SITE INFO

OWNER:	- HELIX DESIGN BUILD
ADDRESS:	- 6922 SE 33rd ST. MERCER ISLAND, WA 98040
PARCEL NUMBER:	- 3359100160
JURISDICTION:	- KING COUNTY
ZONE:	- R-8.4
LOT SIZE:	- 10,000# (0.23 ACRES)
LOT COVERAGE:	- MAX. 40% (4,000#)
FRONT SETBACK:	- 20' FROM PROPERTY LINE
REAR SETBACK:	- 25' FROM PROPERTY LINE
SIDE SETBACK:	- 11% OF LOT WIDTH (100'x11% = 11')
HEIGHT LIMIT:	- 20' FROM HIGHEST POINT OF LOT PER COVENANT

LOT COVERAGE CALCULATIONS

MAIN STRUCTURE W/ O.H.	- 3,450#
DRIVEWAY	- 450#
TOTAL LOT COVERAGE	- 3,900#
LOT AREA PROPOSED	- 10,000#
LOT COVERAGE	- 3,900/10,000 = 39%
MAXIMUM LOT COVERAGE	- 40% (4,000#)
UNUSED LOT COVERAGE	- 1% (100#)

HARDSCAPE CALCULATIONS

RETAINING/LANDSCAPE WALLS	- 51#
HVAC CONCRETE PAD	- 7#
OUTDOOR LIVING STEPS	- 22#
TOTAL HARDSCAPE	- 80#
LOT AREA	- 10,000#
PROPOSED HARDSCAPE	- 80/10,000 = 0.08%
MAXIMUM HARDSCAPE	- 1% + 9% = 10%

GROSS FLOOR AREA CALCULATIONS

SITE AREA	= 10,000#
ALLOWABLE F.A.R. (LESSER OF) 40% = 4,000#	= 40% OR 8,000# = MAX. 4,000#
LOWER FLOOR W/ GARAGE & STORAGE	= 792#
MAIN FLOOR	= 2,861#
UPPER FLOOR	= 324#
TOTAL FLOOR AREA	= 3,983#
PROPOSED G.F.A.	= 3,983#

INFORMATION TAKEN FROM TOPOGRAPHIC & BOUNDARY SURVEY DATED 2/09/2022 BY TERRANE (JOB #212666)

PROVIDE STRAW OR PLASTIC COVER TO ANY EXPOSED SOILS THROUGH OUT THE CONSTRUCTION CYCLE.

LOT SLOPE:
HIGHEST ELEVATION POINT OF LOT (NORTHWEST CORNER): 270.5'
LOWEST ELEVATION POINT OF LOT (SOUTHHEAST CORNER): 255.5'
ELEVATION DIFFERENCE: 15.0'
HORIZONTAL DIFFERENCE BETWEEN HIGH & LOW POINTS: 141.1'
LOT SLOPE: 10.6%

24 HOUR EROSION CONTROL CONTACT INFO:
ERIN JACOBSEN - 206.910.8758

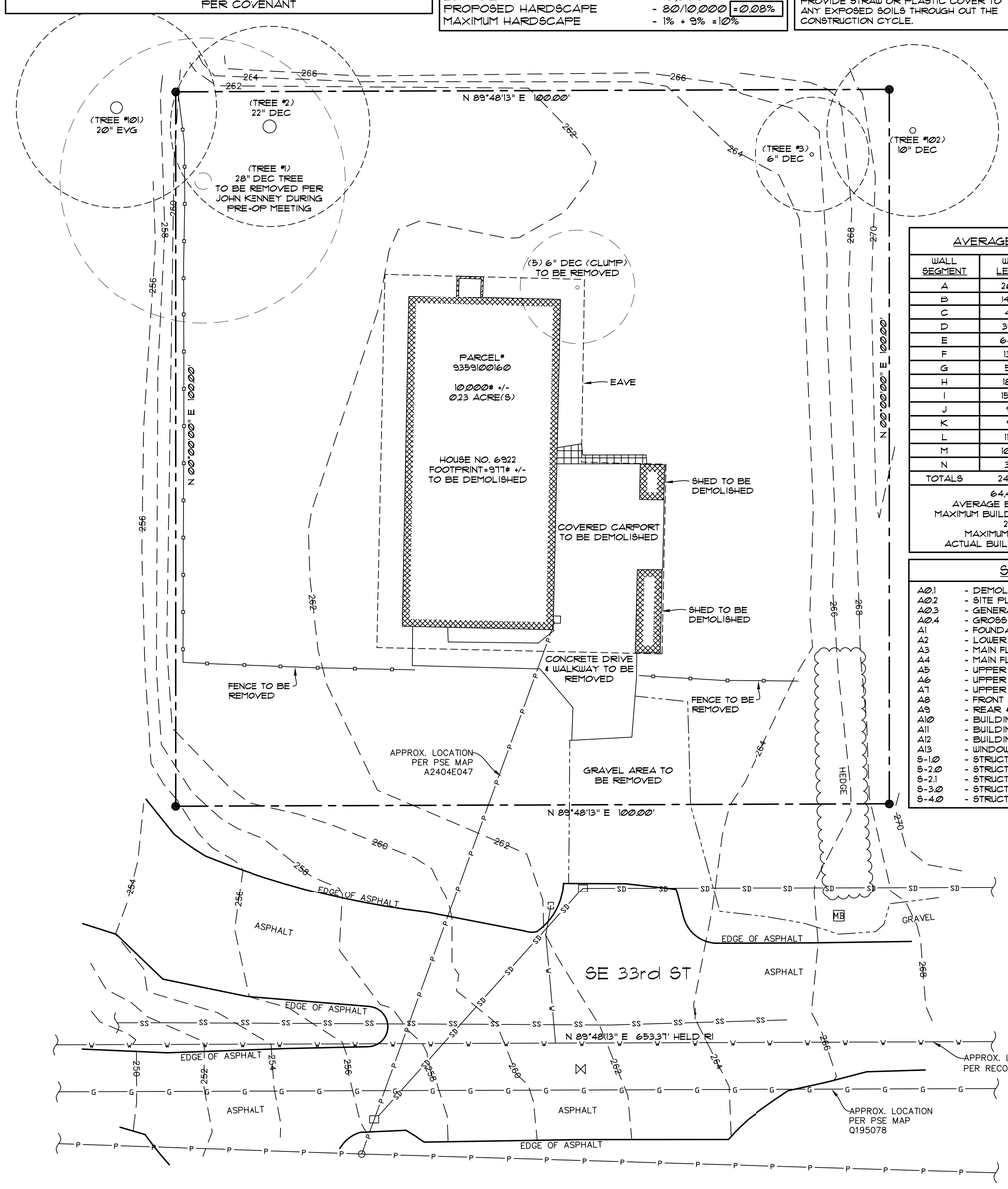
PER MICC 19.07.020(F)(3)(D):
DEVELOPMENT PROPOSALS FOR A NEW SINGLE-FAMILY HOME SHALL REMOVE JAPANESE KNOTWEED (POLYGONUM CUSPIDATUM) AND REGULATED CLASS A, REGULATED CLASS B, AND REGULATED CLASS C WEEDS IDENTIFIED ON THE KING COUNTY NOXIOUS WEED LIST, AS AMENDED, FROM REQUIRED LANDSCAPING AREAS ESTABLISHED PURSUANT TO SUBSECTION (F)(3)(A) OF THIS SECTION. 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

AVERAGE BUILDING ELEVATION

WALL SEGMENT	WALL LENGTH	MIDPOINT ELEVATION	RESULT
A	26.83'	262.3	7,037.51
B	14.00'	261.8	3,665.2
C	4.42'	261.8	1,157.16
D	39.25'	261.9	10,279.6
E	64.46'	262.2	16,901.4
F	13.25'	262.8	3,482.1
G	5.29'	262.8	1,390.21
H	18.67'	262.9	4,908.34
I	15.00'	262.9	3,943.5
J	9.71'	262.8	2,551.79
K	9.21'	262.7	2,419.47
L	11.67'	262.9	3,068.04
M	10.50'	262.8	2,759.4
N	3.38'	262.7	887.93
TOTALS	245.64'	N/A	64,451.6

64,451.6 / 245.64 = 262.4
AVERAGE BUILDING ELEVATION = 262.4'
MAXIMUM BUILDING HEIGHT = 30' ABOVE A.B.E.
262.4' + 30' = 292.4'
MAXIMUM BUILDING HEIGHT = 292.4'
ACTUAL BUILDING HEIGHT = 26.43' (288.83')

SHEET INDEX

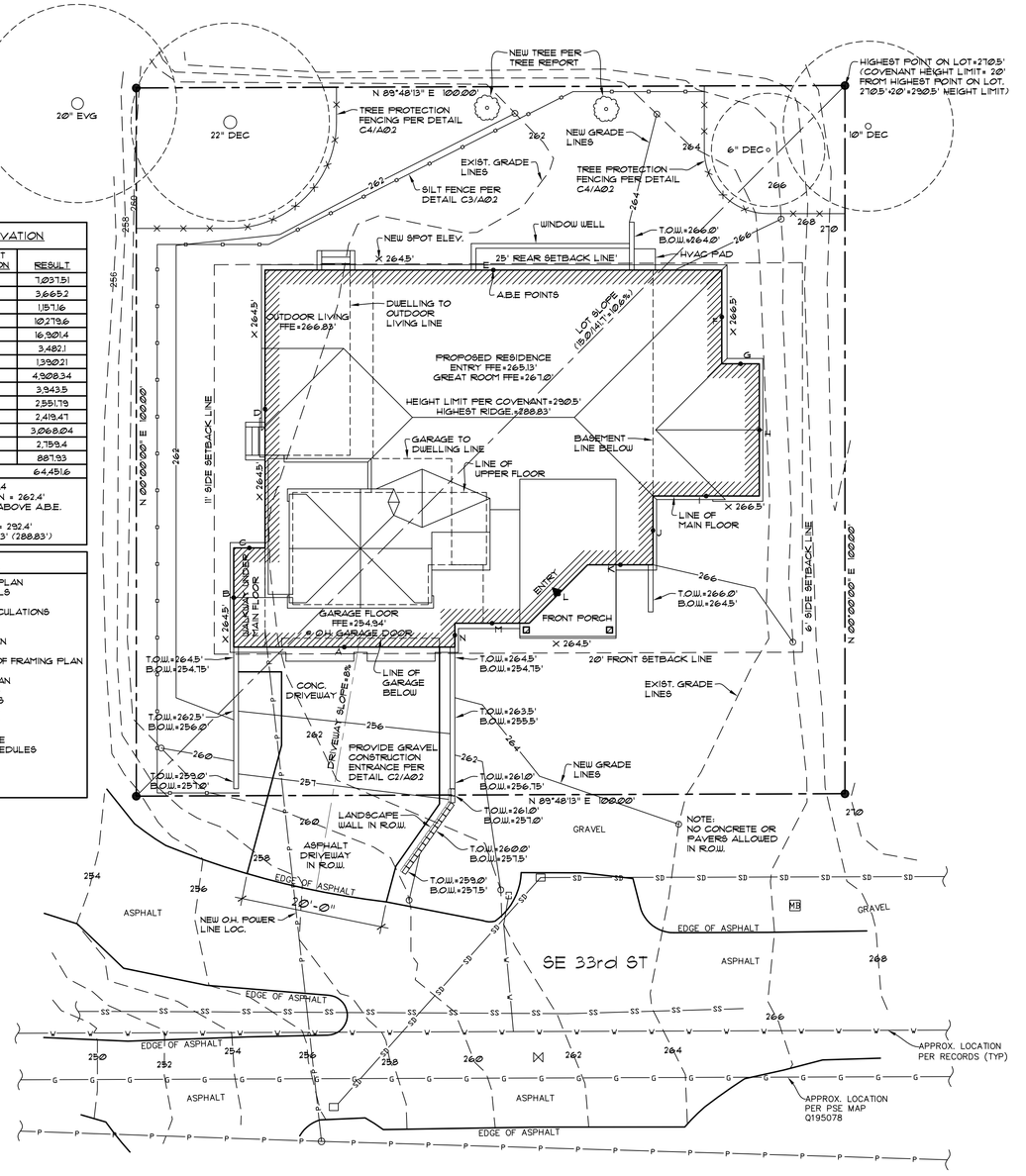


DEMOLITION PLAN

SCALE: 1" = 10'

6922 SE 33rd ST.
MERCER ISLAND, WA 98040

NORTH



SITE PLAN

SCALE: 1" = 10'

6922 SE 33rd ST.
MERCER ISLAND, WA 98040

NORTH

matthew mawer
residential design
matt@mmrd.net
425.417.7817

helix
DESIGN + BUILD
www.helixdesignbuild.com
206.910.8758

HELIX DESIGN BUILD
6922 SE 33rd ST.
MERCER ISLAND, WA 98040

JOB NO: 21-031
DATE: 5/04/22
DRWN. BY: MM
REVISED:

SHEET NO.
A0.1

TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING# 20211210000582)

LOTS 32, 33, 34 AND 35 IN BLOCK 1 OF WHITE & NOBLES FIRST ADDITION TO EAST SEATTLE, AS PER PLAT RECORDED IN VOLUME 3 OF PLATS, PAGE 104, RECORDS OF KING COUNTY;

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

BASIS OF BEARINGS

N 89°48'13" E BETWEEN SURVEY MONUMENTS FOUND ON CENTERLINE OF SE 32ND ST, PER R1.

REFERENCES

R1. RECORD OF SURVEY, VOL. 210, PG. 079, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

NAVD88 PER GPS OBSERVATIONS

SURVEYOR'S NOTES

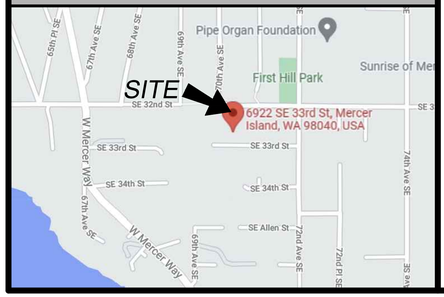
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN FEBRUARY OF 2022. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY 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. 9359100160.
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 10,000± S.F. (0.23 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.

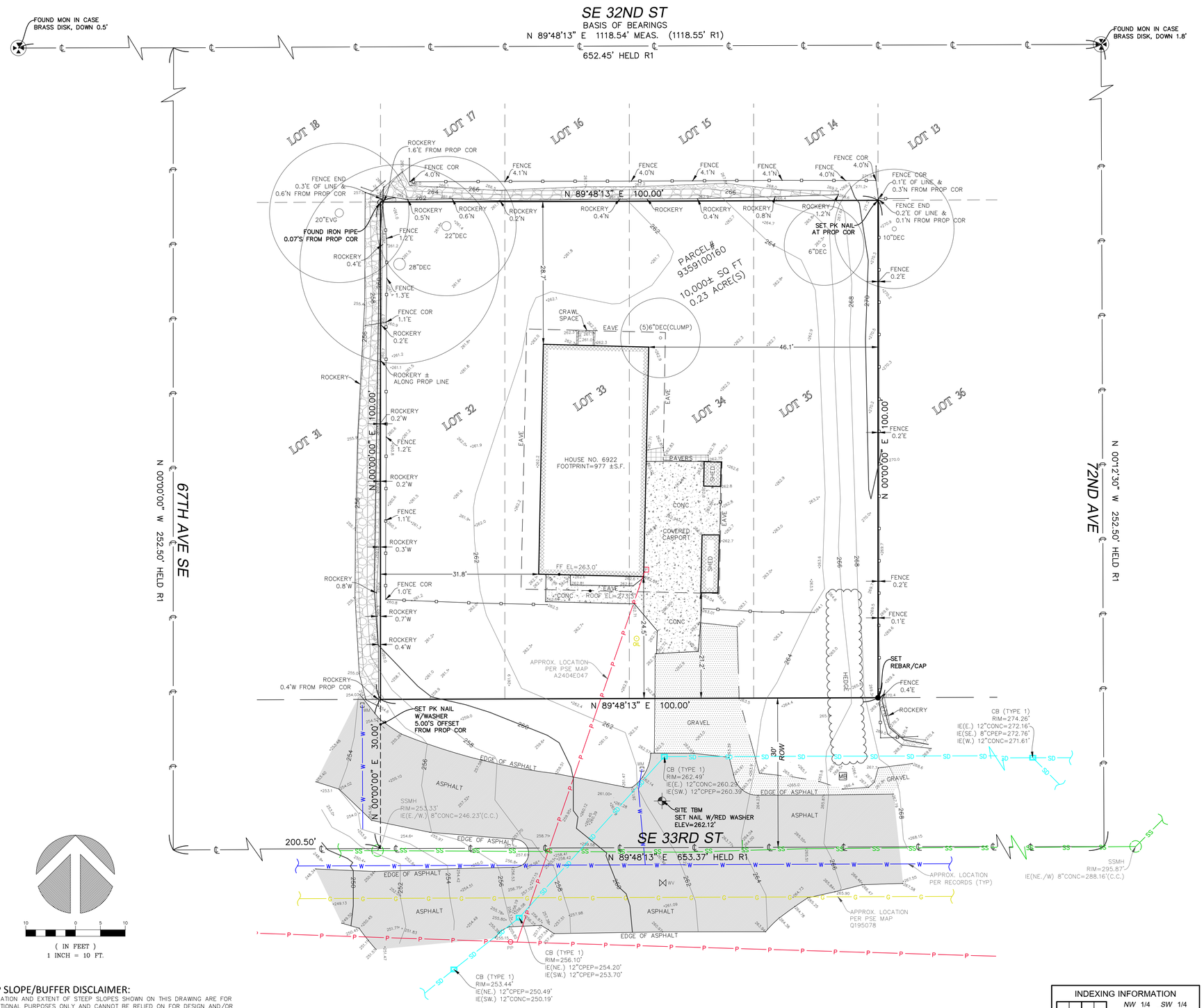
LEGEND

- ASPHALT SURFACE
- BENCHMARK
- BUILDING
- CENTERLINE ROW
- CONCRETE SURFACE
- FENCE LINE (WOOD)
- GAS LINE
- GRAVEL SURFACE
- HEDGE FOLIAGE LINE
- INLET (TYPE 1)
- IP IRON PIPE (FOUND)
- MB MAILBOX (RESIDENTIAL)
- MONUMENT IN CASE (FOUND)
- NAIL AS NOTED
- OIL OIL FILL CAP
- PAVER SURFACE
- P POWER METER
- P POWER (OVERHEAD)
- PP POWER POLE
- RETAINING WALL
- REBAR & CAP (SET)
- ROCKERY
- SS SEWER LINE
- SEWER MAINHOLE
- SD STORM DRAIN LINE
- SIZE TYPE TREE (AS NOTED)
- W WATER LINE
- WM WATER METER
- WV WATER VALVE

VICINITY MAP

N.T.S.





(IN FEET)
1 INCH = 10 FT.

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

NW 1/4 SW 1/4
SECTION: 12
TOWNSHIP: 24N
RANGE: 04E, W.M.
COUNTY: KING

We are the measure | terrane.net

TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 9359100160

JACOBSEN RESIDENCE
6922 SE 33RD ST
MERCER ISLAND, WA 98040

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

JOB NUMBER:	212666
DATE:	02/09/2022
DRAFTED BY:	JAK
CHECKED BY:	JGM/DRT
SCALE:	1" = 10'

REVISION HISTORY

SHEET NUMBER
1 OF 1

EROSION/SEDIMENTATION CONTROL - PLAN NOTES

1. THE APPROVED CONSTRUCTION SEQUENCE SHALL BE AS FOLLOWS:
A. CONDUCT PRE-CONSTRUCTION MEETING.
B. FLAG OR FENCE CLEARING LIMITS.
C. POST SIGN WITH NAME AND PHONE NUMBER OF TESC SUPERVISOR.
D. INSTALL CATCH BASIN PROTECTION IF REQUIRED.
E. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).
F. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).
G. CONSTRUCT SEDIMENT PONDS AND TRAPS.
H. GRADE AND STABILIZE CONSTRUCTION ROADS.
I. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.
J. MAINTAIN EROSION CONTROL MEASURE IN ACCORDANCE WITH CITY/COUNTY STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
K. RELOCATE EROSION CONTROL MEASURES OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE, THE EROSION AND SEDIMENT CONTROL IS ALWAYS IN ACCORDANCE WITH THE CITY/COUNTY TESC MINIMUM REQUIREMENTS.
L. COVER ALL AREAS WITHIN THE SPECIFIED TIME FRAME WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, CRUSHED ROCK OR EQUIVALENT.
M. STABILIZE ALL AREAS THAT REACH FINAL GRADE WITHIN 7 DAYS.
N. SEED OR SOD ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.
O. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE STABILIZED AND BEST MANAGEMENT PRACTICES REMOVED IF APPROPRIATE.

2. CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS CLEAN AND FREE OF CONTAMINANTS AT ALL TIMES AND FOR PREVENTING AN ILLICIT DISCHARGE INTO THE MUNICIPAL STORM DRAIN SYSTEM. IF YOUR CONSTRUCTION PROJECT CAUSES AN ILLICIT DISCHARGE TO THE MUNICIPAL STORM DRAIN SYSTEM, THE CITY/COUNTY STORM MAINTENANCE DIVISION WILL BE CALLED TO CLEAN THE PUBLIC STORM SYSTEM AND OTHER AFFECTED PUBLIC INFRASTRUCTURE. THE CONTRACTOR(S), PROPERTY OWNER, AND ANY OTHER RESPONSIBLE PARTY MAY BE CHARGED ALL COSTS ASSOCIATED WITH THE CLEAN-UP AND MAY ALSO BE ASSESSED MONETARY PENALTIES. THE MINIMUM PENALTY IS $500. A FINE FOR A REPEAT VIOLATION SHALL BE A MULTIPLIED BY THE NUMBER OF VIOLATIONS. A FINE MAY BE REDUCED OR WAIVED FOR PERSONS WHO IMMEDIATELY SELF-REPORT VIOLATION TO THE CITY/COUNTY. A FINAL INSPECTION OF YOUR PROJECT WILL NOT BE GRANTED UNTIL ALL COSTS ASSOCIATED WITH THE CLEAN-UP, AND PENALTIES, ARE PAID TO THE CITY/COUNTY.

3. CONSTRUCTION DEWATERING DISCHARGES SHALL ALWAYS MEET WATER QUALITY GUIDELINES LISTED IN COK POLICY E-1 SPECIFICALLY, DISCHARGES TO THE PUBLIC STORMWATER DRAINAGE SYSTEM MUST BE BELOW 25 NTU, AND NOT CONSIDERED AN ILLICIT DISCHARGE. TEMPORARY DISCHARGES TO SANITARY SEWER REQUIRE PRIOR AUTHORIZATION AND PERMIT AND NOTIFICATION TO THE PUBLIC WORKS CONSTRUCTION INSPECTOR.

4. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY/COUNTY STANDARDS AND SPECIFICATIONS.

5. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE SET BY SURVEY AND CLEARLY FLAGGED IN THE FIELD BY A CLEARING CONTROL FENCE PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE OR REMOVAL OF ANY GROUND COVER BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE PERMITTEE/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.

6. APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).

7. THE IMPLEMENTATION OF THIS ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE PERMITTEE/CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.

8. A COPY OF THE APPROVED ESC PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.

9. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.

10. THE ESC FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS ON THE APPROVED PLANS. LOCATIONS MAY BE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY THE ENGINEER AND THE CITY/COUNTY INSPECTOR.

11. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS. ADDITIONALLY, MORE ESC FACILITIES MAY BE REQUIRED TO ENSURE COMPLETE SILTATION CONTROL. THEREFORE, DURING THE COURSE OF CONSTRUCTION IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES OVER AND ABOVE THE MINIMUM REQUIREMENTS AS MAY BE NEEDED.

12. THE ESC FACILITIES SHALL BE INSPECTED BY THE PERMITTEE/CONTRACTOR DAILY DURING NON-RAINFALL PERIODS, EVERY HOUR (DAYLIGHT) DURING A RAINFALL EVENT, AND AT THE END OF EVERY RAINFALL, AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. IN ADDITION, TEMPORARY SILTATION PONDS AND ALL TEMPORARY SILTATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL, AND THE POTENTIAL FOR EROSION HAS PASSED. WRITTEN RECORDS SHALL BE KEPT DOCUMENTING THE REVIEWS OF THE ESC FACILITIES.

13. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 48 HOURS FOLLOWING A STORM EVENT.

14. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.

15. ALL DENUDED SOILS MUST BE STABILIZED WITH AN APPROVED TESC METHOD (E.G. SEEDING, MULCHING, PLASTIC COVERING, CRUSHED ROCK) WITHIN THE FOLLOWING TIMELINES:
- MAY 1 TO SEPTEMBER 30 – SOILS MUST BE STABILIZED WITHIN 7 DAYS OF GRADING.
- OCTOBER 1 TO APRIL 30 – SOILS MUST BE STABILIZED WITHIN 2 DAYS OF GRADING.
- STABILIZE SOILS AT THE END OF THE WORKDAY PRIOR TO A WEEKEND, HOLIDAY, OR PREDICTED RAIN EVENT.

16. WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE (EXAMPLE: ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE).

17. WHERE STRAW MULCH IS REQUIRED FOR TEMPORARY EROSION CONTROL, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF 2".

18. ALL LOTS ADJOINING OR HAVING ANY NATIVE GROWTH PROTECTION EASEMENTS (NGPE) SHALL HAVE A 6' HIGH TEMPORARY CONSTRUCTION FENCE (CHAIN LINK WITH PIER BLOCKS) SEPARATING THE LOT (OR BUILDABLE PORTIONS OF THE LOT) FROM THE AREA RESTRICTED BY THE NGPE AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR CLEARING AND REMAIN IN PLACE UNTIL THE PLANNING DEPARTMENT AUTHORIZES REMOVAL.

19. CLEARING LIMITS SHALL BE DELINEATED WITH A CLEARING CONTROL FENCE. THE CLEARING CONTROL FENCE SHALL CONSIST OF A 6-FT. HIGH CHAIN LINK FENCE ADJACENT THE DRIP LINE OF TREES TO BE SAVED, WETLAND OR STREAM BUFFERS, AND SENSITIVE SLOPES. CLEARING CONTROL FENCES ALONG WETLAND OR STREAM BUFFERS OR UPSLOPE OF SENSITIVE SLOPES SHALL BE ACCOMPANIED BY AN EROSION CONTROL FENCE. IF APPROVED BY THE CITY, A FOUR-FOOT HIGH ORANGE MESH CLEARING CONTROL FENCE MAY BE USED TO DELINEATE CLEARING LIMITS IN ALL OTHER AREAS.

20. OFF-SITE STREETS MUST BE KEPT CLEAN AT ALL TIMES. IF DIRT IS DEPOSITED ON THE PUBLIC STREET SYSTEM, THE STREET SHALL BE IMMEDIATELY CLEANED WITH POWER SWEEPER OR OTHER EQUIPMENT. ALL VEHICLES SHALL LEAVE THE SITE BY WAY OF THE CONSTRUCTION ENTRANCE AND SHALL BE CLEANED OF ALL DIRT THAT WOULD BE DEPOSITED ON THE PUBLIC STREETS.

21. ROCK FOR EROSION PROTECTION OF ROADWAY DITCHES, WHERE REQUIRED, MUST BE OF SOUND QUARRY ROCK, PLACED TO A DEPTH OF 1' AND MUST MEET THE FOLLOWING SPECIFICATIONS: 4"-8" ROCK/40%-70% PASSING; 2"-4" ROCK/30%-40% PASSING; AND 1"-2" ROCK/10%-20% PASSING. RECYCLED CONCRETE SHALL NOT BE USED FOR EROSION PROTECTION, INCLUDING CONSTRUCTION ENTRANCE OR TEMPORARY STABILIZATION ELSEWHERE ON THE SITE.

22. IF ANY PART(S) OF THE CLEARING LIMIT BOUNDARY OR TEMPORARY EROSION/SEDIMENTATION CONTROL PLAN IS/ARE DAMAGED, IT SHALL BE REPAIRED IMMEDIATELY.

23. ALL PROPERTIES ADJACENT TO THE PROJECT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION AND RUNOFF.

24. AT NO TIME SHALL MORE THAN 1' OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED IMMEDIATELY FOLLOWING REMOVAL OF EROSION CONTROL BMPS. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.

25. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE PERMANENT FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION OR DISPERSION SYSTEM, THE FACILITY SHALL NOT BE USED AS A TEMPORARY SETTLING BASIN. NO UNDERGROUND DETENTION TANK, DETENTION VAULT, OR SYSTEM WHICH BACKS UNDER OR INTO A POND SHALL BE USED AS A TEMPORARY SETTLING BASIN.

26. ALL EROSION/SEDIMENTATION CONTROL PONDS WITH A DEAD STORAGE DEPTH EXCEEDING 6" MUST HAVE A PERIMETER FENCE WITH A MINIMUM HEIGHT OF 3'.

27. THE WASHED GRAVEL BACKFILL ADJACENT TO THE FILTER FABRIC FENCE SHALL BE REPLACED AND THE FILTER FABRIC CLEANED IF IT IS NONFUNCTIONAL BY EXCESSIVE SILT ACCUMULATION AS DETERMINED BY THE CITY. ALSO, ALL INTERCEPTOR SWALES SHALL BE CLEANED IF SILT ACCUMULATION EXCEEDS ONE-QUARTER DEPTH.

28. PRIOR TO THE OCTOBER 1 OF EACH YEAR (THE BEGINNING OF THE WET SEASON), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. THE IDENTIFIED DISTURBED AREA SHALL BE SEEDED WITHIN ONE WEEK AFTER OCTOBER 1. A SITE PLAN DEPICTING THE AREAS TO BE SEEDED AND THE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE PUBLIC WORKS CONSTRUCTION INSPECTOR. THE INSPECTOR CAN REQUIRE SEEDING OF ADDITIONAL AREAS IN ORDER TO PROTECT SURFACE WATERS, ADJACENT PROPERTIES, OR DRAINAGE FACILITIES.

29. ANY AREA TO BE USED FOR INFILTRATION OR PERVIOUS PAVEMENT (INCLUDING A 5-FOOT BUFFER) MUST BE SURROUNDED BY SILT FENCE PRIOR TO CONSTRUCTION AND UNTIL FINAL STABILIZATION OF THE SITE TO PREVENT SOIL COMPACTION AND SILTATION BY CONSTRUCTION ACTIVITIES.

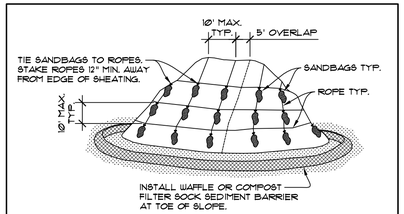
30. IF THE TEMPORARY CONSTRUCTION ENTRANCE OR ANY OTHER AREA WITH HEAVY VEHICLE LOADING IS LOCATED IN THE SAME AREA TO BE USED FOR INFILTRATION OR PERVIOUS PAVEMENT, 6" OF SEDIMENT BELOW THE GRAVEL SHALL BE REMOVED PRIOR TO INSTALLATION OF THE INFILTRATION FACILITY OR PERVIOUS PAVEMENT (TO REMOVE FINES ACCUMULATED DURING CONSTRUCTION).

31. ANY CATCH BASINS COLLECTING RUNOFF FROM THE SITE, WHETHER THEY ARE ON OR OFF THE SITE, SHALL HAVE ADEQUATE PROTECTION FROM SEDIMENT. CATCH BASINS DIRECTLY DOWNSTREAM OF THE CONSTRUCTION ENTRANCE OR ANY OTHER CATCH BASIN AS DETERMINED BY THE CITY INSPECTOR SHALL BE PROTECTED WITH A "STORM DRAIN PROTECTION INSERT" OR EQUIVALENT.

32. IF A SEDIMENT POND IS NOT PROPOSED, A BAKER TANK OR OTHER TEMPORARY GROUND AND/OR SURFACE WATER STORAGE TANK MAY BE REQUIRED DURING CONSTRUCTION, DEPENDING ON WEATHER CONDITIONS.

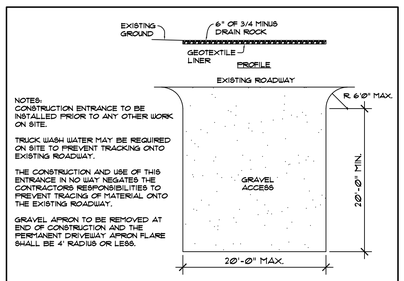
33. DO NOT FLUSH CONCRETE BY-PRODUCTS OR TRUCKS NEAR OR INTO THE STORM DRAINAGE SYSTEM. IF EXPOSED AGGREGATE IS FLUSHED INTO THE STORM SYSTEM, IT COULD MEAN RE-CLEANING THE ENTIRE DOWNSTREAM STORM SYSTEM, OR POSSIBLY RE-LAYING THE STORM LINE.

34. RECYCLED CONCRETE SHALL NOT BE STOCKPILED ON SITE, UNLESS FULLY COVERED WITH NO POTENTIAL FOR RELEASE OF RUNOFF.



NOTES:
1. INSTALL PLASTIC SHEATING VERTICALLY DOWN SLOPE.
2. INSTALL PLASTIC SHEATING SO EDGES OVERLAP AND ARE SHINGLED AWAY FROM PREVAILING WINDS.
3. PLASTIC SHEATING SHALL BE BLACK, MIN. 6 MIL.

C1 TEMPORARY STOCK PILE DETAIL N.T.S.



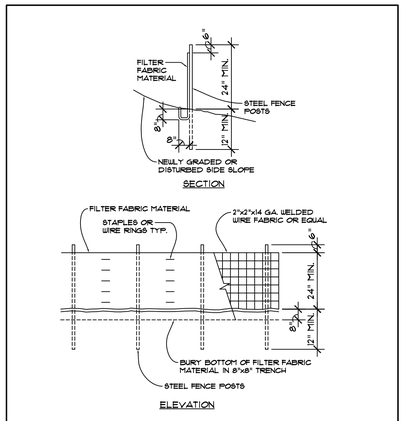
NOTES:
CONSTRUCTION ENTRANCE TO BE INSTALLED PRIOR TO ANY OTHER WORK ON SITE.

TRUCK WASH WATER MAY BE REQUIRED ON SITE TO PREVENT TRACKING ONTO EXISTING ROADWAY.

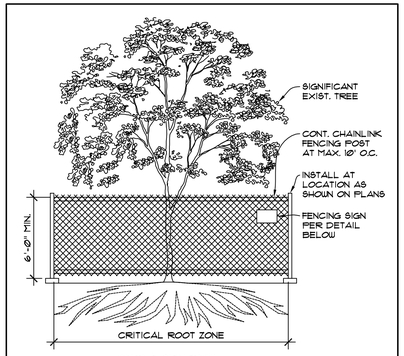
THE CONSTRUCTION AND USE OF THIS ENTRANCE IN NO WAY NEGATES THE CONTRACTORS RESPONSIBILITIES TO PREVENT TRACING OF MATERIAL ONTO THE EXISTING ROADWAY.

GRAVEL APRON TO BE REMOVED AT END OF CONSTRUCTION AND THE PERMANENT DRIVEWAY APRON FLARE SHALL BE 4' RADIUS OR LESS.

C2 GRAVEL CONSTRUCTION ENTRANCE N.T.S.



C3 SILT FENCE DETAIL



FENCING SIGN DETAIL

TREE PROTECTION AREA.
ENTRANCE PROHIBITED.
TO REPORT VIOLATIONS
CONTACT
CITY CODE ENFORCEMENT

NOTES:

1. MINIMUM SIX (6') FOOT HIGH TEMPORARY CHAIN LINK FENCE SHALL BE PLACED AT THE CRITICAL ROOT ZONE OR DESIGNATED LIMIT OF DISTURBANCE OF THE TREE TO BE SAVED. FENCE SHALL COMPLETELY ENCIRCLE TREE(S). INSTALL FENCE POSTS USING PIER BLOCK ONLY. AVOID POST OR STAKES INTO MAJOR ROOTS. MODIFICATIONS TO FENCING MATERIAL AND LOCATION MUST BE APPROVED BY PLANNING OFFICIAL.

2. TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION: FOR ROOTS OVER ONE (1) INCH DIAMETER DAMAGED DURING CONSTRUCTION, MAKE A CLEAN STRAIGHT CUT TO REMOVE DAMAGED PORTION OF ROOT. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING, AND COVERED WITH SOIL AS SOON AS POSSIBLE.

3. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING. FENCING SHALL NOT BE MOVED OR REMOVED UNLESS APPROVED BY THE CITY PLANNING OFFICIAL. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY UNDER THE SUPERVISION OF THE ON-SITE ARBORIST AND WITH PRIOR APPROVAL BY THE CITY PLANNING OFFICIAL.

4. FENCING SIGNAGE AS DETAILED ABOVE MUST BE POSTED EVERY FIFTEEN (15) FEET ALONG THE FENCE. SIGN TO BE MINIMUM 11"x11", AND MADE OF WEATHERPROOF MATERIAL.

C4 TREE PROTECTION DETAIL N.T.S.

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helix
DESIGN + BUILD
www.helixdesignbuild.com
206.910.8758

HELIX DESIGN BUILD
6922 SE 33rd ST.
MERCER ISLAND, WA 98040

JOB NO: 21-031
DATE: 5/04/22
DRWN. BY: MM
REVISED:

SHEET NO.
A0.2

SITE PLAN NOTES & DETAILS

SCALE: N.T.S.

GENERAL NOTES:

1. ALL FLOOR JOISTS PER PLAN. REFER TO MFG. LAYOUT FOR ALL FRAMING DETAILS AND BLOCKING. REVIEW MFG. LAYOUT PRIOR TO FRAMING. DOUBLE UNDER BEARING PARTITIONS. PROVIDE SOLID BLOCKING OVER BEARING MEMBERS.

2. ALL PRE-MANUFACTURED TRUSSES TO BE IDENTIFIED BY MFG'S STAMP.

3. FACTORY BUILT FIREPLACE & CHIMNEY TO BE UL LABELED INSTALL PER MANUFACTURERS SPECS O/SIDE COMBUSTION AIR REQ'D (MIN 6 SQ IN) DUCTED TO F/BOX W/ OPERABLE O/SIDE DAMPER, TIGHTLY FITTING FLUE DAMPER, AND TIGHT FITTING GLASS OR METAL DOORS OR FLUE DRAFT INDUCTION FAN. MINIMUM FIREPLACE EFFICIENCY OF 50% OR GREATER PER WSEC R402.4.2.1. PILOT LIGHT SHALL NOT BE CONTINUOUSLY BURNING PER WSEC R403.1.3.

4. LIMIT SHOWER FLOW TO 2.5 GALLON/MIN.

5. H.W.T. TO BE LABELED PER ASHRAE STD. NO. 90A-80, AND MEET THE REQUIREMENTS. PER 1981 NATIONAL APPLIANCE ENERGY CONSERVATION ACT.

6. FURNACE AND H.W. TANK, PILOTS, BURNERS, HEATING ELEMENTS, AND SWITCHES TO BE A MIN. OF 18" ABOVE FINISHED FLOOR.

7. ALL SKYLITES TO COMPLY WITH I.R.C. SECTION 2409.1 & 2603.7

8. ALL SIDELITES, SLIDING GLASS DOORS AND TUB/SHOWER ENCLOSURES TO COMPLY WITH I.B.C. SECTION 2406.

9. HEAT REGISTERS TO BE PER LEGEND, LOCATE APPROXIMATELY AS SHOWN, 6" IN FROM EXTERIOR WALLS, 3" IN FROM INTERIOR WALLS.

10. VENT DRYER, OVEN/RANGE & EXHAUST FANS TO O/SIDE. DRYER EXHAUST DUCTS SHALL NOT EXCEED A TOTAL COMB HORIZ. AND VERT. LENGTH OF 14'-0", INCL. 2 90d. ELBOWS, DEDUCT 2'-0" FOR EA. 90d. ELBOW EXCEEDING 2. SEE DRYER DUCT DTL. FOR ALT. SOLUTIONS. ALL EXHAUST DUCTS INSULATED (MIN. OF R-4)

11. ALL NAILING PER IRC TABLE R602.3(1) AND/OR IBC TABLE 2304.9.1, COLUMN, POST & BEAM CONNECTIONS TO COMPLY WITH I.B.C. SECTION 2316.

12. ---

13. SOLID SHT'G REQ'D ON LOWER STORY OF 2 STORY BUILDING PER I.B.C. DRYWALL NAILED PER SHEAR NAILING SCHEDULES OR IBC 2018 EDITION.

14. TUB/SHOWER SURROUND WALLS TO HAVE WATER RESISTANT GYP BOARD AND A SMOOTH HARD SURFACE TO A MINIMUM HEIGHT OF 70" ABOVE DRAIN INLET

15. PROVIDE SMOKE DETECTOR IN COMPLIANCE WITH I.B.C. AND I.R.C. STD. #43.6. ALL SMOKE DETECTORS W/BAT BACKUP. SMOKE DETECTORS WILL SOUND AN AUDIBLE ALARM IN ALL SLEEPING ROOMS.

16. DWELLING TO COMPLY W/ 2018 WSEC-R.

17. SEAL, CAULK, GASKET, OR WEATHERSTRIP TO LIMIT AIR LEAKAGE: AT EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES, OPENINGS BETWEEN WALL AND ROOF AND WALL PANELS, OPENINGS AT UTILITY PENETRATIONS THROUGH WALLS, FLOORS, AND ROOFS, ALL OTHER OPENINGS IN BUILDING ENVELOPE.

18. ALL EXTERIOR DOORS OR ACCESS HATCHES TO ENCLOSED UNHEATED AREAS MUST BE WEATHERSTRIPPED.

19. MINIMUM SOIL BEARING PRESSURE = 1500 PSF.

20. FOOTINGS TO BE PLACED ON FIRM, UNDISTURBED NATIVE SOIL.

21. DWELLING TO COMPLY WITH INTERNATIONAL BUILDING CODE (I.B.C.) 2018

22. FIRE STOPS SHALL BE PROVIDED TO CUT OFF ALL CONCL'D DRAFT OPENINGS FROM VERT. TO HORIZ. SPACES, INCLUDING THE STAIR, TUB, SHOWER, FIREPLACE, ETC.

ALL WINDOWS TO HAVE INDIVIDUAL OUTDOOR AIR INLET PORTS PER IMC 402.2 & 402.1

THE BUILDING THERMAL ENVELOPE SHALL BE CONSTRUCTED TO LIMIT AIR LEAKAGE. THE RESULTS OF THE TEST SHALL BE BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL (R402.4.1.2).

AT LEAST ONE THERMOSTAT PER DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE.

DUCTS, AIR HANDLERS, AND FILTER BOXES SHALL BE SEALED. A MINIMUM OF 75% OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.

R317.1.3 GEOGRAPHICAL AREAS. APPROVED NATURALLY DURABLE OR PRESSURE-PRESERVATIVE-TREATED WOOD SHALL BE USED FOR THOSE PORTIONS OF WOOD MEMBERS THAT FORM THE STRUCTURAL SUPPORTS OF BUILDINGS, BALCONIES, PORCHES OR SIMILAR PERMANENT BUILDING APPURTENANCES WHEN THOSE MEMBERS ARE EXPOSED TO THE WEATHER WITHOUT ADEQUATE PROTECTION FROM A ROOF, EAVE, OVERHANG OR OTHER COVERING THAT WOULD PREVENT MOISTURE OR WATER ACCUMULATION ON THE SURFACE OR AT JOINTS BETWEEN MEMBERS. DEPENDING ON LOCAL EXPERIENCE, SUCH MEMBERS MAY INCLUDE:

1. HORIZONTAL MEMBERS SUCH AS GIRDERS, JOISTS AND DECKING.
2. VERTICAL MEMBERS SUCH AS POSTS, POLES AND COLUMNS.
3. BOTH HORIZONTAL AND VERTICAL MEMBERS.

R303.7 STAIRWAY ILLUMINATION.
ALL INTERIOR AND EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH A MEANS TO ILLUMINATE THE STAIRS, INCLUDING THE LANDINGS AND TREADS. 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 THAN 1 FOOT-CANDLE (11 LUX) MEASURED AT THE CENTER OF TREADS AND LANDINGS. EXTERIOR STAIRWAYS SHALL BE PROVIDED WITH AN 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.

SOURCE SPECIFIC VENTILATION REQUIREMENTS:

BATHROOMS, LAUNDRY ROOMS AND POWDER ROOM FANS TO BE 50 CFM.
KITCHEN EXHAUST FANS TO BE 100 CFM U.N.O.
EXHAUST FANS SHALL BE FLOW RATED AT .25 W.G. STATIC PRESSURE

EXHAUST DUCTS SHALL:
BE INSULATED TO R-4 IN UNCONDITIONED SPACE
BE EQUIPPED WITH A BACKDRAFT DAMPER
TERMINATE OUTSIDE THE BUILDING PER SRC M1501.1
COMPLY WITH BELOW:

FAN CFM	MAX. FLEX DIA.	MAX. FT.	MAX. SMOOTH DIA.	MAX. FT.
50	4"	25'	4"	70'
50	5"	90'	5"	100'
50	6"	OVER 100'	6"	OVER 100'
80	4"	N/A	4"	70'
80	5"	15'	5"	100'
80	6"	90'	6"	OVER 100'
100	5"	N/A	5"	90'
100	6"	45'	6"	OVER 100'
125	6"	15'	6"	OVER 100'
125	7"	70'	7"	OVER 100'

WHOLE HOUSE VENTILATION REQUIREMENTS:

A 6" DIAMETER FRESH AIR INLET SHALL BE DUCTED FROM THE EXTERIOR TO THE FRESH AIR RETURN PLENUM.
THE FRESH AIR DUCT SHALL BE PROTECTED FROM THE ENTRY OF INSECTS, LEAVES, OR OTHER DEBRIS AND LOCATED SO AS NOT TO TAKE AIR FROM:
- HAZARDOUS OR UNSANITARY LOCATIONS.
- WHERE IT WILL PICK UP OBJECTIONABLE ODORS, FUMES OR FLMMBL. VPRS.
- A ROOM OR SPACE HAVING FUEL BURNING APPLIANCES THERIN.
- ATTIC, CRAWL SPACE, OR GARAGE.
- CLOSER THAN 10' FROM AN APPLNC OR FLMBG VENT OUTLET, UNLESS THE DUCT VENT OUTLET IS AT LEAST 3' ABOVE THE FRESH AIR INLET.
- DUCT SHALL BE INSLTD TO R-4 WHEN PASSING THROUGH A COND'D SPACE.

INLET DUCT SHALL BE EQUIPPED WITH A MOTORIZED DMPR THAT WILL OPEN WHEN THE VNTLTN FAN RELAY IS ACTIVATED, AND REMAIN CLOSED AT ALL OTHER TIMES. IN ADDTN TO THE MOTORIZED DMPR, A MANUAL DMPR SET TO .35-.5 AIR CHANGES PER HOUR IS ALSO REQUIRED.

A WHOLE HOUSE EXHAUST FAN SHALL BE LCT'D IN THE CEILING. SIZE PER THE CALCS BELOW. THE AIR INTAKE DUCT DMPR SHALL BE SET W/N THIS RNG

WHOLE HOUSE VENTILATION:
THIS SECTION ESTABLISHES MINIMUM PRESCRIPTIVE DESIGN REQUIREMENTS FOR WHOLE HOUSE VENTILATION SYSTEMS. EACH DWELLING UNIT OR GUEST ROOM SHALL BE EQUIPPED WITH A VENTILATION SYSTEM COMPLYING WITH OPTION I, II, III OR IV. COMPLIANCE IS ALSO PERMITTED TO BE DEMONSTRATED THROUGH COMPLIANCE WITH THE INTERNATIONAL MECHANICAL CODE.

- ☐ OPTION I: WHOLE-HOUSE VENTILATION USING EXHAUST FANS. (IRC M1507.3.4)
- ☐ OPTION II: WHOLE-HOUSE VENTILATION INTEGRATED WITH A FORCED-AIR SYSTEM. (IRC M1507.3.5.)
- ☒ OPTION III: WHOLE-HOUSE VENTILATION USING A SUPPLY FAN. (IRC M1507.3.6)
- ☐ OPTION IV: WHOLE-HOUSE VENTILATION USING A HEAT RECOVERY VENTILATION SYSTEM. (IRC M1507.3.7)

MECHANICAL VENTILATION RATE:
THE WHOLE HOUSE MECHANICAL VENTILATION SYSTEM SHALL PROVIDE OUTDOOR AIR TO EACH HABITABLE SPACE AT A CONTINUOUS RATE NOT LESS THAN THAT DETERMINED IN ACCORDANCE WITH TABLE M1507.3.3(1).

EXCEPTION:
THE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM IS PERMITTED TO OPERATE INTERMITTENTLY WHERE THE SYSTEM HAS CONTROLS THAT ENABLE OPERATION FOR NOT LESS THAN 25 PERCENT OF EACH 4-HOUR SEGMENT AND THE VENTILATION RATE PRESCRIBED IN TABLE M1507.3.3(1) IS MULTIPLIED BY THE FACTOR DETERMINED IN TABLE M1507.3.3(2).

TABLE M1507.3.3(1) CONTINUOUS WHOLE HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS

DWELLING UNIT FLOOR AREA (SQUARE FEET)	NUMBER OF BEDROOMS				
	0-1	2-3	4-5	6-7	>7
	AIRFLOW IN CFM				
< 1,500	30	45	60	75	90
1,501-3,000	45	60	75	90	105
3,001-4,500	60	75	90	105	120
4,501-6,000	75	90	105	120	135
6,001-7,500	90	105	120	135	150
>7,500	105	120	135	150	165

TABLE M1507.3.3(2) INTERMITTENT WHOLE HOUSE MECHANICAL VENTILATION RATE FACTORS a,b,c

RUN TIME PERCENTAGE IN EACH 4-HOUR SEGMENT	25%	33%	50%	66%	75%	100%
FACTOR	4	3	2	1.5	1.3	1

a. FOR VENTILATION SYSTEM RUN TIME VALUES BETWEEN THOSE GIVEN, THE FACTORS ARE PERMITTED TO BE DETERMINED BY INTERPOLATION.
b. EXTRAPOLATION BEYOND THE TABLE IS PROHIBITED.

EXHAUST FANS MUST BE FLOW RATED AT .25 W.G. AND MAX. 1.5 SONE RATING. READILY ACCSSBLE 24 HR CLCK TMR OR DEHUMIDISTAT & RELAY SHALL BE INSTLL'D AND WIRED TO REGULATE THE FURN FAN, RELAY AND WHOLE HOUSE EXHAUST FAN.

INTERIOR DOORS SHALL BE INSTLL'D SO AS NOT TO IMPEDE THE MVMNT OF FRESH AIR TO ALL HABITABLE ROOMS.

VNTLTN SYSTEM MUST BE PERFORMANCE TESTED JUST PRIOR TO THE FINAL INSPECTION BY THE INSTALLER OR A GLFD THIRD PARTY. THE INLET DUCT SHALL BE LABELED WITH THE ACTUAL CFMS MSRD & A LETTER OF COMPLNC SHALL BE AVAILABLE ON SITE FOR THE INSPCTR BEFORE A CERT OF OCCUPANCY WILL BE ISSUED.

STAIRWAYS - 2018 IRC SECTION 311.7

R311.7.1 WIDTH - STAIRWAYS SHALL BE NOT LESS THAN 36" IN CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT. THE CLEAR WIDTH OF STAIRWAYS AT AND BELOW THE HANDRAIL HEIGHT, INCLUDING TREADS AND LANDINGS, SHALL BE NOT LESS THAN 31-1/2" WHERE A HANDRAIL IS INSTALLED ON ONE SIDE AND 27" WHERE HANDRAILS ARE PROVIDED ON BOTH SIDES.
EXCEPTION: THE WIDTH OF SPIRAL STAIRWAYS SHALL BE IN ACCORDANCE WITH SECTION R311.7.10.1.

R311.7.2 HEADROOM - THE HEADROOM IN STAIRWAYS SHALL BE NOT LESS THAN 6'-8" MEASURED VERTICALLY FROM THE SLOPED LINE ADJOINING THE TREAD NOSING OR FROM THE FLOOR SURFACE OF THE LANDING OR PLATFORM ON THAT PORTION OF THE STAIRWAY.
EXCEPTIONS: 1. WHERE THE NOSINGS OF TREADS AT THE SIDE OF A FLIGHT EXTEND UNDER THE EDGE OF A FLOOR OPENING THROUGH WHICH THE STAIR PASSES, THE FLOOR OPENING SHALL BE ALLOWED TO PROJECT HORIZONTALLY INTO THE REQUIRED HEADROOM NOT MORE THAN 4-3/4".
2. THE HEADROOM FOR SPIRAL STAIRWAYS SHALL BE IN ACCORDANCE WITH SECTION R311.7.10.1.

R311.7.3 VERTICAL RISE - A FLIGHT OF STAIRS SHALL NOT HAVE A VERTICAL RISE LARGER THAN 151" BETWEEN FLOOR LEVELS OR LANDINGS.

R311.7.5 STAIR TREADS AND RISERS - STAIR TREADS AND RISERS SHALL MEET THE REQUIREMENTS OF THIS SECTION. FOR THE PURPOSES OF THIS SECTION, DIMENSIONS AND DIMENSIONED SURFACES SHALL BE EXCLUSIVE OF CARPETS, RUGS OR RUNNERS.

R311.7.5.1 RISERS - THE RISER HEIGHT SHALL BE NOT MORE THAN 7-3/4". THE RISER SHALL BE MEASURED VERTICALLY BETWEEN LEADING EDGES OF THE ADJACENT TREADS. THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8". RISERS SHALL BE VERTICAL OR SLOPED FROM THE UNDERSIDE OF THE NOSING OF THE TREAD ABOVE AT AN ANGLE NOT MORE THAN 30 DEGREES FROM THE VERTICAL. OPEN RISERS ARE PERMITTED PROVIDED THAT THE OPENING LOCATED MORE THAN 30", AS MEASURED VERTICALLY, TO THE FLOOR OR GRADE BELOW DO NOT PERMIT THE PASSAGE OF A 4" DIAMETER SPHERE.
EXCEPTIONS: 1. THE OPENING BETWEEN ADJACENT TREADS IS NOT LIMITED ON SPIRAL STAIRWAYS.
2. THE RISER HEIGHT OF SPIRAL STAIRWAYS SHALL BE IN ACCORDANCE WITH SECTION R311.7.10.1.

R311.7.5.2 TREADS - THE TREAD DEPTH SHALL BE NOT LESS THAN 10". THE TREAD DEPTH SHALL BE MEASURED HORIZONTALLY BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AND AT A RIGHT ANGLE TO THE TREAD'S LEADING EDGE. THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8".

R311.7.5.3 NOSINGS - NOSINGS AT TREADS, LANDINGS, AND FLOORS OF STAIRWAYS SHALL HAVE A RADIUS OF CURVATURE AT THE NOSINGS NOT GREATER 9/16" OR A BEVEL NOT GREATER THAN 1/2". A NOSING PROJECTION NOT LESS THAN 3/4" AND NOT MORE THAN 1-1/4" SHALL BE PROVIDED ON STAIRWAYS. THE GREATEST NOSING PROJECTION SHALL NOT EXCEED THE SMALLEST NOSING PROJECTION BY MORE THAN 3/8" WITHIN A STAIRWAY.
EXCEPTION: A NOSING PROJECTION IS NOT REQUIRED WHERE THE TREAD DEPTH IS NOT LESS THAN 11".

R311.7.6 LANDINGS FOR STAIRWAYS - THERE SHALL BE A FLOOR OR LANDING AT THE TOP AND BOTTOM OF EACH STAIRWAY. THE WIDTH PERPENDICULAR TO THE DIRECTION OF TRAVEL SHALL BE NOT LESS THAN THE WIDTH OF THE FLIGHT SERVED. LANDINGS OF SHAPES OTHER THAN SQUARE OR RECTANGULAR SHALL BE PERMITTED PROVIDED THAT THE DEPTH AT THE WALK LINE AND THE TOTAL AREA IS NOT LESS THAN THAT OF A QUARTER CIRCLE WITH A RADIUS EQUAL TO THE REQUIRED LANDING WIDTH. WHERE THE STAIRWAY HAS A STRAIGHT RUN, THE DEPTH IN THE DIRECTION OF TRAVEL SHALL BE NOT LESS THAN 36".

R311.7.7 STAIRWAY WALKING SURFACE - THE WALKING SURFACE OF TREADS AND LANDINGS OF STAIRWAYS SHALL BE SLOPED NOT STEEPER THAN ONE UNIT VERTICAL IN 48" HORIZONTAL.

R311.7.8 HANDRAILS - HANDRAILS SHALL BE PROVIDED ON NOT LESS THAN ONE SIDE OF EACH FLIGHT OF STAIRS WITH FOUR OR MORE RISERS.

R311.7.8.1 HEIGHT - HANDRAIL HEIGHT, MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE, SHALL BE NOT LESS THAN 34" AND NOT MORE THAN 38".

R311.7.8.2 HANDRAIL PROJECTION - HANDRAILS SHALL NOT PROJECT MORE THAN 4-1/2" ON EITHER SIDE OF THE STAIRWAY
EXCEPTION: WHERE NOSINGS OF LANDINGS, FLOORS OR PASSING FLIGHTS PROJECT INTO THE STAIRWAY REDUCING THE CLEARANCE AT PASSING HANDRAILS, HANDRAILS SHALL PROJECT NOT MORE THAN 6-1/2" INTO THE STAIRWAY, PROVIDED THAT THE STAIR WIDTH AND HANDRAIL CLEARANCE ARE NOT REDUCED TO LESS THAN REQUIRED.

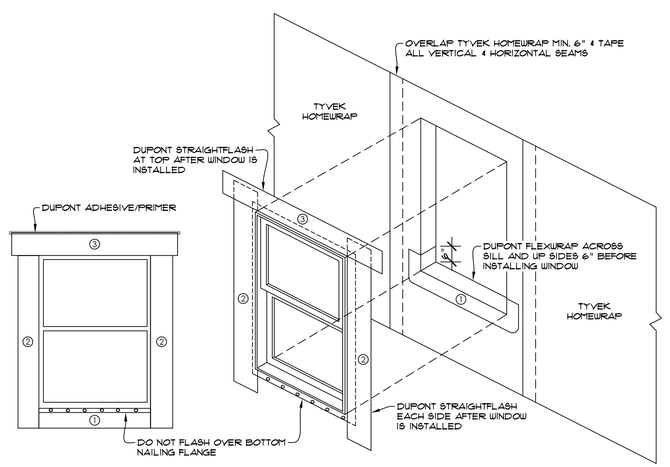
R311.7.8.3 HANDRAIL CLEARANCE - HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 1-1/2" BETWEEN THE WALL AND THE HANDRAILS.

R311.7.8.4 CONTINUITY - HANDRAILS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE FLIGHT, FROM A POINT DIRECTLY ABOVE THE TOP RISER OF THE FLIGHT TO A POINT DIRECTLY ABOVE THE LOWEST RISER OF THE FLIGHT. HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS.
EXCEPTIONS: 1. HANDRAIL CONTINUITY SHALL BE PERMITTED TO BE INTERRUPTED BY A NEWEL POST AT A TURN IN A FLIGHT WITH WINDERS, AT A LANDING, OR OVER THE LOWEST TREAD.
2. A VOLUTE, TURNOUT OR STARTING EASING SHALL BE ALLOWED TO TERMINATE OVER THE LOWEST TREAD

R311.7.8.5 GRIP SIZE - REQUIRED HANDRAILS SHALL BE OF ONE OF THE FOLLOWING TYPES OR PROVIDE EQUIVALENT GRASPABILITY.
1. TYPE I. HANDRAILS WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF NOT LESS THAN 1-1/4" AND NOT GREATER THAN 2". IF THE HANDRAIL IS NOT CIRCULAR, IT SHALL HAVE A PERIMETER DIMENSION OF NOT LESS THAN 4" AND NOT GREATER THAN 6-1/4" WITH A CROSS SECTION OF DIMENSION OF NOT MORE THAN 2-1/4". EDGES SHALL HAVE A RADIUS OF NOT LESS THAN Ø.01".
2. TYPE II. HANDRAILS WITH A PERIMETER GREATER THAN 6-1/4" SHALL HAVE A GRASPABLE FINGER RECESS AREA ON BOTH SIDES OF THE PROFILE. THE FINGER RECESS SHALL BEGIN WITHIN A DISTANCE OF 3/4" MEASURED VERTICALLY FROM THE TALLEST PORTION OF THE PROFILE AND ACHIEVE A DEPTH OF NOT LESS THAN 5/16" WITHIN 7/8" BELOW THE WIDEST PORTION OF THE PROFILE. THIS REQUIRED DEPTH SHALL CONTINUE FOR NOT LESS THAN 3/8" TO A LEVEL THAT IS NOT LESS THAN 1-3/4" BELOW THE TALLEST PORTION OF THE PROFILE. THE WIDTH OF THE HANDRAIL ABOVE THE RECESS SHALL BE NOT LESS THAN 1-1/4" AND NOT MORE THAN 2-3/4". EDGES SHALL HAVE A RADIUS OF NOT LESS THAN Ø.01".

EXHAUST VENT CLEARANCES:
PER SRC M1501 EXHAUST FAN VENTS SHALL TERMINATE OUTDOORS AND NOT IN ATTICS, SOFFITS, RIDGE VENTS, OR CRAWL SPACES. KITCHEN, BATHROOMS, AND LAUNDRY EXHAUST TERMINATIONS TO EXIT THE STRUCTURE WITH CLEARANCES MEETING SRC M1506.3, NOT LESS THAN 3 FEET FROM PROPERTY LINES, 3 FEET FROM OPERABLE OPENINGS IN THE BUILDING AND 10 FEET FROM MECHANICAL AIR INTAKES.

FLANGED WINDOW FLASHING INSTALLATION AFTER TYVEK HOMEWRAP (OR EQUIVALENT)



PRESCRIPTIVE ENERGY CODE COMPLIANCE FOR ALL CLIMATE ZONES IN WASHINGTON PER 2018 WSEC:

MEDIUM DWELLING UNIT: 6 CREDITS

HEATING OPTION 2 - HEAT PUMP (1.0 CREDIT)

ENERGY OPTIONS:

1.3 - EFFICIANT BUILDING ENVELOPE (0.5 CREDITS):
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

2.3 - AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION (1.5 CREDITS):
REDUCE THE TESTED AIR LEAKAGE TO 1.5 AIR CHANGES PER HOUR 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

3.2 - HIGH EFFICIANCY HVAC EQUIPMENT (1.0 CRDITS):
AIR-SOURCED CENTRALLY DUCTED HEAT PUMP WITH A MINIMUM HSPF OF 9.5

5.5 - EFFICIANT WATER HEATING (2.0 CREDITS):
ELECTRIC HEAT PUMP WATER HEATER MEETING THE STANDARDS FOR TIER III OF NEAA'S ADVANCED WATER HEATING SPECIFICATION

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6922 SE 33rd ST.
MERCER ISLAND, WA 98040

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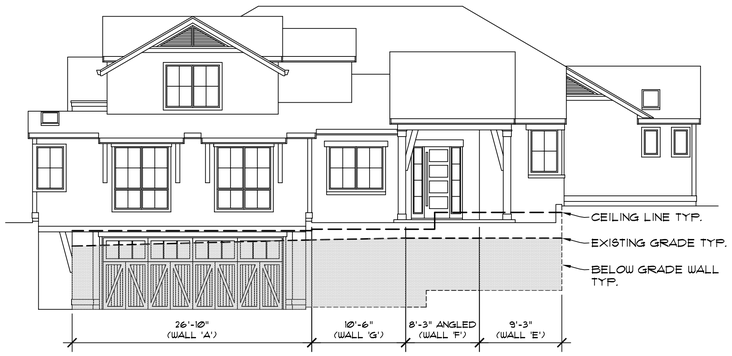
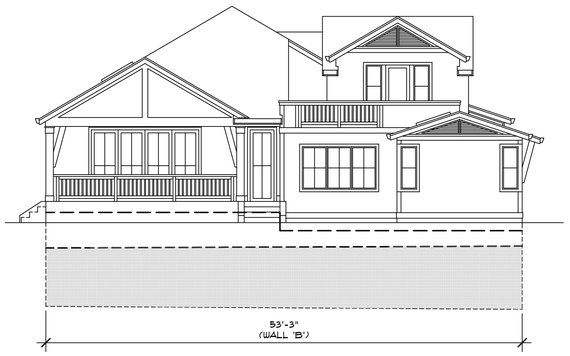


FRONT ELEVATION



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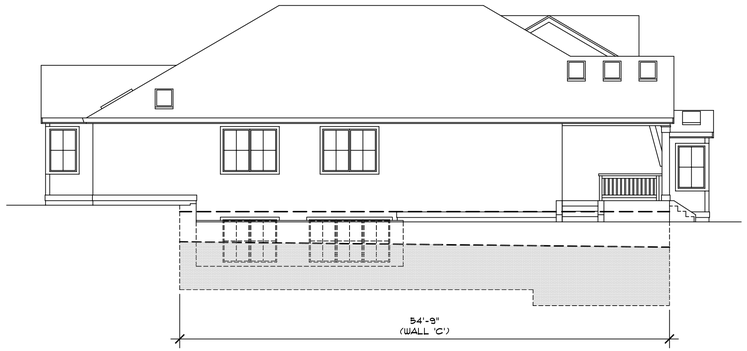

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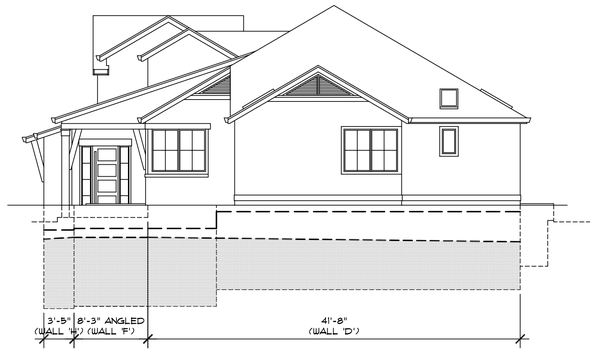
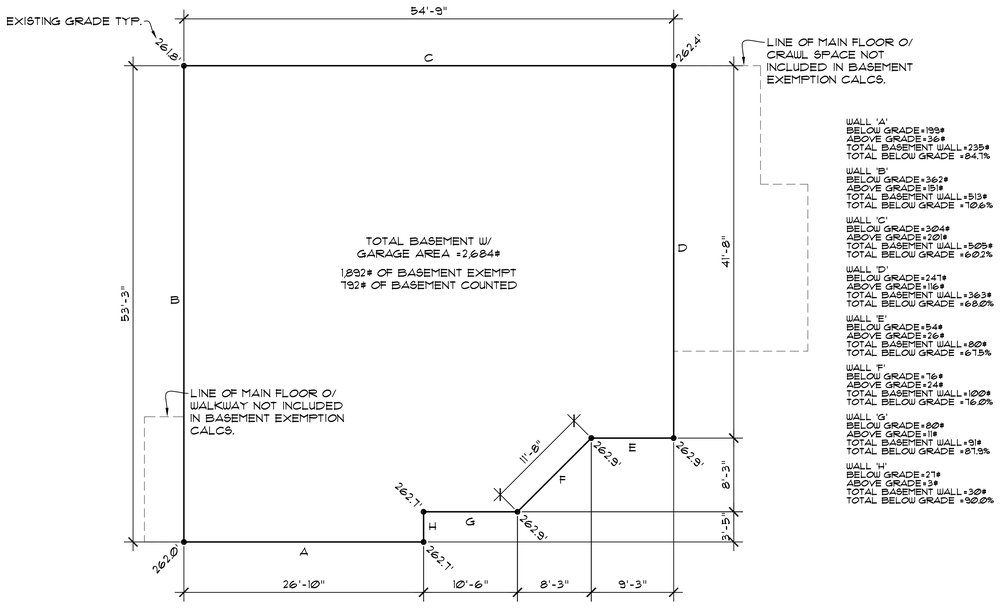


RIGHT ELEVATION



BASEMENT FLOOR PERIMETER

WALL 'A'
BELOW GRADE=199#
ABOVE GRADE=36#
TOTAL BASEMENT WALL=235#
TOTAL BELOW GRADE =84.7%

WALL 'B'
BELOW GRADE=362#
ABOVE GRADE=151#
TOTAL BASEMENT WALL=513#
TOTAL BELOW GRADE =70.6%

WALL 'C'
BELOW GRADE=324#
ABOVE GRADE=201#
TOTAL BASEMENT WALL=525#
TOTAL BELOW GRADE =60.2%

WALL 'D'
BELOW GRADE=241#
ABOVE GRADE=116#
TOTAL BASEMENT WALL=363#
TOTAL BELOW GRADE =68.0%

WALL 'E'
BELOW GRADE=54#
ABOVE GRADE=26#
TOTAL BASEMENT WALL=80#
TOTAL BELOW GRADE =67.5%

WALL 'F'
BELOW GRADE=76#
ABOVE GRADE=24#
TOTAL BASEMENT WALL=100#
TOTAL BELOW GRADE =76.0%

WALL 'G'
BELOW GRADE=80#
ABOVE GRADE=11#
TOTAL BASEMENT WALL=91#
TOTAL BELOW GRADE =87.9%

WALL 'H'
BELOW GRADE=27#
ABOVE GRADE=3#
TOTAL BASEMENT WALL=30#
TOTAL BELOW GRADE =90.0%

INFORMATION TAKEN FROM TOPOGRAPHIC & BOUNDARY SURVEY DATED 2/09/2022 BY TERRANE (JOB #212666)

TABLE OF WALL LENGTHS & COVERAGE

WALL SEGMENT	LENGTH	COVERAGE	RESULT
A	26.83'	84.1%	22.73
B	53.25'	70.6%	37.60
C	54.75'	60.2%	32.96
D	41.67'	68.0%	28.34
E	9.25'	67.5%	6.24
F	11.67'	76.0%	8.87
G	10.5'	87.9%	9.23
H	3.42'	90.0%	3.08
TOTALS	211.34'	N/A	149.05

149.05 / 211.34 = 70.5%

2,684 x 70.5% = 1,892# EXEMPT FROM GROSS FLOOR AREA

2,684 - 1,892 = 792# OF BASEMENT COUNTED

GROSS FLOOR AREA CALCULATIONS

SITE AREA	= 10,000#
ALLOWABLE F.A.R. (LESSER OF) 40% = 4,000#	= 40% OR 8,000# = MAX. 4,000#
LOWER FLOOR W/ GARAGE & STORAGE	= 792#
MAIN FLOOR	= 2,867#
UPPER FLOOR	= 324#
TOTAL FLOOR AREA	= 3,983#
PROPOSED G.F.A.	= 3,983#

NORTH

GROSS FLOOR AREA CALCULATIONS

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

SUBJECT PROPERTY TAX PARCEL NO. 9359100160
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FOOTING SCHEDULE:

18" SQUARE x 10" DEEP W/ (2) #4 EA. WAY

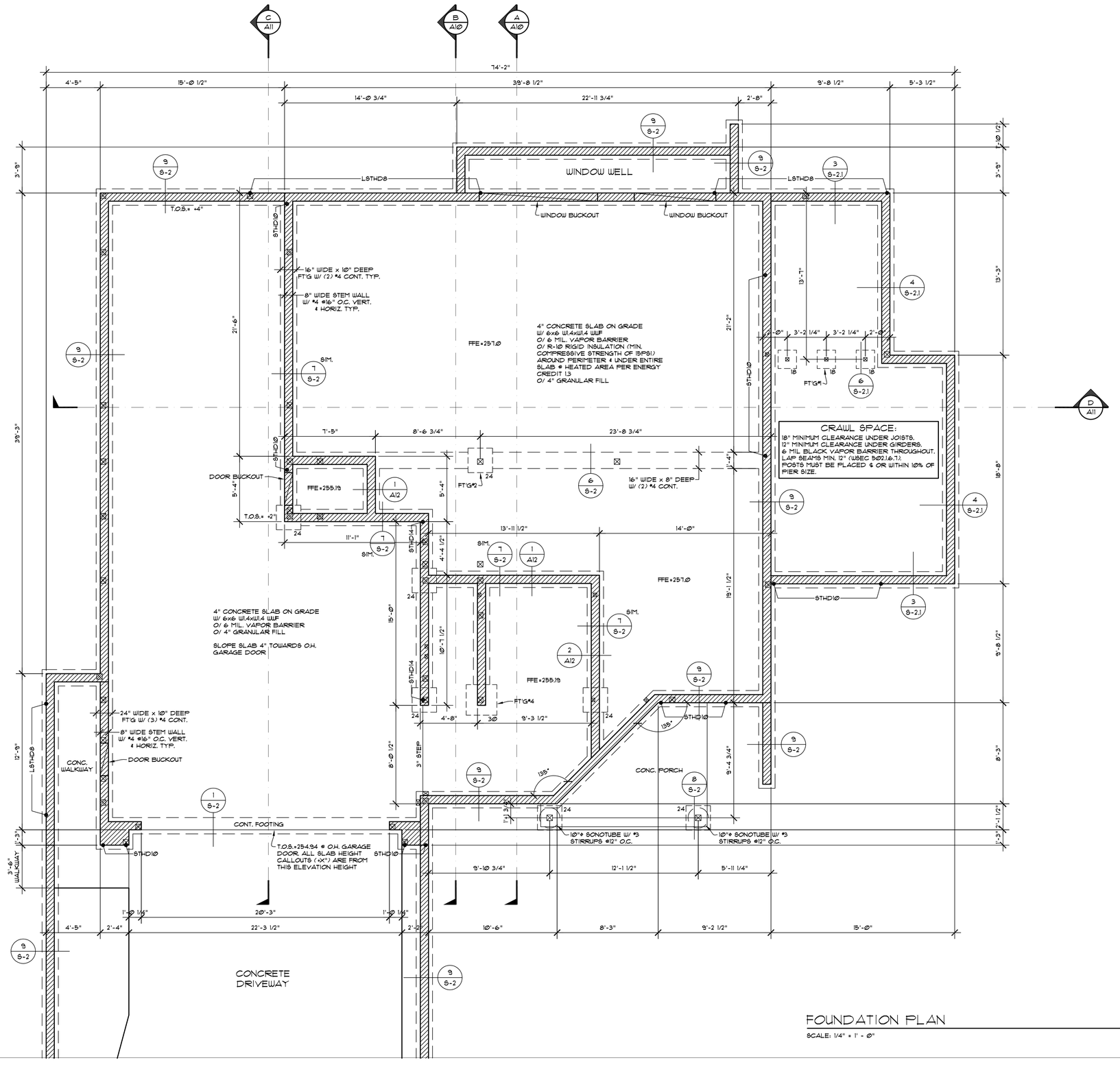
24" SQUARE x 10" DEEP W/ (3) #4 EA. WAY

30" SQUARE x 10" DEEP W/ (3) #4 EA. WAY

NOTE:
ALL UNDERGROUND PLUMBING LOCATIONS TO BE FIELD VERIFIED PRIOR TO FOUNDATION INSTALLATION.

CRAWL VENTILATION CALCULATION

CRAWL SPACE UNDER FLOOR AREA TO REQUIRE VENTING = 403 SF.
PROVIDE 1Ø CFM PER 50 SF. OF MECHANICAL VENTILATION
403 / 50 = 8.2
PROVIDE MINIMUM 9 CFM CONTINUOUS MECHANICAL VENTING



FOUNDATION PLAN

SCALE: 1/4" = 1' - Ø"

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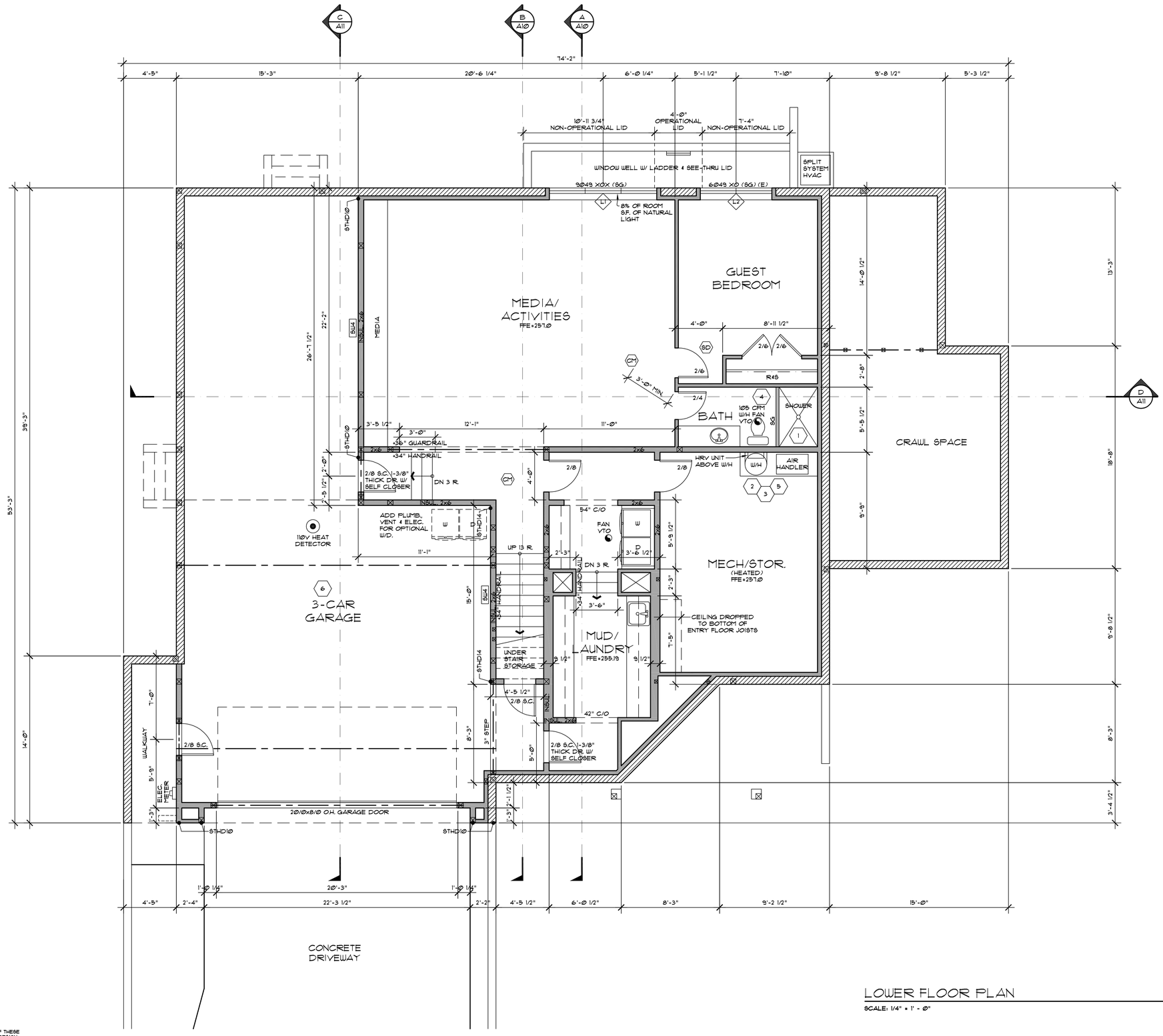
A1

1	CONC. FIBERBOARD @ TUB & SHOWER SURROUND TO 6" ABOVE DRAIN
2	PILOTS & BURNERS OR HTG. ELEMENTS & SWITCHES TO BE AT LEAST 18" ABOVE FLOOR. MIN. 6" DIA. FRESH AIR DUCT TO CONNECT TO RETURN AIR PLENUM
3	WATER HEATERS SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL DISPLACEMENT CAUSED BY EARTHQUAKE MOTION. STRAPPING SHALL BE AT POINTS WITHIN THE UPPER ONE-THIRD AND LOWER ONE-THIRD OF THE APPLIANCE'S VERTICAL DIMENSIONS. AT THE LOWER POINT, THE STRAPPING SHALL MAINTAIN A MINIMUM DISTANCE OF 4 INCHES ABOVE THE CONTROLS
4	WHOLE HOUSE VENTILATION SYSTEM PER M1507.13.3 OF THE I.R.C. SHALL BE MET WITH A HIGH EFFICIENCY FAN (MAX. 0.35 WATTS/CFM), NOT INTERLOCKED WITH THE FURNACE FAN VENTILATION SYSTEMS USING A FURNACE INCLUDING AN ECM MOTOR ARE ALLOWED. WHOLE HOUSE VENTILATION RATE PER TABLE M1507.13.3(2) AND SET TO RUN @ (2) 4 HOUR SEGEMENTS
5	PER ENERGY CREDIT 5.5: ELECTRIC HEAT PUMP WATER HEATER MEETING THE STANDARDS FOR TIER III OF NEAA'S ADVANCED WATER HEATING SPECIFICATION
6	5/8" TYPE "X" GWB OVER ALL WARM WALLS AND SECOND FLOOR FRAMING & SUPPORT MEMBERS, GARAGE CEILING PROTECTION TO BE CONTINUOUS ABOVE GARAGE.
7	PER ENERGY CREDIT 3.2: AIR-SOURCED CENTRALLY DUCTED HEAT PUMP WITH A MINIMUM HSPF OF 9.5
XX	EXTERIOR DOOR TAG. SEE DOOR SCHEDULE ON SHEET A12
XX	EXTERIOR WINDOW TAG. SEE WINDOW SCHEDULE ON SHEET A12
SD	INDICATES 110V HARD WIRED SMOKE DETECTOR WITH BATTERY BACKUP
CM	INDICATES 110V HARD WIRED SMOKE & CARBON MONOXIDE DETECTOR WITH BATTERY BACKUP



LOWER FLOOR PLAN

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

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A2

NOTE:
ROOF SHEATHING IS CONTINUOUS ON ROOF TRUSSES/RAFTERS EXTENDING UNDER OVERFRAMED AREAS THAT ARE SHADED U.N.O. CUT 12"x12" HOLES IN SHEATHING @ EVERY OTHER BAY TO ALLOW FOR CROSS VENTILATION INTO OVERFRAMED AREAS.

