

SITE INFO	
OWNER:	- HELIX DESIGN BUILD
ADDRESS:	- 6922 SE 33rd ST. MERCER ISLAND, WA 98040
PARCEL NUMBER:	- 9359100160
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:	- 17% OF LOT WIDTH (100'x17%=17')
HEIGHT LIMIT:	- 20' FROM HIGHEST POINT OF LOT PER COVENANT

LOT COVERAGE CALCULATIONS	
MAIN STRUCTURE W/ OH.	- 3,440#
DRIVEWAY	- 479#
TOTAL LOT COVERAGE	- 3,919#
LOT AREA PROPOSED	- 10,000#
LOT COVERAGE	- 3,919/10,000 = 39.2%
MAXIMUM LOT COVERAGE	- 40% (4,000#)
UNUSED LOT COVERAGE	- 0.8% (81#)

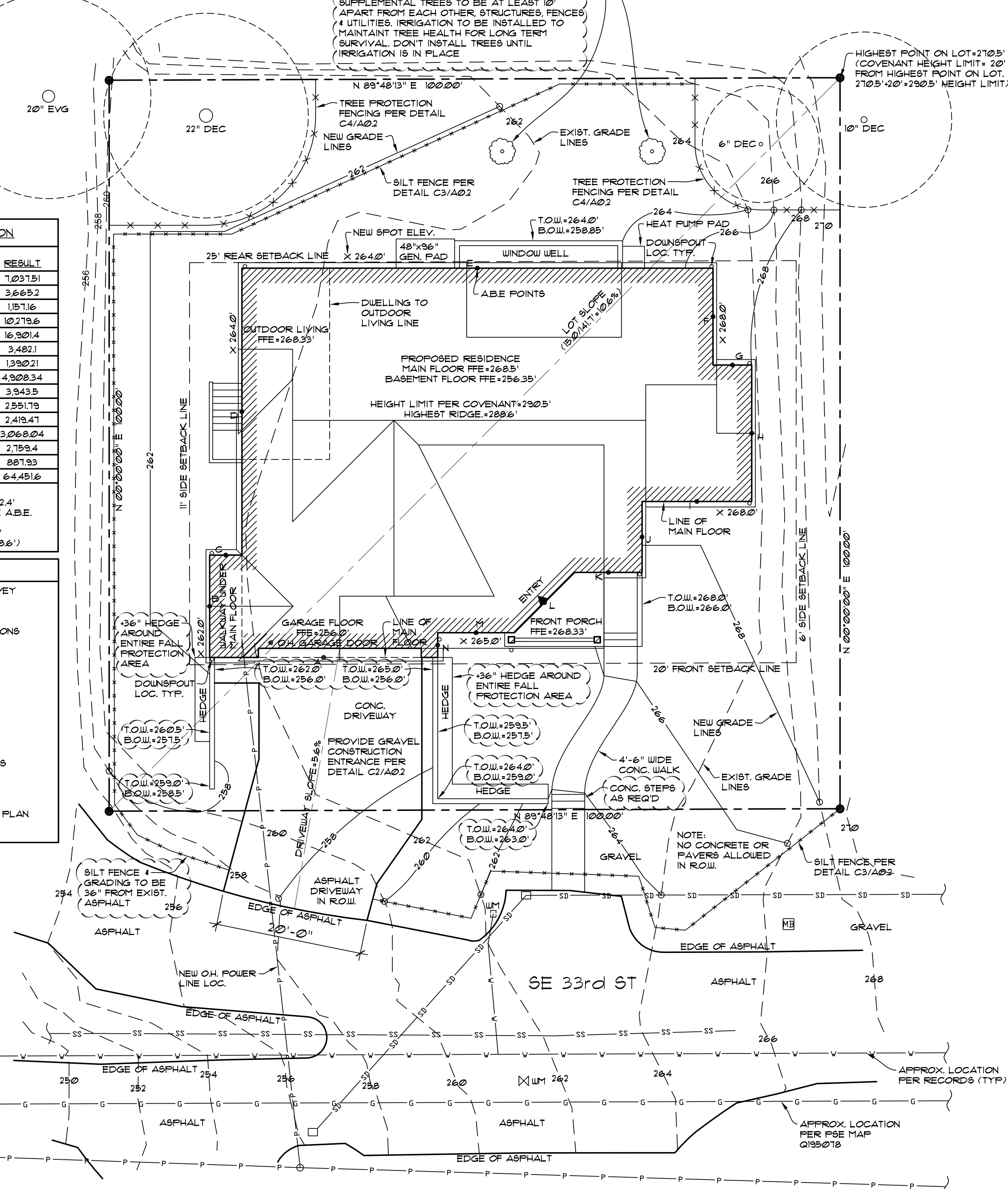
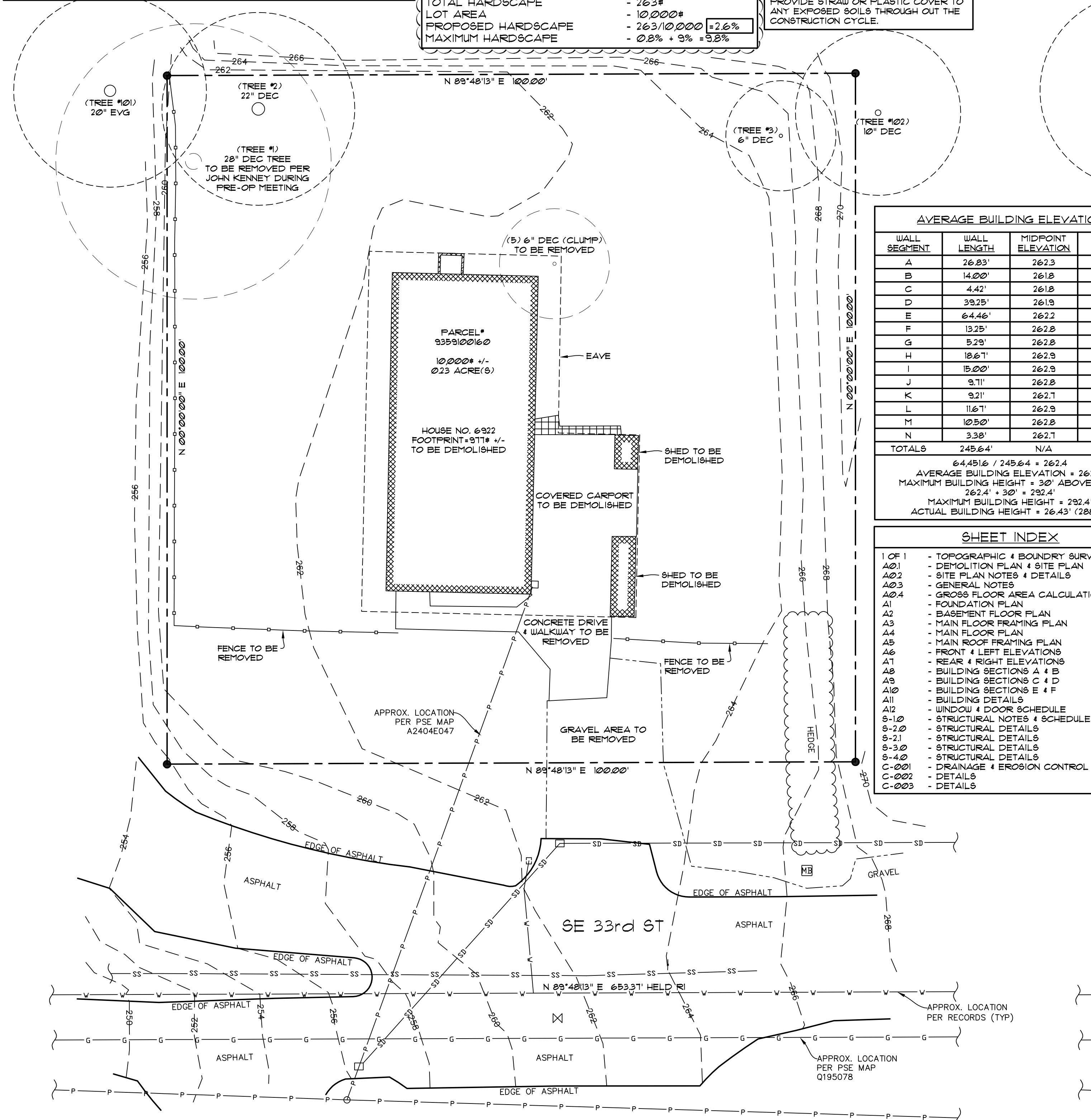
HARDSCAPE CALCULATIONS	
RETAINING/LANDSCAPE WALLS	- 54#
HVAC & GEN. CONCRETE PADS	- 33#
OUTDOOR LIVING STEPS	- 25#
CONCRETE WALKWAY	- 108#
FRONT PORCH	- 43#
TOTAL HARDSCAPE	- 263#
LOT AREA	- 10,000#
PROPOSED HARDSCAPE	- 263/10,000 = 2.6%
MAXIMUM HARDSCAPE	- 0.8% + 9% = 9.8%

GROSS FLOOR AREA CALCULATIONS	
SITE AREA	- 10,000#
ALLOWABLE FAR (LESSER OF)	- 40% OR 5,000#
MAX.	- 4,000#
BASEMENT FLOOR W/ GARAGE	- 2,148#
MAIN FLOOR	- 2,846#
TOTAL FLOOR AREA	- 5,260#
BASEMENT EXCLUSION	- (1,212#)
PROPOSED G.F.A.	- 3,988#

LOT SLOPE:
 HIGHEST ELEVATION POINT OF LOT (NORTHWEST CORNER): 270.5'
 LOWEST ELEVATION POINT OF LOT (SOUTHEAST 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 - 206.910.8158

PER MCC 19.02.02(FX3YD):
 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.



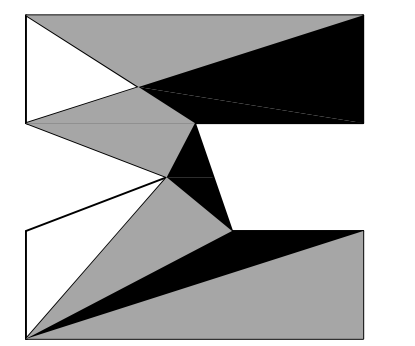
AVERAGE BUILDING ELEVATION			
WALL SEGMENT	WALL LENGTH	MIDPOINT ELEVATION	RESULT
A	26.83'	262.3	7,037.51
B	14.00'	261.8	3,665.2
C	4.42'	261.8	1,157.16
D	39.25'	261.9	10,279.6
E	64.46'	262.2	16,920.4
F	13.25'	262.8	3,482.1
G	5.29'	262.8	1,392.21
H	19.67'	262.9	4,928.34
I	15.00'	262.9	3,943.5
J	9.11'	262.8	2,381.79
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	3.39'	262.7	887.93
TOTALS	245.64'	N/A	6,431.6

6,431.6 / 245.64 = 26.24
 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' (288.6')

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A4	- MAIN FLOOR PLAN
A5	- MAIN ROOF FRAMING PLAN
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FIRE SPRINKLER NOTE:
 A NFPA 13R FIRE SPRINKLER SYSTEM AND A NFPA 72 'CHAPTER 29' MONITORED FIRE ALARM SYSTEM TO BE INSTALLED. (SEPARATE PERMIT REQUIRED)

(2) REPLACEMENT TREES, AT LEAST HALF (1) (NEED TO BE PACIFIC NORTHWEST NATIVE TREES PER <https://treespnw.forestry.oregonstate.edu> SUPPLEMENTAL TREES TO BE AT LEAST 10' APART FROM EACH OTHER, STRUCTURES, FENCES & UTILITIES. IRRIGATION TO BE INSTALLED TO MAINTAIN TREE HEALTH FOR LONG TERM SURVIVAL. DON'T INSTALL TREES UNTIL IRRIGATION IS IN PLACE



TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING# 2021121000582)

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

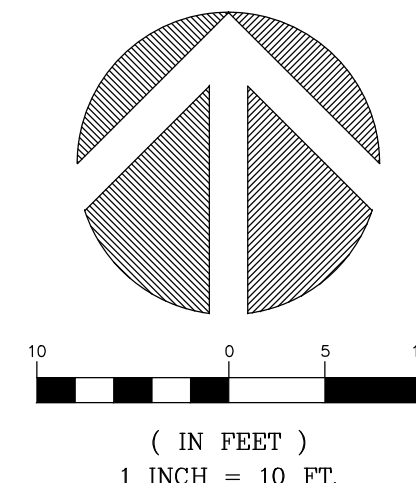
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN FEBRUARY OF 2022. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY 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

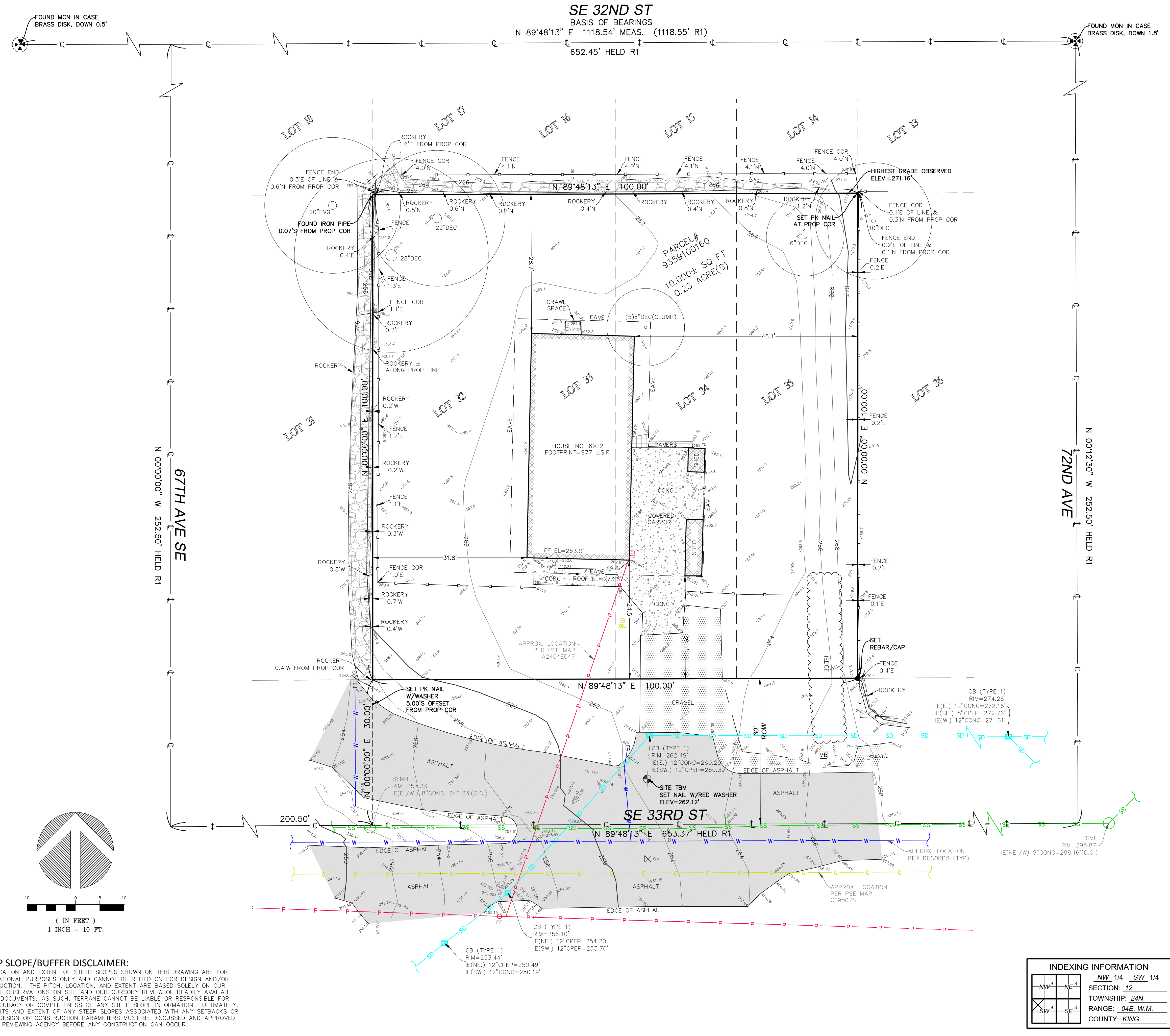
	ASPHALT SURFACE		PAVER SURFACE
	BENCHMARK		POWER METER
	BUILDING		POWER (OVERHEAD)
	CENTERLINE ROW		POWER POLE
	CONCRETE SURFACE		RETAINING WALL
	FENCE LINE (WOOD)		REBAR & CAP (SET)
	GAS LINE		ROCKERY
	GRAVEL SURFACE		SEWER LINE
	HEDGE FOLIAGE LINE		SEWER MAINHOLE
	INLET (TYPE 1)		STORM DRAIN LINE
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

VICINITY MAP

N.T.S.



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



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

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	
10/19/22	ADD HIGHEST GRADE
SHEET NUMBER	
1 OF 1	

We are the measure | terrane.net

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 POND(S) AND TRAPS.
 - H. GRADE AND STABILIZE CONSTRUCTION ROADS.
 - I. CONSTRUCT SURFACE WATER CONTROL(S) 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 SOO 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 MULTIPLE OF 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 STORM/WATER DRAINAGE SYSTEM MUST BE BELOW 25 NTU, AND NOT CONSIDERED AN ILLICIT DISCHARGE. TEMPORARY DISCHARGE TO SANITARY SEWER SHALL 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 PERMITS OFFICER 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, RESTRICTIONS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).

7. THE IMPLEMENTATION OF THIS ESC PLAN AND THE CONSTRUCTION MAINTENANCE, REPLACEMENT, AND UPGRADES 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 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 SLOPS, 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 POND(S) AND ALL TEMPORARY SILTATION CONTROL(S) 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 REVIEW 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 TIME LINES:
 - 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 RTE APPLIED AT APPROXIMATELY 20 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%-10% 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 PARTY(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 BMP'S. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSYSTEM 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 POND(S) 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 DUALLES 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 MUST 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 DOWNSYSTEM 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.

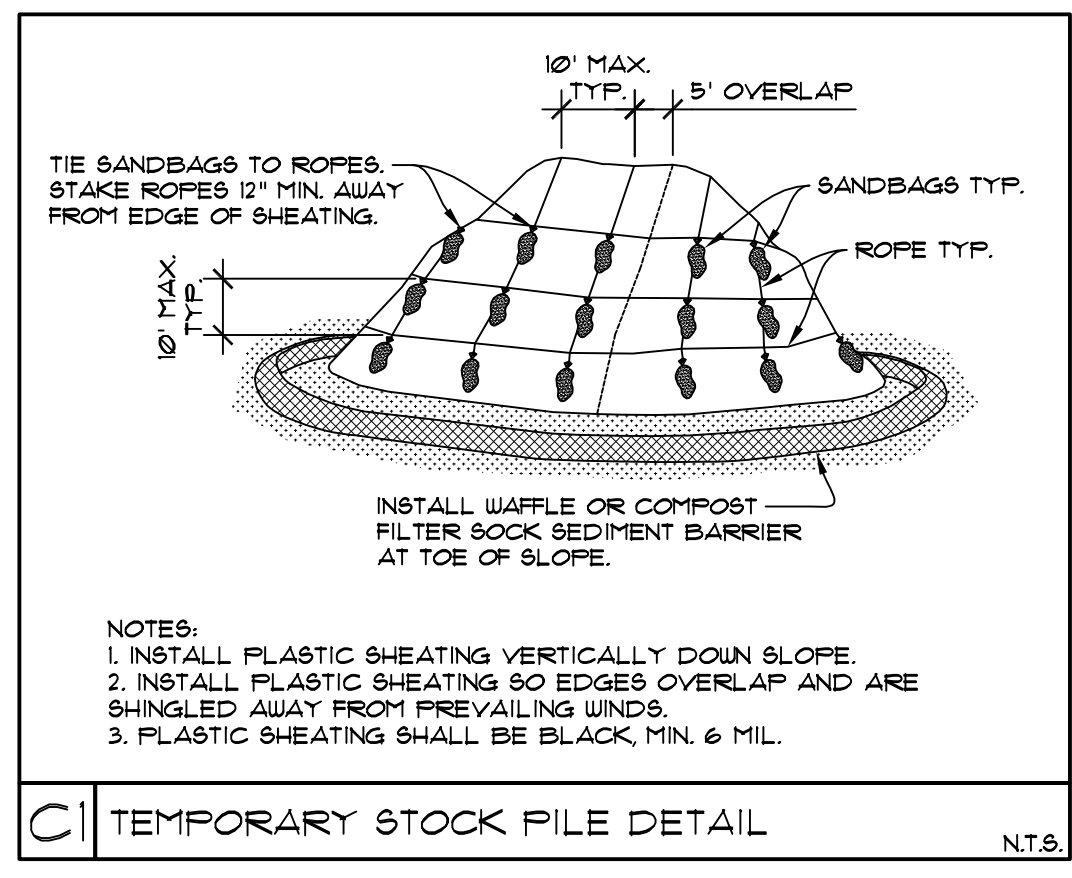
32. IF A SEDIMENT POND IS NOT PROPOSED, A BAKER TANK OR OTHER TEMPORARY GROUND AND/OR SURFACE WATER STORAGE TANK MAY BE REQUIRED DURING CONSTRUCTION, DEPENDING ON WEATHER CONDITIONS.

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 DOWNSYSTEM STORM SYSTEM, OR POSSIBLY RE-LAYING THE STORM LINE.

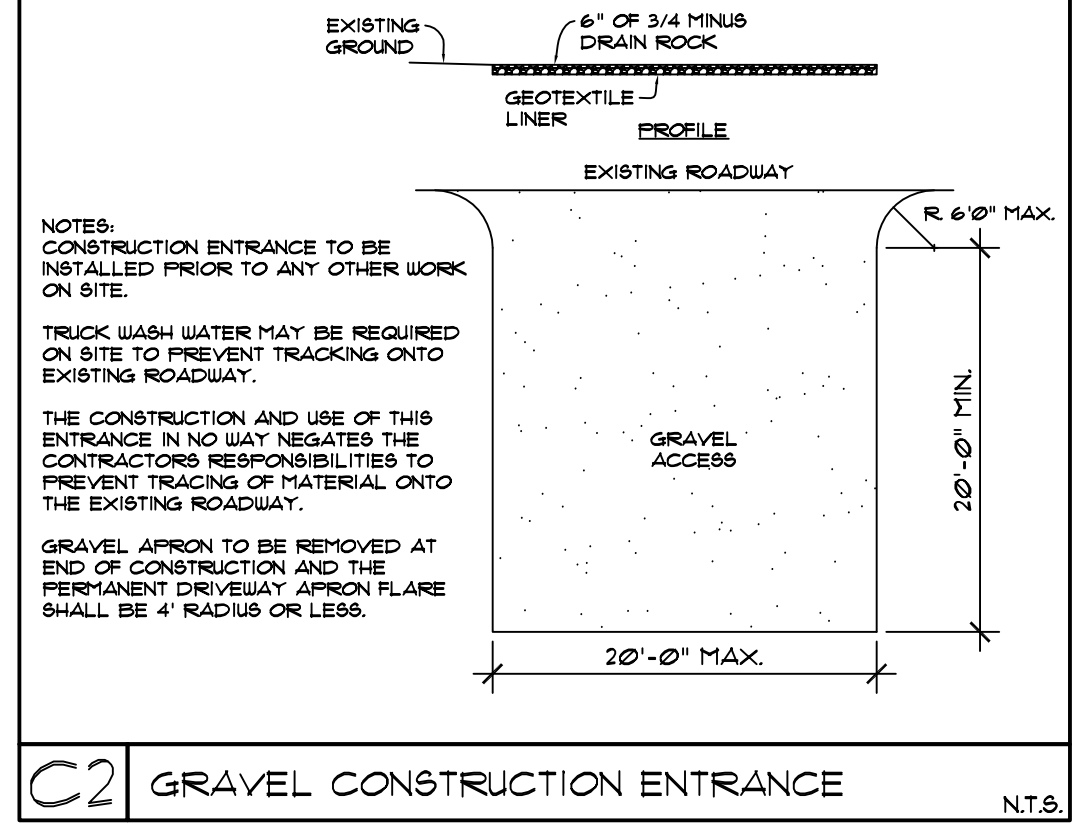
34. RECYCLED CONCRETE SHALL NOT BE STOCKPILED ON SITE, UNLESS FULLY COVERED WITH NO POTENTIAL FOR RELEASE OF RUNOFF.

EFFECTIVE FEBRUARY 1, 2021 WASHINGTON STATUTES MANDATE ALL JURISDICTIONS IN THE STATE TO ADOPT AND ENFORCE THE FOLLOWING UPDATED CONSTRUCTION CODE EDITIONS AS THEY WERE ADOPTED AND AMENDED BY THE STATE OF WASHINGTON:

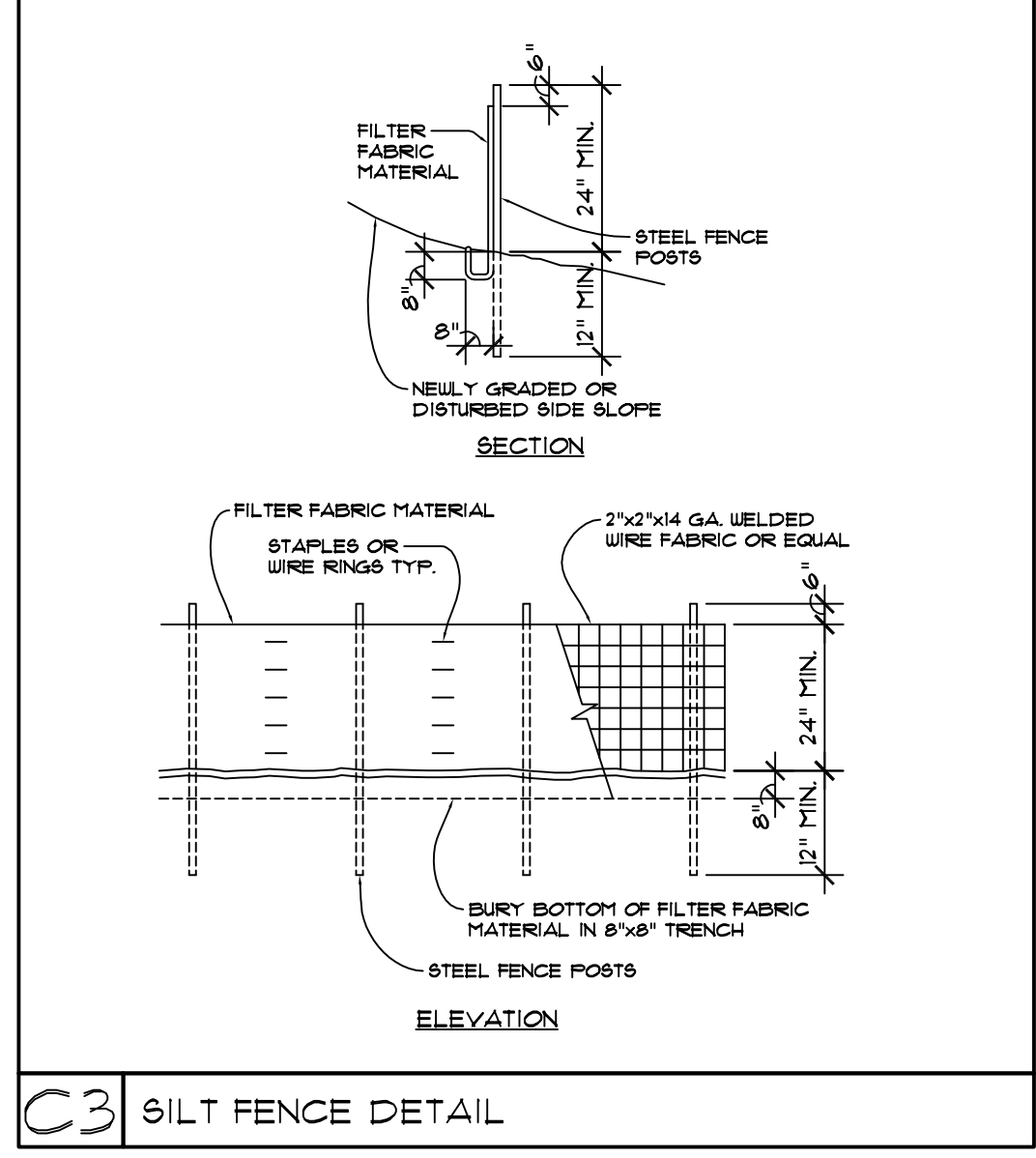
- 2018 INTERNATIONAL BUILDING CODE (IBC)
- 2018 INTERNATIONAL RESIDENTIAL CODE (IRC)
- 2018 INTERNATIONAL MECHANICAL CODE (IMC)
- 2018 INTERNATIONAL FUEL GAS CODE (IFGC)
- 2018 UNIFORM PLUMBING CODE (UPC)
- 2018 INTERNATIONAL FIRE CODE (IFC)
- 2018 INTERNATIONAL EXISTING BUILDING CODE
- 2018 INTERNATIONAL SWIMMING POOL AND SPA CODE
- WASHINGTON STATE ENERGY CODE (USEC)
- CC/ANSI A117-19S, ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES, WITH STATEWIDE AND CITY AMENDMENTS



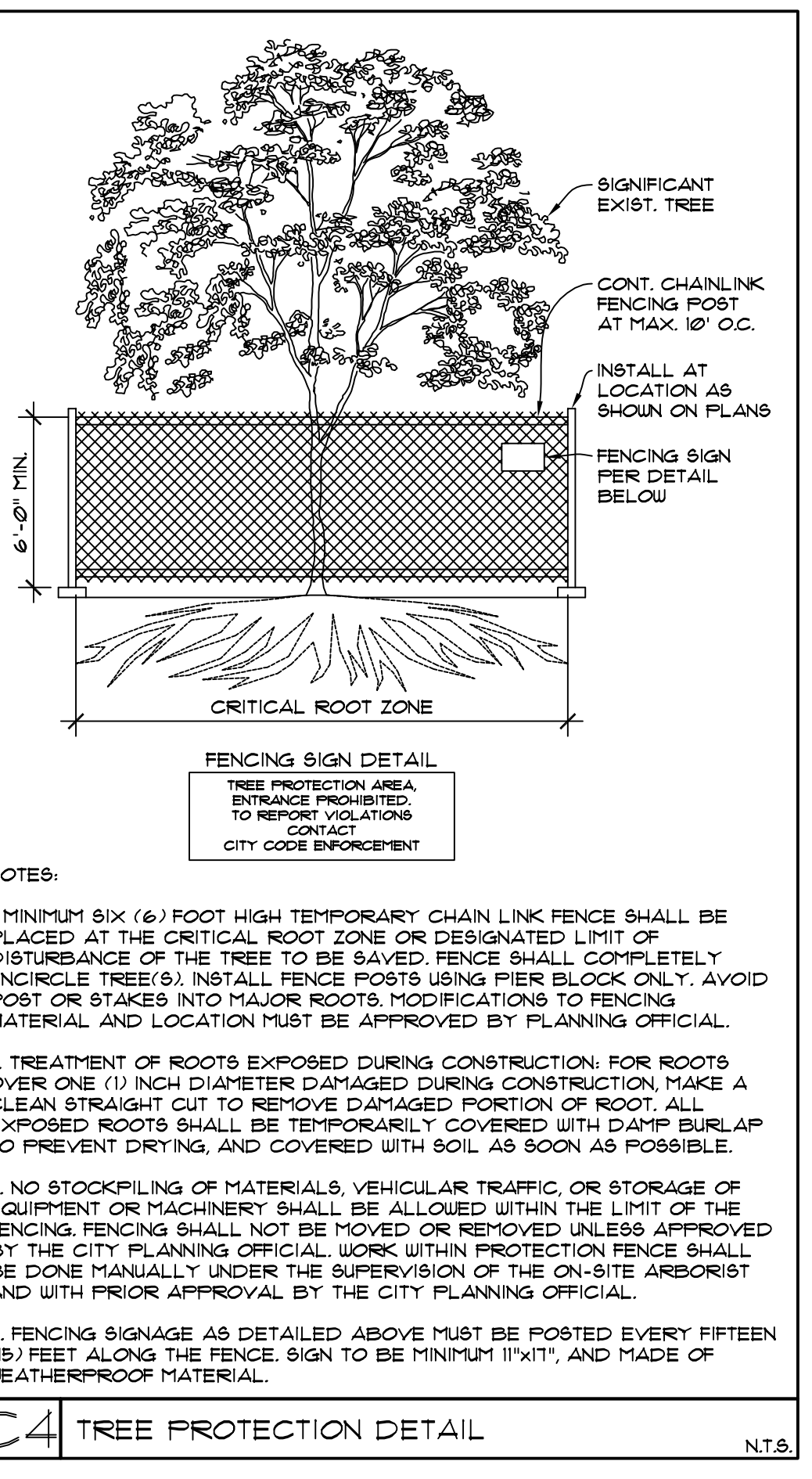
C1 TEMPORARY STOCK PILE DETAIL N.T.S.



C2 GRAVEL CONSTRUCTION ENTRANCE N.T.S.



C3 SILT FENCE DETAIL



C4 TREE PROTECTION DETAIL N.T.S.

SITE PLAN NOTES & DETAILS
SCALE: N.T.S.

GENERAL NOTES:

- 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.
- ALL PRE-MANUFACTURED TRUSSES TO BE IDENTIFIED BY MFG'S STAMP.
- FACTORY BUILT FIREPLACE & CHIMNEY TO BE UL LABELED INSTALL PER MANUFACTURERS SPEC'S O/SIDE COMBUSTION AIR REQ'D (MIN 6 SQ IN) DUCTED TO ROOF 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 USEC R402.4.2. PILOT LIGHT SHALL NOT BE CONTINUOUSLY BURNING PER USEC R402.3.13.
- LIMIT SHOWER FLOW TO 2.5 GALLON/MIN.
- H.W.T. TO BE LABELED PER ASHRAE STD. NO. 90A-200, AND MEET THE REQUIREMENTS, PER 1981 NATIONAL OFFICE ENERGY CONSERVATION ACT.
- FURNACE AND HWY TANK, PILOTS, BURNERS, HEATING ELEMENTS, AND SWITCHES TO BE A MIN. OF 18" ABOVE FINISHED FLOOR.
- ALL SKYLITES TO COMPLY WITH I.R.C. SECTION 2402.1 & 2602.3.7
- ALL SIDELITES, SLIDING GLASS DOORS AND TUB/SHOWER ENCLOSURES TO COMPLY WITH I.B.C. SECTION 2406.
- HEAT REGISTERS TO BE PER LEGEND, LOCATE APPROXIMATELY AS SHOWN, 6" IN FROM INTERIOR WALLS, 3" IN FROM INTERIOR WALLS.
- VENT DRYER, OVEN/RANGE & EXHAUST FANS TO O/SIDE, DRYER EXHAUST DUCTS SHALL NOT EXCEED A TOTAL COMB. HORIZ. AND VERT. LENGTH OF 20' INCL., 2 90° ELBOWS, DEVICE 2'-0" FOR EACH 90° ELBOW, EXCEEDING 2. SEE DRYER DUCT DTL. FOR ALT. SOLUTIONS. ALL EXHAUST DUCTS INSULATED (MIN. OF R-4)
- 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 2306.
-
- SOLID 5/8" REQ'D ON LOWER STORY OF 2 STORY BUILDING PER I.B.C. DRYWALL NAILING PER SHEAR NAILING SCHEDULES OR IBC 2018 EDITION.
- TUB/SHOWER SURROUND WALLS TO HAVE WATER RESISTANT GYP BOARD AND A SMOOTH HARD SURFACE TO A MINIMUM HEIGHT OF 10" ABOVE DRAIN INLET
- PROVIDE SMOKE DETECTOR IN COMPLIANCE WITH I.B.C. AND IBC, STD. #43.6, ALL SMOKE DETECTORS W/ BATT BACKUP, SMOKE DETECTORS WILL SOUND AN AUDIBLE ALARM IN ALL SLEEPING ROOMS.
- DIUELLING TO COMPLY W/ 2018 USEC-R.
- SEAL GASKET, 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.
- ALL EXTERIOR DOORS OR ACCESS HATCHES TO ENCLOSED UNHEATED AREAS MUST BE WEATHERSTRIPPED.
- MINIMUM SOIL BEARING PRESSURE = 1500 PSF.
- FOOTINGS TO BE PLACED ON FIRM, UNDISTURBED NATIVE SOIL.
- DIUELLING TO COMPLY WITH INTERNATIONAL BUILDING CODE (I.B.C.) 2018
- 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 INC 4012 & 4021
- 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. (R402.4.12).
- AT LEAST ONE THERMOSTAT PER DIUELLING 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.
- R311.3 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:
 - HORIZONTAL MEMBERS SUCH AS GIRDERS, JOISTS AND DECKING.
 - VERTICAL MEMBERS SUCH AS POSTS, POLES AND COLUMNS.
 - BOTH HORIZONTAL AND VERTICAL MEMBERS.

R303.1 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 (1 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 80 CFM. KITCHEN EXHAUST FANS TO BE 100 CFM UNO. 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 M501.1. COMPLY WITH BELOW:

FAN CFM	MAX. FLEX DIA.	MAX. FT.	MAX. SMOOTH DIA.	MAX. FT.
50	4"	25'	4"	10'
50	5"	30'	5"	10'
50	6"	OVER 100'	6"	OVER 100'
80	4"	N/A	4"	10'
80	5"	15'	5"	10'
80	6"	30'	6"	OVER 100'
100	5"	N/A	5"	10'
100	6"	45'	6"	OVER 100'
125	6"	15'	6"	OVER 100'
125	7"	10'	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. VFRS. -A ROOM OR SPACE HAVING FUEL BURNING APPLIANCES THEREIN. -ATTIC, CRAWL SPACE, OR GARAGE. -CLOSER THAN 10" FROM AN APPLING OR PLUMBING VENT OUTLET, UNLESS THE DUCT VENT OUTLET IS AT LEAST 3' ABOVE THE FRESH AIR INLET.

OPTION I: WHOLE-HOUSE VENTILATION USING A COMB'D SPACE INLET DUCT SHALL BE EQUIPPED WITH A MOTORIZED DMFR THAT WILL OPEN WHEN THE VENTLN FAN RELAY IS ACTIVATED, AND REMAIN CLOSED AT ALL OTHER TIMES. IN ADDN TO THE MOTORIZED DMFR A MANUAL DMFR SET TO 35-5 AIR CHANGES PER HOUR IS ALSO REQUIRED.

A WHOLE HOUSE EXHAUST FAN SHALL BE LCTD IN THE CEILING, SIZE PER THE CALCS BELOW. THE AIR INTAKE DUCT DMFR SHALL BE SET W/N THIS RNG.

WHOLE HOUSE VENTILATION:

THIS SECTION ESTABLISHES MINIMUM PRESCRIPTIVE DESIGN REQUIREMENTS FOR WHOLE HOUSE VENTILATION SYSTEMS. EACH DUELLING 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 M507.3.4)

OPTION II: WHOLE-HOUSE VENTILATION INTEGRATED WITH A FORCED-AIR SYSTEM. (IRC M507.3.5)

OPTION III: WHOLE-HOUSE VENTILATION USING A SUPPLY FAN. (IRC M507.3.6)

OPTION IV: WHOLE-HOUSE VENTILATION USING A HEAT RECOVERY VENTILATION SYSTEM. (IRC M507.3.7)

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 M507.3.3(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 M507.3.3(1) IS MULTIPLIED BY THE FACTOR DETERMINED IN TABLE M507.3.3(2).

TABLE M507.3.3(1) CONTINUOUS WHOLE HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS					
DUELLING UNIT FLOOR AREA (SQUARE FEET)	NUMBER OF BEDROOMS				
	0-1	2-3	4-5	6-1	>1
< 1500	30	45	60	75	90
1501-3000	45	60	75	90	105
3001-4500	60	75	90	105	120
4501-6000	75	90	105	120	135
6001-7500	90	105	120	135	150
> 7500	105	120	135	150	165

TABLE M507.3.3(2) INTERMITTENT WHOLE HOUSE MECHANICAL VENTILATION RATE FACTORS #D						
RUN TIME PERCENTAGE IN EACH 4-HOUR SEGMENT FACTOR	25%	33%	50%	66%	75%	100%
		4	3	2	1.5	1.3

EXHAUST VENT CLEARANCES:

PER SRC M501.1 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 M506.3, NOT LESS THAN 3 FEET FROM PROPERTY LINES, 3 FEET FROM OPERABLE OPENINGS IN THE BUILDING AND 10 FEET FROM MECHANICAL AIR INTAKES.

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 21" WHERE HANDRAILS ARE PROVIDED ON BOTH SIDES.

EXCEPTION: THE WIDTH OF SPIRAL STAIRWAYS SHALL BE IN ACCORDANCE WITH SECTION R311.10.1.

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 R311.10.1.

R311.7.3 VERTICAL RISE - A FLIGHT OF STAIRS SHALL NOT HAVE A VERTICAL RISE LARGER THAN 18" BETWEEN FLOOR LEVELS OR LANDINGS.

R311.7.4 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 MATS.

R311.7.5 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 LEADING EDGE 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 OPENINGS 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 R311.10.1.

R311.7.6 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".

R311.7.6 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" AT 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".

FLANGED WINDOW FLASHING INSTALLATION AFTER TYVEK HOMEWRAP (OR EQUIVALENT)

NOTE: INSTALL DUPONT FLASHING IN ORDER SHOWN BY NUMBERS. INSTALL WINDOW PER MANUFACTURERS INSTRUCTIONS.

PREScriptive ENERGY CODE COMPLIANCE FOR ALL CLIMATE ZONES IN WASHINGTON PER 2018 USEC:

MEANS DUELLING UNIT: 6 CREDITS

HEATING OPTION 2 - HEAT PUMP (10 CREDIT)

ENERGY OPTIONS:

13 - EFFICIENT 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

23 - AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION (15 CREDITS): REDUCE THE TESTED AIR LEAKAGE TO 15 AIR CHANGES PER HOUR MAXIMUM AT 50 PASCALS AND ALL WHOLE HOUSE VENTILATION REQUIREMENTS AS DETERMINED BY SECTION M507.3 OF THE INTERNATIONAL RESIDENTIAL CODE OR SECTION 403.9 OF THE INTERNATIONAL MECHANICAL CODE SHALL BE MET WITH A HEAT RECOVERY VENTILATION SYSTEM WITH MINIMUM SENSIBLE HEAT RECOVERY EFFICIENCY OF 0.15

32 - HIGH EFFICIENCY HVAC EQUIPMENT (10 CRDITS): AIR-SOURCED CENTRALLY DUCTED HEAT PUMP WITH A MINIMUM HSPFF OF 95

55 - EFFICIENT WATER HEATING (20 CREDITS): ELECTRIC HEAT PUMP WATER HEATER MEETING THE STANDARDS FOR TIER III OF NEAAS ADVANCED WATER HEATING SPECIFICATION

EXHAUST VENT CLEARANCES:

PER SRC M501.1 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 M506.3, NOT LESS THAN 3 FEET FROM PROPERTY LINES, 3 FEET FROM OPERABLE OPENINGS IN THE BUILDING AND 10 FEET FROM MECHANICAL AIR INTAKES.

