING INSIDE THE DOOR OF EACH BEDROOM BUT A MINIMUM 12" FROM ANY WALL.
- SMOKE ALARMS TO BE AUDIBLE IN ALL BEDROOMS AND SLEEPING AREAS.
- A CARBON MONOXIDE DETECTOR or COMBINATION CO / SMOKE ALARM MUST BE LOCATED OUTSIDE OF BEDROOMS OR IN HALLS SERVING BEDROOMS AND THERE MUST BE A MINIMUM OF ONE PER FLOOR
- MINIMUM OF ONE ADDITIONAL SMOKE DETECTOR PER FLOOR. SMOKE DETECTORS TO BE PLACED CENTRALLY IN HALLWAYS SERVING BEDROOMS.
- VAULTED CEILINGS GREATER THAN 30" ABOVE HALLS TO BEDROOMS AND STARIWELLS OFF OF HALLWAYS SERVING SLEEPING ROOMSTO HAVE A SMOKE DETECTOR PLACED 12" DOWN FROM HIGHEST POINT, (BUT NOT IN-SKYLT WELLS), AND A MINIMUM OF 12" FROM ANY WALL.
- SMOKE ALARMS TO BE AUDIBLE IN ALL BEDROOMS AND SLEEPING AREAS.
- ALL HOUSE/GARAGE COMMON WALLS TO BE SHEATHED w/ 1/2" G.W.B. 5/8" TYPE "X" ON GARAGE CEILINGS w/ LIVING SPACE ABOVE.
- ALL ENCLOSED USEABLE SPACE UINDER STAIRS TO BE SHEATHED w/ 1/2" G.W.B.
- ALL WINDOWS WITHIN 18" OF THE FLOOR OR WITHIN 24" OF DOOR SWINGS, TUBS, AND SHOWERS, TO BE TEMPERED SAFETY GLASS.
- DOOR BETWEEN HOUSE & GARAGE TO BE ~~1 3/8"~~ SOLID CORE 1 HR RATED FIRE DOOR
- FIRE BLOCKING REQUIRED AT 10'-0" INTERVALS VERTICALLY IN WALLS.
- FIRE BLOCK AT ALL PLUMBING PENETRATIONS
- HANDRAIL @ 34"-38" ABV. TREAD NOSING
- INSTALL FIREPLACES PER MANUFACTURER'S SPECS.
- VENT ALL FANS & DRYER EXAUST TO OUTSIDE
- PROVIDE EGRESS WINDOWS IN ALL SLEEPING ROOMS

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MAIN FLOOR FRAMING PLAN

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REV. BY:	
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FILE NUMBER
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SHEET NUMBER
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FIRE SPRINKLERS REQUIRED
13r, NFPA 72 Monitored Fire Alarm
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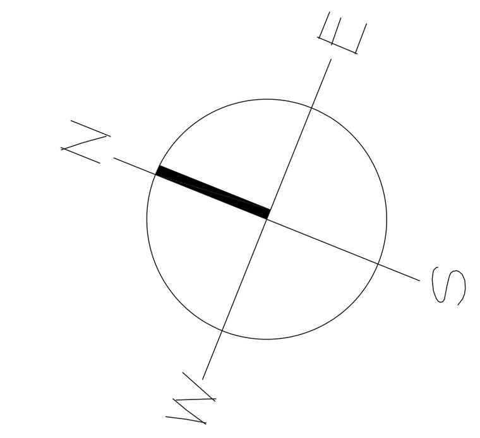
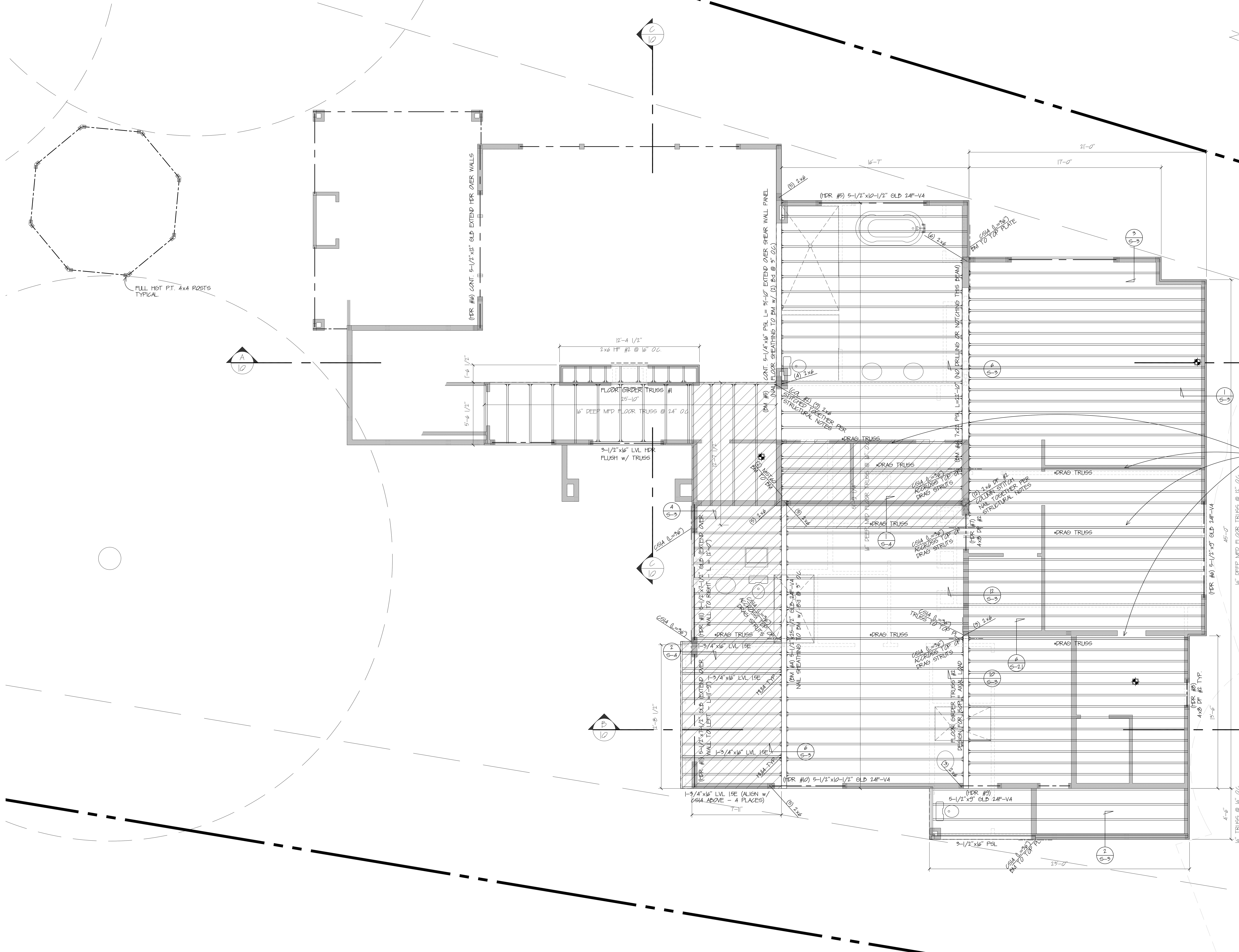
SEE ENGINEERS SHEET S2 FOR ALL BEAM TO POST CONNECTION HARDWARE AND SHEET S4 FOR SHEAR WALL SCHEDULE, HOLDOWNS, NAILING, ETC...
SEE SHEET N1 FOR GENERAL CONSTRUCTION NOTES





*NOTE:
DESIGN TRUSS FOR 250# PLF AXIAL LOAD & SW6 POINT LOAD E= 2.2 KIPS
NAIL SHEATHING TO DRAG TRUSS w/ 8d @ 4" O.C. TYPICAL

= 2x4 (FLAT) BLOCKING AT PANEL EDGES w/ 8d @ 3" O.C. PANEL EDGES

U.F. FRAMING NOTES:

- ALL JOISTS TO BE MFD FLOOR TRUSS PER PLAN.
- ALL FLR TRUSS TO BE INSTALLED & BRACED TO MFR SPECS., DRAWINGS AND HAVE MFR STAMP.
- FLR TRUSS DESIGN DETAILS & DRAWINGS ON SITE FOR INSPECTION
- 3/4" T&G PLYWOOD SUBFLOOR – GLUE & NAIL, BLOCK @ ALL UNSUPPORTED EDGES.
- SOLID BLOCKING @ BEARING POINTS.
- ALL BEAMS AND HEADERS TO BE VERIFIED WITH STAMPED ENGINEERING CALCULATIONS. THIS OFFICE MUST BE NOTIFIED WITH ANY VARIATIONS BEFORE PROCEEDING.
- ALL HANGERS TO BE PER TRUSS MFR & ENG DESIGN OR EQUIVALENT
- USE MIN. R-38 INSULATION AT JOIST BELOW HEATED FLOOR OVER UNHEATED SPACES & GARAGE.

HDR/BM 4x8 DF #2 TYPICAL U.N.O.
POST (2) 2x6 HF #2 TYPICAL U.N.O.

UPPER FLOOR FRAMING PLAN

1/4"=1'-0"

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UPPER FLOOR FRAMING PLAN

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FIRE SPRINKLERS REQUIRED

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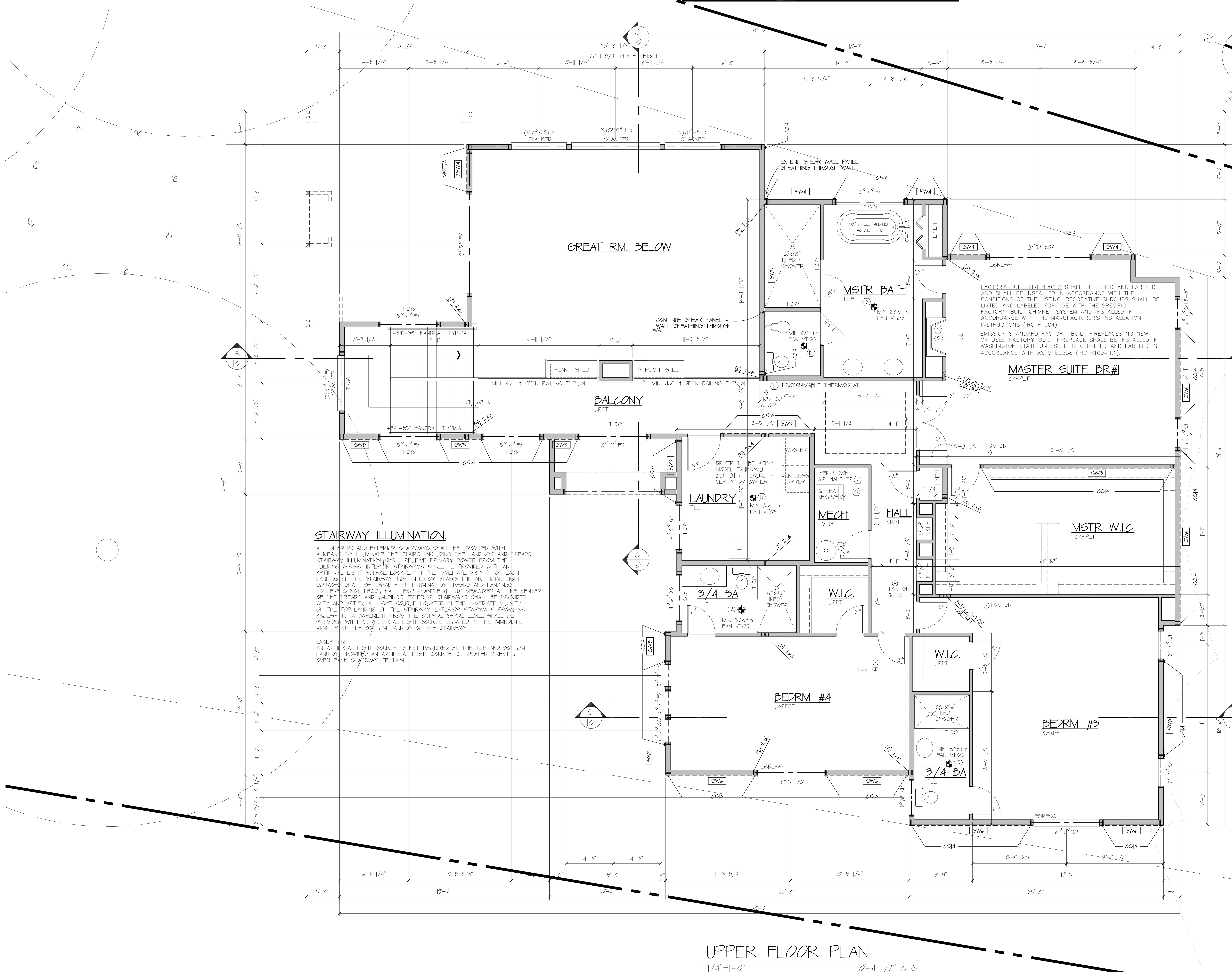

STAIRWAY ILLUMINATION:

ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS TO ILLUMINATE THE STAIRS, INCLUDING THE LANDINGS AND TREADS. STAIRWAY ILLUMINATION SHALL RECEIVE PRIMARY POWER FROM THE BUILDING WIRING. INTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF EACH LANDING OF THE STAIRWAY. FOR INTERIOR STAIRS THE ARTIFICIAL LIGHT SOURCES SHALL BE CAPABLE OF ILLUMINATING TREADS AND LANDINGS TO LEVELS NOT LESS THAT 1 FOOT-CANDLE (11 LUX) MEASURED AT THE CENTER OF THE TREADS AND LANDINGS. EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AND ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE TOP LANDING OF THE STAIRWAY. EXTERIOR STAIRWAYS PROVIDING ACCESS TO A BASEMENT FROM THE OUTSIDE GRADE LEVEL SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE BOTTOM LANDING OF THE STAIRWAY.

EXCEPTION:
AN ARTIFICIAL LIGHT SOURCE IS NOT REQUIRED AT THE TOP AND BOTTOM LANDING, PROVIDED AN ARTIFICIAL LIGHT SOURCE IS LOCATED DIRECTLY OVER EACH STAIRWAY SECTION.

UPPER FLOOR PLAN

1/4"=1'-0" 10'-4 1/2" CLG

FIRE BLOCKING NOTES:

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

1. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS AS FOLLOWS:

1.1. VERTICALLY AT THE CEILING AND FLOOR LEVELS.

1.2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET.

2. AT ALL INTER CONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS.
3. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SEDCTION R311.2.2.
4. AT OPENINGS AROUND VENTS, PIPES, AND DUCTS AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAMES AND PRODUCTS OF COMBUSTION.
5. FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES, SEE SECTION R1001.16.
6. FIREBLOCKING OF CORNICES OF A TWO-FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING UNIT SEPARATION.

TUBS & SHOWERS:

- FIREBLOCK BETWEEN STUDS.
- LIMIT SHOWER FLOW TO 3 G.P.M.
- WALLS SHALL BE WATERPROOF TO MIN. 70" ABOVE DRAIN INLET.
- ALL GLAZING INCLUDING WINDOWS WITHIN 70" OF DRAIN INLET TO BE SAFETY GLASS.
- AN AIR BARRIER SHALL BE INSTALLED AT EXTERIOR WALLS ADJACENT TO TUBS AND SHOWERS.
- ANY AND ALL HOT WATER PIPING SHALL BE INSULATED WITH A MINIMUM R-3 PIPE INSULATION.

(1) - 22"x30" ATTIC ACCESS

(2) INSTALL PER MFR INSTRUCTIONS - VERIFY w/ OWNER / CONTRACTOR

(3) IGNITION SOURCE AND HEATING ELEMENT TO BE MIN 18" ABOVE FINISHED FLOOR

(4) PRESSURIZED SYSTEM w/ OUTSIDE FRESH AIR DUCT (NO WHOLE HOUSE FAN REQUIRED WITH THIS OPTION) IF WINDOWS IN HOUSE HAVE VENTS A WHOLE HOUSE FAN IS REQUIRED.

(5) - 0-CLEARANCE METAL OR DIRECT VENT GAS F/P. INSTALL PER MAUNFACTURER'S SPECS., PREFAB F/P TO BEAR THE STAMP OF AN APPROVED TESTING LAB. PROVIDE 6" OUTSIDE AIR, HEARTH PER BUILDER/OWNER.

(6) PROVIDE MINIMUM 6" DIA. DUCT FOR COMBUSTION AIR. AS NEEDED

(11) PROGRAMABLE THERMOSTAT LOCATION (ONE PER FLOOR TYPICAL) SEE PLANS

(12) EXHAUST VENT FROM FAN (PER CODE REQUIRED MINIMUM DUCTING) VENT CAP TERMINATION TO MINIMUM 36" HORIZ AND 60" VERT FROM ANY OPERABLE WINDOW
*(ALL EXHAUST FANS AT THIS LEVEL TO VENT TO ROOF w/ CAP)

(13) ALL APPLIANCES TO BE ENERGY STAR RATED EQUIPMENT.

(14) TYPICAL ELEC HEAT PUMP WATER HEATER TO BE A/O SMITH MODEL HPTU-80N NEEA APPROVED w/ UEF OF 3.45 (OR EQUIVALENT - VERIFY w/ OWNER OR CONTRACTOR)

NOTES:

- ALL BEAMS & HEADERS TO BE **4x8 D.F. #2** U.N.O.
- ALL GLU-LAM BEAMS TO BE ASSUMED **24F-V4** U.N.O.
- TYPICAL PLATE TO BE **10'-4 1/2"** U.N.O.
- TOP OF DOORS @ **8'-0"** & WINDOWS TO BE @ **9'-2 1/4"** U.N.O.
- ALL EXTERIOR WALLS TO BE 2x6 @ 16" O.C. UNLESS NOTED OTHERWISE
- ALL EXTERIOR WALLS TO BE INSULATED w/ R-21 INSULATION.
- ▯ DENOTES DOUBLE TRIMMERS AT EACH END OF HEADER THAT SPANS 6'-0" OR GREATER
- ▯ DENOTES MULTIPLE STUDS UNDER POINT LOADS SEE PLAN FOR NUMBER OF STUDS REQUIRED
- ⊙ ALL SMOKE DETECTORS TO BE HOT WIRED AND INTERCONNECTED w/ BATTERY BACKUP
- SMOKE DETECTOR TO BE ON THE CEILING INSIDE THE DOOR OF EACH BEDROOM
- SMOKE ALARMS TO BE AUDIBLE IN ALL BEDROOMS AND SLEEPING AREAS.
- ALL HOUSE/GARAGE COMMON WALLS TO BE SHEATHED w/ 1/2" G.W.B. 5/8" TYPE "X" ON GARAGE CEILINGS w/ LIVING SPACE ABOVE.
- ALL ENCLOSED USEABLE SPACE UINDER STAIRS TO BE SHEATHED w/ 1/2" G.W.B.
- ALL WINDOWS WITHIN 18" OF THE FLOOR OR WITHIN 24" OF DOOR SWINGS, TUBS, AND SHOWERS, TO BE TEMPERED SAFETY GLASS.
- FIRE BLOCKING REQUIRED AT 10'-0" INTERVALS VERTICALLY IN WALLS.
- FIRE BLOCK AT ALL PLUMBING PENETRATIONS
- HANDRAIL @ 34"-38" ABV. TREAD NOSING
- VENT ALL FANS & DRYER EXAUST TO OUTSIDE

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UPPER FLOOR PLAN

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REV. BY:	
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FILE NUMBER 22-002

SHEET NUMBER 6 OF 12

FIRE SPRINKLERS REQUIRED

13r, NFPA 72 Monitored Fire Alarm
ALL INTERIOR WALLS & CEILINGS TO HAVE 5/8" TYPE "X" GWB TYPICAL THROUGHOUT. ALL INTERIOR DOORS TO BE 1-3/8" SOLID CORE TYPICAL THROUGHOUT

SEE ENGINEERS SHEET S2 FOR ALL BEAM TO POST CONNECTION HARDWARE AND SHEET S4 FOR SHEAR WALL SCHEDULE, HOLDOWNS, NAILING, ETC.,
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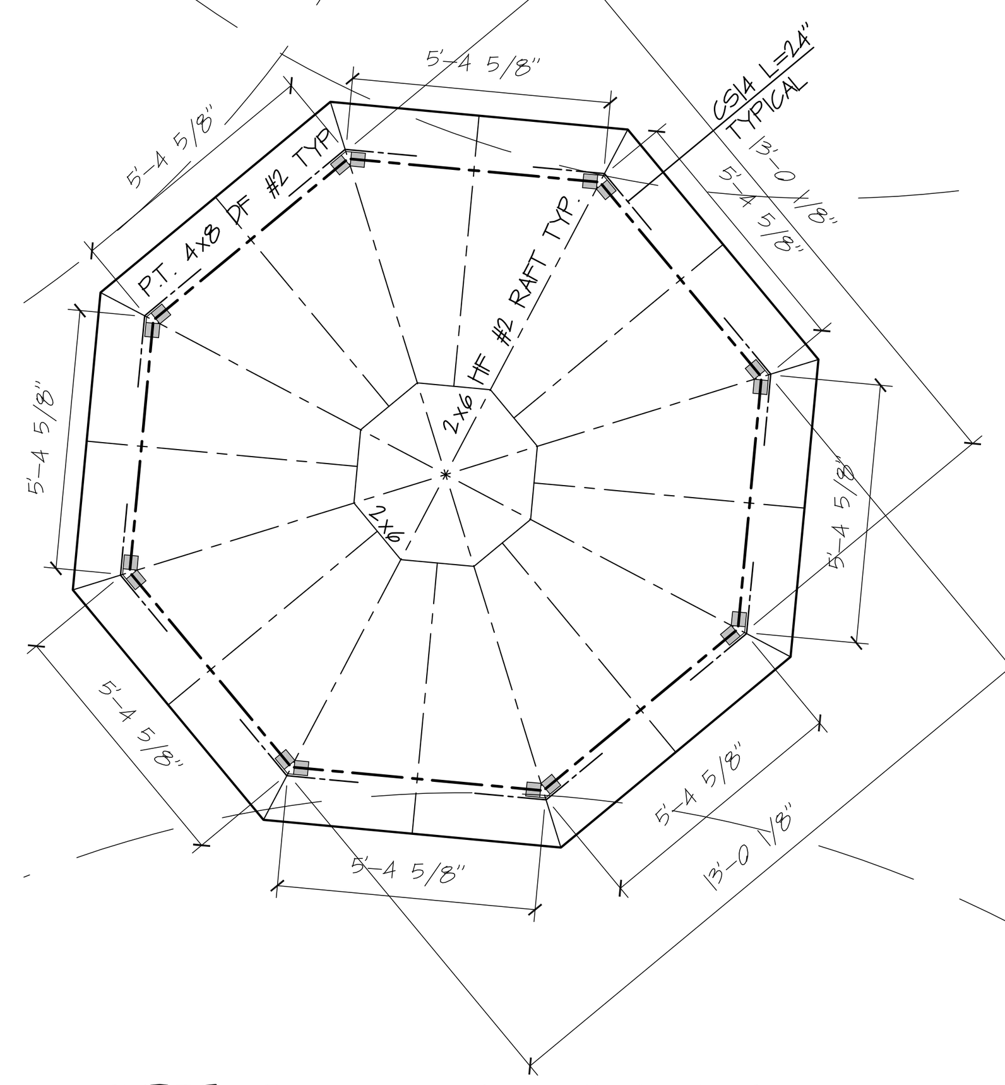
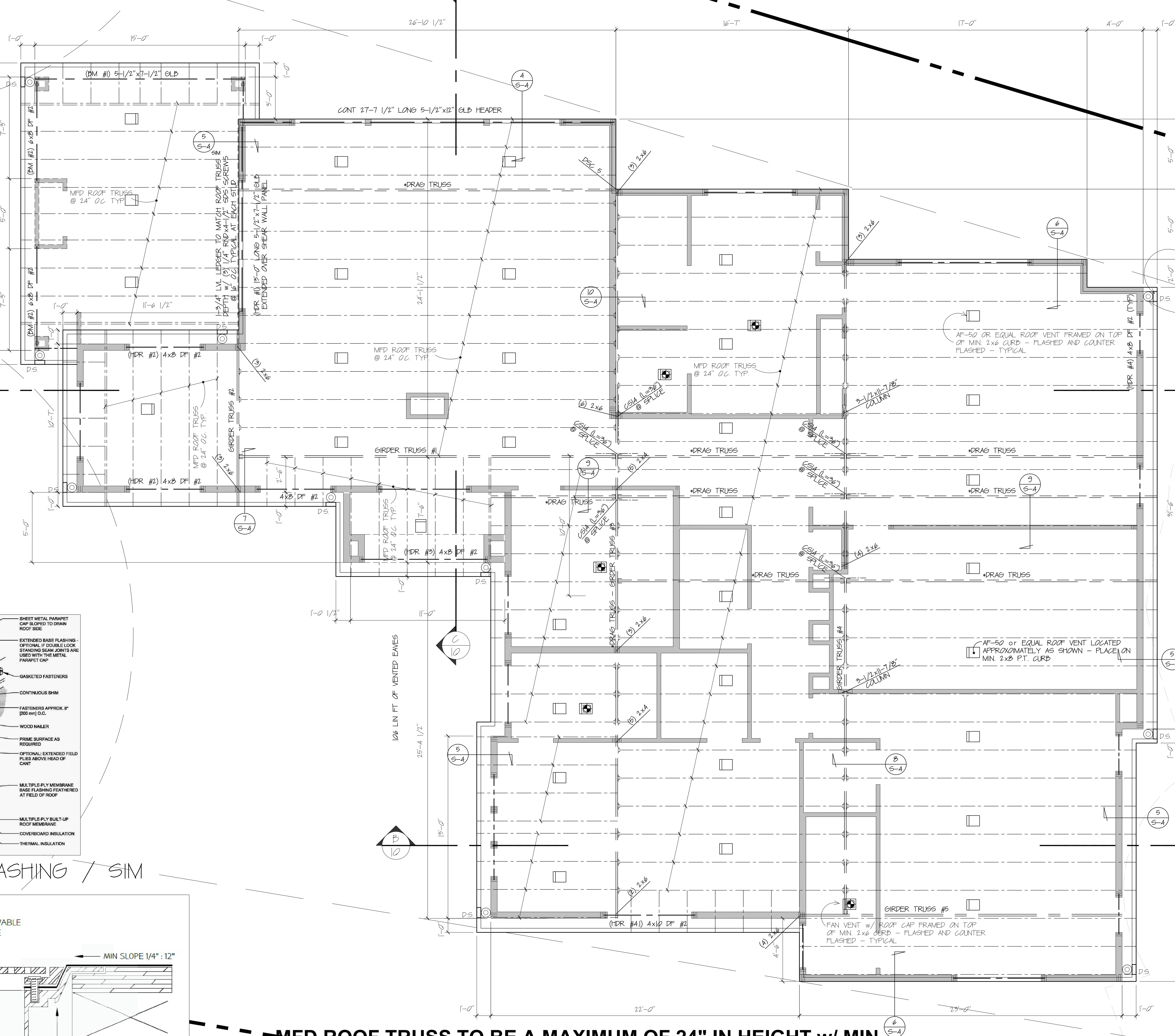