ALL HEADERS TO BE 4x8 DF#2 U.N.O.

ALL POSTS TO BE (2) 2x6 HF#2 U.N.O.

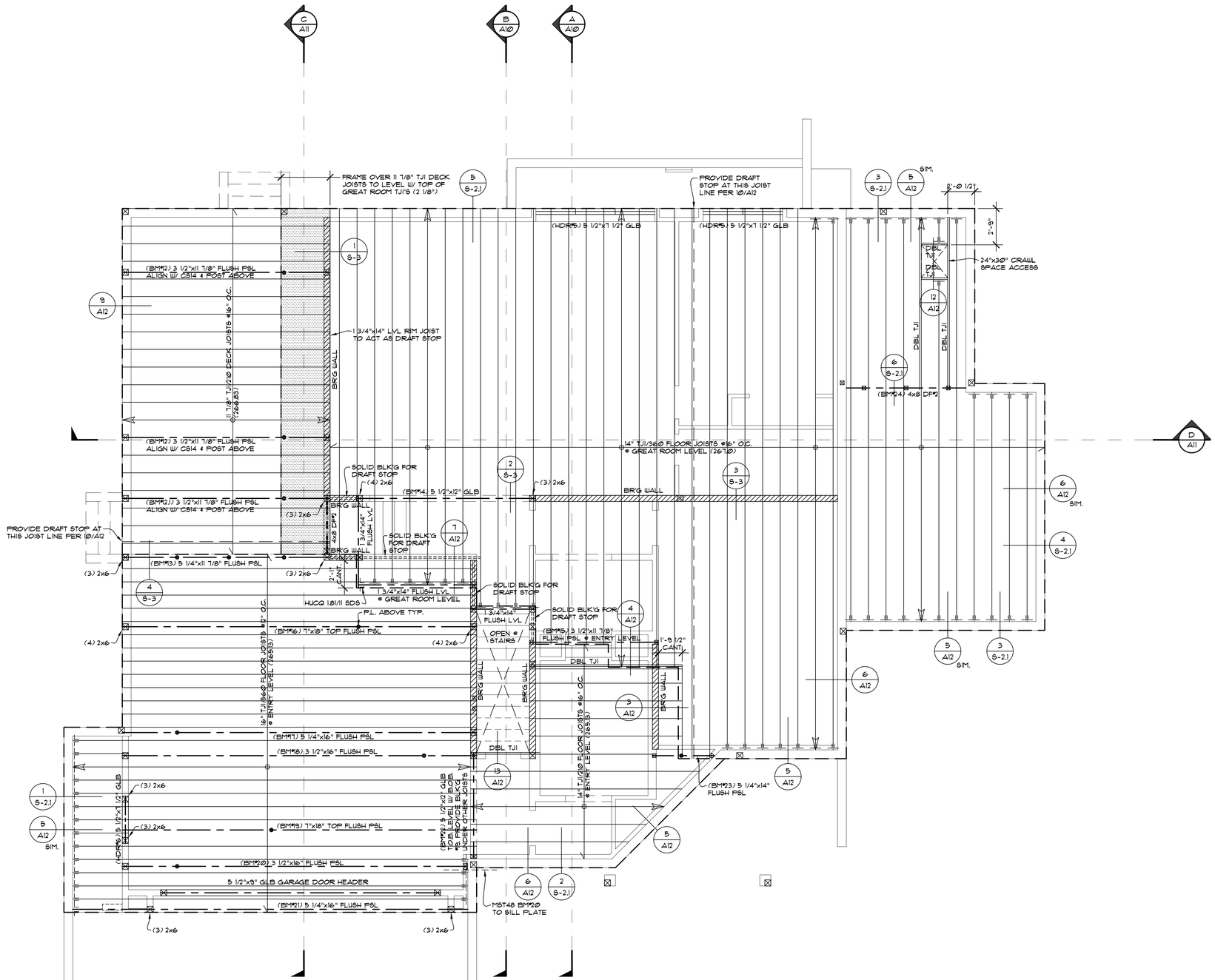
ALL ROOF PITCHES AS NOTED. X:12 INDICATES DOWN SLOPE

A.M.F. = ABOVE MAIN FLOOR

A.U.F. = ABOVE UPPER FLOOR

T.O.B. = TOP OF BEAM

B.O.B. = BOTTOM OF BEAM



MAIN FLOOR FRAMING PLAN

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

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PER PERSCRIPTIVE REQUIREMENTS 2018 W.S.E.C.
*(MODIFIED FOR ENERGY CREDIT 1.3)

CLIMATE ZONE 5B
MAX. GLAZING U-FACTOR: VERT. U=.28*, OVERHEAD U=.50
MAX. DOOR U-FACTOR: U=.20
INSULATION @ CONDITIONED AREA:
TRUSSED CEILING: R-49
VAULTED & SINGLE RAFTER CEILING: R-38 (R40.2.2)
ABOVE GRADE WALLS: R-21
BELOW GRADE WALLS: R-21
FLOOR OVER VENTED CRAWL SPACE: R-38*
SLAB ON GRADE: R-10 @ PERIMETER
& UNDER ENTIRE SLAB*

PERCENT GLAZING CALCULATIONS: 666.6 (S.F. GLAZING AREA) / 4,758 (S.F. FLOOR AREA) = 14.0%

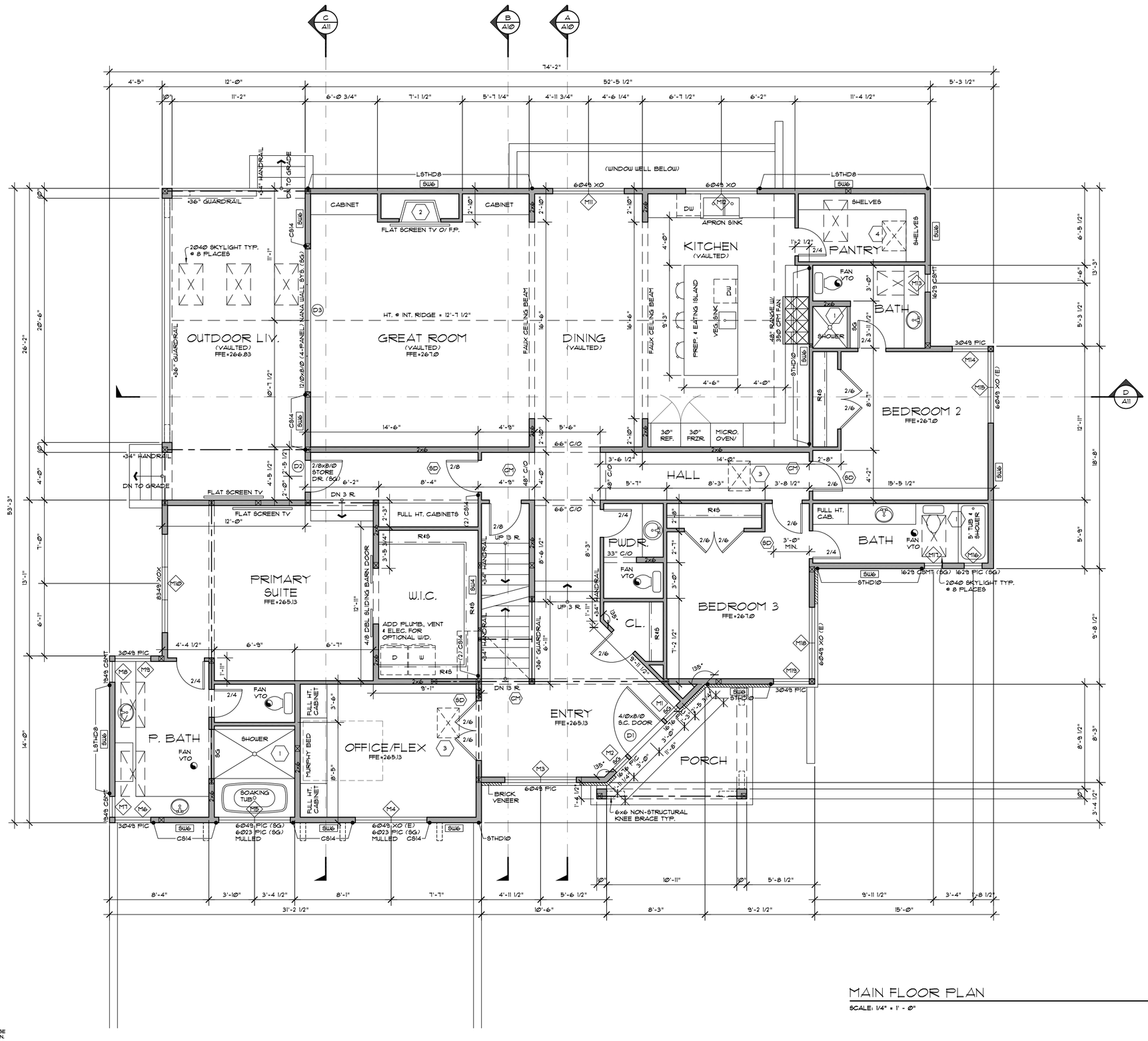
1	CONC. FIBERBOARD @ TUB & SHOWER SURROUND TO 6' ABOVE DRAIN
2	DIRECT VENT FIREPLACE. INSTALL PER MANUFACTURERS SPECIFICATIONS
3	22"x30" ATTIC ACCESS. WEATHERSTRIP & INSULATE OVER TO EQUAL CEILING INSULATION. PROVIDE WOOD SURROUND TO PREVENT LOOSE INSULATION SPILLAGE TO LIVING SPACE.
4	24"x30" CRAWL SPACE ACCESS. WEATHERSTRIP & INSULATE TO LEVEL EQUAL TO SURROUNDING SURFACES.
XX	EXTERIOR DOOR TAG. SEE DOOR SCHEDULE ON SHEET A12
XX	EXTERIOR WINDOW TAG. SEE WINDOW SCHEDULE ON SHEET A12
SD	INDICATES 110V HARD WIRED SMOKE DETECTOR WITH BATTERY BACKUP
CM	INDICATES 110V HARD WIRED SMOKE & CARBON MONOXIDE DETECTOR WITH BATTERY BACKUP

SQUARE FOOTAGE SUMMARY

UPPER FLOOR	324#
MAIN FLOOR	2,867#
LOWER FLOOR	1,566#
TOTAL HEATED	4,757#
GARAGE	1,118#
UPPER FLOOR DECK	131#
M.F. OUTDOOR LIVING	314#
M.F. FRONT PORCH	93#

PER ENERGY CREDIT 2.3:
REDUCE THE TESTED AIR LEAKAGE TO 1.5 AIR CHANGES PER HOUR 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

NOTE:
CONTRACTOR SHALL VERIFY TO INSPECTOR ALL GUARDS AND RAILINGS SHALL BE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION AS REQUIRED BY IRC TABLE R301.5.



MAIN FLOOR PLAN

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

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R807.1 ATTIC ACCESS:
BUILDINGS WITH COMBUSTIBLE CEILING OR ROOF CONSTRUCTION SHALL HAVE AN ATTIC ACCESS OPENING TO ATTIC AREAS THAT HAVE A VERTICAL HEIGHT OF 30 INCHES OR GREATER OVER AN AREA OF NOT LESS THAN 30 SQUARE FEET. THE VERTICAL HEIGHT SHALL BE MEASURED FROM THE TOP OF THE CEILING FRAMING MEMBERS OR ANY PERMANENT OBSTRUCTION TO THE UNDERSIDE OF THE ROOF FRAMING MEMBERS OR ANY PERMANENT OBSTRUCTION.

ALL TRUSSES:
- SHALL CARRY MANUFACTURERS STAMP
- SHALL BE INSTALLED & BRACED TO MANUFACTURERS SPECIFICATIONS
- WILL NOT BE FIELD ALTERED WITHOUT PRIOR BUILDING DEPARTMENT APPROVAL OF ENGINEERING CALCULATIONS
- SHALL HAVE DESIGN DETAILS & DRAWINGS ON SITE FOR FRAMING INSPECTION

NOTE:
ROOF SHEATHING IS CONTINUOUS ON ROOF TRUSSES/RAFTERS EXTENDING UNDER OVERFRAMED AREAS THAT ARE SHADED U.N.O. CUT 12"x12" HOLES IN SHEATHING @ EVERY OTHER BAY TO ALLOW FOR CROSS VENTILATION INTO OVERFRAMED AREAS.

ALL HEADERS TO BE 4x8 DF#2 U.N.O.

ALL POSTS TO BE (2) 2x6 HF#2 U.N.O.

ALL ROOF PITCHES AS NOTED. X:12 INDICATES DOWN SLOPE

A.M.F. = ABOVE MAIN FLOOR

A.U.F. = ABOVE UPPER FLOOR

T.O.B. = TOP OF BEAM

B.O.B. = BOTTOM OF BEAM

(A) ROOF VENTILATION CALCULATIONS

TOTAL VENTILATION REQUIRED: 368 SF. / 300 = 1.23 SF. NET FREE

EAVE VENTILATION = 46 L.F. x 3.3 SQ. IN./L.F. = 1Ø5 SF.
(PROVIDE EAVE VENT BLOCKING @ EVERY BAY)
MIN. 50% BY VENTILATION ABOVE EAVE = 1.23 x Ø.5 = Ø.62 SF.
ROOF-TO-WALL VENTILATION PROVIDED = 31 L.F. x 9.Ø SQ. IN./L.F. = 1.9 SF.

TOTAL VENTILATION PROVIDED:
EAVE VENTILATION = 1Ø5 SF.
ROOF-TO-WALL ABOVE EAVE VENTILATION = 1.9 SF.
TOTAL VENTILATION REQUIRED = 1.23 SF.
TOTAL VENTILATION PROVIDED = 2.95 SF.

NOTE:
USE SMARTVENT ROOF-TO-WALL VENT OR EQUIV.

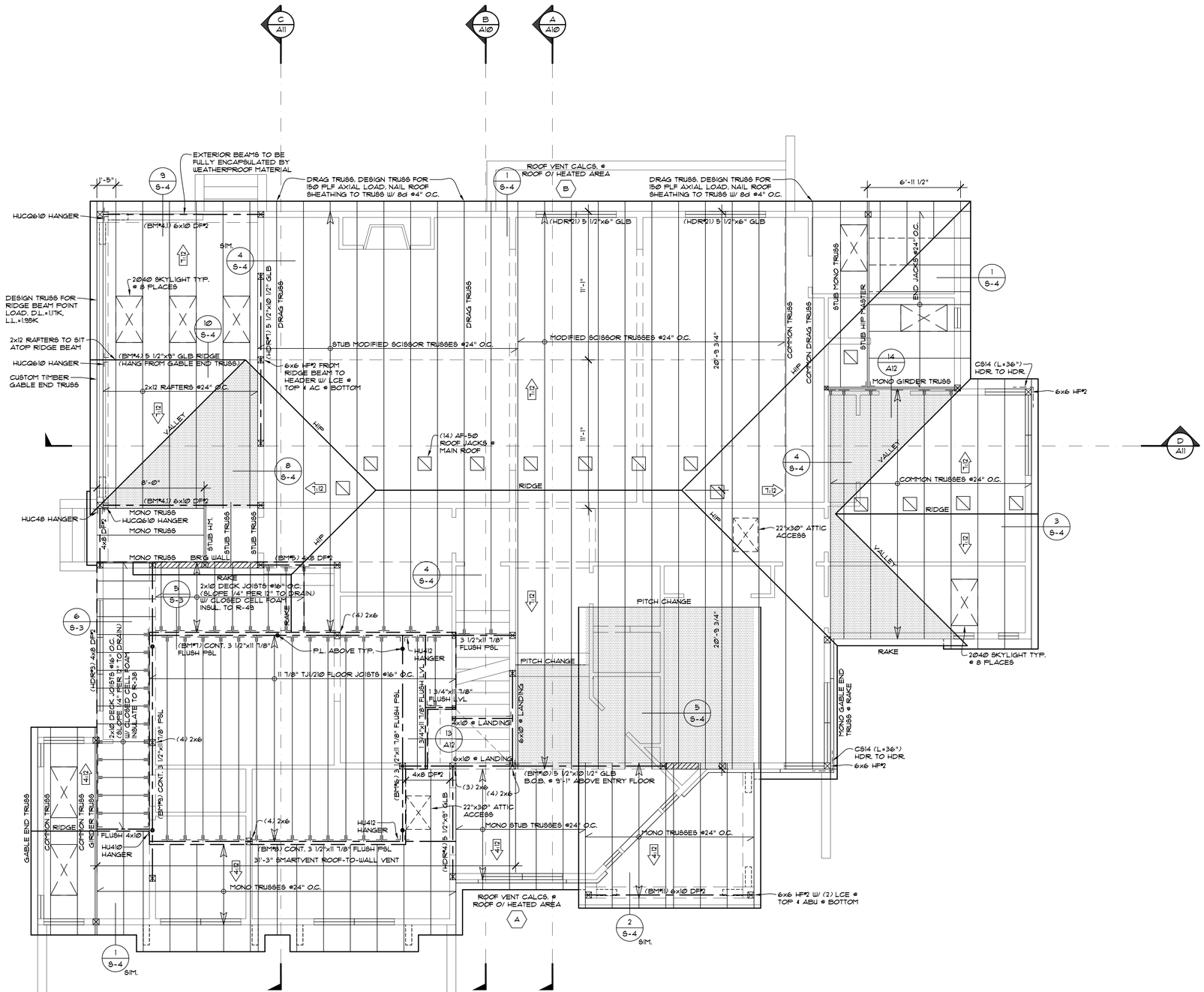
(B) ROOF VENTILATION CALCULATIONS

TOTAL VENTILATION REQUIRED: 2Ø23 SF. / 3ØØ = 6.8 SF. NET FREE

EAVE VENTILATION = 91 L.F. x 3.3 SQ. IN./L.F. = 2Ø8 SF.
(PROVIDE EAVE VENT BLOCKING @ EVERY BAY)
MIN. 50% BY VENTILATION ABOVE EAVE = 6.8 x 3.4 = 2.15 SF.
(14) AF-5Ø ROOF JACK YIELD 4.9 SF. (Ø.35 SF. NET FREE EACH)

TOTAL VENTILATION PROVIDED:
EAVE VENTILATION = 2.Ø8 SF.
ROOF JACK ABOVE EAVE VENTILATION = 4.9 SF.
TOTAL VENTILATION REQUIRED = 6.8 SF.
TOTAL VENTILATION PROVIDED = 6.98 SF.

HATCHING DENOTES 2x OVERFRAMING



UPPER FLOOR & MAIN ROOF FRAMING PLAN

SCALE: 1/4" = 1' - Ø"

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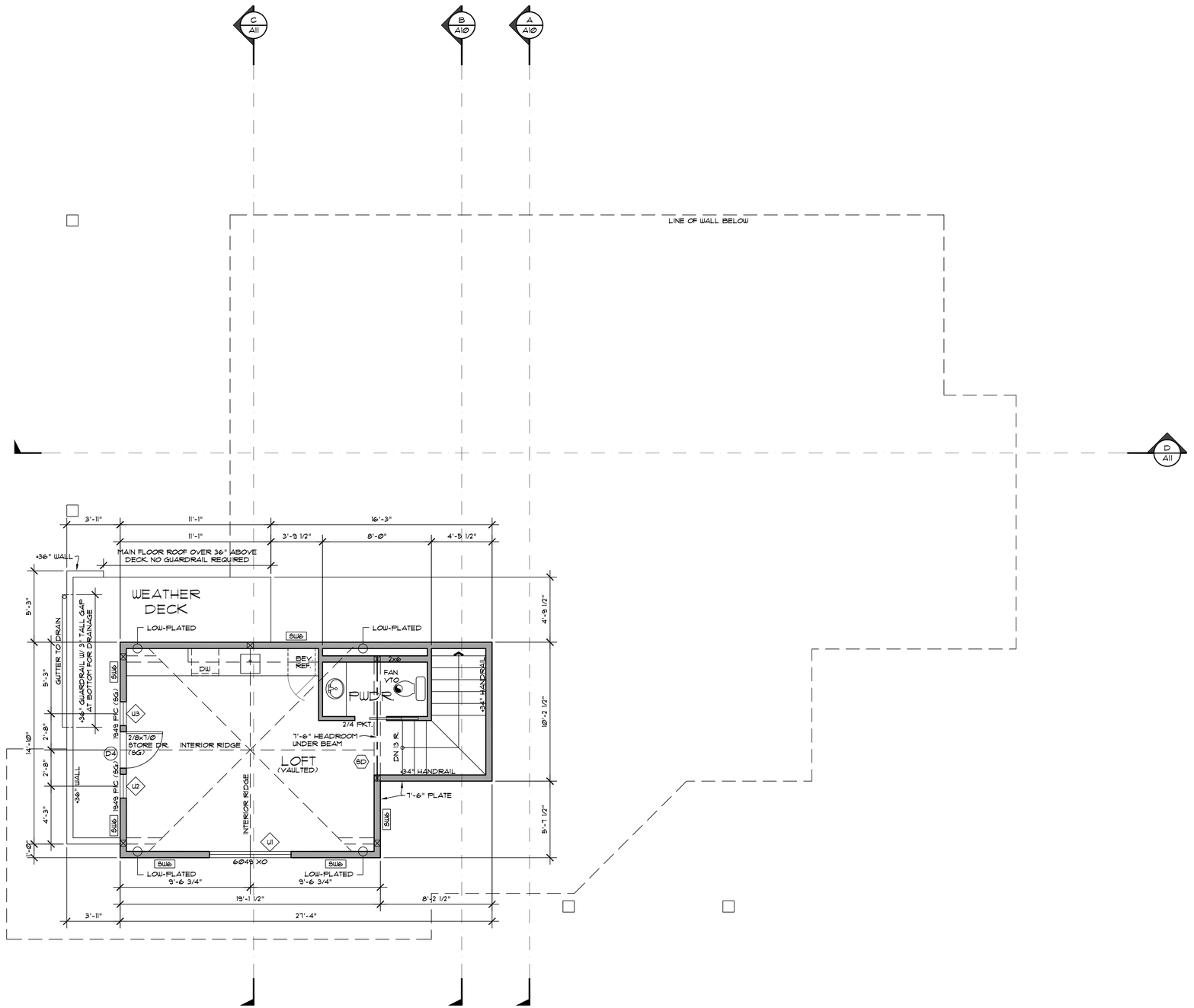
XX	EXTERIOR DOOR TAG. SEE DOOR SCHEDULE ON SHEET A12
XX	EXTERIOR WINDOW TAG. SEE WINDOW SCHEDULE ON SHEET A12
SD	INDICATES 110V HARD WIRED SMOKE DETECTOR WITH BATTERY BACKUP
CM	INDICATES 110V HARD WIRED SMOKE & CARBON MONOXIDE DETECTOR WITH BATTERY BACKUP



UPPER FLOOR PLAN

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

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ALL TRUSSES:
- SHALL CARRY MANUFACTURERS STAMP
- SHALL BE INSTALLED & BRACED TO MANUFACTURERS SPECIFICATIONS
- WILL NOT BE FIELD ALTERED WITHOUT PRIOR BUILDING DEPARTMENT APPROVAL OF ENGINEERING CALCULATIONS
- SHALL HAVE DESIGN DETAILS & DRAWINGS ON SITE FOR FRAMING INSPECTION

NOTE:
ROOF SHEATHING IS CONTINUOUS ON ROOF TRUSSES/RAFTERS EXTENDING UNDER OVERFRAMED AREAS THAT ARE SHADED U.N.O. CUT 12"x12" HOLES IN SHEATHING @ EVERY OTHER BAY TO ALLOW FOR CROSS VENTILATION INTO OVERFRAMED AREAS.

ALL HEADERS TO BE 4x8 DF#2 U.N.O.

ALL POSTS TO BE (2) 2x6 HF#2 U.N.O.

ALL ROOF PITCHES AS NOTED. 4:12 INDICATES DOWN SLOPE

A.M.F. = ABOVE MAIN FLOOR

A.U.F. = ABOVE UPPER FLOOR

T.O.B. = TOP OF BEAM

B.O.B. = BOTTOM OF BEAM

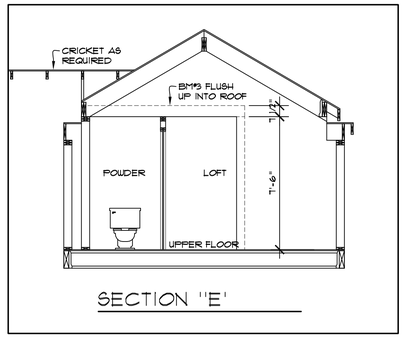
C ROOF VENTILATION CALCULATIONS

TOTAL VENTILATION REQUIRED: 84 S.F. / 300 = Ø.28 S.F. NET FREE

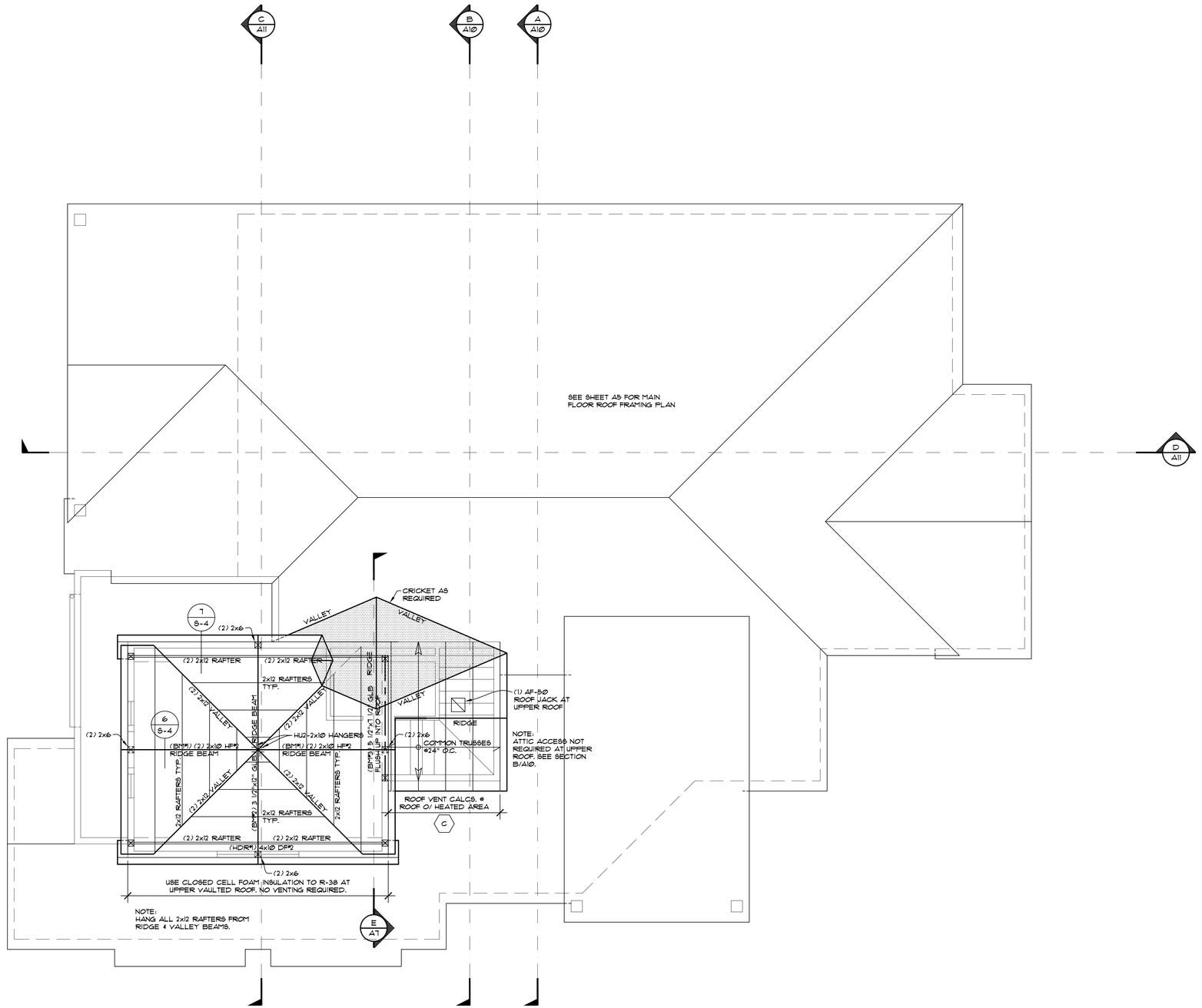
EAVE VENTILATION = 8 L.F. x 3.3 SQ. IN./L.F. = Ø.18 S.F.
(PROVIDE EAVE VENT BLOCKING @ EVERY BAY)
MIN. 50% BY VENTILATION ABOVE EAVE = 6.8 x 3.4 = 2.15 S.F.
(1) AF-30 ROOF JACK YIELD Ø.35 S.F. (Ø.35 S.F. NET FREE EACH)

TOTAL VENTILATION PROVIDED:
EAVE VENTILATION = Ø.18 S.F.
ROOF JACK ABOVE EAVE VENTILATION = Ø.35 S.F.
TOTAL VENTILATION REQUIRED = Ø.28 S.F.
TOTAL VENTILATION PROVIDED = Ø.53 S.F.

HATCHING DENOTES 2x OVERFRAMING



SECTION "E"



UPPER ROOF FRAMING PLAN

SCALE: 1/4" = 1' - Ø"

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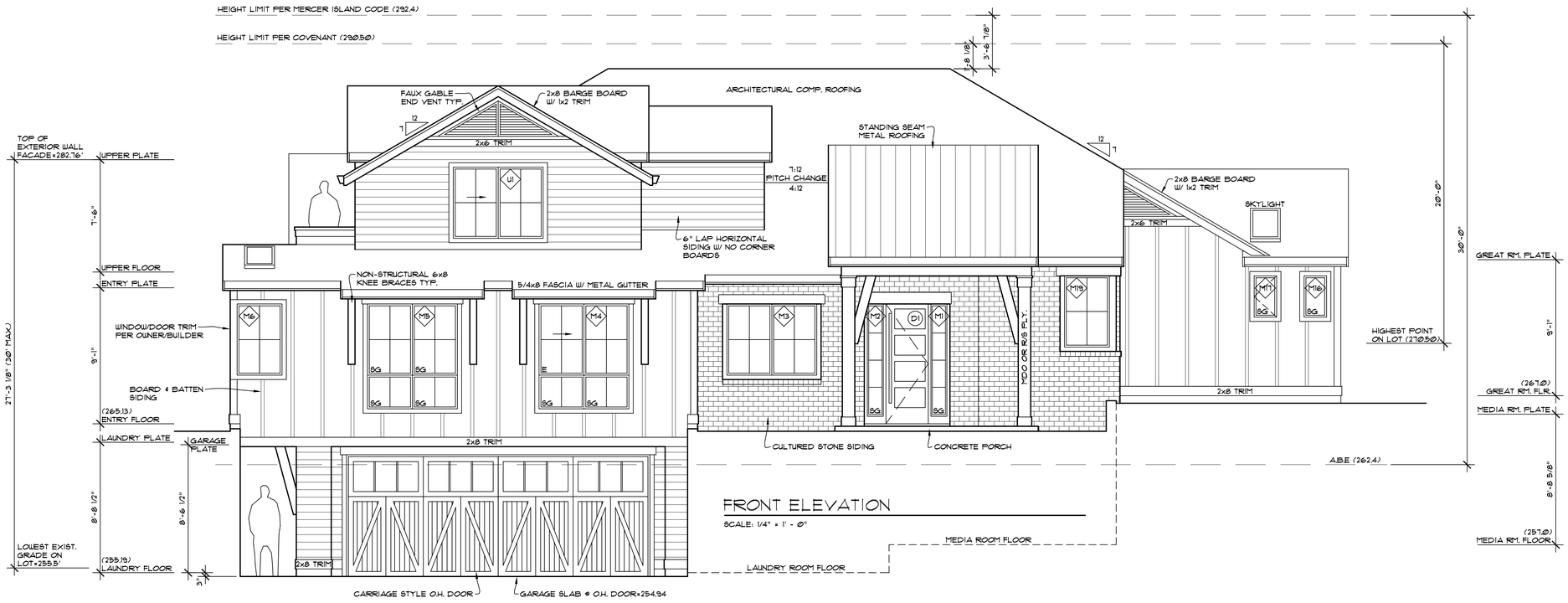
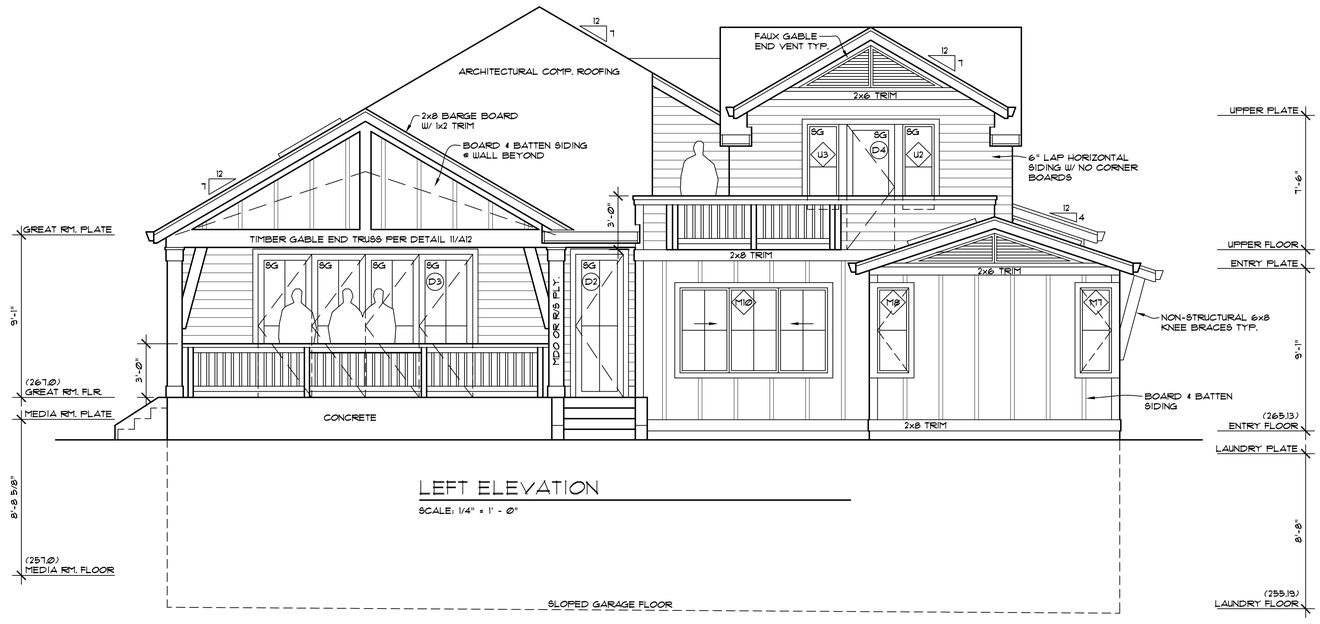


FRONT ELEVATION

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



LEFT ELEVATION

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

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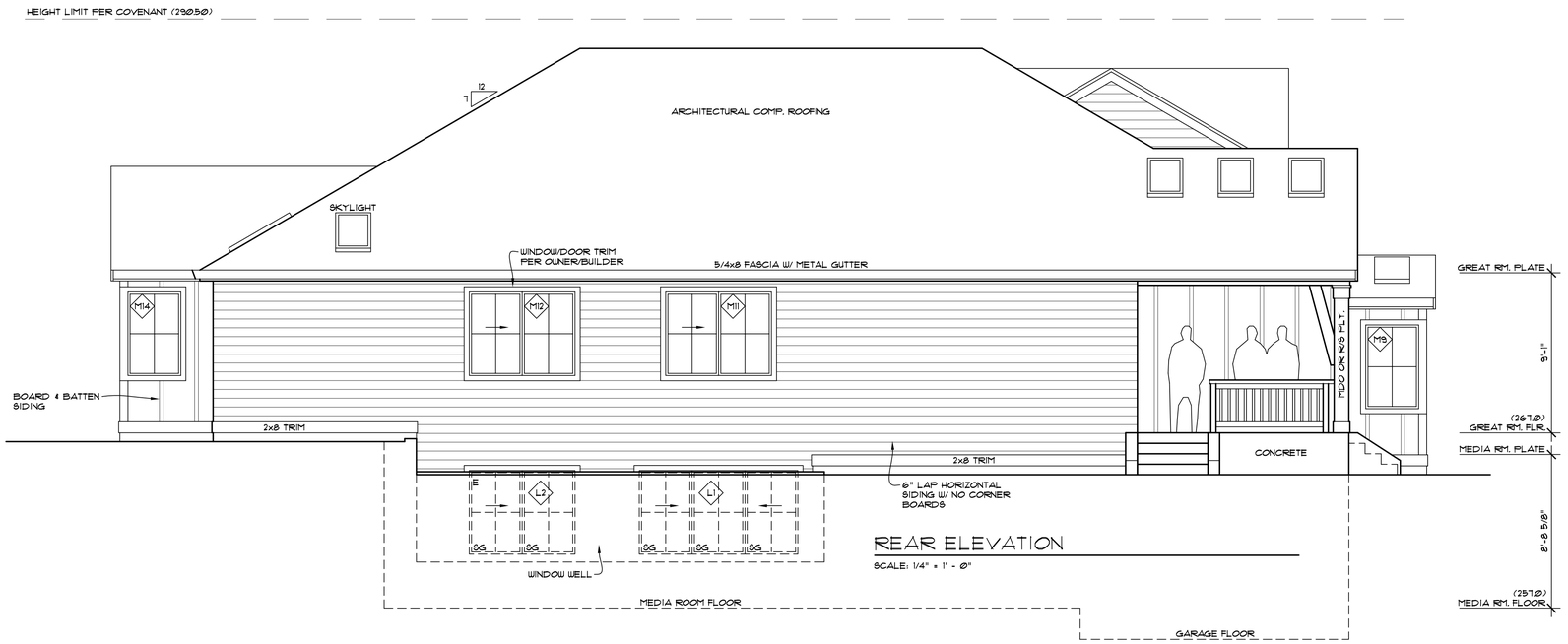

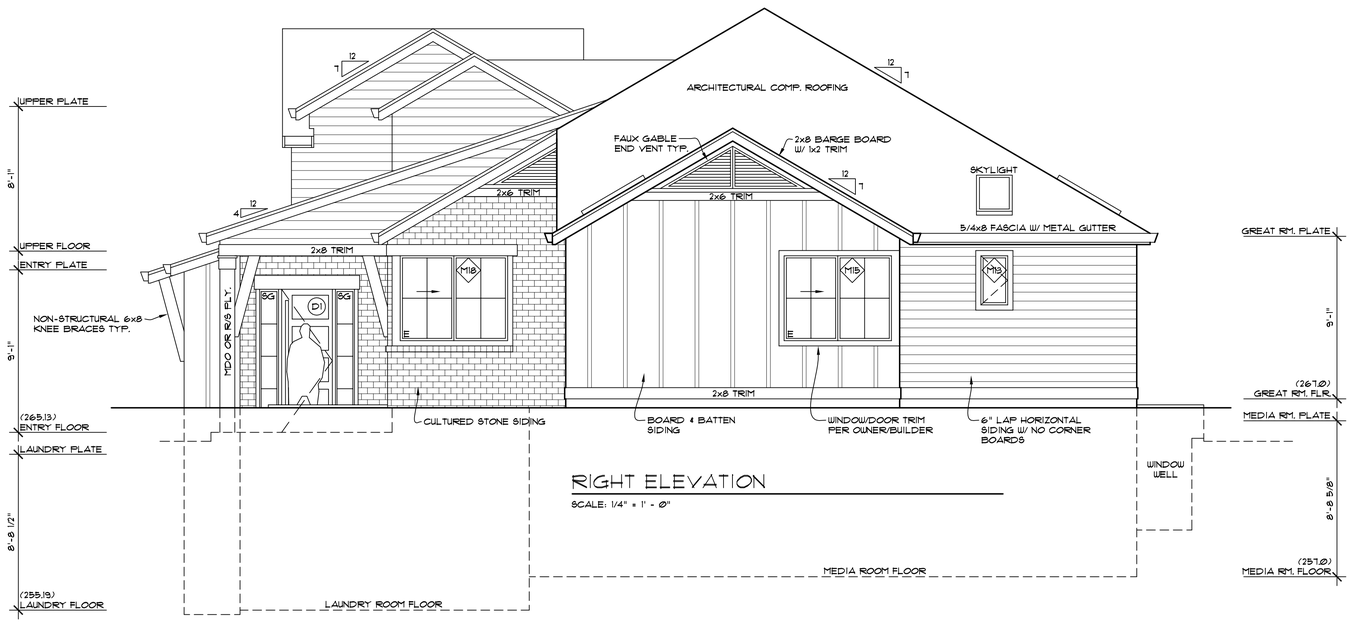

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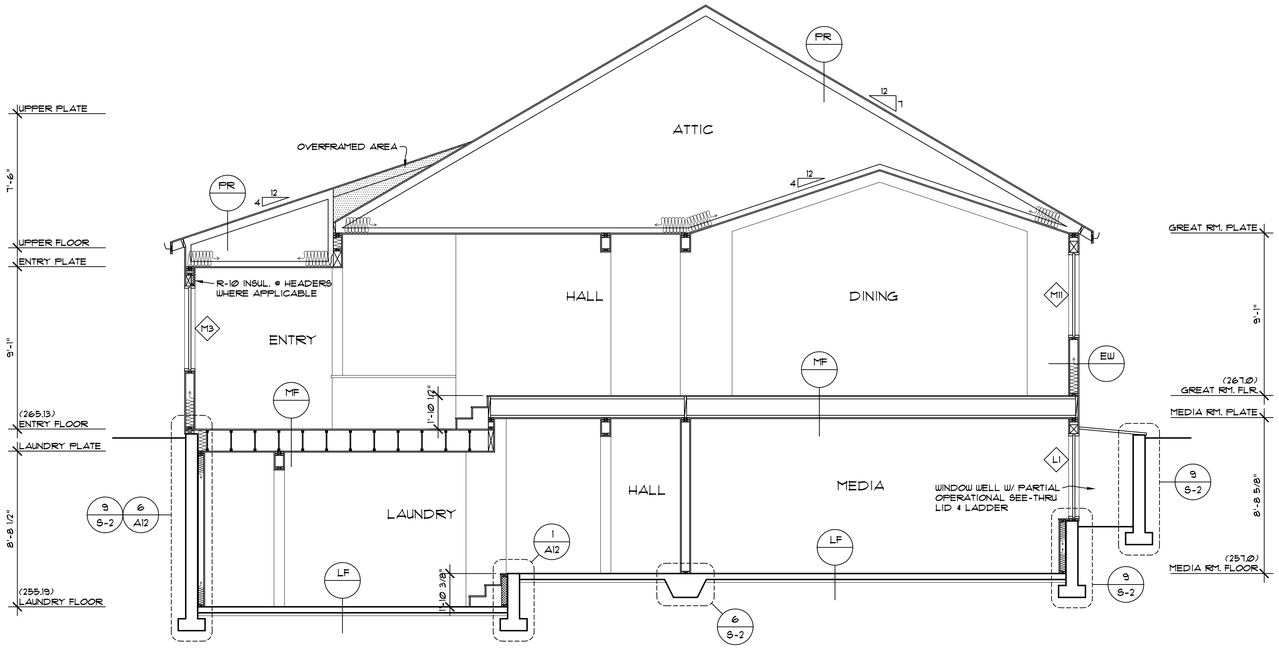
HELIX DESIGN BUILD
6922 SE 33rd ST.
MERCER ISLAND, WA 98040

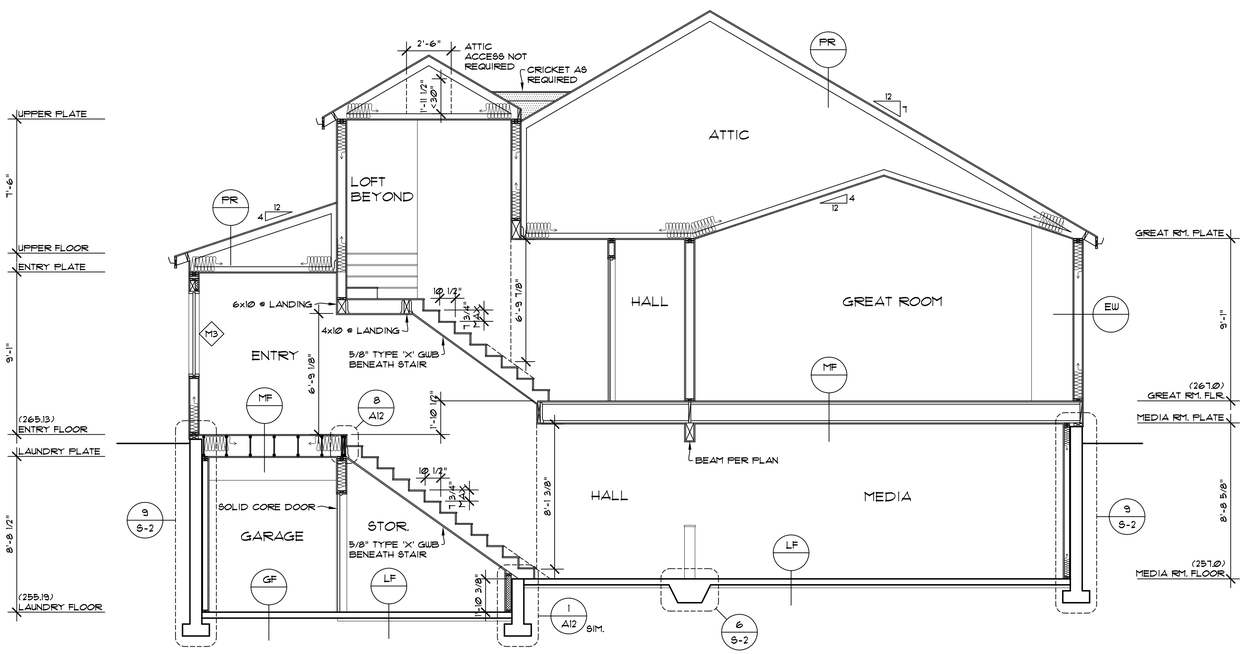
JOB NO: 21-031
DATE: 5/04/22
DRWN. BY: MM
REVISED:

SHEET NO.
A9



BUILDING SECTION 'A'

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



BUILDING SECTION 'B'

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

LR	LOFT ROOF ROOFING PER ELEVATIONS 30# BUILDING PAPER SHEATHING PER STUCTURAL ENGINEER 2x RAFTERS PER PLAN CLOSED CELL FOAM INSULATION TO R-38 @ SINGLE RAFTER ROOF 4 MIL. U.V. POLY. 5/8" GWB
PR	PITCHED ROOF ROOFING PER ELEVATIONS 30# BUILDING PAPER SHEATHING PER STUCTURAL ENGINEER TRUSSES OR 2x RAFTERS PER PLAN R-49 INSULATION @ TRUSSED ROOF R-38 INSULATION @ SINGLE RAFTER ROOF W/ VENT BAFFLE AS NEEDED 4 MIL. U.V. POLY. 5/8" GWB
EW	EXTERIOR CONDITIONED WALL 1/2" GWB. R-21 BATT INSULATION 4 MIL UV RES. POLY 2x6 STUDS @ 16" O.C. SHEATHING PER SHEAR WALL SCHED. BUILDING PAPER SIDING PER ELEVATIONS
GW	EXTERIOR GARAGE WALL 1/2" GWB. 4 MIL UV RES. POLY 2x6 STUDS @ 16" O.C. SHEATHING PER SHEAR WALL SCHED. BUILDING PAPER SIDING PER ELEVATIONS
DG	DWELLING TO GARAGE WALL 1/2" GWB 4 MIL UV RES. POLY 2x6 STUDS @ 16" O.C. R-21 BATT INSULATION 1/2" GWB
UF	UPPER FLOOR FINISH FLOOR 1/2" U.L. FLY @ VINYL 5/8" U.L. FLY @ VINYL TO HARDWOOD 3/4" T&G PLYWOOD SUB-FLOOR (GLUE & NAIL) 11 7/8" TJI/210 FLOOR JOISTS @16" O.C. R-38 BATT. INSULATION @ AREAS OVER UNHEATED SPACE PER ENERGY CREDIT 1.3 5/8" GWB
MF	MAIN FLOOR FINISH FLOOR 1/2" U.L. FLY @ VINYL 5/8" U.L. FLY @ VINYL TO HARDWOOD 3/4" T&G PLYWOOD SUB-FLOOR (GLUE & NAIL) TJI FLOOR JOISTS PER PLAN R-38 BATT. INSULATION @ AREAS OVER UNHEATED SPACE PER ENERGY CREDIT 1.3 5/8" GWB
LF	LOWER FLOOR 4" CONCRETE SLAB ON GRADE W/ 6x6 W1.4xW1.4 WWF 6 MIL. VAPOR BARRIER 4" GRANULAR FILL R-10 RIGID INSULATION (MIN. COMPRESSIVE STRENGTH OF 15 PSI) UNDER ENTIRE SLAB @ HEATED AREA
GF	GARAGE FLOOR 4" CONCRETE SLAB ON GRADE W/ 6x6 W1.4xW1.4 WWF 6 MIL. VAPOR BARRIER 4" GRANULAR FILL
WD	WEATHER DECK @ UPPER FLOOR WEATHERPROOF MEMBRANE 3/4" T&G PLYWOOD SUB-FLOOR 2x10 DECK JOISTS @16" O.C. SLOPED 1/4" PER 12" TO DRAIN CLOSED CELL FOAM INSUL. TO R-49
OL	OUTDOOR LIVING COVERED DECK WEATHERPROOF MEMBRANE 3/4" T&G PLYWOOD SUB-FLOOR 11 7/8" TJI/210 DECK JOISTS @16" O.C.

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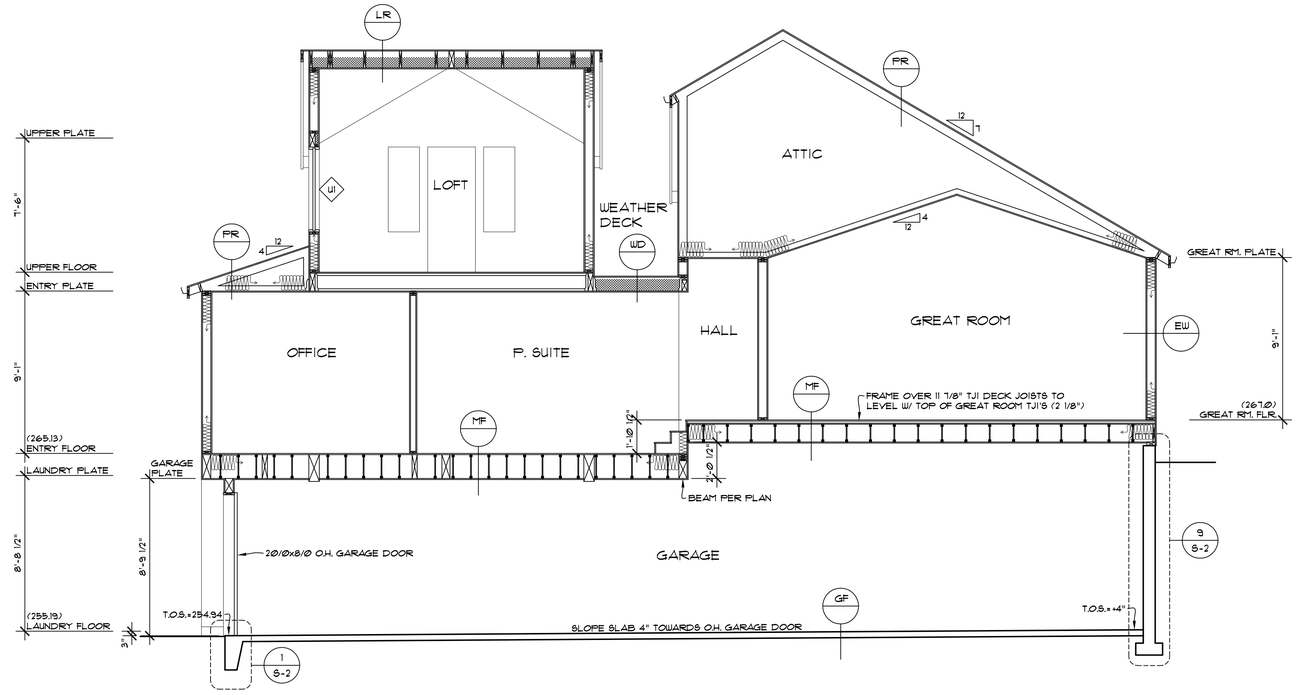
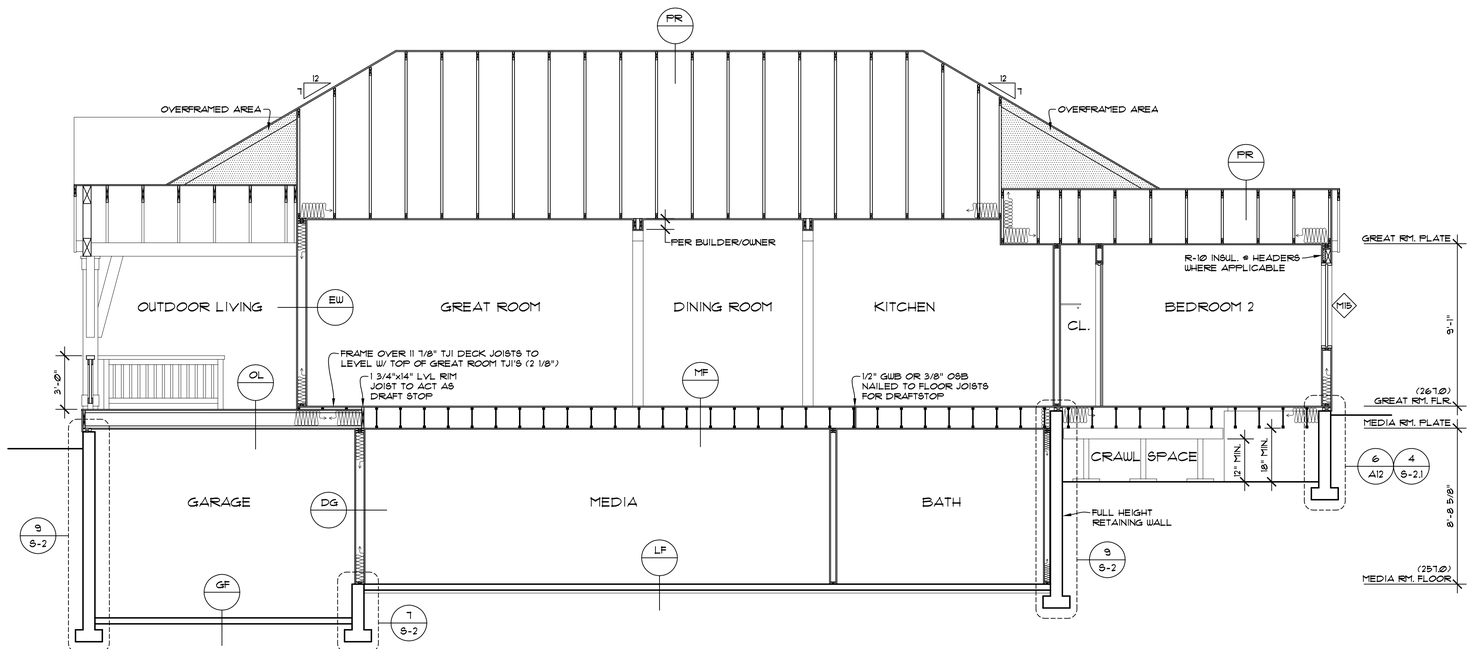
SHEET NO.
A10



BUILDING SECTION 'C'

SCALE: 1/4" = 1' - Ø"



BUILDING SECTION 'D'

SCALE: 1/4" = 1' - Ø"

LR	LOFT ROOF ROOFING PER ELEVATIONS 3Ø# BUILDING PAPER SHEATHING PER STUCTURAL ENGINEER 2x RAFTERS PER PLAN CLOSED CELL FOAM INSULATION TO R-38 @ SINGLE RAFTER ROOF 4 MIL. U.V. POLY. 5/8" GWB
FR	PITCHED ROOF ROOFING PER ELEVATIONS 3Ø# BUILDING PAPER SHEATHING PER STUCTURAL ENGINEER TRUSSES OR 2x RAFTERS PER PLAN R-49 INSULATION @ TRUSSED ROOF R-38 INSULATION @ SINGLE RAFTER ROOF W/ VENT BAFFLE AS NEEDED 4 MIL U.V. POLY. 5/8" GWB
EW	EXTERIOR CONDITIONED WALL 1/2" G.W.B. R-21 BATT INSULATION 4 MIL UV RES. POLY 2x6 STUDS @ 16" O.C. SHEATHING PER SHEAR WALL SCHED. BUILDING PAPER SIDING PER ELEVATIONS
GW	EXTERIOR GARAGE WALL 1/2" G.W.B. 4 MIL UV RES. POLY 2x6 STUDS @ 16" O.C. SHEATHING PER SHEAR WALL SCHED. BUILDING PAPER SIDING PER ELEVATIONS
DG	DWELLING TO GARAGE WALL 1/2" GWB 4 MIL UV RES. POLY 2x6 STUDS @ 16" O.C. R-21 BATT INSULATION 1/2" GWB
UF	UPPER FLOOR FINISH FLOOR 1/2" U.L. FLY @ VINYL 5/8" U.L. FLY @ VINYL TO HARDWOOD 3/4" T4G PLYWOOD SUB-FLOOR (GLUE & NAIL) 11 7/8" TJI/21Ø FLOOR JOISTS @16" O.C. R-38 BATT. INSULATION @ AREAS OVER UNHEATED SPACE PER ENERGY CREDIT 1.3 5/8" GWB
MF	MAIN FLOOR FINISH FLOOR 1/2" U.L. FLY @ VINYL 5/8" U.L. FLY @ VINYL TO HARDWOOD 3/4" T4G PLYWOOD SUB-FLOOR (GLUE & NAIL) TJI FLOOR JOISTS PER PLAN R-38 BATT. INSULATION @ AREAS OVER UNHEATED SPACE PER ENERGY CREDIT 1.3 5/8" GWB
LF	LOWER FLOOR 4" CONCRETE SLAB ON GRADE W/ 6x6 W1.4xW1.4 WWF 6 MIL. VAPOR BARRIER 4" GRANULAR FILL R-1Ø RIGID INSULATION (MIN. COMPRESSIVE STRENGTH OF 15 PSI) UNDER ENTIRE SLAB @ HEATED AREA
GF	GARAGE FLOOR 4" CONCRETE SLAB ON GRADE W/ 6x6 W1.4xW1.4 WWF 6 MIL. VAPOR BARRIER 4" GRANULAR FILL
WD	WEATHER DECK @ UPPER FLOOR WEATHERPROOF MEMBRANE 3/4" T4G PLYWOOD SUB-FLOOR 2x1Ø DECK JOISTS @16" O.C. SLOPED 1/4" PER 12" TO DRAIN CLOSED CELL FOAM INSUL. TO R-49
OL	OUTDOOR LIVING COVERED DECK WEATHERPROOF MEMBRANE 3/4" T4G PLYWOOD SUB-FLOOR 11 7/8" TJI/21Ø DECK JOISTS @16" O.C.

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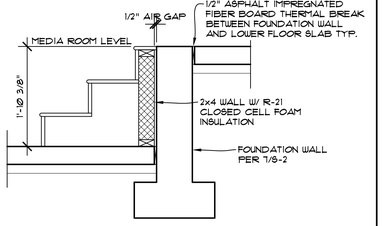
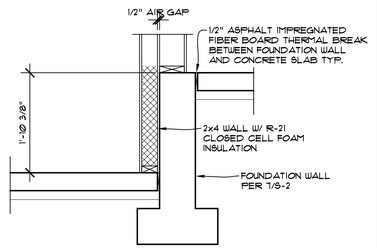
JOB NO: 21-Ø31
DATE: 5/Ø4/22
DRWN. BY: MM
REVISED:

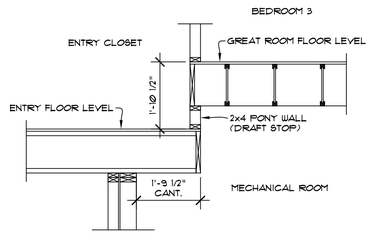
SHEET NO.
A11



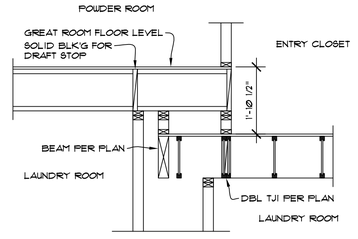
1 STEPPED FLOOR @ STAIR DETAIL
N.T.S.



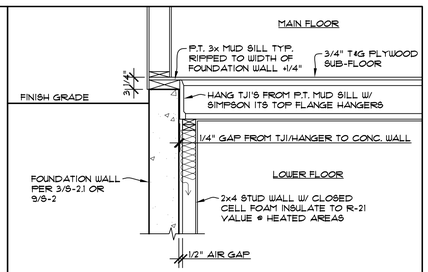
2 STEPPED FLOOR DETAIL
N.T.S.



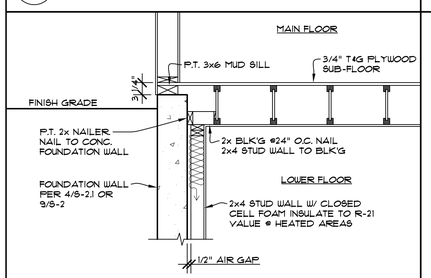
3 STEPPED FLOOR DETAIL
N.T.S.



4 STEPPED FLOOR DETAIL
N.T.S.



5 DROPPED JOIST DETAIL
N.T.S.



6 DROPPED JOIST DETAIL
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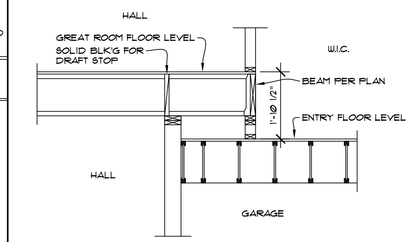
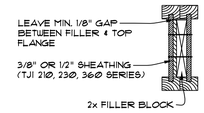
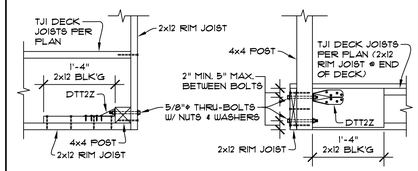


7 STEPPED FLOOR DETAIL
N.T.S.



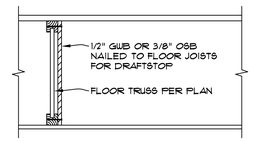
NOTE:
PROVIDE TJI WEB STIFFENER AT ALL DOUBLE TJI'S

8 TJI WEB STIFFENER DETAIL
N.T.S.

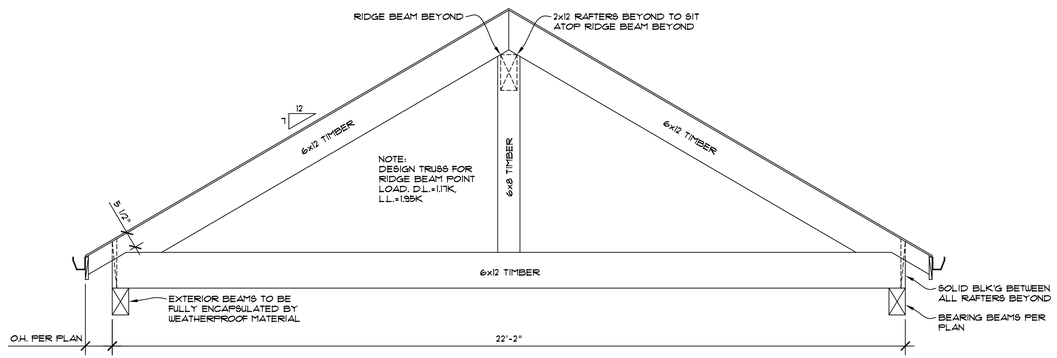


NOTE:
TYP. @ ALL GUARDRAIL POSTS

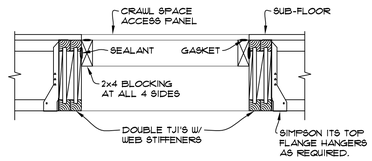
9 GUARDRAIL CONNECTION DETAIL
N.T.S.



10 DRAFTSTOP DETAIL
N.T.S.



11 CUSTOM TIMBER GABLE END TRUSS @ OUTDOOR LIVING
N.T.S.



12 CRAWL SPACE ACCESS DETAIL
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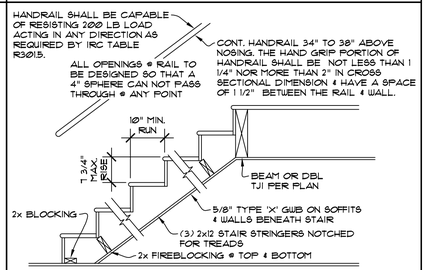
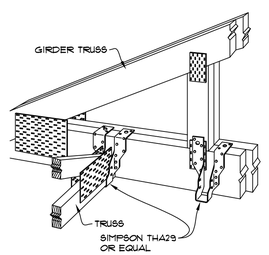


13 STAIR SECTION DETAIL
N.T.S.



14 GIRDER TRUSS DETAIL
N.T.S.

NOT USED

15
N.T.S.

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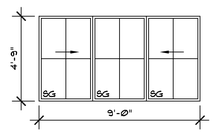
A12

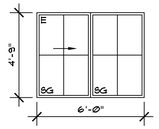
WINDOW SCHEDULE

LOWER FLOOR WINDOWS

U1 — MEDIA — HDR. HT. 7'-10"

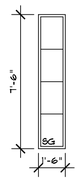


U2 — MEDIA — HDR. HT. 7'-10"

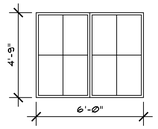


MAIN FLOOR WINDOWS

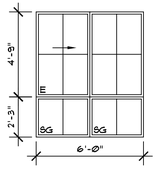
M1 M2 — ENTRY — HDR. HT. 8'-0"



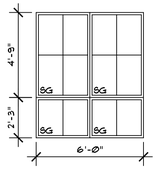
M3 — ENTRY — HDR. HT. 8'-0"



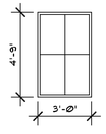
M4 — OFFICE — HDR. HT. 8'-0"



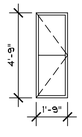
M5 — P. BATH — HDR. HT. 8'-0"



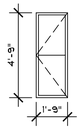
M6 M9 — P. BATH — HDR. HT. 8'-0"



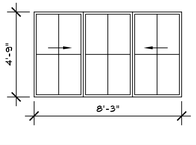
M7 — P. BATH — HDR. HT. 8'-0"



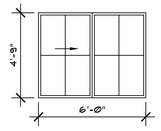
M8 — P. BATH — HDR. HT. 8'-0"



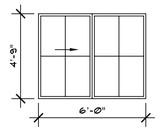
M10 — P. SUITE — HDR. HT. 8'-0"



M11 — DINING — HDR. HT. 8'-0"

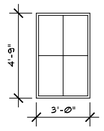


M12 — KITCHEN — HDR. HT. 8'-0"

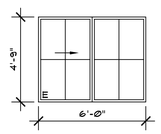


M13 — BATH — HDR. HT. 8'-0"

M14 — BEDROOM 2 — HDR. HT. 8'-0"



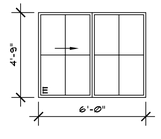
M15 — BEDROOM 2 — HDR. HT. 8'-0"



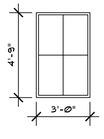
M16 — BATH — HDR. HT. 8'-0"

M17 — BATH — HDR. HT. 8'-0"

M18 — BEDROOM 3 — HDR. HT. 8'-0"

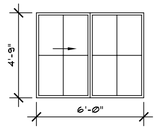


M19 — BEDROOM 3 — HDR. HT. 8'-0"

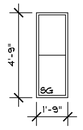


UPPER FLOOR WINDOWS

U1 — LOFT — HDR. HT. 7'-0"



U2 U3 — LOFT — HDR. HT. 7'-0"



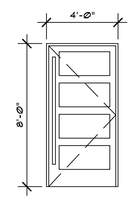
SG = SAFETY GLASS
E = EGRESS WINDOW

U-FACTOR FOR ALL WINDOWS = Ø.28
U-FACTOR FOR DOORS = Ø.20

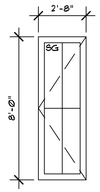
DOOR SCHEDULE

EXTERIOR DOORS

D1 — ENTRY



D2 — P. SUITE



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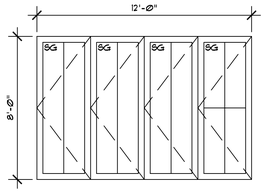

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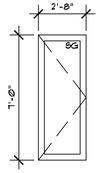

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JOB NO: 21-Ø31
DATE: 5/Ø4/22
DRWN. BY: MM
REVISED:

SHEET NO.
A13

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 = 1.409G; S1 = 0.490G; SITE CLASS = D; SDS = 1.127G; SD1 = 0.490G; 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 = 0.121; 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

DESIGN-BY-OTHERS (DEFERRED SUBMITTALS) LOADS: ALL PRE-ENGINEERED/FABRICATED/MANUFACTURED OR OTHER PRODUCTS DESIGNED BY OTHERS SHALL BE DESIGNED FOR THE TRIBUTARY DEAD AND LIVE LOADS PLUS WIND, EARTHQUAKE, AND COMPONENT AND CLADDING LOADS WHEN APPLICABLE. DESIGN SHALL CONFORM TO THE PROJECT DRAWINGS AND SPECIFICATIONS, REFERENCE STANDARDS, AND GOVERNING CODE.

ROOF DEAD LOAD	15 PSF
TOP CHORD DEAD LOAD	8 PSF
BOTTOM CHORD DEAD LOAD	7 PSF
TRUSS UPLIFT LOAD (GROSS)	10 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 EVALUATION" BY COBALT GEOSCIENCES, LLC., DATED MARCH 12, 2022 WERE USED FOR FOOTING DESIGN.

DESIGN SOIL VALUES:

ALLOWABLE BEARING PRESSURE	3000 PSF
PASSIVE LATERAL PRESSURE	275 PSF/FT
ACTIVE LATERAL PRESSURE (UNRESTRAINED)	35 PSF/FT
AT-REST LATERAL PRESSURE (RESTRAINED)	50 PSF/FT
COEFFICIENT OF SLIDING FRICTION	0.40

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 4.2.2.8.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).

	MINIMUM APA RATING			
LOCATION	THICKNESS	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.

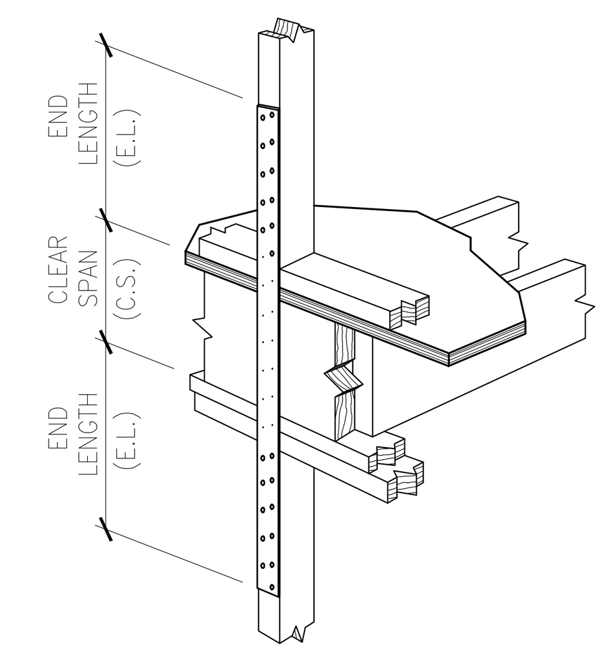
NAILING REQUIREMENTS: PROVIDE MINIMUM NAILING IN ACCORDANCE WITH IBC TABLE 2304.9.1 "FASTENING SCHEDULE" EXCEPT AS NOTED ON THE DRAWINGS. NAILING FOR ROOF/FLOOR DIAPHRAGMS/SHEAR WALLS SHALL BE PER DRAWINGS. NAILS SHALL BE DRIVEN FLUSH AND SHALL NOT FRACTURE THE SURFACE OF SHEATHING.

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.

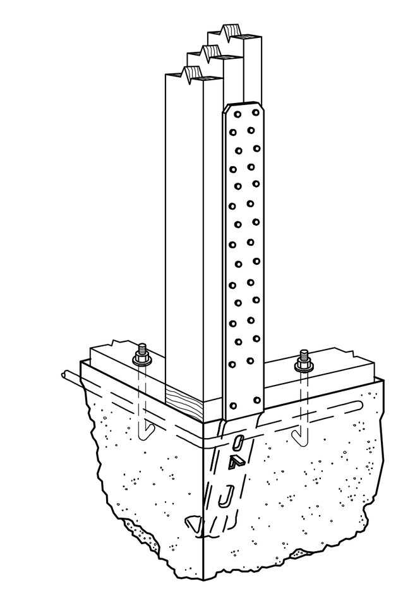
MOISTURE CONTENT: WOOD MATERIAL USED FOR THIS PROJECT SHALL HAVE MAXIMUM MOISTURE CONTENT OF 19% EXCEPT FOR THE PRESSURE-TREATED WOOD SILL PLATE.

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 C

MODEL # (1)	ANCHORAGE TYPE (4,5,6)	FASTENERS	END STUD REQUIRED (2,3)	CAPACITY (LBS) DOUG-FIR	CAPACITY (LBS) HEM-FIR
CS14	FLR-TO-FLR STRAP (E.L.=19")	(30) 10d COMMON	2x STUD	2,490	2,490
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
STHD14/RJ	CAST-IN-PLACE	(22) 16d SINKERS	(2) 2x STUDS[7]	3,695	3,695

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 1½" 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.

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 PL AT FRAMING	SILL PLATE REQUIREMENTS: ANCHOR BOLT TO CONCRETE FOUNDATION [10]	SILL PL AT FOUNDATION [11]	SHEAR LOAD CAPACITY (PLF)
SW-6	15/32" CD-EXT	0.131"ø x 2½" @ 6"OC	CLIP @ 18"OC	0.148"ø x 3¼" @ 6"OC	2x	⅝"ø @ 48"OC	P.T. 2x	242
SW-4	15/32" CD-EXT	0.131"ø x 2½" @ 4"OC	CLIP @ 14"OC	0.148"ø x 3¼" @ 4"OC	3x [15]	⅝"ø @ 32"OC	P.T. 2x	353
						⅝"ø @ 48"OC	P.T. 3x [15]	

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 2½" NAILS AT 12"OC WHERE STUDS ARE SPACED AT 16"OC AND 0.148"Ø x 2½" NAILS AT 6"OC WHERE STUDS ARE SPACED AT 24"OC.
8. BASED ON 0.131"Ø x 1½" NAILS USED TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING. USE 0.131"Ø x 2½" NAILS WHERE INSTALLED OVER SHEATHING.
9. FRAMING CLIPS: SIMPSON "A35" OR "LTP5" OR APPROVED EQUIVALENT.
10. ANCHOR BOLTS SHALL BE PROVIDED WITH HOT-DIPPED GALVANIZED STEEL PLATE WASHERS 3"x3"x0.229"(MIN). THE HOLE IN THE PLATE WASHER MAY BE DIAGONALLY SLOTTED 13/16"x1¾" PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND NUT. PLATE WASHER TO EXTEND TO WITHIN ½" OF THE EDGE OF THE SILL PLATE ON THE SIDE(S) WITH SHEATHING. WHERE SHEAR WALLS ARE SHEATHED ON BOTH SIDES OF 2x6 WALL FRAMING, USE 4.5"x4.5"x0.229"(MIN) PLATE WASHERS. EMBED ANCHOR BOLTS 7" MINIMUM INTO THE CONCRETE.
11. PRESSURE TREATED MATERIAL CAN CAUSE EXCESSIVE CORROSION IN THE FASTENERS. PROVIDE HOT-DIPPED GALVANIZED (ELECTRO-PLATING IS NOT ACCEPTABLE) NAILS AND CONNECTOR PLATES (FRAMING ANGLES, ETC.) FOR ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED FRAMING MEMBERS. ADDITIONAL INFORMATION PER STRUCTURAL NOTES.
12. WHERE WOOD SHEATHING IS APPLIED OVER GYPSUM SHEATHING, CONTACT THE ENGINEER OF RECORD FOR ALTERNATE NAILING REQUIREMENTS.
13. AT ADJOINING PANEL EDGES, (2) 2x STUDS NAILED TOGETHER MAY BE USED IN PLACE OF SINGLE 3x STUD. DOUBLE 2X STUDS SHALL BE CONNECTED TOGETHER BY NAILING THE STUDS TOGETHER WITH 3" LONG NAILS OF THE SAME SPACING AND DIAMETER AS THE PLATE NAILING.
14. CONTACT THE STRUCTURAL ENGINEER OF RECORD FOR ADHESIVE OR EXPANSION BOLT ALTERNATIVES TO CAST-IN-PLACE ANCHOR BOLTS. SPECIAL INSPECTION MAY BE REQUIRED.
15. NAIL STUDS TO 3x BOTTOM/SILL PLATES WITH EITHER (2) 0.148"Øx4" END NAILS OR (4) 0.131"Øx2½" TOENAILS.

WOOD-FRAMED SHEAR WALL SCHEDULE

SCALE: N.T.S.

12

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4/27/2022

HELIX HOMES
6922 SE 33RD ST.
MERCER ISLAND, WA 98040

REVISION #	DATE	DESCRIPTION:

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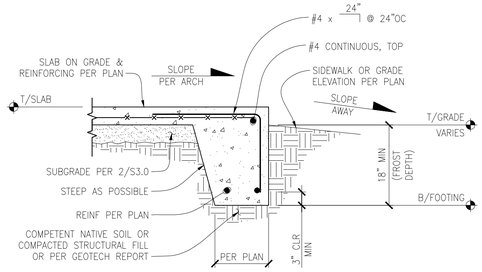
CK JOB NO.
22-021

STRUCTURAL NOTES/SCHED.

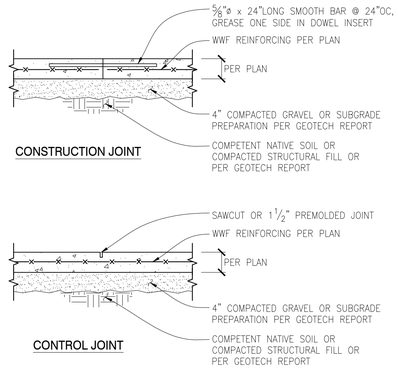
S-1.0



TYPICAL THICKENED SLAB EDGE FOOTING

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

1



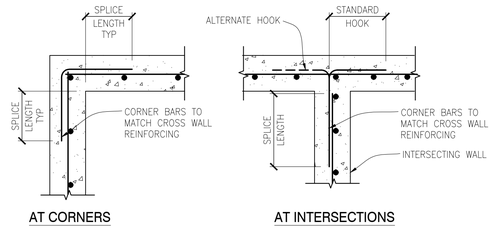
NOTES:

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

SCALE: N.T.S.

2



NOTES:

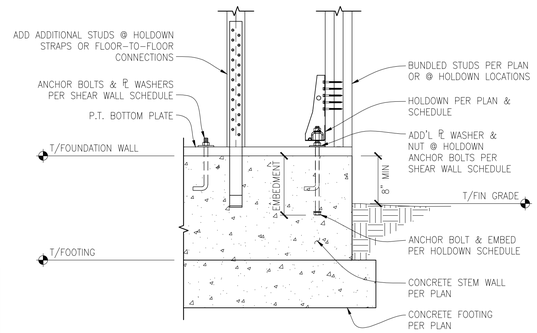
1. WALL SIZE & REINFORCING PER PLAN.
2. CORNER BARS SIZE & SPACING TO MATCH HORIZONTAL REINFORCING.

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

TYPICAL CORNER BARS AT CONCRETE WALLS - SINGLE MAT

SCALE: N.T.S.

3

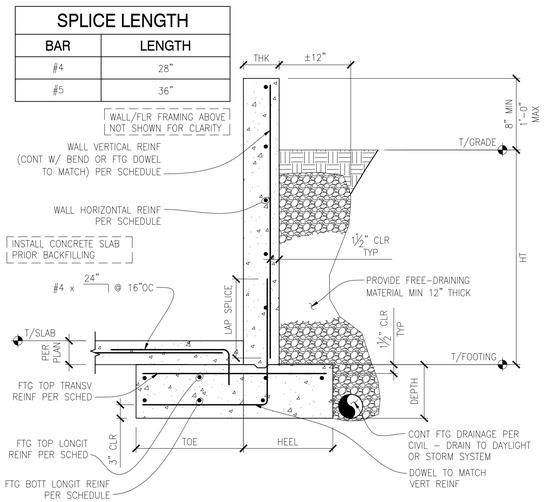


TYPICAL SHEAR WALL HOLDOWN CONNECTIONS AT FOUNDATION CONCRETE WALL

SCALE: N.T.S.

4

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

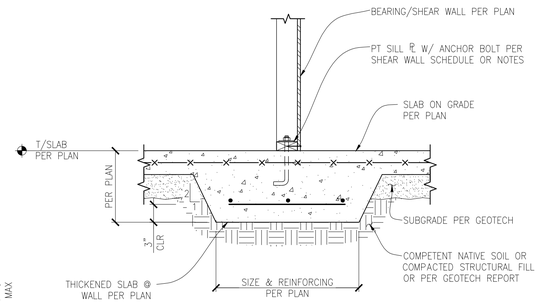


RETAINING WALL/FOOTING SCHEDULE									
WALL				FOOTING					
SIZE		REINFORCEMENT		SIZE			REINFORCEMENT		
HT (MAX)	THK	VERTICAL	HORIZONTAL	TOE	HEEL	DEPTH	TOP/TRANSV	TOP/LONGIT	BOTTOM/LONGIT
4'-0"	8"	#4 @ 12"OC	#4 @ 12"OC	1'-0"	1'-6"	10"	#4 @ 10"OC	(3) #4	(2) #4
6'-0"	8"	#4 @ 8"OC	#4 @ 12"OC	2'-6"	1'-6"	10"	#4 @ 10"OC	(4) #4	(3) #4
8'-0"	8"	#5 @ 10"OC	#4 @ 12"OC	4'-0"	1'-6"	14"	#5 @ 10"OC	(5) #5	(3) #5
10'-0"	10"	#6 @ 9"OC	#4 @ 10"OC	5'-0"	2'-0"	16"	#6 @ 10"OC	(7) #5	(6) #5

RETAINING WALL SCHEDULE

SCALE: N.T.S.

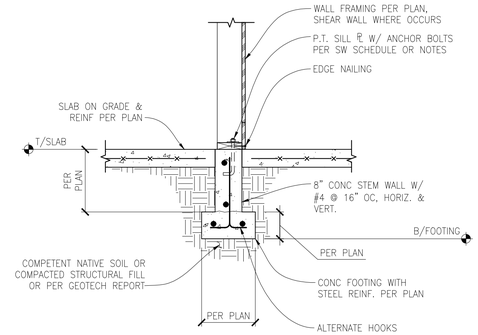
9



TYPICAL INTERIOR THICKENED SLAB FOOTING AT BEARING / SHEAR WALL

SCALE: 1" = 1'-0"

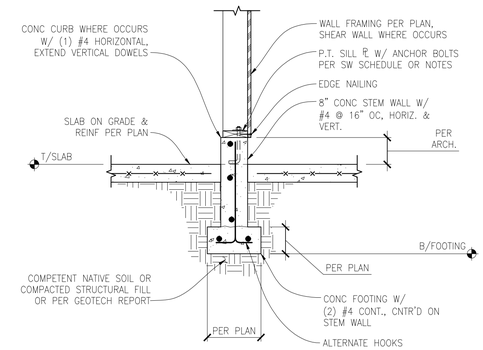
6



TYPICAL INTERIOR FOUNDATION FOOTING AND STEM WALL WITH SLAB ON GRADE

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

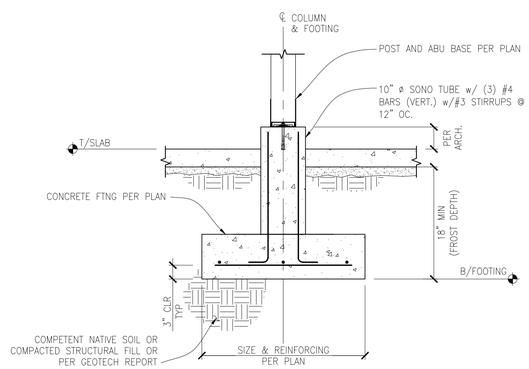
7



TYPICAL INTERIOR FOUNDATION FOOTING AND STEM WALL WITH SLAB ON GRADE

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

8



NEW FOOTING/POST CONNECTION

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

10

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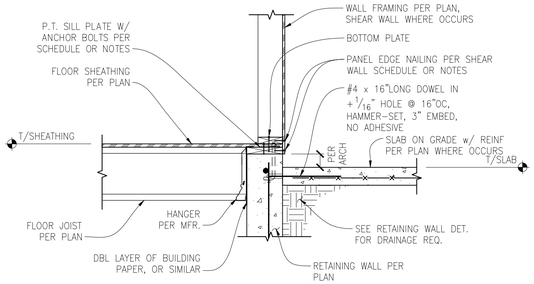
STRUCTURAL DETAILS

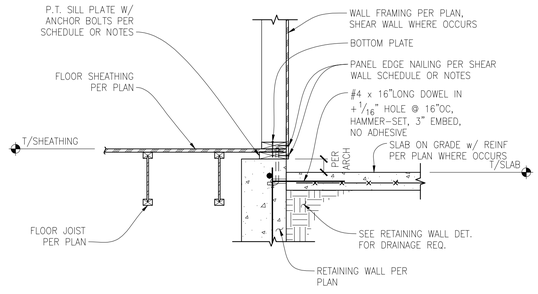
S-2.0



EXTERIOR SHEAR WALL WITH JOISTS PERPENDICULAR TO RETAINING WALL

1

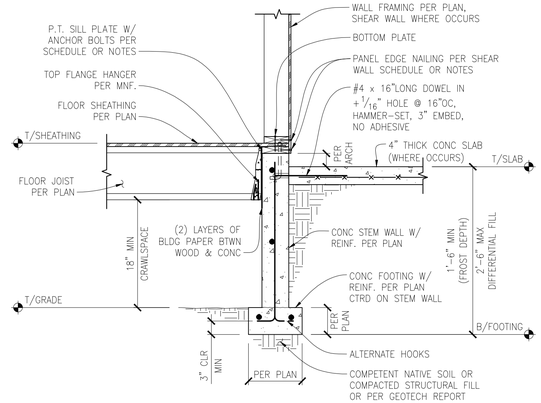
SCALE: 3/4" = 1'-0"



EXTERIOR SHEAR WALL WITH JOISTS PERARALLEL TO RETAINING WALL

2

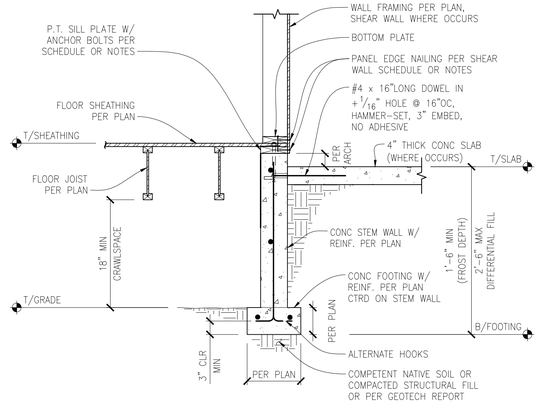
SCALE: 3/4" = 1'-0"



CRAWL SPACE EXTERIOR SHEAR WALL WITH JOISTS PERPENDICULAR TO RAISED STEM WALL

3

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



SHEAR WALL WITH JOISTS PARALLEL TO RAISED STEM WALL

4

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

MAIN FLOOR SHEAR WALL TO FOUNDATION CONN. (JOISTS PERPENDICULAR)

5

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

POST AND BEAM AT CRAWLSPACE

6

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

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

7

SCALE: 1" = 1'-0"

TYPICAL SHEAR WALL ELEVATION

8

SCALE: N.T.S.

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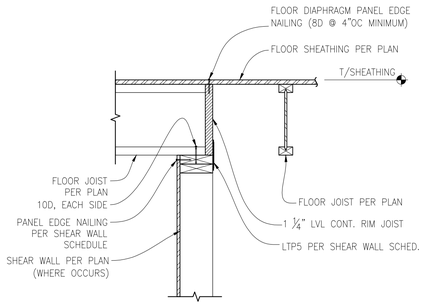
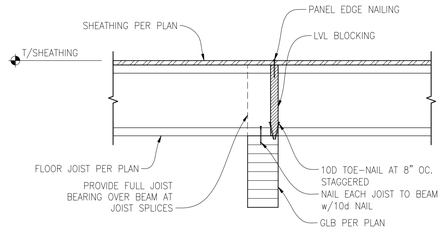
S-2.1



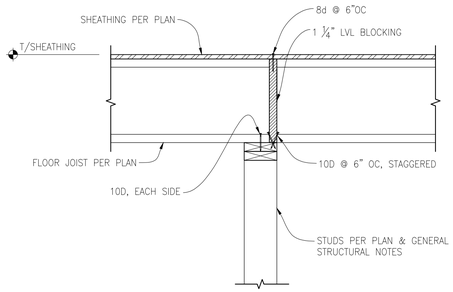
FLOOR JOIST TO SHEAR WALL CONNECTION — 1

SCALE: 1" = 1'-0"



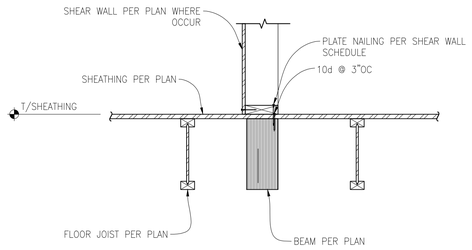
FLOOR JOIST/DROPPED BEAM CONNECTION — 2

SCALE: 1" = 1'-0"



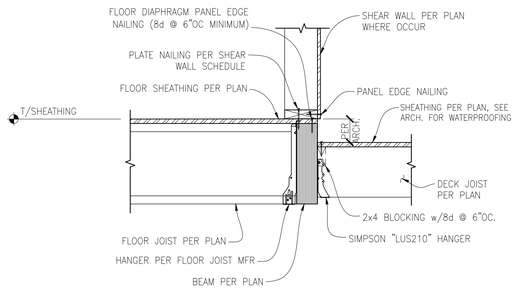
FLOOR JOIST PERP. AT INTERIOR BEARING WALL — 3

SCALE: 1" = 1'-0"



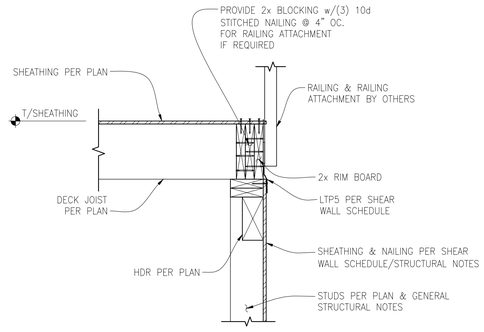
FLOOR BEAM AT BEARING/SHEAR WALL CON. — 4

SCALE: 1" = 1'-0"



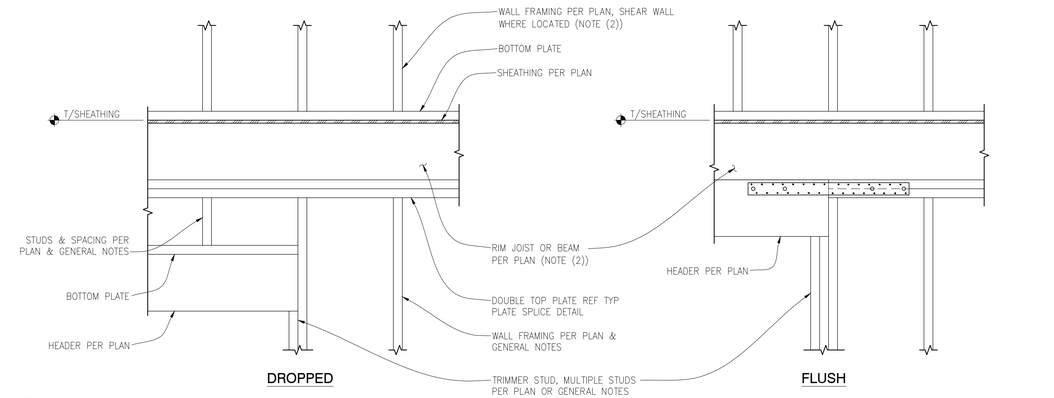
FLOOR JOIST/FLUSH BEAM/DECK JOIST CON. — 5

SCALE: 1" = 1'-0"



EXTERIOR WALL PERPENDICULAR TO DECK JOISTS — 6

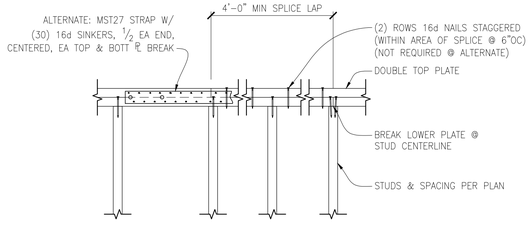
SCALE: 1" = 1'-0"



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 — 8

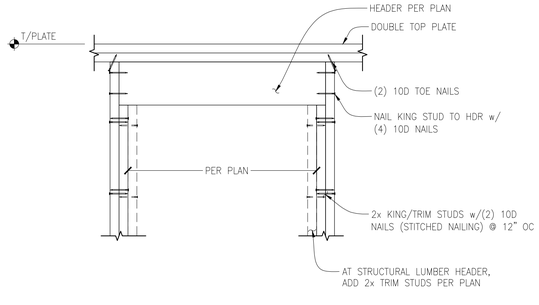
SCALE: 1" = 1'-0"



NOTE:
FLOOR JOISTS NOT SHOWN FOR CLARITY.

TYPICAL PLATE SPLICE DETAIL — 9

SCALE: N.T.S.



NOTE:
FLOOR/ROOF FRAMING NOT SHOWN FOR CLARITY.

TYPICAL HEADER CONNECTION — 10

SCALE: N.T.S.

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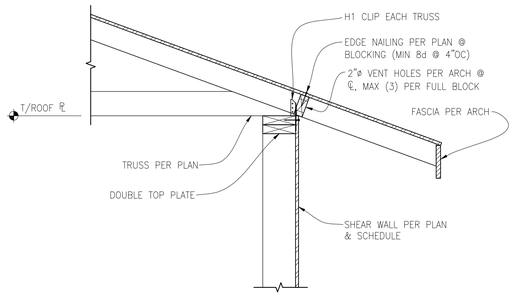
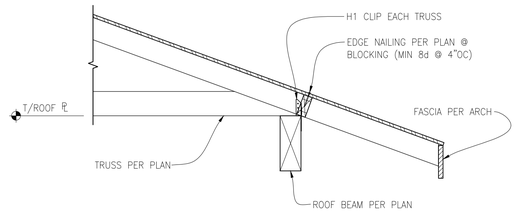


EXTERIOR SHEAR WALL PERPENDICULAR TO ROOF TRUSS

1

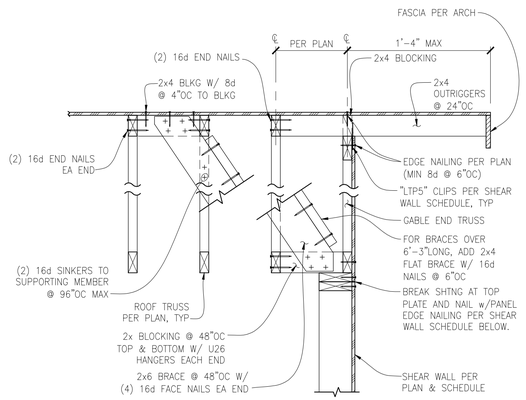
SCALE: 1" = 1'-0"



EXTERIOR ROOF TRUSS BEAM CONNECTION

2

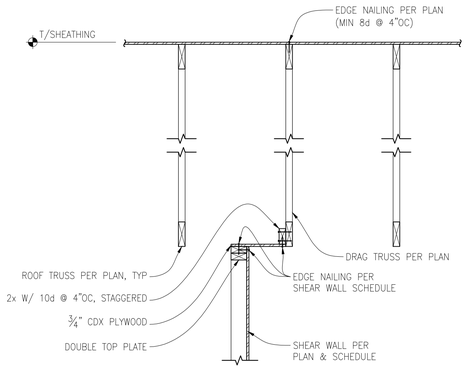
SCALE: 1" = 1'-0"



EXTERIOR SHEAR WALL PARALLEL TO ROOF TRUSS

3

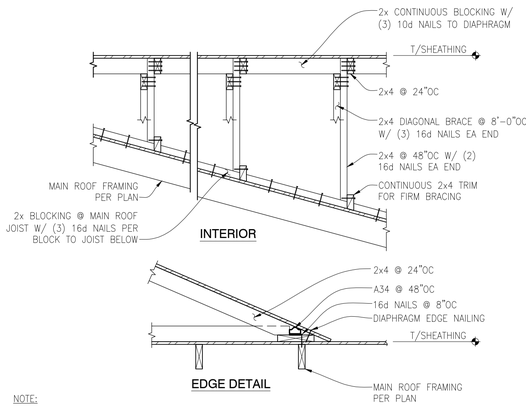
SCALE: N.T.S.



INTERIOR SHEAR WALL PARALLEL TO ROOF TRUSS CONNECTION

4

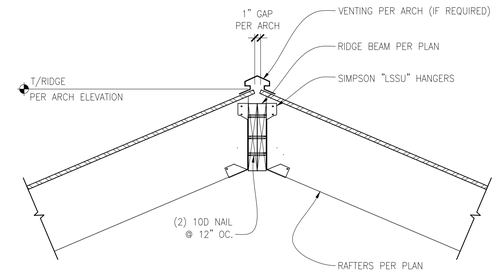
SCALE: ¾" = 1'-0"



TYPICAL ROOF OVERFRAMING DETAIL

5

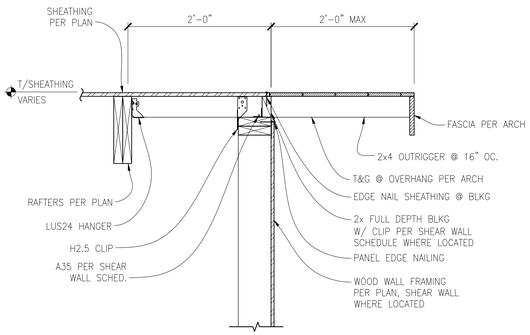
SCALE: N.T.S.



TYPICAL SECTION AT RIDGE BEAM

6

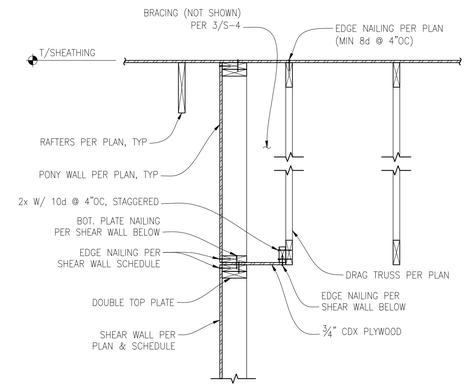
SCALE: 1" = 1'-0"



TYPICAL OUTRIGGER AT GABLE END

7

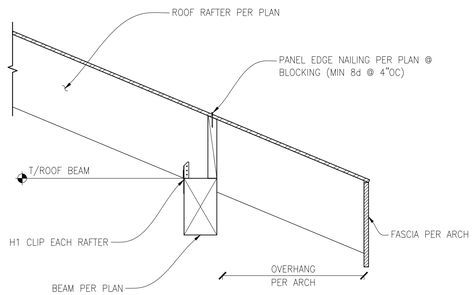
SCALE: 1" = 1'-0"



INTERIOR SHEAR WALL PARALLEL TO ROOF TRUSS CONNECTION

8

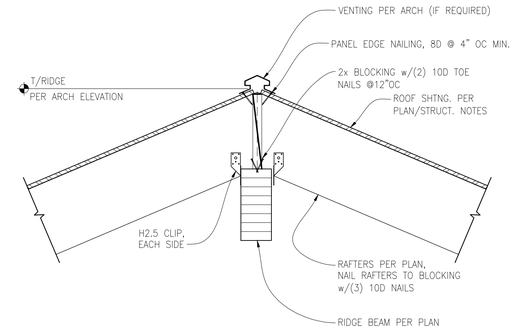
SCALE: ¾" = 1'-0"



EXTERIOR ROOF RAFTERS TO ROOF BEAM CONNECTION

9

SCALE: 1" = 1'-0"



RIDGE BEAM TO RAFTERS CON.

10

SCALE: 1" = 1'-0"

CK ENGINEERING LLC
PROFESSIONAL STRUCTURAL ENGINEERING SERVICES
19229 38th Pl. NE
Lake Forest Park, WA 98155
Phone: (206) 417-0670

STEVEN COOKE
STATE OF WASHINGTON
49213
REGISTERED PROFESSIONAL ENGINEER
4/27/2022

HELIX HOMES
6922 SE 33RD ST.
MERCER ISLAND, WA 98040

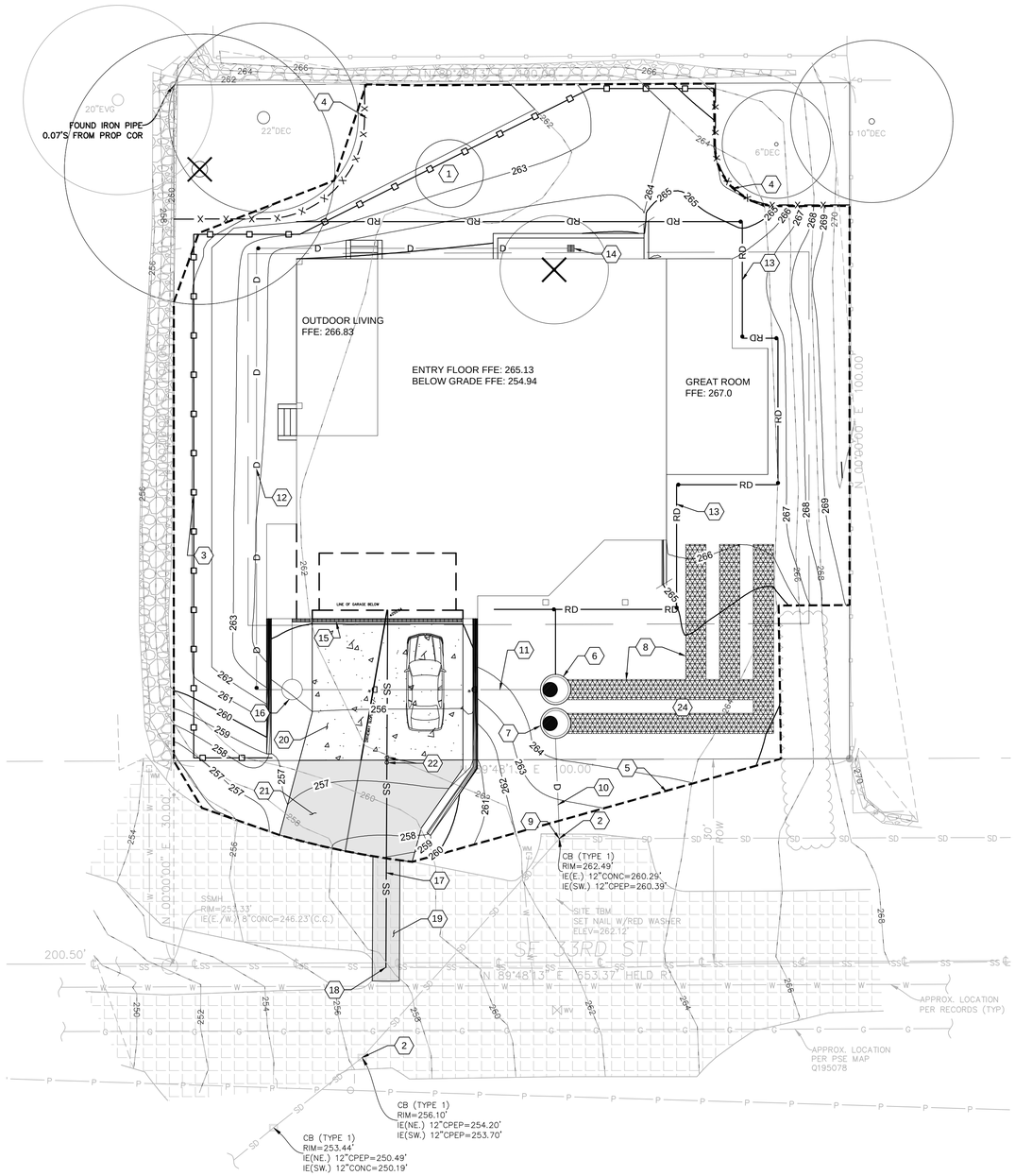
REVISION #	DATE	DESCRIPTION:

Drawn By: PK
Checked By: SC
Date: 04-27-2022

CK JOB NO.
22-021

STRUCTURAL DETAILS

S-4.0



10 5 0 10

SCALE: 1"=10'

SHEET NOTES

1. TEMPORARY STOCK PILE (10/C-003)
2. PROVIDE INLET PROTECTION (6/C-002)
3. SILT FENCE
4. TEMPORARY TREE PROTECTION FENCE
5. LIMITS OF DISTURBANCE. ANY NON-HARD SURFACE IN THIS AREA WILL RECEIVE SOIL AMENDMENTS
6. 54" TYPE 2 CATCH BASIN (SEE DETENTION SIZING SHEET) (8/C-003)
   RIM:264.63
7. 54" TYPE 2 CATCH BASIN WITH CONTROL STRUCTURE (SEE DETENTION SIZING SHEET) (8/C-003)
   RIM: 264.53
8. TOTAL OF 120' OF 36" DETENTION PIPE
   TOP OF PIPE: 263.42, ENSURE 1' MIN COVER
   (SEE ATTACHED DETENTION SIZING SHEET)
9. TIE INTO EXISTING CATCH BASIN, IE IN: 260.29
10. 8" PVC PIPE @ 1% MIN
11. 2" PVC (SCHEDULE 40 OR STRONGER) FORCE STORM LINE. ENSURE 1 FOOT MIN COVER, 2 FEET AT DRIVEWAY.
12. 6" PVC STORM LINE @ 1% MIN
13. 6" PVC TIGHTLINED ROOF AND FOOTING DRAIN @ 1% MIN
14. AREA DRAIN
    RIM: 259.68
    IE OUT: 258.18
15. TRENCH DRAIN
    RIM: 254.94
    IE OUT: 253.44
16. DUPLEX PUMP SYSTEM, COMPOSED OF TWO ZOELLER 50 SERIES PUMPS, ZOELLER DUPLEX ELECTRICAL ALTERNATOR CONTROL PANEL/ALARM, APAK Z CONTROL ALARM, AND A ZOELLER BASIN (7/C-002)
    RIM: 256.65 +/-
    IE IN: 253.24
    IE OUT: 254.50
17. 6" PVC SDR-35 SEWER LINE @ 2% MIN
18. SADDLE CONNECTION TO EXISTING SEWER MAIN
    IE IN: 205.09 +/-
19. SAWCUT AND RESTORE (9/C-003)
20. CONCRETE DRIVEWAY (5/C-002)
21. ASPHALT DRIVEWAY
22. SEWER CONNECTION (1/C-002) (2/C-002)
23. STORM CLEANOUT (11/C-003)
24. ELEVATION OVER DETENTION FACILITY MUST BE 264.5 OR GREATER TO MEET COVER REQUIRMENTS

GENERAL NOTES

-PROVIDE STRAW OR PLASTIC COVER TO ANY EXPOSED SOILS THROUGHOUT THE CONSTRUCTION CYCLE

-AVOID SENDING ROOF AND FOOTING DRAINS TO PUMPS UNLESS ABSOLUTELY NECESSARY

-ENSURE 1 FOOT MINIMUM COVER ON ALL ROOF DRAINS AND FORCE STORM LINES, 2 FEET OF COVER ON ALL OTHER PIPES

-SOIL ON ENTIRE SITE CONSISTS OF ARENTS, ALDERWOOD MATERIAL (HSG B/D)

-INFORMATION IS TAKEN FROM TOPO & BOUNDARY SURVEY DATED 02/09/2022 BY TERRANE

-PERVIOUS AREAS WITHIN LIMITS OF DISTURBANCE WILL RECEIVE SOIL AMENDMENT (1/C-002)

Know what's Call below. before you dig.

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414 STEWART STREET SUITE 200, SEATTLE, WA 98101

SEAL

JUSTIN JAN CONN
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43432
REGISTERED
PROFESSIONAL ENGINEER

05/04/2022

PROJECT
HELIX DESIGN BUILD
HELIX MI
6922 33RD ST
MERCER ISLAND, WA 98040

REVISIONS

DATE
05.03.2022

BCRA NO.
22022

DRAWN BY: BS DESIGNED BY: BS

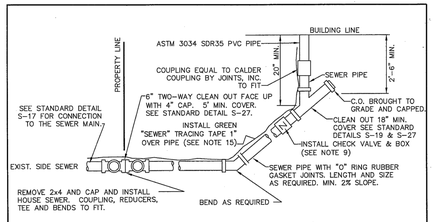
REVIEWED BY: JG

SHEET TITLE
DRAINAGE AND EROSION CONTROL PLAN

SHEET
C-001
STORM DESIGN

DATE PLOTTED: 5/4/2022 4:15:49 PM FILENAME: 22022C-SITE.DWG BY:

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY



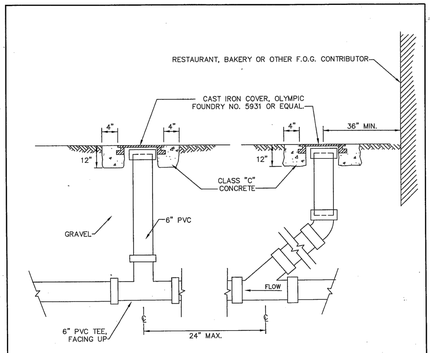
BUILDING CONNECTION

NOTES

1. ELBOWS SHALL NOT BE GREATER THAN 45 DEGREES.
2. CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED ELBOW/100'.
3. ALL HOUSE PLUMBING OUTLETS MUST BE CONNECTED TO THE SEWER. NO DOWN SPOUTS OR STORM DRAINAGE MAY BE CONNECTED TO THE SEWER SYSTEM.
4. 18" MINIMUM COVERAGE OVER PIPE.
5. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH ⅛ BEND OR WYE. 90° CHANGE WITH 1/8 BEND AND WYE.
6. 4" SEWER PIPE MINIMUM SIZE ON PROPERTY. 2% MINIMUM GRADE.
7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT SEWER ORDINANCES.
8. ALL CONSTRUCTION REQUIRES A PLAN SHOWING PROPERTY AND DIMENSIONS AND COMPLETION OF SIDE SEWER APPLICATION AND MAINTENANCE AGREEMENT, AS NEEDED.
9. BACK WATER VALVE (CHECK VALVE) IS REQUIRED:
   A. IF CONNECTED TO A SHARED SIDE SEWER.
   B. IF CONNECTION AT HOUSE IS LOWER THAN BOTH UPSTREAM AND DOWNSTREAM MANHOLE.
   C. SEE S-23 & S-24 FOR LAKE LINE REQUIREMENTS.
10. AS-BUILT DRAWING SHOWING LOCATION OF SIDE SEWER & ALL BENDS, C.O. ETC., IN RELATION TO THE HOUSE IS REQUIRED AFTER INSPECTION & INSTALLATION. SEE STANDARD DETAIL S-38 FOR A TYPICAL "AS BUILT".
11. THE MINIMUM PIPE SIZE FOR SIDE SEWERS SHALL BE:
    6" – WITHIN THE PUBLIC RIGHT-OF-WAY.
    4" – SINGLE FAMILY RESIDENCES.
    6" – 2 TO 6 SINGLE FAMILY RESIDENCES.
    6" – BUILDINGS OTHER THAN SINGLE FAMILY RESIDENCES.
12. UTILITY PIPE TRACER TAPE SHALL BE DETECTABLE BELOW GROUND SURFACE, COLOR CODED, WITH UTILITY NAME PRINTED ON TAPE. CONDUCTIVE WARNING TAPE REQUIRED OVER ALL WATER PIPE. TAPE SHALL BE MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED PLASTIC TAPE, ALUMINUM BACKED, INTENDED FOR DIRECT-BURIAL SERVICE. TAPE SHALL BE NOT LESS THAN 6" WIDE X 4 MILS THICK.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
HOUSE SEWER CONNECTION
6-5-2009 | NO SCALE | **S-18**
REV DATE | APPROVED

HOUSE SEWER CONNECTION
SCALE: NTS (1)

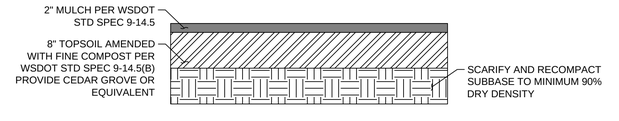


NOTES

1. INSTALL SAMPLING TEE ON EXISTING OR NEW SIDE SEWER.

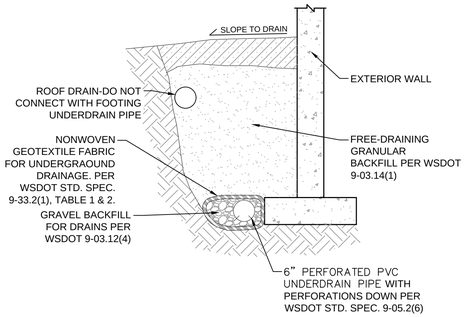
CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
SAMPLING TEE
6-5-2009 | NO SCALE | **S-27**
REV DATE | APPROVED

SAMPLING TEE
SCALE: NTS (2)



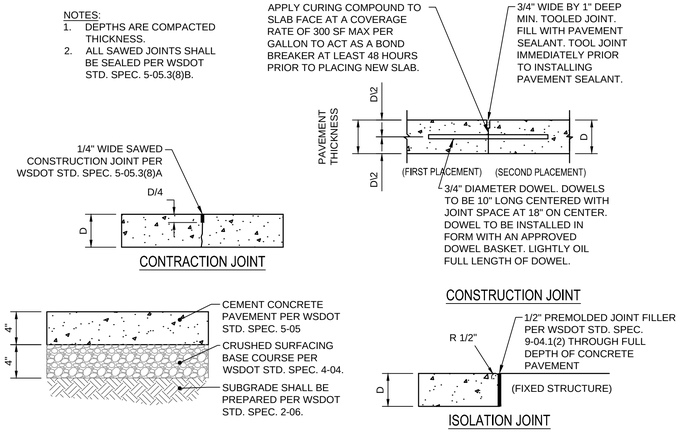
NOTE: CONTRACTOR SHALL AMEND STOCKPILED TOP SOILS WITH COMPOST PER DETAIL AND PLACE IN ALL DISTURBED LANDSCAPE AREAS.

POST CONSTRUCTION SOIL QUALITY & DEPTH SECTION
SCALE: NTS (3)



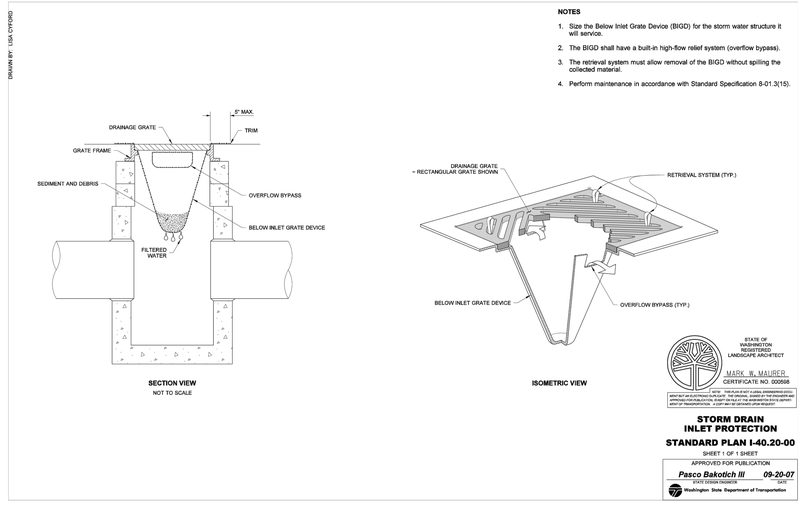
FOOTING AND ROOF DRAIN SECTION
SCALE: NTS (4)

NOTES:
1. DEPTHS ARE COMPACTED THICKNESS.
2. ALL SAWED JOINTS SHALL BE SEALED PER WSDOT STD. SPEC. 5-05.3(8)B.



NOTE: CEMENT CONCRETE JOINTING TO BE DETERMINED BY CONTRACTOR.

CEMENT CONCRETE PAVEMENT
SCALE: NTS (5)



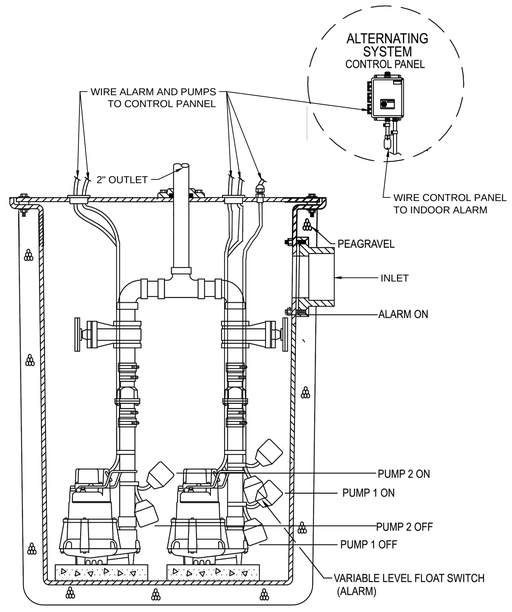
NOTES

1. Size the Below Inlet Grate Device (BIGD) for the storm water structure it will service.
2. The BIGD shall have a built-in high-flow relief system (overflow bypass).
3. The retrieval system must allow removal of the BIGD without spilling the collected material.
4. Perform maintenance in accordance with Standard Specification 8-01.3(15).

STATE OF WASHINGTON
REGISTERED LANDSCAPE ARCHITECT
MARK W. MAURER
CERTIFICATE NO. 000566
WSDOT STD. SPEC. 9-33.2(1), TABLE 1 & 2.

STORM DRAIN INLET PROTECTION
STANDARD PLAN I-40.20-00
SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
Pasco Bakotich III 09-20-07
STATE DESIGN ENGINEER DATE
Washington State Department of Transportation

STORM DRAIN INLET PROTECTION
SCALE: NTS (6)



DUPLEX PUMP SYSTEM
SCALE: NTS (7)

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SEAL

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43432
REGISTERED PROFESSIONAL ENGINEER
05/04/2022

PROJECT
HELIX DESIGN BUILD
HELIX MI
6922 33RD ST
MERCER ISLAND, WA 98040

REVISIONS

DATE
03.21.2022

BCRA NO.
22022

DRAWN BY: BS | DESIGNED BY: BS
REVIEWED BY: JG

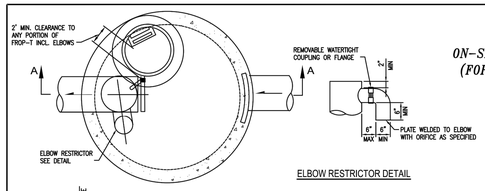
SHEET TITLE
DETAILS

SHEET
C-002
STORM DESIGN

DATE PLOTTED: 5/4/2022 4:15:49 PM FILENAME: 22022C-SITE.DWG BY:—

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

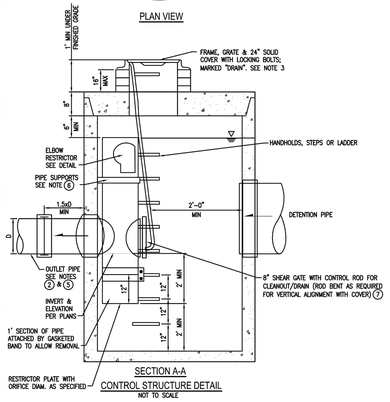
ATTACHMENT 1
CITY OF MERCER ISLAND
ON-SITE DETENTION SYSTEM WORKSHEET
(FOR NEW PLUS REPLACED IMPERVIOUS AREA OF 9,500 SF OR LESS)



PLAN VIEW

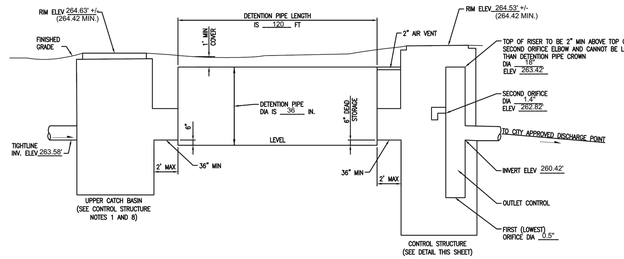
ELBOW RESTRICTOR DETAIL

OWNER: XXXXX	ADDRESS: 6922 33RD ST SE	PREPARED BY: JUSTIN GOROCH, P.E.	
PERMIT #: TBD	MERCER ISLAND, WA	PHONE: (253) 627 - 4367	
		DATE: 03/XX/2022	
NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): 3,871	DETENTION PIPE DIA (INCH): 36	DETENTION PIPE LENGTH (FT): 120	ORIFICE #1 DIA 0.5 INCH, ELEV 258.42'
SOIL TYPE: ARENTS, ALDERWOOD MATERIAL (HSG B/D)	PIPE MATERIAL: PER ON-SITE DETENTION SYSTEM NOTE #3		ORIFICE #2 DIA 1.4 INCH, ELEV 262.82'



SECTION A-A

CONTROL STRUCTURE DETAIL
NOT TO SCALE



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

CONTROL STRUCTURE NOTES

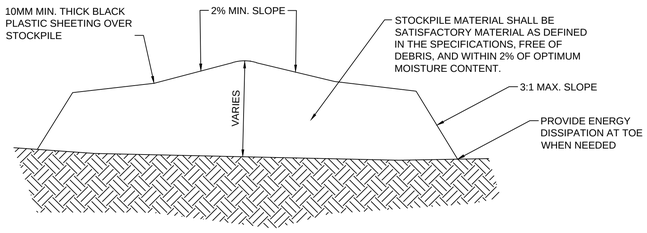
1. USE A MINIMUM OF A 54 IN. DIAM. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.
2. OUTLET PIPE: MIN. 6 INCH.
3. METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
4. FRAME AND LADDER OR STEPS OFFSET SO:
   A. CLEANOUT GATE IS VISIBLE FROM TOP;
   B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE;
   C. FRAME IS CLEAR OF CURB.
5. IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
6. PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3'-0" VERTICAL SPACING).
7. THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION 2133A, OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B. THE LIFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION), IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED. A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED. THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT. ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.
8. THE UPPER CATCH BASIN IS REQUIRED IF THE LENGTH OF THE DETENTION PIPE IS GREATER THAN 50 FT.

ON-SITE DETENTION SYSTEM NOTES:

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

ON-SITE DETENTION SYSTEM DETAIL

SCALE: NTS (8)



PLASTIC COVER INSTALLATION NOTES:

1. RUN PLASTIC UP AND DOWN SIDE SLOPES SLOPE, NOT ACROSS THE SIDE SLOPE.
2. PROVIDE MINIMUM OF 3-FOOT OVERLAP AT SEAMS. PLACE UPSLOPE SHEETS TO OVERLAP DOWNSLOPE SHEETS.
3. ON LONG OR WIDE SLOPES, OR SLOPES SUBJECT TO WIND, ALL SEAMS SHALL BE TAPED.
4. PLACE PLASTIC INTO A SMALL (12-INCH WIDE BY 6-INCH DEEP) SLOT TRENCH AT THE TOP OF THE SLOPE AND BACKFILL WITH SOIL TO KEEP WATER FROM FLOWING UNDERNEATH.
5. PLACE SAND FILLED BURLAP OR GEOTEXTILE BAGS EVERY 3 TO 6 FEET ALONG SEAMS/EDGES AND POUND A WOODEN STAKE THROUGH EACH TO HOLD THEM IN PLACE.
6. ROPE TOGETHER AND PLACE SAND FILLED BURLAP OR GEOTEXTILE BAGS EVERY 3 TO 6 FEET CENTERED BETWEEN ALL SEAMS.

MAINTENANCE REQUIREMENTS:

1. INSPECT PLASTIC FOR RIPS, TEARS, AND OPEN SEAMS REGULARLY AND REPAIR IMMEDIATELY. THIS PREVENTS HIGH VELOCITY RUNOFF FROM CONTACTING BARE SOIL WHICH CAUSES EXTREME EROSION.
2. TORN SHEETS MUST BE REPLACED AND OPEN SEAMS REPAIRED.
3. IF THE PLASTIC BEGINS TO DETERIORATE DUE TO ULTRAVIOLET RADIATION, IT MUST BE COMPLETELY REMOVED AND REPLACED.

TOPSOIL STOCKPILE NOTES:

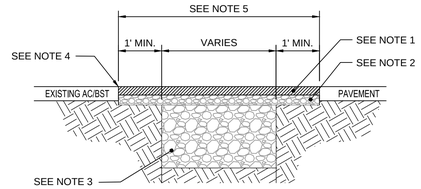
1. STOCKPILES SHALL BE STABILIZED (WITH PLASTIC SHEETING OR OTHER APPROVED DEVICE) DAILY BETWEEN NOVEMBER 1 AND MARCH 31.
2. IN ANY SEASON, SEDIMENT LEACHING FROM STOCK PILES MUST BE PREVENTED.
3. TOPSOIL SHALL NOT BE PLACED WHILE IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBGRADE IS EXCESSIVELY WET, OR WHEN CONDITIONS EXIST THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING OR PROPOSED SODDING OR SEEDING.
4. PREVIOUSLY ESTABLISHED GRADES ON THE AREAS TO BE TOPSOILED SHALL BE MAINTAINED ACCORDING TO THE APPROVED PLAN.

PLASTIC COVERING NOTES:

1. PLASTIC SHEETING SHALL HAVE A MINIMUM THICKNESS OF 6 MILS AND SHALL MEET THE REQUIREMENTS OF THE STATE STANDARD SPECIFICATION SECTION 9-14.5.
2. COVERING SHALL BE INSTALLED AND MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 10-FOOT GRID SPACING IN ALL DIRECTIONS. ALL SEAMS SHALL BE TAPED OR WEIGHTED DOWN FULL LENGTH AND THERE SHALL BE AT LEAST A 12-INCH OVERLAP OF ALL SEAMS.
3. CLEAR PLASTIC COVERING SHALL BE INSTALLED IMMEDIATELY ON AREAS SEEDED BETWEEN NOVEMBER 1 AND MARCH 31 AND REMAIN UNTIL VEGETATION IS FIRMLY ESTABLISHED.
4. WHEN THE COVERING IS USED ON UN-SEEDED SLOPES, IT SHALL BE KEPT IN PLACE UNTIL THE NEXT SEEDING PERIOD.
5. PLASTIC COVERING SHEETS SHALL BE BURIED TWO FEET AT THE TOP OF SLOPES IN ORDER TO PREVENT SURFACE WATER FLOW BENEATH SHEETS.
6. PROPER MAINTENANCE INCLUDES REGULAR CHECKS FOR RIPS AND DISLODGED ENDS.

TEMPORARY STOCK PILE

SCALE: NTS (10)

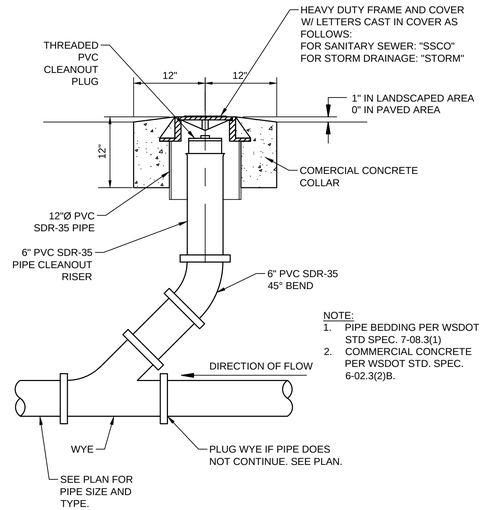


NOTES:

1. ASPHALT CONCRETE PAVEMENT CONFORMING TO PG 58-22 PER WSDOT 5-04. AGGREGATE GRADATION CONFORMING TO THE CONTROL POINTS FOR 1/2-INCH MIX AS PRESENTED UNDER HMA PROPORTIONS OF MATERIALS PER WSDOT 9-03.8(6). HMA 1/2", WITH A MINIMUM COMPACTED DEPTH PER PAVEMENT SECTION SPECIFICATION ON PAVING PLAN PLUS 1". PLACE IN LIFTS WITH A MAXIMUM COMPACTED DEPTH OF 3" AND MACHINE ROLL FLUSH WITH EXISTING PAVEMENT.
2. CRUSHED SURFACING TOP COURSE CONFORMING TO WSDOT 9-03.9(3).
3. BACKFILL MATERIAL SHALL BE PLACED IN 4" MAXIMUM LOOSE LIFTS IF COMPACTED WITH HAND OPERATED EQUIPMENT OR 10" MAXIMUM LOOSE LIFTS IF COMPACTED WITH HEAVY EQUIPMENT AND COMPACTED TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTOR TEST (ASTM D-1557). REFER TO TRENCH SECTIONS AND SPECIFICATIONS FOR BACKFILL MATERIAL.
4. NEAT, UNIFORM VERTICAL CUT (TYPICAL BOTH SIDES). CLEAN AND NEAT EDGES AND TACK WITH EMULSIFIED ASPHALT. SEAL JOINT WITH HOT ASPHALT CEMENT.
5. ALL PERMANENT FINAL PATCHES SHALL BE RECTANGULAR OR CIRCULAR IN SHAPE.

HMA RESTORATION

SCALE: NTS (9)



NOTE:

1. PIPE BEDDING PER WSDOT STD SPEC. 7-08.3(1)
2. COMMERCIAL CONCRETE PER WSDOT STD. SPEC. 6-02.3(2)B.

STORM CLEANOUT

SCALE: NTS (11)

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SEAL

JUSTIN JAN GOROCH — STATE OF WASHINGTON — 43432 — REGISTERED PROFESSIONAL ENGINEER

05/04/2022

PROJECT
HELIX DESIGN BUILD
HELIX MI
6922 33RD ST
MERCER ISLAND, WA 98040

REVISIONS

DATE
03.21.2022

BCRA NO.
22022

DRAWN BY: BS DESIGNED BY: BS

REVIEWED BY: JG

SHEET TITLE
DETAILS

SHEET

C-003

STORM DESIGN

DATE PLOTTED: 5/4/2022 4:15:51 PM FILENAME: 22022C-SITE.DWG BY:—

IF SHEET MEASURES LESS THAN 24"X36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY