2015 IRC AND 780 CMR 51.00 RESIDENTIAL BUILDING CODE EXCERPTS

R303: LIGHT, VENTILATION, AND HEATING

R303.1: HABITABLE ROOMS
HABITABLE ROOMS SHALL HAVE AN AGGREGATE GLAZING AREA OF NOT LESS THAN 8 PERCENT OF THE FLOOR AREA OF SUCH ROOMS. NATURAL *VENTILATION* SHALL BE THROUGH WINDOWS, SKYLIGHTS, DOORS, LOUVERS OR OTHER *APPROVED* OPENINGS TO THE OUTDOOR AIR. SUCH OPENINGS SHALL BE PROVIDED WITH READY ACCESS OR SHALL OTHERWISE BE READILY CONTROLLABLE BY THE BUILD- ING OCCUPANTS. THE OPENABLE AREA TO THE OUTDOORS SHALL BE NOT LESS THAN 4 PERCENT OF THE FLOOR AREA BEING VENTILATED.
EXCEPTIONS:
1. THE GLAZED AREAS NEED NOT BE OPENABLE WHERE THE OPENING IS NOT REQUIRED BY SECTION R310 AND A WHOLE-HOUSE MECHANICAL *VENTILATION* SYSTEM IS INSTALLED IN ACCORDANCE WITH SECTION M1507.
2. THE GLAZED AREAS NEED NOT BE INSTALLED IN ROOMS WHERE EXCEPTION 1 IS SATISFIED AND ARTIFICIAL LIGHT IS PROVIDED THAT IS CAPABLE OF PRODUCING AN AVERAGE ILLUMINATION OF 6 FOOTCANDLES (65 LUX) OVER THE AREA OF THE ROOM AT A HEIGHT OF 30 INCHES (762 MM) ABOVE THE FLOOR LEVEL.
3. USE OF SUNROOM AND PATIO COVERS, AS DEFINED IN SECTION R202, SHALL BE PERMITTED FOR NATURAL *VENTILATION* IF IN EXCESS OF 40 PERCENT OF THE EXTERIOR SUNROOM WALLS ARE OPEN, OR ARE ENCLOSED ONLY BY INSECT SCREENING.

R303.3: BATHROOMS
MECHANICAL VENTILATION IN ACCORDANCE WITH SECTION M1507 IS REQUIRED FOR ALL BATHROOMS WITH A SHOWER OR BATHTUB AND ROOMS WITH A TOILET.

R310: EMERGENCY ESCAPE AND RESCUE OPENINGS
R310.1: EMERGENCY ESCAPE AND RESCUE REQUIRED
BASEMENTS, HABITABLE ATTICS AND EVERY SLEEPING ROOM SHALL HAVE NOT LESS THAN ONE OPERABLE EMERGENCY ESCAPE AND RESCUE OPENING. WHERE *BASEMENTS* CONTAIN ONE OR MORE SLEEPING ROOMS, AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE REQUIRED IN EACH SLEEPING ROOM. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL OPEN DIRECTLY INTO A PUBLIC WAY, OR TO A *YARD* OR COURT THAT OPENS TO A PUBLIC WAY.
EXCEPTION:
1.STORM SHELTERS AND *BASEMENTS* USED ONLY TO HOUSE MECHANICAL *EQUIPMENT* NOT EXCEEDING A TOTAL FLOOR AREA OF 200 SQUARE FEET (18.58 M2).

R310.1.1: MINIMUM OPENING AREA
EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE. WINDOW OPENING CONTROL DEVICES COMPLYING WITH ASTM F 2090 SHALL BE PERMITTED FOR USE ON WINDOWS SERVING AS A REQUIRED EMERGENCY ESCAPE AND RESCUE OPENING.
R310.2: EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE MINIMUM DIMENSIONS AS SPECIFIED IN THIS SECTION.
R310.2.1: MINIMUM OPENING AREA. EMERGENCY AND ESCAPE RESCUE OPENINGS SHALL HAVE A NET CLEAR OPENING OF NOT LESS THAN 5.7 SQUARE FEET (0.530 M2). THE NET CLEAR OPENING DIMENSIONS REQUIRED BY THIS SECTION SHALL BE OBTAINED BY THE NORMAL OPERATION OF THE EMERGENCY ESCAPE AND RESCUE OPENING FROM THE INSIDE. THE NET CLEAR HEIGHT OPENING SHALL BE NOT LESS THAN 24 INCHES (610 MM) AND THE NET CLEAR WIDTH SHALL BE NOT LESS THAN 20 INCHES (508 MM).
EXCEPTIONS:
1. *GRADE* FLOOR OR BELOW *GRADE* OPENINGS SHALL HAVE A NET CLEAR OPENING OF NOT LESS THAN 5 SQUARE FEET (0.465 M2).
2. SINGLE-HUNG AND/OR DOUBLE HUNG WINDOWS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 3.3 SQUARE FEET (0.31 M2). IN SUCH CASES, THE MINIMUM NET CLEAR OPENING DIMENSIONS SHALL BE 20 INCHES (508MM) BY 24 INCHES (610 MM) IN EITHER DIRECTION.

R311: MEANS OF EGRESS
R311.1: MEANS OF EGRESS
DWELLING UNITS SHALL BE PROVIDED WITH A PRIMARY AND SECONDARY MEANS OF EGRESS IN ACCORDANCE WITH THIS SECTION. EACH MEANS OF EGRESS SHALL PROVIDE A CONTINUOUS AND UNOBSTRUCTED PATH OF VERTICAL AND HORIZONTAL EGRESS TRAVEL FROM ALL PORTIONS OF THE DWELLING TO THE EGRESS DOORS. THE PRIMARY MEANS OF EGRESS SHALL NOT REQUIRE TRAVEL THROUGH A GARAGE, BUT THE SECONDARY MEANS OF EGRESS MAY. THE REQUIRED EGRESS DOORS SHALL OPEN DIRECTLY INTO A PUBLIC WAY OR TO A YARD OR COURT THAT OPENS TO A PUBLIC WAY.
NOTES:
1. IN MULTI-LEVEL DWELLINGS INCLUDING, BUT NOT LIMITED TO TOWNHOUSES, SPLIT-LEVEL AND RAISED RANCH STYLE
LAYOUTS, THE TWO SEPARATE EGRESS DOORS MAY BE LOCATED ON DIFFERENT LEVELS.
2. WHERE SITE TOPOGRAPHY PREVENTS DIRECT ACCESS AT TWO REMOTE LOCATIONS TO GRADE FROM THE NORMAL LEVEL OF ENTRY, THE TWO SEPARATE EGRESS DOORS MAY BE LOCATED ON DIFFERENT LEVELS.
R311.2: EGRESS DOORS
A PRIMARY AND SECONDARY EGRESS DOOR SHALL BE PROVIDED FOR EACH DWELLING UNIT AND SHALL BE AS REMOTE AS POSSIBLE FROM EACH OTHER. THE PRIMARY EGRESS DOOR SHALL BE SIDE-HINGED, AND SHALL PROVIDE A CLEAR WIDTH OF NOT LESS THAN 32 INCHES (813 MM) WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES (1.57 RAD). THE SECONDARY EGRESS DOOR SHALL BE SIDE-HINGED OR SLIDING, AND SHALL PROVIDE A CLEAR WIDTH OF NOT LESS THAN 28 INCHES (711 MM) WHERE MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES (1.57 RAD). THE CLEAR HEIGHT OF SIDE-HINGED DOOR OPENINGS SHALL BE NOT LESS THAN 78 INCHES (1,981 MM)IN HEIGHT MEASURED FROM THE TOP OF THE THRESHOLD TO THE BOTTOM OF THE STOP. SLIDING DOOR CLEAR WIDTH MAY BE SLIGHTLY LESS THAN 28 INCHES (711 MM) TO CONFORM TO INDUSTRY FABRICATION STANDARDS. OTHER DOORS SHALL NOT BE REQUIRED TO COMPLY WITH THESE MINIMUM DIMENSIONS. EGRESS DOORS SHALL BE CAPABLE OF BEING READILY OPENED FROM INSIDE THE DWELLING WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
R311.2.1: INTERIOR DOORS
ALL DOORS PROVIDING ACCESS TO HABITABLE ROOMS SHALL HAVE A MINIMUM NOMINAL WIDTH OF 30 INCHES (762 MM) AND A MINIMUM NOMINAL HEIGHT OF SIX FEET, SIX INCHES.
EXCEPTIONS:
1. DOORS PROVIDING ACCESS TO BATHROOMS ARE PERMITTED TO BE 28 INCHES (711 MM) IN NOMINAL WIDTH.
2. DOORS PROVIDING ACCESS TO BATHROOMS IN EXISTING BUILDINGS ARE PERMITTED TO BE 24 INCHES (610 MM) IN NOMINAL WIDTH.

R311.6: HALLWAYS
THE WIDTH OF A HALLWAY SHALL BE NOT LESS THAN 3 FEET (914 MM).