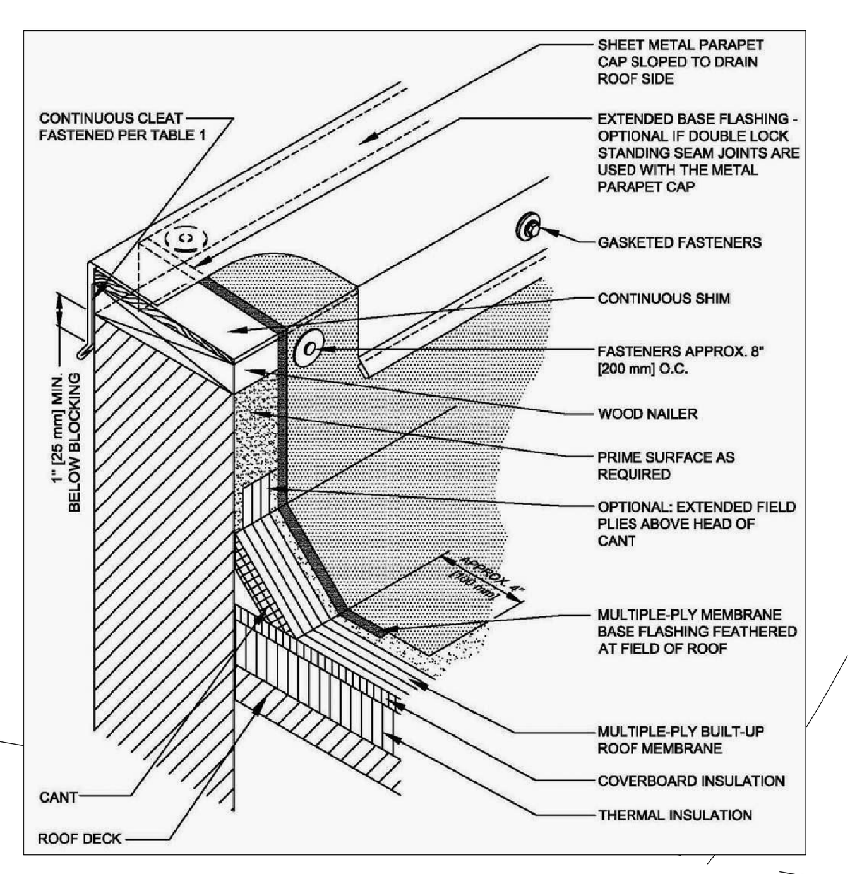
OPTIONAL GAZEEBO

ROOFING TO BE 30YR COMP o/ 30# ROOFING FELT

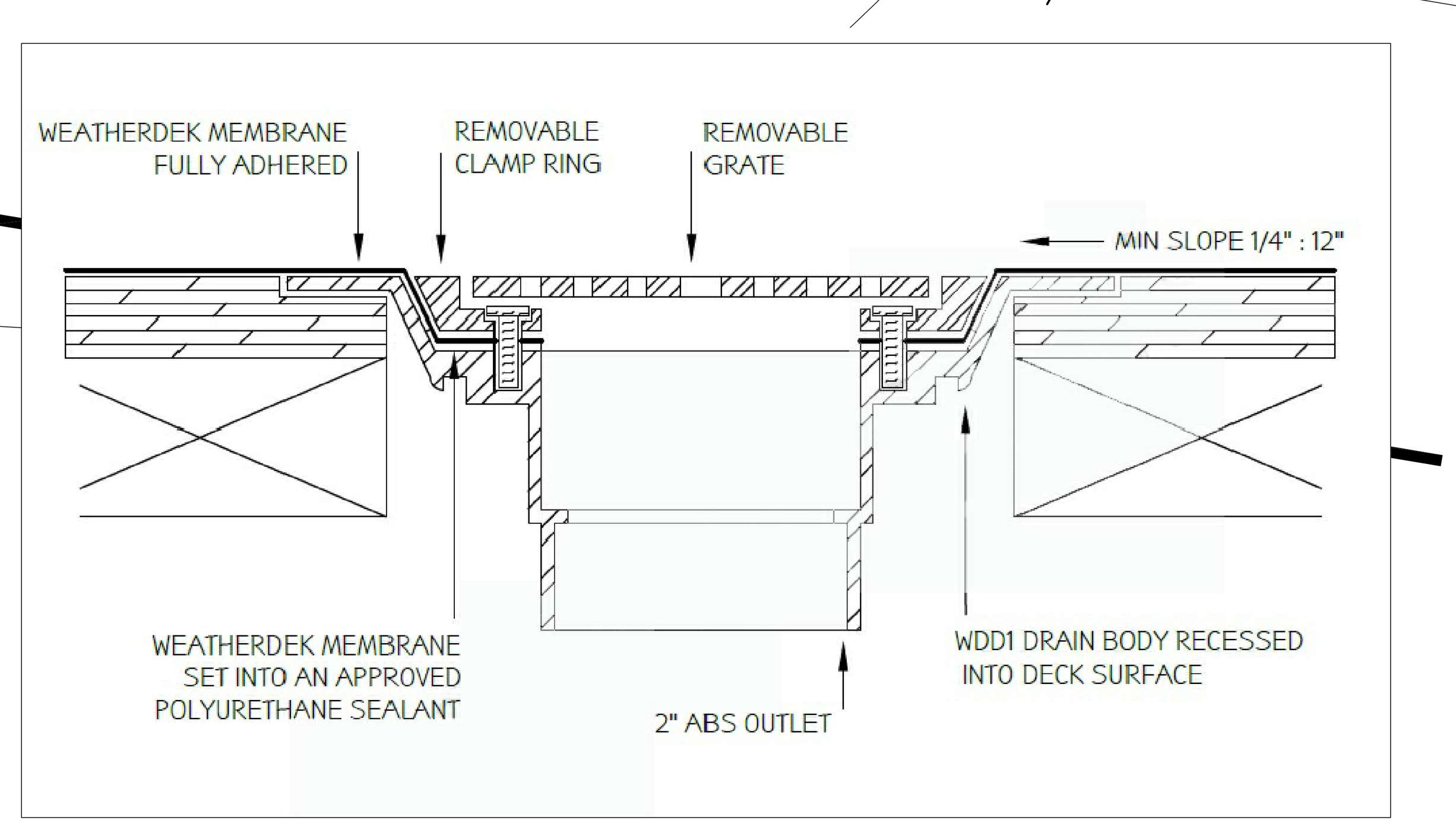


*NOTE:

DRAG TRUSS
* DESIGN TRUSS FOR 200# PLF AXIAL LOAD
* NAIL ROOF SHEATHING TO DRAG TRUSS w/ 8d @ 4" O.C. TYPICAL



PARAPET WALL FLASHING / SIM



RECESSED ROOF DRAIN

MFD ROOF TRUSS TO BE A MAXIMUM OF 24" IN HEIGHT w/ MIN REQUIRED SLOPE TO DRAIN AND MINIMUM HEIGHT AT LOW END OF 12" TO ACCOMMODATE R-49 INSULATION - VERIFY w/ TRUSS MFR

ROOF FRAMING PLAN

1/4"=1'-0" MFD FLATT ROOF TRUSS

ATTIC VENTILATION:

ATTIC VENTILATION REQUIRED		
LOCATION	TOTAL AREA (X)	X/150 = TOTAL S.F. VENTILATION REQUIRED
UPPER RF.	3,353 S.F.	22.35 S.F.

MIN. ATTIC VENTILATION REQUIRED			
LOCATION	EA AF-50 = .277 S.F. (A)	CONT. SOFFIT VENT = 0.067 S.F PER LIN FT (B)	VENTILATION PROVIDED (A+B > C)
UPPER ROOF	(34)x.277=9.42	(197 LIN FT x 0.067) = 13.2	22.62 > 22.35 S.F.

* ALL AF-50 ROOF VENTS TO BE PLACED ON MIN 2x8 P.T. WOOD CURB. CURB TO BE FLASHED AND COUNTER FLASHED AND SOLID MEMBRANE ROOFING TO LAP OVER VENT EDGE.
* ALL AVAILABLE EXPOSED SOFFIT AREA TO HAVE A CONTINUOUS METAL FULL VENT STRIP 2" WIDE THE AVAILABLE LENGTH OF ALL EXPOSED SOFFIT AREA

VULCAN METAL SCREEN SOFFIT VENT MODEL VSC2120 2"X120" PROVIDES 96 SQ INCHES PER 10 FT STRIP (9.6 SQ INCHES PER LIN FT or 0.067 SQ FT PER LIN FT)

MIN. S.F. REQ. = X/1500 = C

$$\text{AF-50 VENT} = \frac{(.80)(50\ \text{SQ. IN})}{144} = .277\ \text{SQ. FT.}$$

$$\text{ROOF VENTS} = \frac{C - B}{.277} = A$$

$$\text{CONT SOFFIT VENT} = \frac{(\text{TOTAL SQ. IN})}{144} = B$$

NOTES:

ROOFING MATERIAL TO BE SOLID MEMBRANE o/ 30# FELT or MFR INSTRUCTIONS AND DETAILS

ALL BMS. & HDRS. SHALL BE 4x8 D.F. #2 UNLESS OTHERWISE NOTED.

ALL BUILT UP POSTS SHALL BE (2) 2x6 H.F. #2 MIN. UNLESS OTHERWISE NOTED.

VENTED BLOCKING OVER SUPPORTS.
ROOF OVERHANGS TO BE 12" UNLESS OTHERWISE NOTED.

ALL ROOF PITCHES TO BE MIN SLOPE TO DRAIN U.N.O.

SKYLIGHTS ON 2x6 CURB - SAFETY GLASS

TRUSSES & RAFTERS SHALL BE @ 24" O.C. UNLESS OTHERWISE NOTED.

INSULATION IN ROOF SHAL BE R-49 OR BETTER

TRUSS NOTES:

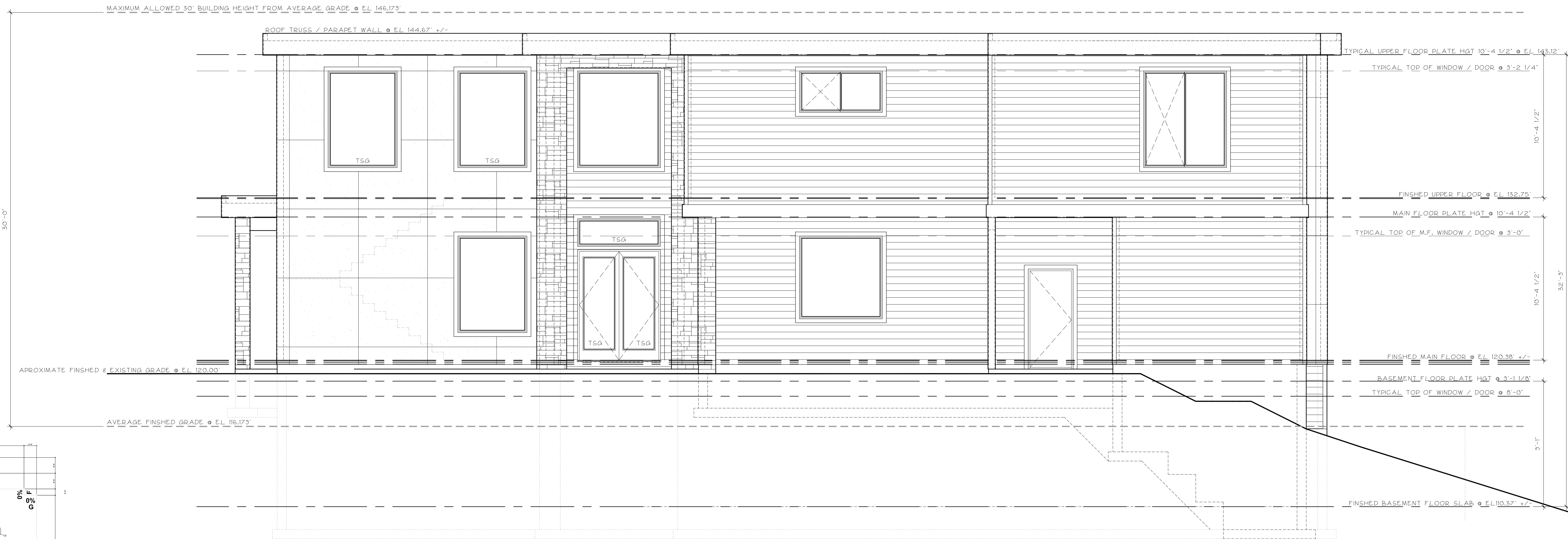
- ALL TRUSSES SHALL CARRY MANUFACTURES STAMP.
- ALL TRUSSES SHALL BE INSTALLED & BRACED TO MANUFACTURS SPECIFICATIONS.
- TRUSSES WILL NOT BE FIELD ALTERED WITHOUT PRIOR BUILDING DEPT. APPROVAL OR ENGINEERING CALCULATIONS.
- ALL TRUSSES SHALL HAVE DESIGN DETAILS & DRAWINGS ON SITE FOR FRAMING INSPECTION.
- ALL CONNECTIONS OF RAFTERS, JACK OR HIP TRUSSES TO MAIN GIRDER TO BE PROVIDED BY TRUSS MANUFACTURE.
- TRUSS DRAWINGS TO BE STAMPED AND SIGNED BY A LICENSED WASHINGTON STATE STRUCTURAL ENGINEER.
- TRUSSES SHALL BE MANUFACTURED IN A PLANT APPROVED UNDER THE REQUIREMENTS OF SECTION 1701.7. EACH TRUSS SHALL BEAR THE QUALITY CONTROL STAMP (SECTION 2311.6) AS WELL AS MANUFACTURING PLANT'S NAME/ADDRESS, DESIGN LOAD AND MAXIMUM SPACING. SECTION 2343.6.
- APPROVED HANGERS SHOULD BE USED AT ALL CONNECITONS OF RAFTERS, JACK OR HIP TRUSSES TO MAIN GIRDER TRUSSES.
- LIGHT METAL PLATE CONNECTORS TO HAVE FIELD AND GIRDER IDENTIFCATION. INFORMATION BRANDED, MARKED, OR OTHERRWISE PERMANENTLY AFFIXED TO EACH TRUSS SHALL CONTAIN THE FOLLOWING:
  A. IDENTIFICATION OF THE TRUSS MANUFACTURING COMPANY.
  B. THE DESIGN LOAD.
  C. THE TRUSS SPACING.
- ALL ROOF TRUSSES SHALL BE SO FRAMED AND TIED INTO THE FRAMEWORK AND SUPPORTING WALLS SO AS TO FORM AN INTEGRAL PART OF THE WHOLE BUILDING. ROOF TRUSSES SHALL HAVE JOINTS WELL FITTED AND SHALL HAVE ALL TENSION MEMBERS WELL TIGHTENED BEFORE ANY LOAD IS PLACED UPON THE TRUSS. DIAGONAL AND SWAY BRACING SHALL BE USED TO BRACE ALL ROOF TRUSSES.
- ROOF TRUSSES SHOULD BE SUPPORTED LATERALLY AT POINTS OF BEARING BY SOLID BLOCKING TO PREVENT ROTAION AND LATERAL DISPLACEMENT. THEY SHOULD ALSO BE BLOCKED AT THE RIDGE

MDB RESIDENTIAL DESIGN ASSOCIATES
8801 SAINT THOMAS DRIVE
SPACE #222
PASCO, WA 99301
425-830-6713

PROJECT: 9419 SE 54th ST
ELITE HOMES NW
PARCEL # 143870-0150

ROOF FRAMING PLAN

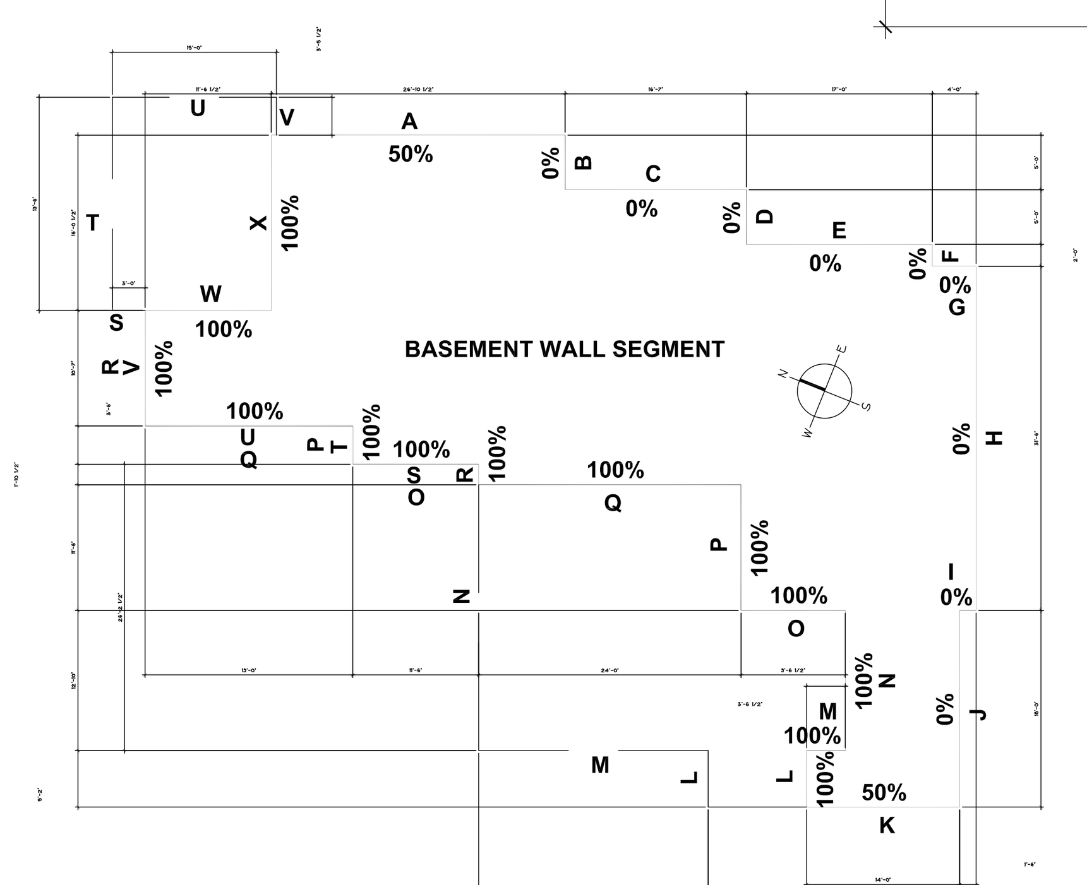
ENG FILE#:
ENG BY:
DWG DATE: 05.05.23
DRAWN BY: MDB
REV. BY:
REV. DATE:
FILE NUMBER 22-002
SHEET NUMBER 7 OF 12



RIGHT SIDE ELEVATION VIEW

1/4"=1'-0"

EAST



SEGMENT	ELEVATION	segment	LENGTH	(Axa)=
A	113.13	a	26.917	3044.986
B	113.13	b	5.000	565.625
C	113.13	c	16.583	1875.952
D	113.13	d	5.000	565.625
E	113.13	e	17.000	1923.125
F	113.13	f	2.000	226.25
G	113.13	g	4.000	452.5
H	111.00	h	31.500	3496.5
I	112.00	i	1.500	168
J	114.00	j	18.000	2052
K	116.00	k	23.000	2668
L	120.00	l	5.167	620.04
M	120.00	m	21.000	2520
N	120.00	n	26.250	3150
O	120.00	o	11.500	1380
P	120.00	p	3.500	420
Q	120.00	q	19.000	2280
R	120.00	r	10.583	1269.96
S	120.00	s	3.000	360
T	120.00	t	19.500	2340
U	116.00	u	15.000	1740
V	114.00	v	3.500	399
	2554.88		288.500	33517.56
ABE=	33300.69 /	2550 =	116.178726	

FRONT ELEVATION VIEW

1/4"=1'-0"

SOUTH

MDB RESIDENTIAL DESIGN ASSOCIATES
3920 S 159th PLACE, #313
TUKWILA, WA
425-830-6713

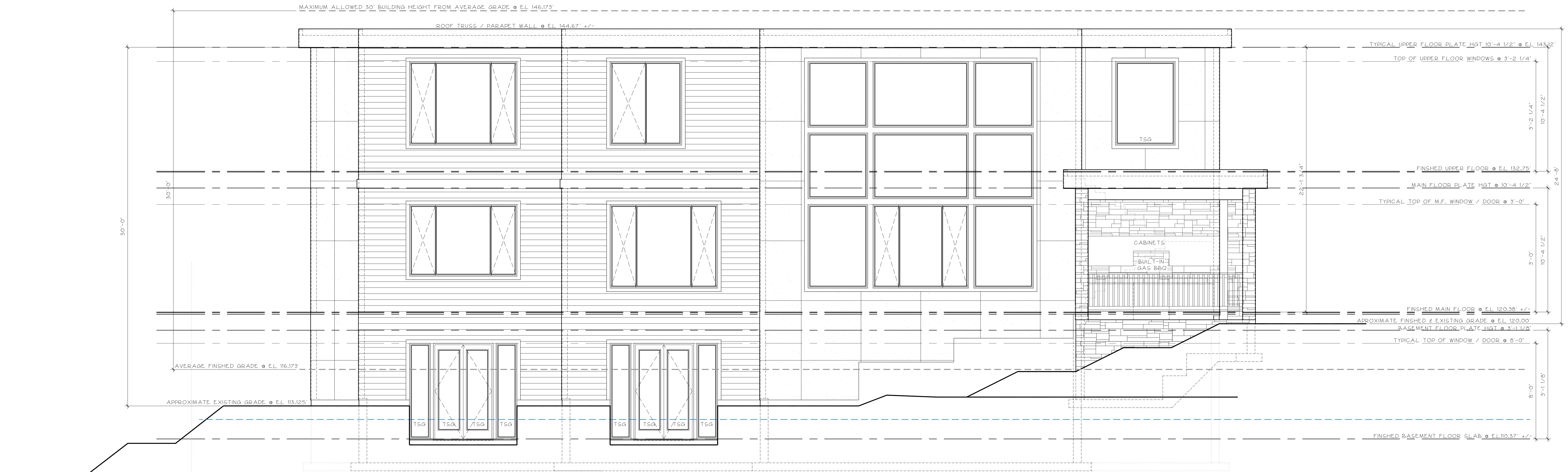
PROJECT: 9419 SE 54th ST
ELITE HOMES NW
PARCEL # 143870-0150