EXHAUST VENT CLEARANCES:

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

MEANS DUELLING UNIT: 6 CREDITS

HEATING OPTION 2 - HEAT PUMP (10 CREDIT)

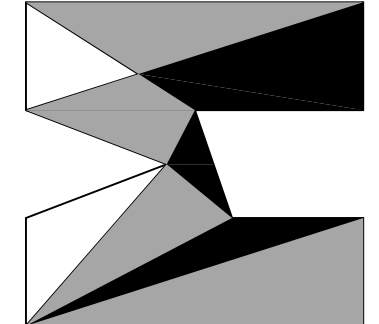
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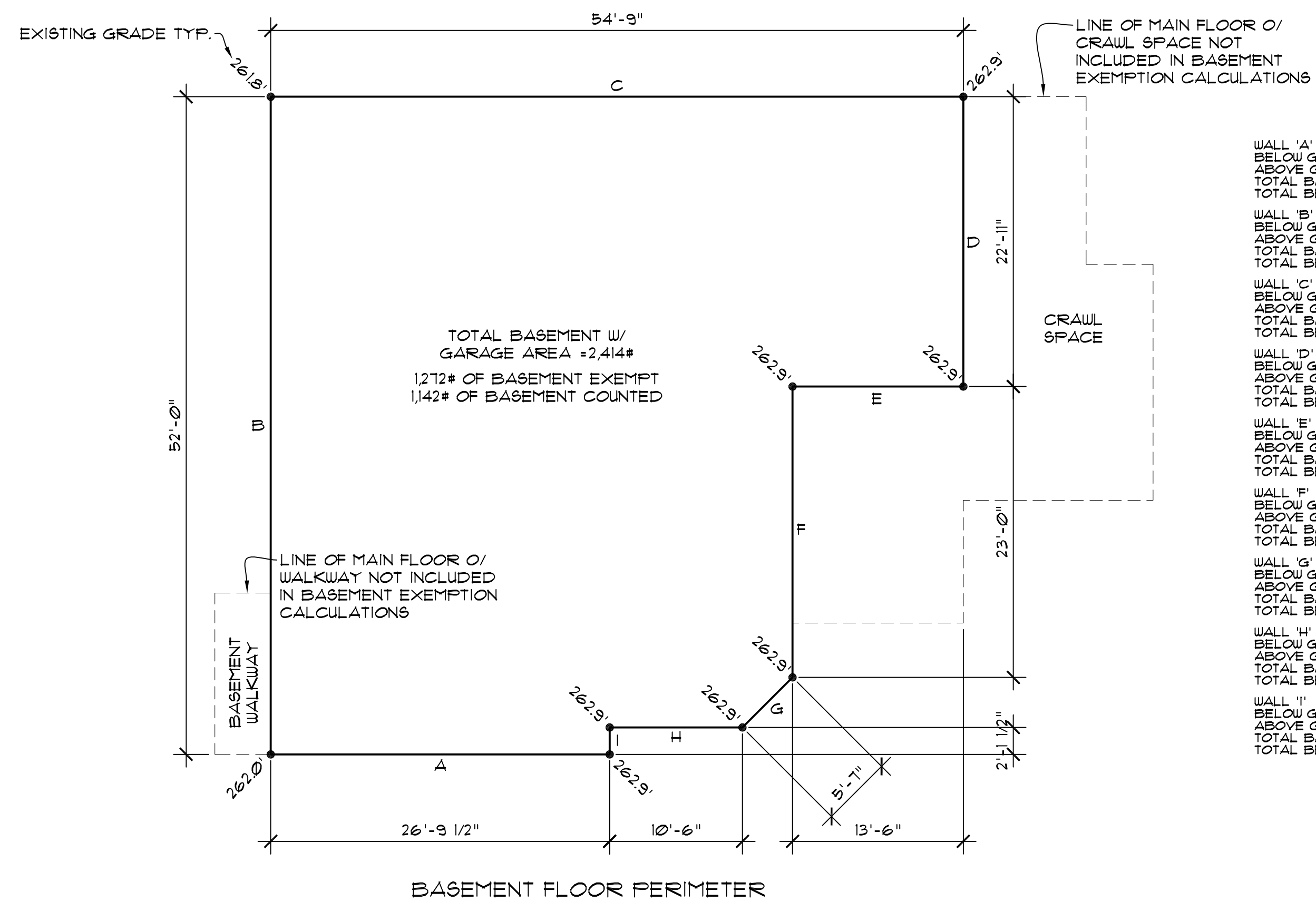
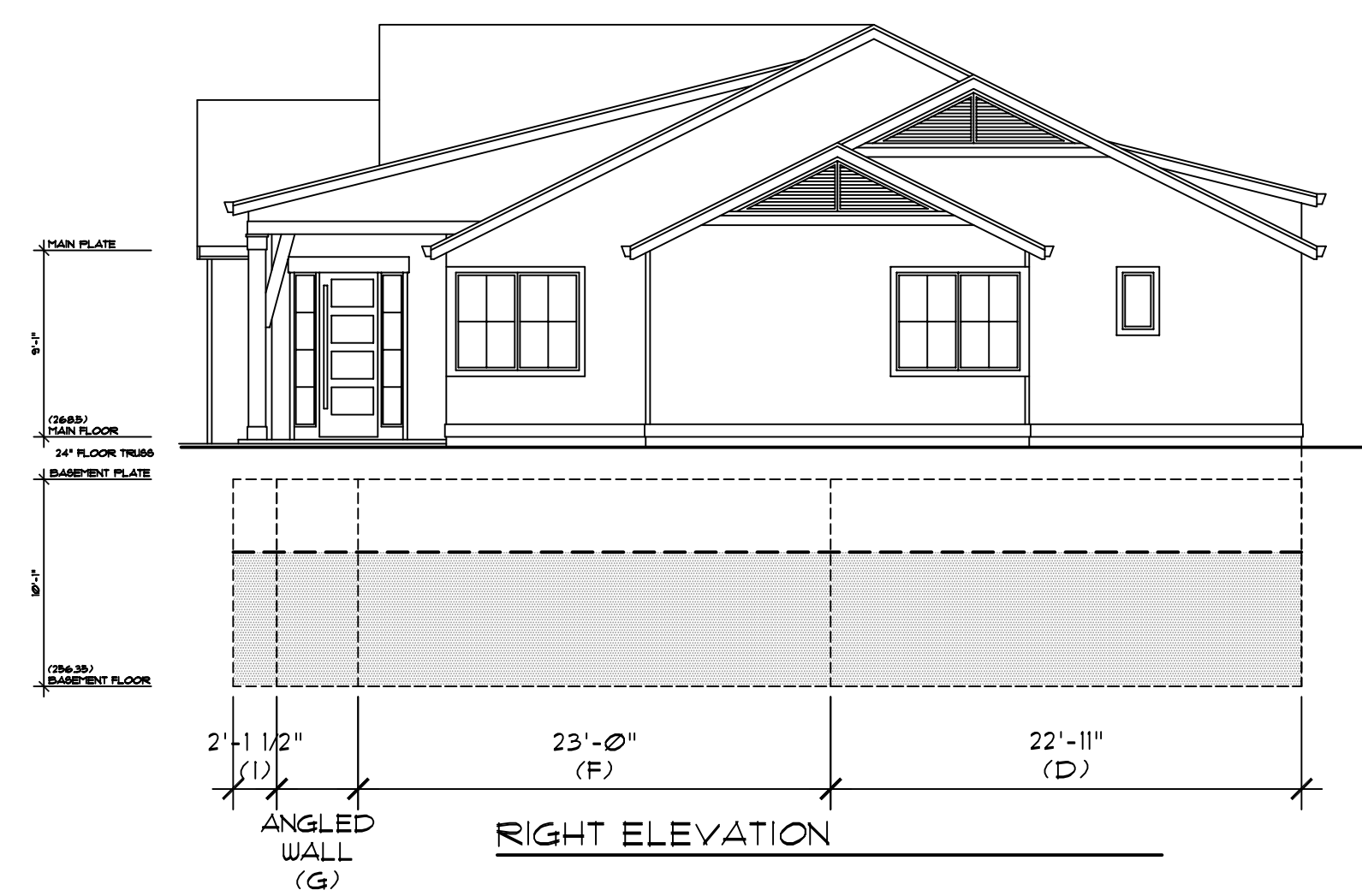
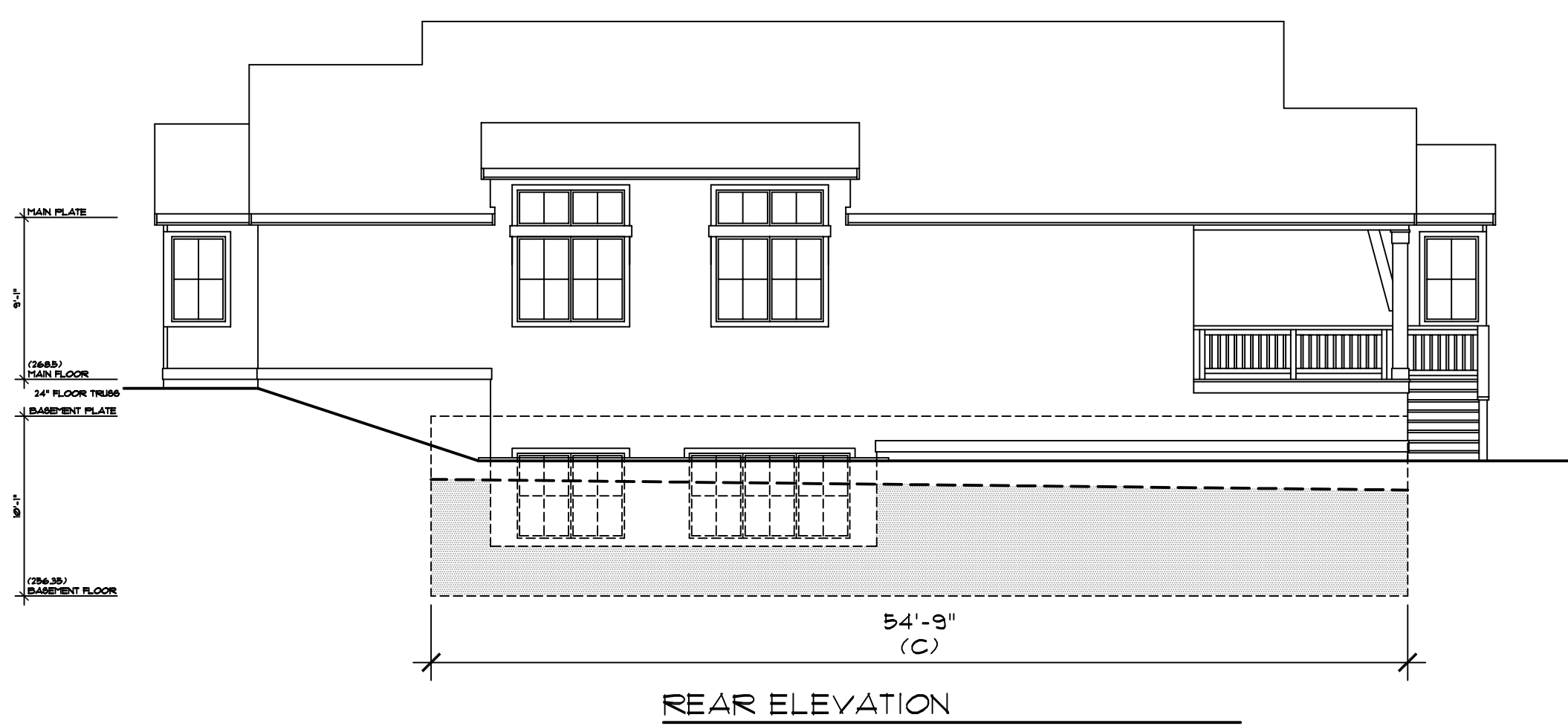
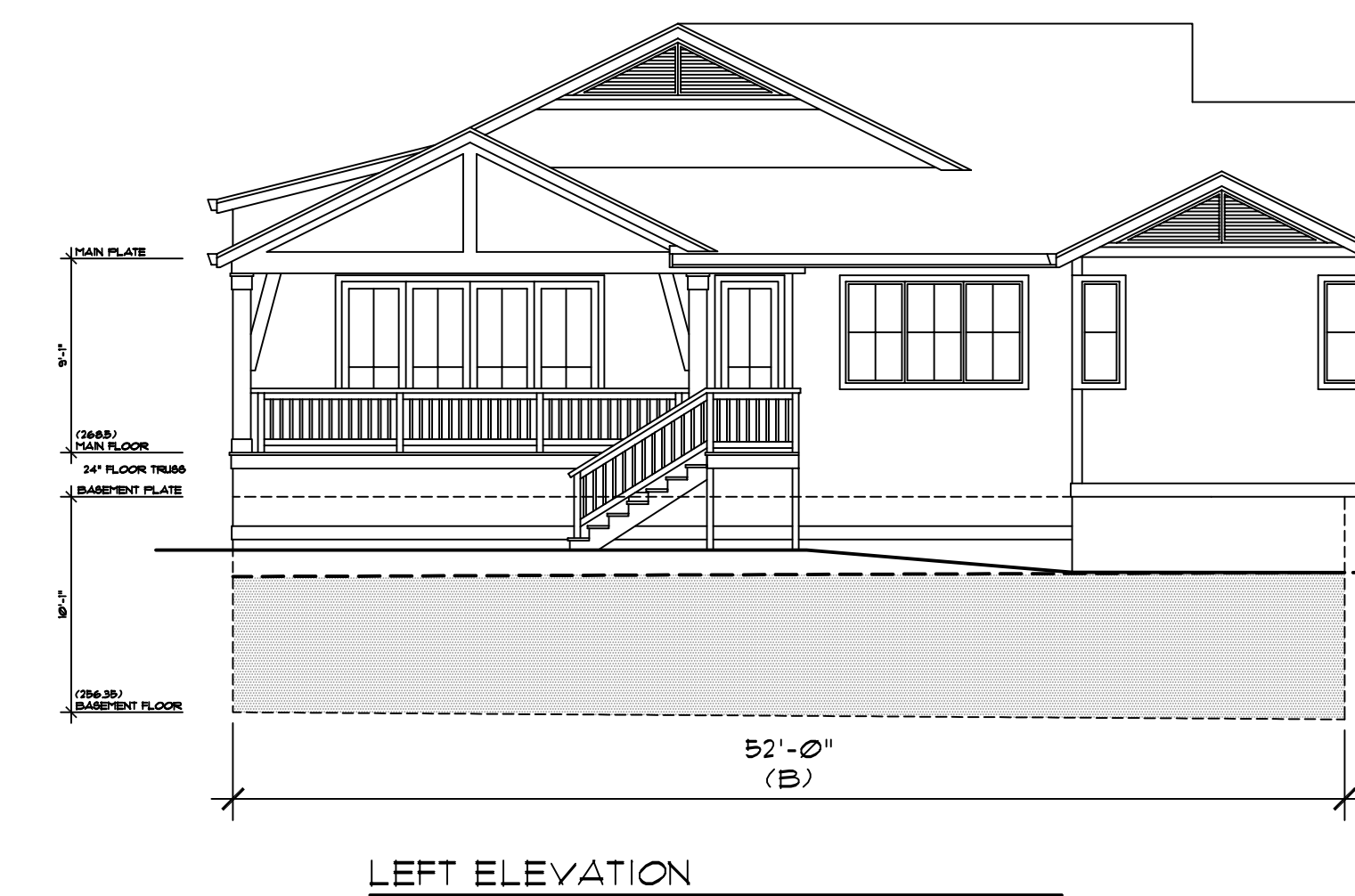
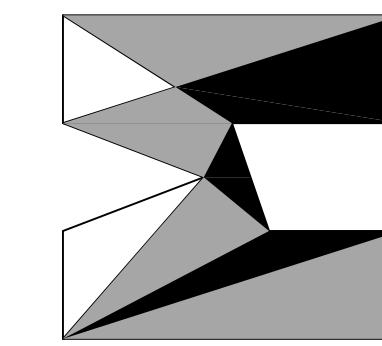
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55 - EFFICIENT WATER HEATING (20 CREDITS): ELECTRIC HEAT PUMP WATER HEATER MEETING THE STANDARDS FOR TIER III OF NEAAS ADVANCED WATER HEATING SPECIFICATION





WALL 'A'
BELOW GRADE = 4#
ABOVE GRADE = 275#
TOTAL BASEMENT WALL = 279#
TOTAL BELOW GRADE = 0.0%

WALL 'B'
BELOW GRADE = 352#
ABOVE GRADE = 150#
TOTAL BASEMENT WALL = 542#
TOTAL BELOW GRADE = 65.0%

WALL 'C'
BELOW GRADE = 264#
ABOVE GRADE = 288#
TOTAL BASEMENT WALL = 552#
TOTAL BELOW GRADE = 41.5%

WALL 'D'
BELOW GRADE = 150#
ABOVE GRADE = 8#
TOTAL BASEMENT WALL = 231#
TOTAL BELOW GRADE = 65.0%

WALL 'E'
BELOW GRADE = 9#
ABOVE GRADE = 45#
TOTAL BASEMENT WALL = 136#
TOTAL BELOW GRADE = 6.70%

WALL 'F'
BELOW GRADE = 15#
ABOVE GRADE = 8#
TOTAL BASEMENT WALL = 232#
TOTAL BELOW GRADE = 65.1%

WALL 'G'
BELOW GRADE = 39#
ABOVE GRADE = 17#
TOTAL BASEMENT WALL = 56#
TOTAL BELOW GRADE = 70.0%

WALL 'H'
BELOW GRADE = 12#
ABOVE GRADE = 34#
TOTAL BASEMENT WALL = 106#
TOTAL BELOW GRADE = 68.0%

WALL 'I'
BELOW GRADE = 14#
ABOVE GRADE = 7#
TOTAL BASEMENT WALL = 21#
TOTAL BELOW GRADE = 66.1%

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	26.75'	0.0%	0.0
B	52.0'	65.0%	33.8
C	54.75'	47.8%	26.17
D	22.92'	65.0%	14.90
E	13.5'	67.0%	9.05
F	23.0'	65.1%	15.0
G	5.58'	70.0%	3.91
H	10.5'	68.0%	7.14
I	2.13'	66.7%	1.42
TOTALS	211.17'	N/A	111.39

111.39 / 211.17 = 52.7%
2,414 x 52.7% = 1,272# EXEMPT FROM GROSS FLOOR AREA
2,414 - 1,272 = 1,142# OF BASEMENT COUNTED

GROSS FLOOR AREA CALCULATIONS

SITE AREA	= 10,000#
ALLOWABLE FAR (LESSER OF)	= 40% OR 5,000#
40% = 4,000#	= MAX. 4,000#
BASEMENT FLOOR W/ GARAGE	= 2,414#
MAIN FLOOR	= 2,846#
TOTAL FLOOR AREA	= 5,260#
BASEMENT EXCLUSION	= (1,272#)
PROPOSED G.F.A.	= 3,988#

RESULT: WITHIN CODE PARAMETERS



GROSS FLOOR AREA CALCULATIONS
SCALE: 1/8" = 1'-0"
SUBJECT PROPERTY TAX PARCEL NO. 9359100160
6922 SE 33rd ST.
MERCER ISLAND, WA 98040

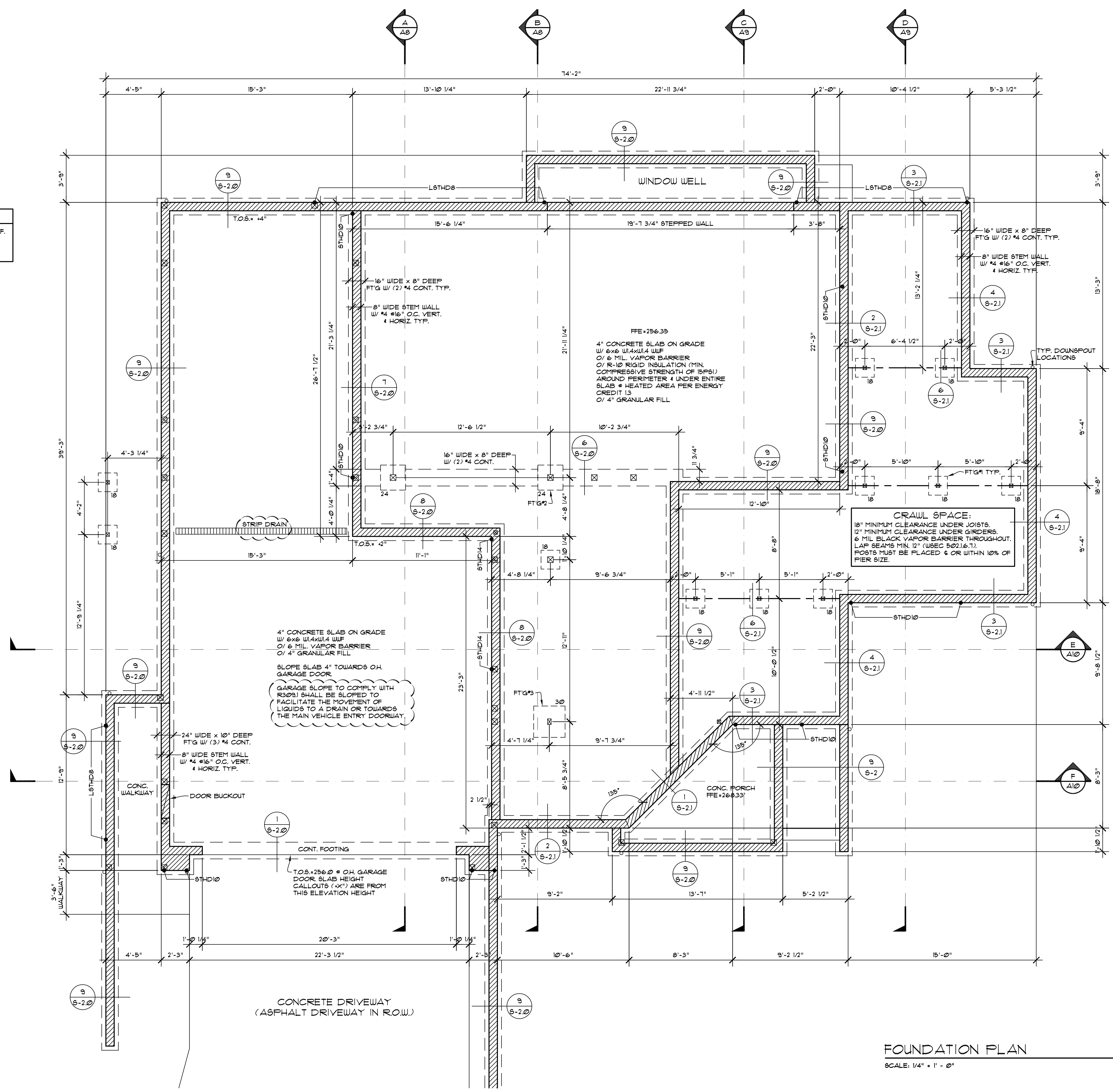
FOOTING SCHEDULE:

- 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.

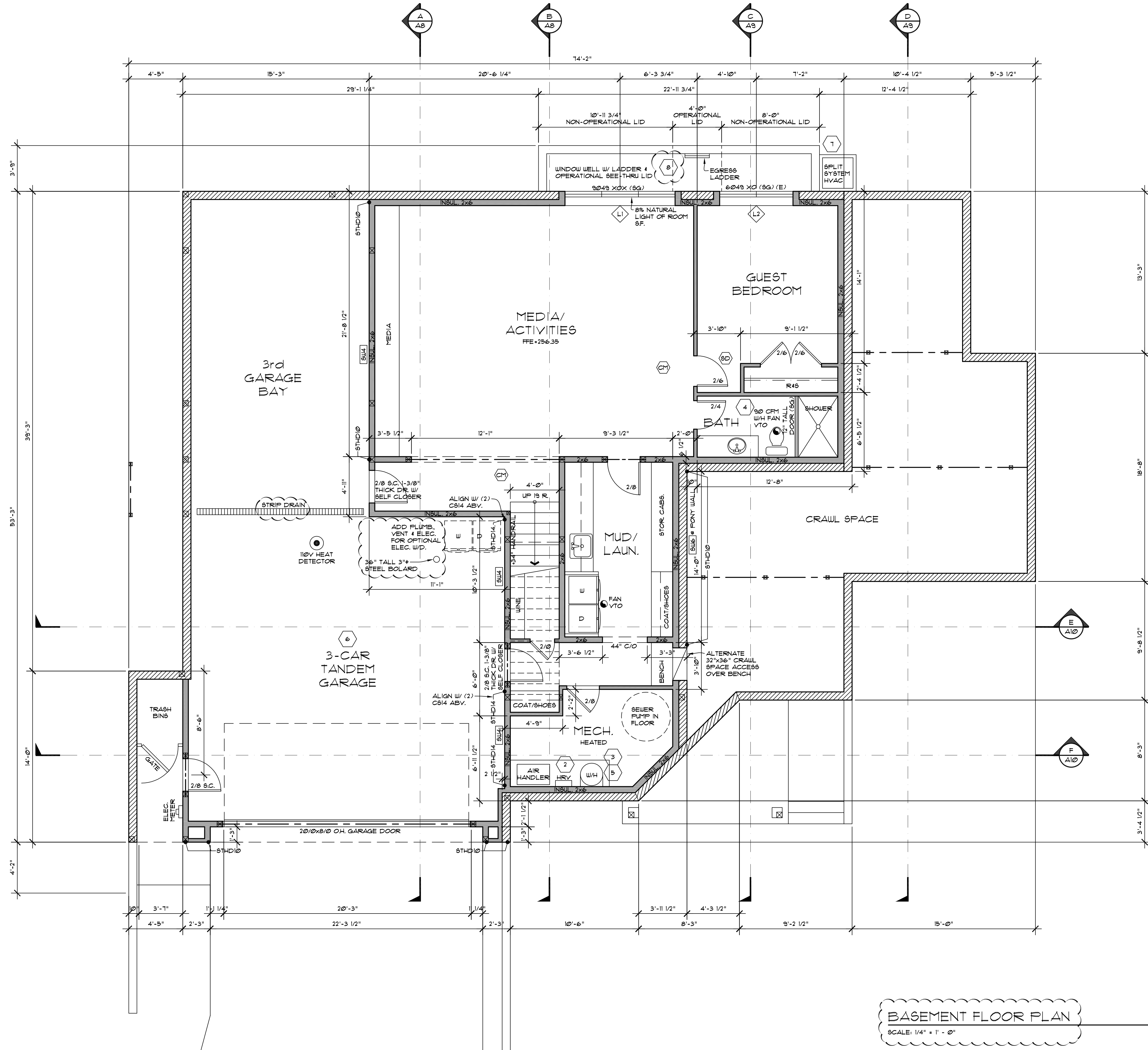
CRAWL VENTILATION CALCULATION

CRAWL SPACE UNDER FLOOR AREA TO REQUIRE VENTING = 670 SF.
 PROVIDE 10 CFM PER 50 SF. OF MECHANICAL VENTILATION
 670 / 50 = 13.4
 PROVIDE MINIMUM 14 CFM CONTINUOUS MECHANICAL VENTING



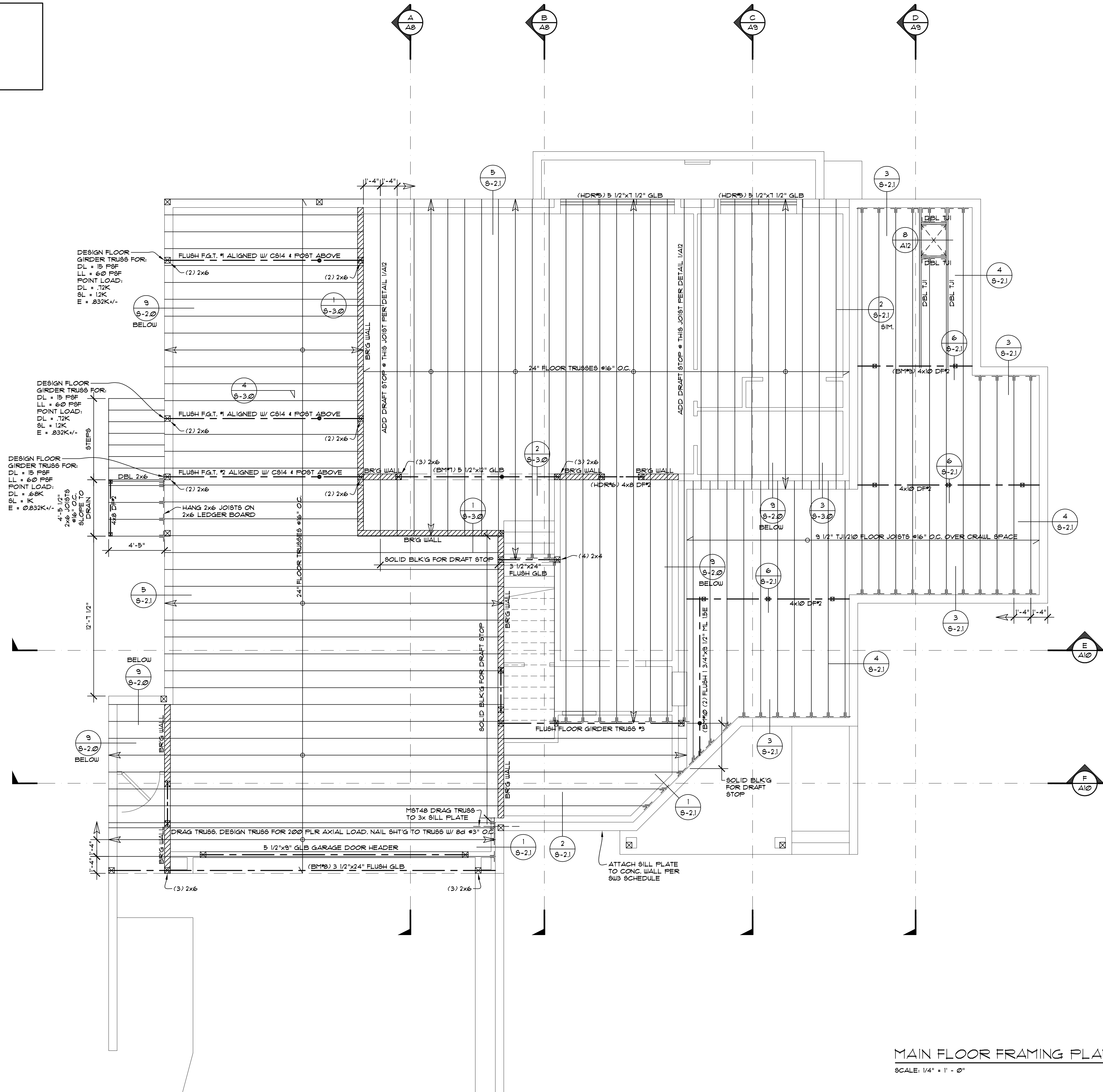
FOUNDATION PLAN
SCALE: 1/4" = 1' - 0"

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 FLENUM
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 MIB013.3 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 MIB013.3(2) AND SET TO RUN @ (2) 4-HOUR BEGEMENTS
5	PER ENERGY CREDIT 9.5. ELECTRIC HEAT PUMP WATER HEATER MEETING THE STANDARDS FOR TIER III OF NEAA'S ADVANCED WATER HEATING SPECIFICATION
6	5/8" TYPE "X" GIB 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
8	WINDOW WELL W/ OPERATIONAL SEE-THRU LID & LADDER LID TO COMPLY W/ R310.4.4 DEVICES SHALL BE RELEASABLE OR REMOVABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR TOOL OR FORCE GREATER THAN THAT REQUIRED FOR THE NORMAL OPERATION OF THE ESCAPE AND RESCUE OPENINGS
XX	EXTERIOR DOOR TAG. SEE DOOR SCHEDULE ON SHEET A12
XX	EXTERIOR WINDOW TAG. SEE WINDOW SCHEDULE ON SHEET A12
BD	INDICATES 110V HARD WIRED SMOKE DETECTOR WITH BATTERY BACKUP
CH	INDICATES 110V HARD WIRED SMOKE & CARBON MONOXIDE DETECTOR WITH BATTERY BACKUP

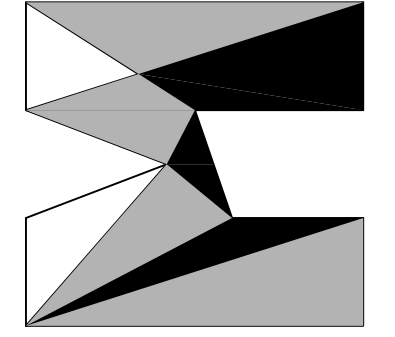


BASEMENT FLOOR PLAN
SCALE: 1/4" = 1' - 0"

ALL HEADERS TO BE 4x8 DFP2 UNO.
 ALL POSTS TO BE (2) 2x6 HFP2 UNO.
 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"



PER PERSCRIPTIVE REQUIREMENTS 2018 IBC E.C.
(MODIFIED FOR ENERGY CREDIT 1.3)

CLIMATE ZONE 5B
MAX. GLAZING U-FACTOR: VERT. U=0.28, OVERHEAD U=0.20
MAX. DOOR U-FACTOR: U=0.20
INSULATION & CONDITIONED AREAS:
TRUSSED CEILING: R-49
VAULTED & SINGLE RAFTER CEILING: R-38 (R40222)
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: 626.8 (S.F. GLAZING AREA) = 15.0%
CALCULATIONS: 4,186 (S.F. FLOOR AREA)

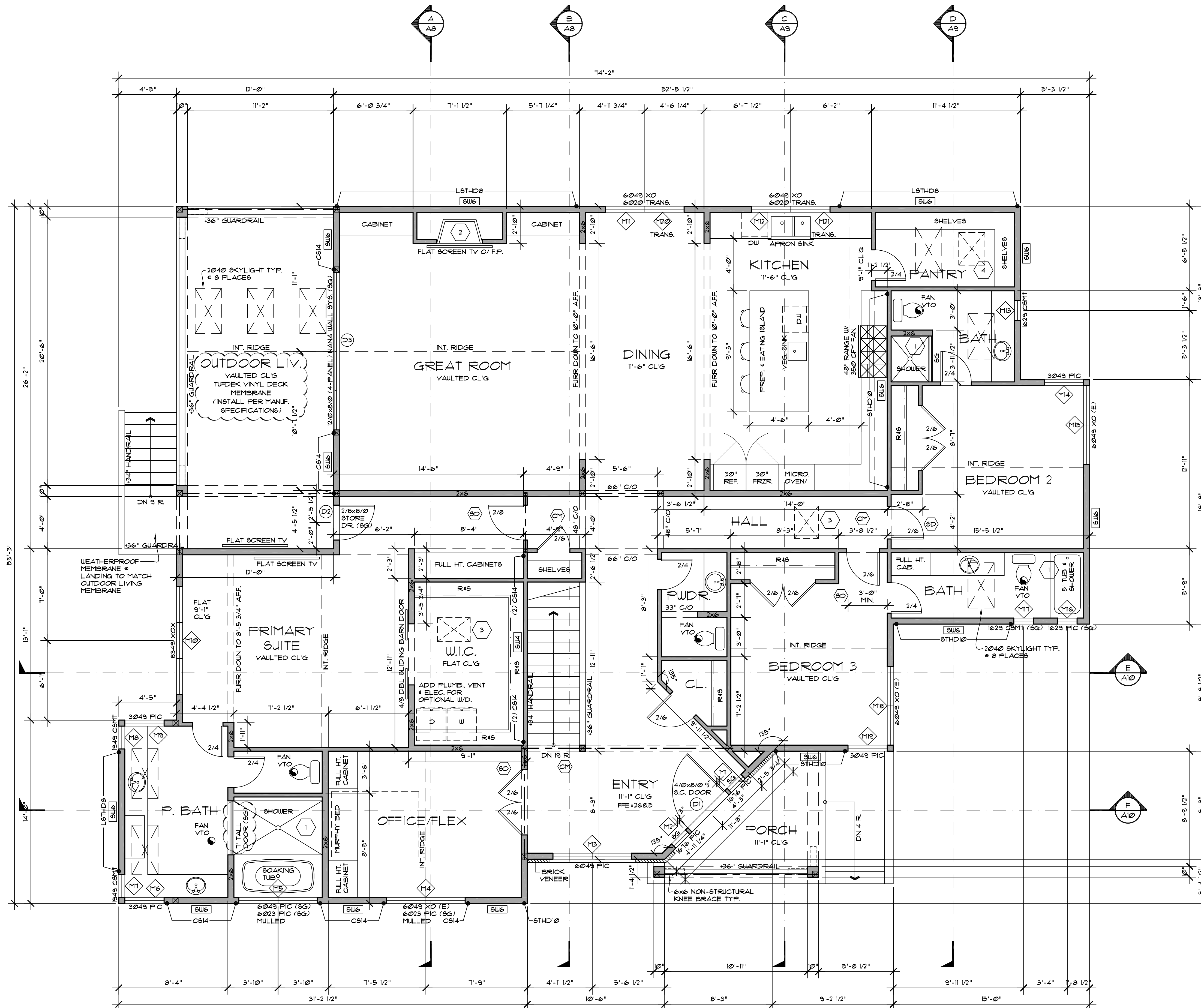
- 1 CONC. FIBERBOARD @ TUB & SHOWER SURROUND TO 6" ABOVE DRAIN
- 2 DIRECT VENT FIREPLACE, INSTALL PER MANUFACTURER'S SPECIFICATIONS
- 3 22"x30" ATTIC ACCESS, WEATHERSTRIP & INSULATE OVER TO EQUAL CEILING INSULATION. PROVIDE WOOD SURROUND TO PREVENT LOOSE INSULATION SPILLAGE TO LIVING SPACE
- 4 24"x30" 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
- 9D INDICATES 110V HARD WIRED SMOKE DETECTOR WITH BATTERY BACKUP
- CM INDICATES 110V HARD WIRED SMOKE & CARBON MONOXIDE DETECTOR WITH BATTERY BACKUP

SQUARE FOOTAGE SUMMARY

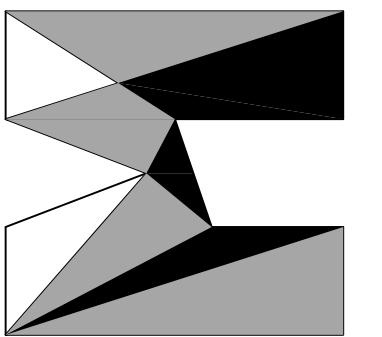
MAIN FLOOR	2,846#
BASEMENT FLOOR	1,340#
TOTAL HEATED	4,186#
GARAGE	
M.F. OUTDOOR LIVING	331#
M.F. FRONT PORCH	138#

PER ENERGY CREDIT 2.3:
REDUCE THE TESTED AIR LEAKAGE TO 15 AIR CHANGES PER HOUR MAXIMUM AT 50 PASCALS AND ALL WHOLE HOUSE VENTILATION REQUIREMENTS AS DETERMINED BY SECTION M1901.3 OF THE INTERNATIONAL RESIDENTIAL CODE OR SECTION 402.3 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"



88071 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

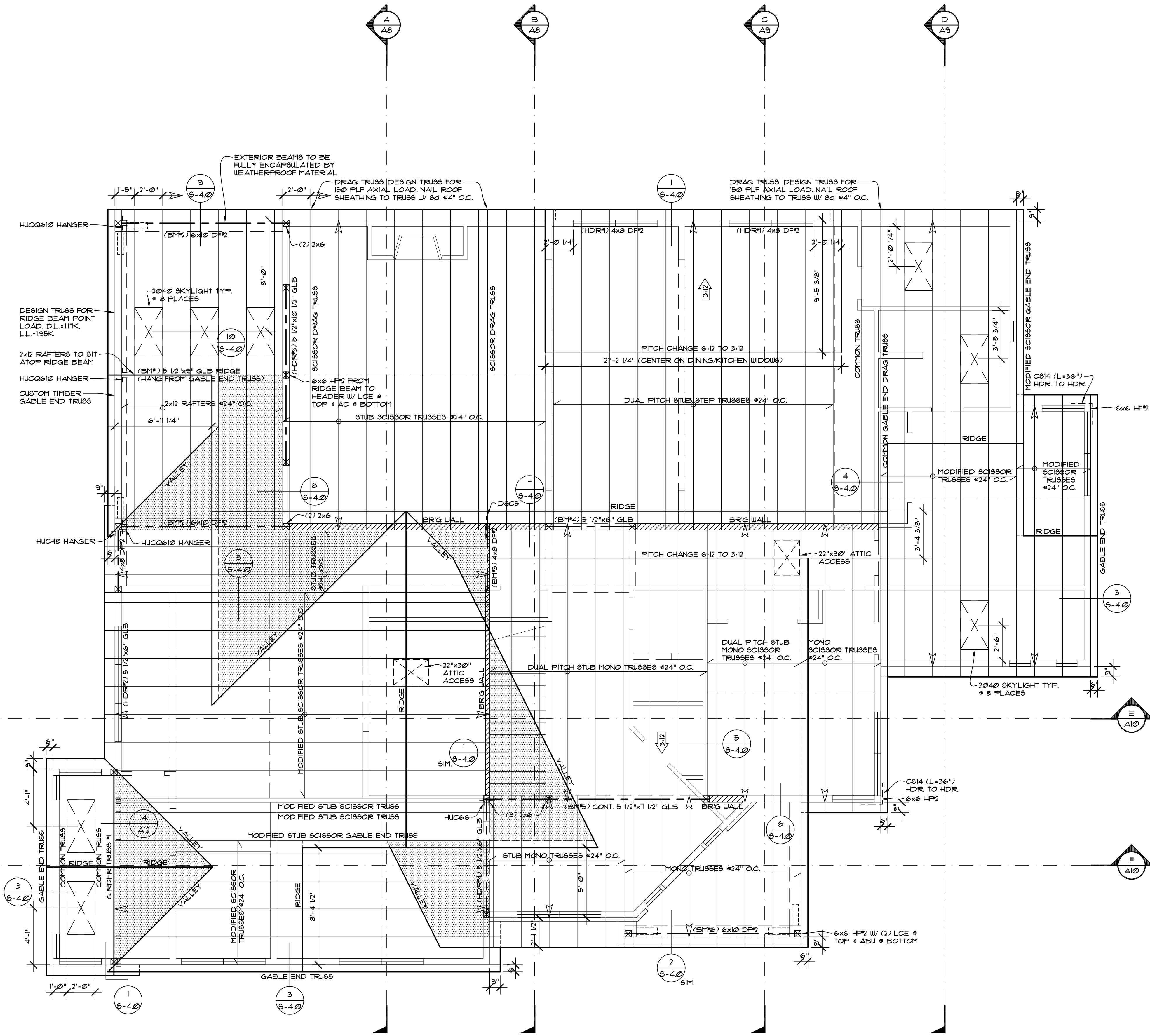
NOTE:
 ROOF SHEATHING IS CONTINUOUS ON ROOF TRUSSES/RAFTERS EXTENDING UNDER OVERFRAMED AREAS THAT ARE SHADED UNO. CUT 12"x12" HOLES IN SHEATHING @ EVERY OTHER BAY TO ALLOW FOR CROSS VENTILATION INTO OVERFRAMED AREAS.

ALL HEADERS TO BE 4x8 DP2 UNO.
 ALL POSTS TO BE (2) 2x6 HP2 UNO.
 ALL ROOF PITCHES TO BE 6:12 UNO. ∇ 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

ROOF VENTILATION CALCULATIONS

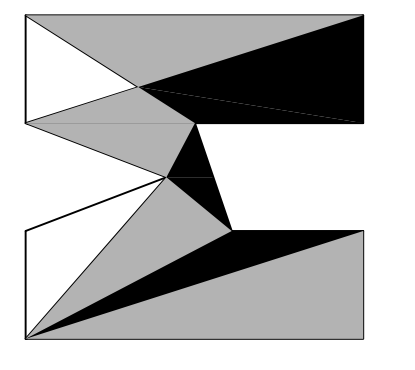
TOTAL VENTILATION REQUIRED: $2,846 / 300 = 9.5$ SF, NET FREE
 EAVE VENTILATION = 124 L.F. x 3.3 SQ. IN./L.F. = $2,844$
 (PROVIDE EAVE VENT BLOCKING @ EVERY BAY)
 MIN. 50% BY VENTILATION ABOVE EAVE = $9.5 \times 0.5 = 4.75$
 GABLE END VENTILATION ABOVE EAVE = $(5) 18' \times 24' = 19.0$ NET FREE
TOTAL VENTILATION PROVIDED:
 EAVE VENTILATION = $2,844$
 GABLE END ABOVE EAVE VENTILATION = 19.0
 TOTAL VENTILATION REQUIRED = 9.5
 TOTAL VENTILATION PROVIDED = $11,844$

 HATCHING DENOTES 2x OVERFRAMING



MAIN ROOF FRAMING PLAN
 SCALE: 1/4" = 1' - 0"

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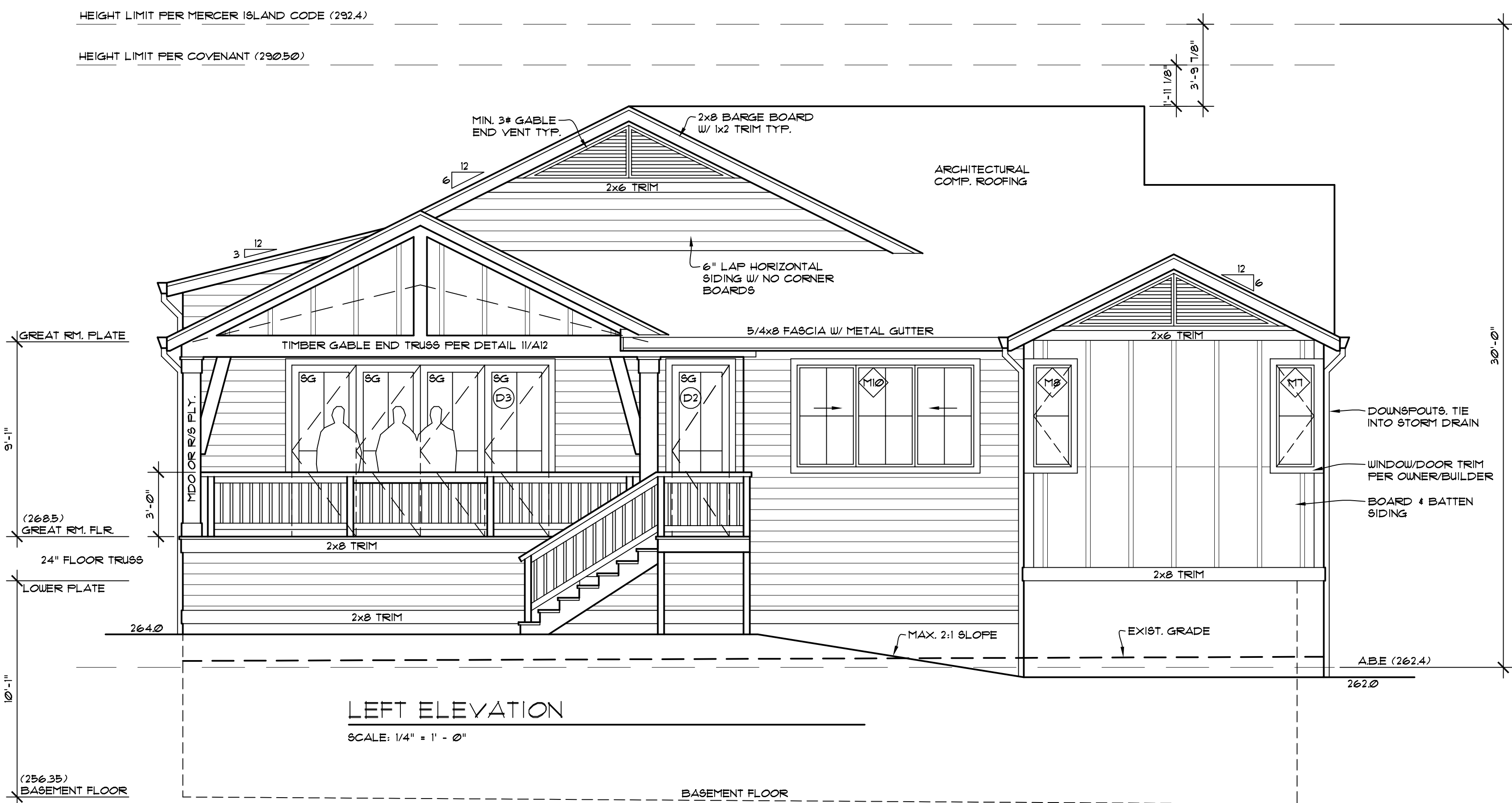
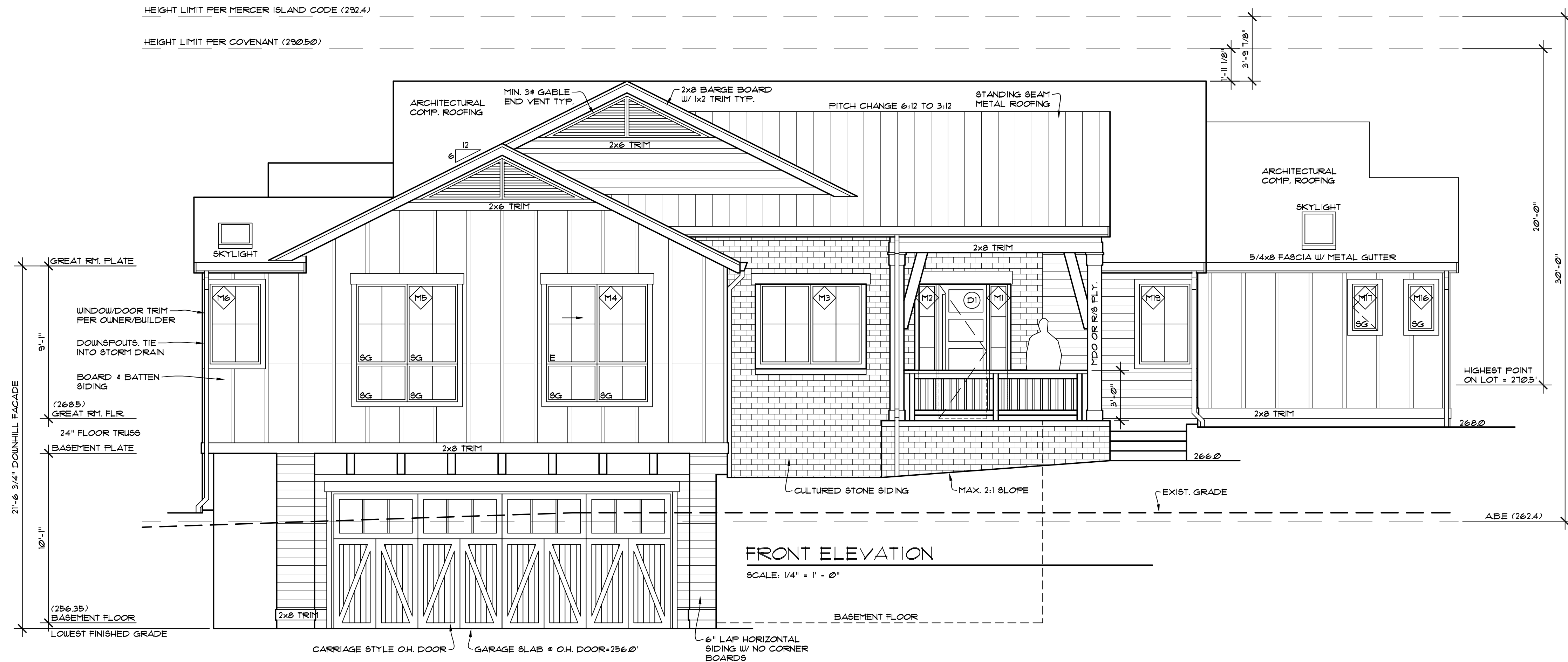


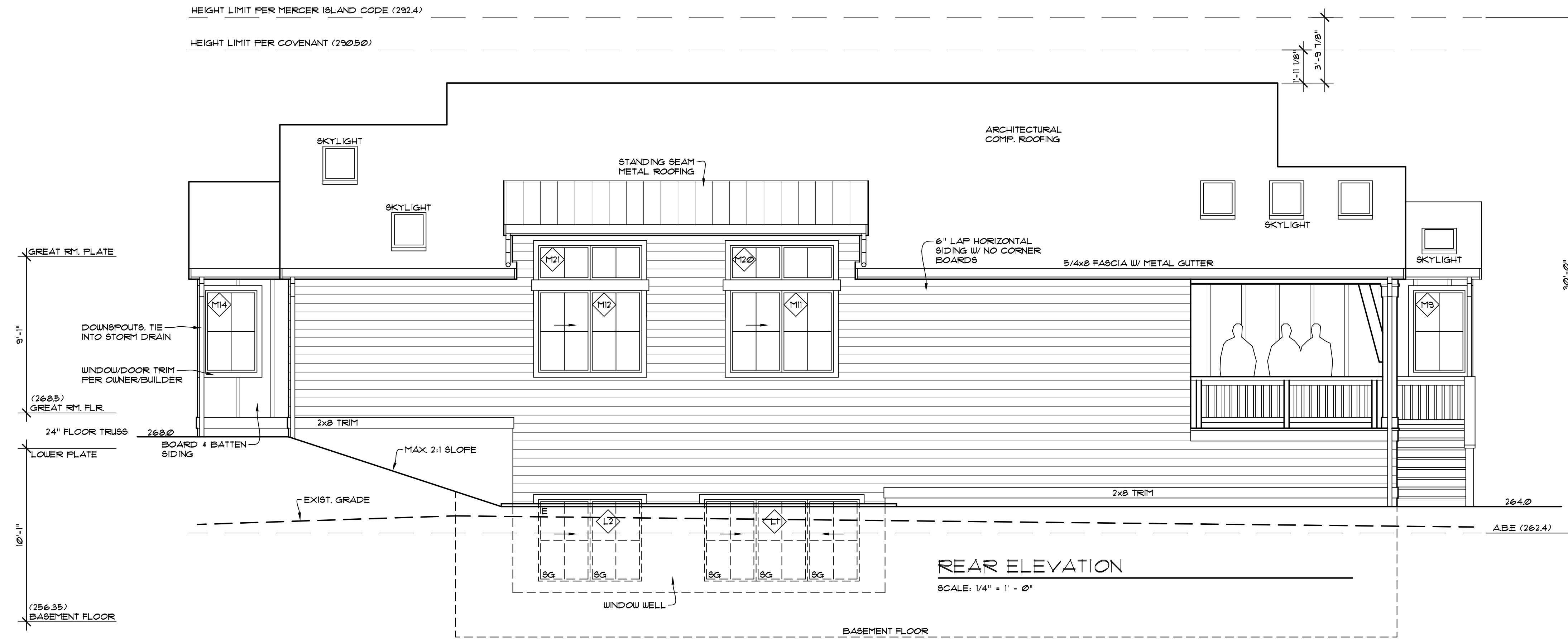
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JOB NO: 21-031
 DATE: 5/04/22
 DRN. BY: MM
 REVISED: 10/19/22

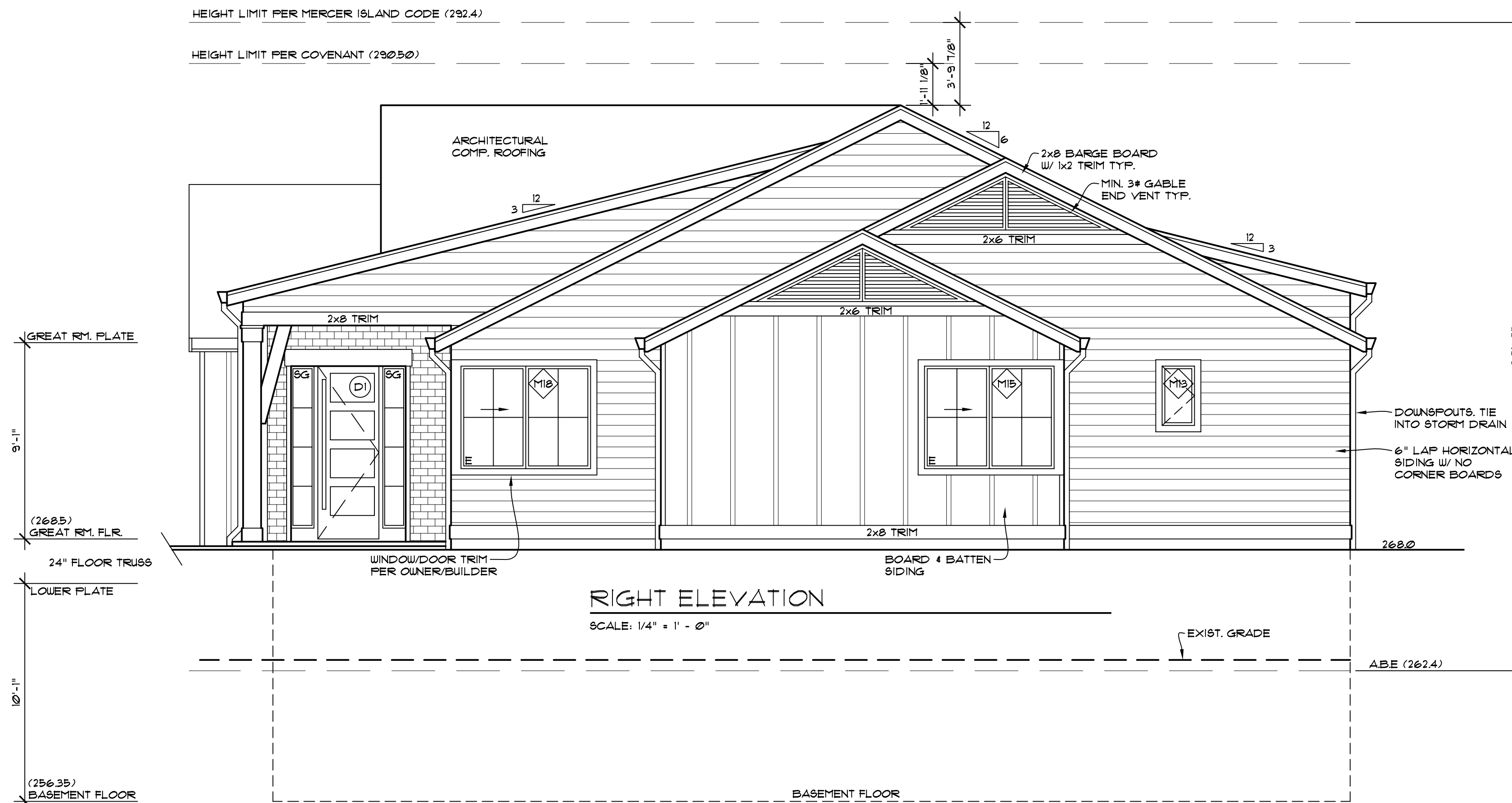
SHEET NO.
A5





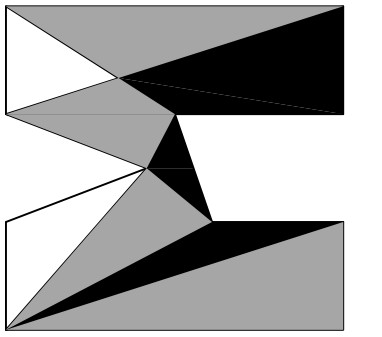
REAR ELEVATION

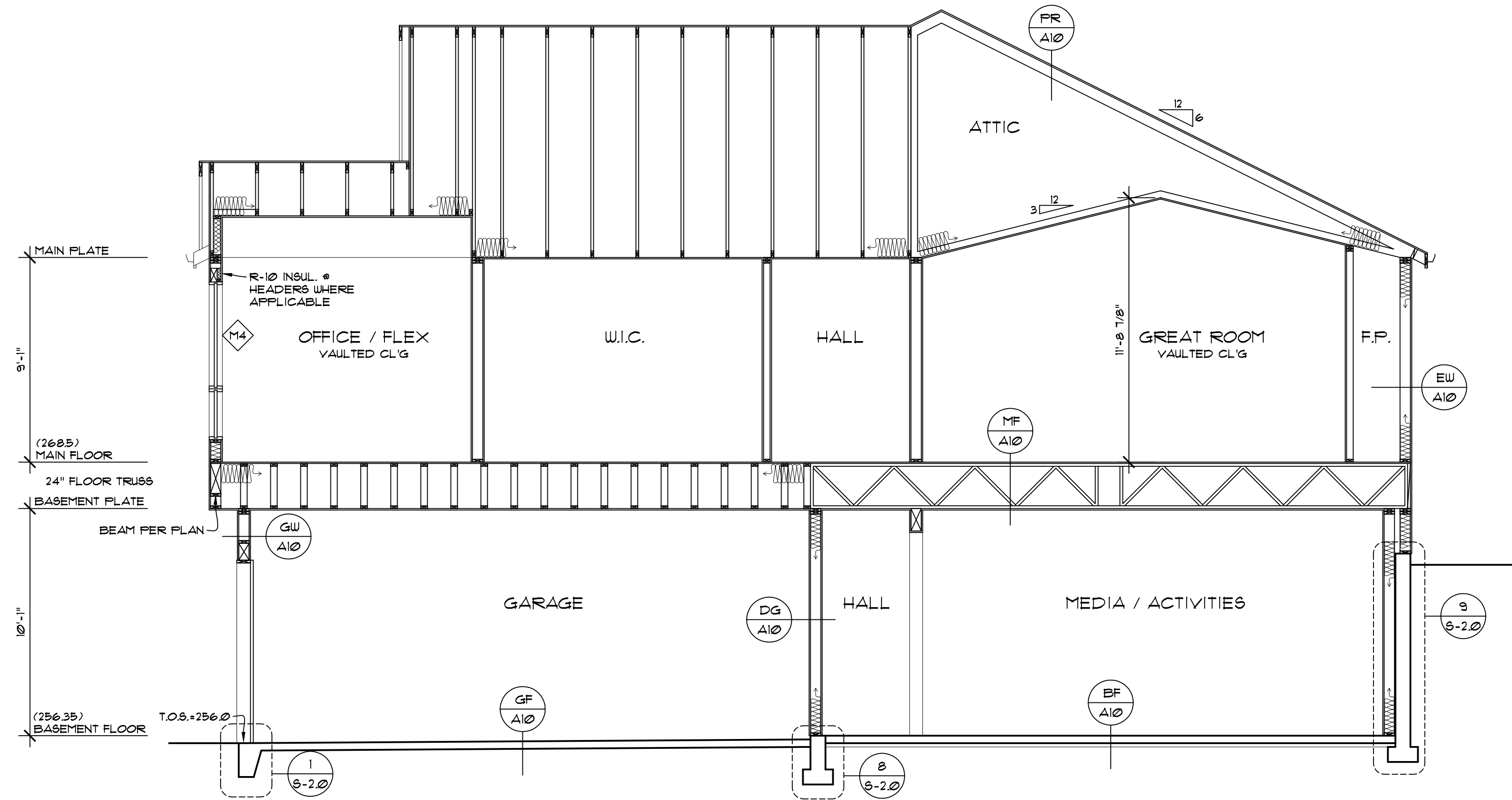
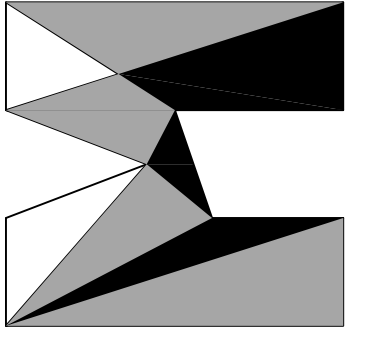
SCALE: 1/4" = 1' - 0"



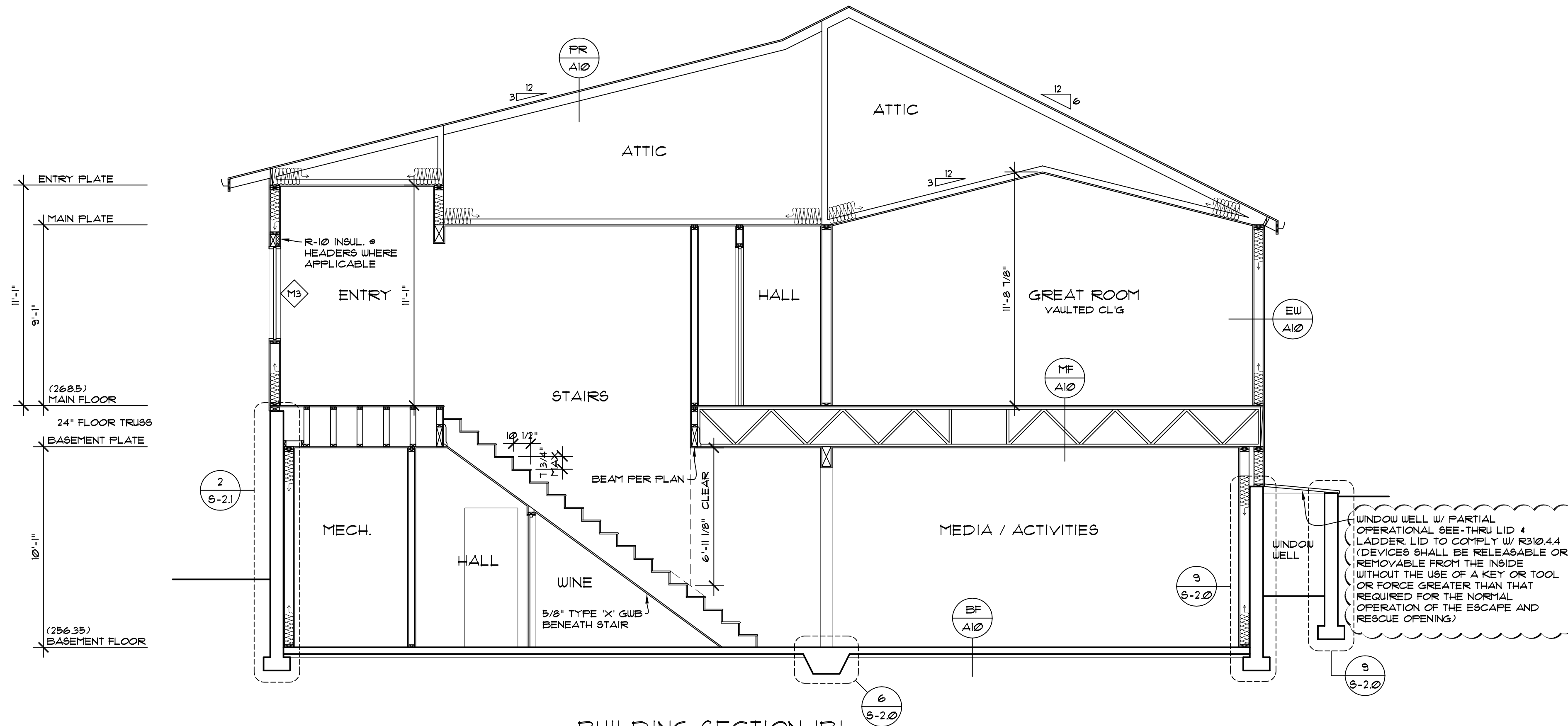
RIGHT ELEVATION

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





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



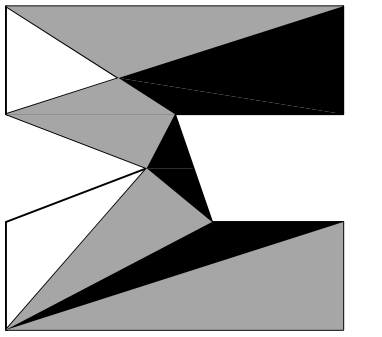
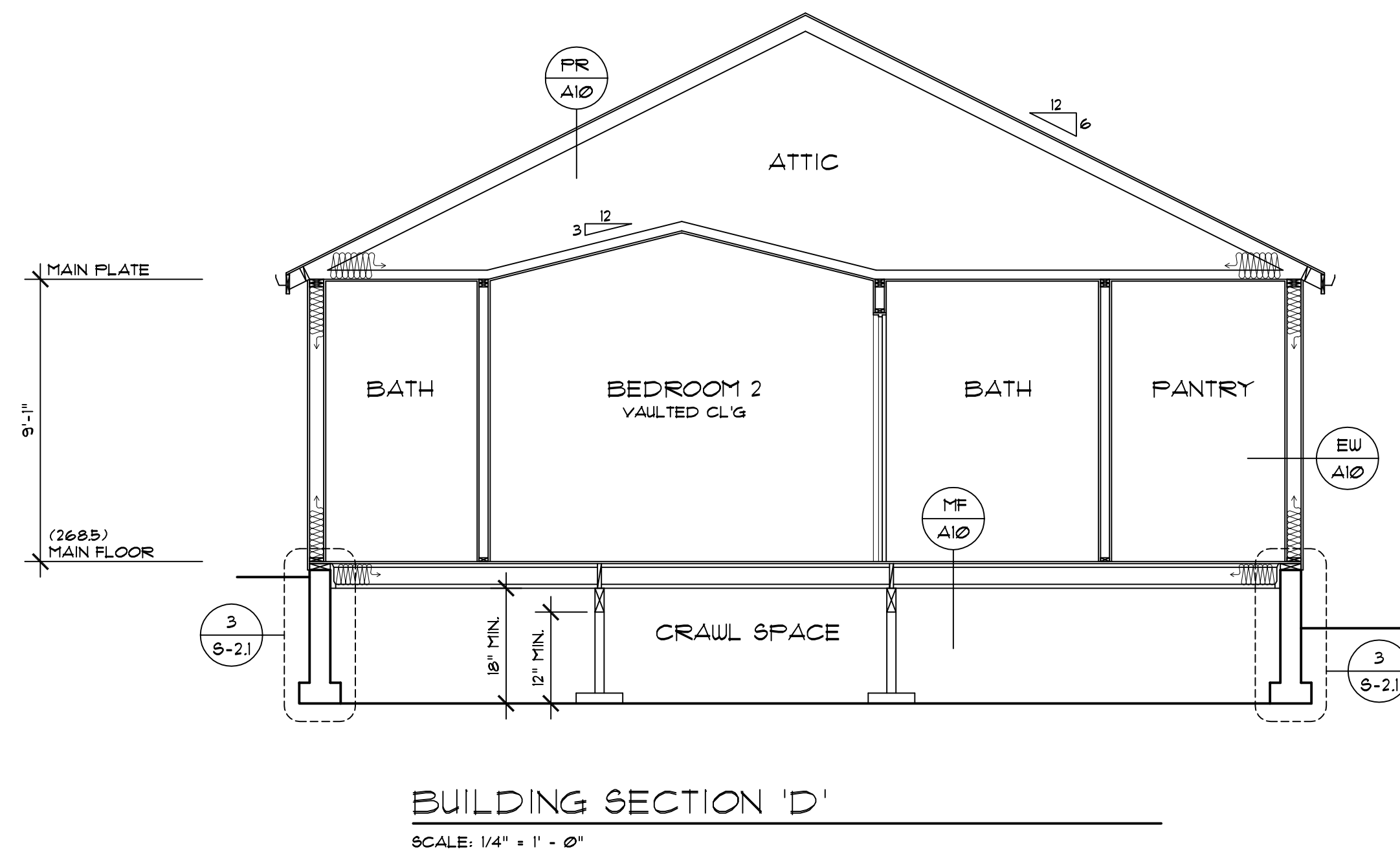
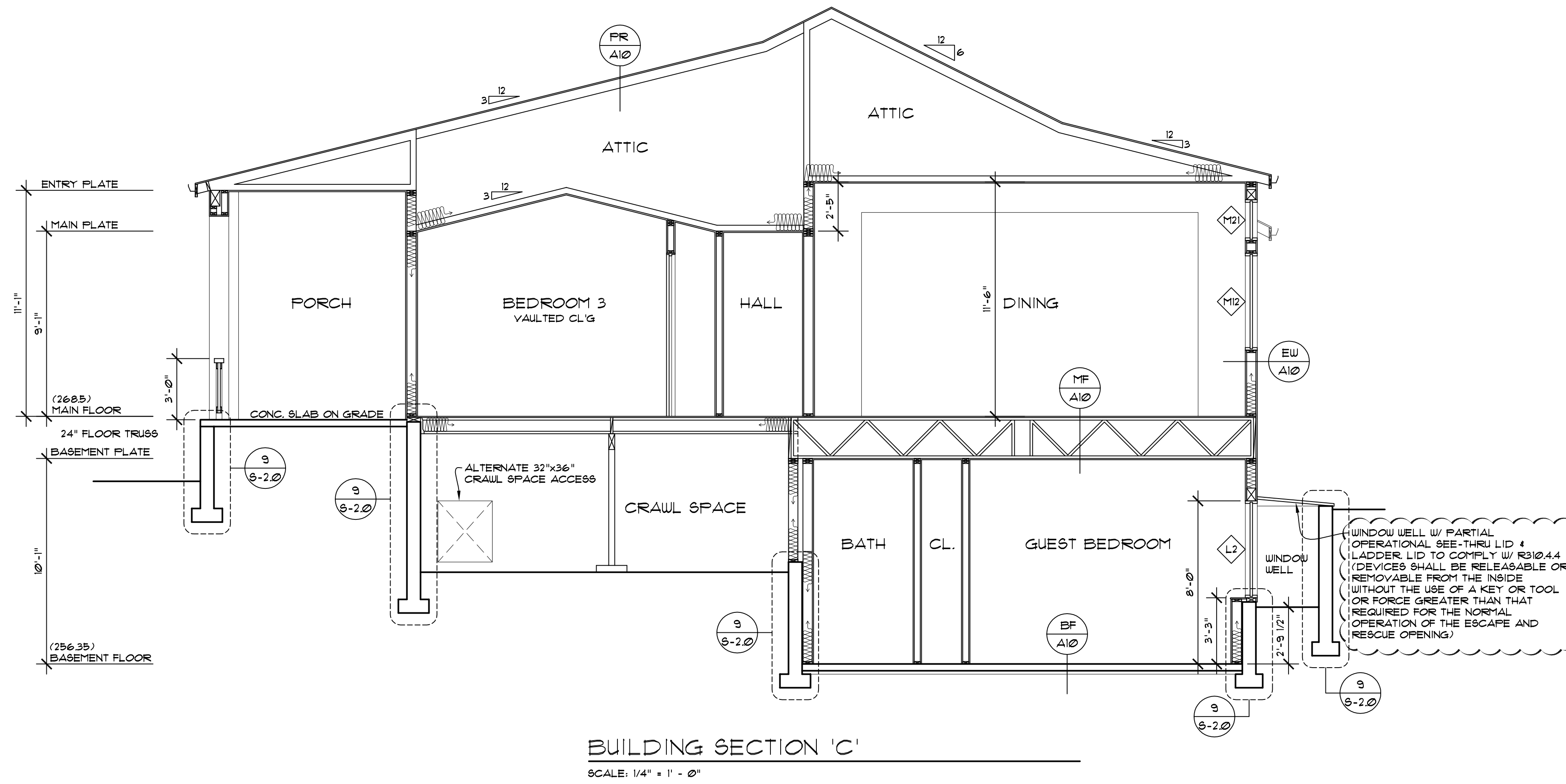
BUILDING SECTION 'B'
SCALE: 1/4" = 1' - 0"

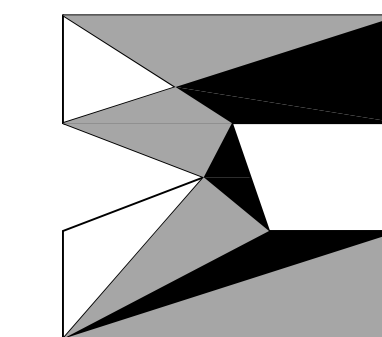
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SHEET NO.
A8



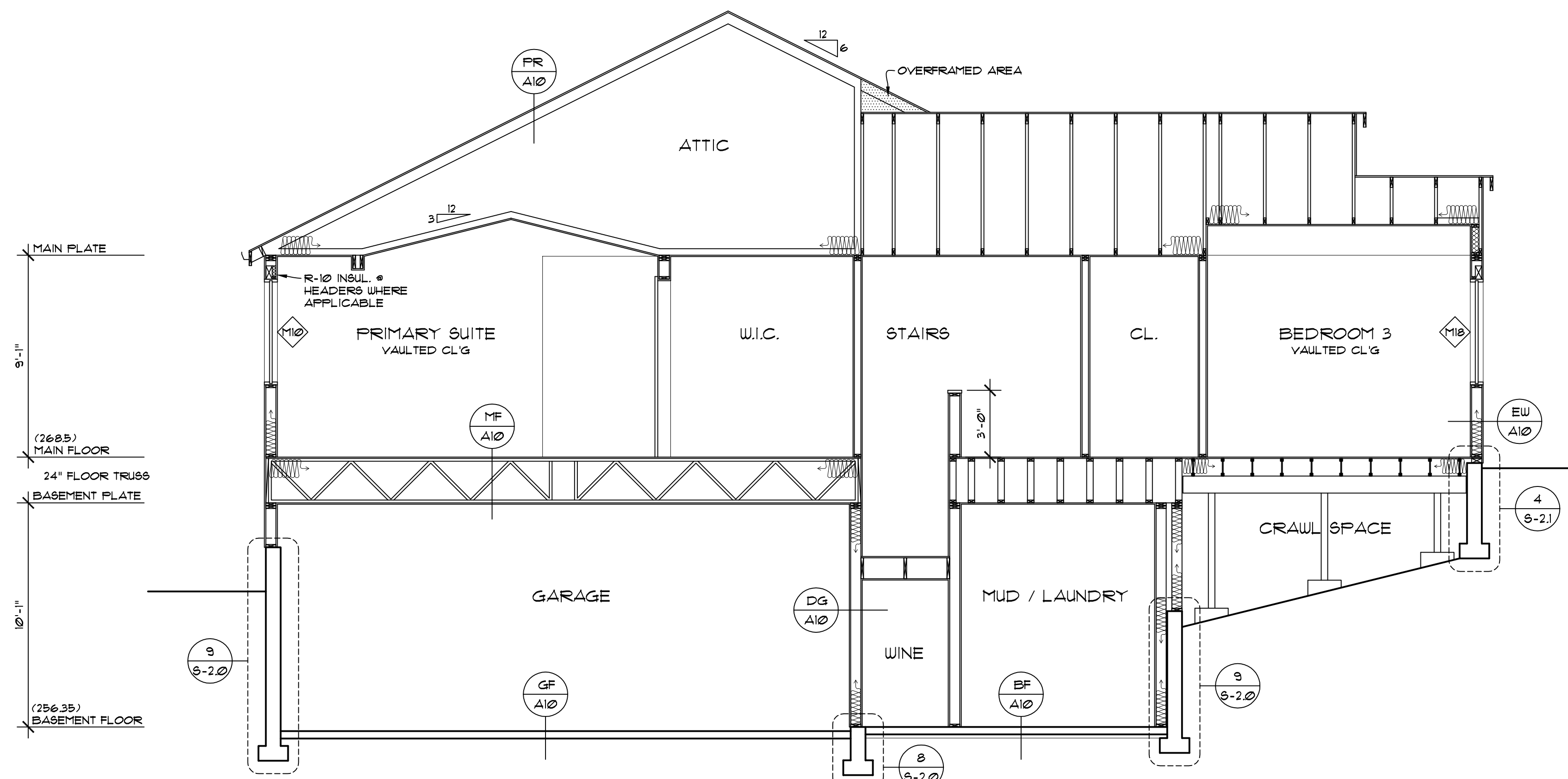


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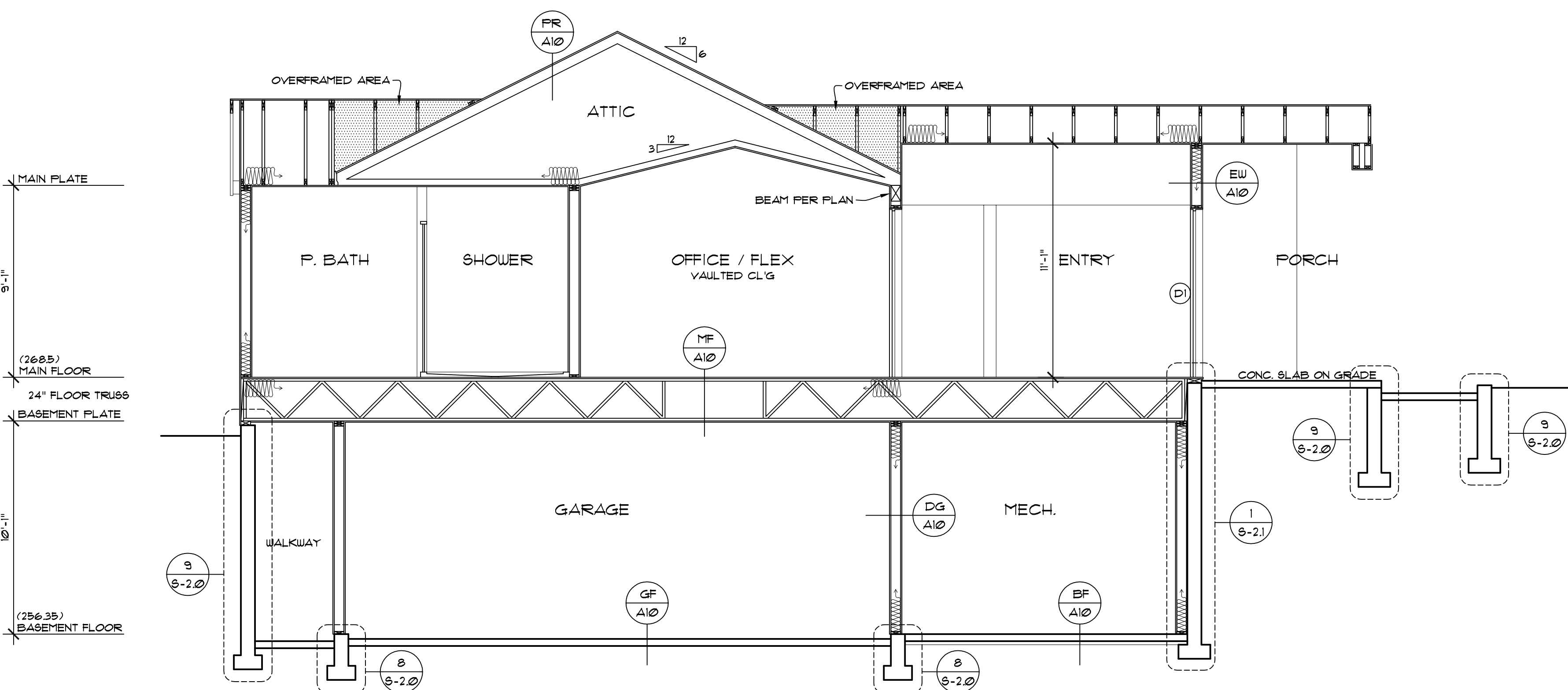
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JOB NO: 21-031
DATE: 5/04/22
DRWN. BY: MM
REVISED: 10/19/22

SHEET NO.
A10

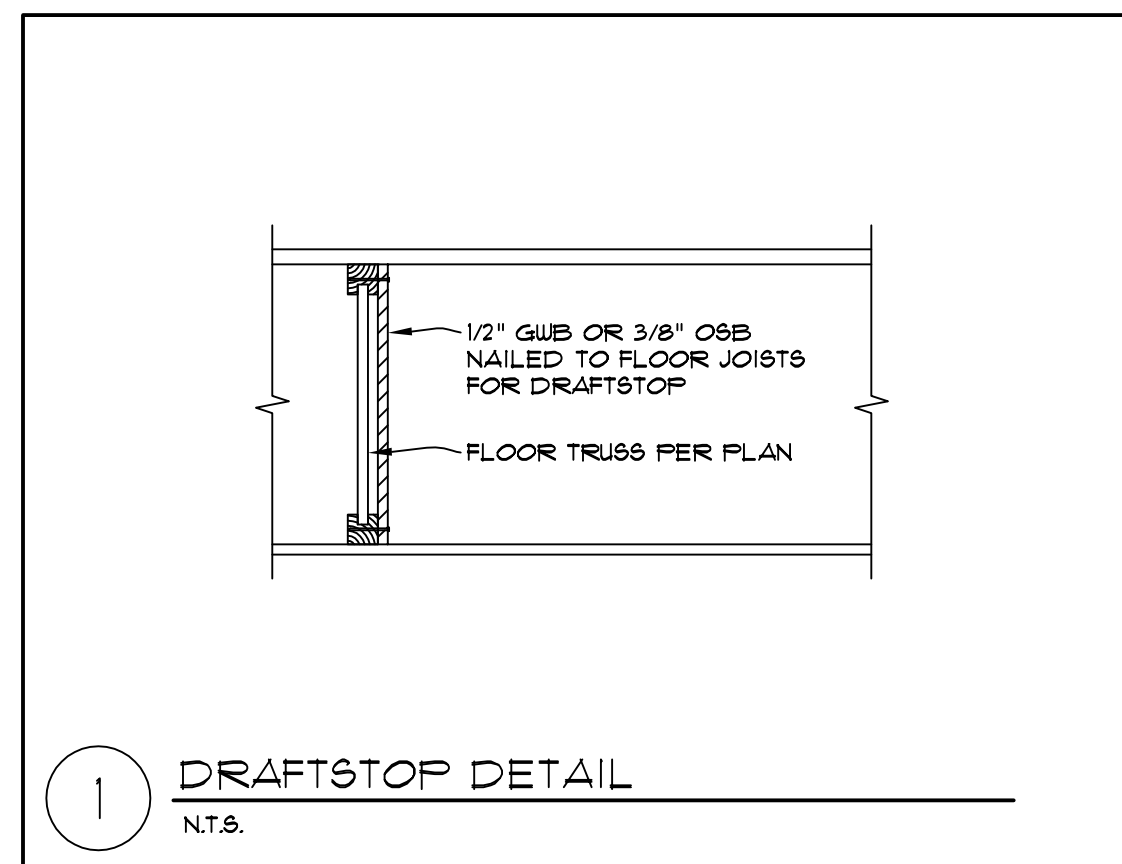


BUILDING SECTION 'E'
SCALE: 1/4" = 1' - 0"

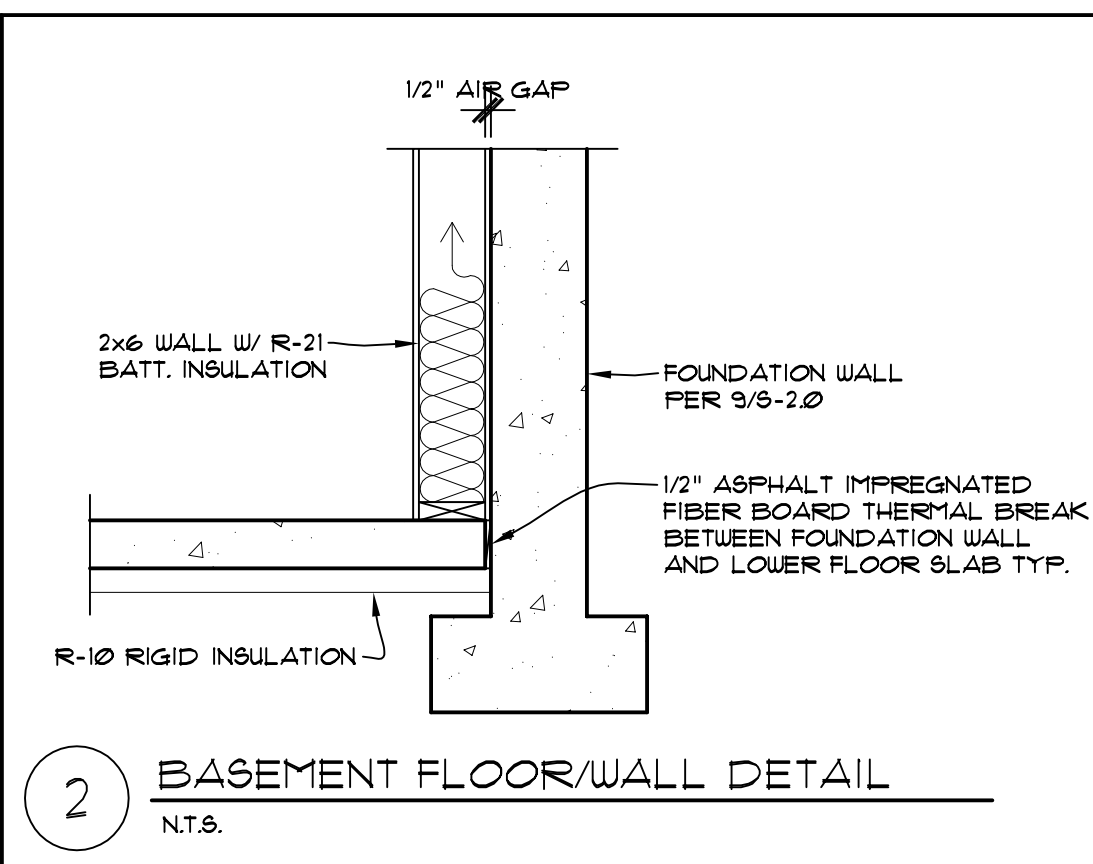


BUILDING SECTION 'F'
SCALE: 1/4" = 1' - 0"

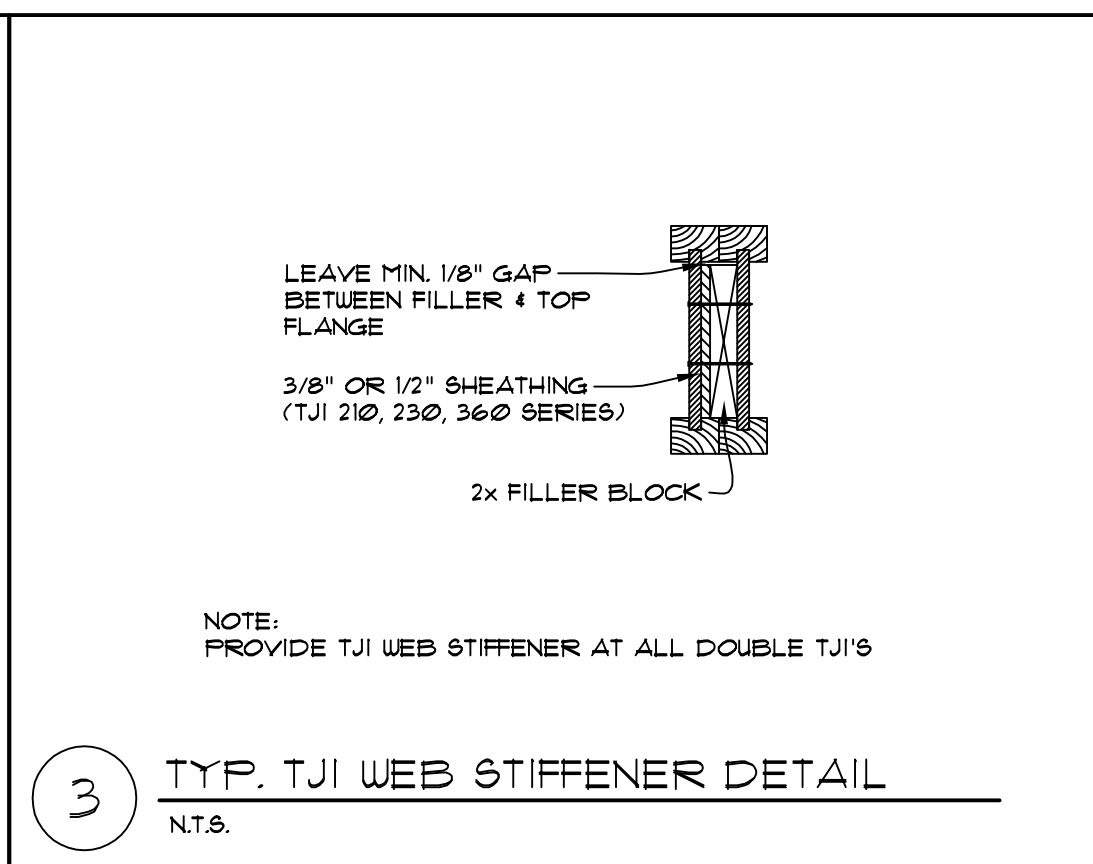
FR A10	PITCHED ROOF ROOFING PER ELEVATIONS 30# BUILDING PAPER SHEATHING PER STRUCTURAL ENGINEER TRUSSES OR 2x RAFTERS PER PLAN R-49 INSULATION • TRUSSED ROOF R-38 INSULATION • SINGLE RAFTER ROOF w/ VENT BAFFLE AS NEEDED 4 MIL UV. POLY. 5/8" GUB.
EU A10	EXTERIOR CONDITIONED WALL 1/2" GUB. R-21 BATT INSULATION 4 MIL UV RES. POLY. 2x6 STUDS @ 16" O.C. SHEATHING PER SHEAR WALL SCHED. BUILDING PAPER SIDING PER ELEVATIONS
GW A10	EXTERIOR GARAGE WALL 1/2" GUB. 4 MIL UV RES. POLY. 2x6 STUDS @ 16" O.C. SHEATHING PER SHEAR WALL SCHED. BUILDING PAPER SIDING PER ELEVATIONS
DG A10	DWELLING TO GARAGE WALL 1/2" GUB. 4 MIL UV RES. POLY. 2x6 STUDS @ 16" O.C. R-21 BATT INSULATION 1/2" GUB.
UF A10	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) FLOOR JOISTS PER PLAN R-38 BATT. INSULATION • AREAS OVER UNHEATED SPACE PER ENERGY CREDIT 13 5/8" GUB.
MF A10	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) FLOOR JOISTS PER PLAN R-38 BATT. INSULATION • AREAS OVER UNHEATED SPACE PER ENERGY CREDIT 13 5/8" GUB.
BF A10	BASEMENT FLOOR 4" CONCRETE SLAB ON GRADE w/ 6x6 W4x4 WUF 6 MIL VAPOR BARRIER 4" GRANULAR FILL R-10 RIGID INSULATION (MIN. COMPRESSIVE STRENGTH OF 15 PSI) UNDER ENTIRE SLAB • HEATED AREA
GF A10	GARAGE FLOOR 4" CONCRETE SLAB ON GRADE w/ 6x6 W4x4 WUF 6 MIL VAPOR BARRIER 4" GRANULAR FILL



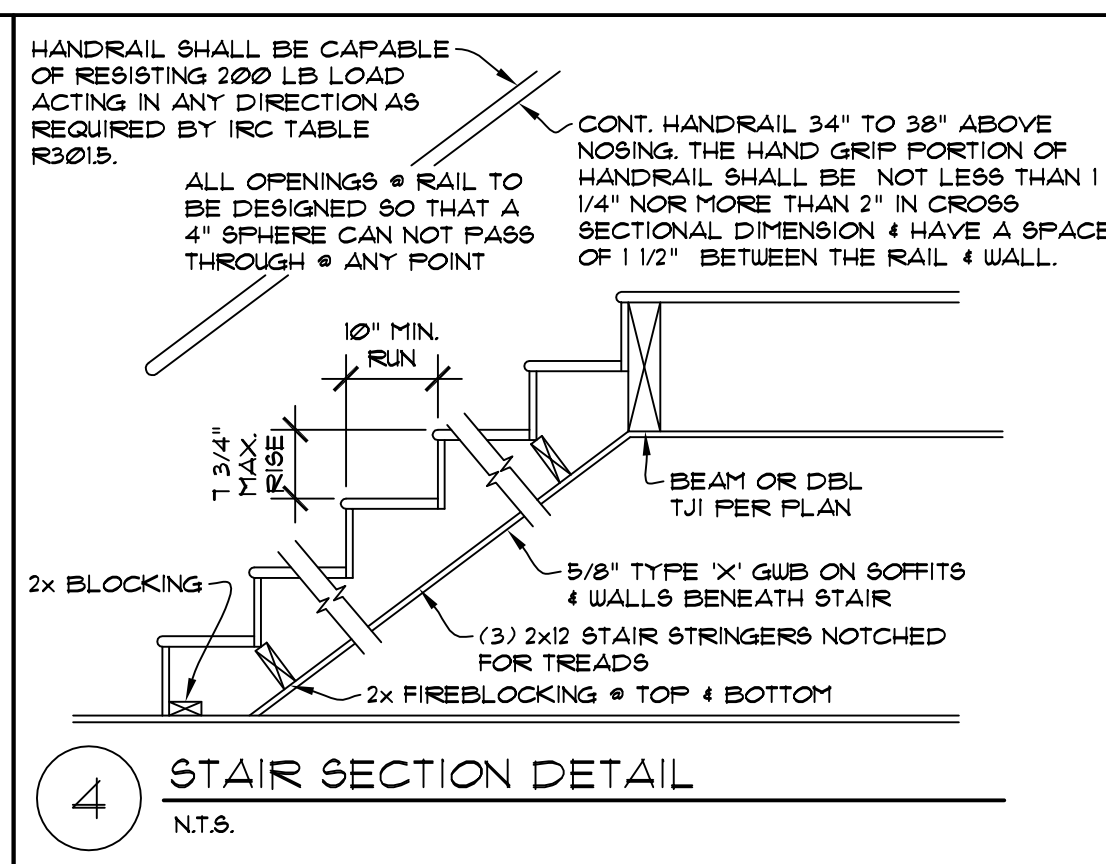
1 DRAFTSTOP DETAIL
N.T.S.



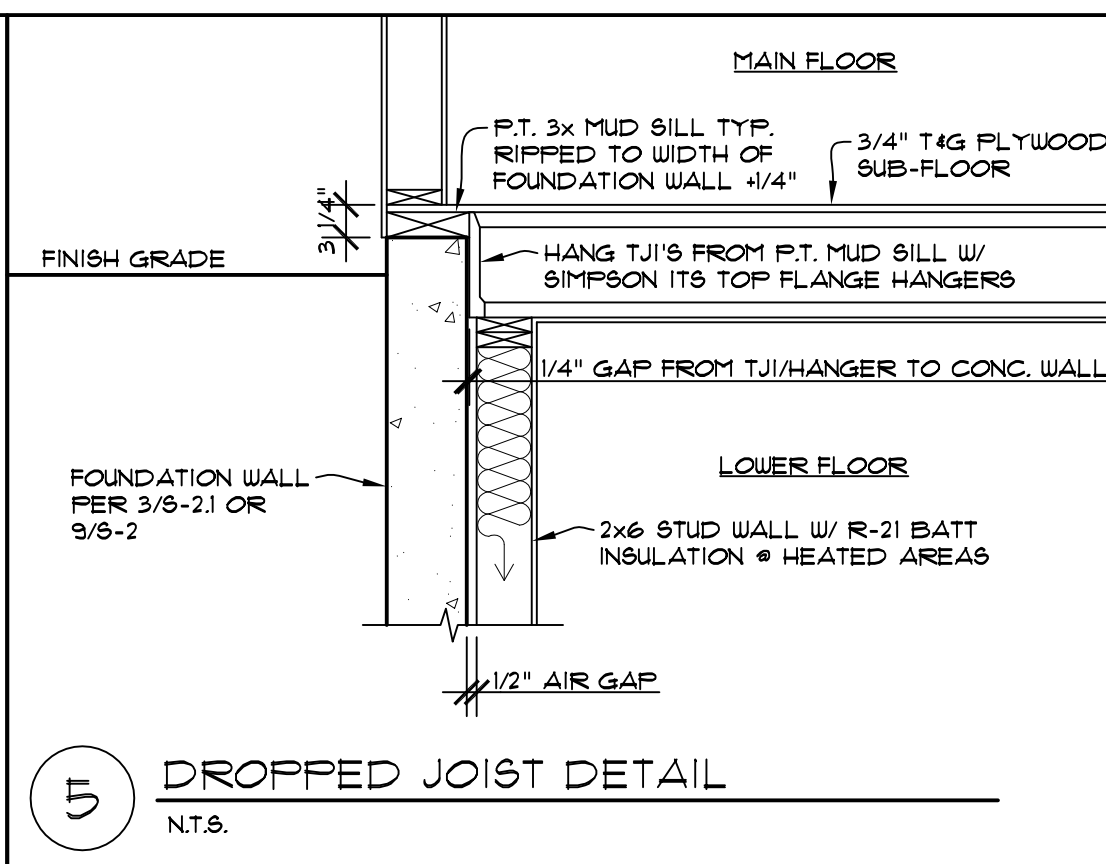
2 BASEMENT FLOOR/WALL DETAIL
N.T.S.



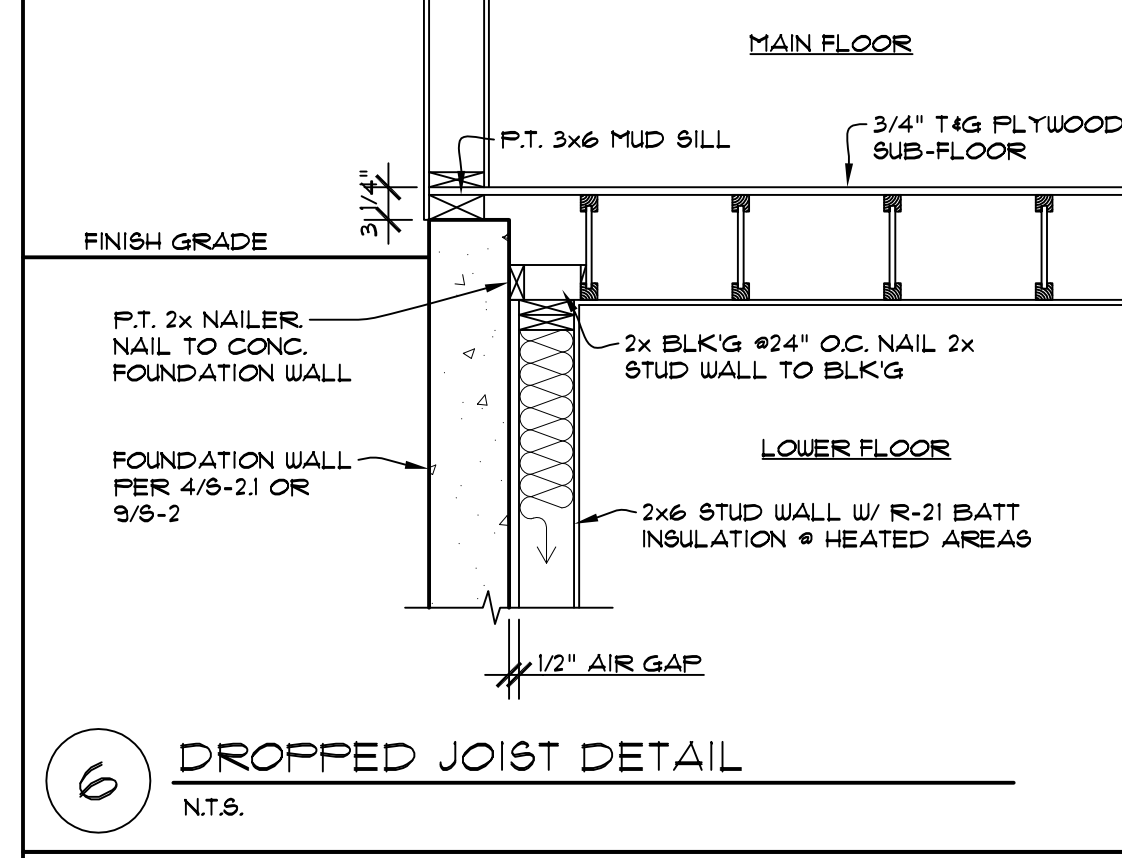
3 TYP. TJI WEB STIFFENER DETAIL
N.T.S.



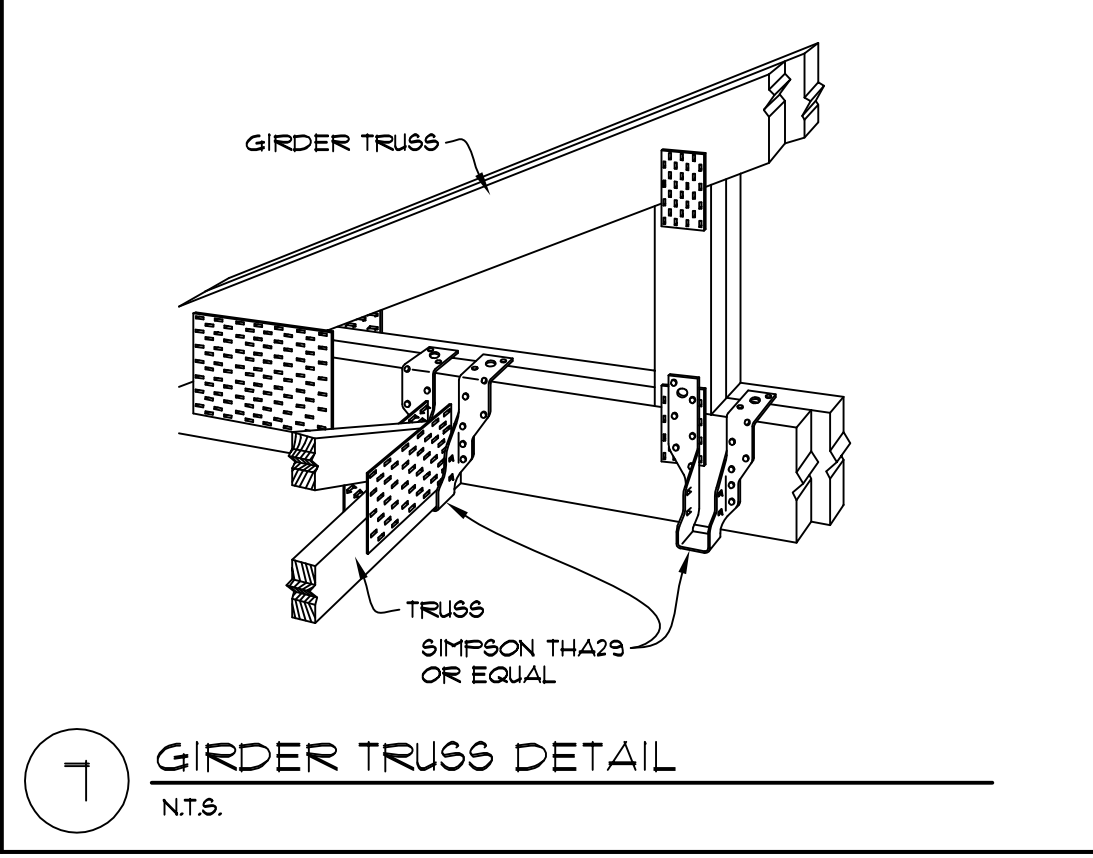
4 STAIR SECTION DETAIL
N.T.S.



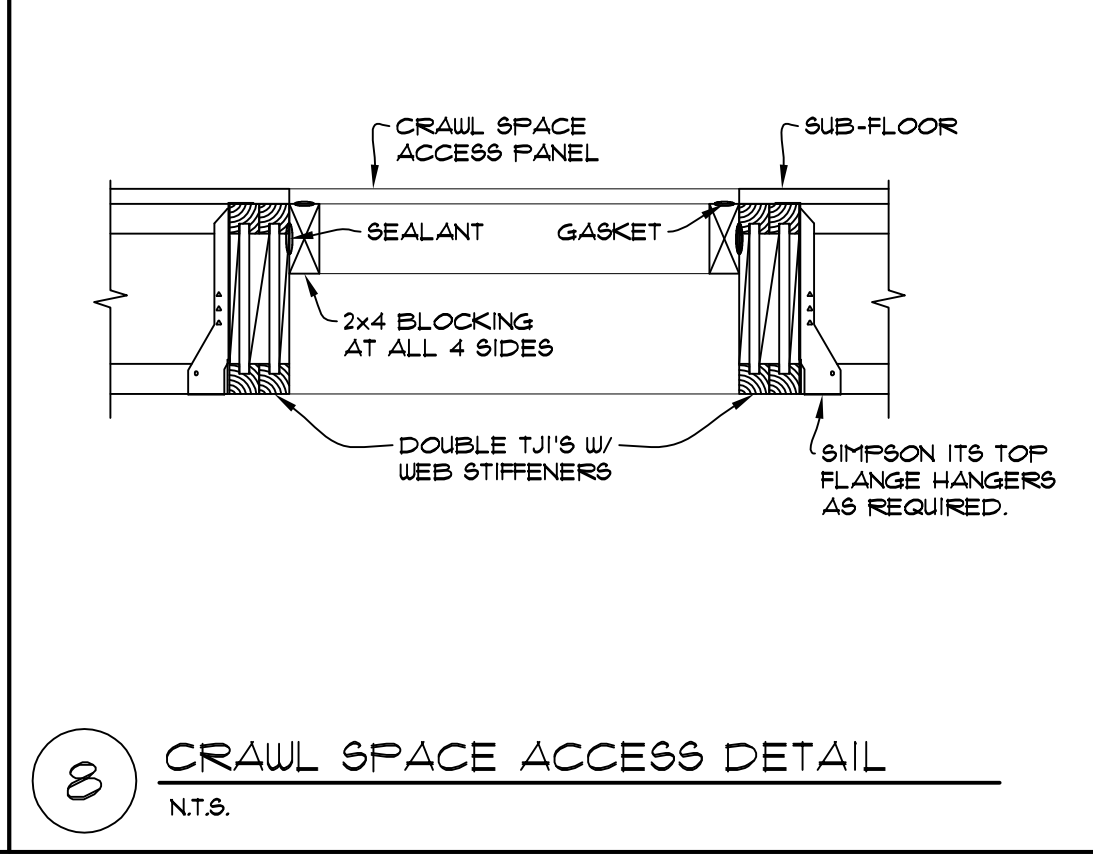
5 DROPPED JOIST DETAIL
N.T.S.



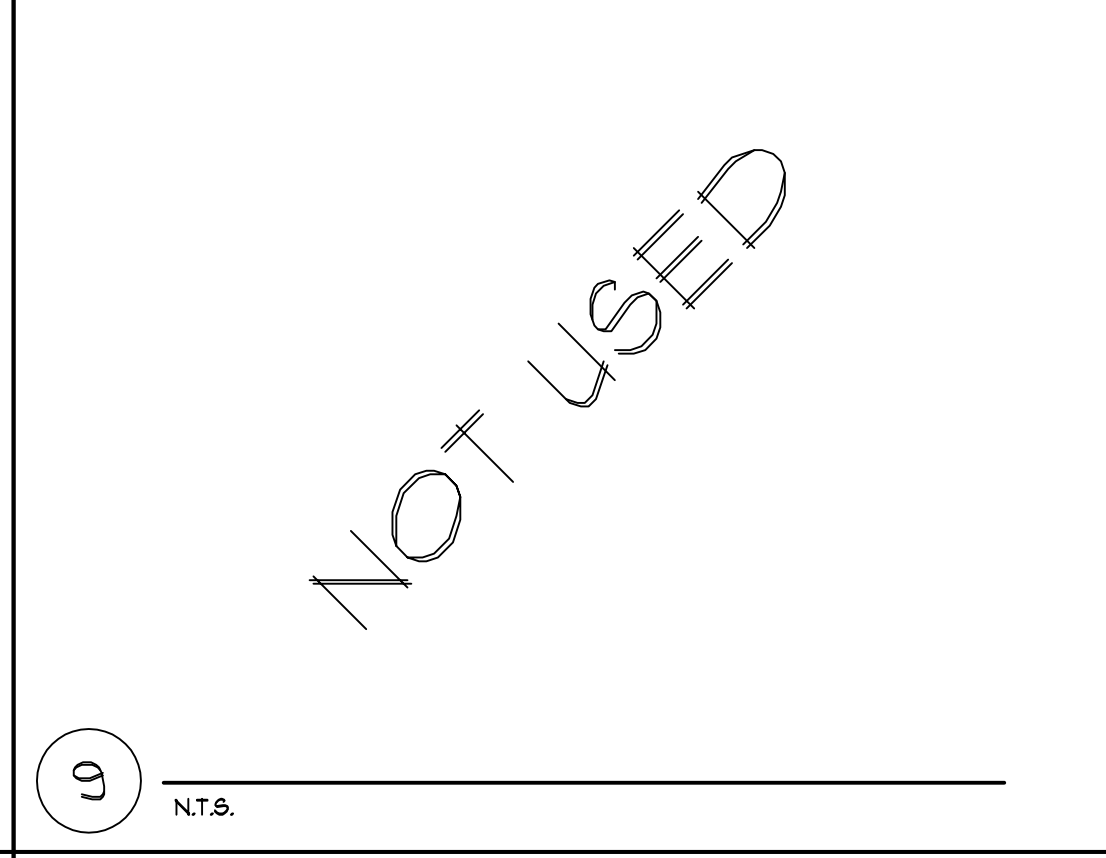
6 DROPPED JOIST DETAIL
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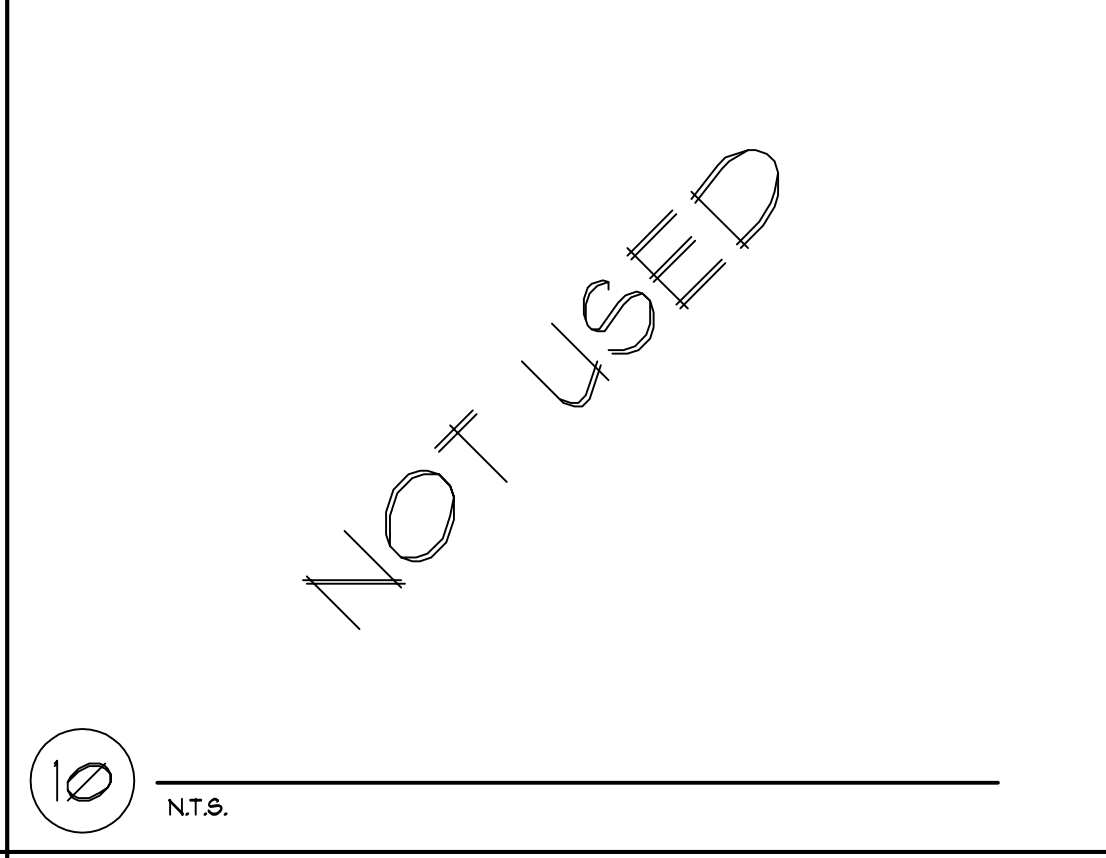
7 GIRDER TRUSS DETAIL
N.T.S.



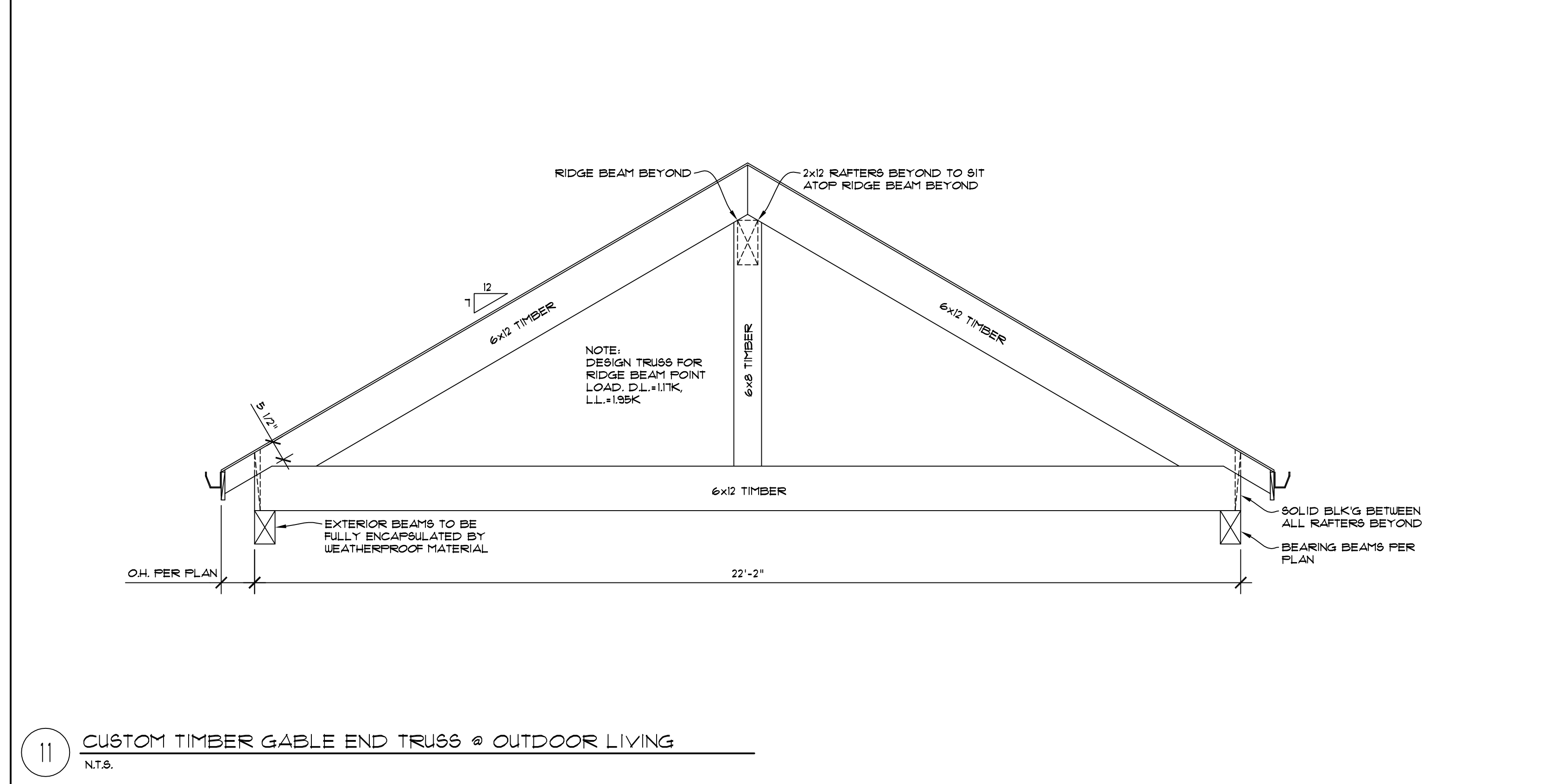
8 CRAWL SPACE ACCESS DETAIL
N.T.S.



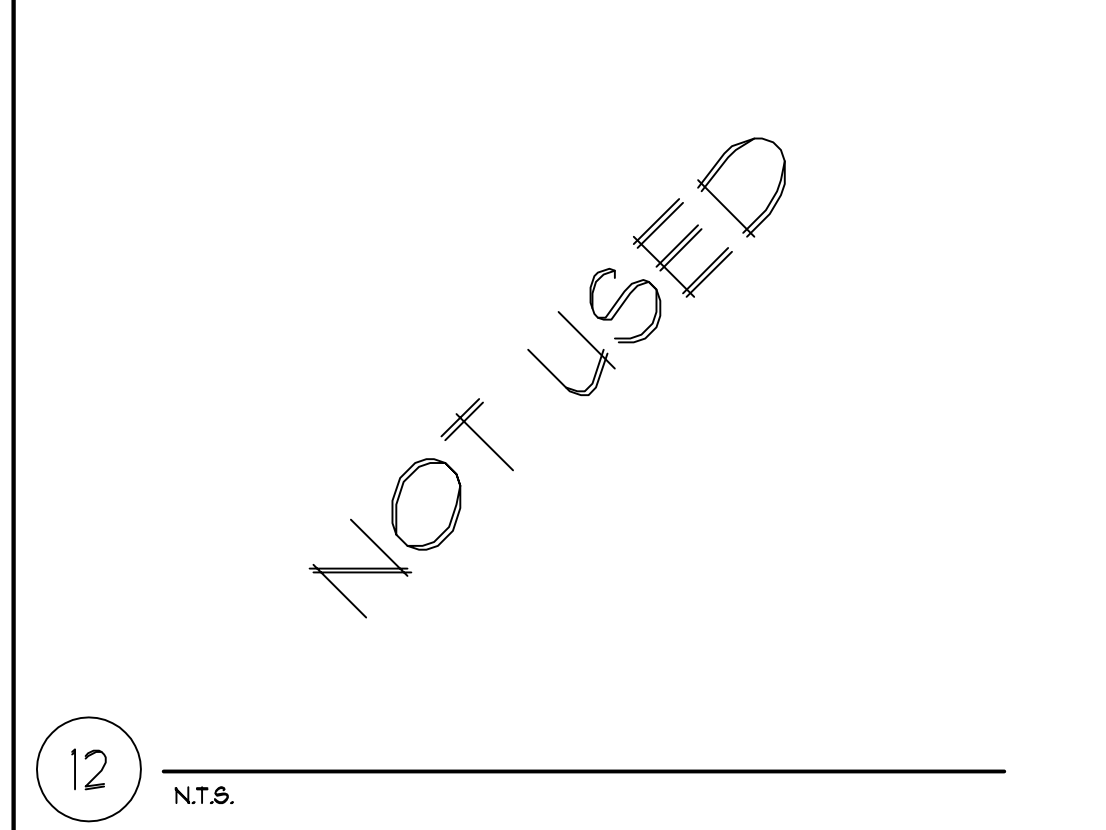
9 N.T.S.



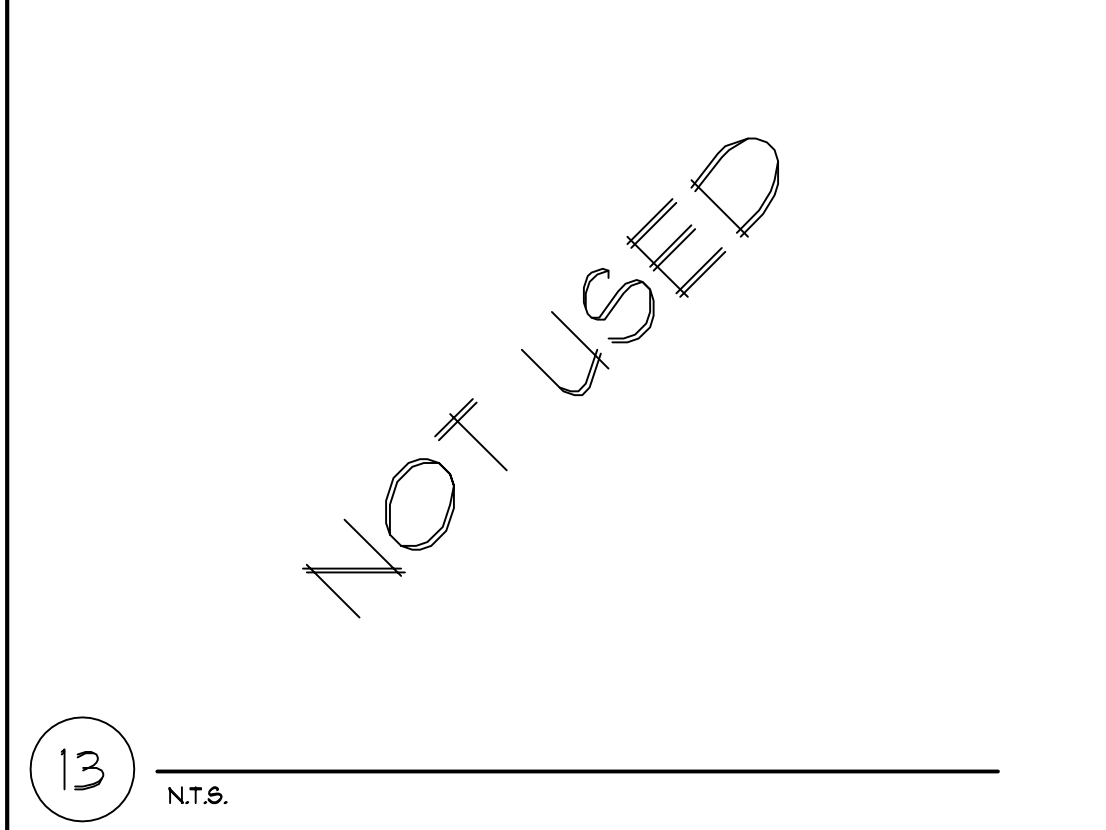
10 N.T.S.



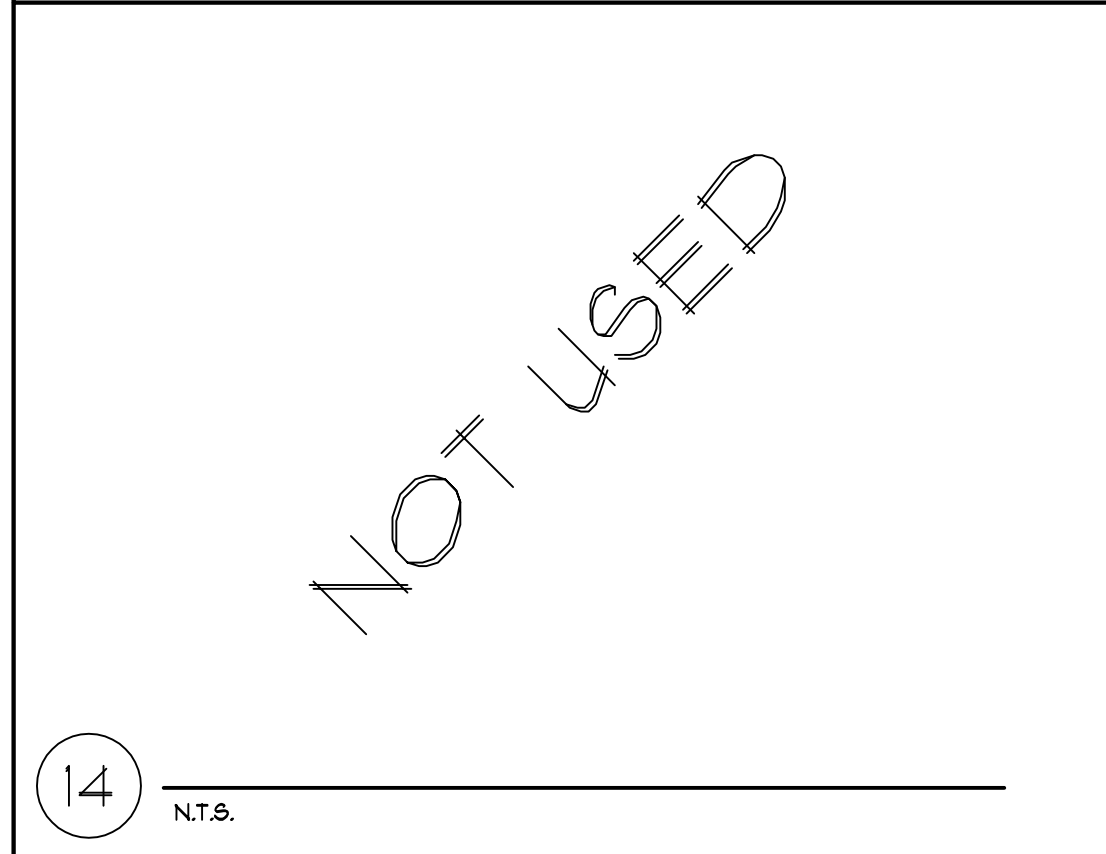
11 CUSTOM TIMBER GABLE END TRUSS @ OUTDOOR LIVING
N.T.S.



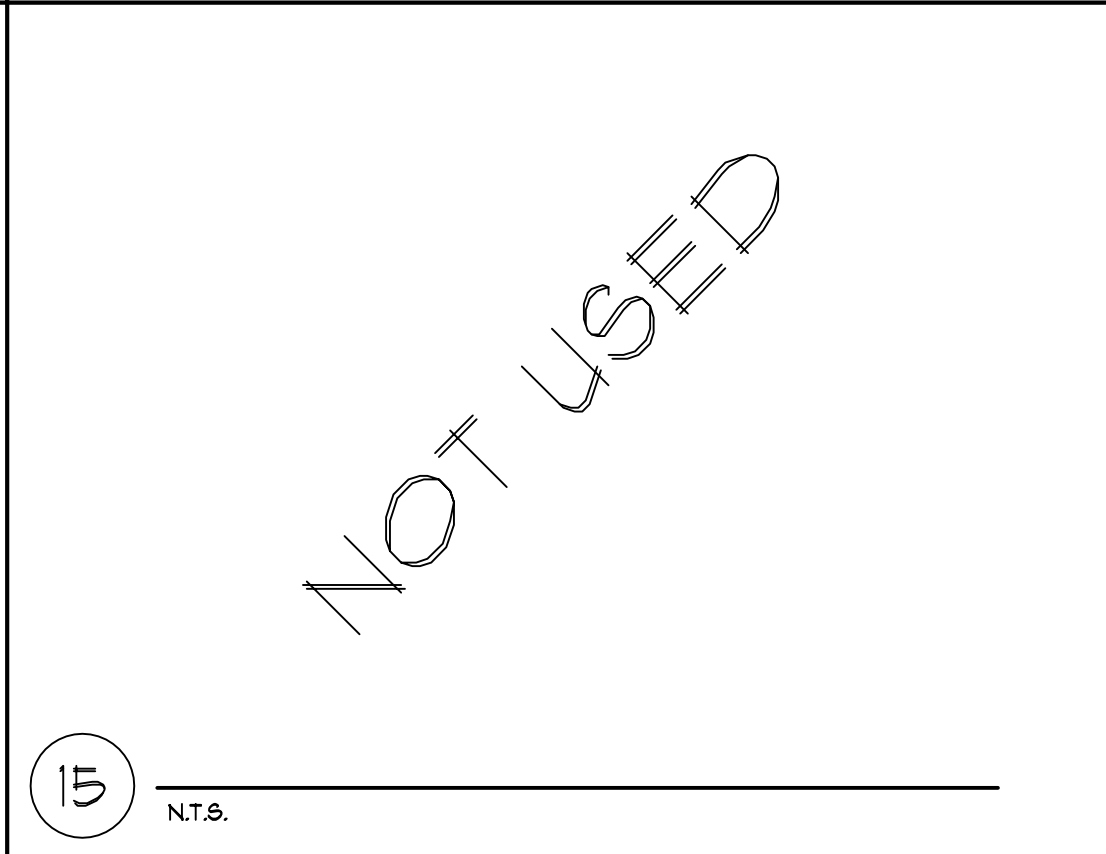
12 N.T.S.



13 N.T.S.



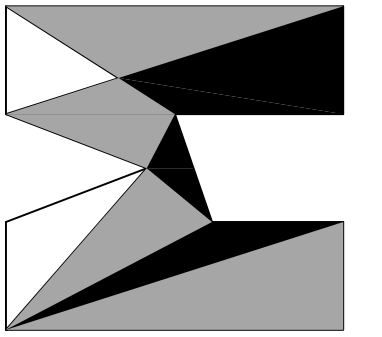
14 N.T.S.



15 N.T.S.

WINDOW SCHEDULE			
LOWER FLOOR WINDOWS		MAIN FLOOR WINDOWS	
L1 MEDIA HDR. HT. 7'-10"		M1 ENTRY HDR. HT. 8'-0"	
L2 MEDIA HDR. HT. 7'-10"		M2 DINING HDR. HT. 8'-0"	
		M3 KITCHEN HDR. HT. 8'-0"	
		M4 OFFICE HDR. HT. 8'-0"	
		M5 P. BATH HDR. HT. 8'-0"	
		M6 P. BATH HDR. HT. 8'-0"	
		M7 P. BATH HDR. HT. 8'-0"	
		M8 P. BATH HDR. HT. 8'-0"	
		M9 P. SUITE 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"	
			SG = SAFETY GLASS E = EGRESS WINDOW
			U-FACTOR FOR ALL WINDOWS = 0.28 U-FACTOR FOR DOORS = 0.20

DOOR SCHEDULE	
EXTERIOR DOORS	
D1 ENTRY	
D2 P. SUITE	
D3 GREAT ROOM	



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; S01 = 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 4.2.2.5.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 50 F 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.

CORNER 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 WMPA, WCLB 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, WATERBOARD, PARTICLEBOARD, T1-11 SIDING, AND COMPOSITES OF VENEER AND WOOD BASED MATERIAL. CONFORM TO PRODUCT STANDARDS PS-1 AND PS-2 OF THE U.S. DEPT. OF COMMERCE AND THE AMERICAN PLYWOOD ASSOCIATION (APA).

LOCATION	THICKNESS	SPAN RATING	MINIMUM APA 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."

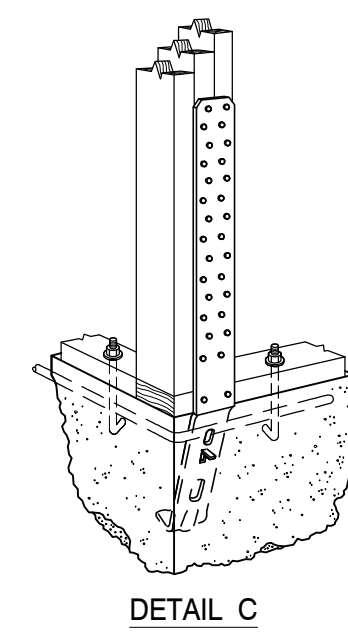
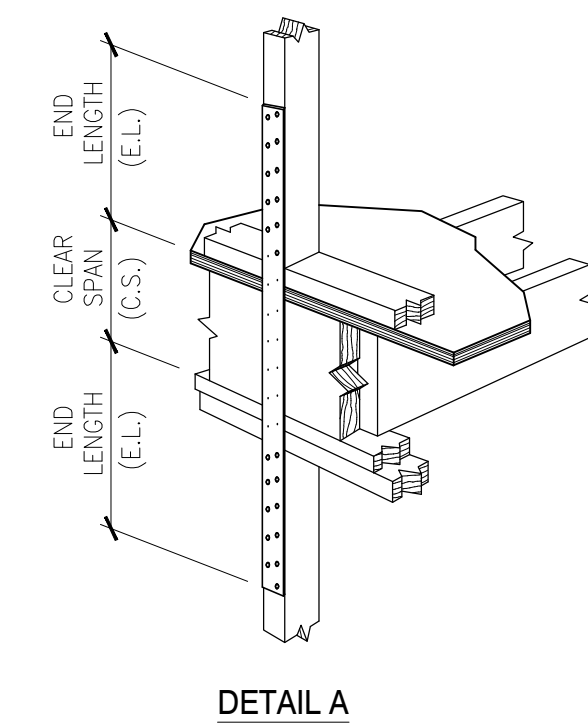
(1) **WALL FRAMING:** UNLESS OTHERWISE NOTED, ALL INTERIOR WALLS SHALL BE 2X4 @ 16"OC AND ALL EXTERIOR WALLS SHALL BE 2X6 @ 16"OC. PROVIDE (2)BUNDLED STUDS MIN AT WALL ENDS AND EACH SIDE OF ALL OPENINGS. UNO, ALL SOLID SAWN LUMBER HEADERS SHALL BE SUPPORTED BY A MINIMUM OF (1)TRIM AND (1)KING STUD AND ALL GULUM 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 GULUM 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.



MODEL # (1)	ANCHORAGE TYPE (4.8)	FASTENERS	END STUD REQUIRED (2.8)		CAPACITY (LBS)	
			DOUG-FIR	HEM-FIR	DOUG-FIR	HEM-FIR
CS14	FLR-TO-FLR STRAP (E.L.=19")	(30) 10d COMMON	2x STUD	2,490	2,490	
LSTD8/RJ	CAST-IN-PLACE	(16) 16d SINKERS	(2) 2x STUDS ⁷	1,975	1,975	
STD10/RJ	CAST-IN-PLACE	(18) 16d SINKERS	(2) 2x STUDS ⁷	2,640	2,640	
STD14/RJ	CAST-IN-PLACE	(22) 16d SINKERS	(2) 2x STUDS ⁷	3,695	3,695	

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

HOLDOWN SCHEDULE

SCALE: N.T.S.

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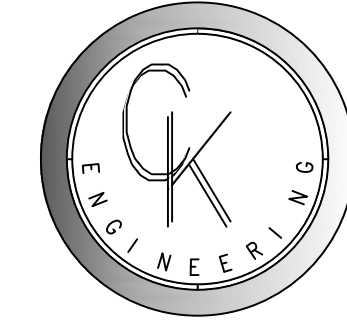
WOOD-FRAMED SHEAR WALL SCHEDULE								
FOR HEM-FIR/DOUG-FIR STUD FRAMING								
SW TYPE	SW SHEATHING APA-RATED	NAIL SIZE & SPACING @ PANEL EDGES [1, 2, 12]	RIM JOIST OR BLOCKING ATTACHMENT TO TOP PLATE BELOW [8, 9]	BOTTOM PLATE & EDGE MEMBER REQUIREMENTS [3, 7, 13]		SILL PLATE REQUIREMENTS		SHEAR LOAD CAPACITY (PLF)
				SHEAR NAILING TO WOOD FRAMING BELOW	BOTTOM P. AT FRAMING	ANCHOR BOLT TO CONCRETE FOUNDATION [10]	SILL P. AT FOUNDATION [11]	
SW-6	15/32" CD-EXT	0.131" @ 2 1/2" @ 6"OC	CLIP @ 18"OC	0.148" @ 3 1/4" @ 6"OC	2x	5/8" @ 48"OC	P.T. 2x	242
SW-4	15/32" CD-EXT	0.131" @ 2 1/2" @ 4"OC	CLIP @ 14"OC	0.148" @ 3 1/4" @ 4"OC	3x	5/8" @ 32"OC	P.T. 2x	353
					[15]	5/8" @ 48"OC	P.T. 3x [15]	

- NOTES:**
- INSTALL PANELS EITHER HORIZONTALLY OR VERTICALLY
 - 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.
 - BLOCKING IS REQUIRED AT ALL PANEL EDGES.
 - 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.
 - SHEAR WALLS DESIGNATED AS PERFORATED SHEAR WALLS REQUIRE SHEATHING, SHEAR WALL NAILING, ETC. ABOVE AND BELOW ALL OPENINGS.
 - 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.
 - INTERMEDIATE FRAMING TO BE 2x MINIMUM MEMBERS. ATTACH SHEATHING TO INTERMEDIATE FRAMING WITH 0.148" @ 2 1/2" NAILS AT 12"OC WHERE STUDS ARE SPACED AT 16"OC AND 0.148" @ 2 1/2" NAILS AT 6"OC WHERE STUDS ARE SPACED AT 24"OC.
 - BASED ON 0.131" @ 1 1/2" NAILS USED TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING. USE 0.131" @ 2 1/2" NAILS WHERE INSTALLED OVER SHEATHING.
 - FRAMING CLIPS: SIMPSON "A35" OR "LTP5" OR APPROVED EQUIVALENT.

WOOD-FRAMED SHEAR WALL SCHEDULE

SCALE: N.T.S.

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10/15/2022

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

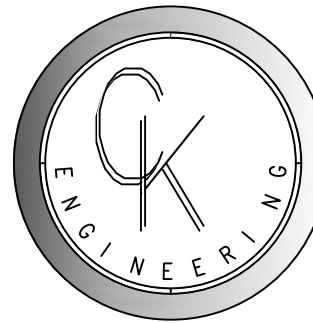
REVISION #	DATE	DESCRIPTION

Drawn By: PK
 Checked By: SC
 Date: 10-15-2022

CK JOB NO.
22-021

STRUCTURAL NOTES/SCHED.

S-1.0



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Lake Forest Park, WA 98155
Phone: (206) 417-0670



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MERCER ISLAND, WA 98040

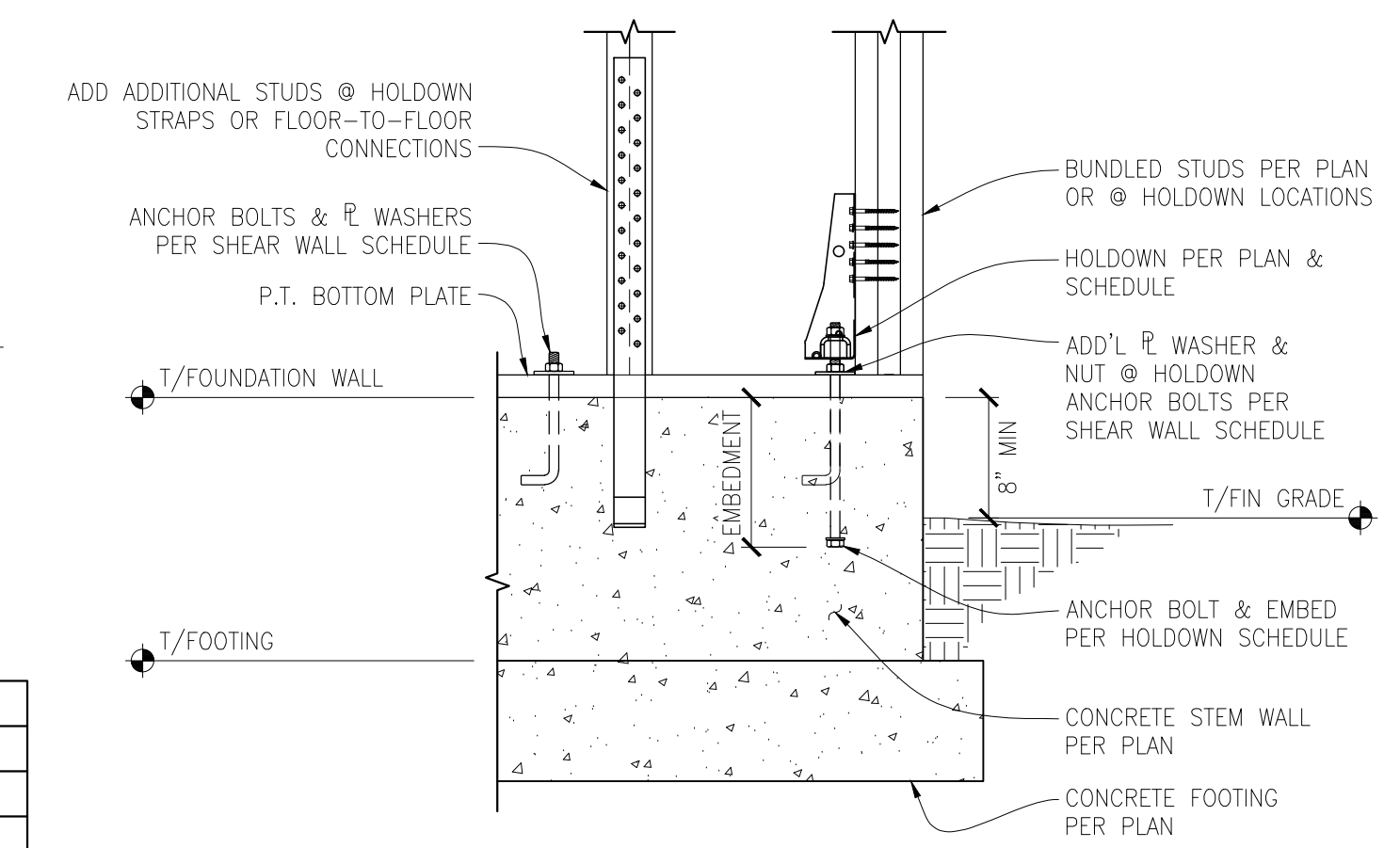
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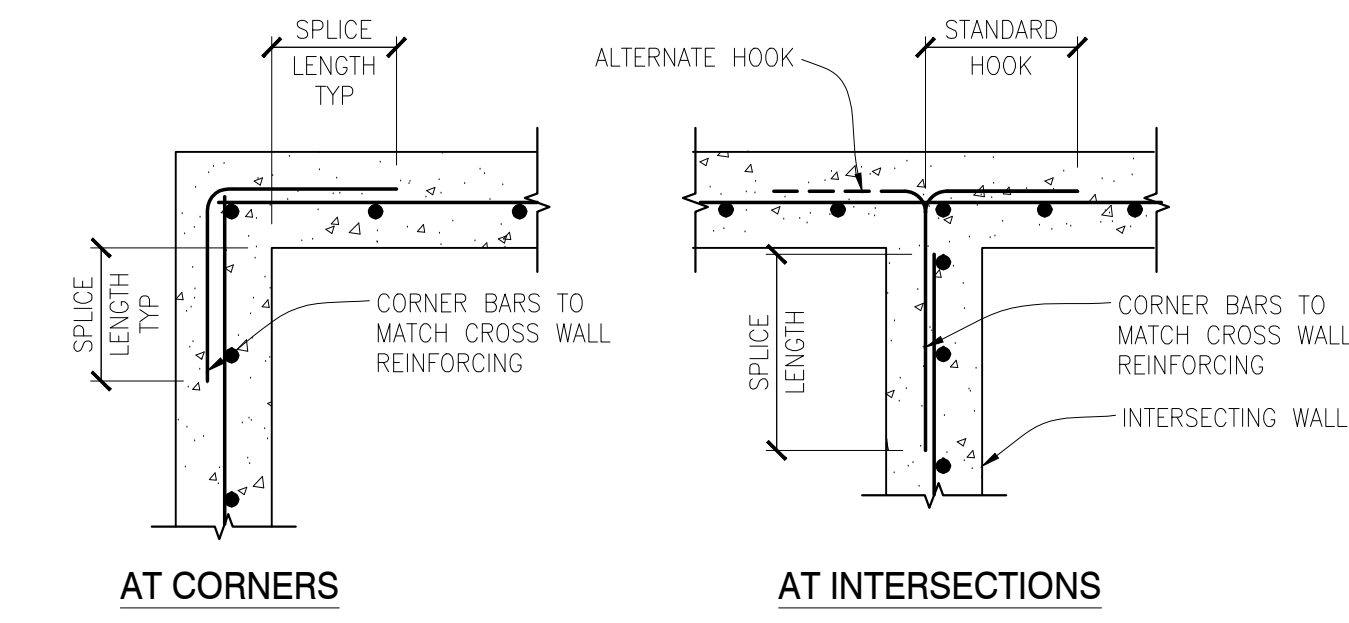
CK JOB NO.
22-021

STRUCTURAL
DETAILS

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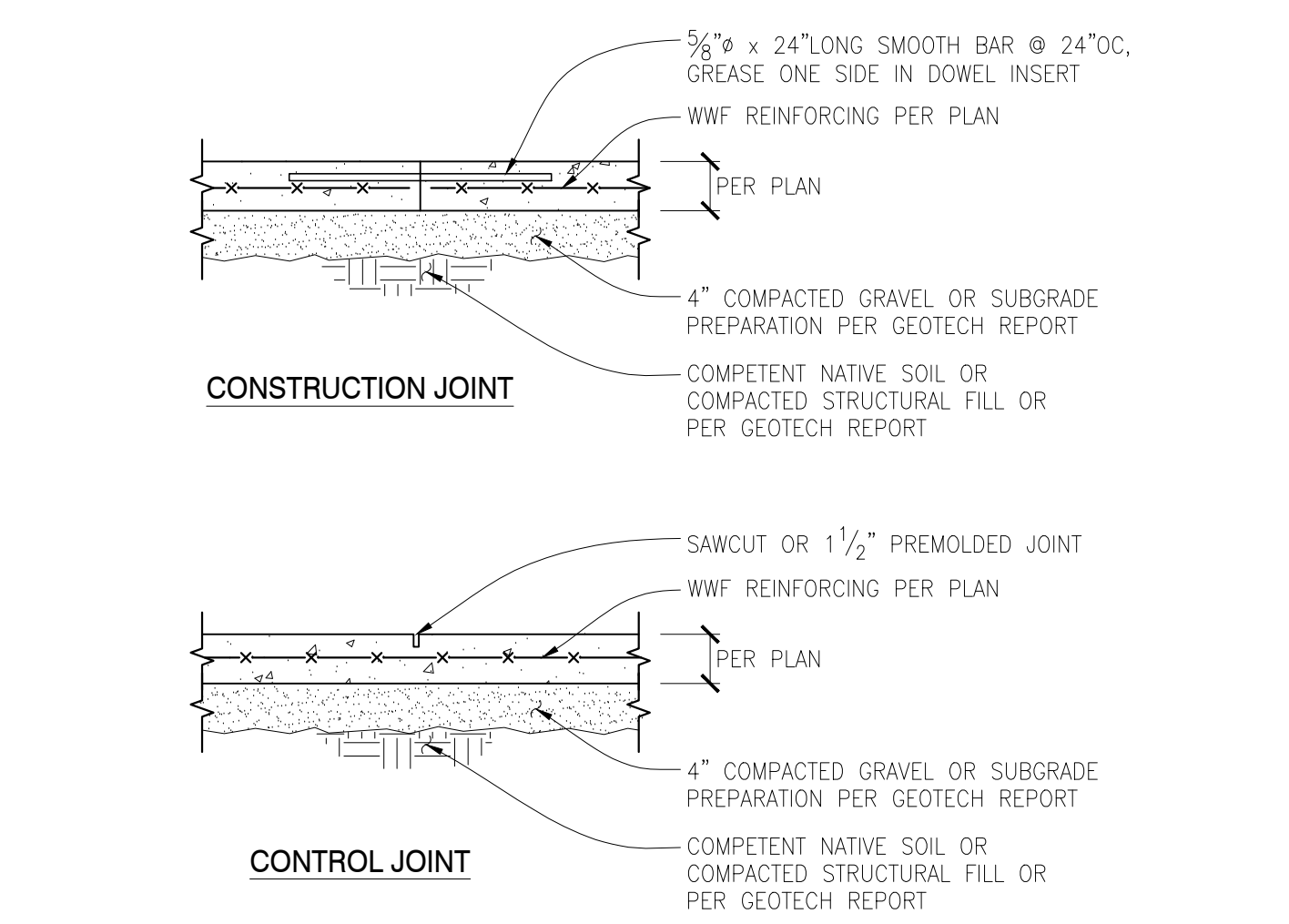


TYPICAL SHEAR WALL HOLDDOWN CONNECTIONS AT FOUNDATION CONCRETE WALL
SCALE: 3/4" = 1'-0"

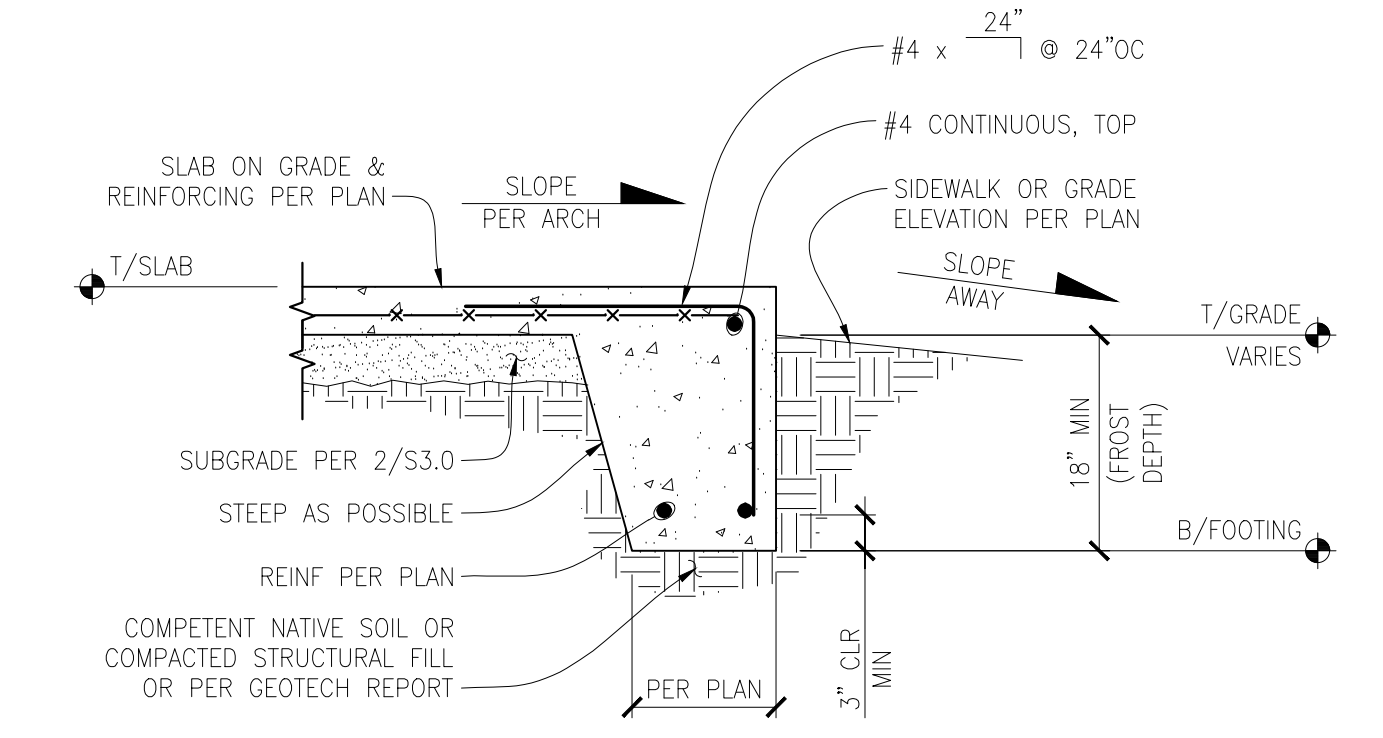


TYPICAL CORNER BARS AT CONCRETE WALLS - SINGLE MAT
SCALE: N.T.S.