R311.7: STAIRWAYS
R311.7.1: WIDTH
STAIRWAYS SHALL BE NOT LESS THAN 36 INCHES (914 MM) IN CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT. HANDRAILS SHALL NOT PROJECT MORE THAN 4 1/2 INCHES (114 MM) ON EITHER SIDE OF THE STAIRWAY AND THE CLEAR WIDTH OF THE STAIRWAY AT AND BELOW THE HANDRAIL HEIGHT, INCLUDING TREADS AND LANDINGS, SHALL BE NOT LESS THAN 31 1/2 INCHES (787 MM) WHERE A HANDRAIL IS INSTALLED ON ONE SIDE AND 27 INCHES (698 MM) WHERE HANDRAILS ARE PROVIDED ON BOTH SIDES.
EXCEPTION: THE WIDTH OF SPIRAL STAIRWAYS SHALL BE IN ACCORDANCE WITH SECTION R311.7.10.1.

R311.7.2: HEADROOM
THE HEADROOM IN STAIRWAYS SHALL BE NOT LESS THAN 6 FEET 8 INCHES (2032 MM) 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 INCHES (121 MM).
2. THE HEADROOM FOR SPIRAL STAIRWAYS SHALL BE IN ACCORDANCE WITH SECTION R311.7.10.1.

R311.7.5: STAIR TREADS AND RISERS
R311.7.5.1: RISERS
THE RISER HEIGHT SHALL BE NOT MORE THAN 8 1/4 INCHES (210 MM). THE RISER SHALL BE MEASURED VERTICALLY BETWEEN LEADING EDGES OF THE ADJACENT TREADS. THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH (9.5 MM). RISERS SHALL BE VERTICAL OR SLOPED FROM THE UNDERSIDE OF THE NOSING OF THE TREAD AT AN ANGLE NOT MORE THAN 30 DEGREES (.51 RAD) FROM THE VERTICAL. OPEN RISERS ARE PERMITTED PROVIDED THAT THE OPENINGS LOCATED MORE THAN 30 INCHES (762 MM), AS MEASURED VERTICALLY, TO THE FLOOR OR GRADE BELOW DO NOT PERMIT THE PASSAGE OF A FOUR-INCH-DIAMETER (102 MM) SPHERE.
EXCEPTIONS:
1. THE OPENING BETWEEN ADJACENT TREADS IS NOT LIMITED ON SPIRAL STAIRWAYS.
2. THE RISER HEIGHT OF SPIRAL STAIRWAYS SHALL BE IN ACCORDANCE WITH SECTION R311.7.10.1

R311.7.4.2: TREAD DEPTH
THE TREAD DEPTH SHALL BE NOT LESS THAN 9 INCHES (229 MM). THE TREAD DEPTH SHALL BE MEASURED HORIZONTALLY BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AND AT A RIGHT ANGLE TO THE TREAD'S LEADING EDGE. THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH (9.5 MM) CONSISTENTLY SHAPED WINDERS AT THE WALKLINE SHALL BE ALLOWED WITHIN THE SAME FLIGHT OF STAIRS AS RECTANGULAR TREADS AND DO NOT HAVE TO BE WITHIN 3/8 INCH OF THE RECTANGULAR TREAD DEPTH.

R311.7.5.2.1 WINDER TREADS
WINDER TREADS SHALL HAVE A MINIMUM TREAD DEPTH EQUAL TO THE THE TREAD DEPTH OF THE STRAIGHT RUN PORTION OF THE STAIRS MEASURED AS ABOVE AT A POINT 12 INCHES FROM THE SIDE WHERE THE TREADS ARE NARROWER. WINDER TREADS SHALL HAVE A MINIMUM TREAD DEPTH OF THREE INCHES AT ANY POINT. WITHIN A FLIGHT OF STAIRS, THE GREATEST WINDER TREAD DEPTH AT THE 12 INCH WALK LINE SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8 INCH (9.5 MM).

R311.7.7: STAIRWAY WALKING SURFACE
THE WALKING SURFACE OF TREADS AND LANDINGS OF STAIRWAYS SHALL BE SLOPED NOT STEEPER THAN ONE UNIT VERTICAL IN 48 INCHES HORIZONTAL (2 PERCENT SLOPE).

R311.7.8: HANDRAILS
HANDRAILS SHALL BE PROVIDED ON NOT LESS THAN ONE SIDE OF EACH CONTINUOUS RUN OF TREADS OR FLIGHT WITH FOUR OR MORE RISERS.

R311.7.8.1: HEIGHT
HANDRAIL HEIGHT, MEASURED VERTI- CALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE, SHALL BE NOT LESS THAN 34 INCHES (864 MM) AND NOT MORE THAN 38 INCHES (965 MM).
EXCEPTIONS:
1. THE USE OF A VOLUTE, TURNOUT OR STARTING EASING SHALL BE ALLOWED OVER THE LOWEST TREAD.
2. WHERE HANDRAIL FITTINGS OR BENDINGS ARE USED TO PROVIDE CONTINUOUS TRANSITION BETWEEN FLIGHTS, TRANSITIONS AT WINDER TREADS, THE TRANSITION FROM HANDRAIL TO *GUARD*, OR USED AT THE START OF A FLIGHT, THE HANDRAIL HEIGHT AT THE FITTINGS OR BENDINGS SHALL BE PERMITTED TO EXCEED 38 INCHES (956 MM).

R311.7.8.2: CONTINUITY
HANDRAILS FOR STAIRWAYS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE FLIGHT, FROM A POINT DIRECTLY ABOVE THE TOP RISER OF THE FLIGHT TO A POINT DIRECTLY ABOVE THE LOWEST RISER OF THE FLIGHT. HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS. HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 11/2 INCHES (38 MM) BETWEEN THE WALL AND THE HANDRAILS.
EXCEPTIONS:
1.HANDRAILS SHALL BE PERMITTED TO BE INTERRUPTED BY A NEWEL POST AT THE TURN.
2.THE USE OF A VOLUTE, TURNOUT, STARTING EASING OR STARTING NEWEL SHALL BE ALLOWED OVER THE LOWEST TREAD.

R312.1: GUARDS
R312.1.1: WHERE REQUIRED
GUARDS SHALL BE LOCATED ALONG OPEN-SIDED WALKING SURFACES, INCLUDING STAIRS, RAMPS AND LANDINGS, THAT ARE LOCATED MORE THAN 30 INCHES (762 MM) MEASURED VERTICALLY TO THE FLOOR OR *GRADE* BELOW AT ANY POINT WITHIN 36 INCHES (914 MM) HORIZONTALLY TO THE EDGE OF THE OPEN SIDE. INSECT SCREENING SHALL NOT BE CONSIDERED AS A *GUARD*.

R312.1.2 HEIGHT.
REQUIRED *GUARDS* AT OPEN-SIDED WALKING SURFACES, INCLUDING STAIRS, PORCHES, BALCONIES OR LANDINGS, SHALL BE NOT LESS THAN 36 INCHES (914 MM) IN HEIGHT AS MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACE OR THE LINE CONNECTING THE LEADING EDGES OF THE TREADS.
EXCEPTIONS:
1 GUARDS ON THE OPEN SIDES OF STAIRS SHALL HAVE A HEIGHT NOT LESS THAN 34 INCHES (864 MM) MEA- SURED VERTICALLY FROM A LINE CONNECTING THE LEAD- ING EDGES OF THE TREADS.
2 WHERE THE TOP OF THE *GUARD* SERVES AS A HANDRAIL ON THE OPEN SIDES OF STAIRS, THE TOP OF THE *GUARD* SHALL BE NOT LESS THAN 34 INCHES (864 MM) AND NOT MORE THAN 38 INCHES (965 MM) AS MEASURED VERTICALLY FROM A LINE CONNECTING THE LEADING EDGES OF THE TREADS.

R312.1.3 OPENING LIMITATIONS.
REQUIRED *GUARDS* SHALL NOT HAVE OPENINGS FROM THE WALKING SURFACE TO THE REQUIRED *GUARD* HEIGHT THAT ALLOW PASSAGE OF A SPHERE 4 INCHES (102 MM) IN DIAMETER.
EXCEPTIONS:
1 THE TRIANGULAR OPENINGS AT THE OPEN SIDE OF STAIR, FORMED BY THE RISER, TREAD AND BOTTOM RAIL OF A *GUARD*, SHALL NOT ALLOW PASSAGE OF A SPHERE 6 INCHES (153 MM) IN DIAMETER.
2 GUARDS ON THE OPEN SIDE OF STAIRS SHALL NOT HAVE OPENINGS THAT ALLOW PASSAGE OF A SPHERE 43/8 INCHES (111 MM) IN DIAMETER.

R312.1.4 EXTERIOR PLASTIC COMPOSITE GUARDS.
PLASTIC COMPOSITE EXTERIOR *GUARDS* SHALL COMPLY WITH THE REQUIREMENTS OF SECTION R317.4.