FRONT & LEFT SIDE ELEVATIONS

ENG FILE#:
ENG BY:

DWG DATE: 02.11.23
DRAWN BY: MDB
REV. BY:
REV. DATE: 06.26.23

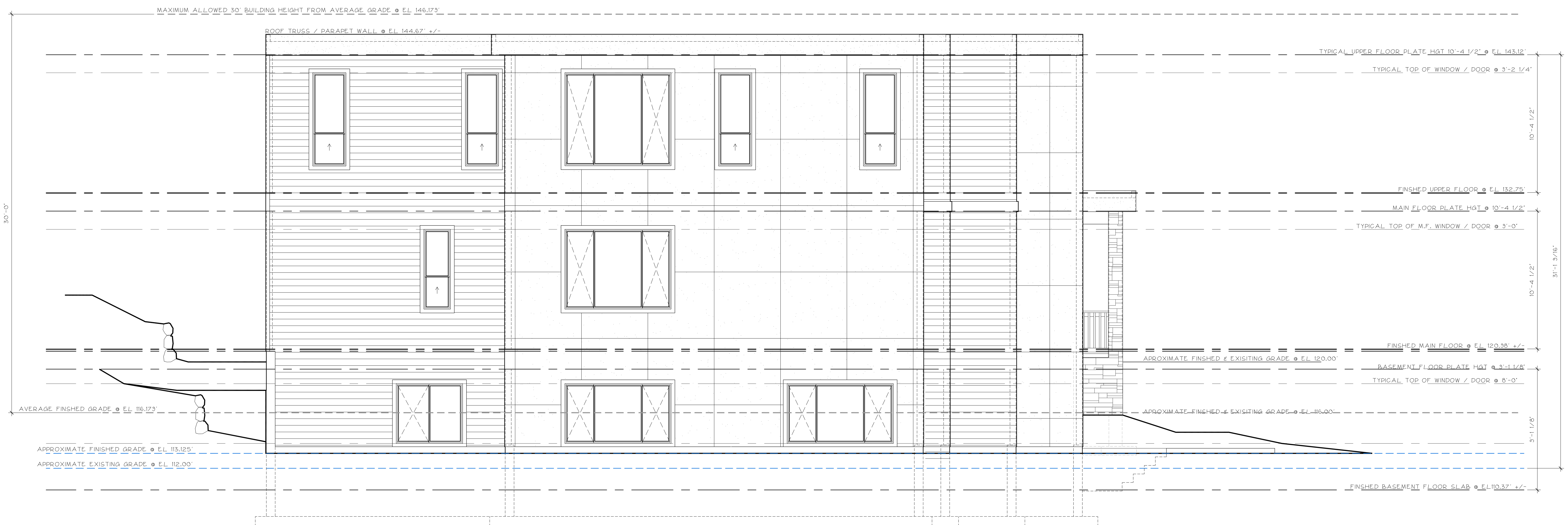
FILE NUMBER
22-002
SHEET NUMBER



LEFT SIDE ELEVATION VIEW

1/4"=1'-0"

WEST



BACK ELEVATION VIEW

1/4"=1'-0"

NORTH

MDB RESIDENTIAL DESIGN ASSOCIATES
929 E 58th ST
TACOMA, WA
425-830-6713

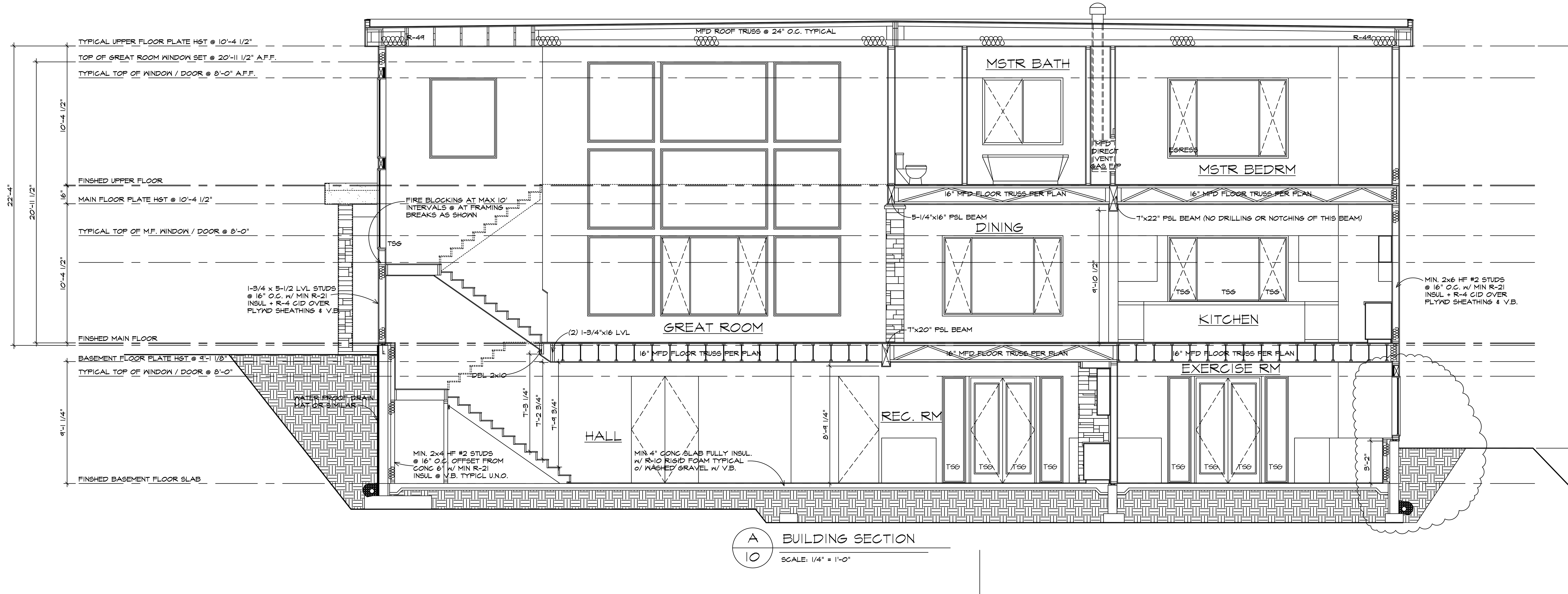
PROJECT: 9419 SE 54th ST
ELITE HOMES NW
PARCEL # 143870-0150

BACK & RIGHT SIDE ELEVATIONS

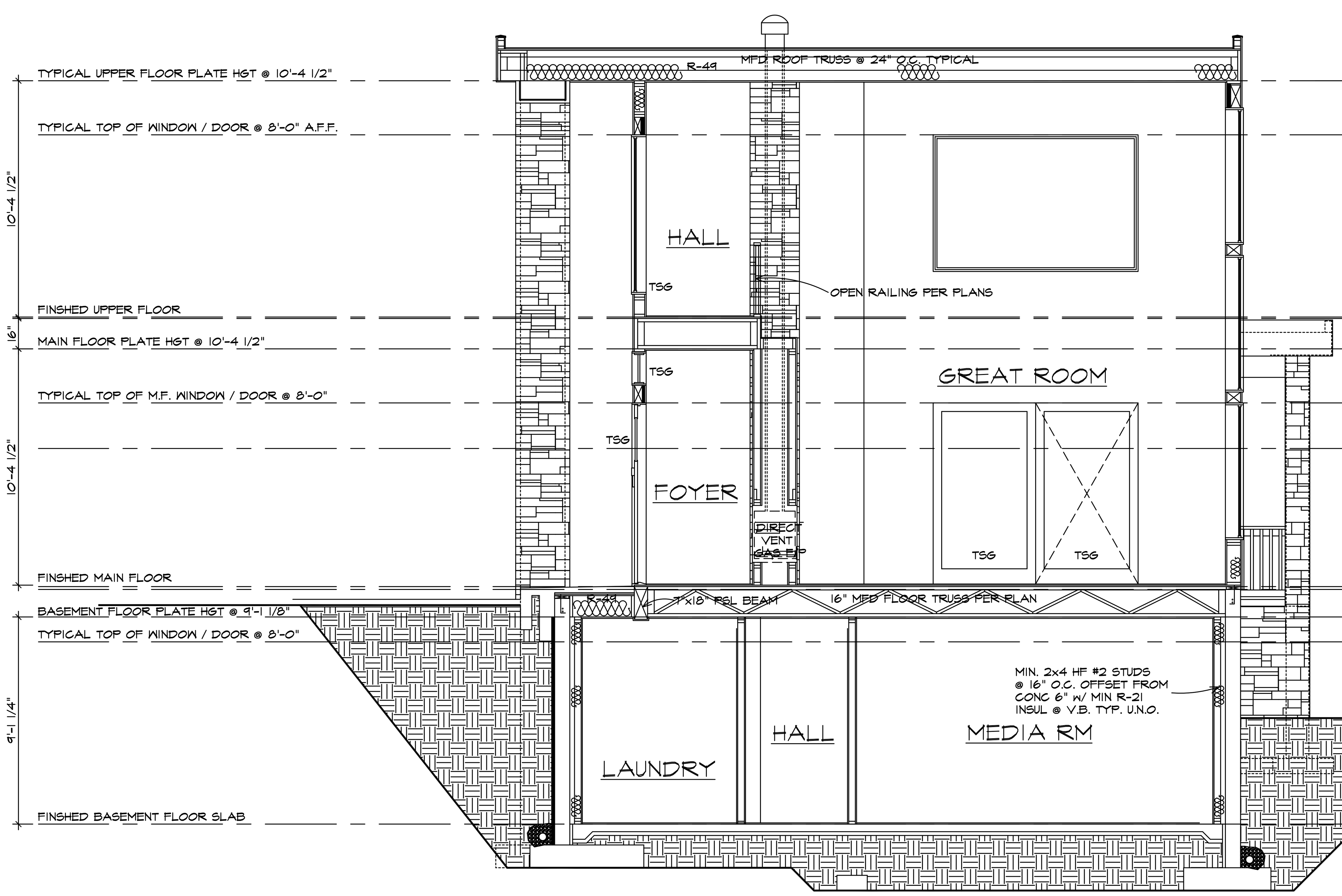
ENG FILE#:
ENG BY:

DWG DATE: 05.04.23
DRAWN BY: MDB
REV. BY:
REV. DATE: 06.26.23

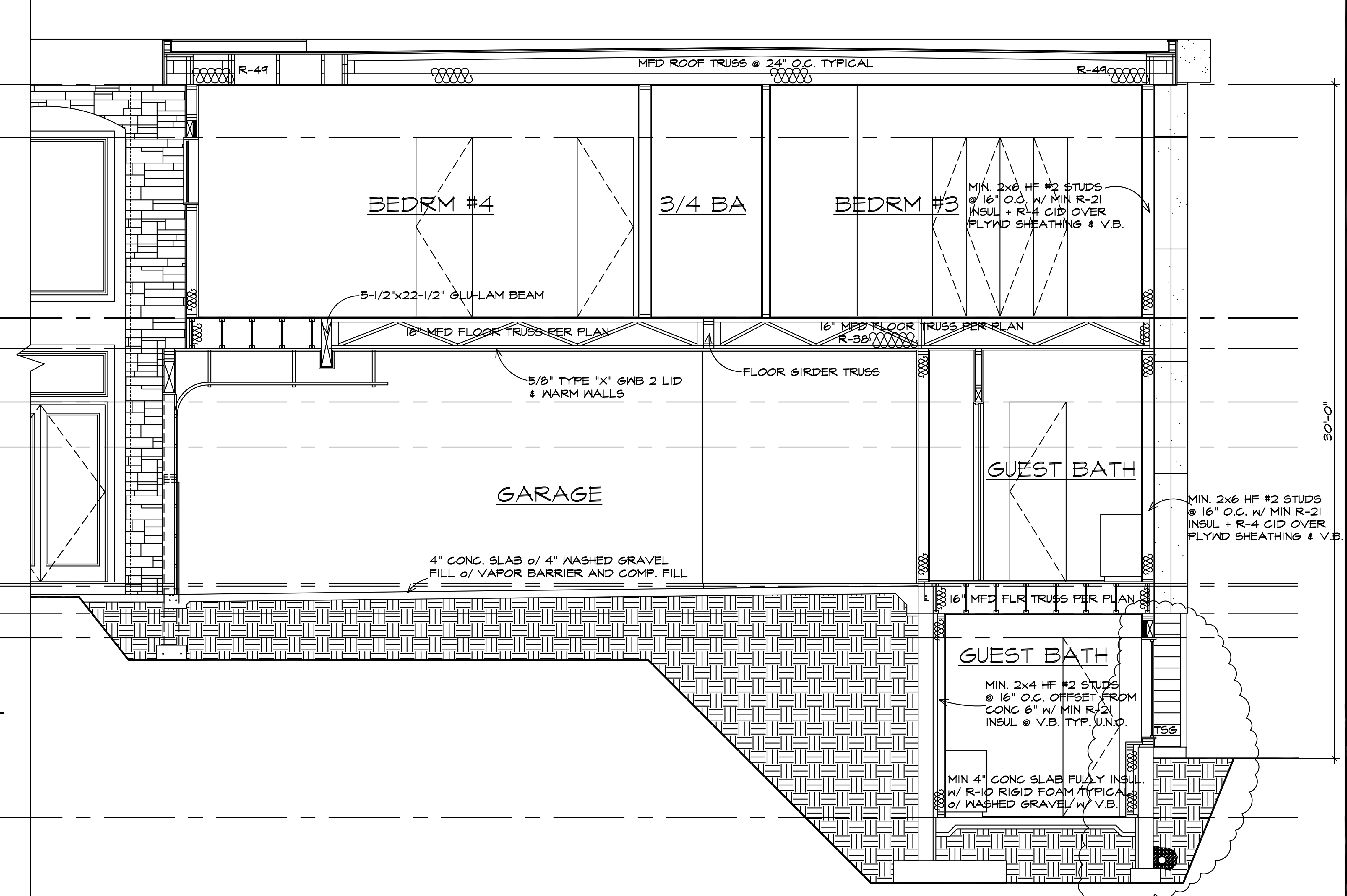
FILE NUMBER 22-002
SHEET NUMBER 9 of 12



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



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



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

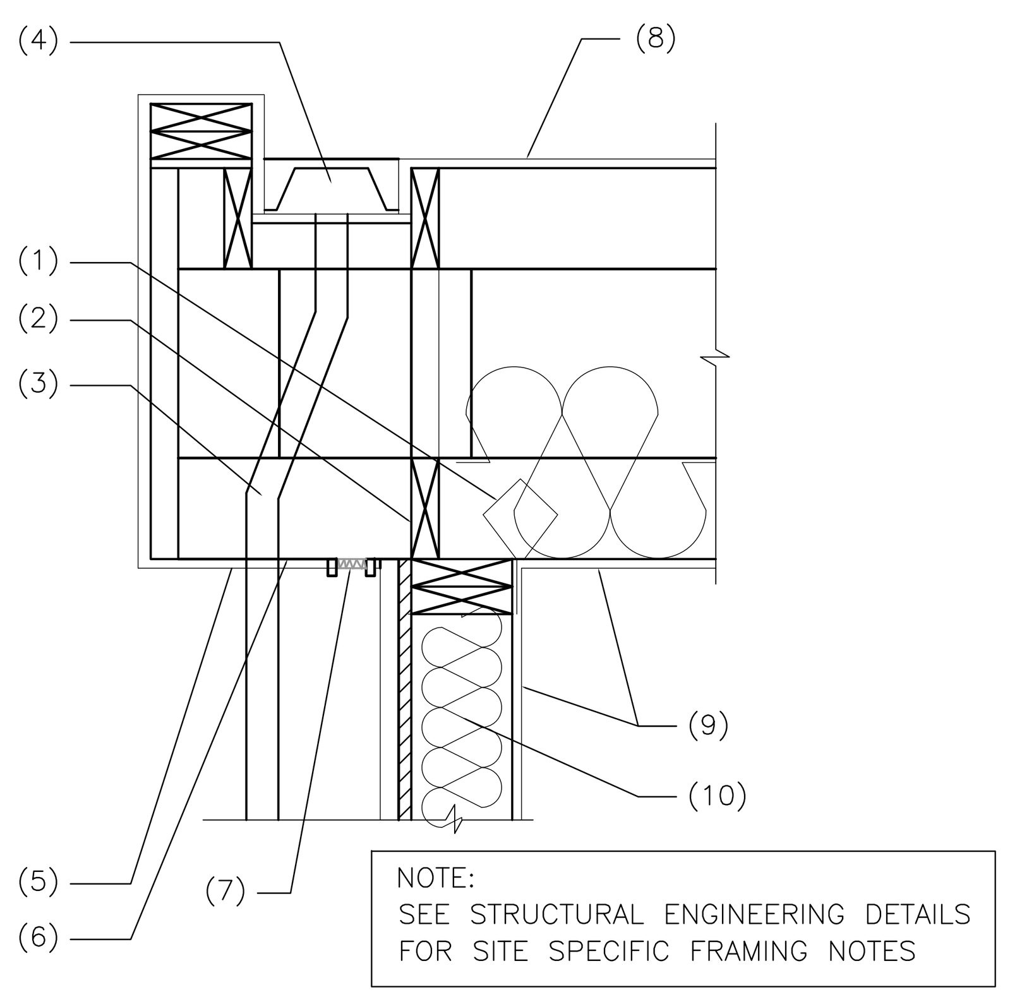
MDB RESIDENTIAL DESIGN ASSOCIATES
8801 SAINT THOMAS DR
SPACE #222
PASCO, WA
425-830-6713

PROJECT: 2439 78th AVE NE, MEDINA
ELITE HOMES NW
PARCEL # 3262300685
SECTION CUT VIEWS

ENG FILE#:	
ENG BY:	
DWG DATE:	05.04.23
DRAWN BY:	MDB
REV. BY:	
REV. DATE:	

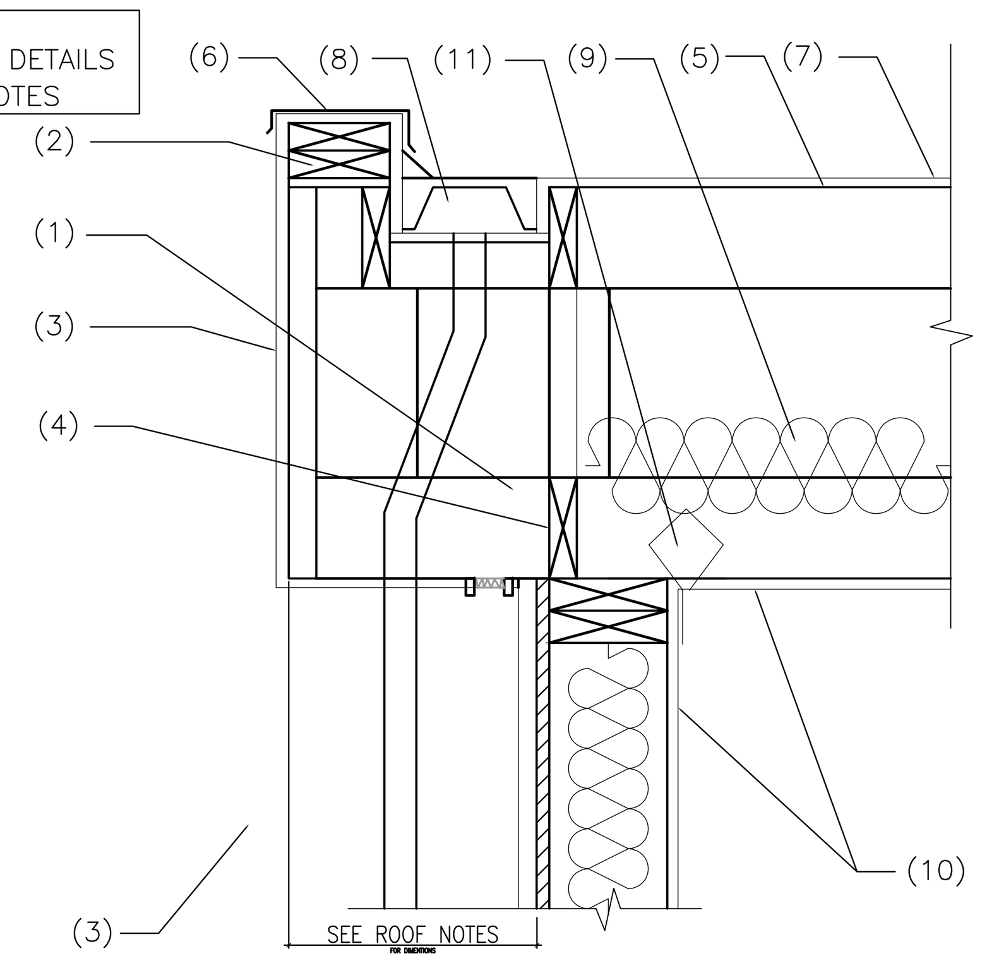
FILE NUMBER
21-002
SHEET NUMBER
10 OF 12

NOTE:
SEE STRUCTURAL ENGINEERING DETAILS
FOR SITE SPECIFIC FRAMING NOTES



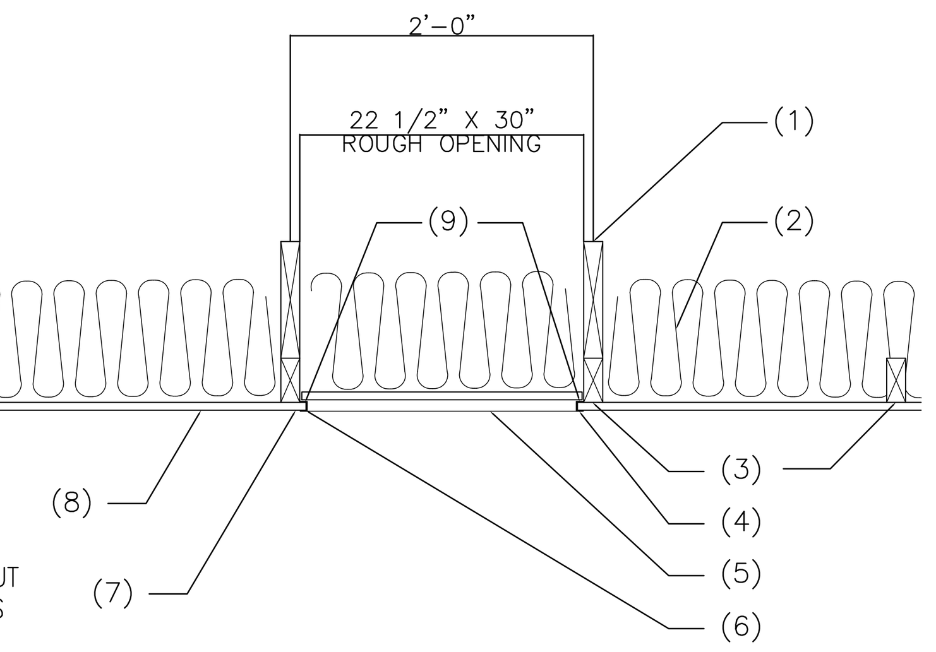
NOTES:
1. SEISMIC CLIPS AT EA. RAFTER & INTO BLKG.
2. 2 X SOLID BLKG. or BLOCKING AS SPECIFIED BY TRUSS MFR
3. DOWNSPOUT THROUGH TRUSS O.H.
4. MFD RECESSED ROOF DRAIN INSTALED PER MFR DETAILS
5. EXTERIOR SIDING PER OWNER / CONTRACTOR
6. CONT. SOFFIT OF EXT. PLYWD OR OTHER EXT. RATED FINISH
7. CONTINUOUS SOFFIT VENT – SEE ROOF PLAN
8. SOLID MEMBRANE ROOFING PER MFR NOTES, DET & INSTRUCTIONS
9. 1/2" TYPE GWB
10. R-21 + R-4 C.I. INSUL.