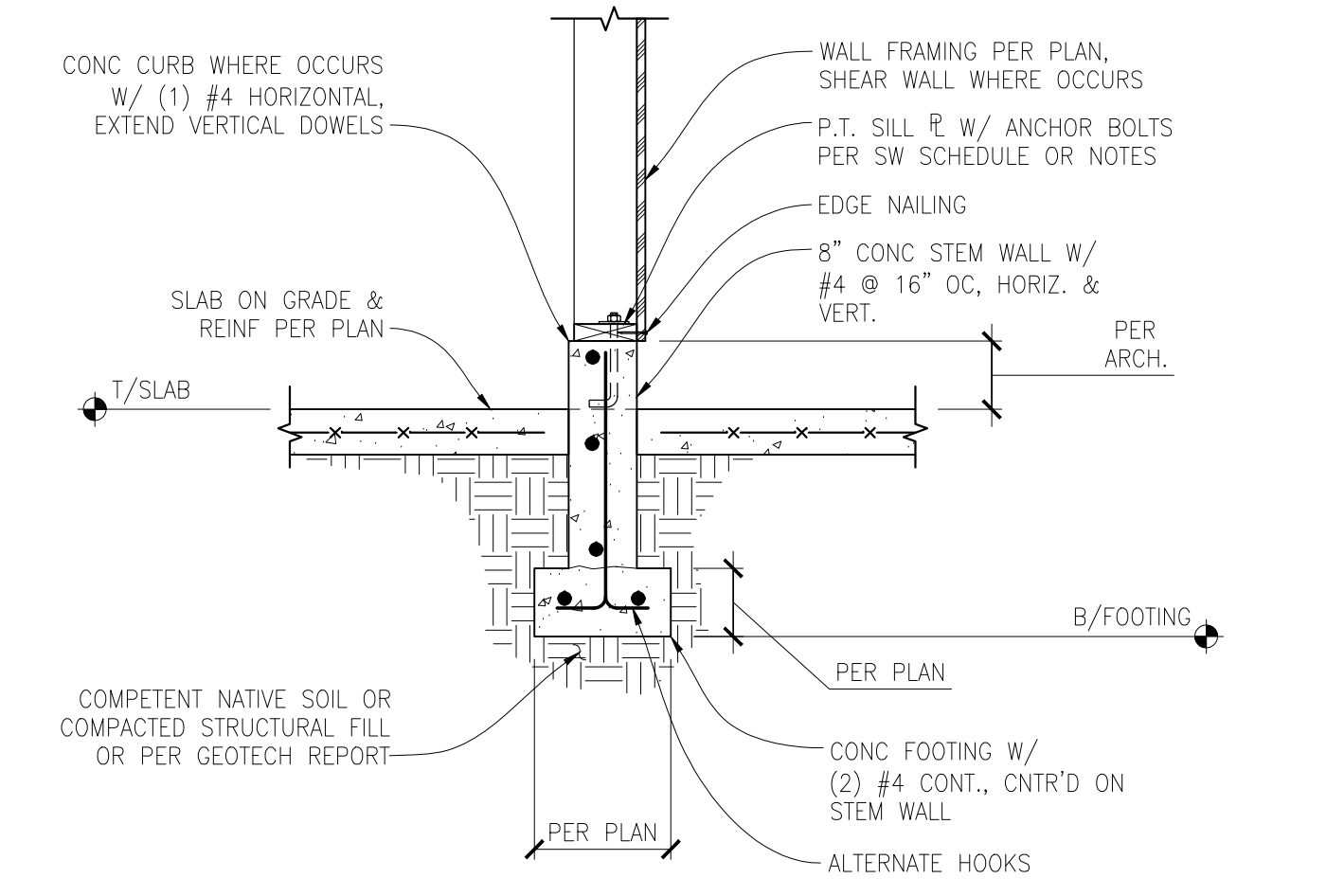
SPLICE LENGTH	
BAR	LENGTH
#4	28"
#5	36"



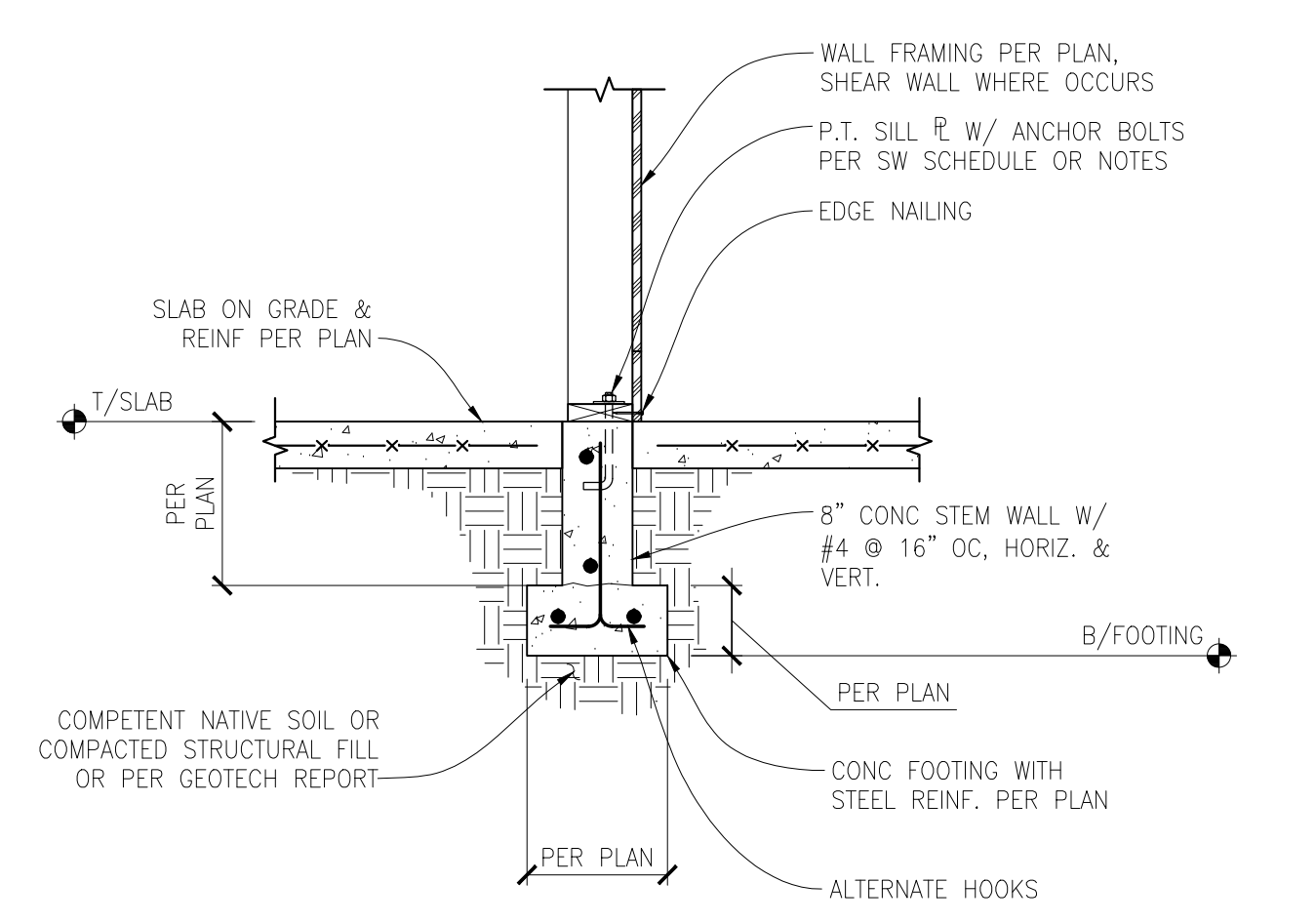
TYPICAL SLAB ON GRADE JOINT DETAILS
SCALE: N.T.S.



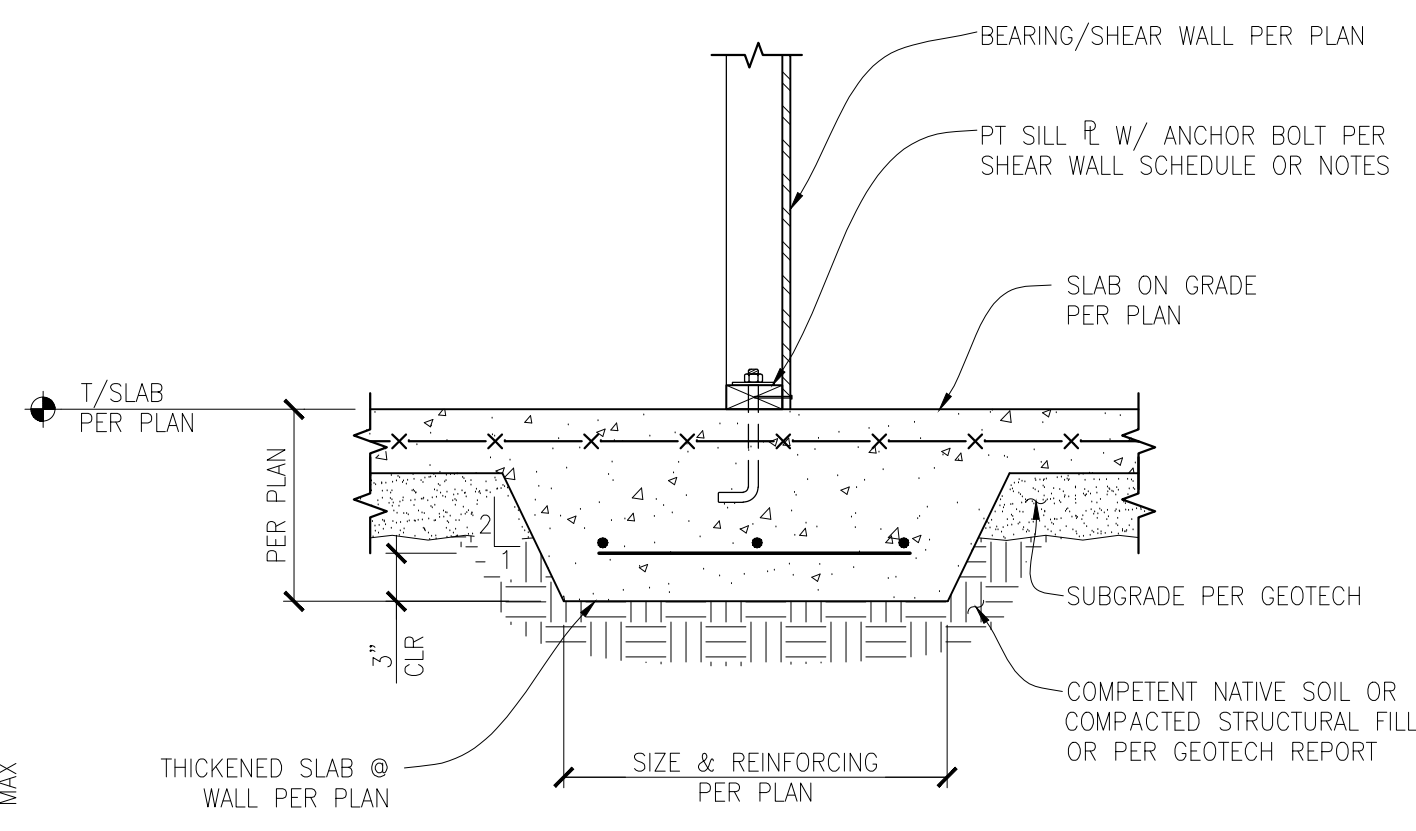
TYPICAL THICKENED SLAB EDGE FOOTING
SCALE: 3/4" = 1'-0"



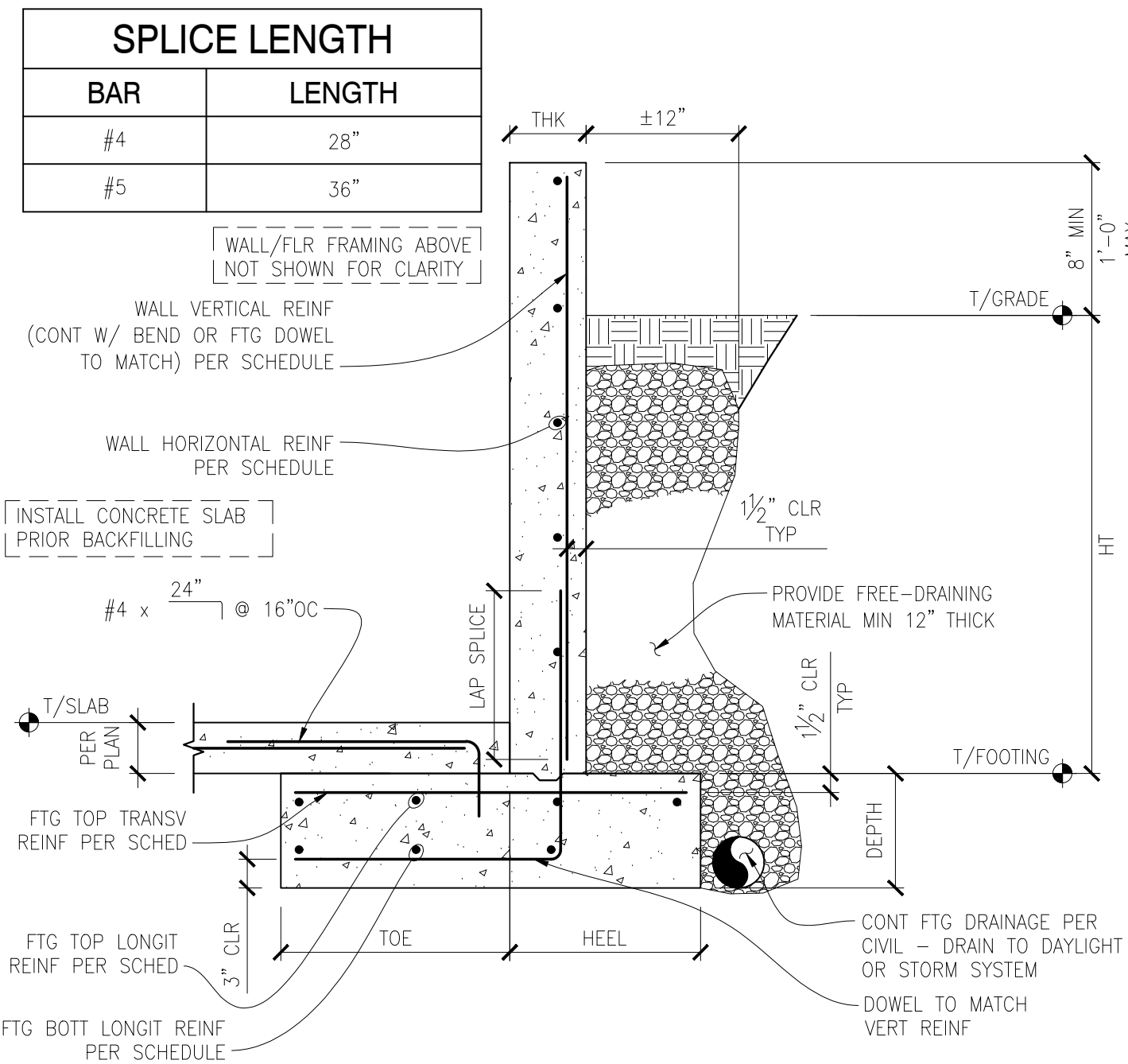
TYPICAL INTERIOR FOUNDATION FOOTING AND STEM WALL WITH SLAB ON GRADE
SCALE: 3/4" = 1'-0"



TYPICAL INTERIOR FOUNDATION FOOTING AND STEM WALL WITH SLAB ON GRADE
SCALE: 3/4" = 1'-0"



TYPICAL INTERIOR THICKENED SLAB FOOTING AT BEARING / SHEAR WALL
SCALE: 1" = 1'-0"

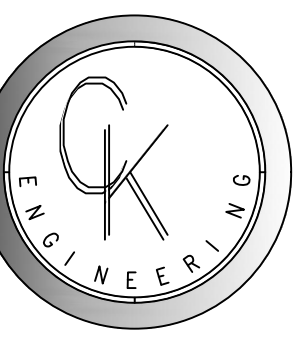


RETAINING WALL/FOOTING SCHEDULE									
WALL					FOOTING				
HT	THK	VERTICAL	HORIZONTAL	TOE	HEEL	DEPTH	TOP/TRANSV	TOP/LONGIT	BOTTOM/LONGIT
4'-0"	8"	#4 @ 12"OC	#4 @ 12"OC	1'-0"	1'-6"	10"	#4 @ 10"OC	(3) #4	(2) #4
6'-0"	8"	#4 @ 8"OC	#4 @ 12"OC	2'-6"	1'-6"	10"	#4 @ 10"OC	(4) #4	(3) #4
8'-0"	8"	#5 @ 10"OC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

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

- NOTES:
- WALL SIZE & REINFORCING PER PLAN.
 - CORNER BARS SIZE & SPACING TO MATCH HORIZONTAL REINFORCING.



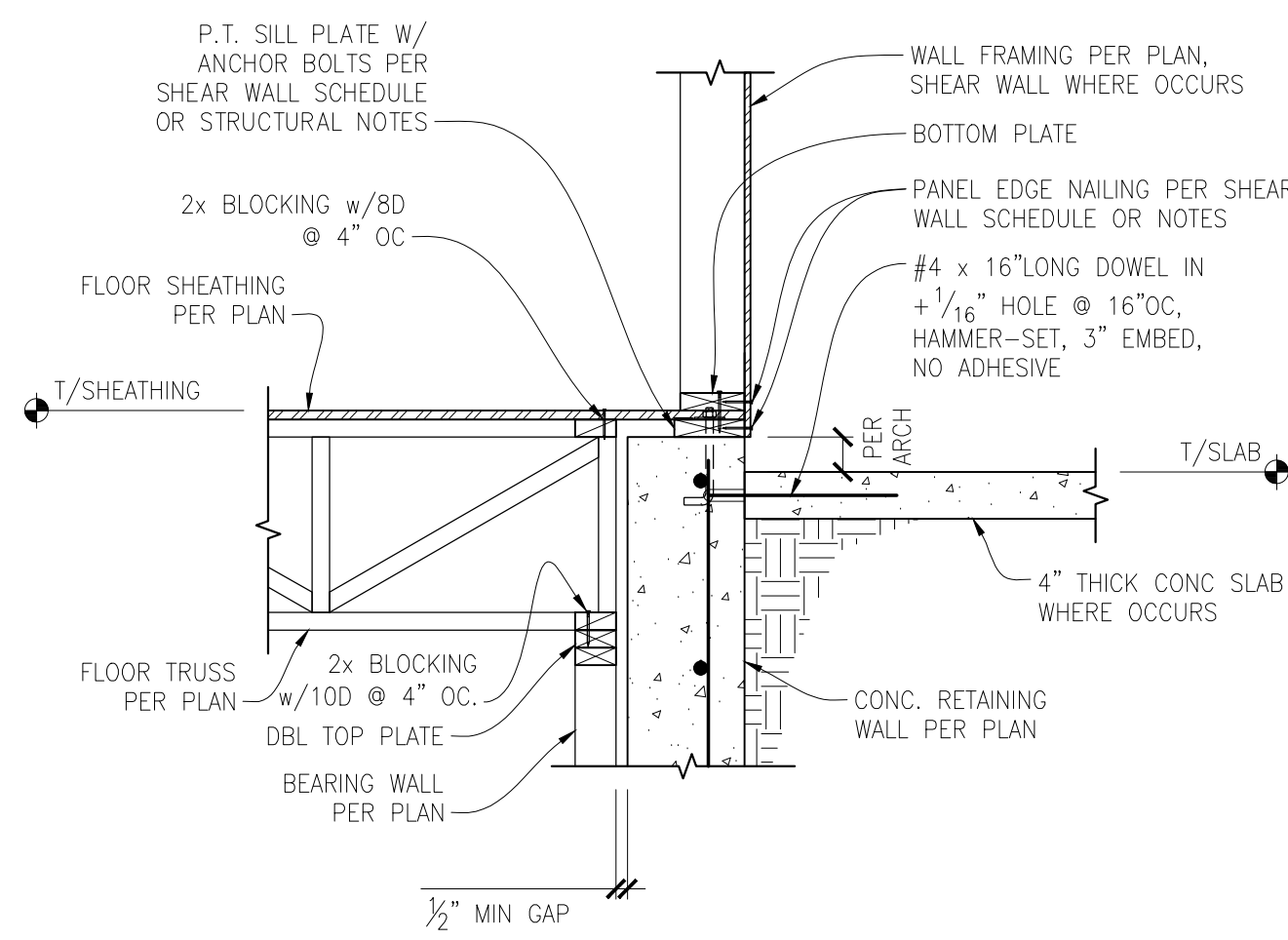
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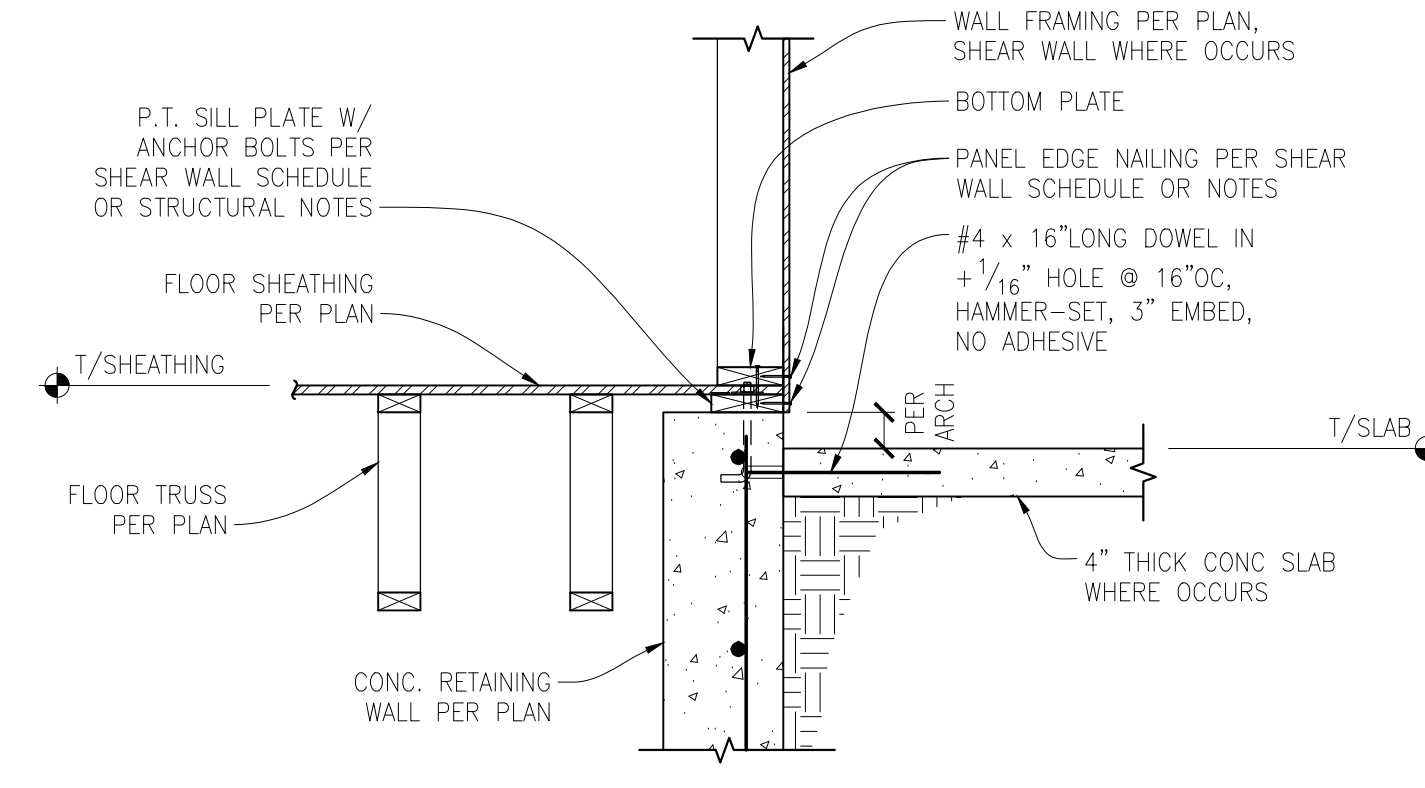
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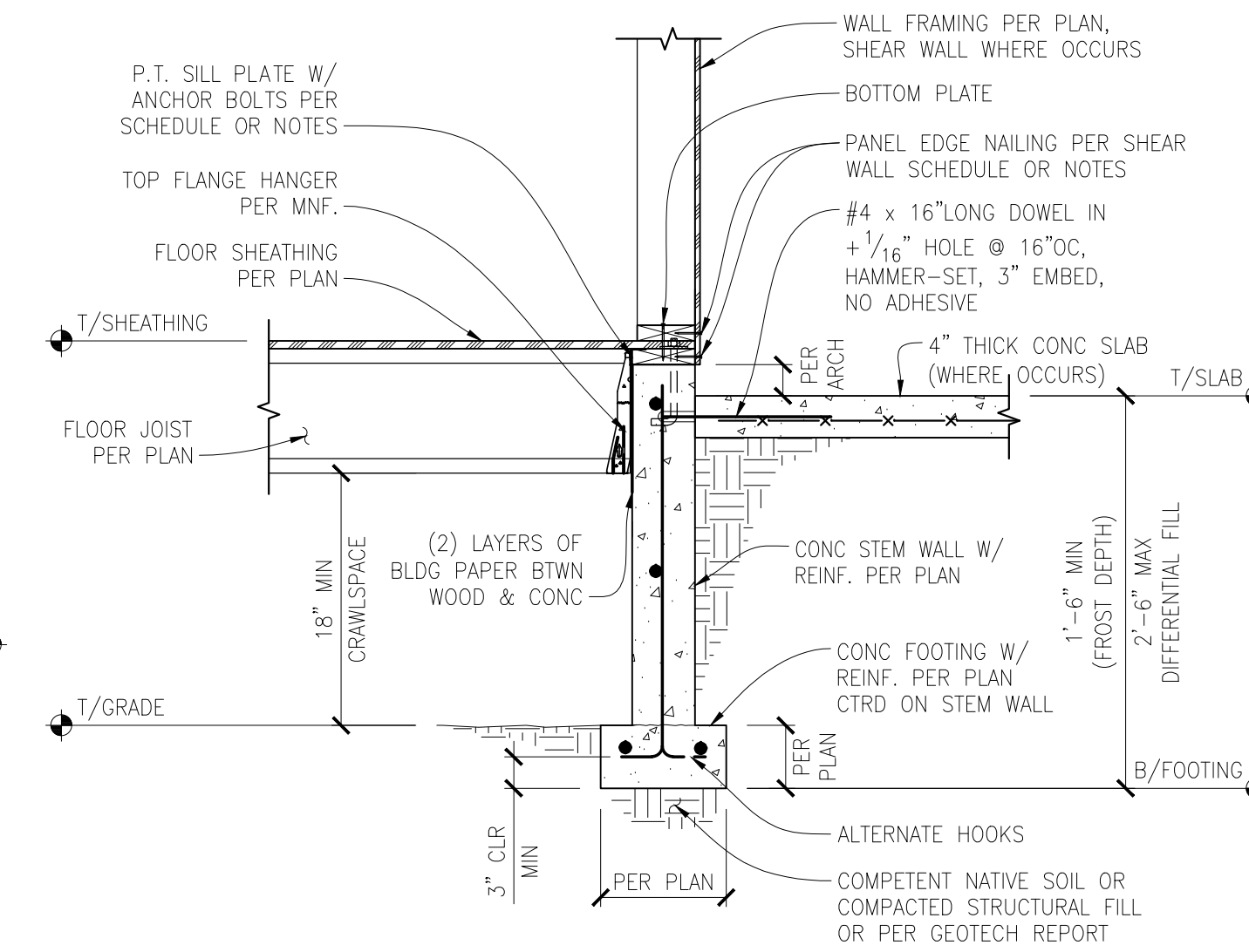
EXTERIOR WALL/SHEAR WALL (WHERE OCCURS)/ TRUSSES PARALLEL TO RETAINING WALL CON.

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



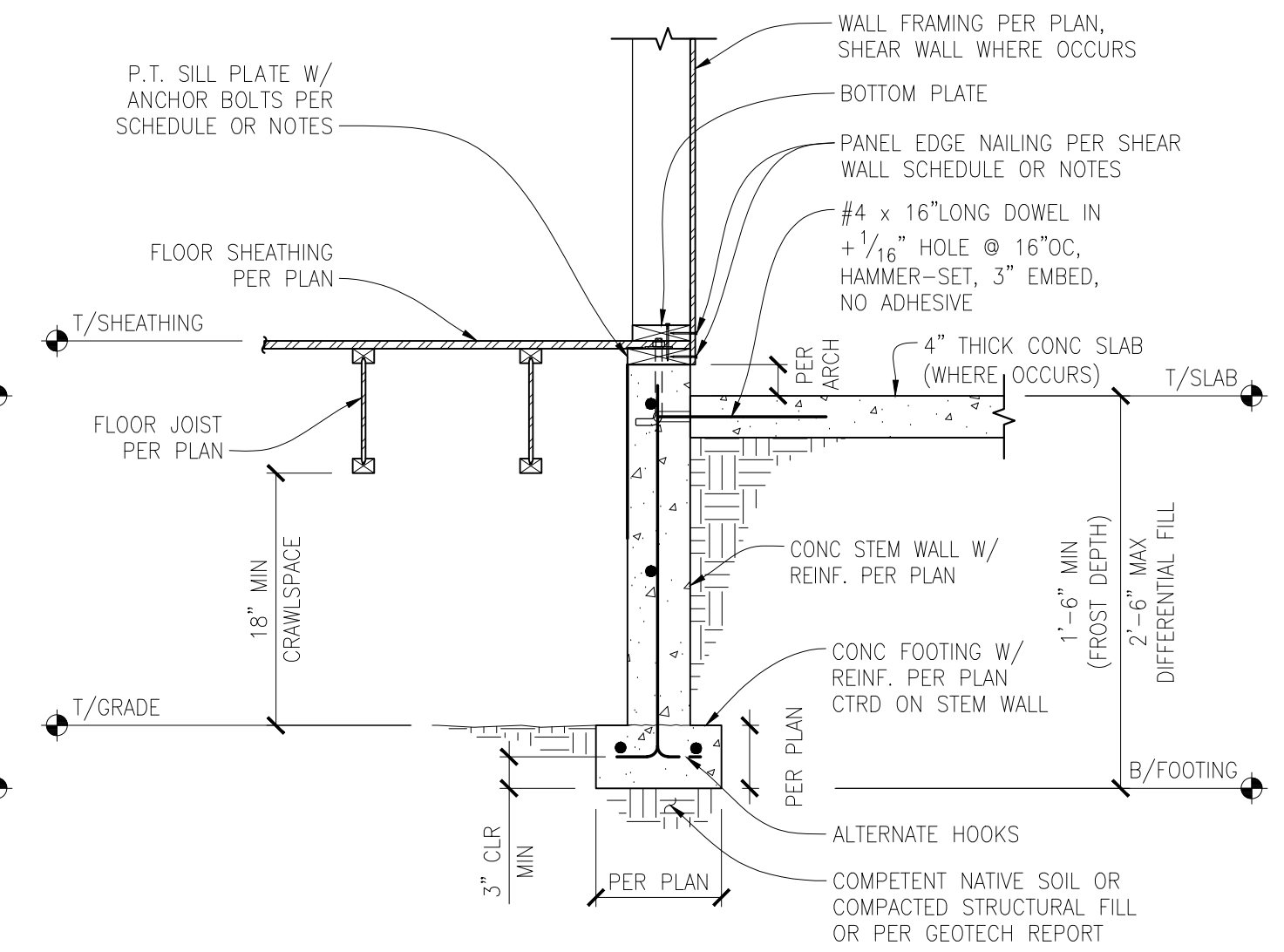
EXTERIOR SHEAR WALL WITH TRUSSES PARALLEL TO RETAINING WALL CON.

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



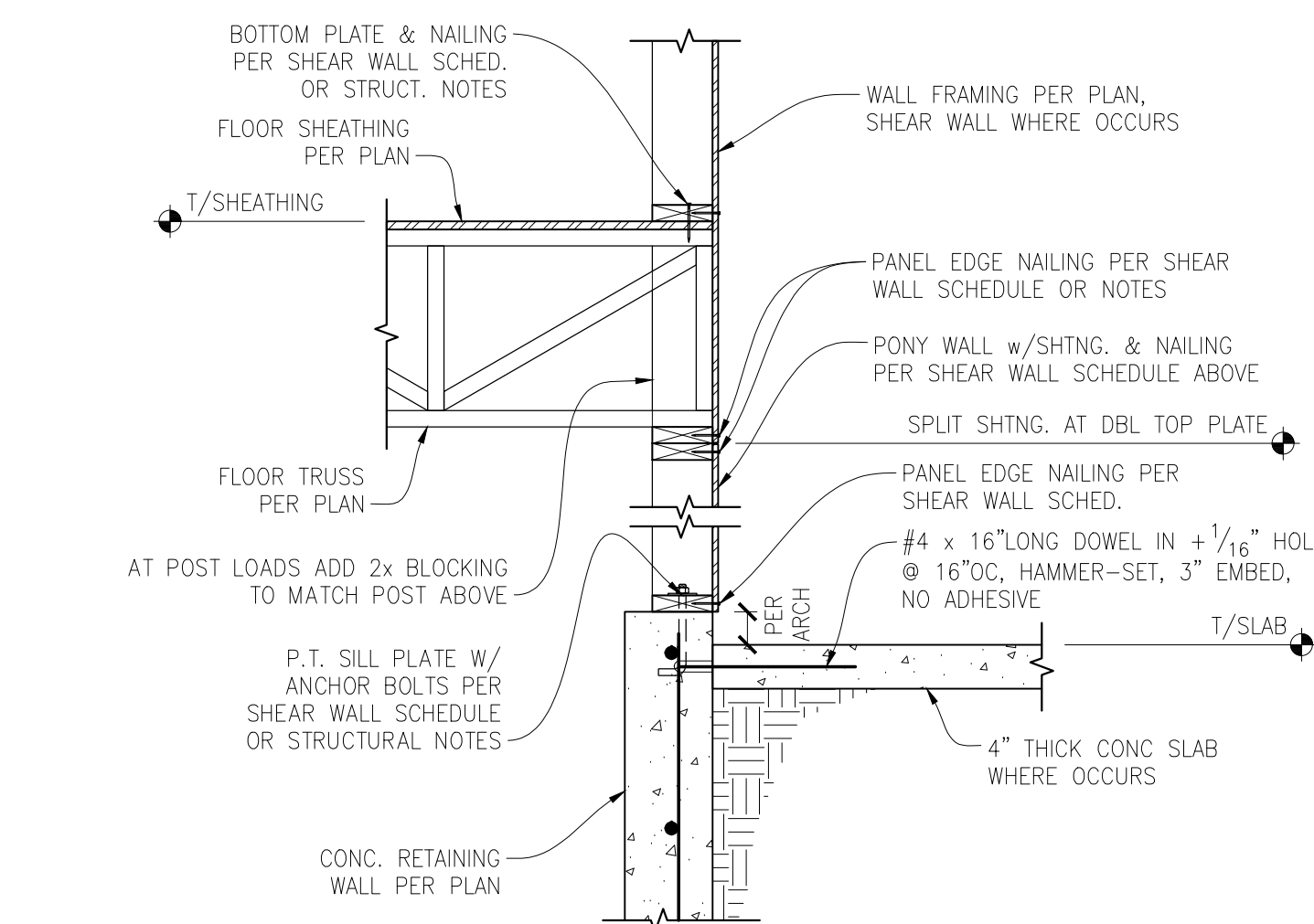
CRAWL SPACE EXTERIOR SHEAR WALL WITH JOISTS PERPENDICULAR TO RAISED STEM WALL

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



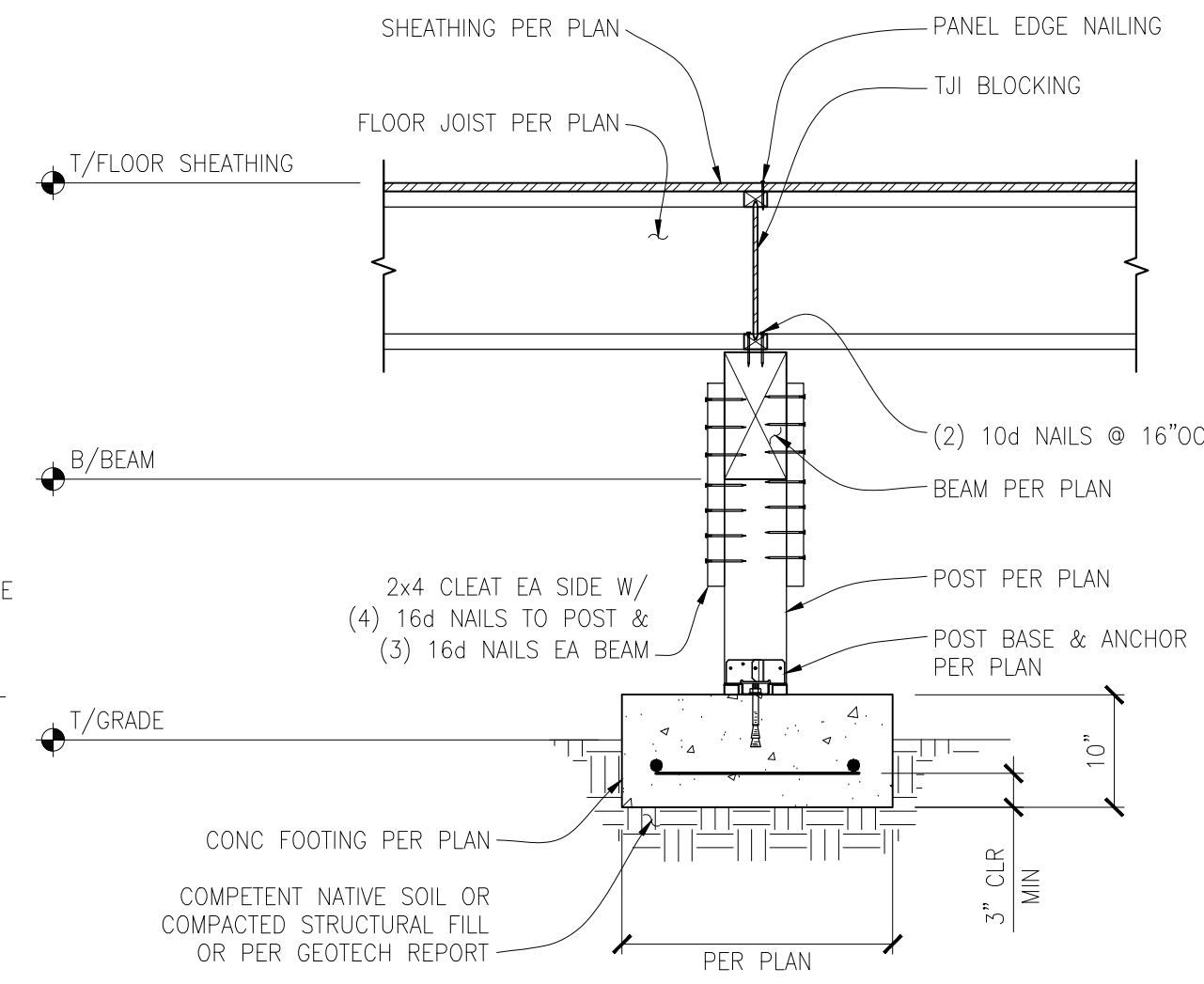
SHEAR WALL WITH JOISTS PARALLEL TO RAISED STEM WALL

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



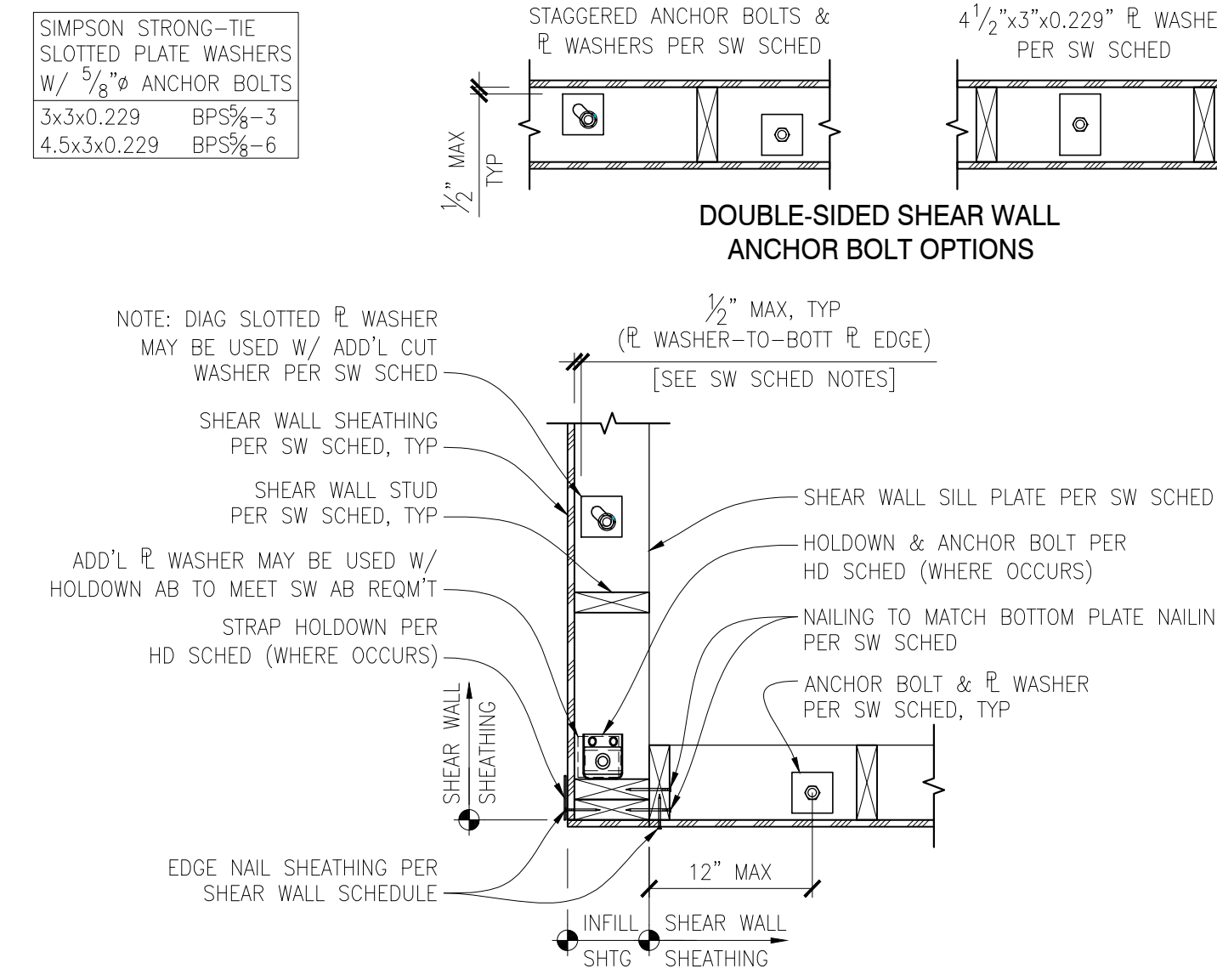
EXTERIOR SHEAR WALL WITH TRUSSES PERPENDICULAR TO RET. WALL CON.

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



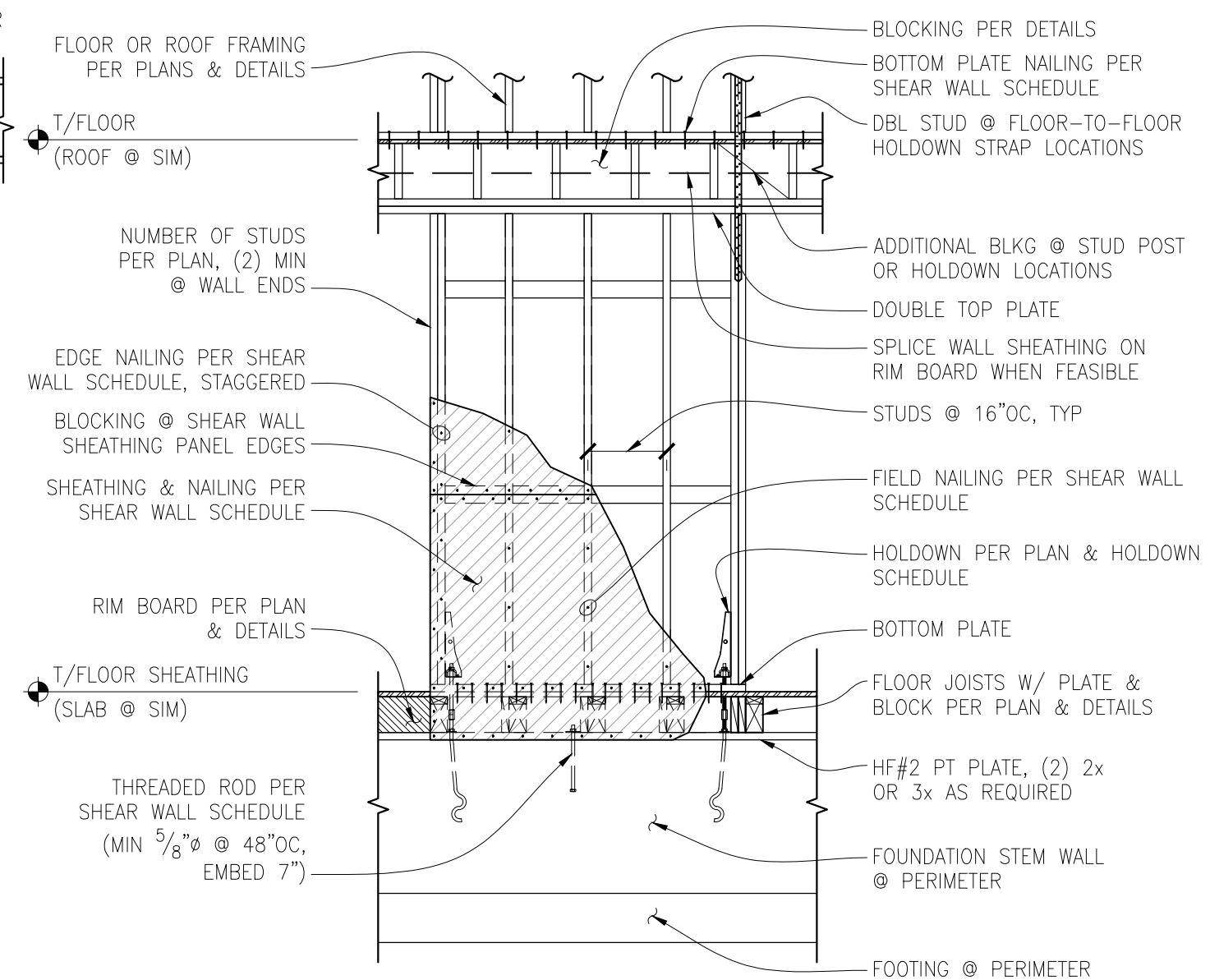
POST AND BEAM AT CRAWLSPACE

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



TYPICAL PLAN VIEW - SHEAR WALL HOLDOWNS & ANCHOR BOLTS

SCALE: 1" = 1'-0"



TYPICAL SHEAR WALL ELEVATION

SCALE: N.T.S.

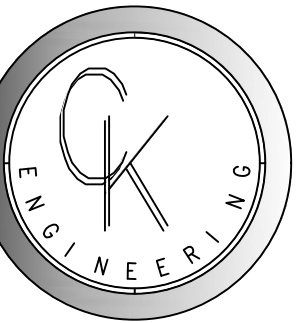
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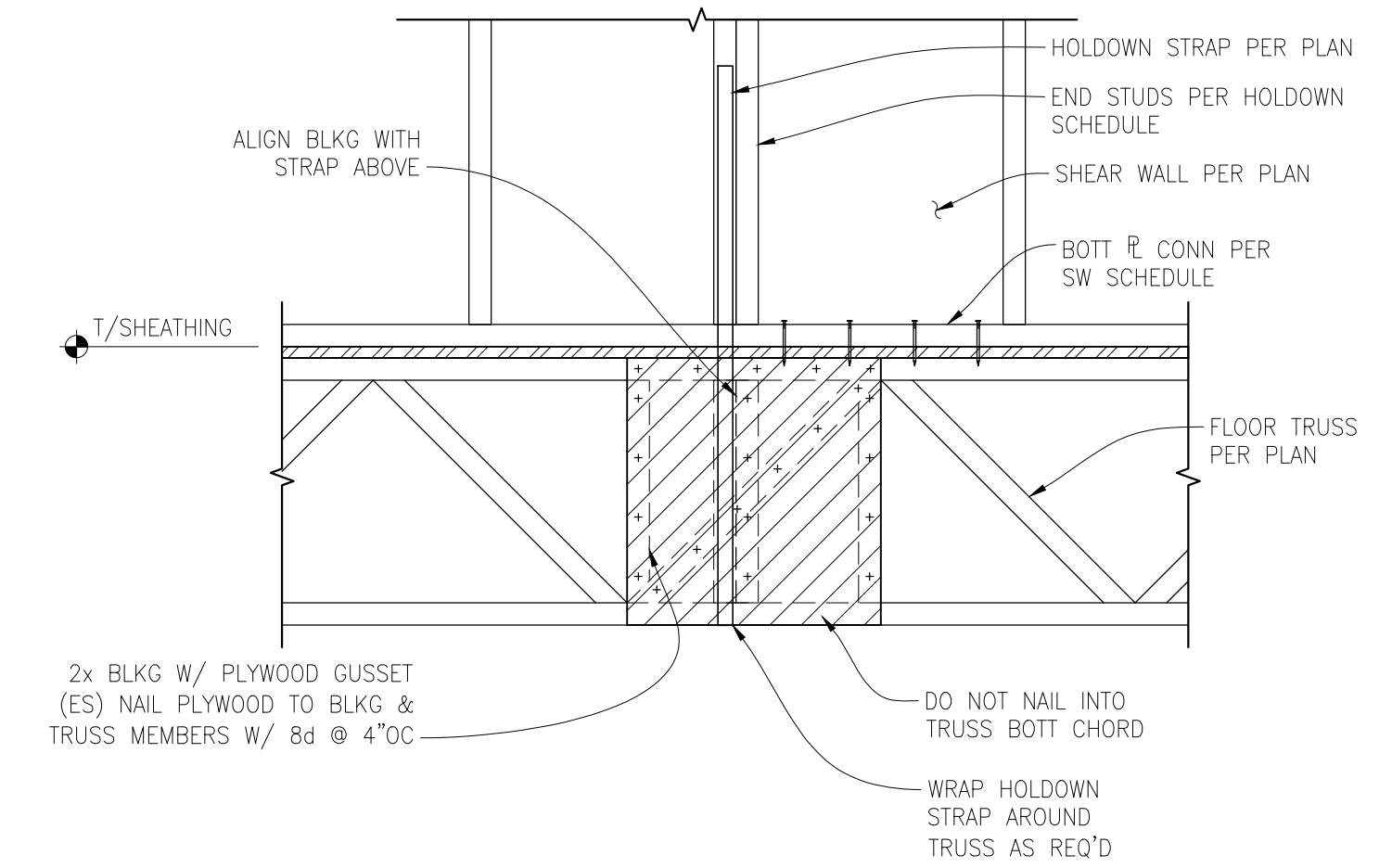
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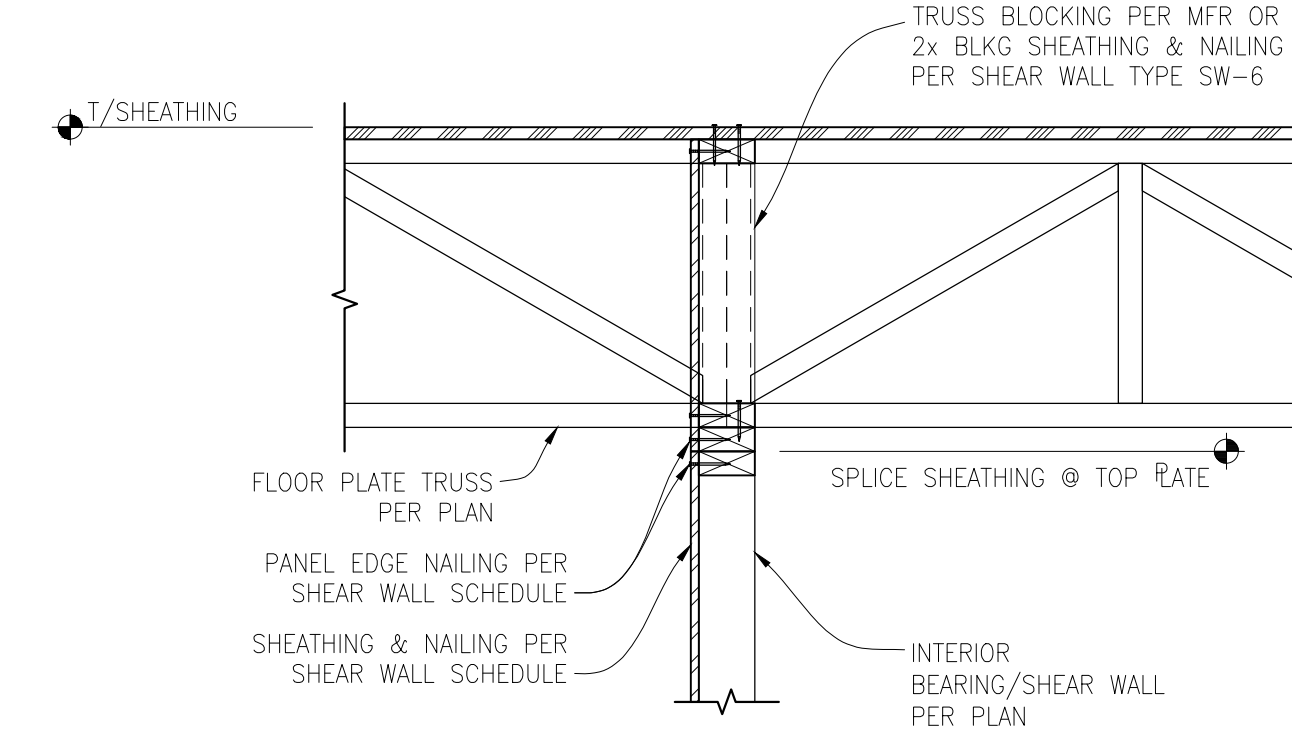
STRUCTURAL
DETAILS

S-3.0



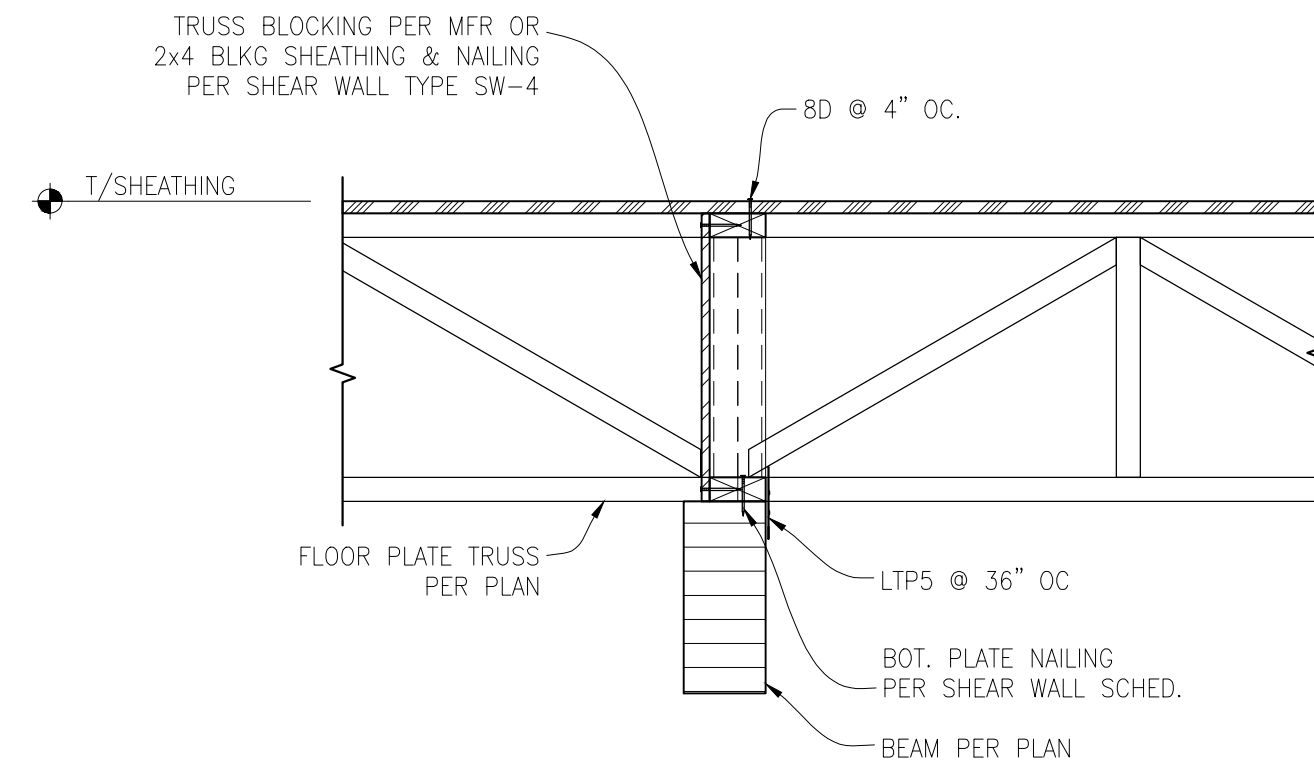
HOLDOWN STRAP ABOVE FLOOR TRUSS

SCALE: 1" = 1'-0"



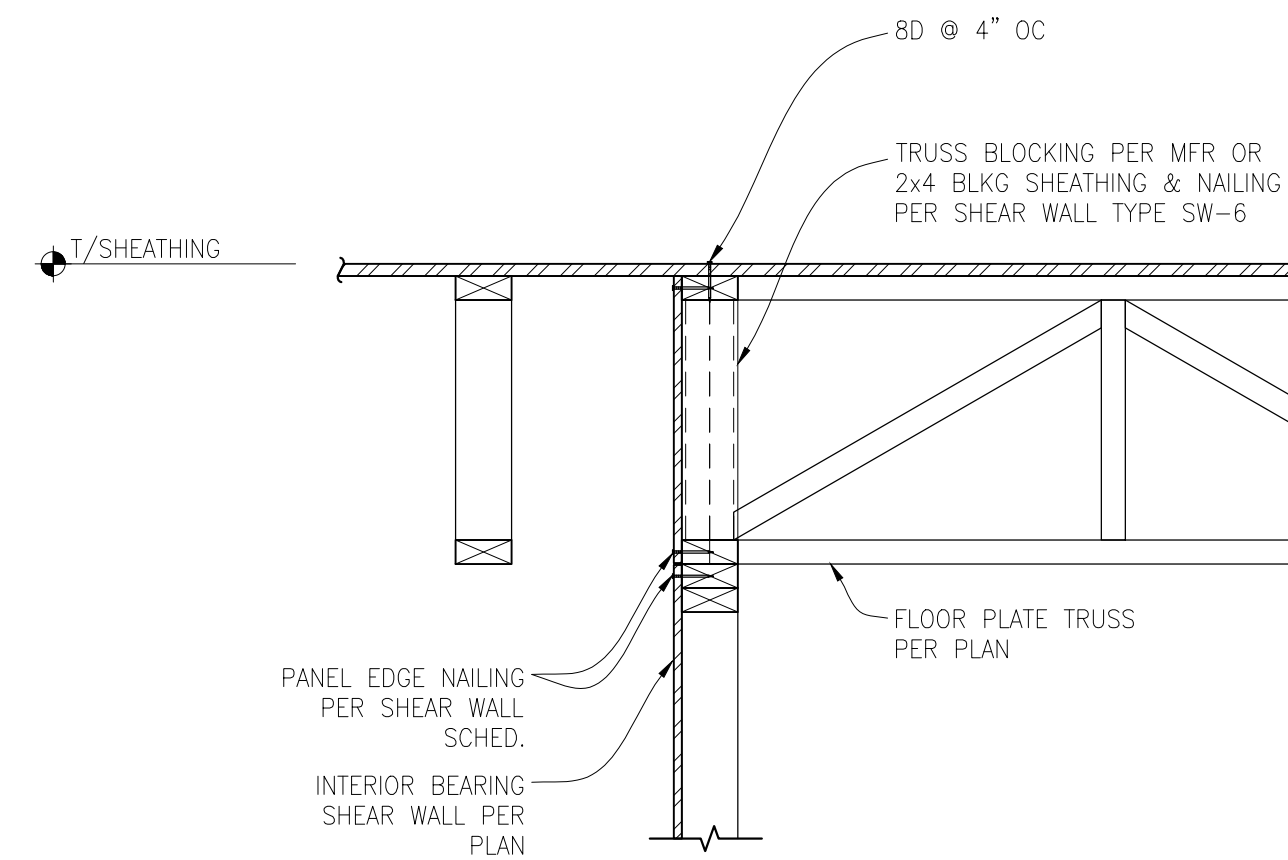
FLOOR TRUSS AT INTERIOR BEARING/SHEAR WALL

SCALE: 1" = 1'-0"



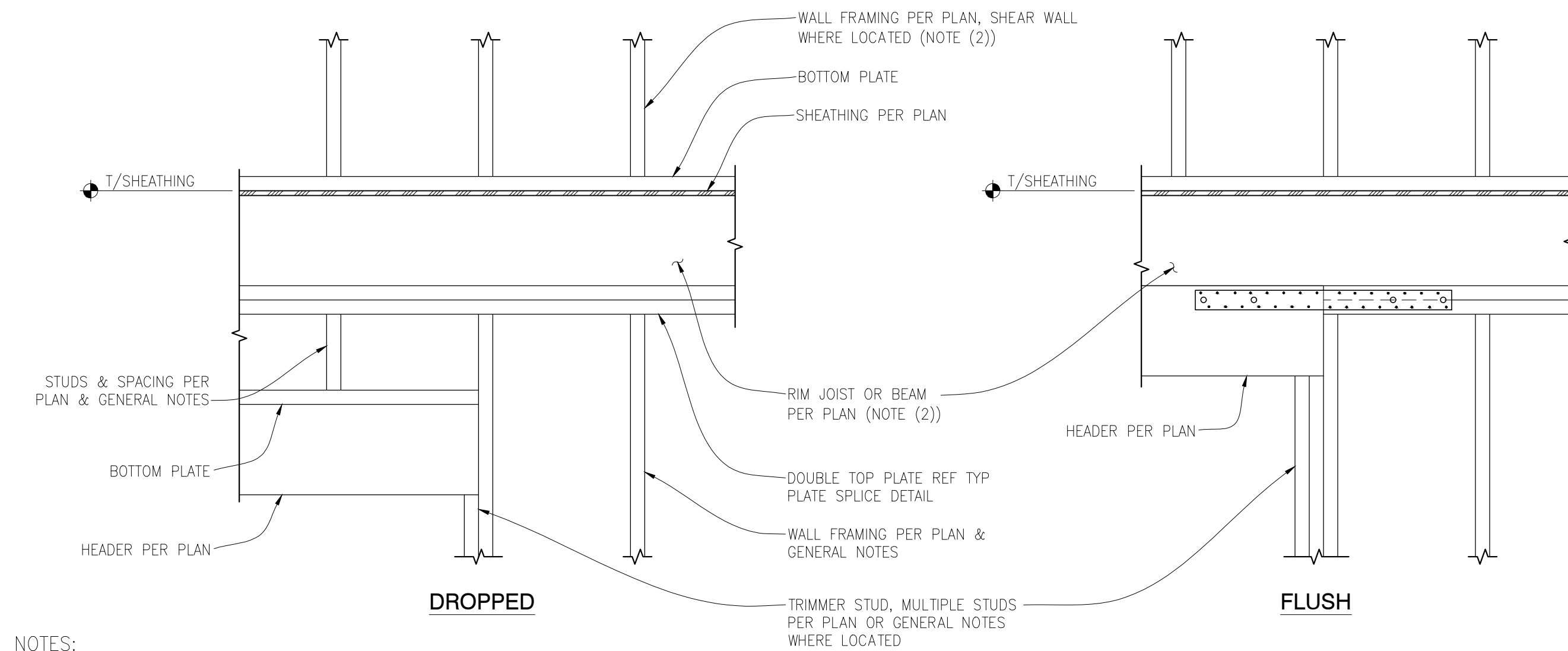
FLOOR TRUSS 'DROPPED' BEAM CONNECTION

SCALE: 1" = 1'-0"



FLOOR TRUSS AT INTERIOR SHEAR WALL

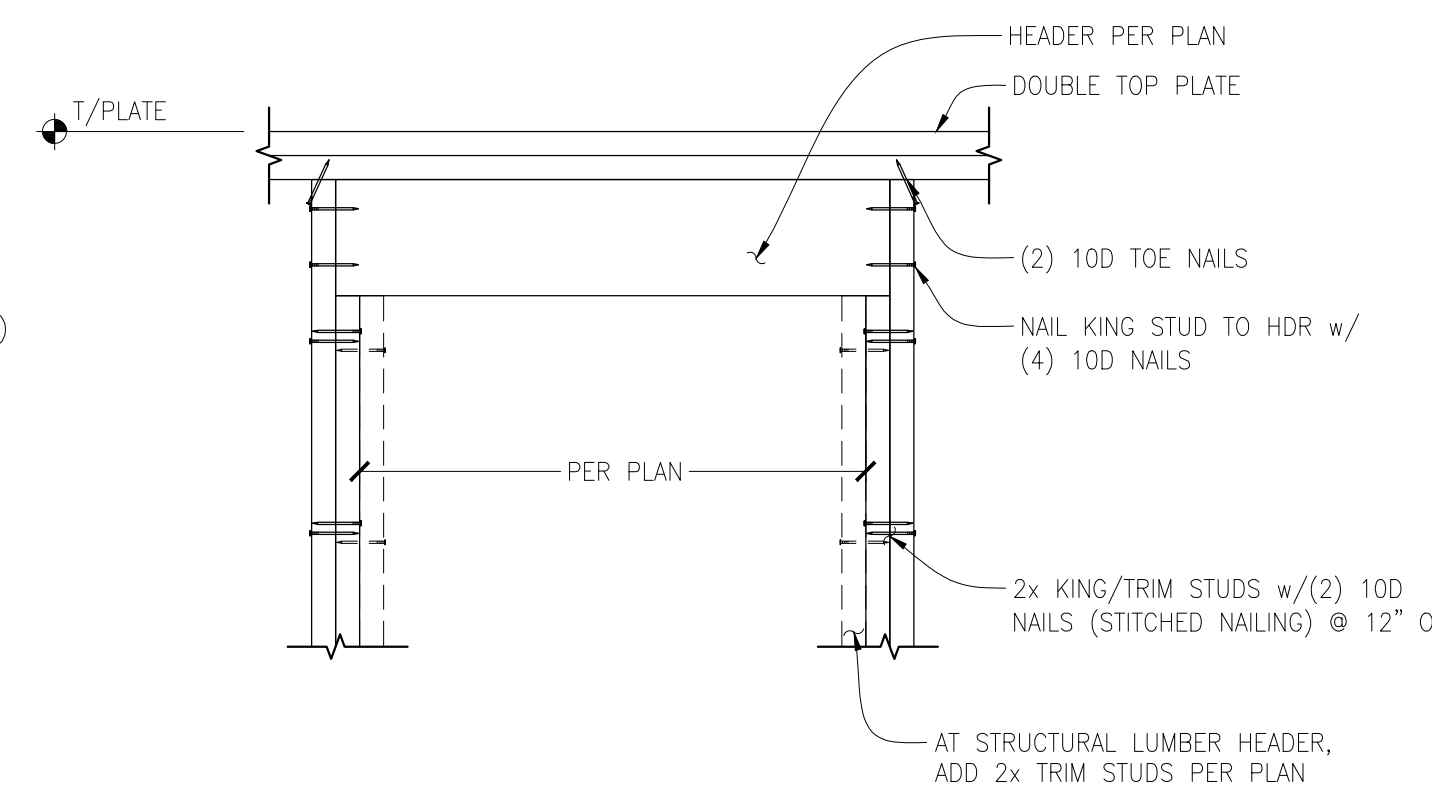
SCALE: 1" = 1'-0"



TYPICAL HEADER FRAMING

SCALE: 1" = 1'-0"

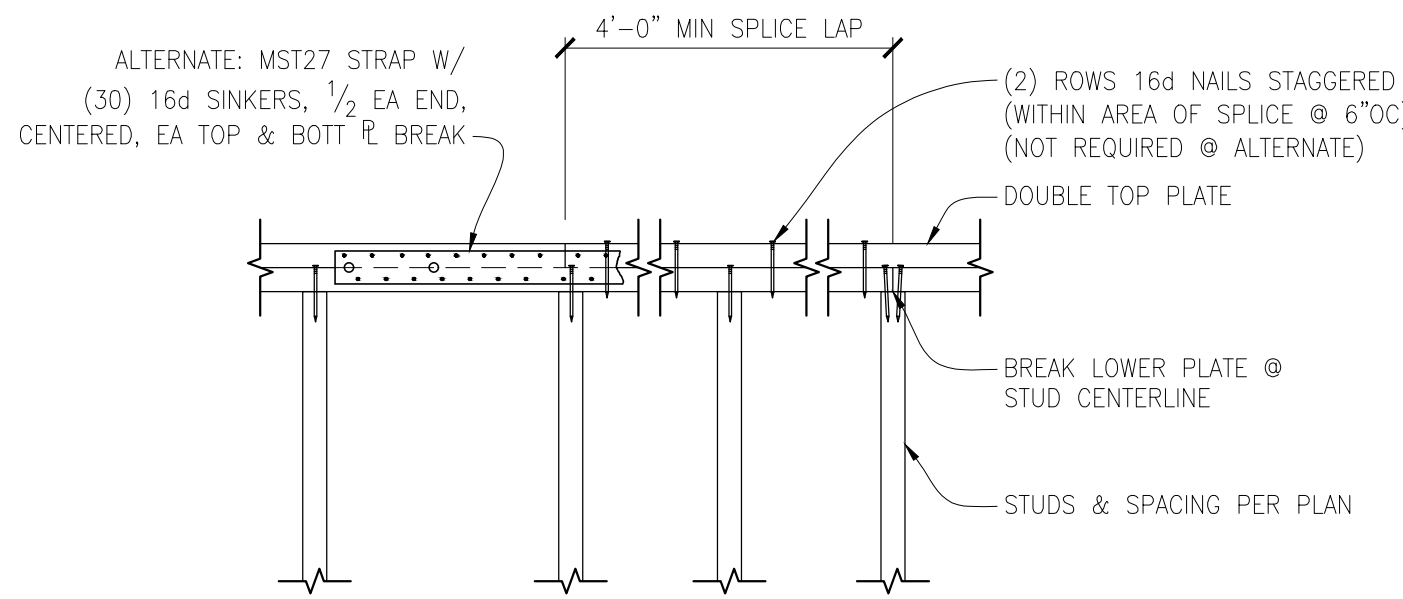
- NOTES:
1. WALL SHEATHING NOT SHOWN FOR CLARITY
2. WHERE ROOF ABOVE, RAFTERS OR PRE-MANUFACTURED TRUSSES PER PLAN REPLACES RIM JOIST



TYPICAL HEADER CONNECTION

SCALE: N.T.S.

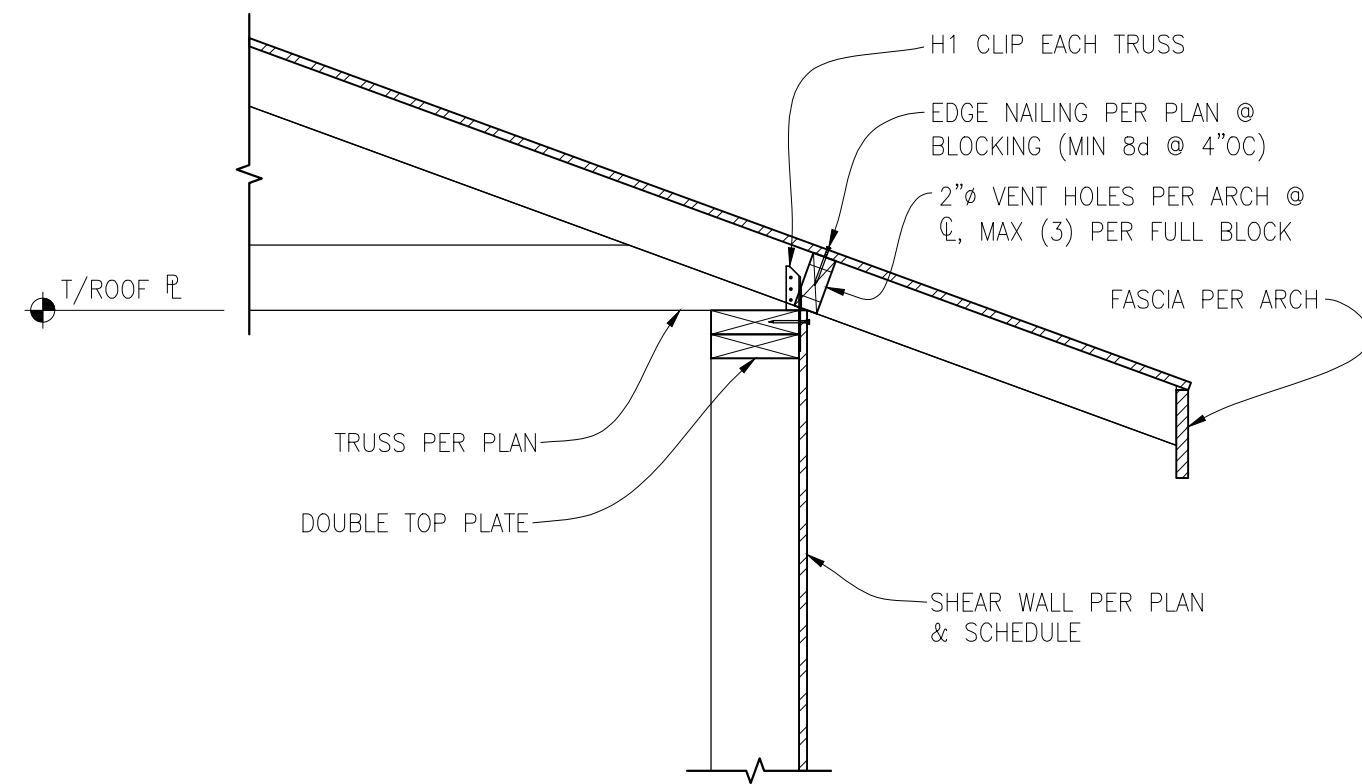
NOTE:
FLOOR/ROOF FRAMING NOT SHOWN FOR CLARITY.



TYPICAL PLATE SPLICE DETAIL

SCALE: N.T.S.

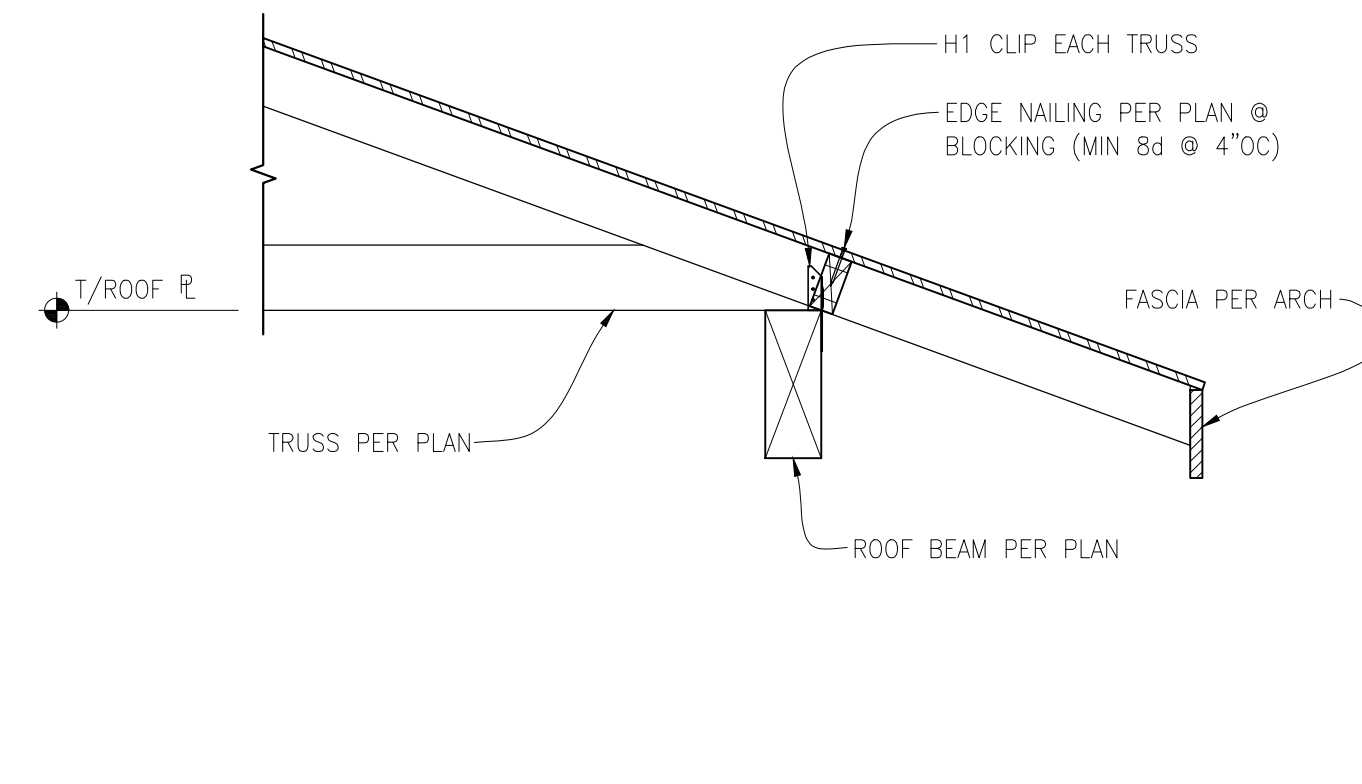
NOTE:
FLOOR JOISTS NOT SHOWN FOR CLARITY.



EXTERIOR SHEAR WALL PERPENDICULAR TO ROOF TRUSS

SCALE: 1" = 1'-0"

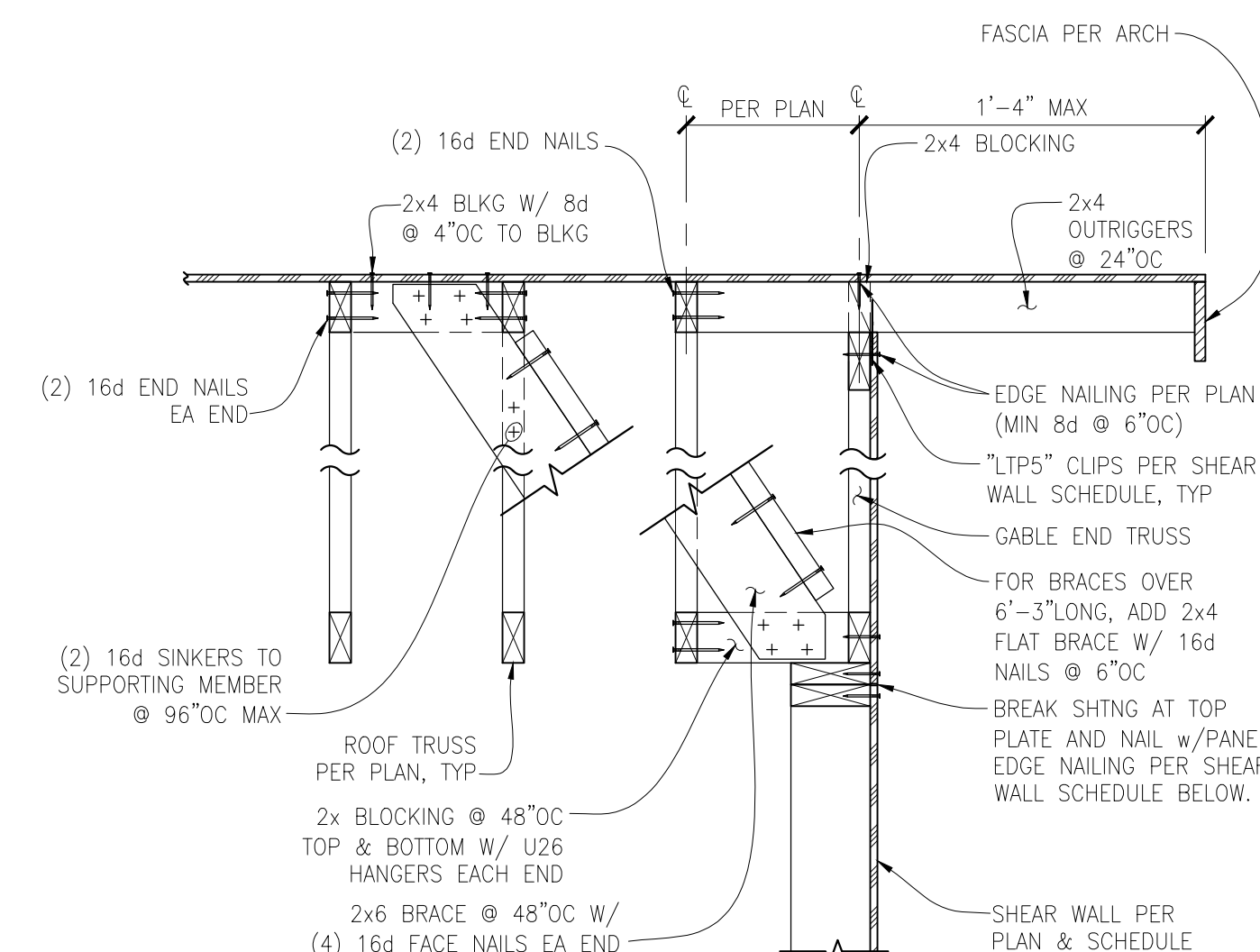
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EXTERIOR ROOF TRUSS BEAM CONNECTION

SCALE: 1" = 1'-0"

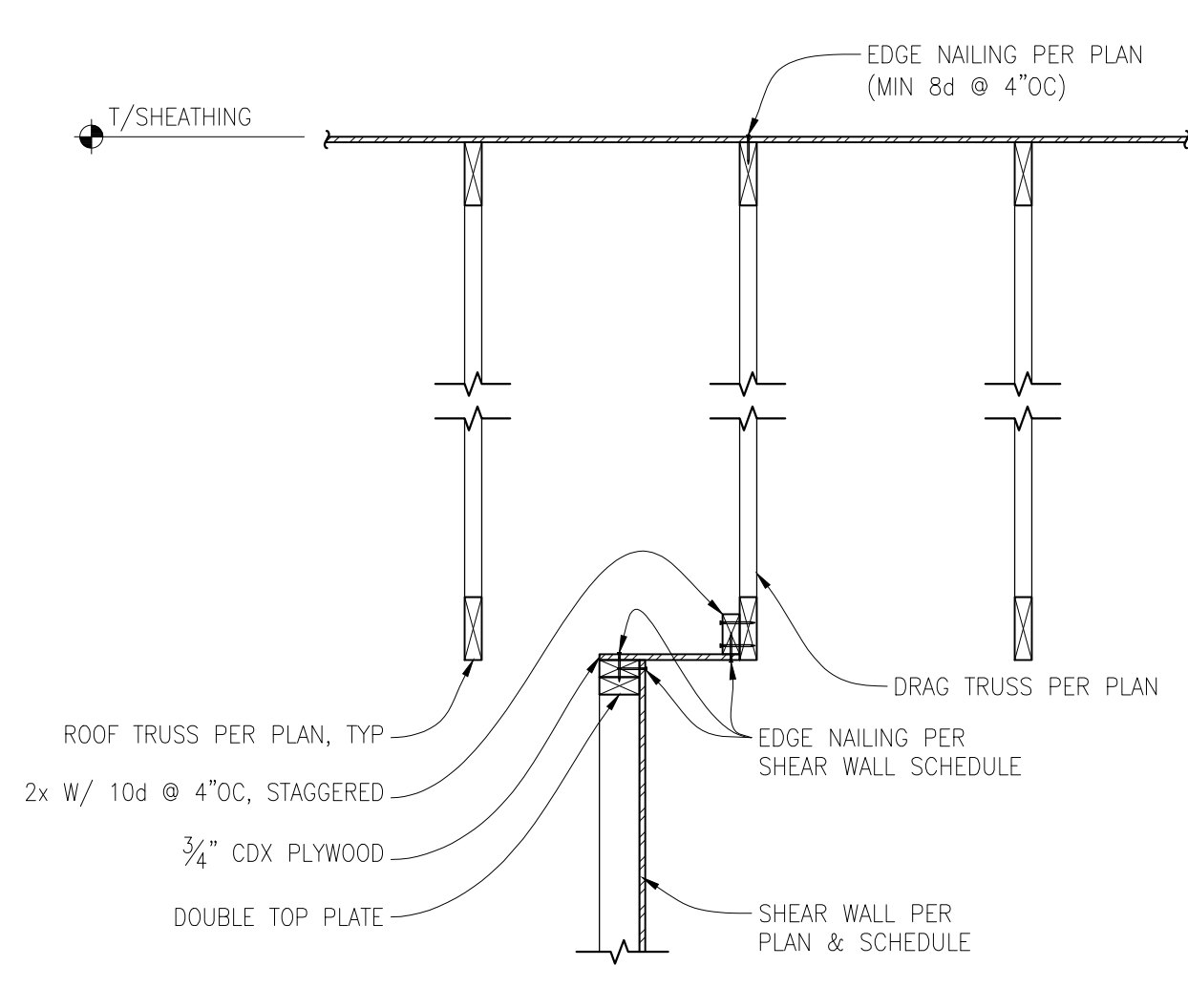
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EXTERIOR SHEAR WALL PARALLEL TO ROOF TRUSS

SCALE: N.T.S.

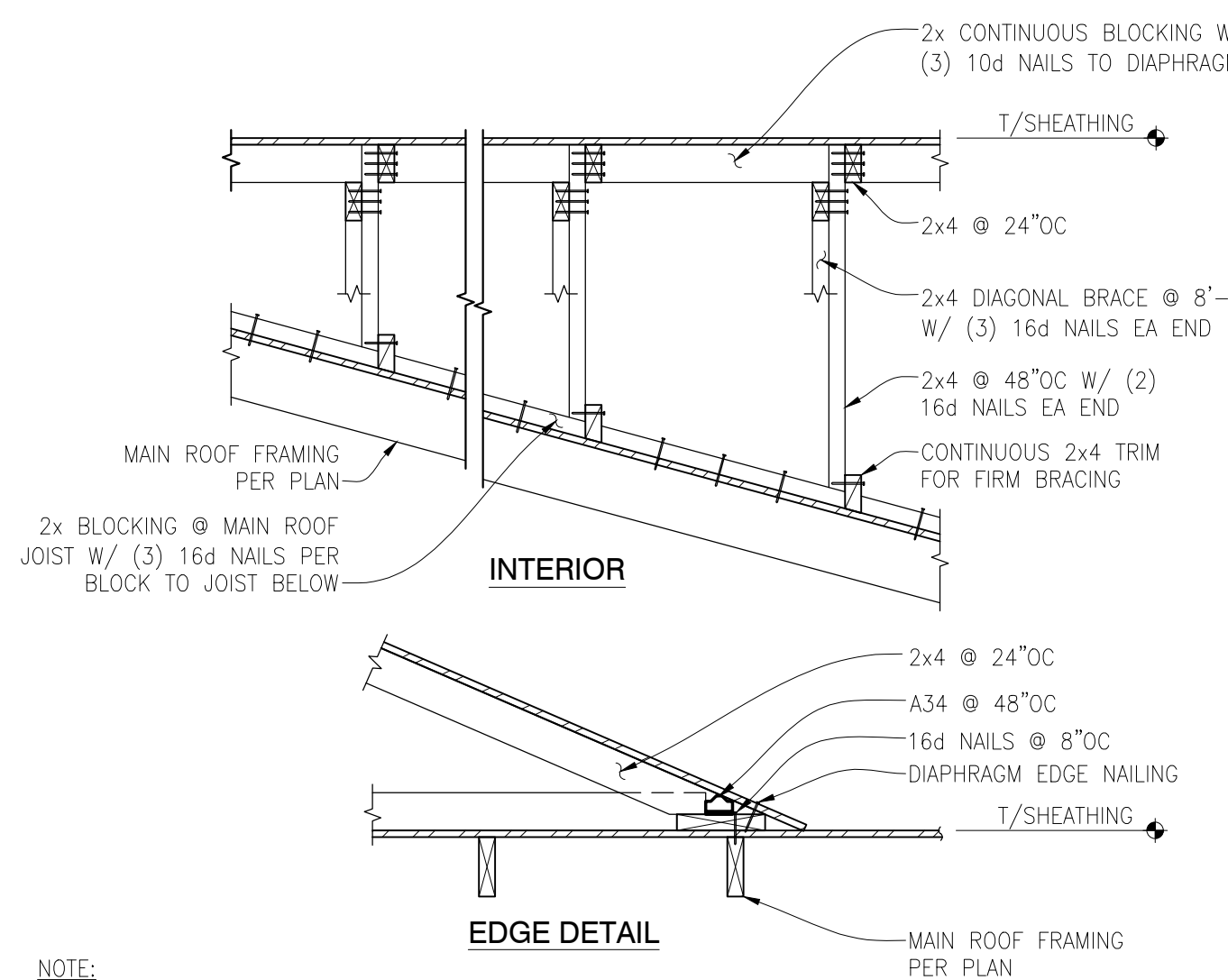
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INTERIOR SHEAR WALL PARALLEL TO ROOF TRUSS CONNECTION

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

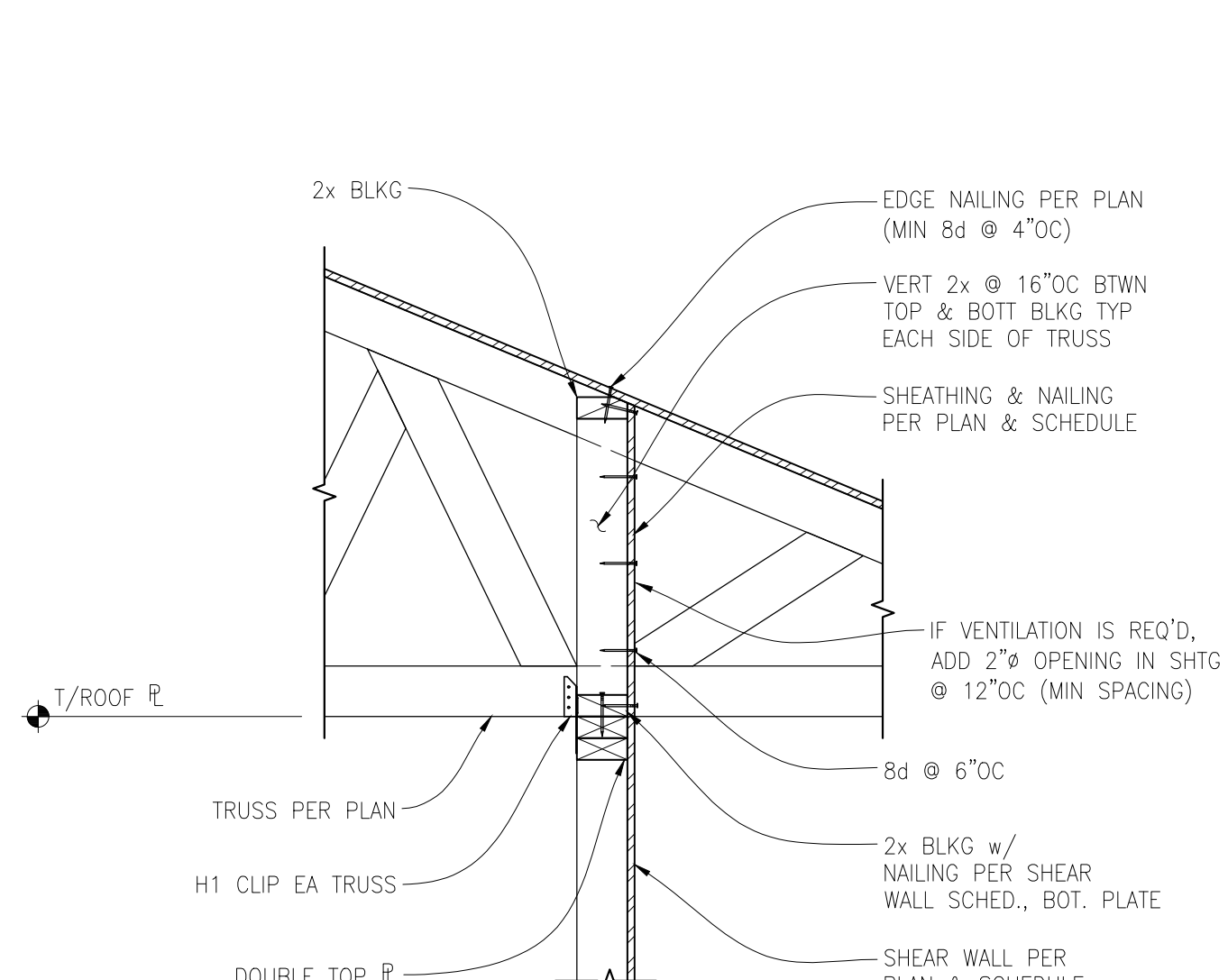
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TYPICAL ROOF OVERFRAMING DETAIL

SCALE: N.T.S.

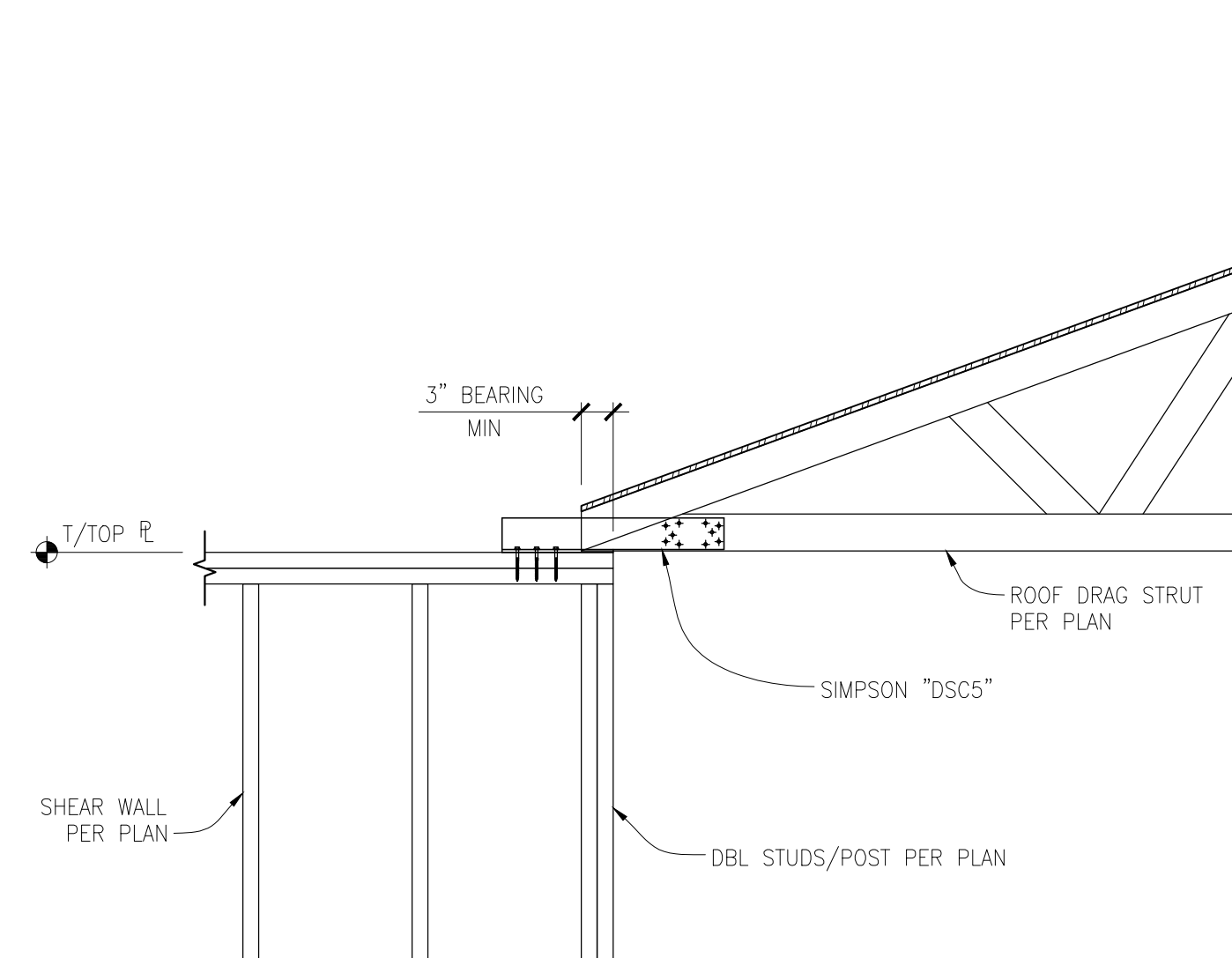
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SHEAR WALL PERPENDICULAR TO ROOF TRUSS

SCALE: 1" = 1'-0"

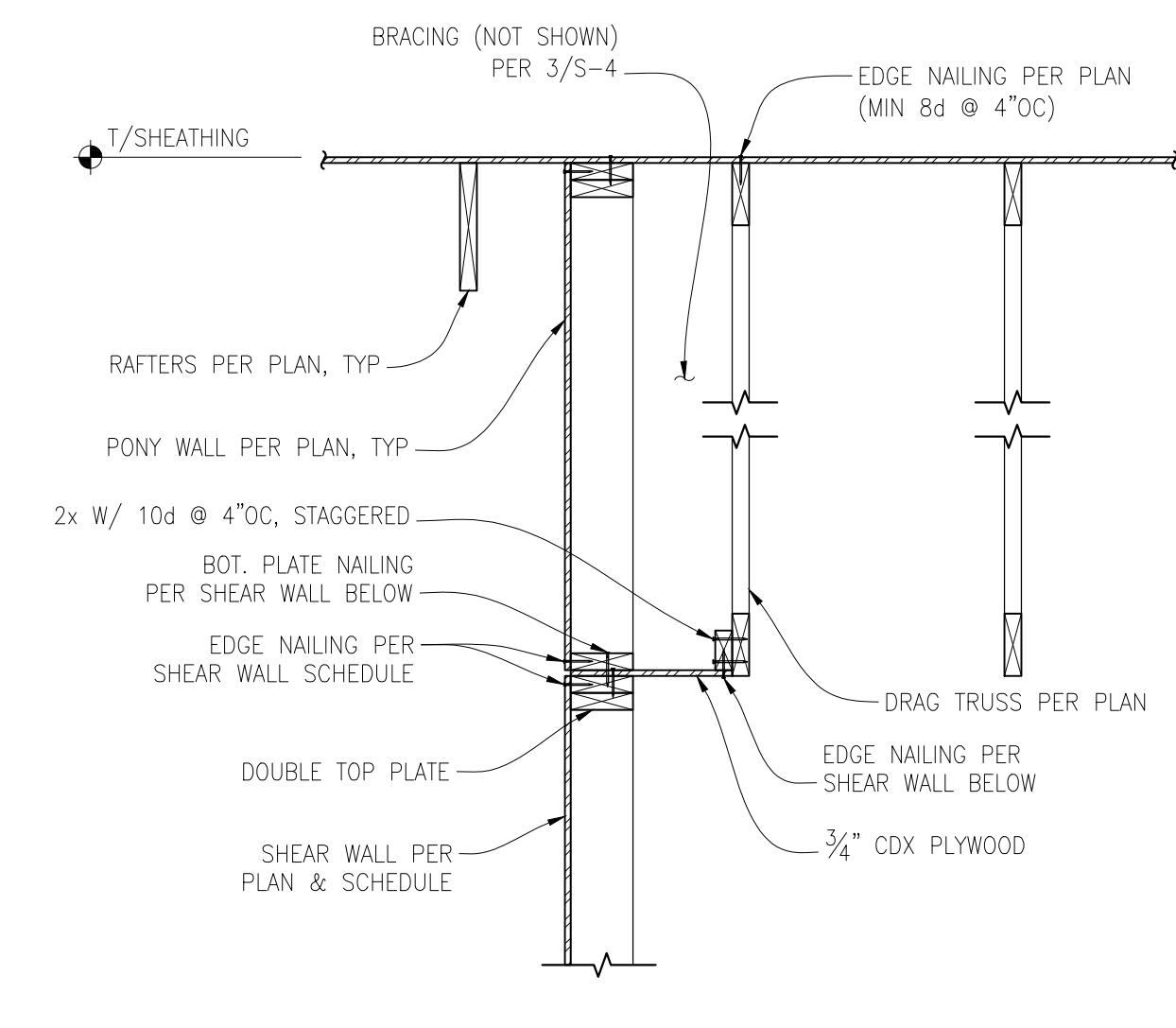
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ROOF DRAG STRUT TO SHEAR WALL CONNECTION

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

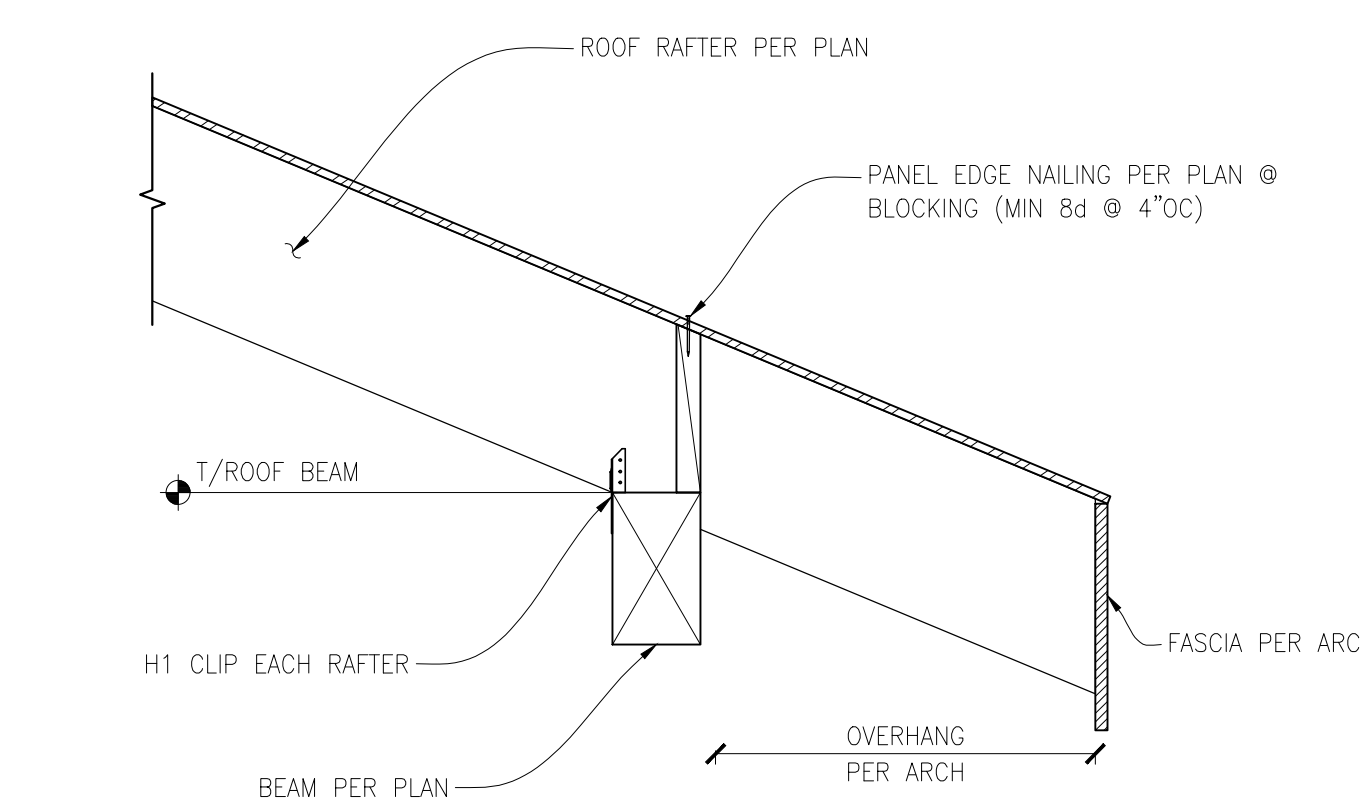
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INTERIOR SHEAR WALL PARALLEL TO ROOF TRUSS CONNECTION

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

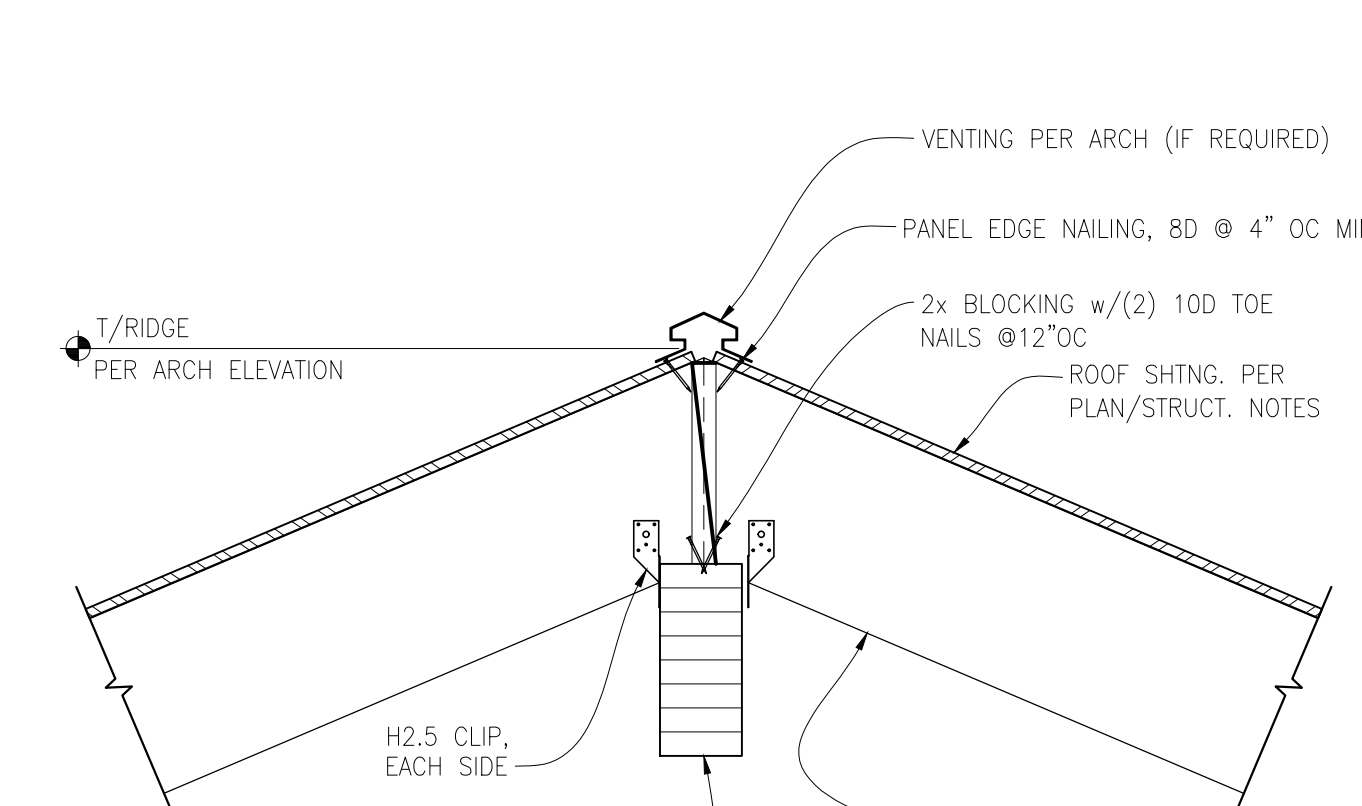
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EXTERIOR ROOF RAFTERS TO ROOF BEAM CONNECTION

SCALE: 1" = 1'-0"

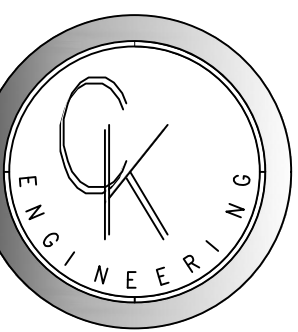
9



RIDGE BEAM TO RAFTERS CON.

SCALE: 1" = 1'-0"

10



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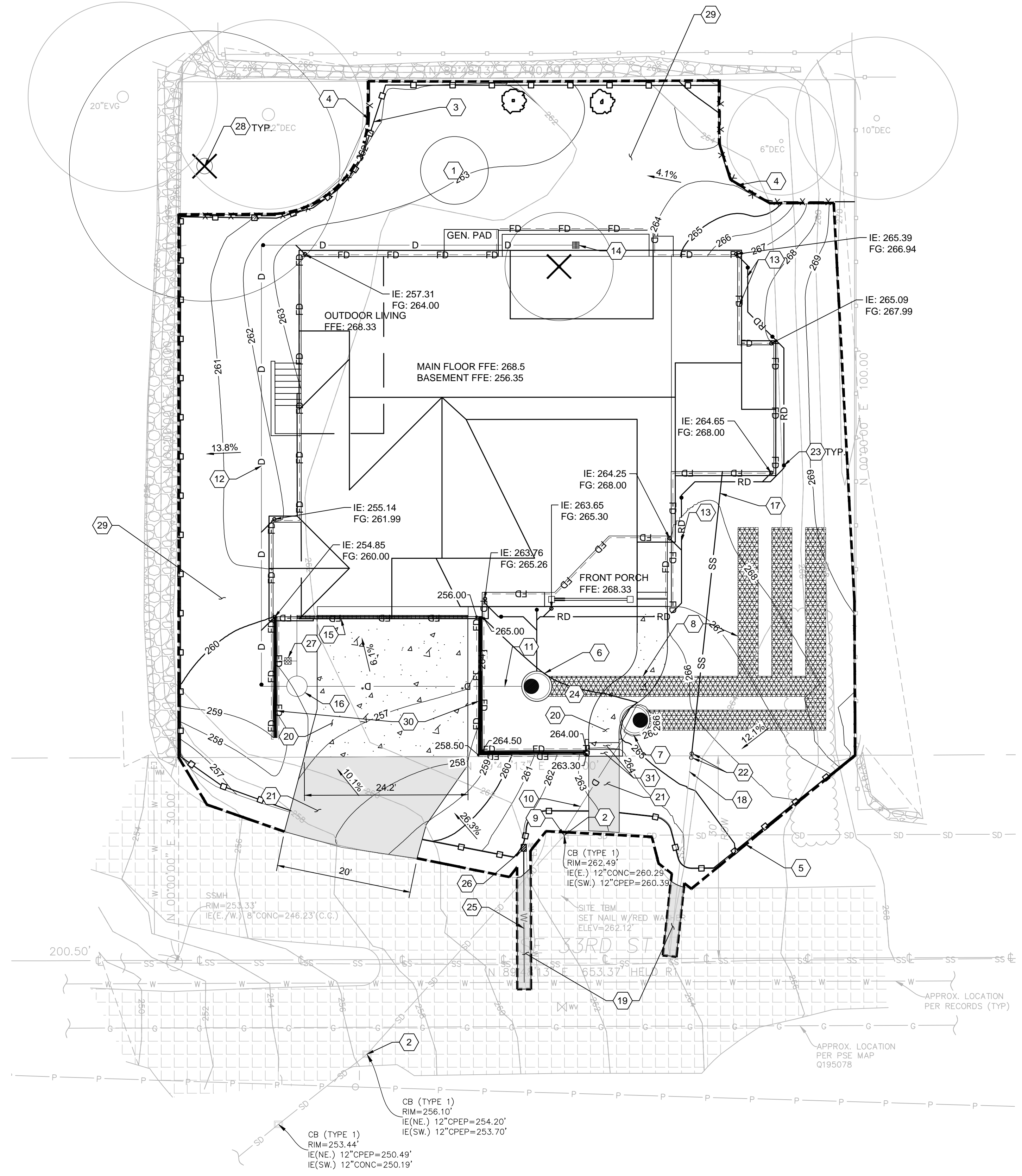
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22-021

STRUCTURAL
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S-4.0



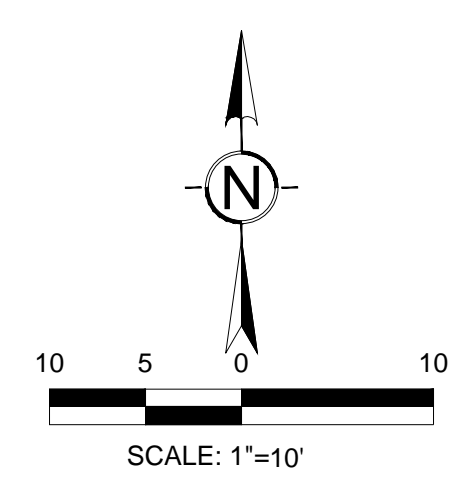
GENERAL NOTES

- PROVIDE STRAW OR PLASTIC COVER TO ANY EXPOSED SOILS THROUGHOUT THE CONSTRUCTION CYCLE
- ENSURE 1.5 FOOT MINIMUM COVER ON ALL ROOF DRAINS, FORCE STORM LINES, AND OTHER PIPES OUTSIDE OF DRIVABLE SURFACES. ENSURE 2 FOOT MINIMUM COVER ON ALL PIPES UNDER DRIVABLE SURFACES.
- 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. THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST-CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP 15.13. THE PROJECT CIVIL ENGINEER MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN AND LANDSCAPE AREAS ARE MEETING THE POST-CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENTS SPECIFIED ON THE APPROVED PLAN SET PRIOR TO FINAL INSPECTION OF THE PROJECT
- PROPOSED TURF AREAS SHALL RECEIVE TOPSOIL AMENDED WITH CEDAR GROVE FINE GRADE COMPOST OR OTHER COMPOST THAT MEETS WSDOT STANDARD SPEC 9-14.5(B) AT A RATE OF 0.01 CY PER SQUARE FOOT. SEE DETAIL FOR SOIL POST CONSTRUCTION SOIL QUALITY AND DEPTH SECTION.
- THE TV INSPECTION OF THE EXISTING SIDE SEWER TO THE CITY SEWER MAIN ON SE 33RD ST IS REQUIRED PRIOR TO ANY WORK RELATED TO THE SIDE SEWER. IF THE RESULT OF THE TV INSPECTION IS NOT IN SATISFACTORY CONDITION, AS DETERMINED BY THE CITY OF MERCER ISLAND INSPECTOR, THE REPLACEMENT OF THE EXISTING SIDE SEWER IS REQUIRED.
- AN EMERGENCY ON-SITE, BACK-UP POWER SUPPLY AND AN EXTERNAL ALARM SYSTEM FOR SYSTEM FAILURE AND HIGH WATER LEVEL INDICATOR ARE REQUIRED FOR THE PUMP SYSTEM.
- PRIVATE PROPERTY OWNS SHALL BE RESPONSIBLE FOR ANY AND ALL CLAIMS FOR INJURIES AND DAMAGE DUE TO THE OPERATION OR NON-OPERATION OF THE PUMP SYSTEM.

SHEET NOTES

- 1 TEMPORARY STOCK PILE (C-200)
- 2 PROVIDE INLET PROTECTION (C-200)
- 3 SILT FENCE PER A.02
- 4 TEMPORARY TREE PROTECTION FENCE PER A.02
- 5 LIMITS OF DISTURBANCE. ANY NON-HARD SURFACE IN THIS AREA WILL RECEIVE SOIL AMENDMENTS FOR TURF (C-200)
- 6 54" TYPE 2 CATCH BASIN (SEE DETENTION SIZING SHEET) RIM:264.94 (C-200)
- 7 54" TYPE 2 CATCH BASIN WITH CONTROL STRUCTURE (SEE DETENTION SIZING SHEET) RIM: 266.15 (C-200)
- 8 TOTAL OF 134' OF 36" DETENTION PIPE TOP OF PIPE: 262.98. ENSURE 1.5' MIN COVER (SEE ATTACHED DETENTION SIZING SHEET) (C-200)
- 9 TIE INTO EXISTING CATCH BASIN. IE IN: 260.39 IF THE EXISTING CATCH BASIN IS NOT IN SATISFACTORY CONDITION, AS DETERMINED BY THE CITY OF MERCER ISLAND INSPECTOR, THE REPLACEMENT OF THE EXISTING CATCH BASIN IS REQUIRED. (C-200)
- 10 12" ADS N-12 PIPE @ 0.5% MIN (C-200)
- 11 2" PVC (SCHEDULE 40 OR STRONGER) FORCE STORM LINE. ENSURE 1.5 FOOT MIN COVER, 2 FEET AT DRIVEWAY. (C-200)
- 12 6" PVC STORM LINE @ 2% MIN (C-200)
- 13 6" PVC ROOF AND FOOTING DRAIN @ 2% MIN (C-200)
- 14 AREA DRAIN RIM: 258.85 IE OUT: 258.09 (C-200)
- 15 TRENCH DRAIN RIM: 256.98 IE OUT: 256.62 (C-200)
- 16 DUPLEX PUMP SYSTEM, COMPOSED OF TWO ZOELLER N57 SERIES PUMPS, ZOELLER DUPLEX ELECTRICAL ALTERNATOR CONTROL PANEL/ALARM, APAK Z CONTROL ALARM, AND A 48" Ø TYPE 2 CATCH BASIN RIM: 256.87 +/- IE IN: 251.80 IE OUT: 254.80 (C-200)
- 17 6" PVC SDR-35 SEWER LINE @ 2% MIN IE OUT OF BUILDING: 256.13 (C-200)
- 18 CONNECTION TO EXISTING SEWER STUB IE IN: 254.71 LOCATION ASSUMED. NOT SURVEYED. CONTRACTOR TO FIELD VERIFY (C-200)
- 19 SAWCUT AND RESTORE (C-200)
- 20 CONCRETE PAVEMENT (C-200)
- 21 ASPHALT PAVEMENT (C-200)
- 22 SEWER CONNECTION (C-200)
- 23 STORM CLEANOUT (C-200)
- 24 ELEVATION OVER DETENTION FACILITY MUST BE 264.5 OR GREATER TO MEET COVER REQUIREMENTS (C-200)
- 25 NEW 2" WATER SERVICE LINE (C-200)
- 26 1.5" WATER METER (C-200)
- 27 BACKFLOW VALVE PER DETAIL (C-200)
- 28 REMOVE EXISTING TREE (C-200)
- 29 5,664 SF TOTAL PROPOSED TURF AREA. IMPLEMENT POST CONSTRUCTION SOIL QUALITY PER GENERAL NOTES. (C-200)
- 30 RETAINING WALL. STRUCTURAL DESIGN BY OTHERS. (C-200)
- 31 7" TALL STEP (C-200)

DATE PLOTTED: 11/4/2022 9:26:05 AM FILENAME: 22022-SITE.DWG BY: ---



11/4/2022

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

NO.	REVISIONS

DATE: 11.04.2022
 BCRA NO: 22022
 DRAWN BY: BS DESIGNED BY: BS
 REVIEWED BY: JG
 SHEET TITLE: DRAINAGE AND EROSION CONTROL PLAN

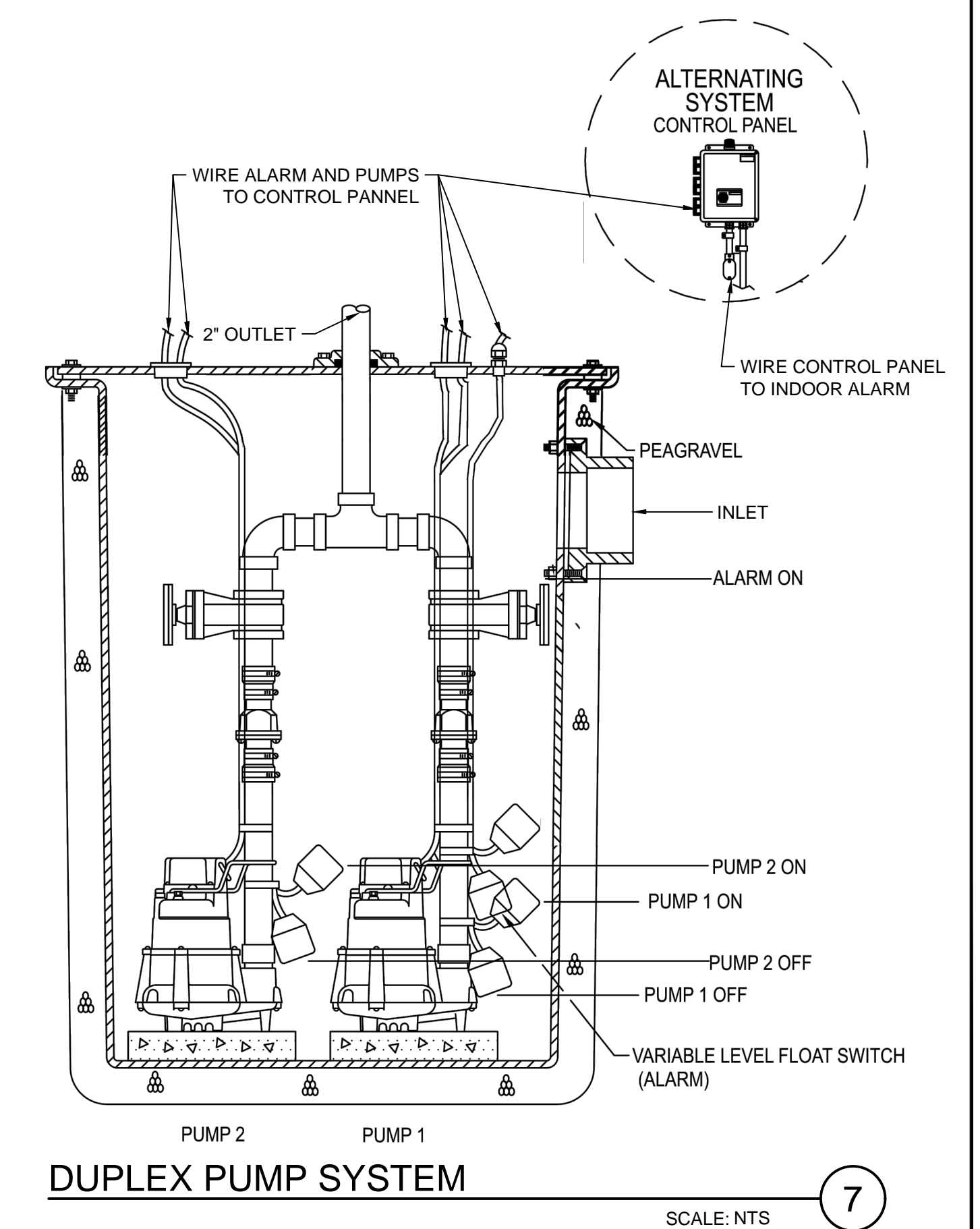
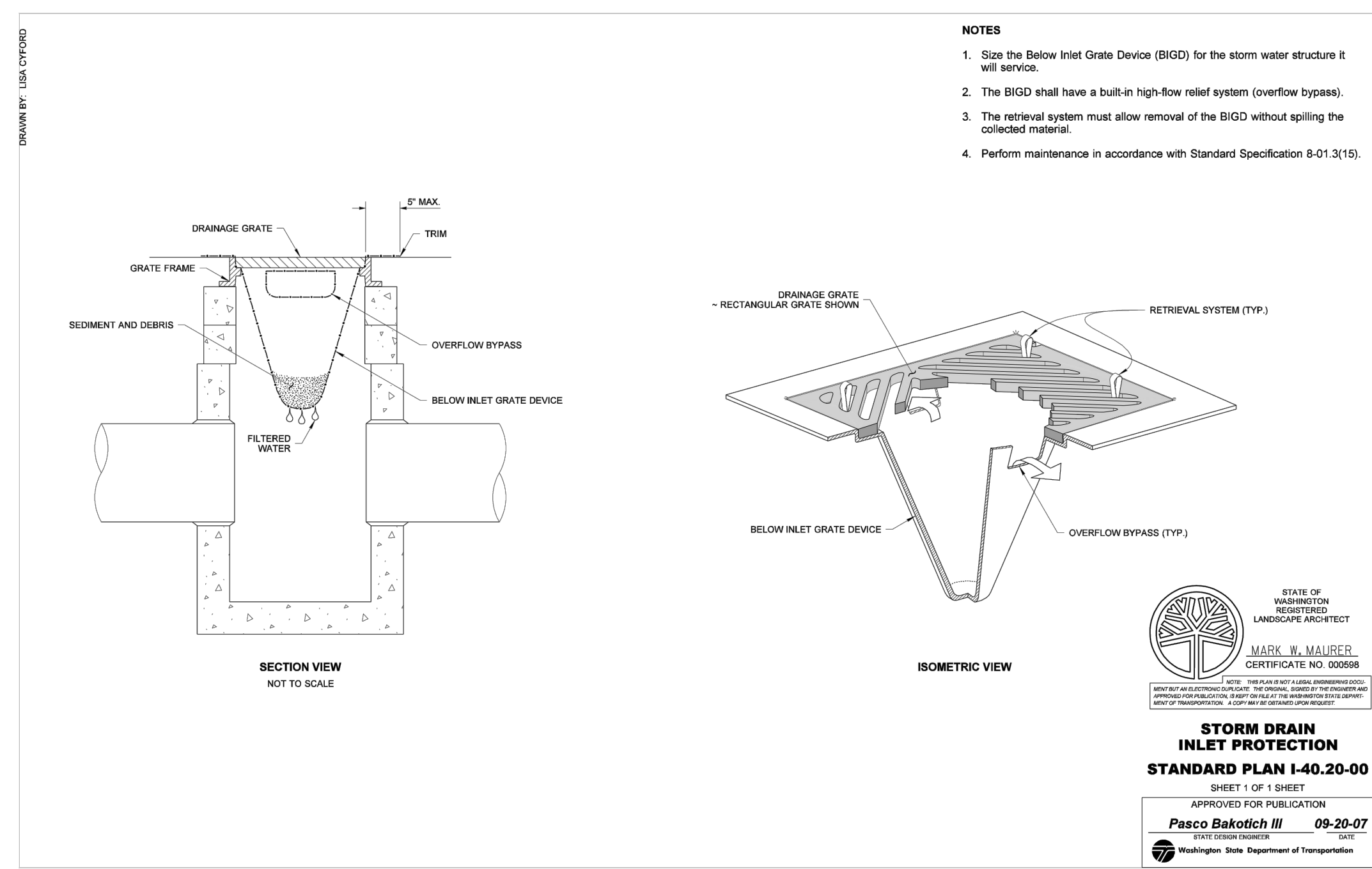
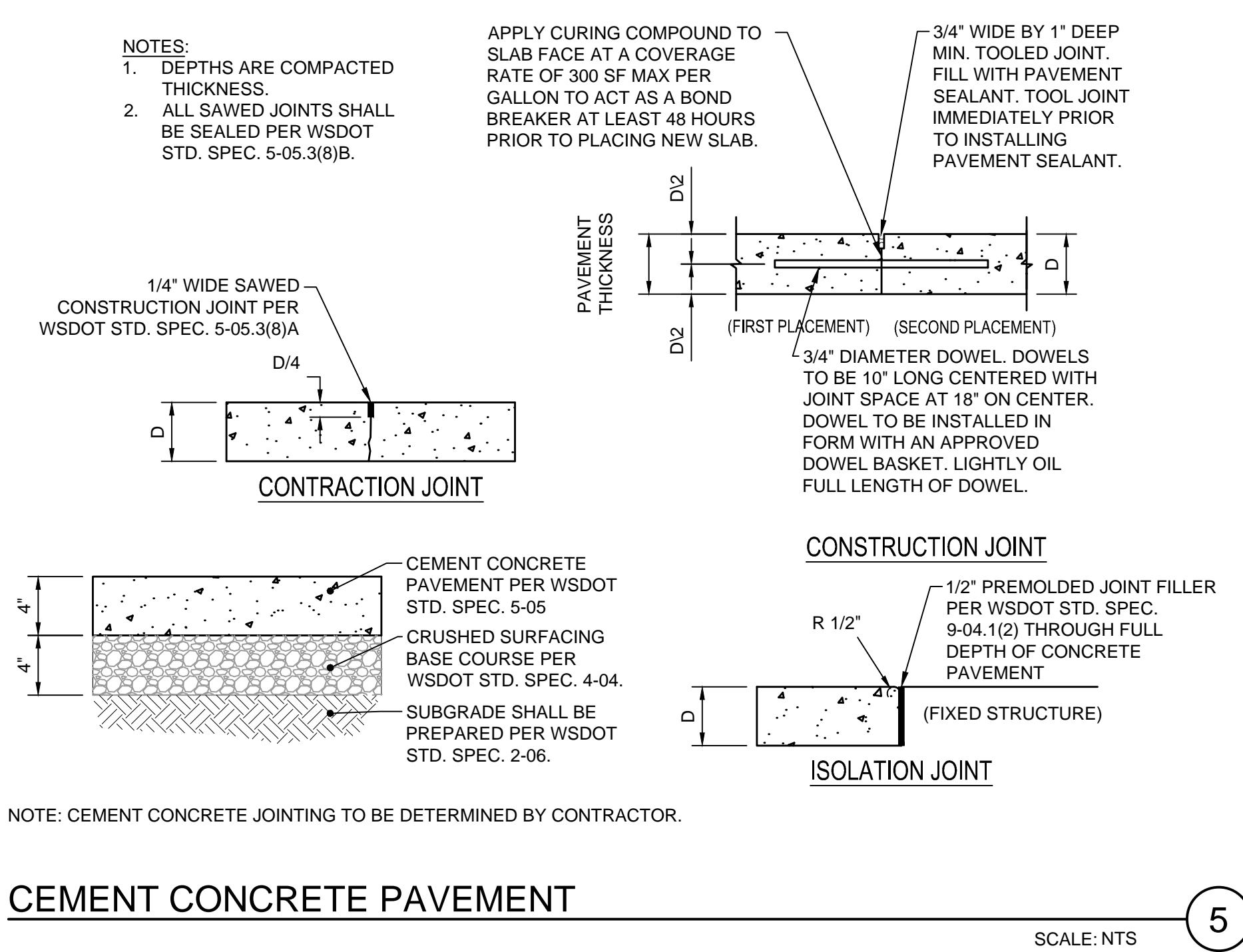
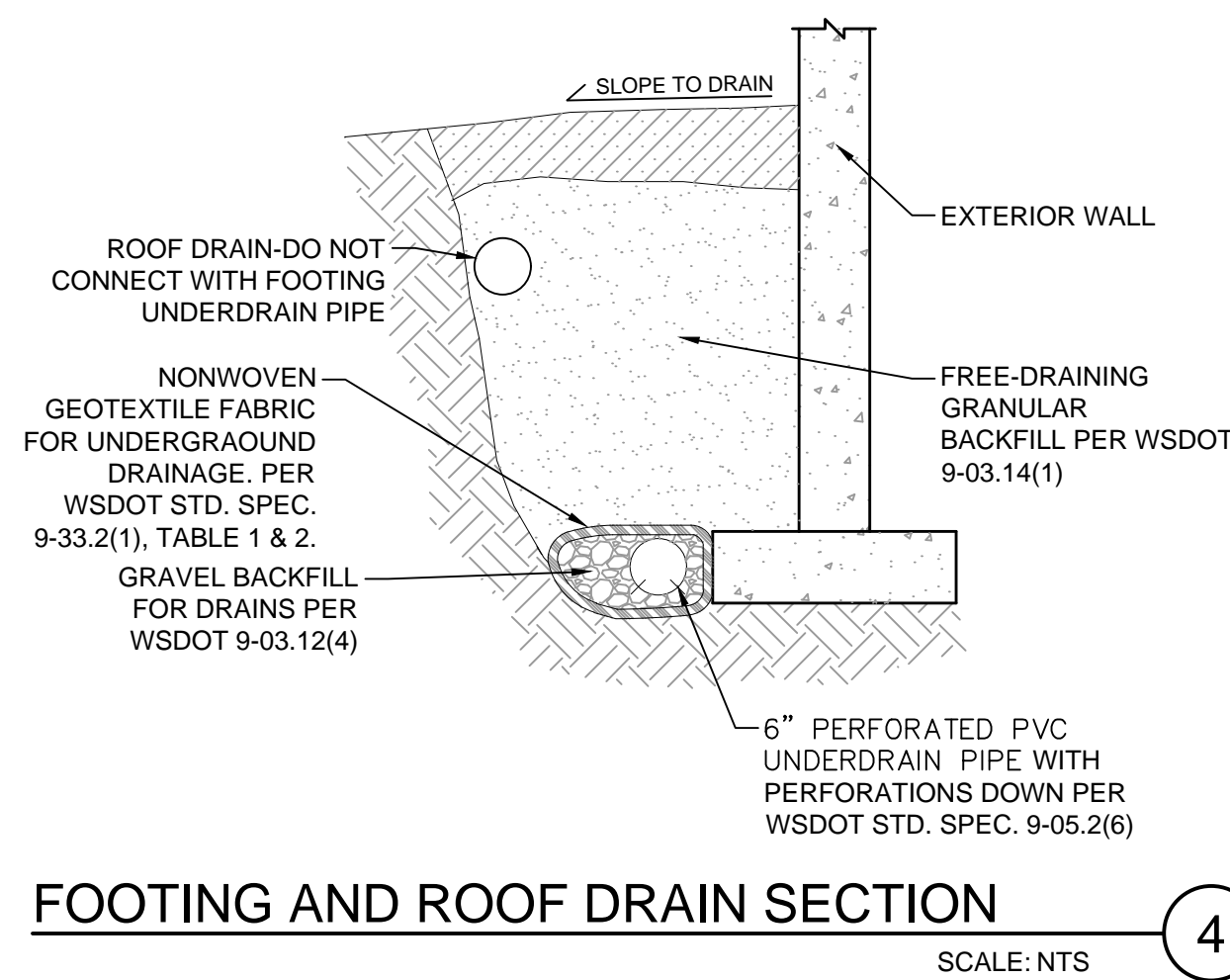
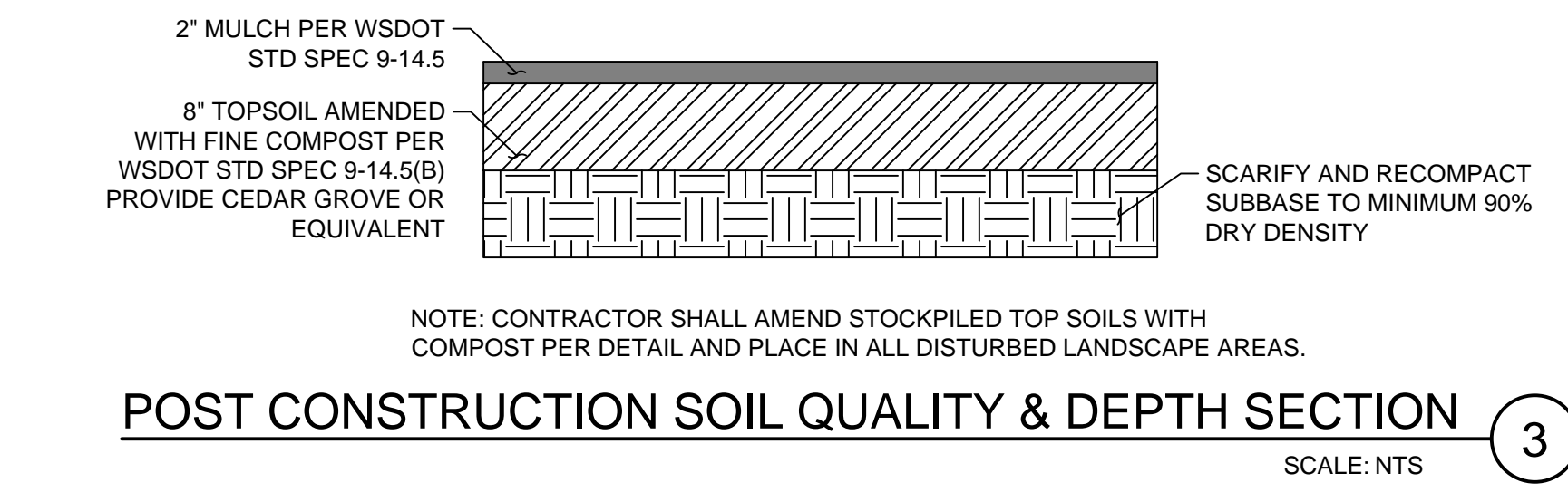
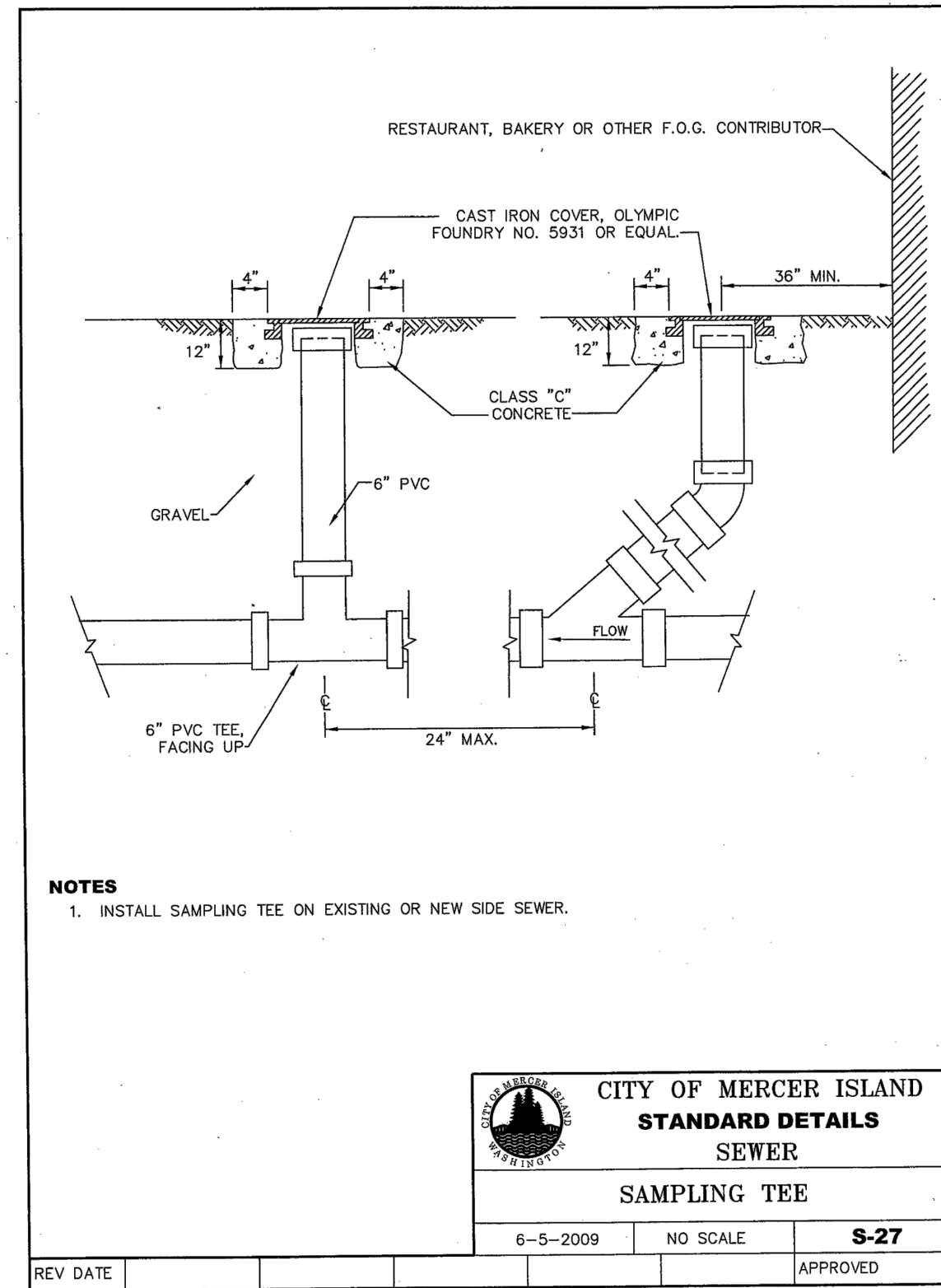
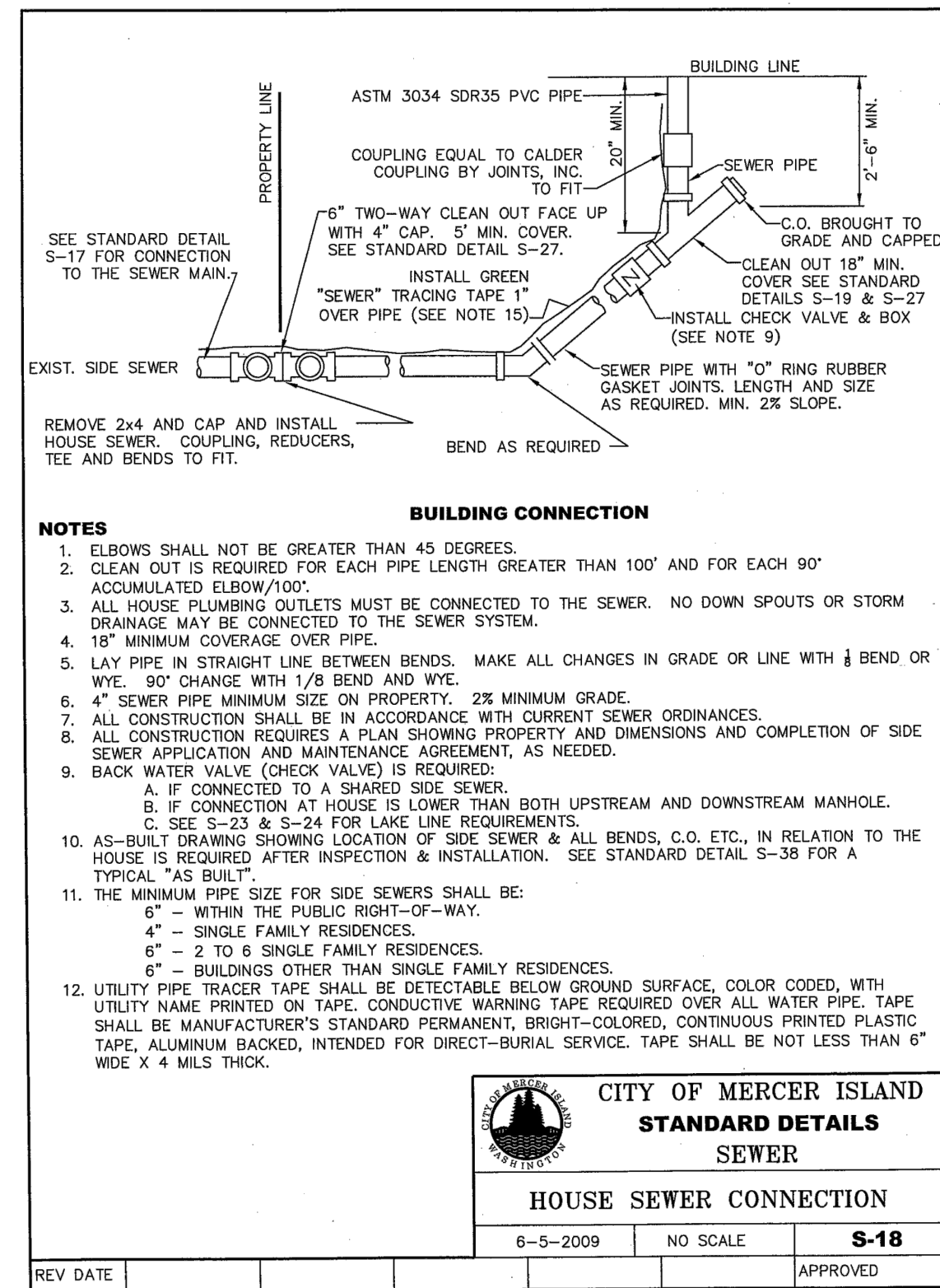


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bcra
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 SHEET

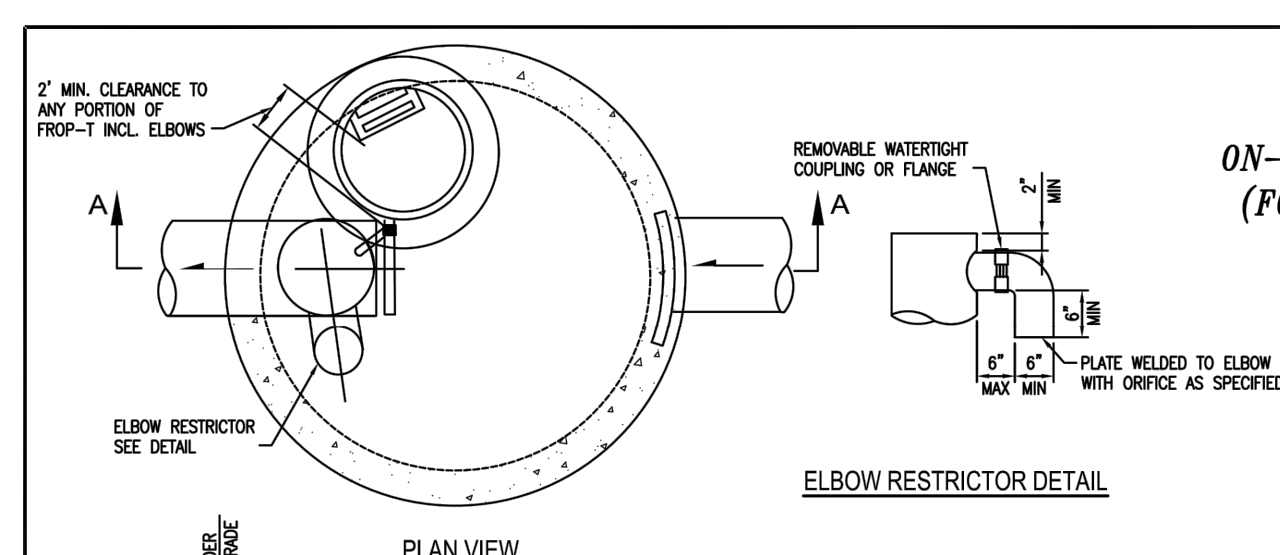
C-001
 STORM DESIGN

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



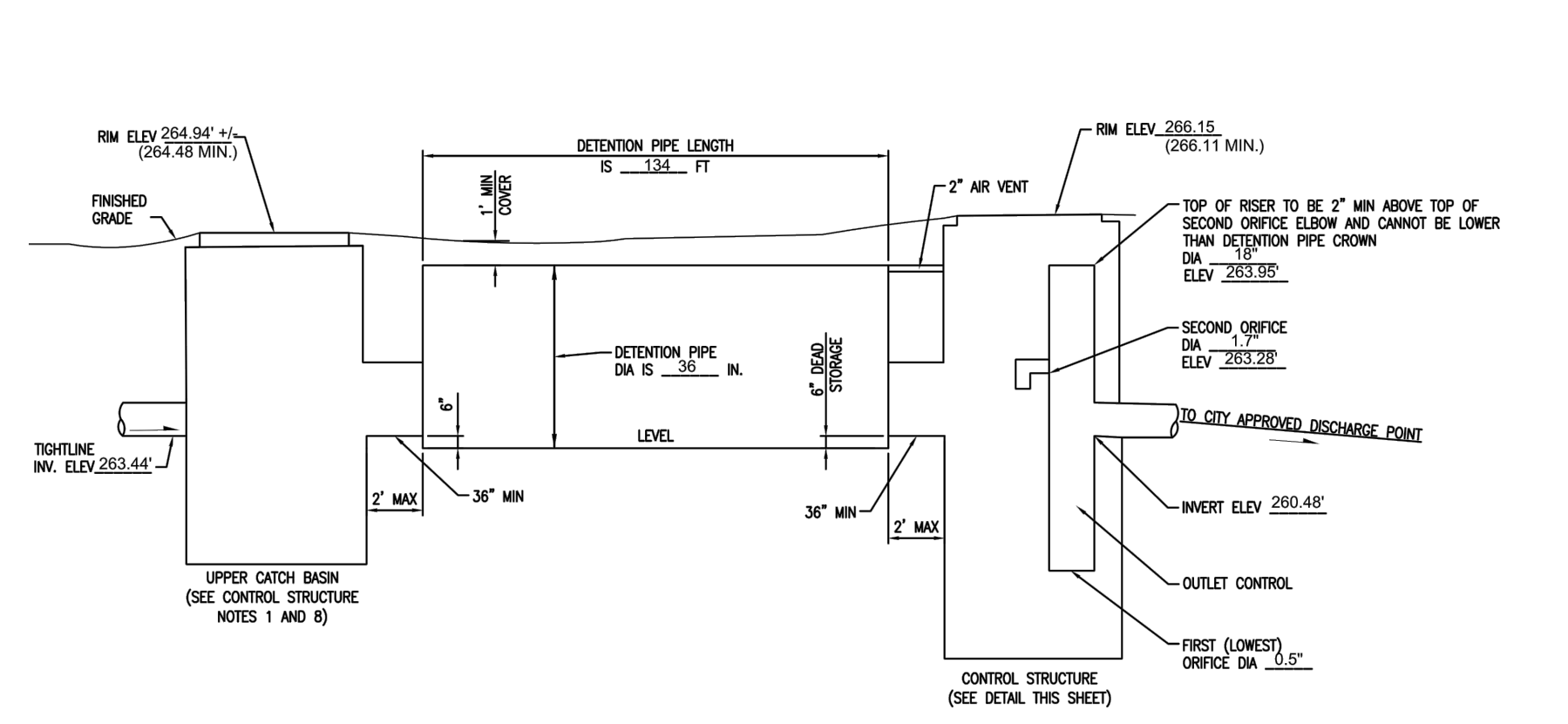
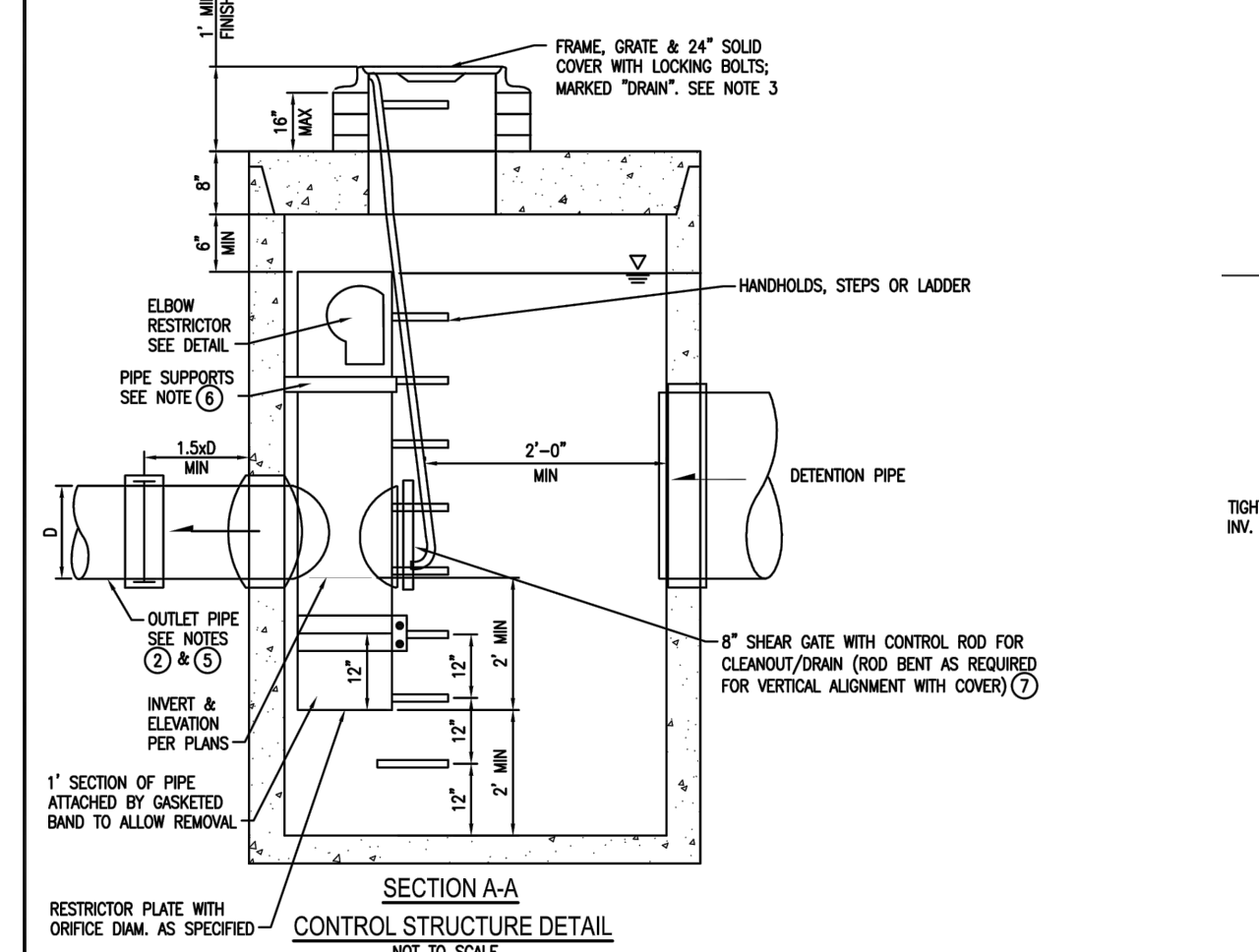
DATE PLOTTED: 11/14/2022 9:26:05 AM FILENAME: 22022-SITE.DWG BY: ---

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)**

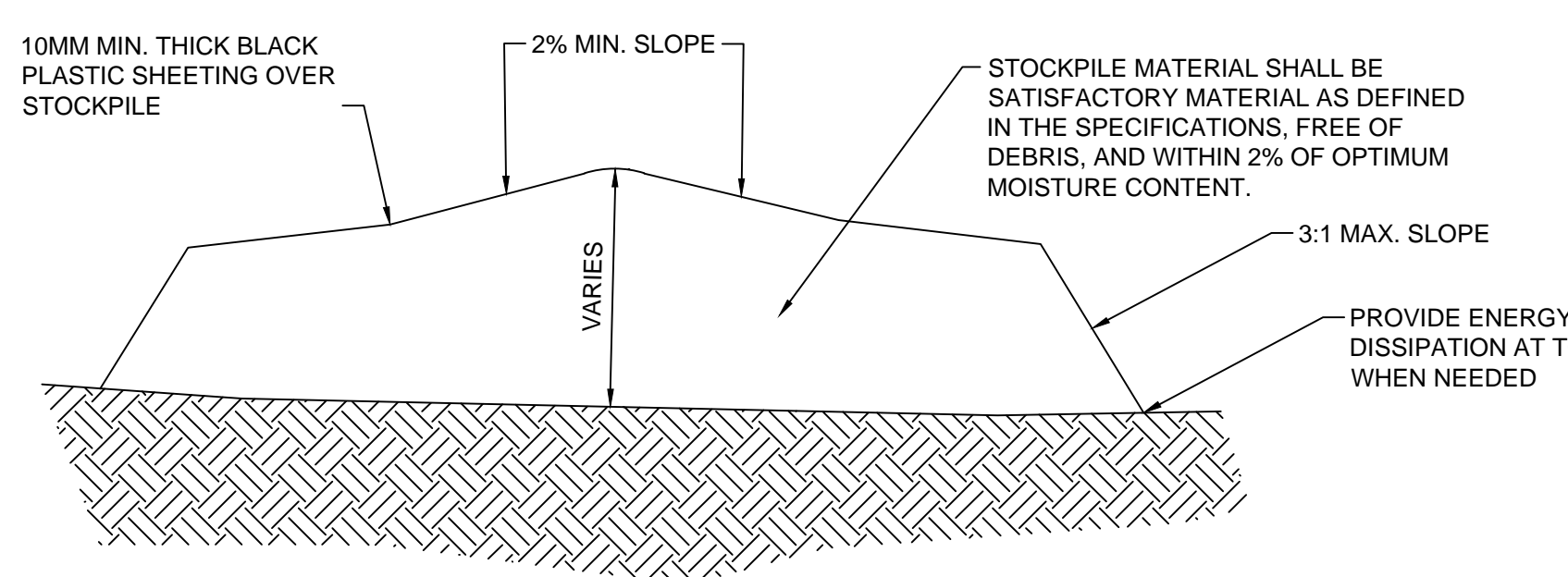
OWNER: Erin Jacobsen	ADDRESS: 6922 33RD ST SE	PREPARED BY: JUSTIN GOROCH, P.E.
PERMIT #: 2205-096	MERCER ISLAND, WA	PHONE: (253) 627-4367
DATE: 10/05/2022		
NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): 9,500	DETECTION PIPE DIA (INCH): 36	DETECTION PIPE LENGTH (FT): 134
SOIL TYPE: ASENT'S ALDERWOOD MATERIAL (HSG BID)	PIPE MATERIAL: CMP	ORIFICE #1 DIA: 0.5 INCH, ELEV: 258.48
		ORIFICE #2 DIA: 1.7 INCH, ELEV: 263.28



- CONTROL STRUCTURE NOTES**
- USE A MINIMUM OF A 5/8 IN. DIA. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.
 - OUTLET PIPE: MIN. 6 INCH.
 - METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
 - FRAME AND LADDER OR STEPS OFFSET 50.
 - CLEANOUT GATE IS VISIBLE FROM TOP.
A. CLAMP-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE.
B. FRAME IS CLEAR OF CURB.
 - IF METAL OUTLET PIPE CONNECTS TO CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
 - 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\"/>

- ON-SITE DETENTION SYSTEM NOTES**
- CALL DEVELOPMENT SERVICES (206-275-7005) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
 - RESPONSIBILITY FOR OPERATION AND MAINTENANCE 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.
 - PIPE MATERIAL, JOINT, AND PROTECTIVE TREATMENT SHALL BE IN ACCORDANCE WITH SECTION 7.04 AND 9.05 OF THE WSDOT STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST VERSION. SUCH MATERIALS INCLUDE THE FOLLOWING: LINED CORRUGATED POLYETHYLENE PIPE (LCP), ALUMINIZED TYPE 2 CORRUGATED STEEL PIPE AND PIPE ARCH (MEETS AASHTO DESIGNATIONS M24 AND M30), CORRUGATED OR SPIRAL RIB ALUMINUM PIPE, OR REINFORCED CONCRETE PIPE. CORRUGATED STEEL PIPE IS NOT ALLOWED.
 - FOOTING DRAINS SHALL NOT BE CONNECTED TO THE DETENTION SYSTEM.

ON-SITE DETENTION SYSTEM DETAIL



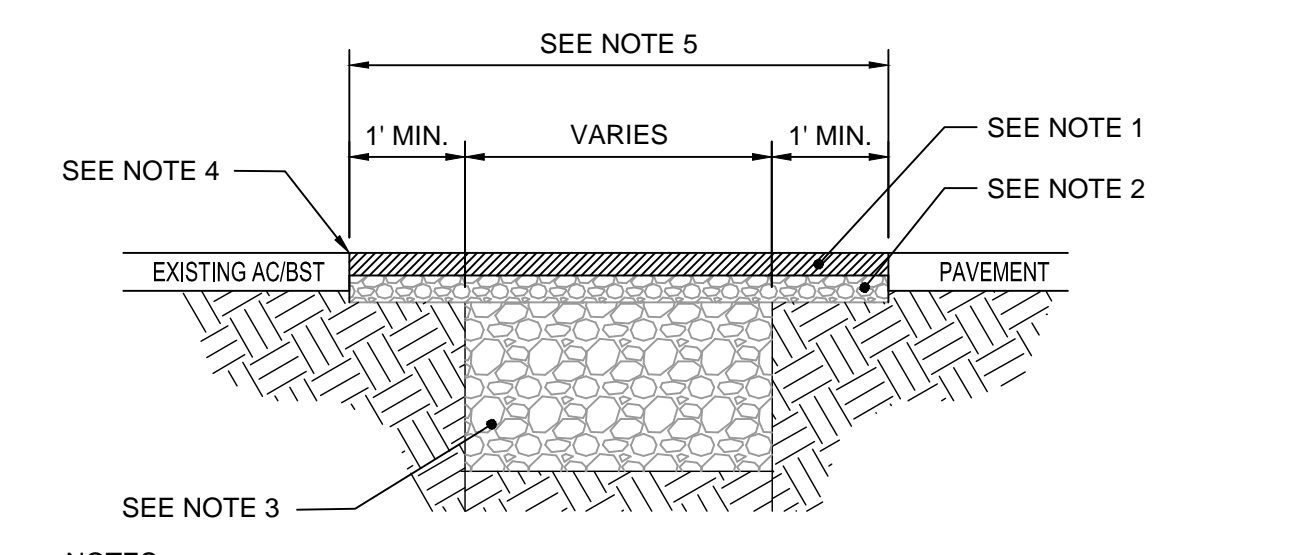
- MAINTENANCE REQUIREMENTS:**
- INSPECT PLASTIC FOR RIPS, TEARS, AND OPEN SEAMS REGULARLY AND REPAIR IMMEDIATELY. THIS PREVENTS HIGH VELOCITY RUNOFF FROM CONTACTING BARE SOIL WHICH CAUSES EXTREME EROSION.
 - TORN SHEETS MUST BE REPLACED AND OPEN SEAMS REPAIRED.
 - IF THE PLASTIC BEGINS TO DETERIORATE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

- TOPSOIL STOCKPILE NOTES:**
- STOCKPILES SHALL BE STABILIZED (WITH PLASTIC SHEETING OR OTHER APPROVED DEVICE) DAILY BETWEEN NOVEMBER 1 AND MARCH 31.
 - IN ANY SEASON, SEDIMENT LEACHING FROM STOCK PILES MUST BE PREVENTED.
 - 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.
 - PREVIOUSLY ESTABLISHED GRADES ON THE AREAS TO BE TOPSOILED SHALL BE MAINTAINED ACCORDING TO THE APPROVED PLAN.

- PLASTIC COVERING NOTES:**
- PLASTIC SHEETING SHALL HAVE A MINIMUM THICKNESS OF 6 MILS AND SHALL MEET THE REQUIREMENTS OF THE STATE STANDARD SPECIFICATION SECTION 9-14.5. 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.
 - CLEAR PLASTIC COVERING SHALL BE INSTALLED IMMEDIATELY ON AREAS SEEDED BETWEEN NOVEMBER 1 AND MARCH 31 AND REMAIN UNTIL VEGETATION IS FIRMLY ESTABLISHED.
 - WHEN THE COVERING IS USED ON UN-SEEDED SLOPES, IT SHALL BE KEPT IN PLACE UNTIL THE NEXT SEEDING PERIOD.
 - PLASTIC COVERING SHEETS SHALL BE BURIED TWO FEET AT THE TOP OF SLOPES IN ORDER TO PREVENT SURFACE WATER FLOW BENEATH SHEETS.
 - PROPER MAINTENANCE INCLUDES REGULAR CHECKS FOR RIPS AND DISLODGED ENDS.

TEMPORARY STOCK PILE

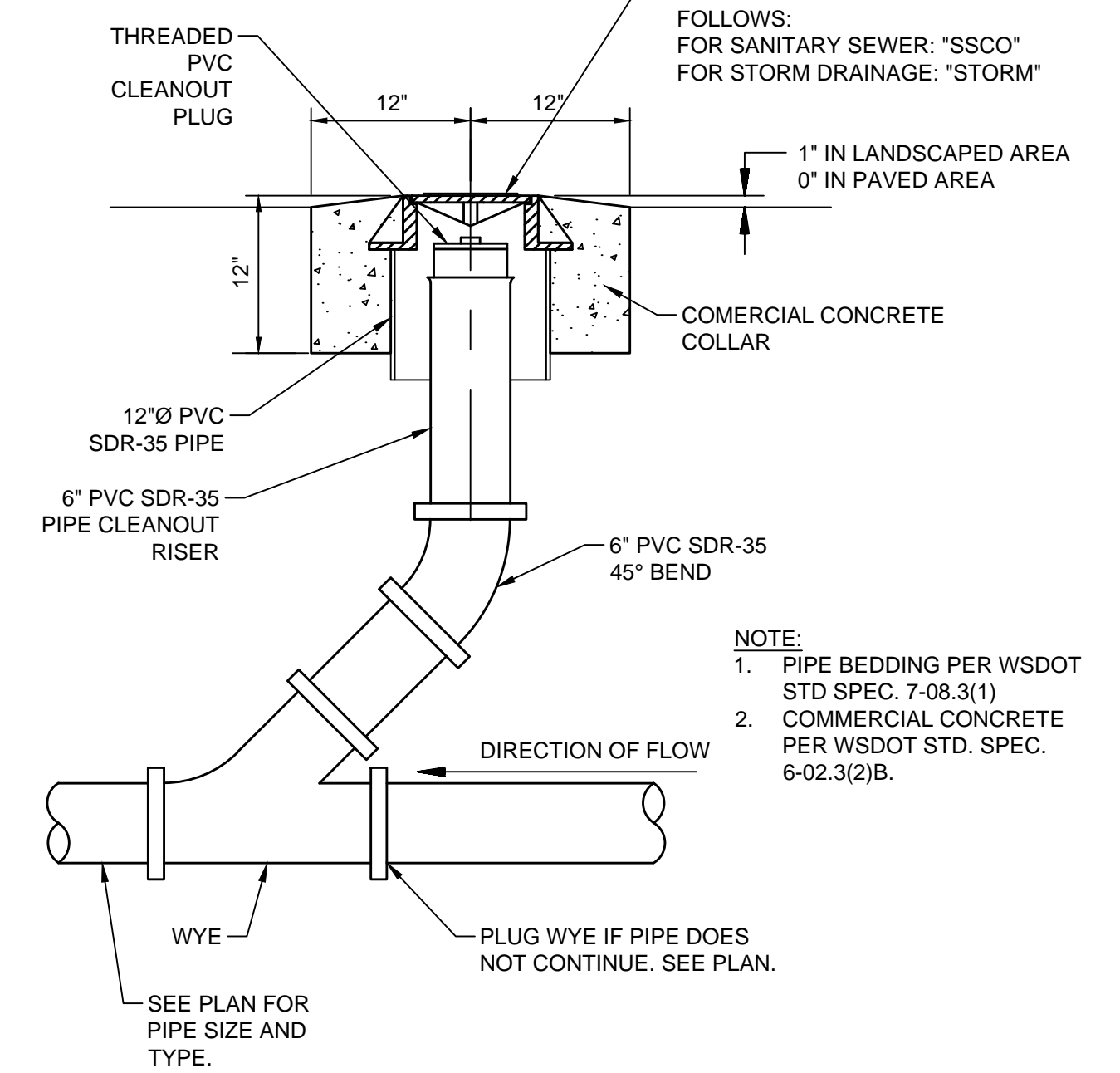
SCALE: NTS 10



- NOTES:**
- ASPHALT CONCRETE PAVEMENT CONFORMING TO PG 58-22 PER WSDOT 6-04. 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\"/>

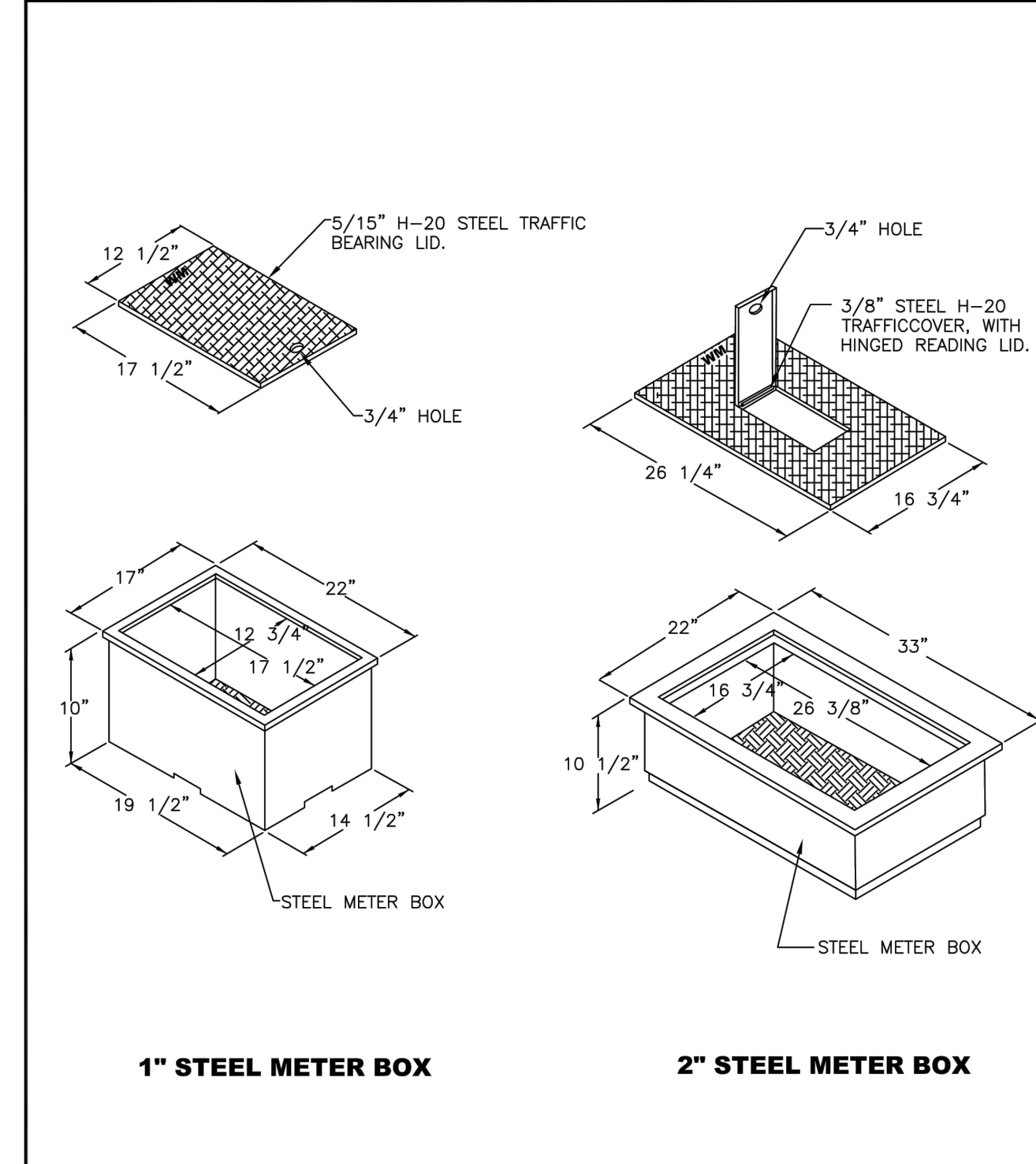
HMA RESTORATION

SCALE: NTS 9



STORM CLEANOUT

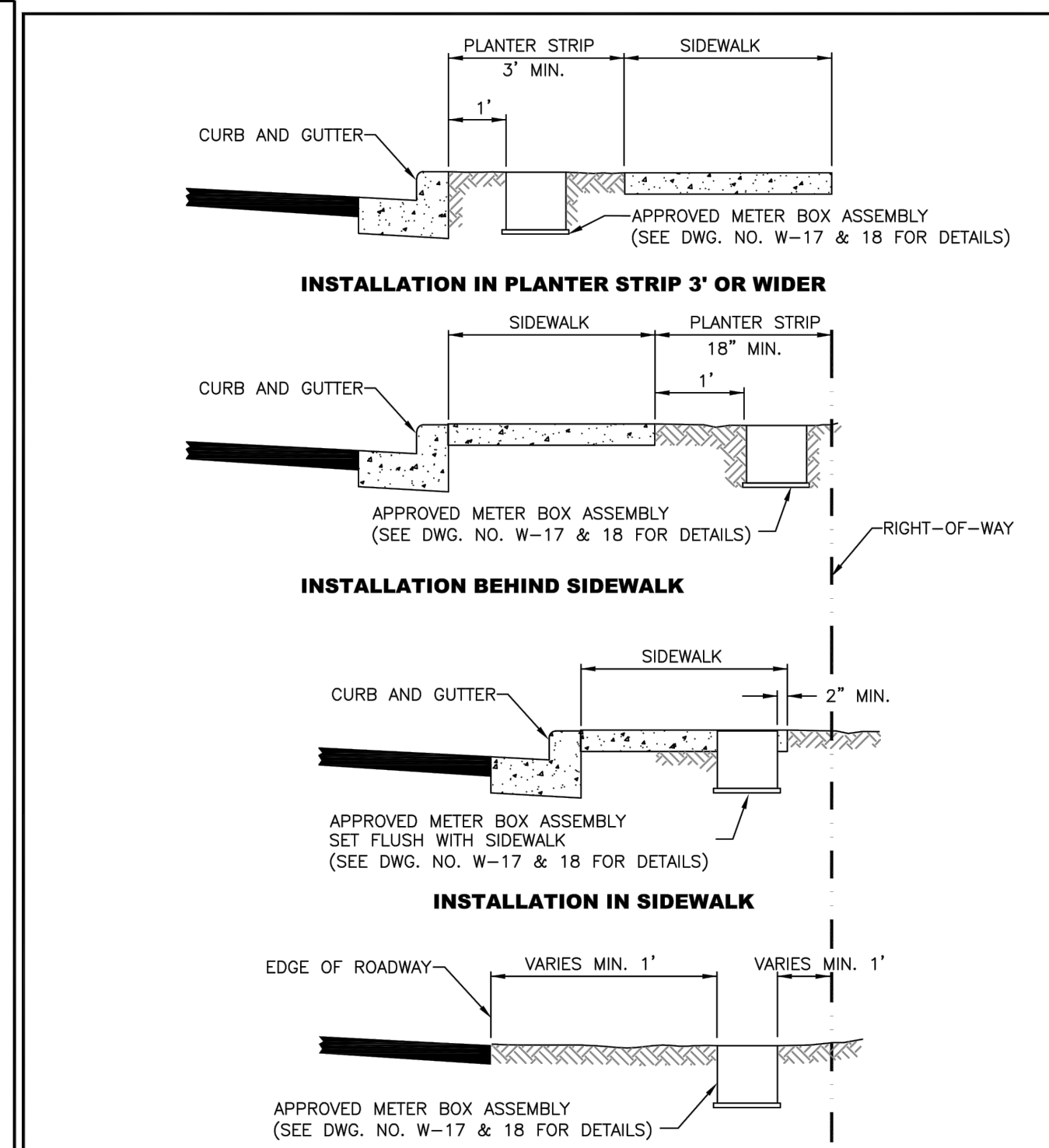
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CITY OF MERCER ISLAND	
STANDARD DETAILS	
WATER	
1\"/>	
12-23-2013	NO SCALE
REV DATE	APPROVED

WATER METER BOX

SCALE: NTS 12



CITY OF MERCER ISLAND	
STANDARD DETAILS	
WATER	
WATER METER PLACEMENT	
3-20-2006	NO SCALE
REV DATE	APPROVED

WATER METER PLACEMENT

SCALE: NTS 12



11/4/2022

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

DATE	11.04.2022
BCR# NO.	22022
DRAWN BY: BS	DESIGNED BY: BS
REVIEWED BY: JG	
SHEET TITLE	DETAILS



C-003

STORM DESIGN

DATE PLOTTED: 11/4/2022 9:26:07 AM FILENAME: 22022-SITE.DWG BY: ---

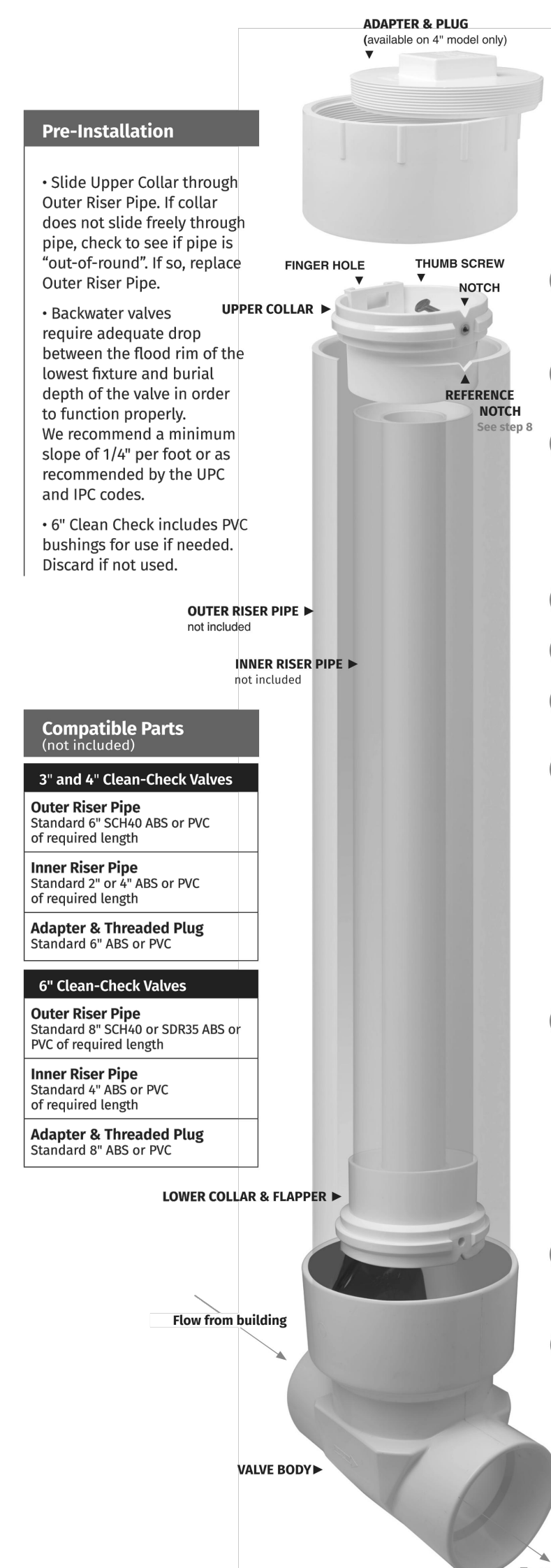
IF SHEET MEASURES LESS THAN 24"x36", IT IS A REDUCED PRINT. REDUCE SCALE ACCORDINGLY

INSTALLATION INSTRUCTIONS

RectoSeal brand solvent cements are approved to meet manufacturer's recommendations.



CLEAN CHECK® Extendable Backwater Valve

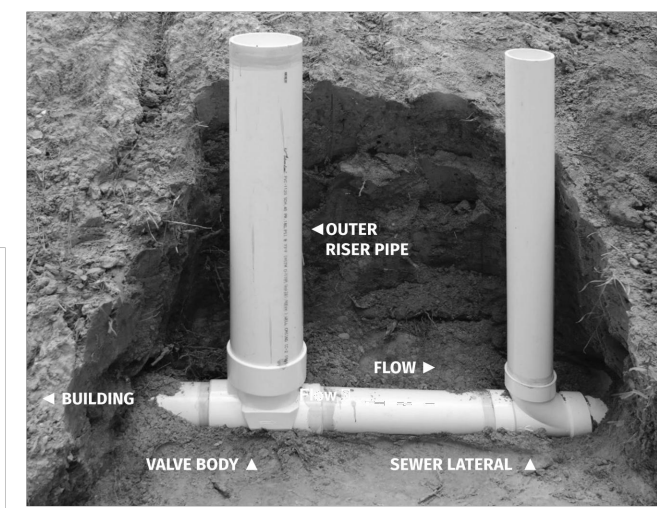


Pre-Installation

- Slide Upper Collar through Outer Riser Pipe. If collar does not slide freely through pipe, check to see if pipe is "out-of-round". If so, replace Outer Riser Pipe.
- Backwater valves require adequate drop between the floor rim of the lowest fixture and burial depth of the valve in order to function properly. We recommend a minimum slope of 1/4" per foot or as recommended by the UPC and IPC codes.
- Clean Check includes PVC bushings for use if needed. Discard if not used.

Compatible Parts

- 3" and 4" Clean-Check Valves**
- Outer Riser Pipe**
Standard 6" SCH40 ABS or PVC of required length
- Inner Riser Pipe**
Standard 2" or 4" ABS or PVC of required length
- Adapter & Threaded Plug**
Standard 6" ABS or PVC
- 6" Clean-Check Valves**
- Outer Riser Pipe**
Standard 8" SCH40 or SDR35 ABS or PVC of required length
- Inner Riser Pipe**
Standard 4" ABS or PVC of required length
- Adapter & Threaded Plug**
Standard 8" ABS or PVC



Outer Riser Installation

- At proper depth, install the Clean Check Valve Body between the building and the sewer lateral, with the "FLOW" arrow of the Valve Body pointing downstream away from the building.
- Rotate the Valve Body until the opening is facing directly upward. A level may be used across the top of the Valve Body to verify horizontal positioning.
- Cut the Outer Riser Pipe to the required length. Cement and insert while keeping the inside of the body clean of debris. CAUTION: Be certain that excess solvent cement has not impeded proper seating of the Flapper Assembly or the proper seating of the flapper seating surface of the Valve Body.

Inner Riser Installation

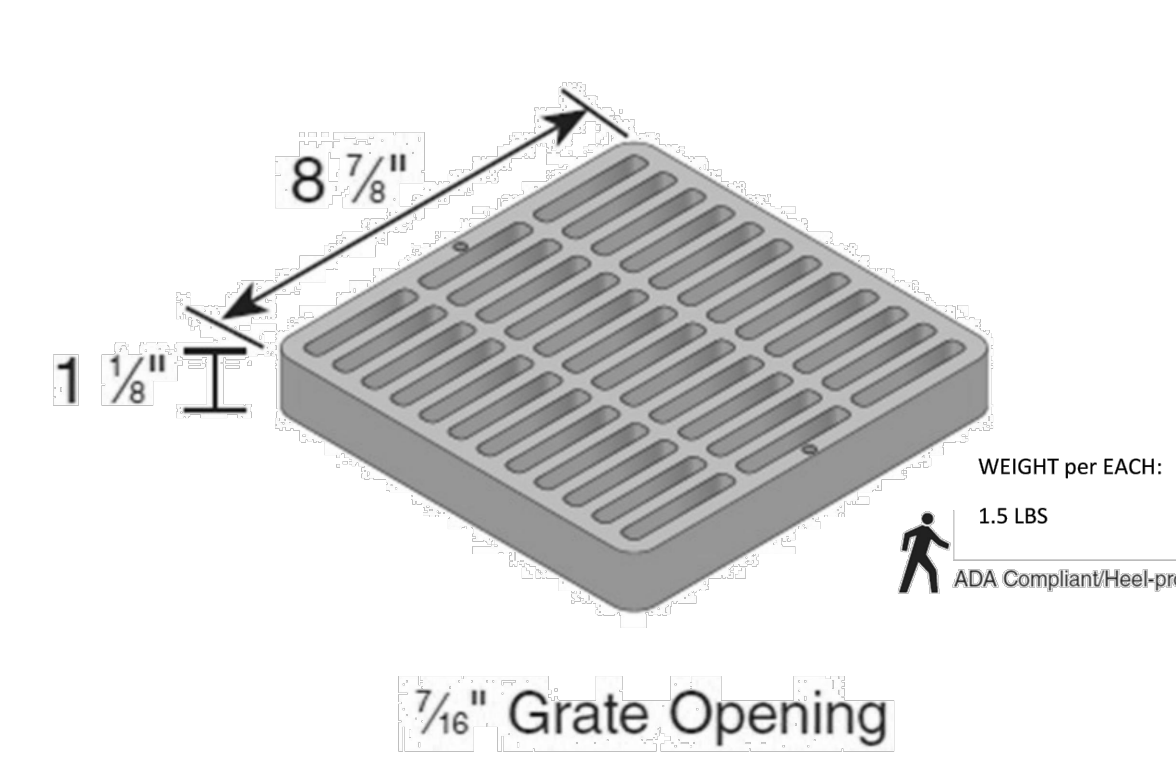
- Cut the Inner Riser Pipe to a length 3/4" shorter than the Outer Riser Pipe.
- Cement the Lower Collar with Flapper to one end of the Inner Riser Pipe.
- Cement the Upper Collar to the other end of the Inner Riser Pipe, while aligning the center of the Finger Hole with the center of the Flapper on the opposite end.
- When cement is dry, loosen the thumb screw in the Upper Collar and slide the Inner Riser Assembly - Flapper Assembly first - into the Outer Riser Assembly with the flat sealing side of the Flapper facing the inlet side of the Valve Body. Lower the Inner Riser Assembly into the seating area of the Valve Body, making certain that the Thumb Screw is inside the inside wall of the Outer Riser Pipe and NOT on the resting on the top edge. Seat the Flapper Assembly by rotating as necessary until it locks in place. Visually inspect that the Flapper Assembly is installed correctly.
- IMPORTANT: Prior to installation of the Threaded Adapter & Plug (with the Inner Riser Assembly properly installed) cut a reference notch into the Outer Riser Pipe. This saw cut notch should be aligned with the molded Notch in the Upper Collar. For future removal, alignment of the notches will quickly indicate that the flapper is seated correctly.
- IMPORTANT: Tighten the stainless steel Thumb Screw in the Upper Collar until it is firmly secured to the Outer Riser Pipe, fixing the Inner Riser Assembly in place.
- Cement the Threaded Adapter to the Outer Riser and install the clean-out plug to complete installation.

RectoSeal® 2021 September Edition - Houston, TX 77055 800-231-3333 www.rectoseal.com

BACKFLOW PREVENTER

SCALE: NTS 13

9" X 9" SQUARE GRATE

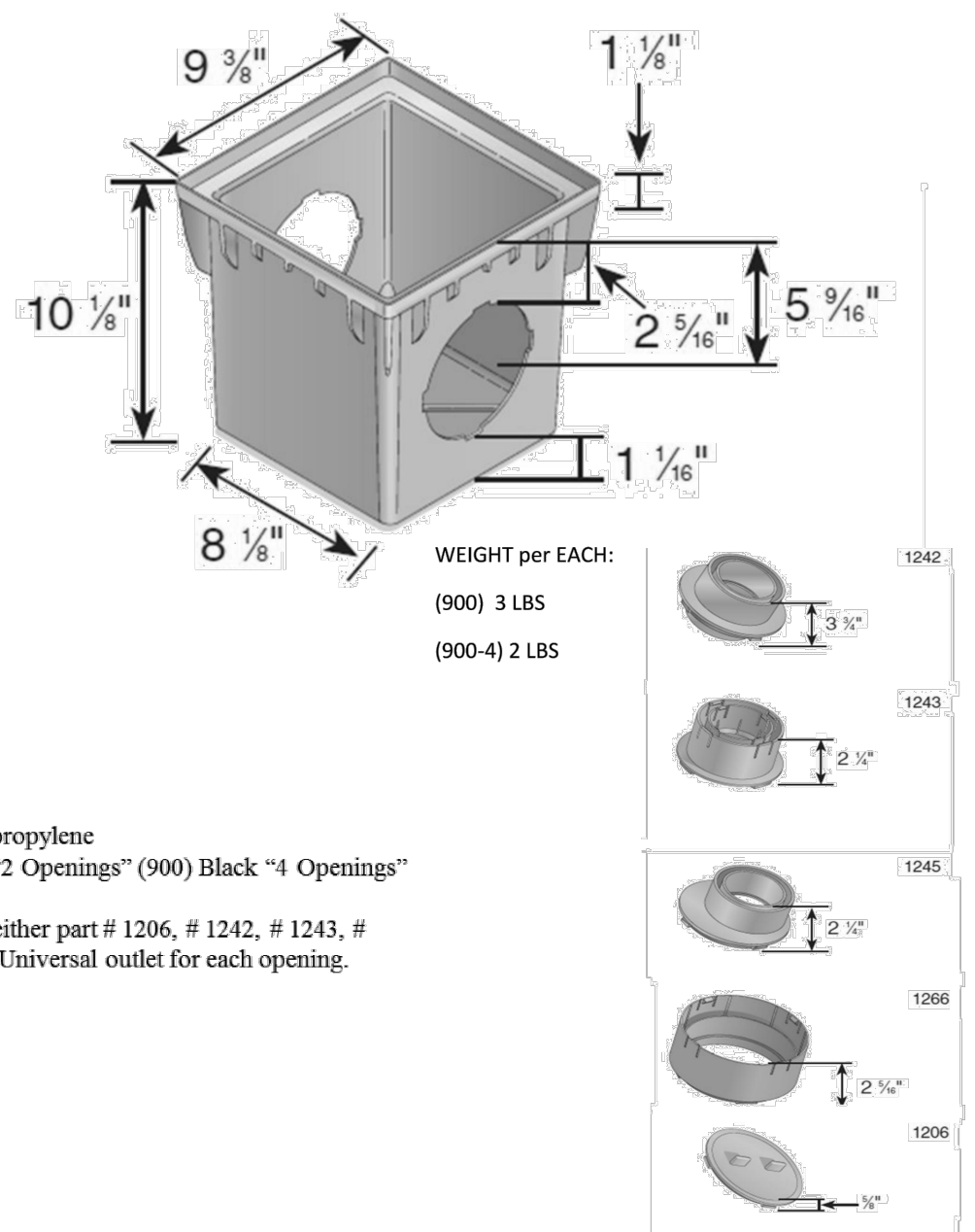


Material: HDPE
Color: Black (980), Green (990), Gray (999), Sand (9995)
Fits: Use with 9" x 9" Catch Basin series
Opening: 37.49 in² open space
Will accommodate 114.69 gallons per minute with 1/2" of head.

Load Recommendation Guide

- Class A**
 - Loads of 140 psi.
 - Recommended for pedestrians, bicycles and wheel chair traffic.

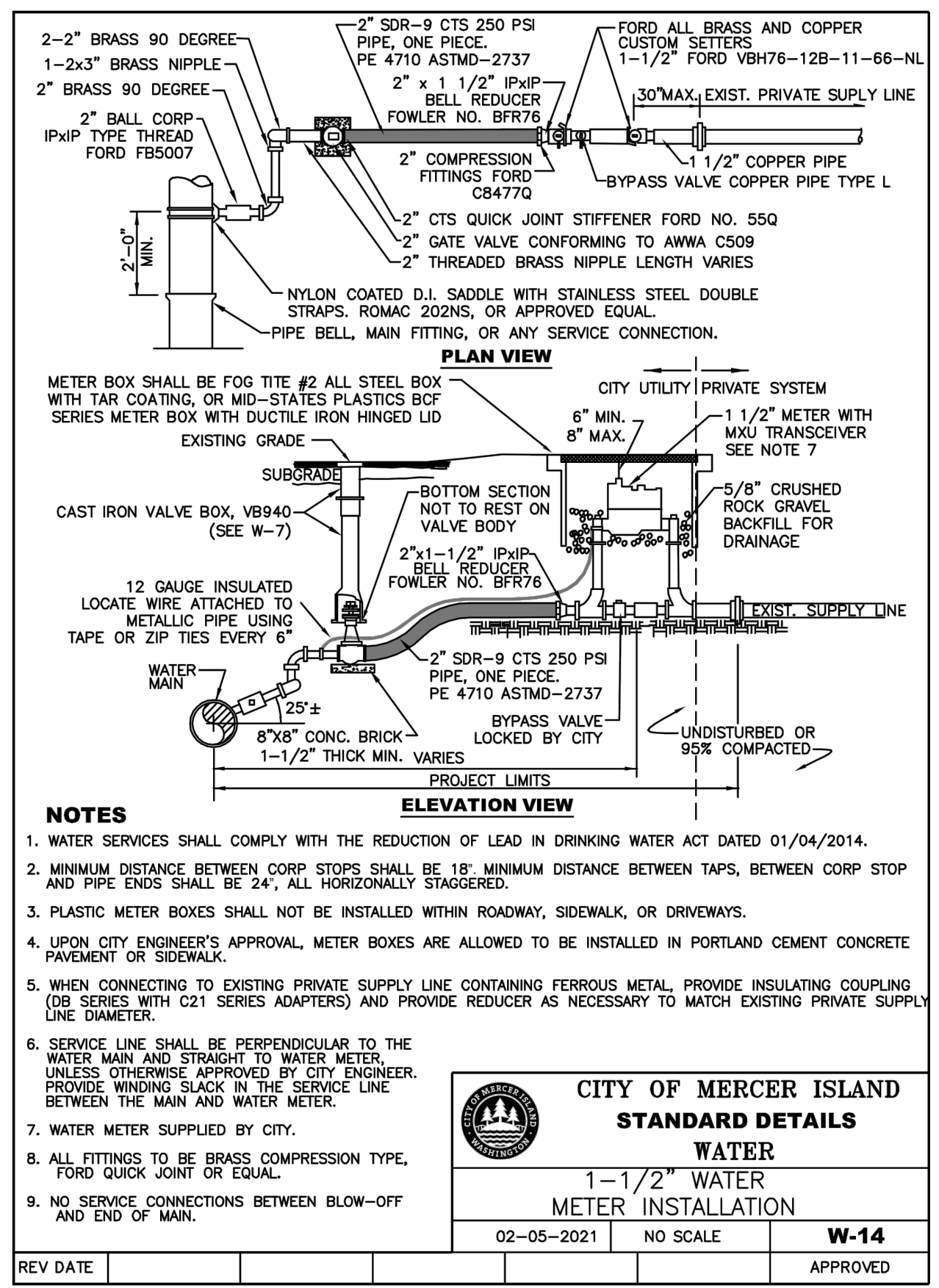
9" x 9" SQUARE CATCH BASIN



Material: Polypropylene
Colors: Black "2 Openings" (900) Black "4 Openings" (900-4)
Fits: Requires either part # 1206, # 1242, # 1243, # 1245 or #1266 Universal outlet for each opening.

AREA DRAIN

SCALE: NTS 14



- ### NOTES
- WATER SERVICES SHALL COMPLY WITH THE REDUCTION OF LEAD IN DRINKING WATER ACT DATED 01/04/2014.
 - MINIMUM DISTANCE BETWEEN CORP STOPS SHALL BE 18". MINIMUM DISTANCE BETWEEN TAPS, BETWEEN CORP STOP AND PIPE ENDS SHALL BE 24", ALL HORIZONTALLY STAGGERED.
 - PLASTIC METER BOXES SHALL NOT BE INSTALLED WITHIN ROADWAY, SIDEWALK, OR DRIVEWAYS.
 - UPON CITY ENGINEER'S APPROVAL, METER BOXES ARE ALLOWED TO BE INSTALLED IN PORTLAND CEMENT CONCRETE PAVEMENT OR SIDEWALK.
 - WHEN CONNECTING TO EXISTING PRIVATE SUPPLY LINE CONTAINING FERROUS METAL, PROVIDE INSULATING COUPLING (DB SERIES WITH C21 SERIES ADAPTERS) AND PROVIDE REDUCER AS NECESSARY TO MATCH EXISTING PRIVATE SUPPLY LINE DIAMETER.
 - SERVICE LINE SHALL BE PERPENDICULAR TO THE WATER MAIN AND STRAIGHT TO WATER METER, UNLESS OTHERWISE APPROVED BY CITY ENGINEER. PROVIDE WINDING SLACK IN THE SERVICE LINE BETWEEN THE MAIN AND WATER METER.
 - WATER METER SUPPLIED BY CITY.
 - ALL FITTINGS TO BE BRASS COMPRESSION TYPE, FORD QUICK JOINT OR EQUAL.
 - NO SERVICE CONNECTIONS BETWEEN BLOW-OFF AND END OF MAIN.

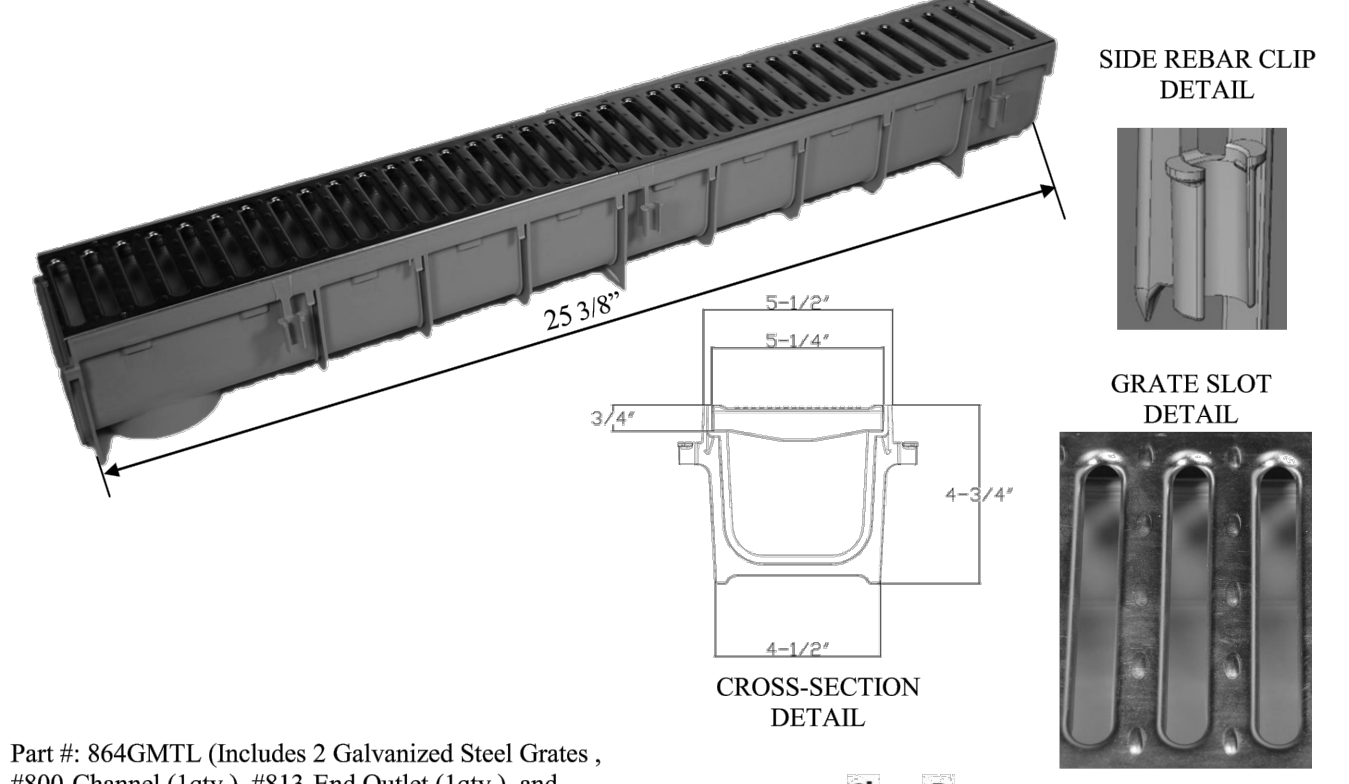
**CITY OF MERCER ISLAND
STANDARD DETAILS
WATER
1-1/2" WATER
METER INSTALLATION**

02-05-2021 NO SCALE **W-14**

WATER METER

SCALE: NTS 16

5 Inch Pro Series Drain Kit With Metal Grate



Part #: 864GMLT (Includes 2 Galvanized Steel Grates, #800-Channel (1Qty.), #813-End Outlet (1Qty.), and #812-End Cap (1Qty.)
Material: Channel (Polyolefin) Grates (Galvanized Steel)
Color: Light Gray / Galvanized Steel
Fits: 3" (Hub) and 4" (Spigot) Sewer/Drain Pipe
Rebar tie clips for easier installation: Fits #4 Rebar
Grate Opening: 0.45"x 4"
Open Surface Area: 19.32 sq. inch per linear ft.

Head Pressure / Flow Rate:
Head (inches) - Max Flow
1" = 83.58 GPM per foot
0.5" = 59.10 GPM per foot
Weight per unit: 7.70 lbs.
Screw: #829 Stainless Steel Screw, 4 per grate.
UV Inhibitors

ADA COMPLIANT



TRENCH DRAIN

SCALE: NTS 15

- ### NOTES
- No steps are required when height is 4' or less.
 - The bottom of the precast catch basin may be sloped to facilitate cleaning.
 - The rectangular frame and grate may be installed with the flange up or down. The frame may be cast into the adjustment section.
 - Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification Section 9-04.3.

CATCH BASIN DIMENSIONS				
CATCH BASIN DIAMETER	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"
72"	6"	8"	60"	12"
84"	8"	12"	72"	12"
96"	8"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"

PIPE ALLOWANCES					
CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER				
	CONCRETE	ALL METAL	CPSSP (1)	SOLID WALL PP (4)	PROFILE WALL PVC (3)
48"	24"	30"	24"	30"	30"
54"	30"	36"	30"	36"	36"
60"	36"	42"	36"	42"	42"
72"	42"	54"	42"	48"	48"
84"	54"	60"	54"	48"	48"
96"	60"	72"	60"	48"	48"
120"	66"	84"	60"	48"	48"
144"	78"	96"	60"	48"	48"

- Corrugated Polyethylene Storm Sewer Pipe (See Standard Specification Section 9-05.20)
- See Standard Specification Section 9-05.12(1)
- See Standard Specification Section 9-05.12(2)
- Polypropylene Pipe (See Standard Specification Section 9-05.24)



Julie Helman, Julie
Feb 20 2018 12:49 PM
**CATCH BASIN TYPE 2
STANDARD PLAN B-10-20-02**

SHEET 1 OF 1 SHEET
APPROVED FOR PUBLICATION
STATE DESIGN ENGINEER
Washington State Department of Transportation

SCALE: NTS 17



11/4/2022

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

DATE: 11.04.2022
BCRA NO: 22022
DRAWN BY: BS DESIGNED BY: BS
REVIEWED BY: JG
SHEET TITLE: DETAILS



C-003

STORM DESIGN

DATE PLOTTED: 11/4/2022 9:26:09 AM FILENAME: 22022-SITE.DWG BY: ---

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