R506: CONCRETE FLOORS (ON GROUND)

R506.1: GENERAL
CONCRETE SLAB-ON-GROUND FLOORS SHALL BE A MINIMUM 3.5 INCHES THICK (FOR EXPANSIVE SOILS, SEE SECTION R403.1.8). THE SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE SHALL BE AS SET FORTH IN SECTION R402.2.
R506.1.1: CONTROL JOINTS
AMENDED PER 780 CMR 51.00: 8TH ED. SLABS SHALL BE CONSTRUCTED WITH CONTROL JOINTS HAVING A DEPTH OF AT LEAST ONE QUARTER OF THE SLAB THICKNESS BUT
NOT LESS THAN 1 INCH (25 MM). JOINTS SHALL BE SPACED AT INTERVALS NOT GREATER THAN 30 FEET (9,144 MM) IN EACH DIRECTION. CONTROL JOINTS SHALL BE PLACED AT LOCATIONS WHERE THE SLAB WIDTH OR LENGTH CHANGES.
EXCEPTION:
1.CONTROL JOINTS MAY BE OMITTED WHEN THE SLAB IS REINFORCED IN ACCORDANCE WITH TABLE R506.1.1. REINFORCEMENT SHALL BE PLACED AT THE MID-DEPTH OF THE SLAB OR 2 INCHES FROM THE TOP OF SLABS GREATER THAN 4 INCHES IN THICKNESS.
R506.2: SITE PREPERATION
THE AREA WITHIN THE FOUNDATION WALLS SHALL HAVE ALL VEGETATION, TOP SOIL AND FOREIGN MATERIAL REMOVED.
R506.2.1: FILL
FILL MATERIAL SHALL BE FREE OF VEGETATION AND FOREIGN MATERIAL. THE FILL SHALL BE COMPACTED TO ENSURE UNI- FORM SUPPORT OF THE SLAB, AND EXCEPT WHERE *APPROVED*, THE FILL DEPTHS SHALL NOT EXCEED 24 INCHES (610 MM) FOR CLEAN SAND OR GRAVEL AND 8 INCHES (203 MM) FOR EARTH.
R506.2.2: BASE
A 4-INCH-THICK (102 MM) BASE COURSE CONSISTING OF CLEAN GRADED SAND, GRAVEL, CRUSHED STONE, CRUSHED CONCRETE OR CRUSHED BLAST-FURNACE SLAG PASSING A 2- INCH (51 MM) SIEVE SHALL BE PLACED ON THE PREPARED SUB- GRADE WHERE THE SLAB IS BELOW *GRADE*.
EXCEPTION: A BASE COURSE IS NOT REQUIRED WHERE THE CONCRETE SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP I ACCORDING TO THE UNITED SOIL CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R405.1.
R506.2.3: VAPOR RETARDER
A 6-MIL (0.006 INCH; 152 MM) POLYETHYLENE OR *APPROVED* VAPOR RETARDER WITH JOINTS LAPPED NOT LESS THAN 6 INCHES (152 MM) SHALL BE PLACED BETWEEN THE CONCRETE FLOOR SLAB AND THE BASE COURSE OR THE PREPARED SUBGRADE WHERE NO BASE COURSE EXISTS.
EXCEPTIONS: THE VAPOR RETARDER IS NOT REQUIRED FOR THE FOLLOWING:
1. GARAGES, UTILITY BUILDINGS AND OTHER UNHEATED *ACCESSORY STRUCTURES*.
2. FOR UNHEATED STORAGE ROOMS HAVING AN AREA OF LESS THAN 70 SQUARE FEET (6.5 M2) AND CARPORTS.
3. DRIVEWAYS, WALKS, PATIOS AND OTHER FLATWORK NOT LIKELY TO BE ENCLOSED AND HEATED AT A LATER DATE.
4. WHERE *APPROVED* BY THE *BUILDING OFFICIAL*, BASED ON LOCAL SITE CONDITIONS.
R506.2.4: REINFORCEMENT SUPPORT
WHERE PROVIDED IN SLABS ON GROUND, REINFORCEMENT SHALL BE SUPPORTED TO REMAIN IN PLACE FROM THE CENTER TO UPPER ONE THIRD OF THE SLAB FOR THE DURATION OF THE CONCRETE PLACEMENT.

R604: WOOD STRUCTURE PANELS

R604.1 IDENTIFICATION AND GRADE.
WOOD STRUCTURAL PANELS SHALL CONFORM TO DOC PS 1, DOC PS 2 OR ANSI/APA PRP 210, CSA O437 OR CSA O325. PANELS SHALL BE IDENTIFIED BY A GRADE MARK OR CERTIFICATE OF INSPECTION ISSUED BY AN *APPROVED* AGENCY.
R604.2 ALLOWABLE SPANS.
THE MAXIMUM ALLOWABLE SPANS FOR WOOD STRUCTURAL PANEL WALL SHEATHING SHALL NOT EXCEED THE VALUES SET FORTH IN TABLE R602.3(3).
R604.3 INSTALLATION
WOOD STRUCTURAL PANEL WALL SHEATHING SHALL BE ATTACHED TO FRAMING IN ACCORDANCE WITH TABLE R602.3(1) OR R602.3(3).
R807: ATTIC ACCESS
R807.1 ATTIC ACCESS. BUILDINGS WITH COMBUSTIBLE CEILING OR ROOF CONSTRUCTION SHALL HAVE AN *ATTIC* ACCESS OPENING TO *ATTIC* AREAS THAT HAVE A VERTICAL HEIGHT OF 30 INCHES (762 MM) OR GREATER OVER AN AREA OF NOT LESS THAN 30 SQUARE FEET (2.8 M2). THE VERTICAL HEIGHT SHALL BE MEASURED FROM THE TOP OF THE CEIL- ING FRAMING MEMBERS TO THE UNDERSIDE OF THE ROOF FRAMING MEMBERS.

THE ROUGH-FRAMED OPENING SHALL BE NOT LESS THAN 22 INCHES BY 30 INCHES (559 MM BY 762 MM) AND SHALL BE LOCATED IN A HALLWAY OR OTHER READILY ACCESSIBLE LOCATION. WHERE LOCATED IN A WALL, THE OPENING SHALL BE NOT LESS THAN 22 INCHES WIDE BY 30 INCHES HIGH (559 MM WIDE BY 762 MM HIGH). WHERE THE ACCESS IS LOCATED IN A CEILING, MINIMUM UNOBSTRUCTED HEAD- ROOM IN THE *ATTIC* SPACE SHALL BE 30 INCHES (762 MM) AT SOME POINT ABOVE THE ACCESS MEASURED VERTICALLY FROM THE BOTTOM OF CEILING FRAMING MEMBERS. SEE SECTION M1305.1.3 FOR ACCESS REQUIREMENTS WHERE MECHANICAL *EQUIPMENT* IS LOCATED IN *ATTICS*.

R905: REQUIREMENTS FOR ROOF COVERINGS
R905.2.2: SLOPE
R905.2.2 SLOPE. ASPHALT SHINGLES SHALL BE USED ONLY ON ROOF SLOPES OF TWO UNITS VERTICAL IN 12 UNITS HORIZONTAL (2:12) OR GREATER. FOR ROOF SLOPES FROM TWO UNITS VERTICAL IN 12 UNITS HORIZONTAL (2:12) UP TO FOUR UNITS VERTICAL IN 12 UNITS HORIZONTAL (4:12), DOUBLE UNDERLAYMENT APPLICATION IS REQUIRED IN ACCORDANCE WITH SECTION R905.1.1.

R1003: MASONRY CHIMNEYS
R1003.9: TERMINATION
CHIMNEYS SHALL EXTEND NOT LESS THAN 2 FEET (610 MM) HIGHER THAN ANY PORTION OF A BUILDING WITHIN 10 FEET (3048 MM), BUT SHALL BE NOT LESS THAN 3 FEET (914 MM) ABOVE THE HIGHEST POINT WHERE THE CHIMNEY PASSES THROUGH THE ROOF.

ARCHITECTURAL ABBREVIATIONS:

	A
ABV.	ABOVE
A.C.	AIR CONDITIONING
A.F.F.	ABOVE FINISH FLOOR
A.N.	AS NOTED
ACT.	ACCOUSTICAL TILE
ADJ.	ADJACENT OR ADJUSTABLE
AL./ ALUM.	ALUMINUM
ALT.	ALTERNATE
APP'D.	APPROVED
APPROX./ +/-	APPROXIMATE
AUX.	AUXILIARY
	B
BOT.	BOTTOM
B.M.	BENCH MARK
B.O.	BOTTOM OF/ BY OTHERS; OWNER
BD.	BOARD
BLDG.	BUILDING
BLK./ BLK'G.	BLOCK/ BLOCKING
	C
C.I.P.	CAST IN PLACE
C.L.	CENTER LINE
C.M.U.	CONCRETE MASONRY UNIT
C.O.	CLEAN OUT OR CLEAR OPENING
CL.	CLEAR OR CLOSET
CL'G.	CEILING
CONC.	CONCRETE
CONT.	CONTINUOUS
	D
D.F.	DRINKING FOUNTAIN
DET./ DTL.	DETAIL
DIA./ DIAM.	DIAMETER
DIM(S).	DIMENSIONS
DN.	DOWN
DWG.	DRAWING
	E
EA.	EACH
EL./ ELEV.	ELEVATION
ELEV.	ELEVATOR
ELEC.	ELECTRICAL
EMERG.	EMERGENCY
EQ.	EQUAL
EQUIP.	EQUIPMENT
EX./ EXIST.	EXISTING
	F
F.D.	FLOOR DRAIN
F.E.	FIRE EXTINGUISHER
F.F	FINISH FLOOR OR FINISH FACE
F.P.S.C.	FIREPROOF SELF-CLOSING
FIN.	FINISH/ FINISHED
FL/ FLR.	FLOOR
FT.	FEET/ FOOT
FT'G.	FOOTING
	G
G.F.C.I.	GROUND FAULT CIRCUIT INTERRUPTER
G.W.B.	GYPSUM WALL BOARD
GA.	GAUGE
GL.	GLASS/ GLAZED
GYP.	GYPSUM
	H
H.B.	HOSE BIB
H.P.	HIGH POINT
HC.	HANDICAP/ HANDICAPPED
HORIZ.	HORIZONTAL
HVAC	HEATING, VENTILATING & AIR CONDITIONING
	I
INSUL.	INSULATION
INT.	INTERIOR