1 SOFFIT AT TRUSSES DETAIL
SCALE: N.T.S.



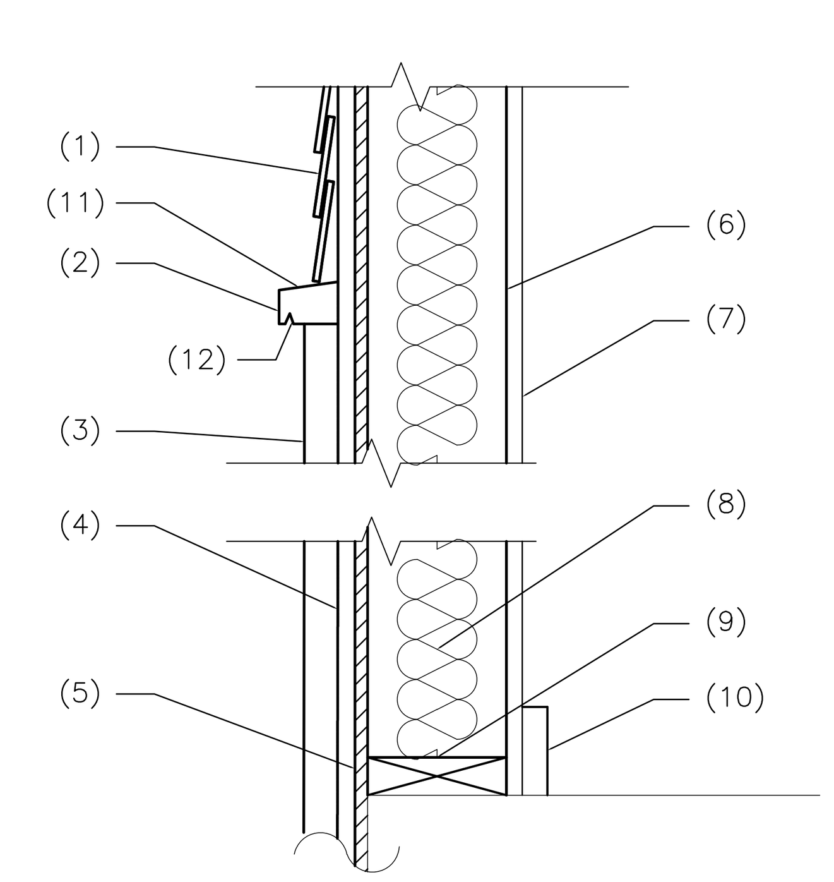
NOTES:
1. ENGINEERED WOOD TRUSSES
2. 2x PARAPET WALL – SEE SECTION CUT and / or MFD TRUSS DRAWINGS WHERE OCCUR ROOF SHEATHING AT FIELD (OPTIONAL PER CONTRACTOR/OWNER)
3. FASCIA (SEE ELEVATION)
4. 2 X SOLID BLKG. or MFD BLOCKING PAMELS PER MFR TRUSS DETAILS
5. 30# FELT UNDERLAYMENT or BACKER MEMBRANE PER SOLID MEMBRANE ROOFING MFR INSTRUCTIONS
6. 28 GA. FLASHING w/ DRIP EDGE
7. SOLID MEMBRANE ROOFING MATERIAL INSTALLED PER MFR DETAILS AND INSTRUCTIONS
8. MFD RECESSED ROOF DRAIN AND DOWNSPOUT WHERE OCCURS INSTALLED PER MFR DETAILS AND INSTRUCTIONS
9. INSULATION AS REQUIRED – MAINTAIN MINIMUM 2" AIRSPACE.
10. 1/2" TYPE GWB
11. SEISMIC CLIPS AT EACH TRUSS PER MFR & ENGINEERED DETAILS

2 EAVE AT TRUSSES DETAIL
SCALE: N.T.S.



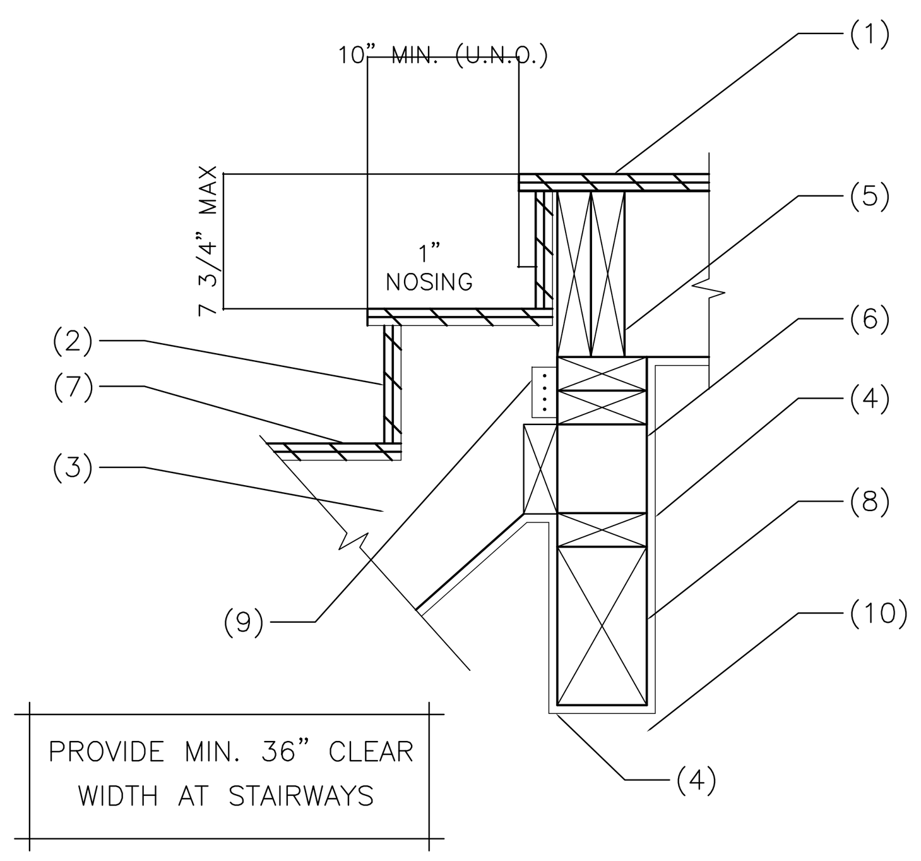
NOTES:
1. 2x10 OR TRUSS AS PER PLAN
2. R-49 BLOWN-IN TYP.
3. TRUSSES
4. OVERHANG 3/8" TO MAX. 1/2"
5. 5/8" G.W.B.
6. U BEAD
7. FINISH EDGE
8. 5/8" WHEN FRAMING AT 24" O.C.
9. WEATHER STRIP

3 ATTIC ACCESS DETAIL
SCALE: N.T.S.



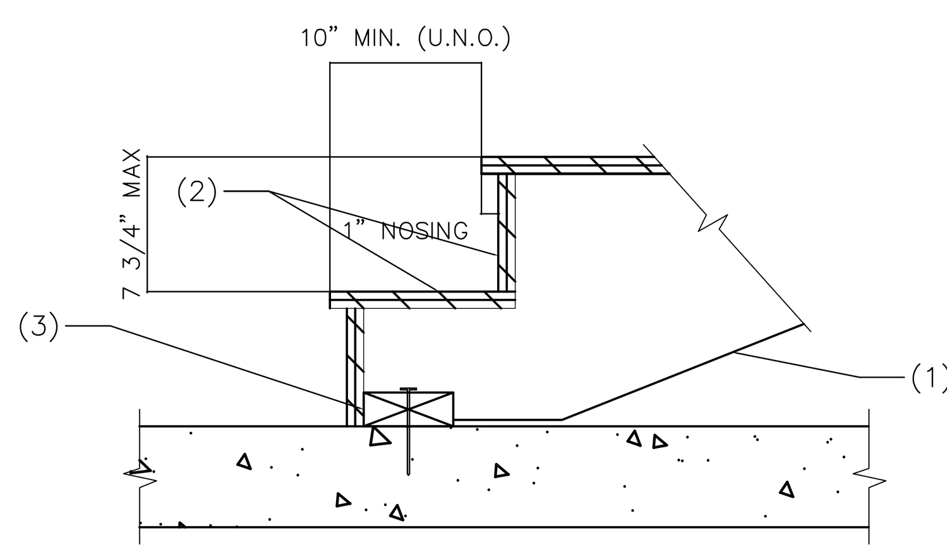
NOTES:
1. EXTERIOR SIDING--SEE ELEVATIONS
2. 2" TRIM
3. EXTERIOR VANEER STONE--SEE ELEVATIONS
4. CONT. WEATHER BARRIER (TYVEK OR SIM.)
5. 1/2" PLYWD. SHT'G
6. 2x6 STUDS 16" o.c.
7. 1/2" TYPE GWB
8. R-26 INSUL.
9. 2x6 P.T. PLATE SET IN BED OF SEALANT AND ANCHORED PER SHEARWALL SCHEDULE.
10. WOOD BASE OR PER CONTRACTOR/OWNER
11. 1/2" SLOPE
12. WATER DRIP LINE

4 EXT. WALL ASSEMBLY
SCALE: N.T.S.



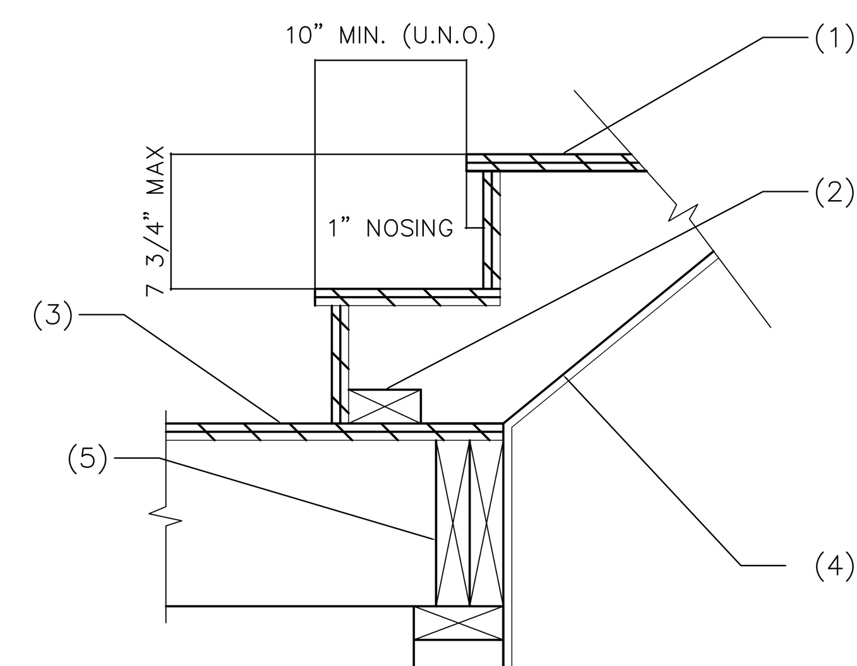
NOTES:
1. PLYWOOD SUBFLOOR
2. 3/4" PLYWOOD RISERS
3. (3) 2X12 STRINGERS
4. 5/8" TYPE "X" G.B. (WHEN REQ'D)
5. DOUBLE JOIST OR HEADER
6. 2X CRIPPLE WALL
7. 1 1/4" PART. BD. BULLNOSE TREADS GLUED & SCREWED (INSTALL AFTER ROOF ON)
8. 4X HEADER OR WALL (WHERE OCCURS)
9. "SIMPSON" LS50 EA. SIDE
10. 5/8" TYPE "X" G.W.B. TYP. UNDER STAIR

5 STRINGER AT WALL
SCALE: N.T.S.



NOTES:
1. 2X12 STRINGERS (MIN 3)
2. 3/4" PLYWOOD TREADS & RISERS
3. P.T. 2X4 THRUST PLATE ANCHORED EXPANSION ANCHORS OR POWER-DRIVEN THREADED FASTENERS W/ NUTS/WASHERS

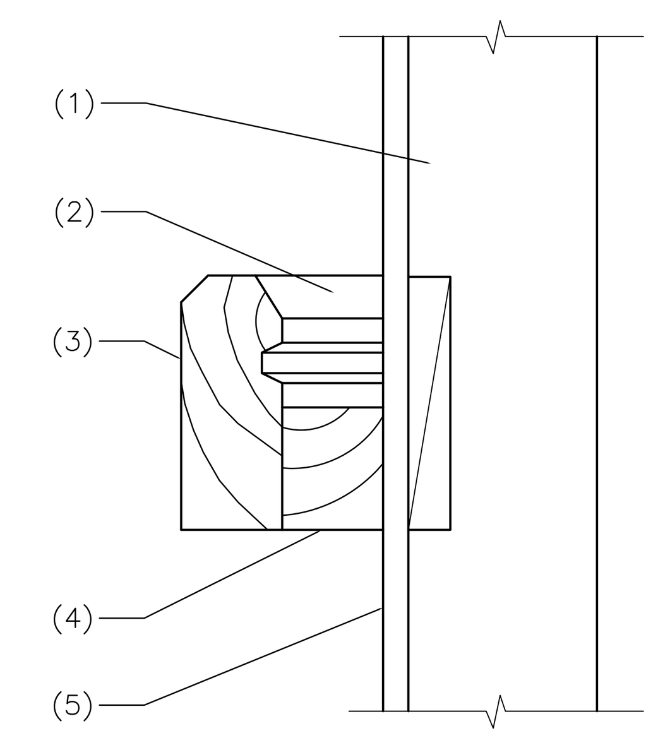
6 STRINGER AT FLOOR
SCALE: N.T.S.



NOTES:
1. 3/4" PLYWOOD TREADS & RISERS
2. CONT. 2X PLATE
3. PLYWOOD SUBFLOOR
4. (3) 2X12 STRINGERS
5. DOUBLE JOIST OR HEADER

PROVIDE MIN. 36" CLEAR
WIDTH AT STAIRWAYS

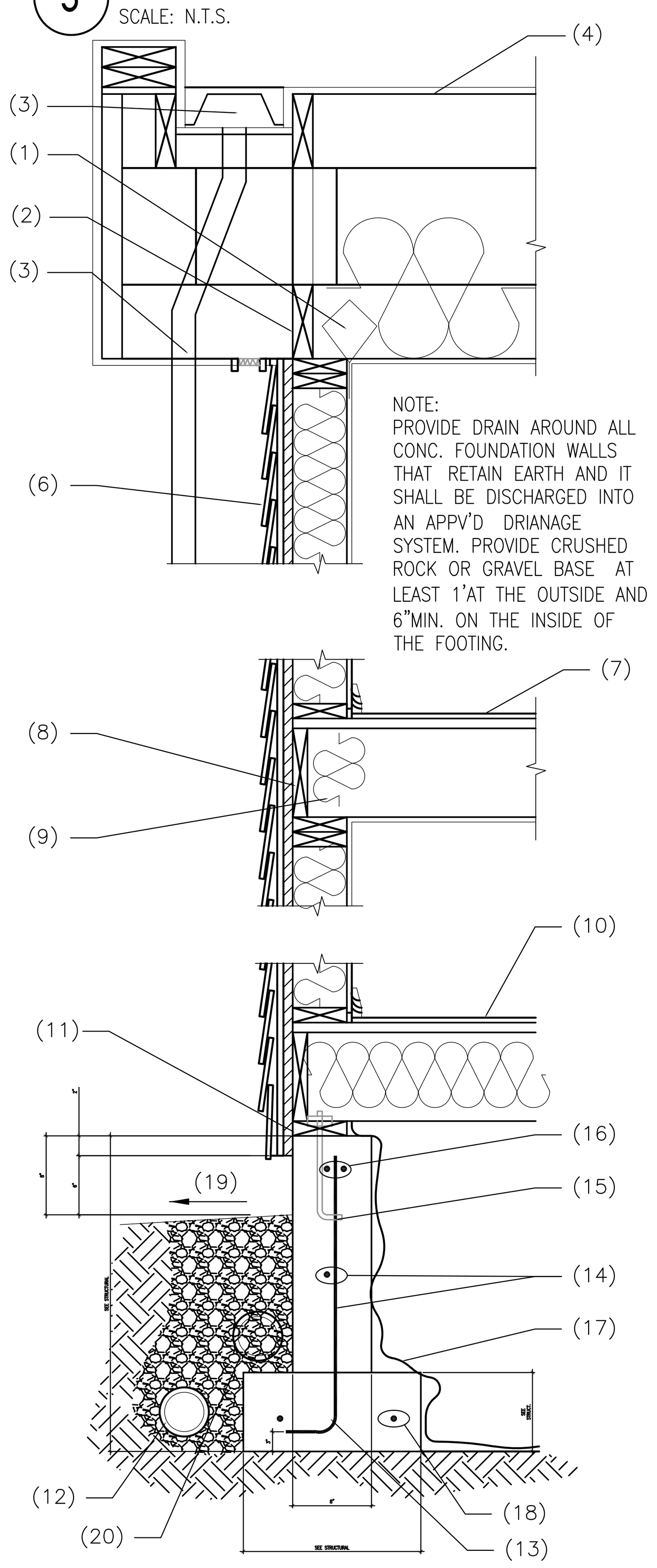
7 STRINGER AT LANDING
SCALE: N.T.S.



NOTES:
1. 2x FRAMING
2. PROVIDE RETURNS AT EA. END MITER CORNERS
3. 2X6 WOOD RAIL W/EASED EDGES
4. 2X3 CONT. SPACER
5. INTERIOR FINISH

NOTE:
A. HANDRAILS SHALL BE CONTINUOUS THE FULL LENGTH OF THE STAIRS PER I.R.C. 311.7.7.2 AND SHALL BE CAPABLE OF WITHSTANDING A LOAD OF AT LEAST 200 LBS. APPLIED IN ANY DIRECTION AT ANY POINT ON THE RAIL.
B. GUARDRAILS SHALL RESIST A 50 LB. PER LINEAL FOOT HORIZONTAL FORCE APPLIED AT RIGHT ANGLE TO TOP RAIL PER IBC 1607.7.1

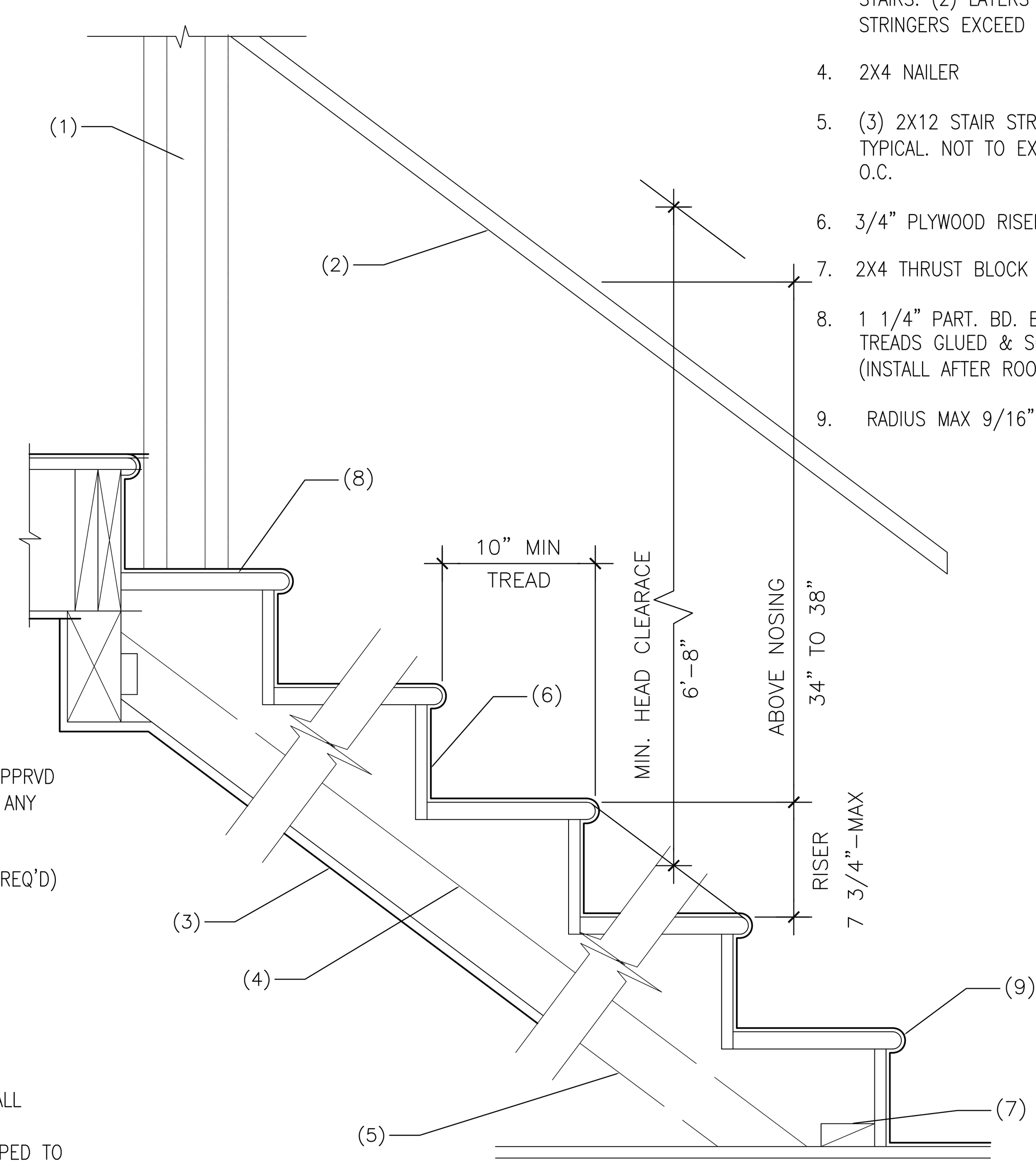
8 HANDRAIL DETAIL
SCALE: N.T.S.



NOTES:
1. "SIMPSON" H10 SEISMIC CLIPS @ EA. RAFTER & INTO BLKG.
2. 2 X SOLID BLKG. or BLOCKING AS SPECIFIED BY TRUSS MFR
3. MFD RECESSED ROOF DRAIN AND DOWNSPOUT
4. SOLID MEMBRANE ROOFING PER MFR INSTRUCTIONS
   – 30# FELT EA. COURSE
   – 1/2" RATED SHTH'G INDEX 32/16 MFG. TRUSSES
   – R-49 MIN. INSULATION
   –5/8" GYPSUM BD. CEILING
5. (SOFFIT EAVE SEE DETAIL 1 OPTIONAL)
6. SIDING (SEE ELEVATIONS)
   –WEATHER BARRIER
   –1/2" RATED SHEATHING
   –2 X 6 STUDS @ 16" O.C.
   –R-21 + R-4 C.I. INSULATION
   –1/2" GYPSUM BD.
7. FLOOR FINISH
   –1/2" PART. BD. UNDERLAY
   –3/4" CDX PLYWOOD SUBFLOOR
   –FLOOR JOISTS PER PLAN
   –R-38 MIN. INSUL OVER UNHEATED
   –(OVER UNHEATED SPACES)
   –1/2" GYPSUM BD. CEILING
8. 2 X RIM JOIST
9. R-21 MIN. INSUL AT WALL LINE
10. FLOOR FINISH
   –1/2" PART. BD. UNDERLAY
   –3/4" CDX PLYWOOD SUBFLOOR
   –FLOOR JOISTS PER PLAN
   –R-38 BATT INSUL OVER UNHEATED SPACE
   –CRAWLSPACE/BASEMENT
11. 2 X 6 P.T. MUDSILL WITH 5/8" DIA. A.B. @ 48" O.C. W/ BRG. > OR APPRVD EQ. (MIN. OF 2 PER PLATE & W/IN 12" OF ANY CORNER) MIN. 0.229X3X3
12. 4" ~ PERFORATED DRAIN TILE (TYP. WHERE REQ'D) SLOPED TO APPROVE WATER TREATMENT
13. REINFORCEMENT PER STRUCTURAL
14. REINFORCEMENT PER STRUCTURAL
15. 10" MIN. EMBED
16. REINFORCEMENT PER STRUCTURAL
17. 6 MIL BLACK "VISQUEEN" POLYETHYLENE OVERLAPPED 12" ON GROUND
18. REINFORCEMENT PER STRUCTURAL
19. FINISH GRADE AWAY FROM THE BUILDING SHALL SLOPE 6" IN THE FIRST 10'
20. DOWNSPOUT DRAIN (TYP. WHERE REQ'D) SLOPED TO APPROVE WATER TREATMENT

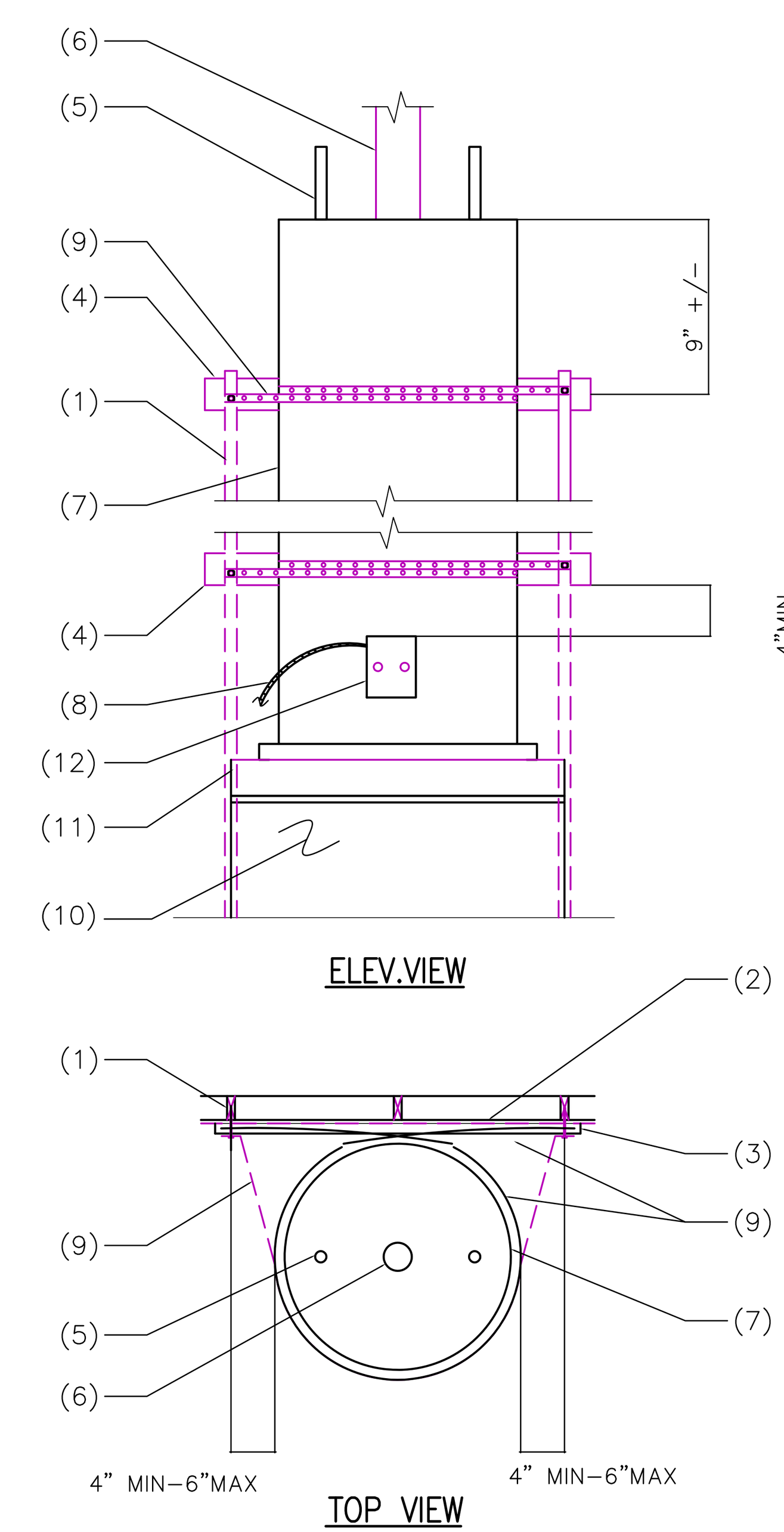
9 TYP. WALL SECTION
SCALE: N.T.S.

STAIR NOTES:
A. STRINGERS SHALL BE FIRE BLOCKED AT BOTH TOP & BOTTOM.
B. MAX. RISE TO BE 7 3/4".
C. MIN. RUN TO BE 10".
D. MIN. HEAD HT. TO BE 6'-8".
E. MIN. STAIR WIDTH TO BE 36".
F. PROVIDE HANDRAILS AT LANDINGS MIN. 36" HT. W/DIVIDERS SPACED TO PREVENT PASSAGE OF A 4" SPHERE.



NOTES:
1. IF OPEN RAIL IS USED OPENINGS SHALL HAVE INTERMEDIAT RAILS OR AN ORNAMENTAL PATTERN SUCH THAT A SPHERE 4" IN DIA. CANNOT PASS THROUGH.
2. CONT. HANDRAIL 34" TO 38" ABOVE NOSING
3. 1/2" TYPE 'X' G.W.B. @ WALLS & LID OF USEABLE AREA BELOW STAIRS. (2) LAYERS AT LID WHEN STRINGERS EXCEED 16" O.C.
4. 2X4 NAILER
5. (3) 2X12 STAIR STRINGERS TYPICAL. NOT TO EXCEED 24" O.C.
6. 3/4" PLYWOOD RISERS
7. 2X4 THRUST BLOCK
8. 1 1/4" PART. BD. BULLNOSE TREADS GLUED & SCREWED (INSTALL AFTER ROOF ON)
9. RADIUS MAX 9/16"

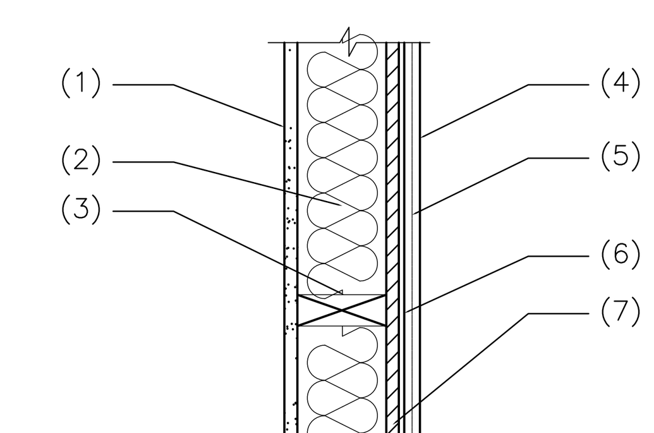
10 STAIR SECTION DETAIL
SCALE: N.T.S.



NOTES:
1. 2X FRAMING AT 16" O.C.
2. GYPSUM WALLBOARD
3. 3/8 X 3 1/2 SCREWS THROUGH BLOCK TO STUDS
4. 2X4 LEDGER
5. FLEXIBLE WATER CONNECTION
6. VENT
7. WATER HEATER
8. FLEXIBLE GAS CONNECTION
9. MIN 26 GA. 1 1/2 WIDE GALVANIZED METAL STRAP OR WASHINGTON STATE ARCHITECT APPROVED EARTHQUAKE STRAPPING PRODUCT
10. 18" HT MIN. W/H PLATFORM (SEE PLAN)
11. WATER TIGHT FAN BENEATH WATER HEATER WITH DRAIN TO EXTERIOR.
12. CONTROL.

NOTE:
WATER HEATER STRAPPING SHALL BE AT POINTS WITH THE UPPER ONE-THIRD (1/3) AND LOWER ONE-THIRD (1/3) OF ITS VERTICAL DIMENTIONS. AT THE LOWER POINT A MIN. DISTANCE OF FOUR INCHES AHALL BE MAINTAINED ABOVE THE CONTROLS WITH STRAPPING.

11 WATER HEATER DETAIL
SCALE: N.T.S.



NOTE:
REINFORCING MATERIALS THROUGH WHICH THE PLASTER IS FORCED ARE EITHER STUCCO WIRE OR METAL LATH. REINFORCING IS FASTENED TO SHEATHING. SHEATHING HAS TO BE RIGID ENOUGH TO REMAIN STIFF DURING THE PROCESS OF APPLYING THE STUCCO. IN SUCH AREAS 5/8" PLYWOOD IS RECOMENDED

NOTES:
1. GYPSUM BOARD OR GYPSUM VENEER FASTENERS AS PER CODE
2. BATT INSULATION
3. 2 X 6 WOOD STUDS – 16 " O.C. SOLID BLOCKING OR PLATES AS PER CODE; NAILING AS PER CODE REQUIREMENTS.
4. 3/8" THICK HOLNAM ONE COAT STUCCO
5. MIN. 1.75 EXPANDED DIAMOND MESH METAL LATH OR 20 GA. 1" GALV. STEEL WOVEN WIRE FABRIC FULLY EMBEDDED IN THE STUCCO.
6. 15 LB FELT APPROVED MOISTURE BARRIER LAPPED TO DRAIN.
7. PLYWOOD O.S.B., GYPSUM BOARD OR OTHER APPROVED SUBSTRATE APPROVED SUBSTRATE APPROVED SUBSTRATE CODE APPROVED NAILS OR STAPLES; SPACING AS PER CODE

12 STUCCO DETAIL
SCALE: N.T.S.

MDB RESIDENTIAL
DESIGN ASSOCIATES
8801 SAINT THOMAS DR
SPACE #222
PASCO, WA
425-830-6713

PROJECT: 9419 SE 54th ST
ELITE HOMES NW
PARCEL # 143870-0150
TYPICAL DETAILS

ENG FILE#:
ENG BY:

DWG DATE: 06.28.23
DRAWN BY: MDB
REV. BY:
REV. DATE:

FILE NUMBER 21-002
SHEET NUMBER 11 OF 12

ENERGY CODE

THIS RESIDNECE IS DESIGNED PER THE:
1. 2018 INTERNATIONAL RESIDENTIAL CODE
2. 2018 INTERNATIONALN ENERGY CONSERVATION CODE of the STATE of WASHIGNTON
3. 2018 INTERNATIONAL MECHANICAL CODE
4. 2018 INTERNATIONAL PLUMBING CODE

WSEC-R/R401.3 A permanent certificate shall be completed by the builder or other approved party and posted on a wall in the space where the furnace is located, a utility room, or an approved location inside the building. When located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label, or other required labels. The certificate shall list the predominant R-values of insulation installed in or on ceiling/roof, walls, foundation (slab, below-grade wall, and/or floor) and ducts outside conditioned spaces; U-factors for fenestration and the solar heat gain coefficient (SHGC) of fenestration; the results from any required duct system and building envelope air leakage testing done on the building; and the results from the whole-house mechanical ventilation system flow rate test. Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the types and efficiencies of heating, cooling, whole house mechanical ventilation, and service water heating appliances. Where a gas-fired unvented room heater, electric furnace, or baseboard electric heater is installed in the residence, the certificate shall list "gas-fired unvented room heater," "electric furnace" or "baseboard electric heater," as appropriate. An efficiency shall not be listed for gas-fired unvented room heaters, electric furnaces or electric baseboard heaters. The code official may require that documentation for any required test results include an electronic record of the time, date and location of the test. A date-stamped smart phone photo or air leakage testing software may be used to satisfy this requirement.

WSEC-R/R402.4.2.1 Gas fireplace efficiency. All gas fireplace heaters rated to ANSI Z21.88 shall be listed and labeled with a fireplace efficiency (FE) rating of 50 percent or greater in accordance with CSA P.4.1. Vented gas fireplaces (decorative appliances) certified to ANSI Z21.50 shall be listed and labeled, including their FE ratings, in accordance with CSA P.4.1.

WSEC-R/R404.1 Lighting equipment. Not less than 90 percent of lamps in permanently installed lighting fixtures shall be high-efficacy lamps.

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These requirements apply to all IRC building types, including detached one- and two-family dwellings and multiple single-family dwellings (townhouses).

Project Information	***Contact Information***
9419 SE 54th St	MDB RESIDNETIAL DESIGN ASC, MARK D BATSON
TPN 143870-0150	8801 SAINT THOMAS DRIVE, PASCO WA 425-830-6713

Instructions: This single-family project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. Based on the size of the structure, the appropriate number of additional credits are checked as chosen by the permit applicant.

Provide all information from the following tables as building permit drawings: Table R402.1 - Insulation and Fenestration Requirements by Component, Table R406.2 - Fuel Normalization Credits and 406.3 - Energy Credits.

Authorized Representative ______ ***Date*** ______

All Climate Zones (Table R402.1.1)		
	R-Value [a]	**U-Factor** [a]
Fenestration U-Factor [b]	n/a	0.30
Skylight U-Factor [b]	n/a	0.50
Glazed Fenestration SHGC [b,e]	n/a	n/a
Ceiling [e]	49	0.026
Wood Frame Wall [g,h]	21 int	0.056
Floor	30	0.029
Below Grade Wall [c,h]	10/15/21 int + TB	0.042
Slab [d,f] R-Value & Depth	10, 2 ft	n/a

a *R*-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the compressed *R*-value of the insulation from Appendix Table A101.4 shall not be less than the *R*-value specified in the table.

b The fenestration *U*-factor column excludes skylights.

c "10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5TB" means R-5 thermal break between floor slab and basement wall.

d R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.

e For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.

f R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.

g For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for *climate zone* 5 of ICC 400.

h Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.

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Each dwelling unit ***in a residential building*** shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table 406.3 (energy credits) to achieve the following minimum number of credits. To claim this credit, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

1. **Small Dwelling Unit:** 3 credits
   Dwelling units less than 1,500 sf in conditioned floor area with less than 300 sf of fenestration area. Additions to existing building that are greater than 500 sf of heated floor area but less than 1,500 sf.
2. **Medium Dwelling Unit:** 6 credits
   All dwelling units that are not included in #1 or #3
3. **Large Dwelling Unit:** 7 credits
   Dwelling units exceeding 5,000 sf of conditioned floor area
4. **Additions less than 500 square feet:** 1.5 credits
   All other additions shall meet 1-3 above

Before selecting your credits on this Summary table, review the details in Table 406.3 (Single Family), on page 4.

Summary of Table R406.2

Heating Options	**Fuel Normalization Descriptions**	**Credits - select ONE heating option**		**User Notes**
1	Combustion heating minimum NAECA[b]	0.0	☐	
2	Heat pump[c]	1.0	☑	Carrier 25VNA4 11.0 HSPF
3	Electric resistance heat only - furnace or zonal	-1.0	☐	
4	DHP with zonal electric resistance per option 3.4	0.5	☐	
5	All other heating systems	-1.0	☐	
Energy Options	**Energy Credit Option Descriptions**	**Credits - select ONE energy option from each category** [d]		
1.1	Efficient Building Envelope	0.5	☐	
1.2	Efficient Building Envelope	1.0	☐	
1.3	Efficient Building Envelope	0.5	☐	
1.4	Efficient Building Envelope	1.0	☑	Glazing U=0.25
1.5	Efficient Building Envelope	2.0	☐	
1.6	Efficient Building Envelope	3.0	☐	
1.7	Efficient Building Envelope ☐	0.5	☐	
2.1	Air Leakage Control and Efficient Ventilation	0.5	☐	
2.2	Air Leakage Control and Efficient Ventilation	1.0	☑	2 chngs hr max / Heat Recov
2.3	Air Leakage Control and Efficient Ventilation	1.5	☐	
2.4	Air Leakage Control and Efficient Ventilation ☐	2.0	☐	
3.1[a]	High Efficiency HVAC	1.0	☐	
3.2	High Efficiency HVAC	1.0	☐	
3.3[a]	High Efficiency HVAC	1.5	☐	
3.4	High Efficiency HVAC	1.5	☐	
3.5	High Efficiency HVAC	1.5	☑	Min HSPF 11.0 See Plans
3.6[a]	High Efficiency HVAC ☐	2.0	☐	
4.1	High Efficiency HVAC Distribution System	0.5	☑	Ducts within Heated space
4.2	High Efficiency HVAC Distribution System ☐	1.0	☐	

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Summary of Table R406.2 (cont.)

Energy Options	**Energy Credit Option Descriptions (cont.)**	**Credits - select ONE energy option from each category** [d]		**User Notes**
5.1[d]	Efficient Water Heating	0.5	☐	
5.2	Efficient Water Heating	0.5	☐	
5.3	Efficient Water Heating	1.0	☐	
5.4	Efficient Water Heating	1.5	☑	Elec Heat Pump Water Heater
5.5	Efficient Water Heating	2.0	☐	
5.6	Efficient Water Heating ☐	2.5	☐	
6.1[e]	Renewable Electric Energy (3 credits max)	1.0		
7.1	Appliance Package	0.5	☑	See Plans for Make & Model
	Total Credits		7.0	Calculate Total Clear Form

a. An alternative heating source sized at a maximum of 0.5 W/sf (equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.
b. Equipment listed in Table C403.3.2(4) or C403.3.2(5)
c. Equipment listed in Table C403.3.2(1) or C403.3.2(2)
d. **You cannot select more than one option from any category EXCEPT in category 5. Option 5.1 may be combined with options 5.2 through 5.6. See Table 406.3.**
e. 1.0 credit for each 1,200 kWh of electrical generation provided annually, up to 3 credits max. See the complete Table R406.2 for all requirements and option descriptions.
f. Use the single radiobutton in the upper right of the second column to deselect radiobuttons in that group.

Please print only pages 1 through 3 of this worksheet for submission to your building official.

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Table 406.3 – Energy Credits (Single Family)

Option	**Description**	**Credits: SF**
1. EFFICIENT BUILDING ENVELOPE OPTIONS Only one option from Items 1.1 through 1.7 may be selected in this category. Compliance with the conductive UA targets is demonstrated using Section R402.1.4, Total UA alternative, where [1-(Proposed UA/Target UA)] > the required %UA reduction.		
1.1	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.24**	0.5
1.2	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.20**	1.0
1.3	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.28** Floor R-38 Slab on grade R-10 perimeter and under entire slab below grade slab R-10 perimeter and under entire slab ***or*** Compliance based on Section R402.1.4: Reduce the Total conductive UA by 5%	0.5
1.4	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.25** Wall R-21 plus R-4 ci Floor R-38 Basement wall R-21 int plus R-5 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab ***or*** Compliance based on Section R402.1.4: Reduce the Total conductive UA by 15%	1.0
1.5	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.22** Ceiling and single-rafter or joist-vaulted R-49 advanced Wood frame wall R-21 int plus R-12 ci Floor R-38 Basement wall R-21 int plus R-12 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab ***or*** Compliance based on Section R402.1.4: Reduce the Total conductive UA by 30%	2.0
1.6	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.18** Ceiling and single-rafter or joist-vaulted R-60 advanced Wood frame wall R-21 int plus R-16 ci Floor R-48 Basement wall R-21 int plus R-16 ci Slab on grade R-20 perimeter and under entire slab Below grade slab R-20 perimeter and under entire slab ***or*** Compliance based on Section R402.1.4: Reduce the Total conductive UA by 40%.	3.0
1.7	Advanced framing and raised heel trusses or rafters Vertical Glazing U-0.28 R-49 Advanced (U-0.020) as listed in Section A102.2.1, *Ceilings below a vented attic **and*** R-49 vaulted ceilings with full height of uncompressed insulation extending over the wall top plate at the eaves.	0.5

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Table 406.3 – Energy Credits (Single Family)

Option	**Description**	**Credits: SF**
2. AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION OPTIONS Only one option from Items 2.1 through 2.4 may be selected in this category.		
2.1	Compliance based on R402.4.1.2: Reduce the tested air leakage to **3.0 air changes per hour** maximum at 50 Pascals ***or*** For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.3 cfm/sf maximum at 50 Pascals *and*** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a high efficiency fan(s) (**maximum 0.35 watts/cfm**), not interlocked with the furnace fan (if present). Ventilation systems using a furnace including an ECM motor are allowed, provided that they are controlled to operate at low speed in ventilation only mode. To qualify to claim this credit, the building permit drawings shall specify the option being selected and the maximum tested building air leakage, and shall show the qualifying ventilation system and its control sequence of operation.	0.5
2.2	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to **2.0 air changes per hour maximum at 50 Pascals *or*** For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to 0.25 cfm/sf maximum at 50 Pascals ***and*** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of **0.65**. [1]	1.0
2.3	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to **1.5 air changes per hour** maximum at 50 Pascals ***or*** For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.25 cfm/sf** maximum at 50 Pascals ***and*** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of **0.75**. [1]	1.5
2.4	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.6 air changes per hour** maximum at 50 Pascals **or** For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.15 cfm/sf** maximum at 50 Pascals **and** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of **0.80. Duct installation shall comply with Section R403.3.7.** [1]	2.0

[1] To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.

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Table 406.3 – Energy Credits (Single Family)

Option	**Description**	**Credits: SF**
3. HIGH EFFICIENCY HVAC EQUIPMENT OPTIONS Only one option from Items 3.1 through 3.6 may be selected in this category.		
3.1 [2]	Energy Star rated (U.S. North) Gas or propane furnace with minimum AFUE of 95% ***or*** Energy Star rated (U.S. North) Gas or propane boiler with minimum AFUE of 90%. [2]	1.0
3.2 [2]	Air-source centrally ducted heat pump with minimum HSPF of 9.5. [3]	1.0
3.3[2]	Closed-loop ground source heat pump; with a minimum COP of 3.3 ***or*** Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet and minimum COP of 3.6. [3]	1.5
3.4	Ductless mini-split heat pump system, zonal control: In homes where the primary space heating system is zonal electric heating, a ductless mini-split heat pump system with a minimum HSPF of 10.0 shall be installed and provide heating to the largest zone of the housing unit. [4]	1.5
3.5 [2]	Air-source, centrally ducted heat pump with minimum HSPF of 11.0. [4]	1.5
3.6 [2]	Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF of 10 shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature. To qualify to claim this credit, the building permit drawings shall specify the option being selected, the heated floor area calculation, the heating equipment type(s), the minimum equipment efficiency, and total installed heat capacity (by equipment type).	2.0
4. HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM OPTIONS		
4.1	All supply and return ducts located in an unconditioned attic shall be deeply buried in ceiling insulation in accordance with Section R403.3.7. For mechanical equipment located outside the conditioned space, a maximum of 10 linear feet of return duct and 5 linear feet of supply duct connections to the equipment may be outside the deeply buried insulation. All metallic ducts located outside the conditioned space must have both transverse and longitudinal joints sealed with mastic. If flex ducts are used, they cannot contain splices. Duct leakage shall be limited to 3 cfm per 100 square feet of conditioned floor area. Air handler(s) shall be located within the conditioned space.	0.5
4.2	HVAC equipment and associated duct system(s) installation shall comply with the requirements of Section R403.3.7. Locating system components in conditioned crawl spaces is not permitted under this option. Electric resistance heat and ductless heat pumps are not permitted under this option. Direct combustion heating equipment with AFUE less than 80% is not permitted under this option. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and shall show the location of the heating and cooling equipment and all the ductwork.	1.0

[2] An alternative heating source sized at a maximum of 0.5 W/sf(equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.
[3] To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.
[4] To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.

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Table 406.3 – Energy Credits (Single Family)

Option	**Description**	**Credits: SF**
5. EFFICIENT WATER HEATING OPTIONS Only one option from Items 5.2 through 5.6 may be selected in this category. Item 5.1 may be combined with any option.		
5.1	A drain water heat recovery unit(s) shall be installed, which captures waste water heat from all and only the showers, and has a minimum efficiency of 40% if installed for equal flow or a minimum efficiency of 54% if installed for unequal flow. Such units shall be rated in accordance with CSA B55.1 or IAPMO IGC 346-2017 and be so labeled. To qualify to claim this credit, the building permit drawings shall include a plumbing diagram that specifies the drain water heat recovery units and the plumbing layout needed to install it. Labels or other documentation shall be provided that demonstrates that the unit complies with the standard.	0.5
5.2	Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.80. [5]	0.5
5.3	Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.91 ***or*** Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum savings of 85 therms or 2000 kWh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar Water Heating Systems ***or*** Water heater heated by ground source heat pump meeting requirements of Option 3.3. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency and, for solar water heating systems, the calculation of minimum energy savings.	1.0
5.4	Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier I of NEEA's advanced water heating specification **or** For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier I of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. [5]	1.5
5.5	Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification ***or*** For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier III of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. [5]	2.0
5.6	Water heating system shall include one of the following: Electric heat pump water heater with a minimum UEF of 2.9 and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors. Equipment shall meet Section 4, requirements for all units, of the NEEA standard *Advanced Water Heating Specification* with the UEF noted above ***or*** For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier III of NEEA's advanced water heating specification and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. [5]	2.5

[5] To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.

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Option	**Description**	**Credits: SF**
6. RENEWABLE ELECTRIC ENERGY OPTION		
6.1	For each 1200 kWh of electrical generation per housing unit provided annually by on-site wind or solar equipment a 1.0 credit shall be allowed, up to 3 credits. Generation shall be calculated as follows: For solar electric systems, the design shall be demonstrated to meet this requirement using the National Renewable Energy Laboratory calculator PVWATTs or approved alternate by the code official. Documentation noting solar access shall be included on the plans. For wind generation projects designs shall document annual power generation based on the following factors: the wind turbine power curve; average annual wind speed at the site; frequency distribution of the wind speed at the site and height of the tower. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the photovoltaic or wind turbine equipment type, provide documentation of solar and wind access, and include a calculation of the minimum annual energy power production.	1.0
7. APPLIANCE PACKAGE OPTION		
7.1	All of the following appliances shall be new and installed in the dwelling unit and shall meet the following standards: Dishwasher – Energy Star rated Refrigerator (if provided) – Energy Star rated Washing machine – Energy Star rated Dryer – Energy Star rated, ventless dryer with minimum CEF rating of 5.2 To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the appliance type and provide documentation of Energy Star compliance. At the time of inspection, all appliances shall be installed and connected to utilities. Dryer ducts and exterior dryer vent caps are not permitted to be installed in the dwelling unit.	0.5

Window, Skylight and Door Schedule

Project Information	*Contact Information*
9419 SE 54th St, Mercer Island TPN 143870-0150	MDB Residential Design Asc / Mark D Batson
Elite Home NW LLC	8801 Sait Thomas Drive, Pasco WA 99301
	425-830-6713 markdbatson@yahoo.com

	Ref.	U-factor	Qt.	Width Feet	Inch	Height Feet	Inch	Area	UA
Exempt Swinging Door (24 sq. ft. max.)	WSEC	N/A	1	3	0	8	0	24.0	######
Exempt Glazed Fenestration (15 sq. ft. max.)								0.0	0.00

Vertical Fenestration (Windows and doors)

Component Description	Ref.	U-factor	Qt.	Width Feet	Inch	Height Feet	Inch	Area	UA
Main Floor Plan								0.0	0.00
Foyer 60"x84" FX Vinyl Pic	WSEC	0.25	1	5	0	7	0	35.0	8.75
(2) 36"x96" Insul FG Entry	WSEC	0.25	2	3	0	8	0	48.0	12.00
72"x24" FX Vinyl Entry Transom	WSEC	0.25	1	6	0	2	0	12.0	3.00
Great Room (2) 21"x96" FX Vinyl Side Lites	WSEC	0.25	2	1	9	8	0	28.0	7.00
(2) 30"X86" Insul FG Patio Swing Doors	WSEC	0.25	2	2	6	8	0	40.0	10.00
(2) 48"x84" FX Vinyl Pic	WSEC	0.25	2	4	0	7	0	56.0	14.00
96"x84" XOX Vinyl	WSEC	0.25	1	8	0	7	0	56.0	14.00
(4) 48"x66" FX Vinyl Transom (stacked)	WSEC	0.25	4	4	0	5	6	88.0	22.00
(2) 96"x66" FX Vinyl Transom (stacked)	WSEC	0.25	2	8	0	5	6	88.0	22.00
Dining Rm 108"x84" XOX Vinyl	WSEC	0.25	1	9	0	7	0	63.0	15.75
Kitchen 108"x72" XOX Vinyl	WSEC	0.25	1	9	0	6	0	54.0	13.50
Guest BR #4 96"x84" XOX Vinyl	WSEC	0.25	1	8	0	7	0	56.0	14.00
Guest 3/4 Bath 24"x72" SH Vinyl	WSEC	0.25	1	2	0	6	0	12.0	3.00
Upper Floor Plan								0.0	0.00
Stairwell (4) 60"x84" FX Vinyl Pic	WSEC	0.25	4	5	0	7	0	140.0	35.00
Balcony 60"x84" FX Vinyl Pic	WSEC	0.25	1	5	0	7	0	35.0	8.75
72"x84" FX Vinyl Pic	WSEC	0.25	1	6	0	7	0	42.0	10.50
Laundry 48"x72" XO Vinyl	WSEC	0.25	1	4	0	6	0	24.0	6.00
BR #2 3/4 Bath 48"x72" XO Vinyl	WSEC	0.25	1	4	0	6	0	24.0	6.00
BR #2 (2) 24"x84" CSMNT Vinyl	WSEC	0.25	2	2	0	7	0	28.0	7.00
24"x84" FX Vinyl	WSEC	0.25	1	2	0	7	0	14.0	3.50
72"x36" XO Vinyl	WSEC	0.25	1	6	0	3	0	18.0	4.50
BR #3 3/4 Bath 36"x72" SH Vinyl	WSEC	0.25	1	3	0	6	0	18.0	4.50
BR #3 72"x84" XO Vinyl	WSEC	0.25	1	6	0	7	0	42.0	10.50
(2) 30"x84" SH Vinyl	WSEC	0.25	2	2	6	7	0	35.0	8.75
Master BR #1 (2) 30"x84" SH Vinyl	WSEC	0.25	2	2	6	7	0	35.0	8.75
108"x84" XOX Vinyl	WSEC	0.25	1	9	0	7	0	63.0	15.75
Master Bath 72"x84" FX Vinyl	WSEC	0.25	1	6	0	7	0	42.0	10.50
Grt Rm Tansom Abv Patio 108"x60" FX Vinyl	WSEC	0.25	1	9	0	5	0	45.0	11.25
Basement Floor Plan								0.0	0.00
Rec RM (2) 21"x96" FX Vinyl Side Lites	WSEC	0.25	2	1	9	8	0	28.0	7.00
(2) 30"x96" Insul FG Patio Doors	WSEC	0.25	2	2	6	8	0	40.0	10.00
Exercise RM (2) 21"x96" FX Vinyl Side Lites	WSEC	0.25	2	1	9	8	0	28.0	7.00
(2) 30"x96" Insul FG Patio Doors	WSEC	0.25	2	2	6	8	0	40.0	10.00
96"x72" XOX Vinyl	WSEC	0.25	1	8	0	6	0	48.0	12.00
Guest BR #5 96"x72" XOX Vinyl	WSEC	0.25	1	8	0	6	0	48.0	12.00
BR #5 60"x72" FX Vinyl Pic	WSEC	0.25	1	5	0	6	0	30.0	7.50
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00

Sum of Vertical Fenestration Area and UA 1503.0 375.75
Vertical Fenestration Area Weighted U = UA/Area 0.25

Overhead Glazing (Skylights)

Component Description	Ref.	U-factor	Qt.	Width Feet	Inch	Height Feet	Inch	Area	UA
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00

Sum of Overhead Glazing Area and UA 0.0 0.00
Overhead Glazing Area Weighted U = UA/Area 0.00

***Total Sum of Fenestration Area and UA** (for heating system sizing calculations)* 1527.0 ######

Simple Heating System Size: Washington State

This heating system sizing calculator is based on the Prescriptive Requirements of the 2018 Washington State Energy Code (WSEC) and ACCA Manuals J and S. This tool will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads.

Please complete the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you need in the drop-down options, please contact the WSU Energy Program at energycode@energy.wsu.edu or (360) 956-2042 for assistance.

Project Information	*Contact Information*
9419 SE 54th St TPN 143870-0150	MDB Residnetial Design Asc, Mark D Batson
Elite Homes NW, PO Box 50302 Bellevue WA 98015	8801 Saint Thomas Dr, Pasco WA 99301-9000
425-283-9035 nicks.elitehomes@gmail.com	425-830-6713 markdbatson@yahoo.com

Heating System Type: ○ All Other Systems ● Heat Pump

To see detailed instructions for each section, place your cursor on the word "Instructions"

Design Temperature
Instructions: Mercer Island
Design Temperature Difference (ΔT) 45
ΔT = Indoor (70 degrees) - Outdoor Design Temp

Area of Building
Conditioned Floor Area
Instructions: Conditioned Floor Area (sq ft) 6,852
Average Ceiling Height
Instructions: Average Ceiling Height (ft) 10.8
Conditioned Volume 74,228

	Selection	U-Factor / F-Factor	Area / Length	UA
Glazing and Doors	Select U-Factor	No selection	376	
Skylights		0.50	0	---
Insulation – Attic	R-49	0.026	3,353	87.18
Single Rafter or Joist Vaulted Ceilings	No Vaulted Ceilings in this project.	---	0	
Above Grade Walls *(see Figure 1)*	R-21 Intermediate	0.056	6,877	385.11
Floors	R-38	0.025	832	20.80
Below Grade Walls *(see Figure 1)*	R-21 Interior	0.042	1,873	78.67
Slab Below Grade *(see Figure 1)*	R-10 Fully insulated	F-Factor 0.303	Length 160	48.48
Slab on Grade *(see Figure 1)*	R-10 Fully Insulated	F-Factor 0.360	Length 108	38.88

Location of Ducts
Instructions: Conditioned Space
Duct Leakage Coefficient 1.00

Figure 1.
Above Grade
Below Grade

Sum of UA	659.12	
Envelope Heat Load *Sum of UA x ΔT*	29,660	Btu / Hour
Air Leakage Heat Load *Volume x 0.6 x ΔT x 0.018*	36,075	Btu / Hour
Building Design Heat Load *Air leakage + envelope heat loss*	65,735	Btu / Hour
Building and Duct Heat Load *Ducts in unconditioned space: sum of building heat loss x 1.10* *Ducts in conditioned space: sum of building heat loss x 1*	65,735	Btu / Hour
Maximum Heat Equipment Output *Building and duct heat loss x 1.40 for forced air furnace* *Building and duct heat loss x 1.25 for heat pump*	82,169	Btu / Hour

(07/01/13)

RESIDENTIAL
DESIGN ASSOCIATES
8801 SAINT THOMAS DR
SPACE #222
PASCO, WA
425-830-6713

PROJECT: 9419 SE 54th ST
ELITE HOMES NW
PARCEL # 143870-0150

2018 WSEC ENERGY CODE FORMS

ENG FILE#:	
ENG BY:	
DWG DATE:	03.08.23
DRAWN BY:	MDB
REV. BY:	
REV. DATE:	

FILE NUMBER
22-002
SHEET NUMBER
2018
ENERGY

STRUCTURAL NOTES

GENERAL REQUIREMENTS & DESIGN CRITERIA

BUILDING CODE & REFERENCE STANDARDS: THE "INTERNATIONAL BUILDING CODE", 2018 EDITION, GOVERNS THE DESIGN AND CONSTRUCTION OF THIS PROJECT. REFERENCE TO A SPECIFIC SECTION IN THE CODE DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE ENTIRE MATERIALS REFERENCE STANDARDS NOTED BELOW. THE LATEST EDITION OF THE MATERIALS REFERENCE STANDARDS SHALL BE USED.

ARCHITECTURAL DRAWINGS: REFER TO THE ARCHITECTURAL DRAWINGS FOR INFORMATION INCLUDING, BUT NOT LIMITED TO: DIMENSIONS, ELEVATIONS, SLOPES, DOOR AND WINDOW OPENINGS, NON-BEARING WALLS, STAIRS, CURBS, DRAINS, DEPRESSIONS, RAILINGS, WATERPROOFING, FINISHES AND OTHER NONSTRUCTURAL ITEMS.

STRUCTURAL RESPONSIBILITIES: THE PE IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE PRIMARY STRUCTURE IN ITS COMPLETED STATE.

CONTRACTOR RESPONSIBILITIES: THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND ALL JOB RELATED SAFETY STANDARDS SUCH AS OSHA AND WSHA. THE CONTRACTOR IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION AND SHALL PROVIDE TEMPORARY SHORING, BRACING AND OTHER ELEMENTS REQUIRED TO MAINTAIN STABILITY UNTIL THE STRUCTURE IS COMPLETED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE WORK REQUIRED IN THE CONSTRUCTION DOCUMENTS AND THE REQUIREMENTS FOR EXECUTING IT PROPERLY.

DISCREPANCIES: IN CASE OF DISCREPANCIES BETWEEN THESE GENERAL NOTES, THE CONTRACT DRAWINGS AND SPECIFICATIONS, AND/OR REFERENCE STANDARDS, THE ENGINEER SHALL DETERMINE WHICH SHALL GOVERN. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

SITE VERIFICATION: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE PRIOR TO FABRICATION AND/OR CONSTRUCTION. CONFLICTS BETWEEN THE DRAWINGS AND ACTUAL SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ALL UNDERGROUND UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO EXCAVATION OR DRILLING.

WIND DESIGN: BASIC WIND SPEED (3-SECOND GUST), V = 85 MPH (ASD); WIND IMPORTANCE FACTOR, IW = 1.0; OCCUPANCY CATEGORY = II; EXPOSURE CATEGORY = C.

SEISMIC DESIGN: SEISMIC IMPORTANCE FACTOR IE = 1.0; OCCUPANCY CATEGORY = II; SS = 1.441G; S1 = 0.50G; SITE CLASS = D; SDS = 1.153G; SD1 = 0.50G; SEISMIC DESIGN CATEGORY = D; BASIC SEISMIC FORCE RESISTING SYSTEM = A-13 (BEARING WALL SYSTEMS) LIGHT-FRAMED WALLS WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE; CS = 0.124; R = 6.5; ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE PROCEDURE PER ASCE 7, SEC 12.8.

SNOW LOAD: GROUND SNOW LOAD, PG = 20 PSF; FLAT ROOF SNOW LOAD, PF = 25 PSF (DRIFT LOADS CONSIDERED PER ASCE 7 WHERE APPLICABLE); SNOW EXPOSURE FACTOR, CE = 1.0; SNOW IMPORTANCE FACTOR, IS = 1.0; THERMAL FACTOR, CT = 1.0.

LIVE LOADS:

ROOF (LIVE)	20 PSF
ROOF (SNOW)	25 PSF
RESIDENTIAL FLOOR	40 PSF
RESIDENTIAL DECK	60 PSF

DEFERRED SUBMITTALS: ITEMS DESIGNED BY OTHERS SHALL INCLUDE CALCULATIONS, SHOP DRAWINGS AND PRODUCT DATA. DESIGN SHALL BE PREPARED BY THE SSE AND SUBMITTED TO THE ARCHITECT AND SER FOR REVIEW PRIOR TO SUBMISSION TO THE JURISDICTION FOR APPROVAL. THE SSE SHALL SUBMIT TO THE ENGINEER FOR REVIEW CALCULATIONS AND SHOP DRAWINGS THAT ARE STAMPED AND SIGNED BY THE SSE. REVIEW OF THE SSE'S SHOP DRAWINGS IS FOR GENERAL COMPLIANCE WITH DESIGN CRITERIA AND COMPATIBILITY WITH THE DESIGN OF THE PRIMARY STRUCTURE AND DOES NOT RELIEVE THE SSE OF RESPONSIBILITY FOR THAT DESIGN. ALL NECESSARY BRACING, TIES, ANCHORAGE, AND PROPRIETARY PRODUCTS SHALL BE FURNISHED AND INSTALLED PER MANUFACTURER'S INSTRUCTIONS OR THE SSE'S DESIGN DRAWINGS AND CALCULATIONS.

INSPECTIONS: ALL CONSTRUCTION IS SUBJECT TO INSPECTION BY THE BUILDING OFFICIAL IN ACCORDANCE WITH IBC SEC 109. THE CONTRACTOR SHALL COORDINATE ALL REQUIRED INSPECTIONS WITH THE BUILDING OFFICIAL. SUBMIT COPIES OF ALL INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.

PREFABRICATED CONSTRUCTION: ALL PREFABRICATED CONSTRUCTION SHALL CONFORM TO IBC SEC 1703.6.

GEOTECHNICAL INSPECTION: THE GEOTECHNICAL ENGINEER OR BUILDING OFFICIAL SHALL INSPECT ALL PREPARED SOIL BEARING SURFACES PRIOR TO PLACEMENT OF CONCRETE AND REINFORCING STEEL AND PROVIDE A LETTER TO THE OWNER STATING THAT SOILS ARE ADEQUATE TO SUPPORT THE "ALLOWABLE FOUNDATION PRESSURE" SHOWN BELOW. SOIL VALUES SHALL BE FIELD VERIFIED BY THE BUILDING OFFICIAL OR THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.

GEOTECHNICAL REPORT: RECOMMENDATIONS CONTAINED IN "GEOTECHNICAL ENGINEERING REPORT" PROJECT NO. 20220159E001 BY ASSOCIATED EARTH SCIENCES INC., DATED OCT. 3, 2022 WERE USED FOR RETAINING WALLS, FOOTING DESIGN.

DESIGN SOIL VALUES:

ALLOWABLE BEARING PRESSURE (ASSUMED)	2500 PSF
PASSIVE LATERAL PRESSURE	250 PSF/FT
ACTIVE LATERAL PRESSURE (UNRESTRAINED)	35 PSF/FT
ACTIVE LATERAL PRESSURE (RESTRAINED)	50 PSF/FT
COEFFICIENT OF SLIDING FRICTION	0.35
SEISMIC SURCHARGE COEFFICIENT	10H

SLABS-ON-GRADE & FOUNDATIONS: ALL FOUNDATIONS SHALL BEAR ON STRUCTURAL COMPACTED FILL OR COMPETENT NATIVE SOIL PER THE GEOTECHNICAL REPORT. ALL SLABS-ON-GRADE SHALL BE FOUNDED ON APPROPRIATE SUB-GRADE PREPARATION AS NOTED IN THE GEOTECHNICAL REPORT. EXTERIOR PERIMETER FOOTINGS SHALL BEAR NOT LESS THAN 18 INCHES BELOW FINISH GRADE, OR BY THE GEOTECHNICAL ENGINEER AND THE BUILDING OFFICIAL. INTERIOR FOOTINGS SHALL BEAR NOT LESS THAN 12 INCHES BELOW FINISH FLOOR.

COMPACTION: UNLESS OTHERWISE SPECIFIED BY A GEOTECHNICAL ENGINEER, FOOTINGS SHALL BE PLACED ON COMPACTED MATERIAL AND SHALL BE WELL-GRADED GRANULAR MATERIAL WITH NO MORE THAN 5% PASSING A #2 SIEVE. FILLS PLACED SHALL BE IN MAXIMUM 8" LIFTS AND ALL BEARING SOILS SHALL BE COMPACTED TO 95% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT USING THE MODIFIED PROCTOR TEST.

CAST-IN-PLACE CONCRETE & REINFORCEMENT

REFERENCE STANDARDS: CONFORM TO:
(1) ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY".
(2) IBC CHAPTER 19.
(3) ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE", SEC 3 "REINFORCEMENT AND REINFORCEMENT SUPPORTS."

FIELD REFERENCE: THE CONTRACTOR SHALL KEEP A COPY OF ACI FIELD REFERENCE MANUAL, SP-15, "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301) WITH SELECTED ACI AND ASTM REFERENCES."

CONCRETE MIXTURES: CONFORM TO ACI 318 CHAPTER 5 "CONCRETE QUALITY, MIXING, AND PLACING."

MATERIALS: CONFORM TO ACI 318 CHAPTER 3 "MATERIALS" FOR REQUIREMENTS FOR CEMENTITIOUS MATERIALS, AGGREGATES, MIXING WATER AND ADMIXTURES.

REINFORCING BARS	ASTM A615, GRADE 60, DEFORMED BARS.
DEFORMED WELDED WIRE FABRIC	ASTM A497
BAR SUPPORTS	CRSI MSP-2, CHAPTER 3 "BAR SUPPORTS."
TIE WIRE	16.5 GAGE OR HEAVIER, BLACK ANNEALED.

MIX DESIGNS: PROVIDE A 5-SACK MINIMUM, 28-DAY COMPRESSIVE STRENGTH F'C = 2,500 PSI CONCRETE MIX WITH MAXIMUM 3/4" AGGREGATE AND 0.50 W/C RATIO FOR ALL ISOLATED POST AND CONTINUOUS WALL FOOTINGS, SLABS-ON-GRADE, AND BASEMENT WALLS EXTENDING NO MORE THAN 8" ABOVE FINISH GRADE ELEVATION. FOR BASEMENT WALLS EXTENDING MORE THAN 8" ABOVE FINISH GRADE AND ALL SITE WALLS, PROVIDE A 5-1/2 SACK MINIMUM F'C = 3,000 PSI CONCRETE MIX WITH MAXIMUM 3/4" AGGREGATE AND 0.50 W/C RATIO.

MIX DESIGN NOTES:
(1) W/C RATIO: WATER-CEMENTITIOUS MATERIAL RATIOS SHALL BE BASED ON THE TOTAL WEIGHT OF CEMENTITIOUS MATERIALS.
(2) CEMENTITIOUS CONTENT: THE USE OF FLY ASH, OTHER POZZOLANS, SILICA FUME, OR SLAG SHALL CONFORM TO ACI 301 SEC 4.2.2.B.B. MAXIMUM AMOUNT OF FLY ASH SHALL BE 20% OF TOTAL CEMENTITIOUS CONTENT UNLESS REVIEWED AND APPROVED OTHERWISE BY SER.
(3) AIR CONTENT: CONFORM TO ACI 301 SEC 4.2.2.4. HORIZONTAL EXTERIOR SURFACES IN CONTACT WITH THE SOIL REQUIRE ENTRAINED AIR. USE "MODERATE EXPOSURE". VERTICAL EXTERIOR SURFACES REQUIRE "MODERATE EXPOSURE". TOLERANCE IS +/- 1-1/2% AIR CONTENT SHALL BE MEASURED AT POINT OF PLACEMENT.
(4) SLUMP: CONFORM TO ACI 301 SEC 4.2.2.2. SLUMP SHALL BE DETERMINED AT POINT OF PLACEMENT.
(5) NON-CHLORIDE ACCELERATOR: NON-CHLORIDE ACCELERATING ADMIXTURE MAY BE USED IN CONCRETE SLABS PLACED AT AMBIENT TEMPERATURES BELOW 50F AT THE CONTRACTOR'S OPTION.

FORMWORK: CONFORM TO ACI 301 SEC 2 "FORMWORK AND FORM ACCESSORIES." REMOVAL OF FORMS SHALL CONFORM TO SEC 2.3.2 EXCEPT STRENGTH INDICATED IN SEC 2.3.2.5 SHALL BE 0.75 F'C.

MEASURING, MIXING, AND DELIVERY: CONFORM TO ACI 301 SEC 4.3.

HANDLING, PLACING, CONSTRUCTING AND CURING: CONFORM TO ACI 301 SEC 5.

REBAR FABRICATION & PLACING: CONFORM TO ACI 301, SEC 3.2.2 "FABRICATION", AND ACI SP-66 "ACI DETAILING MANUAL." CONFORM TO ACI 301, SEC 3.3.2 "PLACEMENT." PLACING TOLERANCES SHALL CONFORM TO SEC 3.3.2.1 "TOLERANCES."

SPLICES: CONFORM TO ACI 301, SEC 3.3.2.7. REFER TO PLANS FOR TYPICAL SPLICES.

FIELD BENDING: CONFORM TO ACI 301 SEC 3.3.2.8. "FIELD BENDING OR STRAIGHTENING." BAR SIZES #3 THROUGH #5 MAY BE FIELD BENT COLD THE FIRST TIME. OTHER BARS REQUIRE PREHEATING. DO NOT TWIST BARS.

CORNERS BARS: PROVIDE MATCHING-SIZED "L" CORNER BARS FOR ALL HORIZONTAL WALL AND FOOTING BARS WITH THE APPROPRIATE SPLICE LENGTH, UNO.

CONCRETE COVER: CONFORM TO THE FOLLOWING COVER REQUIREMENTS FROM ACI 301, TABLE 3.3.2.3:

CONCRETE CAST AGAINST EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER (#5 & SMALLER)	1-1/2"
BARS IN SLABS AND WALLS	3/4"

CONSTRUCTION JOINTS: CONFORM TO ACI 301 SEC 2.2.2.5, 5.1.2.3A, 5.2.2.1, AND 5.3.2.6. CONSTRUCTION JOINTS SHALL BE LOCATED AND DETAILED AS ON THE CONSTRUCTION DRAWINGS. USE OF AN ACCEPTABLE ADHESIVE, SURFACE RETARDER, PORTLAND CEMENT GROUT, OR ROUGHENING THE SURFACE IS NOT REQUIRED UNLESS SPECIFICALLY NOTED ON THE DRAWINGS. WHERE SHEAR BOND IS REQUIRED, ROUGHEN SURFACES TO 1/4" AMPLITUDE.

WOOD FRAMING

REFERENCE STANDARDS: CONFORM TO:
(1) IBC CHAPTER 23 "WOOD",
(2) NDS AND NDS SUPPLEMENT - "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION",
(3) ANSI/TPI 1 "NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION",

DEFERRED SUBMITTALS: SUBMIT PRODUCT DATA AND PROOF OF ICC APPROVAL FOR FRAMING MEMBERS AND FASTENERS THAT HAVE BEEN DESIGNED BY OTHERS. SUBMIT CALCULATIONS PREPARED BY THE SSE IN THE STATE OF WASHINGTON FOR ALL MEMBERS AND CONNECTIONS DESIGNED BY OTHERS ALONG WITH SHOP DRAWINGS. ALL NECESSARY BRIDGING, BLOCKING, BLOCKING PANELS AND WEB STIFFENERS SHALL BE DETAILED AND FURNISHED BY THE SUPPLIER. TEMPORARY AND PERMANENT BRIDGING SHALL BE INSTALLED IN CONFORMANCE WITH THE MANUFACTURER'S SPECIFICATIONS. DEFLECTION LIMITS SHALL BE AS NOTED UNDER DESIGN LOADS SECTION.

IDENTIFICATION: ALL SAWN LUMBER AND PRE-MANUFACTURED WOOD PRODUCTS SHALL BE IDENTIFIED BY THE GRADE MARK OR A CERTIFICATE OF INSPECTION ISSUED BY THE CERTIFYING AGENCY.

MATERIALS:
- SAWN LUMBER: CONFORM TO GRADING RULES OF WWPA, WCLIB OR NLGA. FINGER JOINTED STUDS ACCEPTABLE AT INTERIOR WALLS ONLY.

MEMBER USE	SIZE	SPECIES	GRADE
STUDS & POSTS	2x, 4x	HEM-FIR	NO. 2
RAFTERS	2x4 - 2x10	HEM-FIR	NO. 2
BEAMS	4x8 - 4x12	HEM-FIR	NO. 2
BEAMS	6x8 - 6x12	HEM-FIR	NO. 2
POSTS & TIMBERS	6x, 8x	DOUG-FIR	NO. 2

- GLUED LAMINATED TIMBER: CONFORM TO AITC 117 "STANDARD SPECIFICATIONS FOR STRUCTURAL GLUE-LAMINATED TIMBER OF SOFTWOOD SPECIES, MANUFACTURING AND DESIGN" AND ANSI/AITC A190.1 "STRUCTURAL GLUED LAMINATED TIMBER." CAMBER ALL GLUED LAMINATED MEMBERS BEAMS TO 2000' RADIUS, UNLESS SHOWN OTHERWISE ON THE PLANS.

MEMBER USE	SIZES	SPECIES	STRESS CLASS	USES
BEAMS	ALL	DF/DF	24F-1.8E	SIMPLE SPANS
	ALL	DF/DF	24F-1.8E [(-FB)=(+FB)]	CANTILEVER SPANS

- METAL PLATE CONNECTED WOOD ROOF TRUSSES: CONFORM TO IBC SEC 2303.4 "TRUSSES."
- WOOD STRUCTURAL SHEATHING (PLYWOOD): WOOD APA-RATED STRUCTURAL SHEATHING INCLUDES: ALL VENEER PLYWOOD, ORIENTED STRAND BOARD, WAFERBOARD, PARTICLEBOARD, T1-11 SIDING, AND COMPOSITES OF VENEER AND WOOD BASED MATERIAL. CONFORM TO PRODUCT STANDARDS PS-1 AND PS-2 OF THE U.S. DEPT. OF COMMERCE AND THE AMERICAN PLYWOOD ASSOCIATION (APA).

LOCATION	THICKNESS	MINIMUM APA RATING: SPAN RATING	PLYWOOD GRADE	EXPOSURE
ROOF	15/32"	32/16	C-D	1
FLOOR	23/32" T&G	24 OC	STURD-I-FLOOR	1
WALLS	15/32"	32/16	C-D	1
WALLS(ALT)	7/16" OSB	24/16	C-D	1

- JOIST HANGERS AND CONNECTORS: SHALL BE "STRONG TIE" BY SIMPSON COMPANY OR USP EQUIVALENT AS SPECIFIED IN THEIR LATEST CATALOGS. ALTERNATE CONNECTORS BY OTHER MANUFACTURERS MAY BE SUBSTITUTED PROVIDED THEY HAVE CURRENT ICC APPROVAL FOR EQUIVALENT OR GREATER LOAD CAPACITIES AND ARE REVIEWED AND APPROVED BY THE SER PRIOR TO ORDERING. CONNECTORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE 1/2 OF THE NAILS OR BOLTS IN EACH MEMBER. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. UNLESS NOTED OTHERWISE ALL NAILS SHALL BE FULL LENGTH COMMON. NAIL STRAPS TO WOOD FRAMING AS LATE AS POSSIBLE IN THE FRAMING PROCESS TO ALLOW THE WOOD TO SHRINK AND THE BUILDING TO SETTLE.
- NAILS AND STAPLES: CONFORM TO IBC SEC 2303.6 "NAILS AND STAPLES." UNLESS NOTED ON PLANS, NAIL PER IBC TABLE 2304.9.1. UNLESS NOTED OTHERWISE ALL NAILS SHALL BE COMMON. NAIL SIZES SPECIFIED ON THE DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER
8d	2-1/2"	0.131"
10d	3"	0.148"
(8d & 10d ALTERNATIVE) PASLODE TETRAGRIP NAILS	2-3/8"	0.113"
12d (16d SINKER)	3-1/4"	0.148"
16d	3-1/2"	0.162"

- LAG BOLTS/BOLTS: CONFORM TO ASTM A307.

NAILING REQUIREMENTS: PROVIDE MINIMUM NAILING IN ACCORDANCE WITH IBC TABLE 2304.9.1 "FASTENING SCHEDULE" EXCEPT AS NOTED ON THE DRAWINGS. NAILING FOR ROOF/FLOOR DIAPHRAGMS/SHEAR WALLS SHALL BE PER DRAWINGS. NAILS SHALL BE DRIVEN FLUSH AND SHALL NOT FRACTURE THE SURFACE OF SHEATHING.

STANDARD LIGHT-FRAME CONSTRUCTION: UNLESS NOTED ON THE PLANS, CONSTRUCTION SHALL CONFORM TO IBC SEC 2308 "CONVENTIONAL LIGHT-FRAME CONSTRUCTION" AND IBC SEC 2304 "GENERAL CONSTRUCTION REQUIREMENTS."

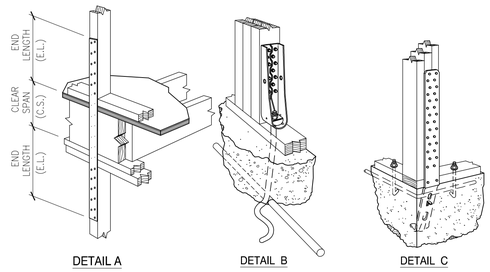
(1) WALL FRAMING: UNLESS OTHERWISE NOTED, ALL INTERIOR WALLS SHALL BE 2X4 @ 16"OC AND ALL EXTERIOR WALLS SHALL BE 2X6 @ 16"OC. PROVIDE (2)BUNDLED STUDS MIN AT WALL ENDS AND EACH SIDE OF ALL OPENINGS. UNO, ALL SOLID SAWN LUMBER HEADERS SHALL BE SUPPORTED BY A MINIMUM OF (1)TRIM AND (1)KING STUD AND ALL GLULAM OR ENGINEERED WOOD HEADERS BY (2)TRIM AND (2)KING STUDS. AT FRAMED WALLS, UNO, ALL SOLID SAWN LUMBER BEAMS SHALL BE SUPPORTED ON A MINIMUM OF (2) BUNDLED 2X STUDS AND ALL GLULAM OR ENGINEERED WOOD BEAMS ON A MINIMUM OF (3) BUNDLED 2X STUDS. STITCH-NAIL BUNDLED STUDS WITH (2)10D @ 12"OC. UNO, ALL INTERIOR AND EXTERIOR HEADERS SHALL BE 4X6. PROVIDE SOLID BLOCKING THRU FLOORS TO SUPPORTS BELOW FOR BEARING WALLS AND POSTS. UNO, ATTACH BOTTOM PLATES OF STUD WALLS TO WOOD FRAMING BELOW WITH 16D @ 12"OC OR TO CONCRETE WITH 5/8"-DIA. ANCHOR BOLTS X 7" EMBEDMENT AT 48"OC. REFER TO SHEAR WALL SCHEDULE FOR SPECIFIC SHEATHING, STUD, AND NAILING REQUIREMENTS AT SHEAR WALLS. UNO, PROVIDE GYPSUM SHEATHING ON INTERIOR SURFACES AND PLYWOOD SHEATHING ON EXTERIOR SURFACES.

(2) ROOF/FLOOR FRAMING: UNLESS OTHERWISE NOTED, PROVIDE DOUBLE JOISTS/RAFTERS UNDER ALL PARALLEL BEARING PARTITIONS AND SOLID BLOCKING AT ALL BEARING POINTS. PROVIDE DOUBLE JOISTS AROUND ALL ROOF/FLOOR OPENINGS. UNO, MULTI-JOISTS/RAFTERS SHALL BE STITCH-NAILED TOGETHER WITH (2)10D @ 12"OC. PROVIDE ROOF SHEATHING EDGE CLIPS CENTERED BETWEEN FRAMING AT UNBLOCKED PLYWOOD EDGES. ALL FLOOR SHEATHING SHALL HAVE TONGUE AND GROOVE JOINTS OR BE SUPPORTED BY SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF ROOF/FLOOR SHEATHING. ROOF/FLOOR SHEATHING SHALL BE LAID FACE GRAIN PERPENDICULAR TO FRAMING MEMBERS.

MOISTURE CONTENT: WOOD MATERIAL USED FOR THIS PROJECT SHALL HAVE MAXIMUM MOISTURE CONTENT OF 19% EXCEPT FOR THE PRESSURE-TREATED WOOD SILL PLATE.

PRESERVATIVE TREATMENT: WOOD MATERIALS ARE REQUIRED TO BE "TREATED WOOD" UNDER CERTAIN CONDITIONS IN ACCORDANCE WITH IBC SEC 2304.11 "PROTECTION AGAINST DECAY AND TERMITES". CONFORM TO THE APPROPRIATE STANDARDS OF THE AMERICAN WOOD-PRESERVERS ASSOCIATION (AWPA) FOR SAWN LUMBER, GLUED LAMINATED TIMBER, ROUND POLES, WOOD PILES AND MARINE PILES. FOLLOW AMERICAN LUMBER STANDARDS COMMITTEE (ALSC) QUALITY ASSURANCE PROCEDURES. PRODUCTS SHALL BEAR THE APPROPRIATE MARK.

METAL CONNECTORS/PT WOOD: CK ENGINEERING LLC RECOMMENDS THAT ALL METAL HARDWARE AND FASTENERS IN CONTACT WITH PRESSURE TREATED LUMBER BE STAINLESS STEEL TYPE 316L. AT THE OWNER'S RISK AND DISCRETION, HOT-DIPPED GALVANIZED METAL HARDWARE AND FASTENERS MAY BE INVESTIGATED FOR USE IN LIEU OF STAINLESS STEEL PROVIDED THAT THE FINISH HAS A MINIMUM ZINC CONTENT OF AT LEAST 1.85 OZ/SF AND ITS USE IS COORDINATED BY THE CONTRACTOR AND WOOD SUPPLIER FOR THE EXPECTED ENVIRONMENT AND MOISTURE EXPOSURE FOR APPROPRIATE USE BASED ON THE METHOD OF PRESERVATIVE TREATMENT OF THE WOOD.



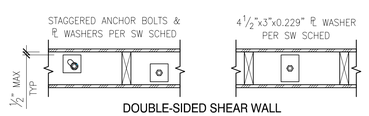
DETAIL A | DETAIL B | DETAIL C

MODEL # (1)	ANCHORAGE TYPE (4,5,6)	FASTENERS	END STUD REQUIRED (2,3)	CAPACITY (LBS)	
				DOUG-FIR	HEM-FIR
CS14	FLR-TO-FLR STRAP (E.L.=19")	(30) 10d COMMON	2x STUD	2,490	2,490
MST60	FLR-TO-FLR STRAP (CNTR'D ON C.S.)	(46) 16d COMMON	(2) 2x STUDS	6,235	5,405
MST72	FLR-TO-FLR STRAP (CNTR'D ON C.S.)	(62) 16d COMMON	(2) 2x STUDS	6,730	6,475
LSTHD8/RJ	CAST-IN-PLACE	(16) 16d SINKERS	(2) 2x STUDS[7]	1,975	1,975
STHD10/RJ	CAST-IN-PLACE	(18) 16d SINKERS	(2) 2x STUDS[7]	2,640	2,640
HDU8	SSTB28	(20) 1/4"ø x 2 1/2" SDS WOOD SCREWS	(3) 2x STUDS	7,870	5,665
HDU11	SB1x30	(30) 1/4"ø x 2 1/2" SDS WOOD SCREWS	6x6 DF#2 MIN.	9,335	
HDU14	PAB8	(4) 1"ø	6X6 DF#2 MIN.	14,445	

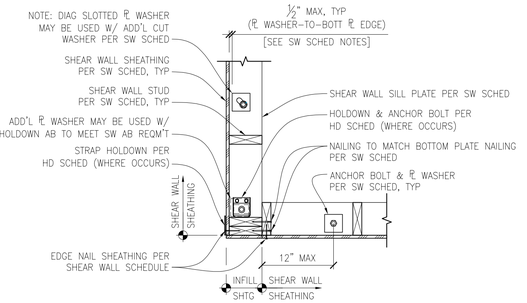
NOTES:
1. HOLDOWNS SPECIFIED ARE AS MANUFACTURED BY SIMPSON ANCHOR TIE DOWN CO., INC; ACCEPTABLE EQUIVALENT PRODUCT SUBSTITUTIONS ARE AVAILABLE FROM OTHER MANUFACTURERS WITH SER APPROVAL.
2. LOCATE ALL HOLDOWNS AT ENDS OF ALL SHEAR WALLS & FASTEN TO BUNDLED END STUDS.
3. BUNDLED END STUDS SHOULD BE STITCH-NAILED TOGETHER USING MINIMUM (2) 16d @ 10"OC, UNO.
4. LOCATE "HDU#", "LSTHD#" & "STHD#" HOLDOWNS AT CONCRETE FOUNDATION LEVEL. (DETAIL B & C) LOCATE "CS#", "MST", "MSTC#" & "CMST#" STRAPS AT FLOOR-TO-FLOOR CONNECTIONS. (DETAIL A)
5. ALL HOLDOWN ANCHOR BOLTS SHALL BE MIN 5" FROM CONCRETE WALL ENDS.
6. USE "SSTB" FOR 2x SILL PLATES & "SSTBL" FOR 3x SILL PLATES.
7. ADDITIONAL END STUD REQUIRED TO MEET MINIMUM 1 1/2" EDGE DISTANCE FROM CONCRETE CORNER TO "STHD" STRAP. USE "RJ" STYLE WITH "STHD" WHERE RIM JOIST IS PRESENT.
8. INSTALL ALL HOLDOWN HARDWARE PER MANUFACTURER'S INSTRUCTIONS & RECOMMENDATIONS.

SIMPSON STRONG-TIE SLOTTED PLATE WASHERS W/ 5/8"ø ANCHOR BOLTS

3x3x0.229	BPS5/8-3
4.5x3x0.229	BPS5/8-6



DOUBLE-SIDED SHEAR WALL ANCHOR BOLT OPTIONS



TYPICAL PLAN VIEW - SHEAR WALL HOLDOWNS & ANCHOR BOLTS

SCALE: 1" = 1'-0" — 7

HOLDOWN SCHEDULE

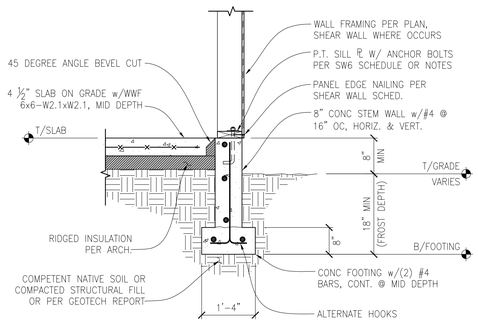
SCALE: N.T.S. — 8

WOOD-FRAMED SHEAR WALL SCHEDULE

FOR HEM-FIR/DOUG-FIR STUD FRAMING

SW TYPE	SW SHEATHING APA-RATED [1, 2, 12]	NAIL SIZE & SPACING @ PANEL EDGES [4, 5, 6]	RIM JOIST OR BLOCKING ATTACHMENT TO TOP PLATE BELOW [8, 9]	BOTTOM PLATE & EDGE MEMBER REQUIREMENTS [3, 7, 13]: SHEAR NAILING TO WOOD FRAMING BELOW	BOTTOM ø AT FRAMING	SILL PLATE REQUIREMENTS: ANCHOR BOLT TO CONCRETE FOUNDATION [10]	SILL ø AT FOUNDATION [11]	SHEAR LOAD CAPACITY (PLF)
SW-6	15/32" CD-EXT	0.131"ø x 2 1/2" @ 6"OC	CLIP @ 18"OC	0.148"ø x 3 1/4" @ 6"OC	2x	5/8"ø @ 48"OC	P.T. 2x	242
SW-4	15/32" CD-EXT	0.131"ø x 2 1/2" @ 4"OC	CLIP @ 14"OC	0.148"ø x 3 1/4" @ 4"OC	3x [15]	5/8"ø @ 32"OC	P.T. 2x	353
						5/8"ø @ 48"OC	P.T. 3x [15]	
SW-3	15/32" CD-EXT	0.131"ø x 2 1/2" @ 3"OC, STAGGERED	CLIP @ 12"OC	0.148"ø x 3 1/4" @ 4"OC & CLIP @ 18"OC	3x [15]	5/8"ø @ 24"OC	P.T. 2x	456
						5/8"ø @ 32"OC	P.T. 3x [15]	
SW-2	15/32" CD-EXT	0.131"ø x 2 1/2" @ 2"OC, STAGGERED	CLIP @ 8"OC	0.148"ø x 3 1/4" @ 4"OC & CLIP @ 16"OC	3x [15]	5/8"ø @ 16"OC	P.T. 2x	595
						5/8"ø @ 24"OC	P.T. 3x [15]	
2SW-4	15/32" CD-EXT BOTH SIDE	0.131"ø x 2 1/2" @ 4"OC, STAGGERED	CLIP @ 6"OC	0.148"ø x 3 1/4" @ 4"OC & CLIP @ 12"OC	3x [15]	5/8"ø @ 24"OC	P.T. 3x [15]	707
2SW-3	15/32" CD-EXT BOTH SIDE	0.131"ø x 2 1/2" @ 3"OC, STAGGERED	CLIP @ 8"OC BOTH SIDES, STAGGERED	0.148"ø x 3 1/4" @ 4"OC & CLIP @ 8"OC	3x [15]	5/8"ø @ 16"OC	P.T. 3x [15]	911
2SW-2	15/32" CD-EXT BOTH SIDE	0.131"ø x 2 1/2" @ 2"OC, STAGGERED	CLIP @ 6"OC BOTH SIDES, STAGGERED	0.148"ø x 3 1/4" @ 4"OC & CLIP @ 5"OC	3x [15]	5/8"ø @ 12"OC	P.T. 3x [15]	1190

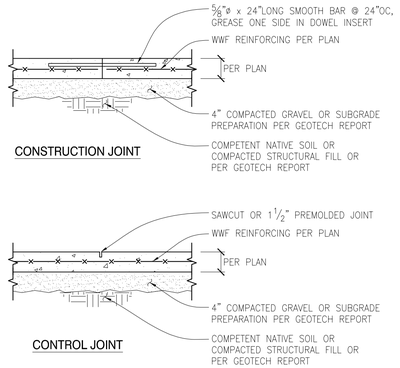
NOTES:
1. INSTALL PANELS EITHER HORIZONTALLY OR VERTICALLY
2. WHERE SHEATHING IS APPLIED ON BOTH SIDES OF WALL, PANEL EDGE JOINTS ON 2x FRAMING SHALL BE STAGGERED SO THAT JOINTS ON OPPOSITE SIDES ARE NOT LOCATED ON THE SAME STUDS.
3. BLOCKING IS REQUIRED AT ALL PANEL EDGES.
4. PROVIDE SHEAR WALL SHEATHING AND NAILING FOR ENTIRE LENGTH OF THE WALLS INDICATED ON THE PLANS. ENDS OF FULL HEIGHT WALLS ARE DESIGNATED BY WINDOWS, OR DOORWAYS OR AS DESIGNATED ON PLANS. HOLDOWN REQUIREMENTS PER PLANS.
5. SHEAR WALLS DESIGNATED AS PERFORATED SHEAR WALLS REQUIRE SHEATHING, SHEAR WALL NAILING, ETC. ABOVE AND BELOW ALL OPENINGS).
6. SHEATHING EDGE NAILING IS REQUIRED AT ALL HOLDOWN POSTS. EDGE NAILING MAY ALSO BE REQUIRED TO EACH STUD USED IN BUILT-UP HOLDOWN POSTS. ADDITIONAL INFORMATION PER HOLDOWN SCHEDULE & DETAILS.
7. INTERMEDIATE FRAMING TO BE 2x MINIMUM MEMBERS. ATTACH SHEATHING TO INTERMEDIATE FRAMING WITH 0.148"ø x 2 1/2"



TYPICAL FOUNDATION FOOTING AND STEM WALL WITH SLAB ON GRADE

1

SCALE: ¾" = 1'-0"



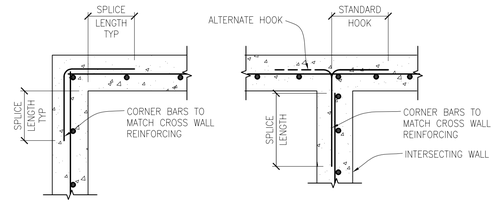
NOTES:

1. FOR CONSTRUCTION OR CONTROL JOINT LOCATIONS REFERENCE FOUNDATION/SLAB PLAN
2. USE "SOFTCUT SAW" AS SOON AS POSSIBLE WITHOUT CAUSING RAVELING OF CONCRETE EDGES. SAWCUT ALONG SHORT DIRECTION OF POUR FIRST
3. PROVIDE CONSTRUCTION/CONTROL JOINT TO ENCLOSE APPROXIMATE SQUARE AREAS OF 225 SF MAX

TYPICAL SLAB ON GRADE JOINT DETAILS

2

SCALE: N.T.S.



NOTES:

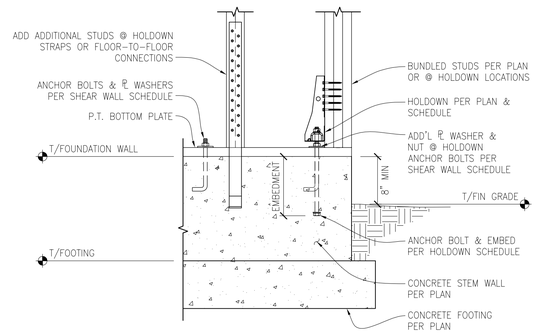
1. WALL SIZE & REINFORCING PER PLAN.
2. CORNER BARS SIZE & SPACING TO MATCH HORIZONTAL REINFORCING.

SPLICE LENGTH	
BAR	LENGTH
#4	28"
#5	36"

TYPICAL CORNER BARS AT CONCRETE WALLS - SINGLE MAT

3

SCALE: N.T.S.

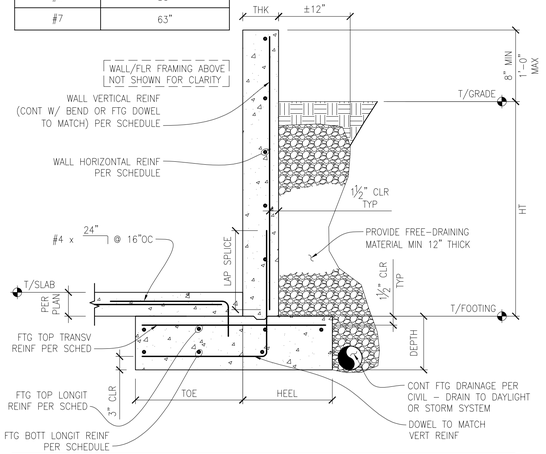


TYPICAL SHEAR WALL HOLDOWN CONNECTIONS AT FOUNDATION CONCRETE WALL

4

SCALE: N.T.S.

SPLICE LENGTH	
BAR	LENGTH
#4	28"
#5	36"
#7	63"

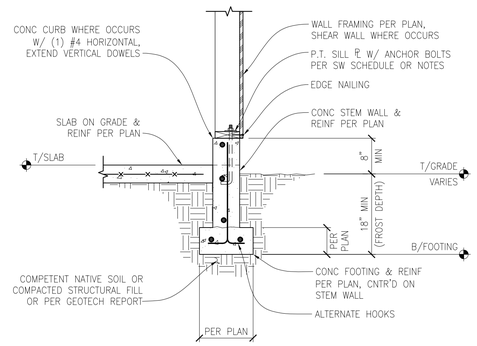


RETAINING WALL/FOOTING SCHEDULE									
WALL				FOOTING					
SIZE		REINFORCEMENT		SIZE			REINFORCEMENT		
HT (MAX)	THK	VERTICAL	HORIZONTAL	TOE	HEEL	DEPTH	TOP/TRANSV	TOP/LONGIT	BOTTOM/LONGIT
4'-0"	8"	#4 @ 12"OC	#4 @ 12"OC	1'-0"	1'-0"	10"	#4 @ 10"OC	(3) #4	(2) #4
6'-0"	8"	#4 @ 8"OC	#4 @ 12"OC	1'-9"	1'-6"	10"	#4 @ 10"OC	(3) #4	(2) #4
8'-0"	8"	#5 @ 10"OC	#4 @ 12"OC	3'-0"	2'-0"	14"	#5 @ 12"OC	(5) #5	(4) #5
10'-0"	10"	#7 @ 10"OC	#4 @ 12"OC	4'-0"	3'-0"	18"	#5 @ 9"OC	(8) #5	(6) #5
11'-0"	10"	#7 @ 8"OC	#4 @ 12"OC	4'-6"	3'-0"	18"	#5 @ 8"OC	(8) #5	(6) #5

BASEMENT RETAINING WALL AND SCHEDULE

9

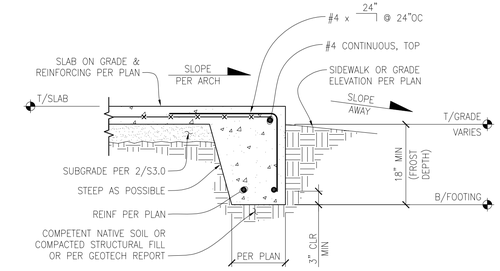
SCALE: N.T.S.



TYPICAL FOUNDATION FOOTING AND STEM WALL WITH SLAB ON GRADE

6

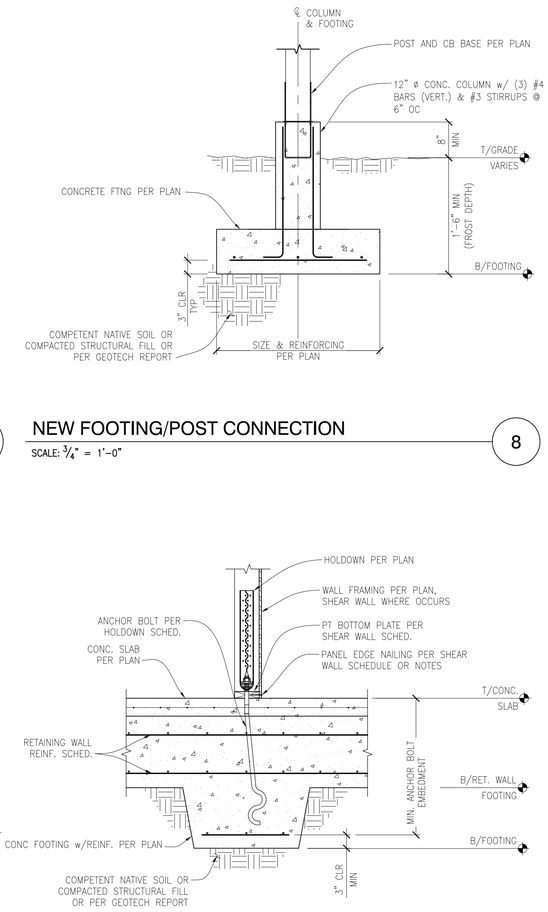
SCALE: ¾" = 1'-0"



TYPICAL THICKENED SLAB EDGE FOOTING

7

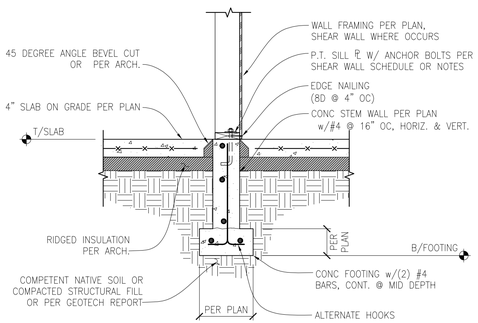
SCALE: ¾" = 1'-0"



NEW FOOTING/POST CONNECTION

8

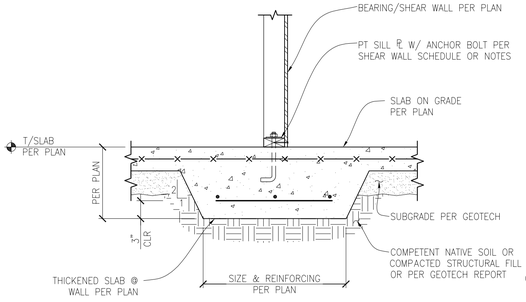
SCALE: ¾" = 1'-0"



TYPICAL BASEMENT FOUNDATION FOOTING AND STEM WALL WITH SLAB ON GRADE

10

SCALE: ¾" = 1'-0"



TYPICAL INTERIOR THICKENED SLAB FOOTING AT BEARING / SHEAR WALL

11

SCALE: 1" = 1'-0"

INTERIOR FTNG. AT HOLDOWN'S ANCHOR BOLTS

12

SCALE: ¾" = 1'-0"

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STEVEN COOKS — STATE OF WASHINGTON — 49213 — REGISTERED PROFESSIONAL ENGINEER

5/23/2023

ELITE HOMES NW, LLC
9419 SE 54TH ST
MERCER ISLAND, WA 98040

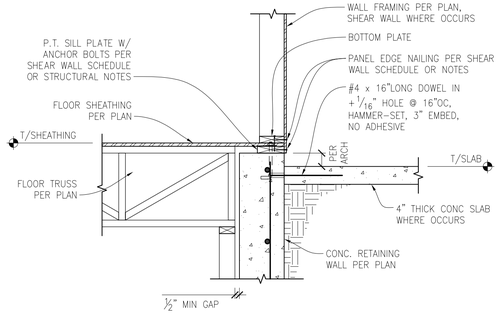
REVISION #	DATE	DESCRIPTION:

Drawn By: PK
Checked By: SC
Date: 5-23-2023

CK JOB NO.
22-053

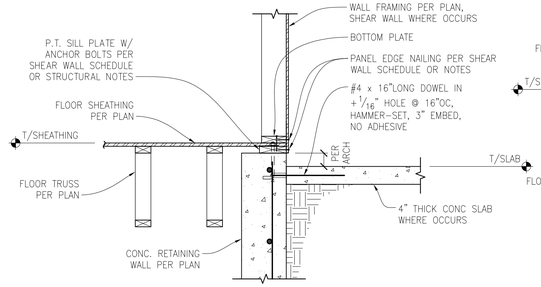
STRUCTURAL DETAILS

S-2.0



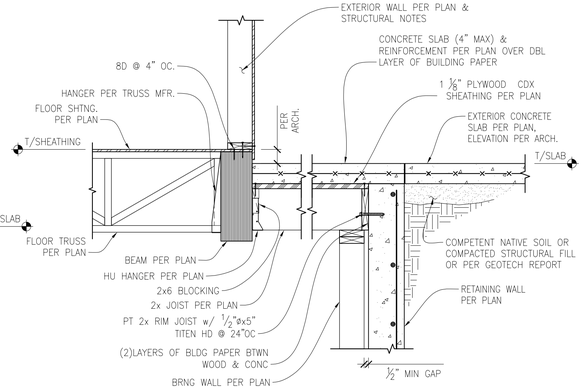
EXTERIOR SHEAR WALL WITH TRUSSES PERPEND. TO RETAINING WALL CON. 1

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



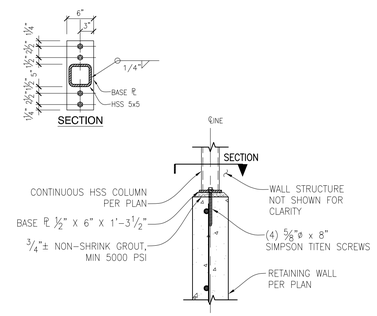
EXTERIOR SHEAR WALL WITH TRUSSES PARALLEL TO RETAINING WALL CON. 2

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



FLOOR BEAM/JOIST/CONC. SLAB/RET. WALL CON. 3

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

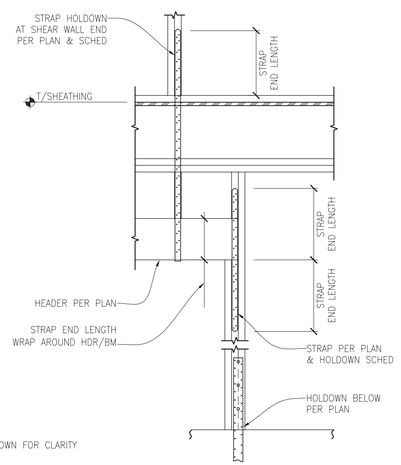


HSS POST TO BASE PLATE CONNECTION 4

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

TYPICAL SHEAR WALL ELEVATION 5

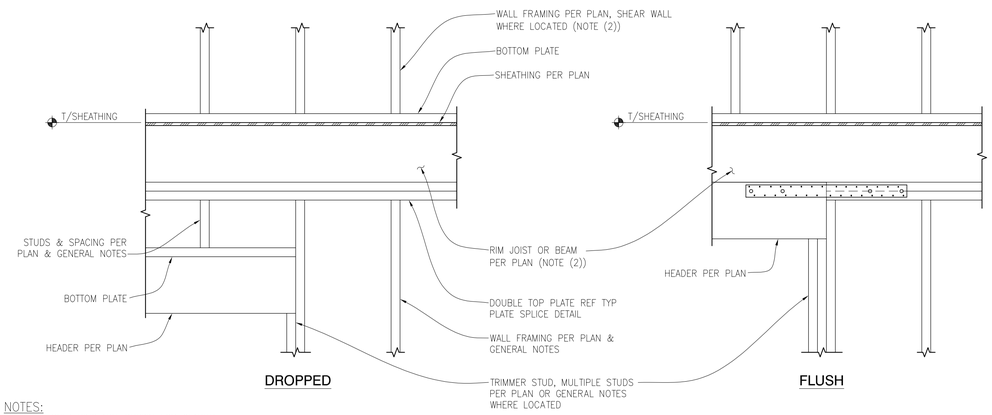
SCALE: N.T.S.



NOTES:
1. SHEATHING NOT SHOWN FOR CLARITY

STRAP HOLDOWN AT HEADER BELOW 9

SCALE: N.T.S.



NOTES:
1. WALL SHEATHING NOT SHOWN FOR CLARITY
2. WHERE ROOF ABOVE, RAFTERS OR PRE-MANUFACTURED TRUSSES PER PLAN REPLACES RIM JOIST

TYPICAL HEADER FRAMING 11

SCALE: 1" = 1'-0"

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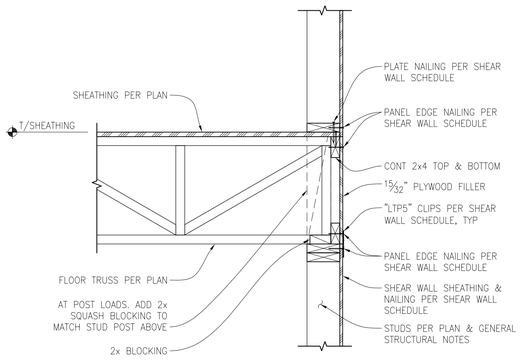
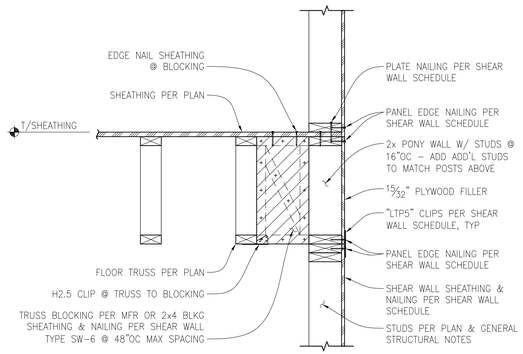
S-2.1



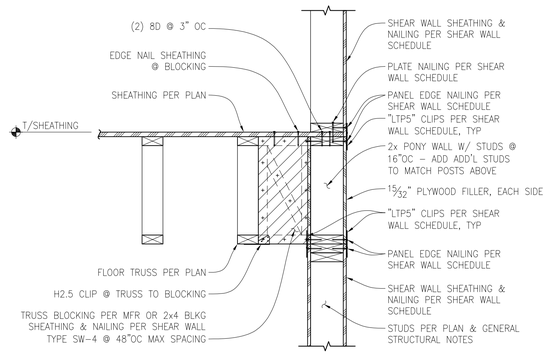
EXTERIOR WALL PERPENDICULAR TO TRUSSES — 1

SCALE: 1" = 1'-0"



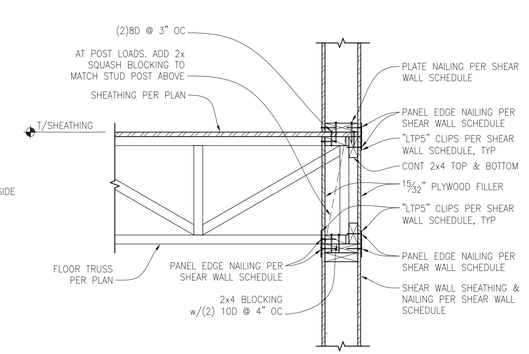
EXTERIOR WALL PARALLEL TO TRUSSES — 2

SCALE: 1" = 1'-0"



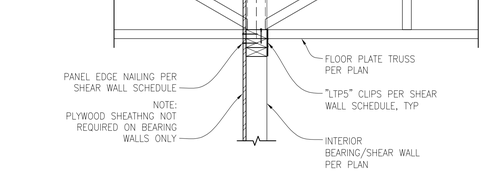
DOUBLE SIDED SHEAR WALL PARALLEL TO TRUSSES — 3

SCALE: 1" = 1'-0"



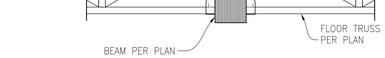
DOUBLE SIDED SHEAR WALL PERPENDICULAR TO TRUSSES — 4

SCALE: 1" = 1'-0"



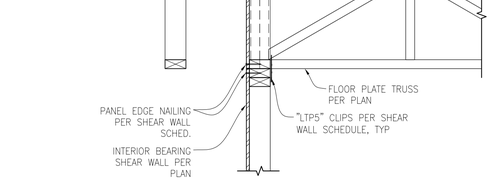
FLOOR TRUSS AT INTERIOR BEARING/SHEAR WALL — 5

SCALE: 1" = 1'-0"



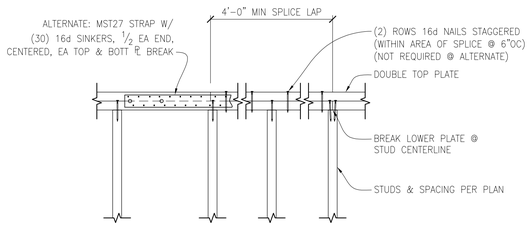
FLOOR TRUSS TO BEAM CONNECTION — 6

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



FLOOR TRUSS AT INTERIOR SHEAR WALL — 7

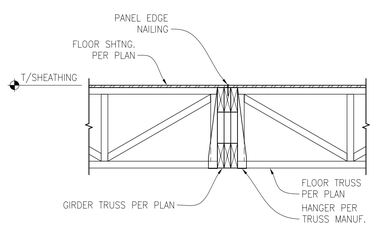
SCALE: 1" = 1'-0"



NOTE:
FLOOR JOISTS NOT SHOWN FOR CLARITY.

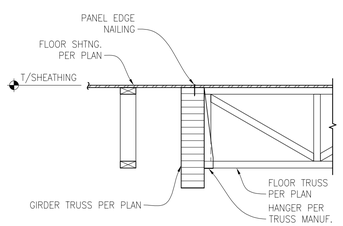
TYPICAL PLATE SPLICE DETAIL — 9

SCALE: N.T.S.



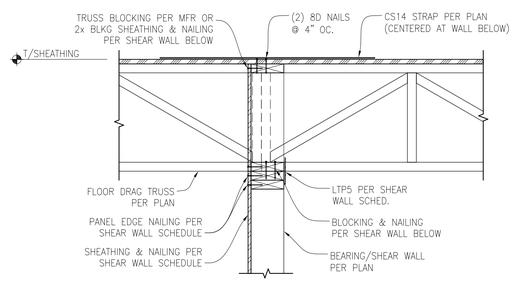
FLOOR TRUSS TO GIRDER TRUSS CONNECTION — 10

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



FLOOR TRUSS TO BEAM CONNECTION — 11

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



FLOOR DRAG TRUSS AT BRNG./SHEAR WALL CON. — 12

SCALE: 1" = 1'-0"

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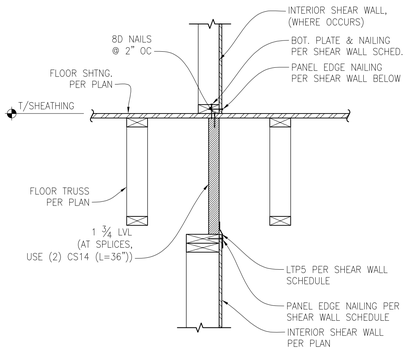
STRUCTURAL DETAILS

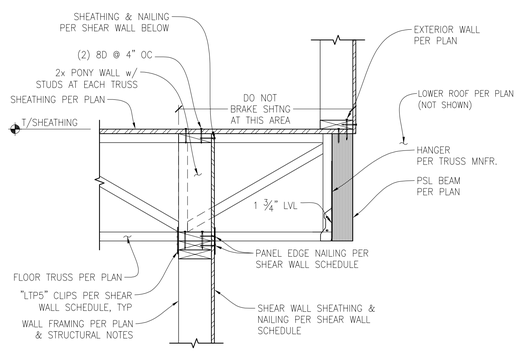
S-3.0



FLOOR TRUSS PARALLEL AT INTERIOR SHEAR WALLS

SCALE: 1" = 1'-0"

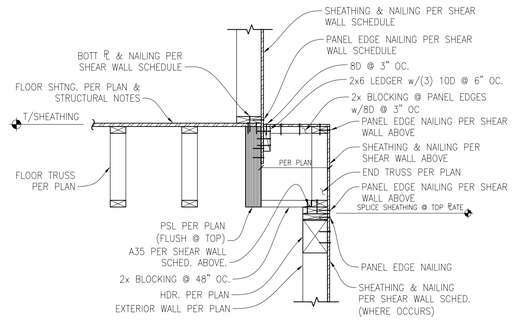
1



FLOOR TRUSS PERPENDICULAR TO SHEAR WALL CONNECTION

SCALE: 1" = 1'-0"

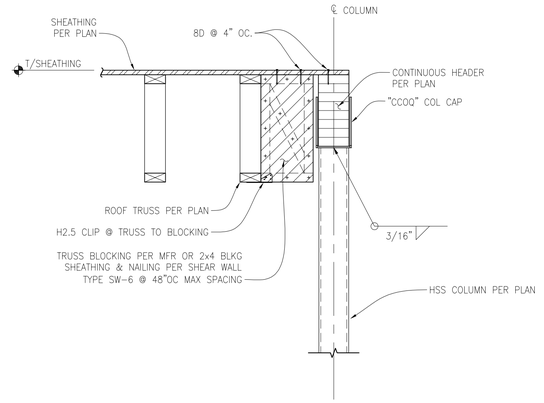
2



UPPER FLOOR SHEAR WALL TO MAIN FLOOR SHEAR WALL CONNECTION

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

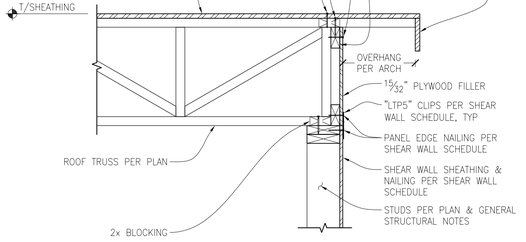
3



CONT. HDR TO ROOF/HSS COLUMN CONNECTION

SCALE: NTS

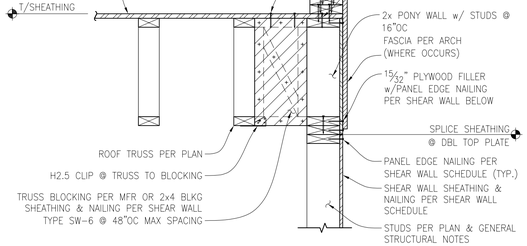
4



EXTERIOR SHEAR WALL PERP. TO ROOF TRUSS

SCALE: 1" = 1'-0"

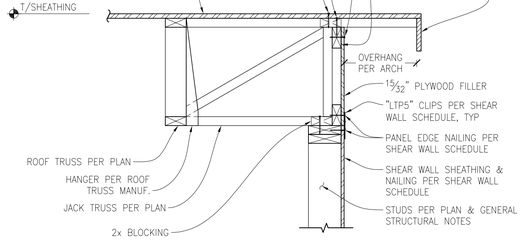
5



EXTERIOR WALL PARALLEL TO TRUSS CON.

SCALE: 1" = 1'-0"

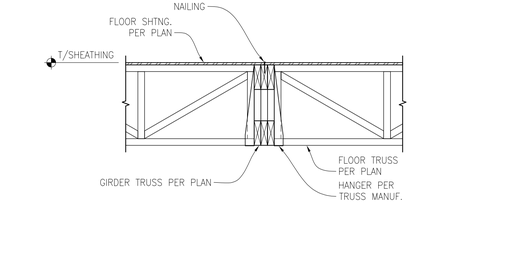
6



EXTERIOR SHEAR WALL AT END ROOF TRUSS

SCALE: 1" = 1'-0"

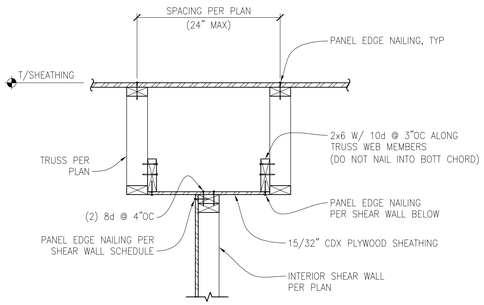
7



ROOF TRUSS TO GIRDER TRUSS CONNECTION

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

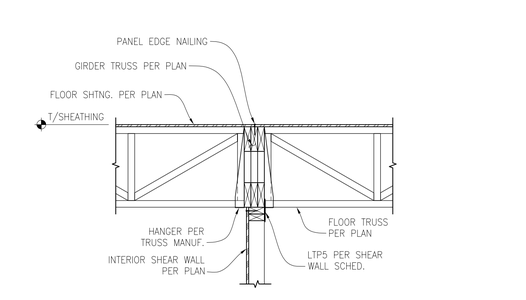
8



ROOF TRUSS PARALLEL AT INTERIOR SHEAR WALLS

SCALE: 1" = 1'-0"

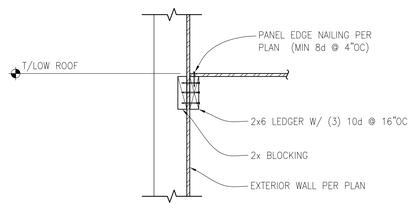
9



DRAG/GIRDER TRUSS TO SHEAR WALL CON.

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

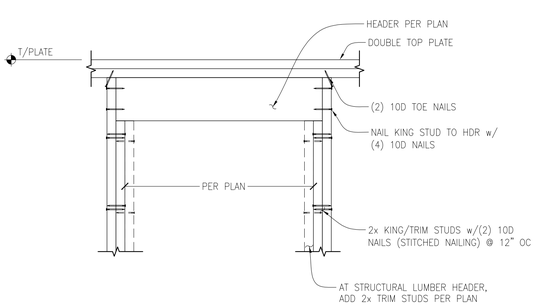
10



TYP. WALL TO LOWER ROOF CON.

SCALE: 1" = 1'-0"

11



NOTE:
FLOOR/ROOF FRAMING NOT SHOWN FOR CLARITY.

TYPICAL HEADER CONNECTION

SCALE: N.T.S.

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5/23/2023

ELITE HOMES NW, LLC
9419 SE 54TH ST
MERCER ISLAND, WA 98040

REVISION #	DATE	DESCRIPTION:

Drawn By: PK
Checked By: SC
Date: 5-23-2023

CK JOB NO.
22-053

STRUCTURAL DETAILS

S-4.0