	J
JAN.	JANITOR
	L
L.P.	LOW POINT
LAM.	LAMINATE
LAV.	LAVATORY
LT.	LIGHT
	M
M.E.P.	MECHANICAL, ELECTRICAL, PLUMBING
M.O.	MASONRY OPENING
MECH.	MECHANICAL
MET./ MTL.	METAL
MEZZ.	MEZZANINE
MIN.	MINIMUM
MTD.	MOUNTED
	N
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO.	NUMBER
NOM.	NOMINAL
	O
O.A.	OVERALL
O.C.	ON CENTER
O.H.	OVERHEAD
OPP. HND.	OPPOSITE HAND
	P
PLAT.	PLATFORM
PLY./ PLYWD.	PLYWOOD
PR.	PAIR
PREFAB	PREFABRICATED
PROJ.	PROJECT OR PROJECTION
PT./ PTD.	PAINTED
	Q
QTY.	QUANTITY
	R
R.O.	ROUGH OPENING
REC.	RECESS/ RECESSED
REF.	REFERENCE
REINF.	REINFORCED/ REINFORCEMENT
REQ'D.	REQUIRED
	S
S.S./ ST. STL.	STAINLESS STEEL
SECT.	SECTION
SHT.	SHEET
SIM.	SIMILAR
SPEC(S).	SPECIFICATION(S)
SPRKLR.	SPRINKLER
SPKR.	SPEAKER
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
SUSP.	SUSPENDED
	T
T.O.	TOP OF
TEL.	TELEPHONE
TEMP.	TEMPERED OR TEMPORARY
THK.	THICK/ THICKNESS
TV.	TELEVISION
TYP.	TYPICAL
	U
U.O.N.	UNLESS OTHERWISE NOTED
UNEXC.	UNEXCAVATED
U'SIDE.	UNDERSIDE
UTIL.	UTILITY
	V
V.I.F.	VERIFY IN FIELD
VERT.	VERTICAL
VEST.	VESTIBULE
	W
W.C.	WATER CLOSET
W.P.	WATERPROOF/ WATERPROOFING
WD.	WOOD
WT.	WEIGHT

A-1

sheet number:

Revision Table

NO.	Date	Description

16 FOLEY BEACH ROAD
HINGHAM, MA

DOUG KEACH - ALR HOMES
NEW CONSTRUCTION

project:

contractor to verify all information, schedules, and dimensions in the field prior to start of construction and shall notify **eckstrom home designs** of any discrepancies, in writing

ECKSTROM
HOME DESIGNS
RENDERING DREAMS INTO REALITY
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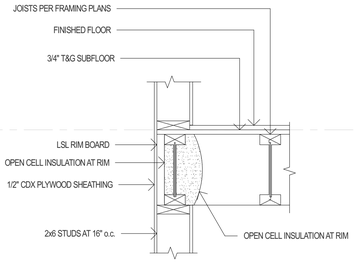
issue:	date:
schematic design	
design development	
construction documents	
permit set	5/15/2024
construction set	

structural engineer:

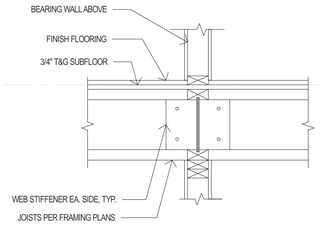
client approval:

E.T.E.

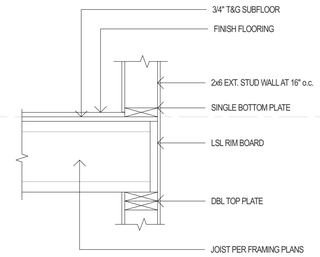
drawn & checked by:



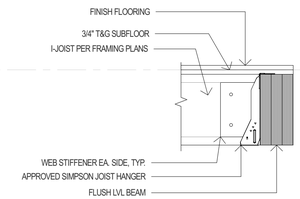
A JOIST PARALLEL TO WALL
1"=1'-0"



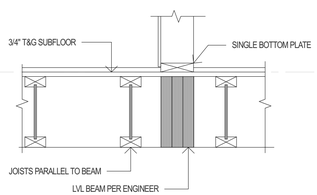
B BLOCKING UNDER BEARING WALL
1"=1'-0"



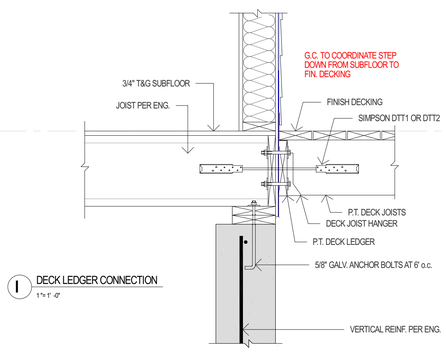
C JOIST PERPENDICULAR TO WALL
1"=1'-0"



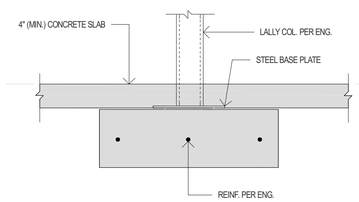
D JOIST TO FLUSH LVL
1"=1'-0"



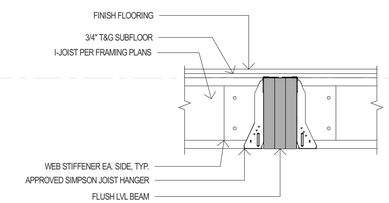
F JOIST PARALLEL TO WALL
1"=1'-0"



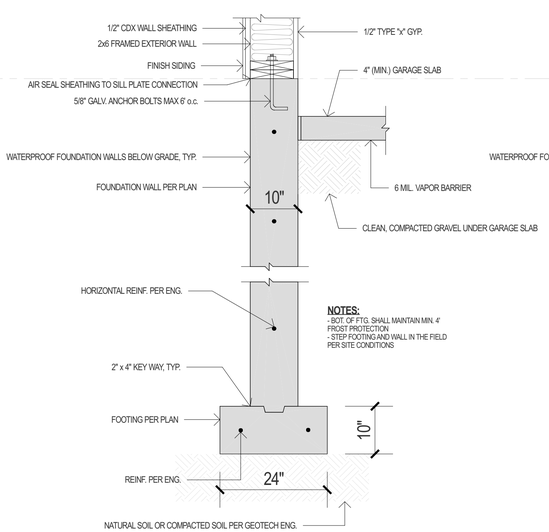
I DECK LEDGER CONNECTION
1"=1'-0"



J STEEL COL. TO PAD FTG.
1"=1'-0"

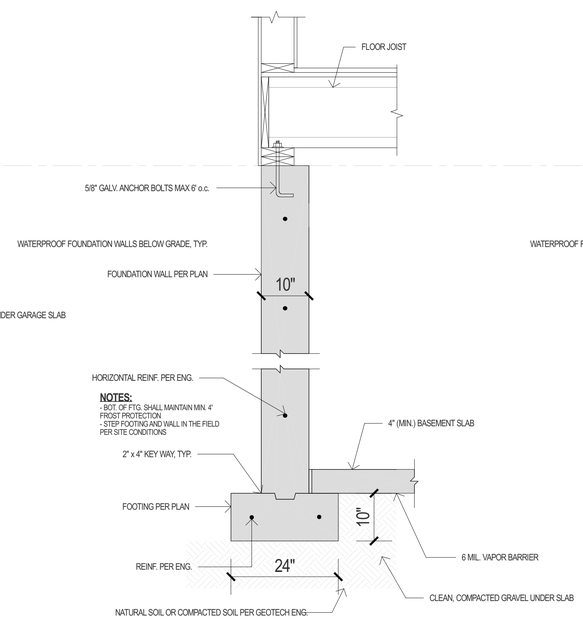


E JOIST TO FLUSH LVL - TWO SIDED
1"=1'-0"



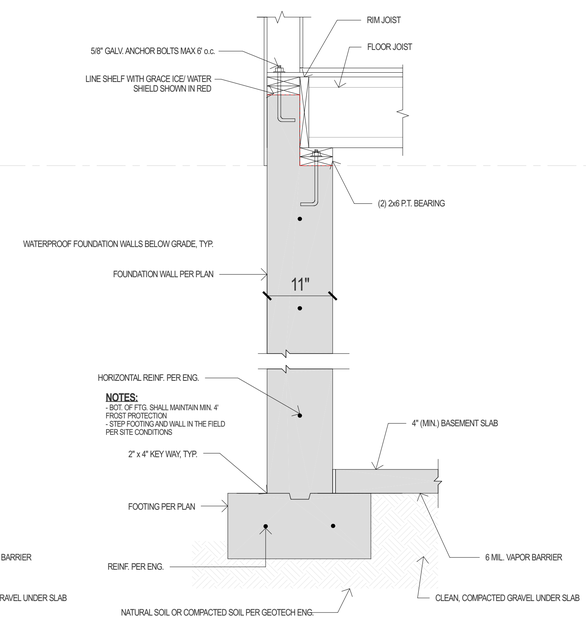
NOTES:
- BOT. OF FTG. SHALL MAINTAIN MIN. 4' FROST PROTECTION
- STEP FOOTING AND WALL IN THE FIELD PER SITE CONDITIONS

K TYP. GARAGE FROST WALL
1"=1'-0"



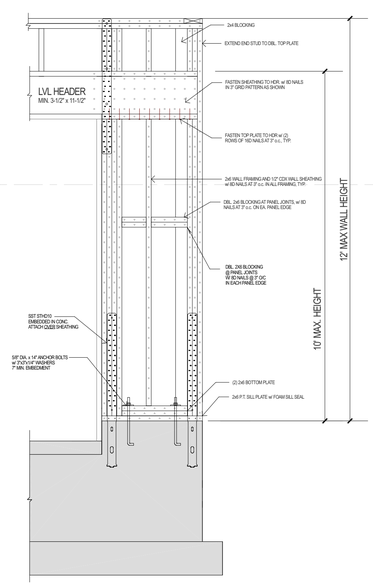
NOTES:
- BOT. OF FTG. SHALL MAINTAIN MIN. 4' FROST PROTECTION
- STEP FOOTING AND WALL IN THE FIELD PER SITE CONDITIONS

L TYP. FOUNDATION WALL
1"=1'-0"



NOTES:
- BOT. OF FTG. SHALL MAINTAIN MIN. 4' FROST PROTECTION
- STEP FOOTING AND WALL IN THE FIELD PER SITE CONDITIONS

M FOUNDATION WALL W/ REVERSE BRICK SHELF
1"=1'-0"



N GARAGE PORTAL FRAME DETAIL
1"=1'-0"

A-2

sheet number:

Revision Table

NO.	Date	Description

16 FOLEY BEACH ROAD
HINGHAM, MA

DOUG KEACH - ALR HOMES
NEW CONSTRUCTION

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design development	
construction documents	
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construction set	

structural engineer:

client approval:

E.T.E.

drawn & checked by:

01 PROPOSED FRONT ELEVATION
1/4" = 1'-0"

A-3

sheet number:

Revision Table

NO.	Date	Description

16 FOLEY BEACH ROAD
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structural engineer:

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drawn & checked by:

01 PROPOSED RIGHT ELEVATION
1/4" = 1'-0"

A-4

sheet number:

Revision Table

NO.	Date	Description

16 FOLEY BEACH ROAD
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01 PROPOSED REAR ELEVATION
1/4" = 1'-0"

A-5

sheet number:

Revision Table

NO.	Date	Description

16 FOLEY BEACH ROAD
HINGHAM, MA

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structural engineer:

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01 PROPOSED LEFT ELEVATION
1/4" = 1'-0"

A-6

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Revision Table

NO.	Date	Description

16 FOLEY BEACH ROAD
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construction set	

structural engineer:

client approval:

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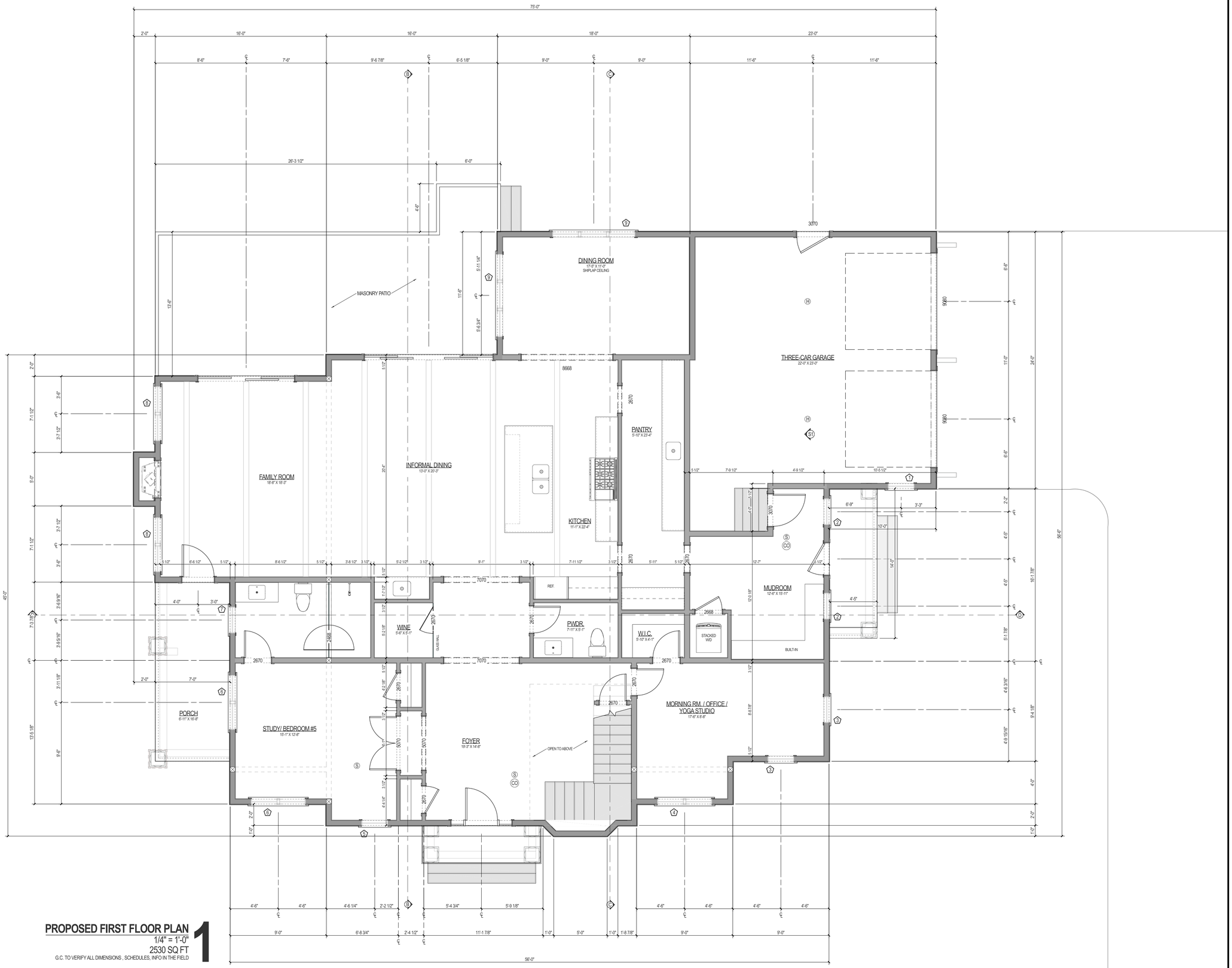

PROPOSED FIRST FLOOR PLAN 1

1/4" = 1'-0"

2530 SQ FT

G.C. TO VERIFY ALL DIMENSIONS , SCHEDULES, INFO IN THE FIELD

A-7

sheet number:

Revision Table

NO.	Date	Description

project:

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design development	
construction documents	
permit set	5/15/2024
construction set	

structural engineer:

client approval:

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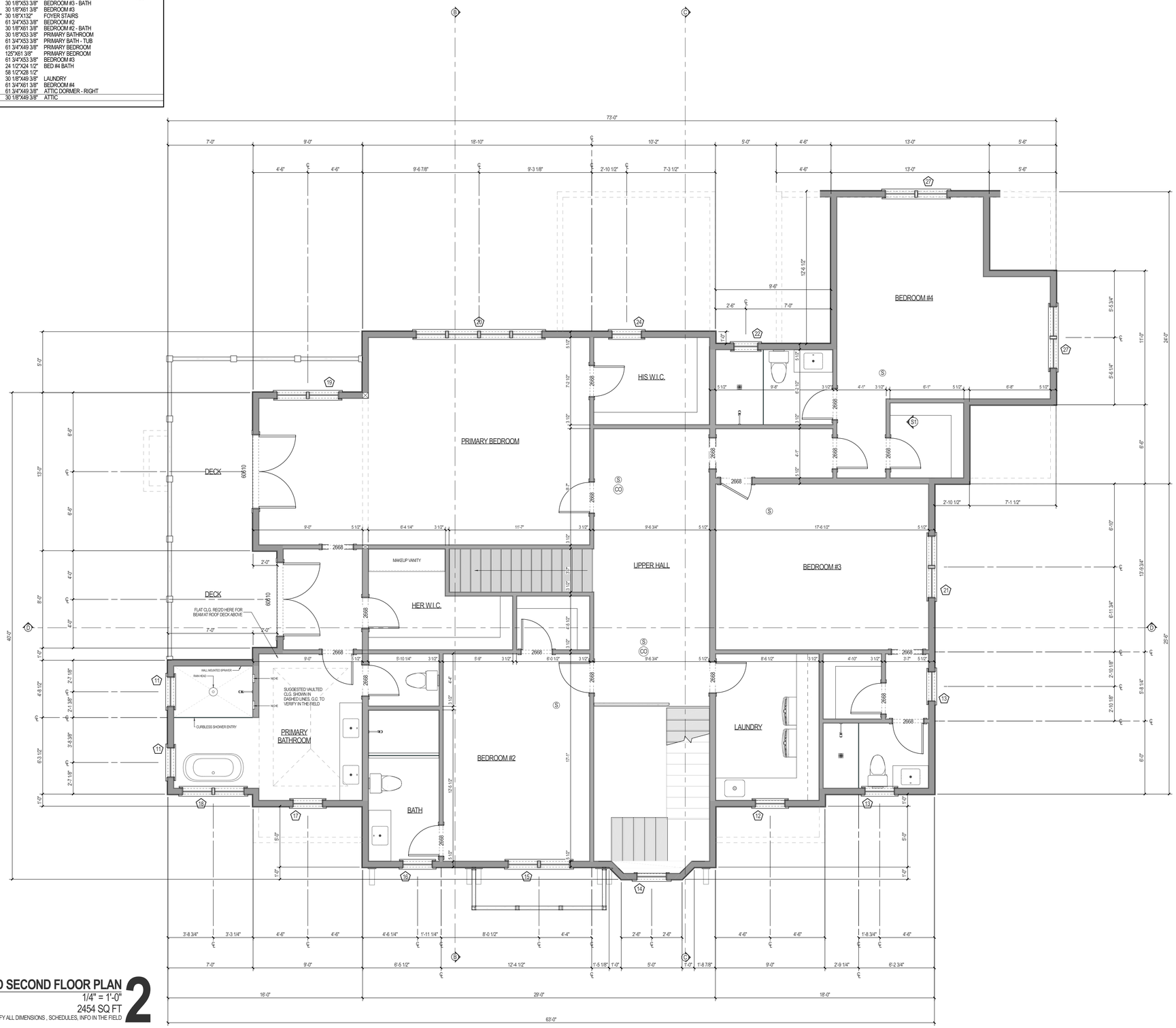
WINDOW SCHEDULE

NUMBER	LABEL	QTY	FLOOR	SIZE	WIDTH	HEIGHT	R/O	COMMENTS	TEMPERED
1		1	1	2664	29 5/8 "	76 "	30 1/8"X76 1/2"	GARAGE	
2		2	1	2664	29 5/8 "	76 "	30 1/8"X76 1/2"	MUDROOM	
3		2	1	2664	29 5/8 "	76 "	30 1/8"X76 1/2"	MORNING ROOM	
4		1	1	5164	61 1/4 "	76 "	61 3/4"X76 1/2"	MORNING ROOM	
5		1	1	2664	29 5/8 "	76 "	30 1/8"X76 1/2"	STUDY/ BED #5	
6		2	1	5164	61 1/4 "	76 "	61 3/4"X76 1/2"	STUDY/ BED #5	
7		1	1	2664	29 5/8 "	76 "	30 1/8"X76 1/2"	BATH - STUDY/ BED #5	
8		2	1	5164	61 1/4 "	76 "	61 3/4"X76 1/2"	FAMILY ROOM	
9		2	1	7964	92 7/8 "	76 "	93 3/8"X76 1/2"	DINING ROOM	
11		2	2	2645DH	29 5/8 "	52 7/8 "	30 1/8"X53 3/8"	PRIMARY BATH - TEMP.	YES
12		1	2	2645DH	29 5/8 "	52 7/8 "	30 1/8"X53 3/8"	BEDROOM #3 - BATH	
13		2	2	2651DH	29 5/8 "	60 7/8 "	30 1/8"X61 3/8"	BEDROOM #3	
14		1	2	26110	29 5/8 "	131 1/2 "	30 1/8"X132"	FOYER STAIRS	
15		1	2	5145	61 1/4 "	52 7/8 "	61 3/4"X53 3/8"	BEDROOM #2	
16		1	2	2651DH	29 5/8 "	60 7/8 "	30 1/8"X61 3/8"	BEDROOM #2 - BATH	
17		1	2	2645DH	29 5/8 "	52 7/8 "	30 1/8"X53 3/8"	PRIMARY BATHROOM	
18		1	2	5145	61 1/4 "	52 7/8 "	61 3/4"X53 3/8"	PRIMARY BATH - TUB	
19		1	2	5141	61 1/4 "	48 7/8 "	61 3/4"X49 3/8"	PRIMARY BEDROOM	
20		1	2	10551	124 1/2 "	60 7/8 "	125"X61 3/8"	PRIMARY BEDROOM	
21		1	2	5145	61 1/4 "	52 7/8 "	61 3/4"X53 3/8"	BEDROOM #3	
22		1	2	2020AW	24 "	24 "	24 1/2"X24 1/2"	BED #4 BATH	
23		2	0	41024	58 "	28 "	58 1/2"X28 1/2"		
24		1	2	2641DH	29 5/8 "	48 7/8 "	30 1/8"X49 3/8"	LAUNDRY	
27		2	2	5151	61 1/4 "	60 7/8 "	61 3/4"X61 3/8"	BEDROOM #4	
28		1	3	5141	61 1/4 "	48 7/8 "	61 3/4"X49 3/8"	ATTIC DORMER - RIGHT	
30		2	3	2641DH	29 5/8 "	48 7/8 "	30 1/8"X49 3/8"	ATTIC	



PROPOSED SECOND FLOOR PLAN 2

1/4" = 1'-0"

2454 SQ.FT

G.C. TO VERIFY ALL DIMENSIONS , SCHEDULES, INFO IN THE FIELD

A-8

sheet number:

Revision Table

NO.	Date	Description

project:

16 FOLEY BEACH ROAD
HINGHAM, MA

DOUG KEACH - ALR HOMES
NEW CONSTRUCTION

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permit set	5/15/2024
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structural engineer:

client approval:

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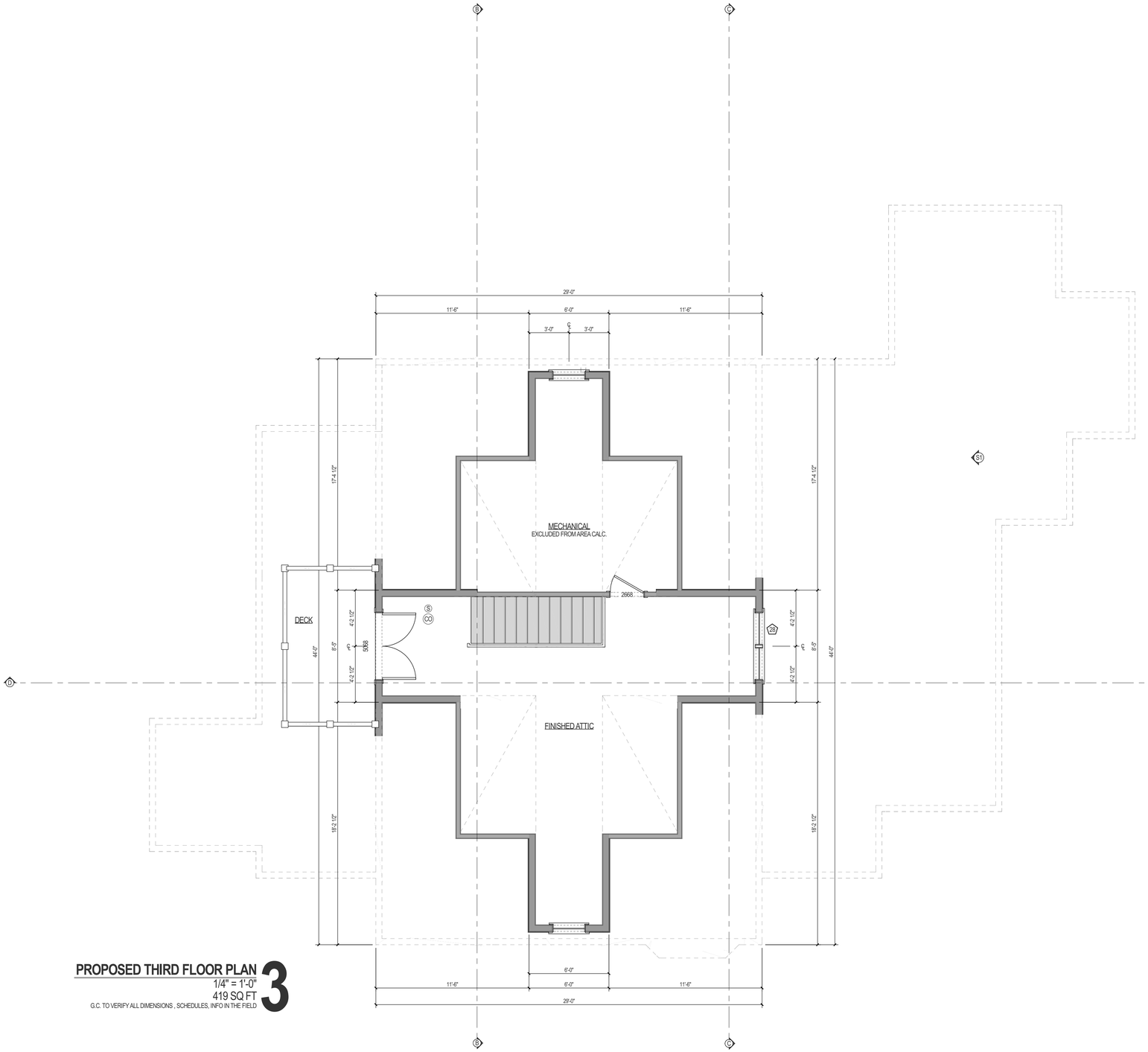
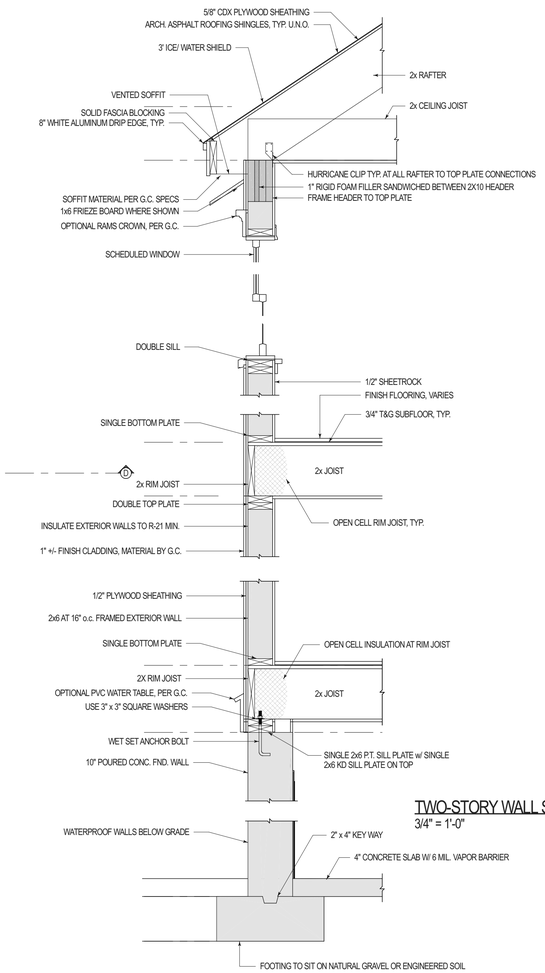


PROPOSED THIRD FLOOR PLAN 3

1/4" = 1'-0"
419 SQ FT
G.C. TO VERIFY ALL DIMENSIONS , SCHEDULES, INFO IN THE FIELD



TWO-STORY WALL SECTION

3/4" = 1'-0"

A-9

sheet number:

Revision Table

NO.	Date	Description

16 FOLEY BEACH ROAD
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permit set	5/15/2024
construction set	

structural engineer:

client approval:

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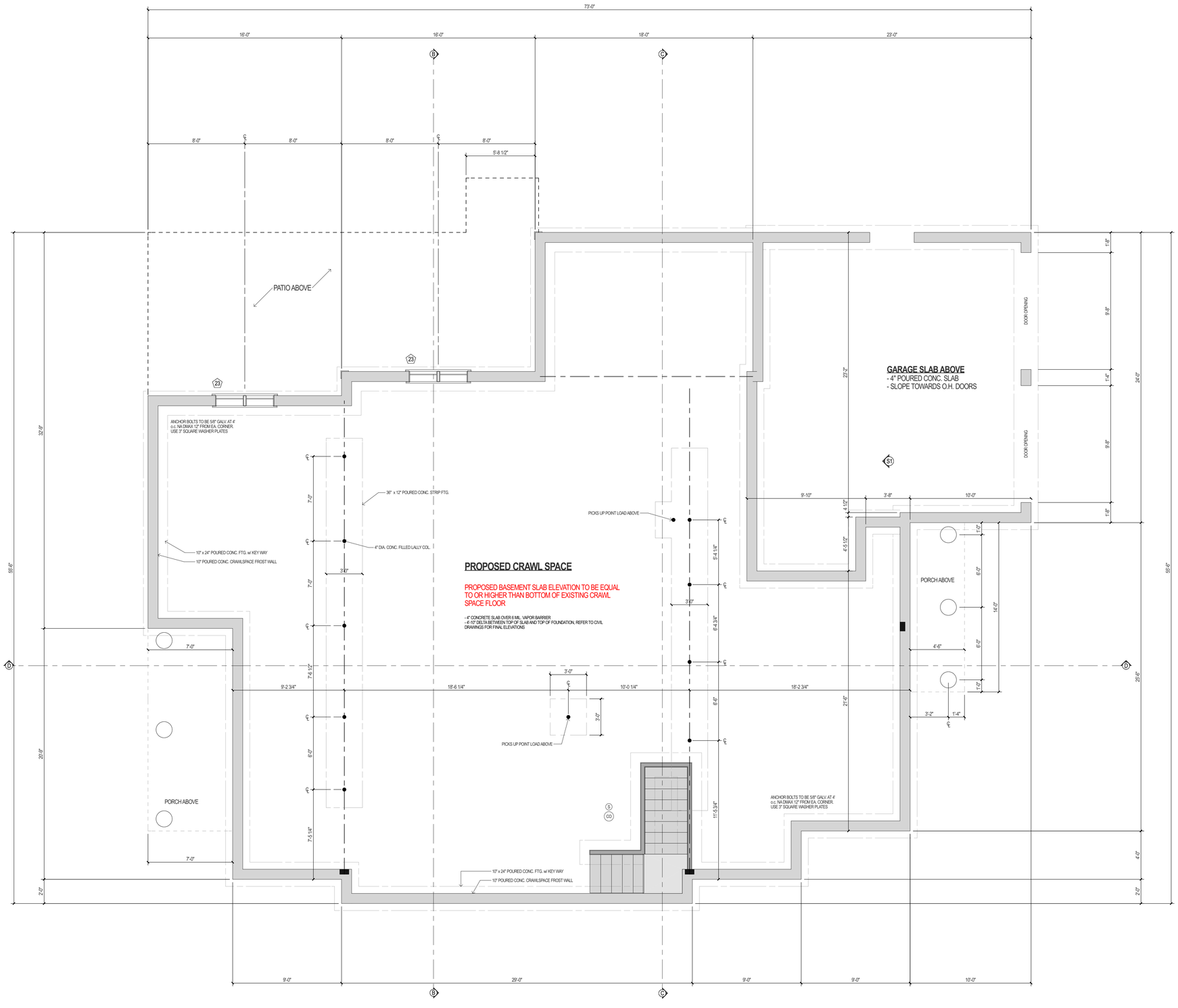

A-10

sheet number:

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structural engineer:

client approval:

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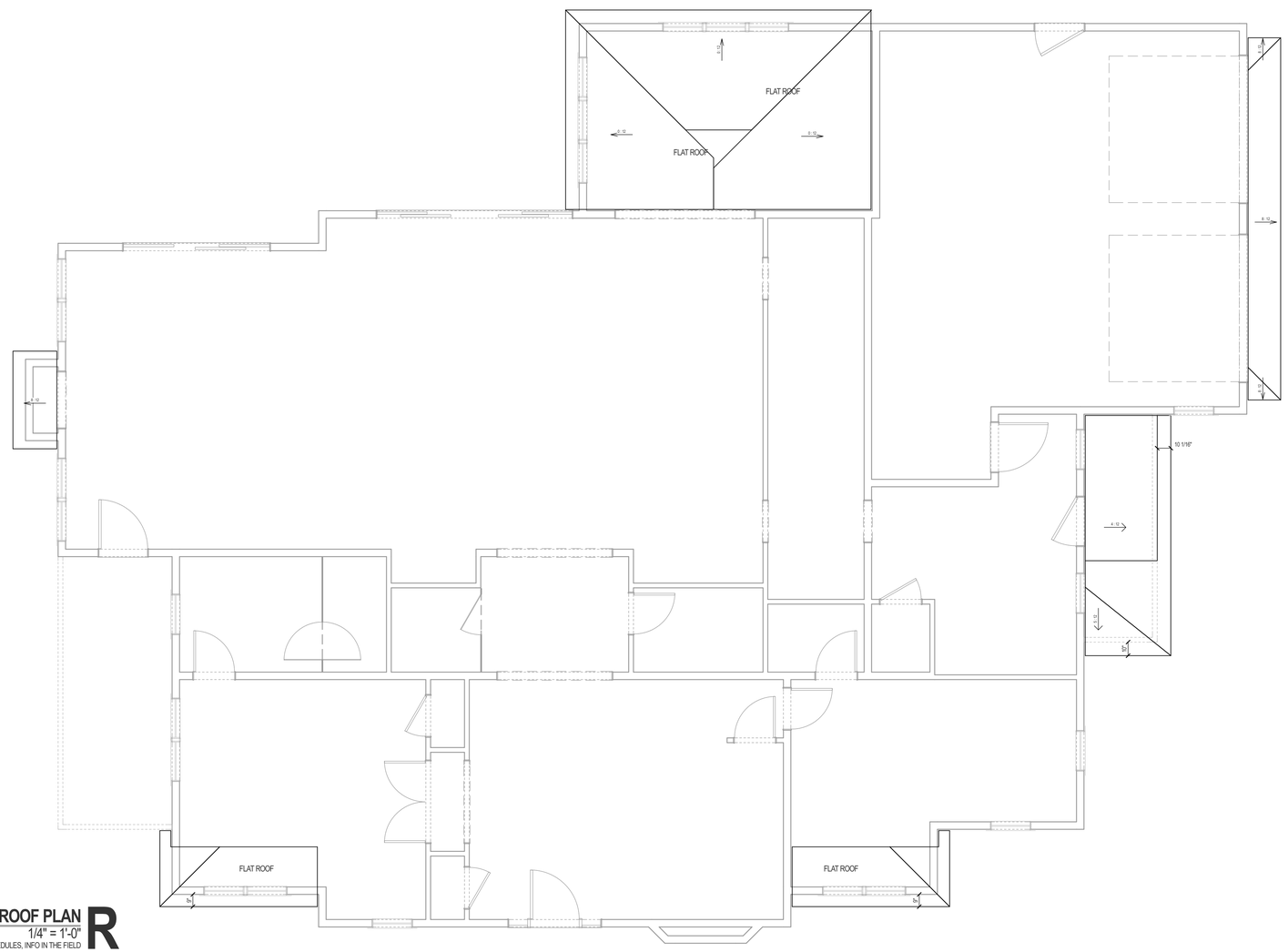
ROOF NOTES:
- RUN ICE/ WATER SHIELD UP CHEEK WALL MIN. 18" AT EVERY ROOF TO WALL INTERSECTION
- PROVIDE KICK OUT FLASHING WHERE ROOF ABUTS SIDE WALL
- PROVIDE ICE/ WATER SHIELD MIN. 6' FROM EAVE EDGE



PROPOSED LOW ROOF PLAN
1/4" = 1'-0"
G.C. TO VERIFY ALL DIMENSIONS , SCHEDULES, INFO IN THE FIELD

R

A-11

sheet number:

Revision Table

NO.	Date	Description

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design development	
construction documents	
permit set	5/15/2024
construction set	

structural engineer:

client approval:

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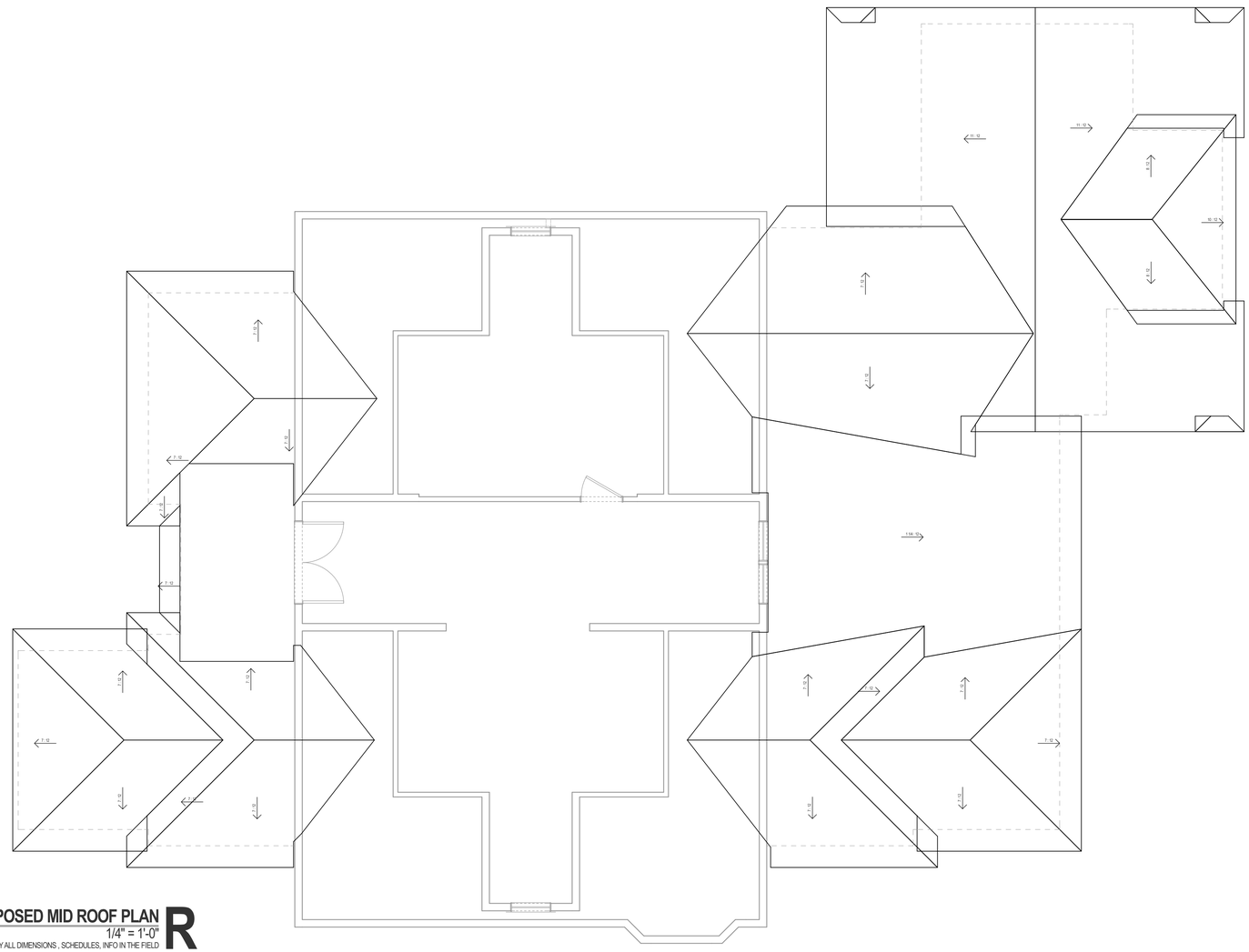

PROPOSED MID ROOF PLAN **R**

1/4" = 1'-0"

G.C. TO VERIFY ALL DIMENSIONS , SCHEDULES, INFO IN THE FIELD

A-12

sheet number:

Revision Table

NO.	Date	Description

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design development	
construction documents	
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construction set	

structural engineer:

client approval:

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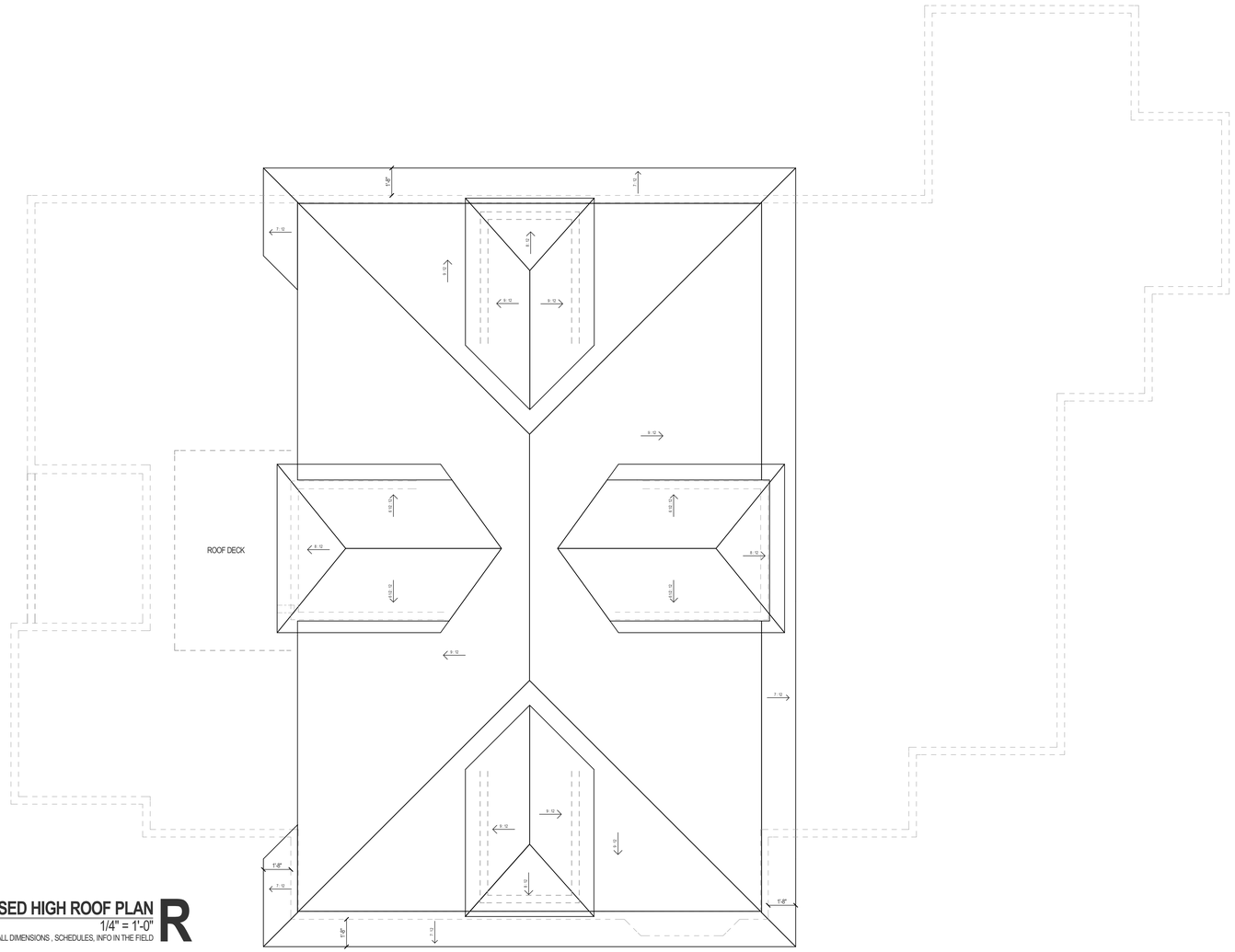

PROPOSED HIGH ROOF PLAN

1/4" = 1'-0"

G.C. TO VERIFY ALL DIMENSIONS , SCHEDULES, INFO IN THE FIELD

A-13

sheet number:

Revision Table

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construction set	

structural engineer:

client approval:

E.T.E.

drawn & checked by: