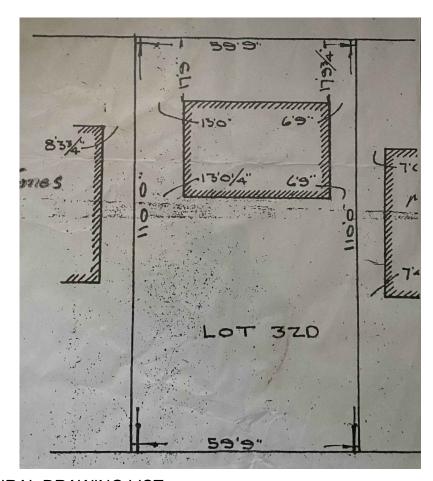
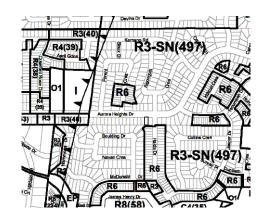
EXPANSION & CARPORT ADDITION TO THE EXISTING RESIDENCE

77 AURORA HEIGHTS DR. L4G 2X1 AURORA ON

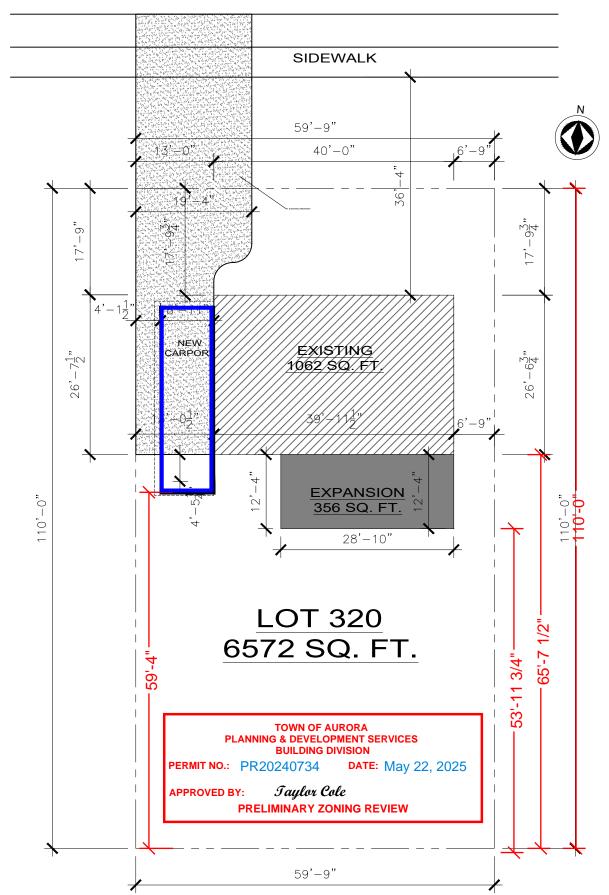


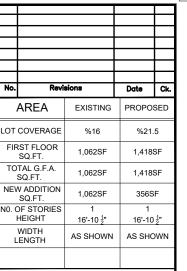
ARCHITECTURAL DRAWING LIST

COVER SHEET, SITE PLAN A0 **EXISTING FLOOR PLANS A1 EXISTING ELEVATIONS** A2 PROPOSED MAIN FLOOR **A3** PROPOSED ROOF PLAN A5 PROPOSED CROSS SECTION A6 PROPOSED EXTERIOR ELEVATIONS **A7** STRUCTURAL PLANS & NOTES **A8 GENERAL NOTES** Α9 **ROOF STRUCTURAL DRAWINGS** A10



AURORA HEIGHTS DRIVE









SITE STA	ATISTICS
ZONING	R3-SN(497)
LOT#	320
PLAN#	PIN 21376 - 0071(LT
LOT AREA	6,572 SQ.F
LOT FRONTAGE	59'-9"FT.
LOT DEPTH	110'-0"FT.

location 77 AURORA HEIGHTS DR. AURORA, ON L4G 2X1

SITE PLAN

ate: SEP 2023 drawing no.

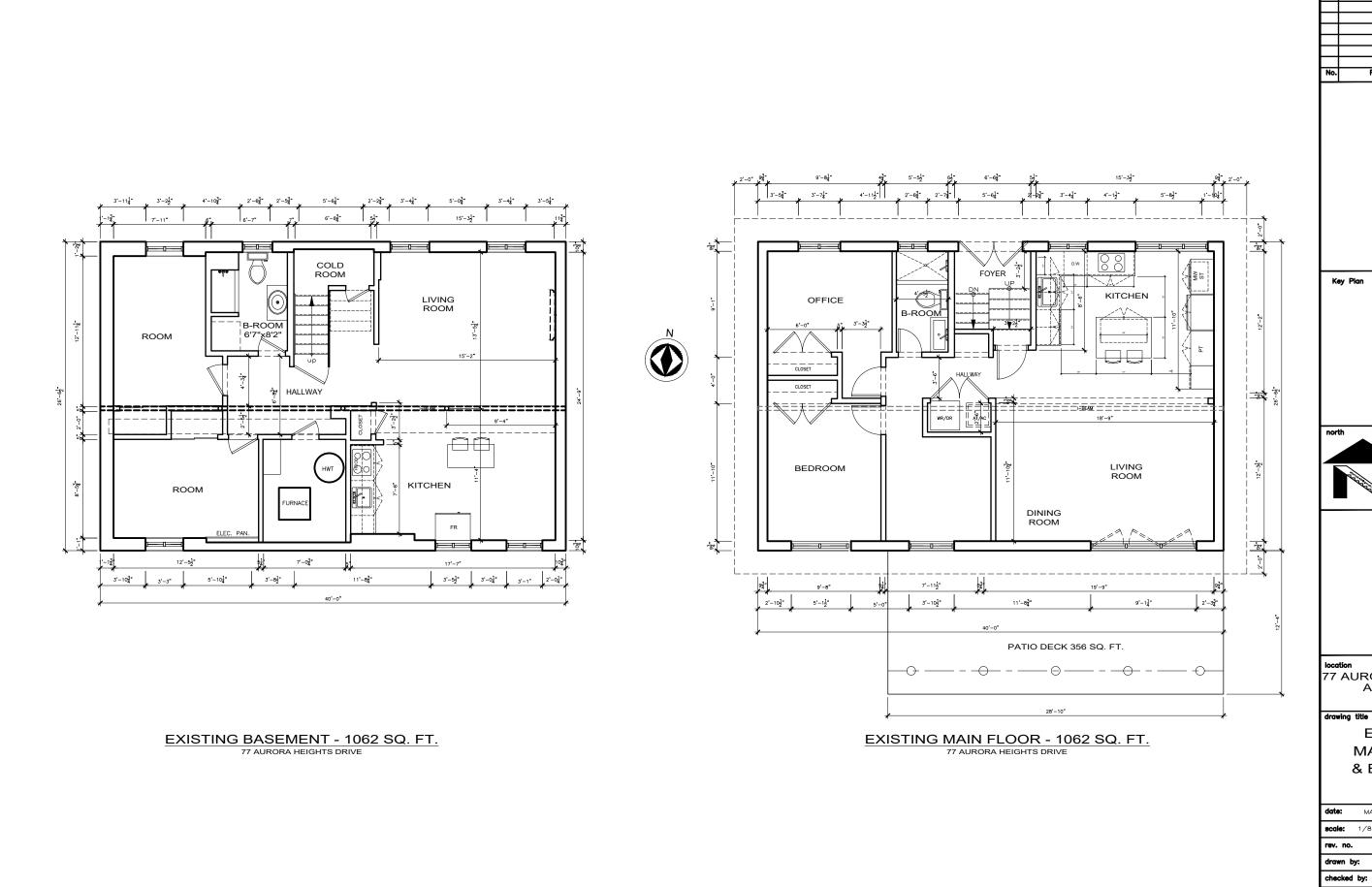
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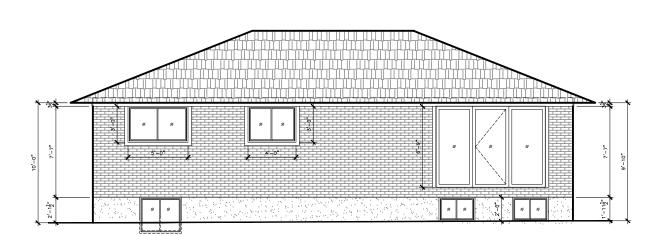
77 AURORA HEIGHTS DR

PLAN

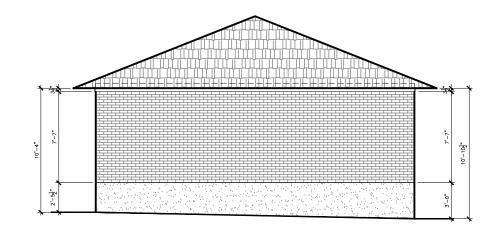




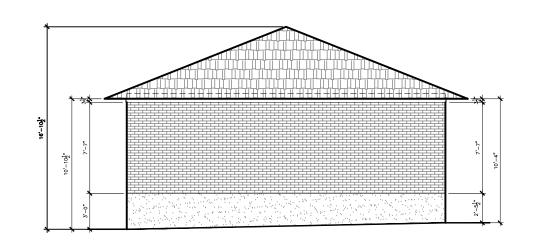
EXIST. NORTH ELEVATION 425SF - 125SF OPENING



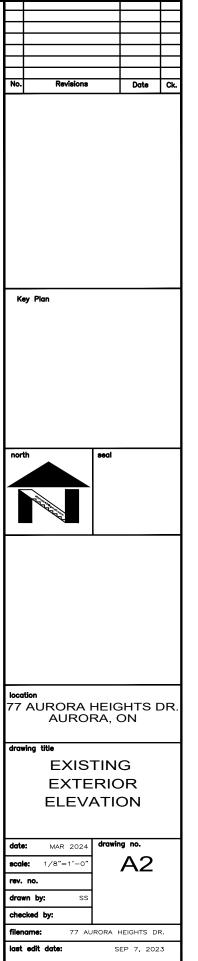
EXIST. SOUTH ELEVATION 425SF - 125SF OPENING

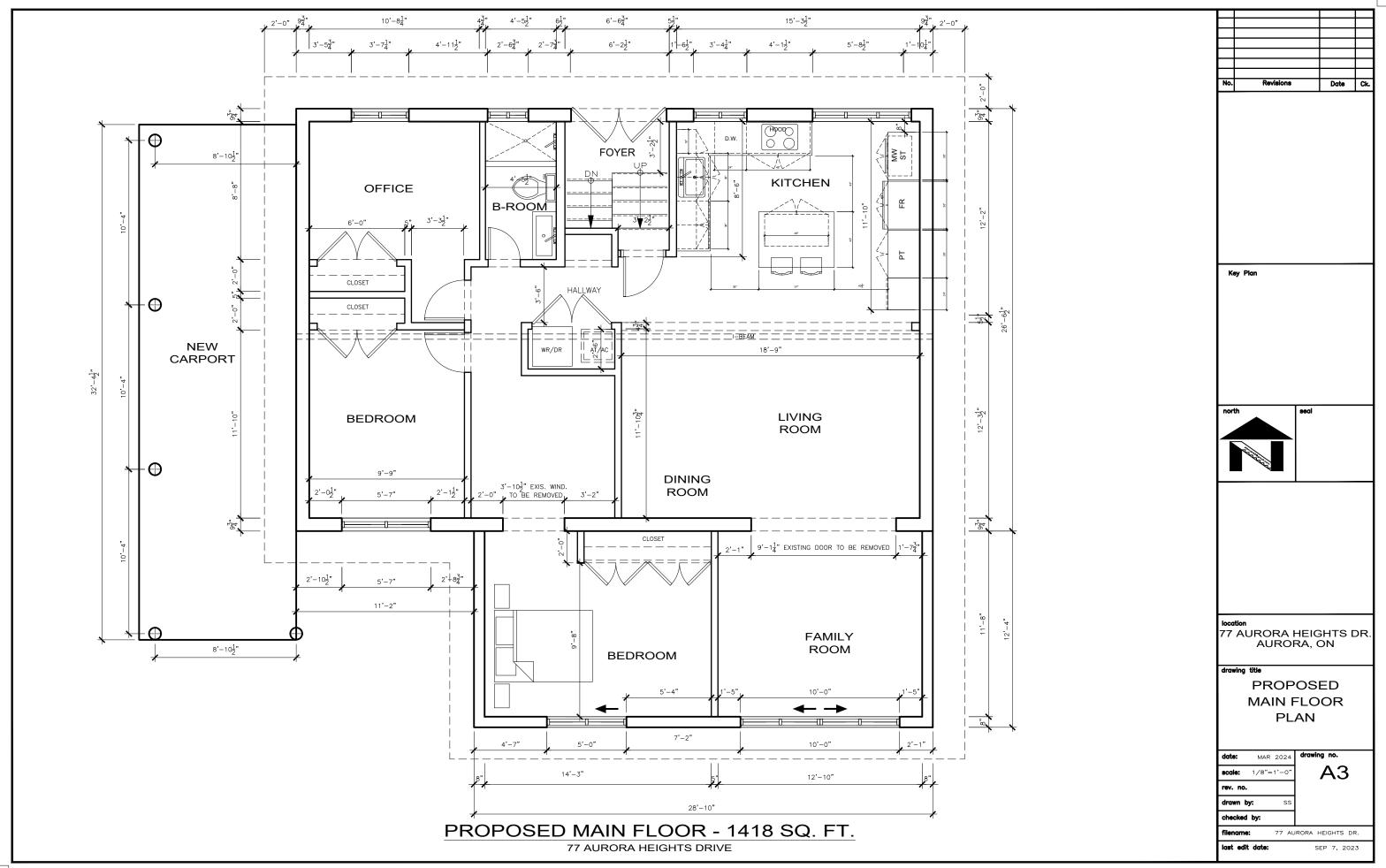


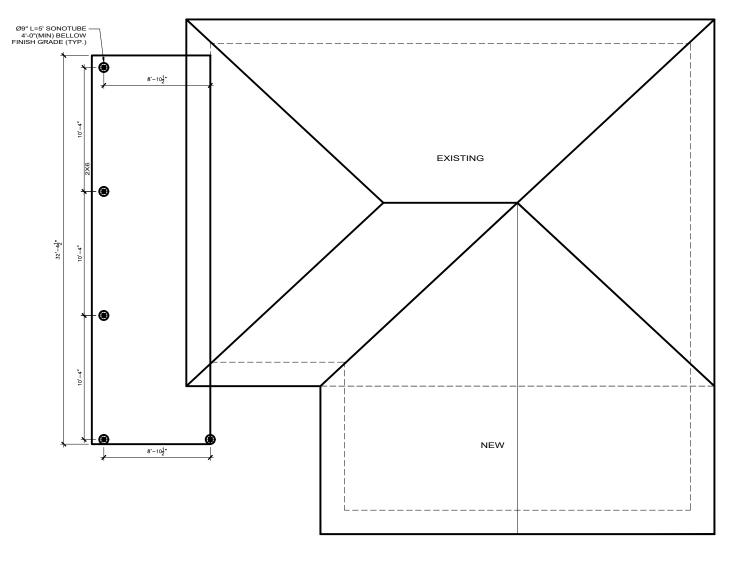
EXIST. WEST ELEVATION 285.0SF

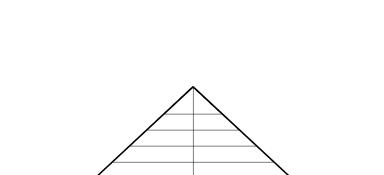


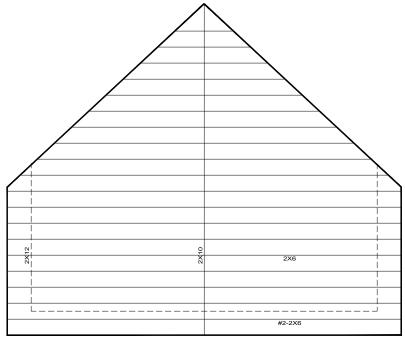
EXIST. EAST ELEVATION











Key Plan

Date Ck.

location 77 AURORA HEIGHTS DR. AURORA, ON

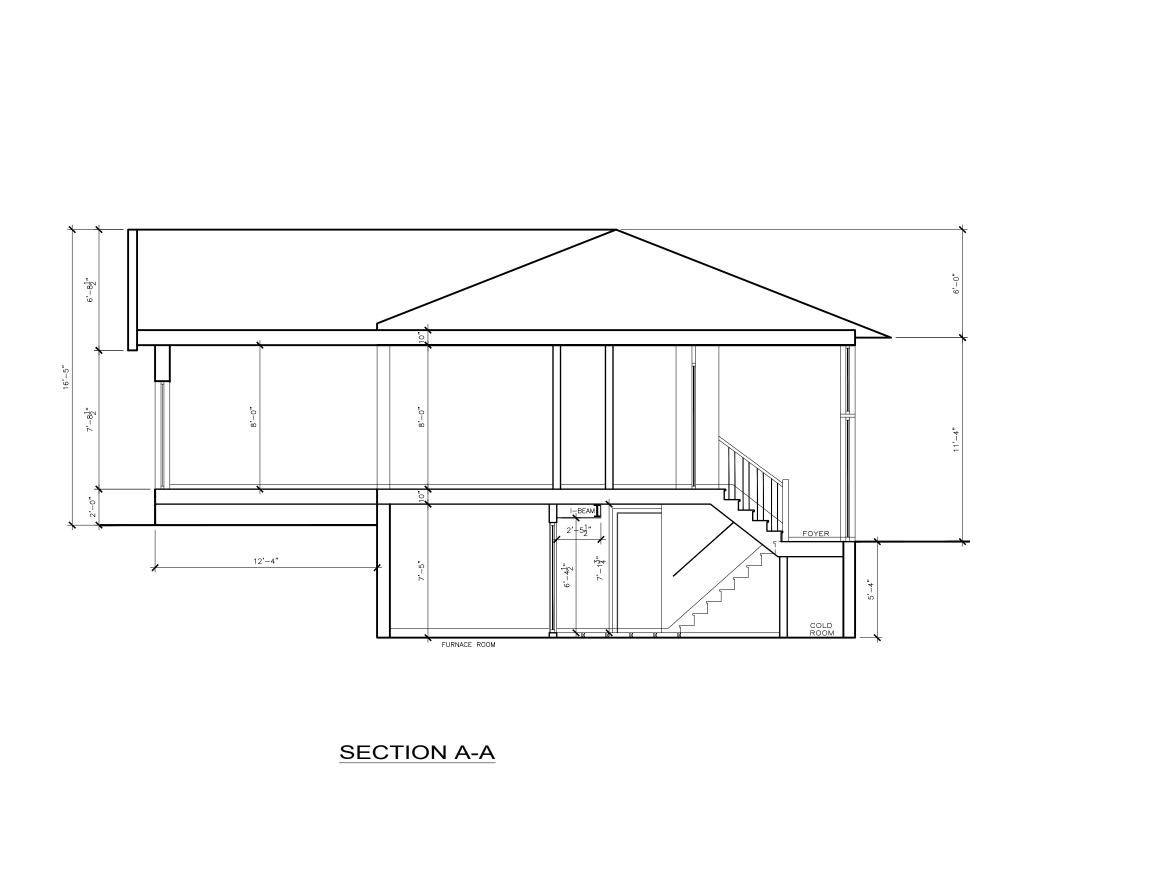
drawing title

ROOF PLAN

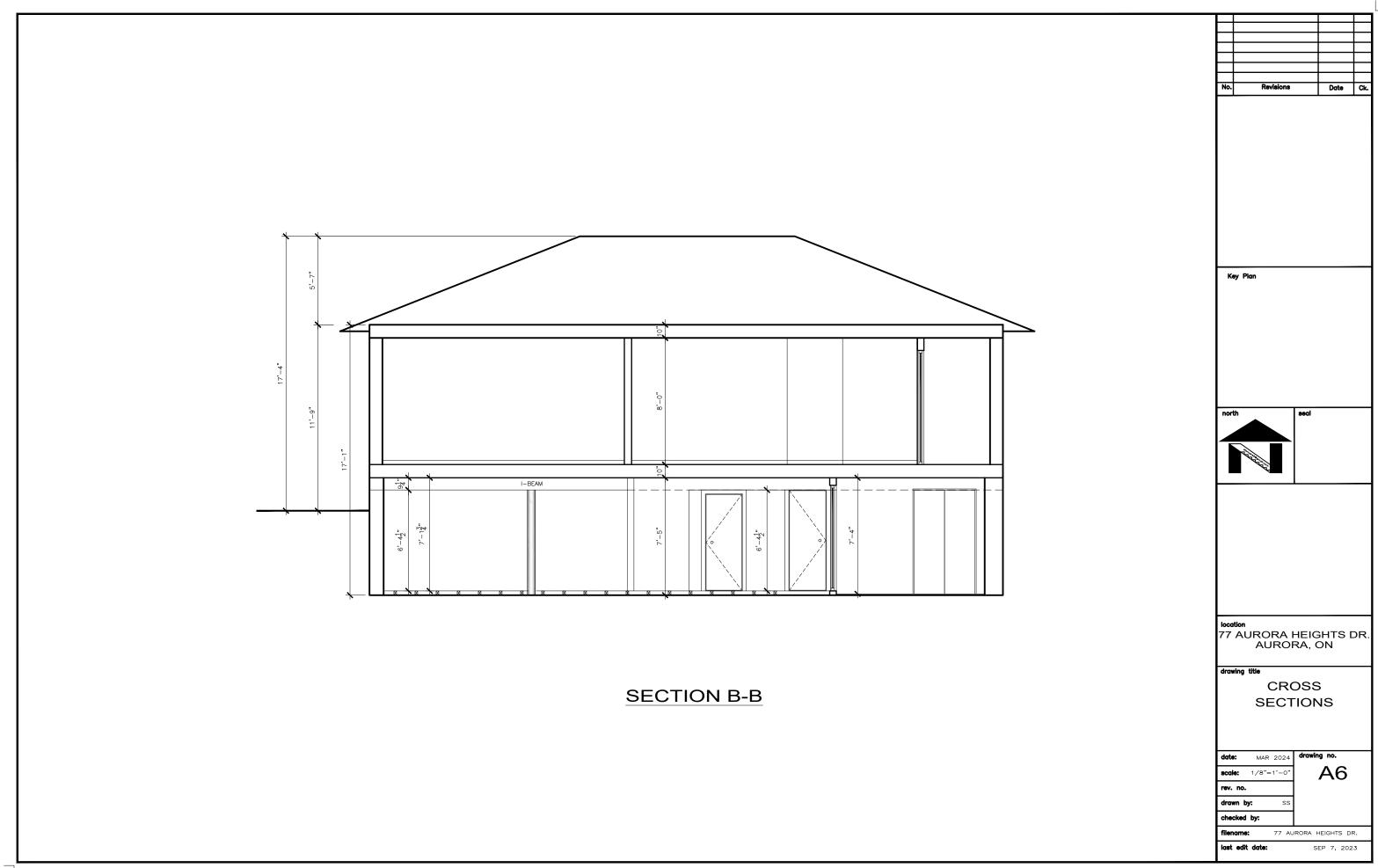
drawing no. MAR 2024 **A4**

77 AURORA HEIGHTS DR. last edit date: SEP 7, 2023

PROPOSED ROOF PLAN 77 AURORA HEIGHTS DRIVE



Date Ck. Key Plan location 77 AURORA HEIGHTS DR. AURORA, ON drawing title CROSS SECTION AA drawing no. **A6** 77 AURORA HEIGHTS DR. last edit date: SEP 7, 2023





PROP. NORTH ELEVATION

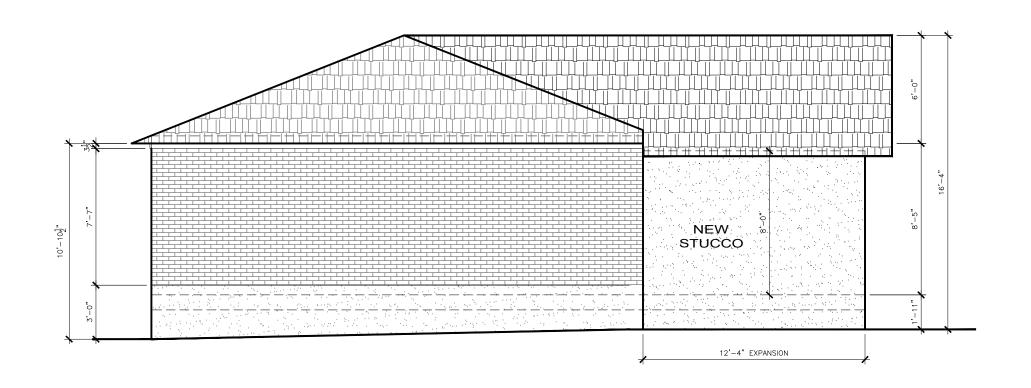
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PROP. SOUTH ELEVATION

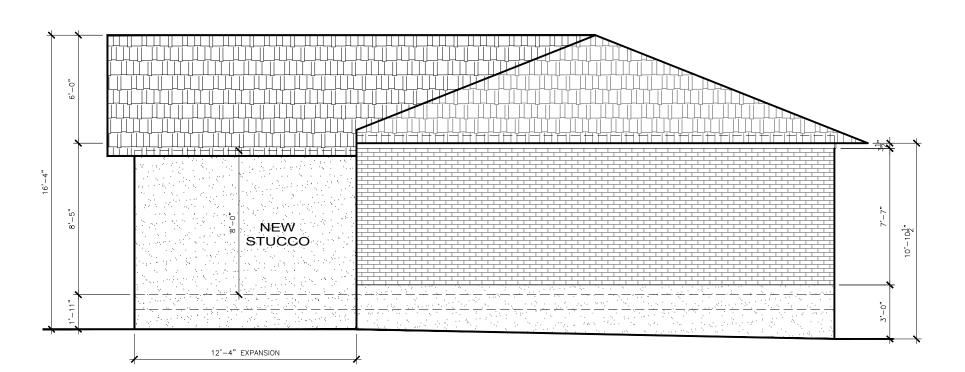
425SF - 125SF OPENING

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PROPOSED NORTH & SOUTH ELEVATIONS				
date	MAR 2024	drawin	g no.	-
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PORP. WEST ELEVATION

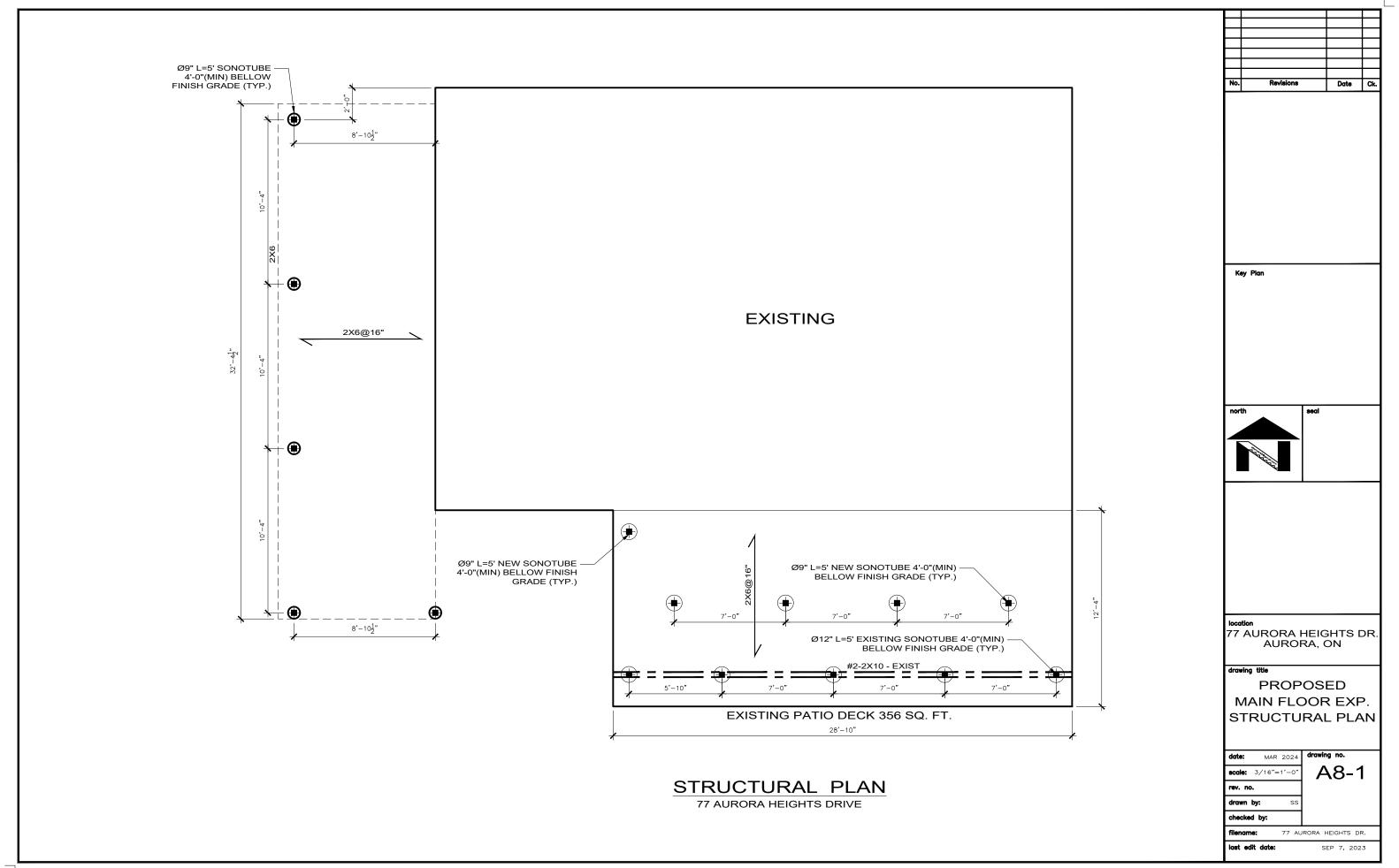
285.0+118.8SF



PROP. EAST ELEVATION

285.0+118.0SF

Date Key Plan location 77 AURORA HEIGHTS DR. AURORA, ON drawing title PROPOSED **EAST & WEST ELEVATIONS** MAR 2024 A7-2 77 AURORA HEIGHTS DR. last edit date:



GENERAL NOTES: 1. THESE NOTES ARE A PART OF ALL DRAWINGS THAT REFER TO THEM. WHERE DISCREPANCIES EXIST BETWEEN DRAWINGS, NOTES OR THE CODE, THE MOST RESTRICTIVE SHALL APPLY. 2. ALL DIMENSIONS ARE SHOWN IN IMPERIAL AND ALL LEVELS AND CO-ORDINATES ARE SHOWN IN METERS. 3. DO NOT SCALE THE DRAWINGS. ALL STRUCTURAL DRAWINGS SHALL BE IN CONJUNCTION WITH RELEVANT ARCHITECTURAL, MECHANICAL AND LANDSCAPE DRAWINGS 5. ANY DISCREPANCY NOTED SHALL BE BROUGHT TO THE NOTICE OF THE ENGINEER BEFORE COMMENCING ANY 6. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS, AND ALL WORK SHALL BE DUNE IN ACCURDANCE WITH THE ONTARIO OCCUPATIONAL HEALTH AND SAFETY ACT AND REQUATIONS, AND ALL APPLICABLE CODES, ORDINANCES AND ACCEPTED INDUSTRY STANDARDS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS AND ESTABLISHING THE COMPATIBILITY OF ALL NEW WORK WITH THE EXISTING CONDITIONS. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS SO AS NOT TO DAMAGE THE EXISTING STRUCTURES. ALL DRAWINGS ARE THE PROPERTY OF THE OWNER AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART WITHOUT WRITTEN CONSENT FROM THE ENGINEER. ANY FIELD MODIFICATIONS NOT IN ACCORDANCE WITH THE ORIGINAL SEALED DRAWINGS SHALL BE APPROVED BY THE ENGINEERING DEPARTMENT A MODIFICATION WITHOUT ITS APPROVAL SHALL DELECTIONS DESCRIPTION. DEPARTMENT. A MODIFICATION WITHOUT ITS APPROVAL SHALL VOID THE ENGINEER'S RESPONSIBILITY. FOUNDATIONS: 1. SUBGRADES TO BE ASSESSED BY GEOTECHNICAL ENGINEER BEFORE CASTING FOUNDATION OR SLAB. REMOVE LOOSE, UNSUITABLE

- SOUS AND REPLACE WITH ENGINEERED FILLS AS SPECIFIED.

 FOOTING SHALL REST ON UNDISTURBED SOIL, CAPABLE OF SUSTAINING 110 MPG AT SERVICEABILITY LIMIT STATES (SLS) OR ROCK.

 IF WATER TABLE IS WITHIN A DISTANCE BELOW THE BEARING SURFACE EQUAL TO THE WIDTH OF THE FOOTING, THE AREA OF THE FOOTING SHALL BE DOUBLED. CONTRACTOR SHOULD VERIFY THE ELEVATION OF WATER TABLE.
- THE BOTTOM OF EXCAVATION SHALL BE FREE OF ALL ORGANIC MATERIAL.
 FOUNDATION SHOULD BE PLACED AT A MINIMUM DEPTH OF 4'-0" BELOW FINISHED OUTSIDE GRADE.
- 6. PROTECT ALL FOOTING, WALLS, SLAB ON GRADE AND ADJACENT SOIL AGAINST FROST ACTION AND FREEZING AT ALL TIME DURING
- CONSTRUCTION.

 PROOF-ROLL SUBGRADE TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANTS PRIOR TO PLACING FOUNDATION OR SLAB.

 THE MAXIMUM SLOPE BETWEEN ADJACENT EXCAVATIONS FOR FOOTINGS OR ALONG STEPPED FOOTINGS SHALL NOT EXCEED A RISE
- OF 7 IN A RUN OF 10 MAXIMUM STEP OF APPROXIMATELY 24"
- ALL FOUNDATION WALLS TO EXTEND A MINIMUM OF 6" ABOVE GRADE.
- BASEMENT AND GROUND FLOOR FRAMING MUST BE IN PLACE BEFORE BACK FILLING.
 BACKFILL AGAINST FOUNDATION WALL AND RETAINING WALL SHALL BE PLACED AFTER THE CONCRETE GOT CURED AT LEAST FOR
 THREE DAYS AND FRAMING ON TOP OF THE FOUNDATION WALL INSTALLED COMPLETELY. BACKFILL WITHIN 24" OF THE FOUNDATION SHALL BE FREE OF DELETERIOUS DEBRIS AND BOULDERS LARGER THAN 10" DIAMETER.

 12. EXTERIOR SURFACE OF FOUNDATION WALL BELOW GROUND LEVEL, (EXCLUDE IN GARAGES, UNENCLOSED PORTION, OR INSTALLED
- OVER GRANDLAR FILL, SHALL BE DAMPPROOFED. MINIMUM OVERLAPPED IS 4".

 13. WHERE HYDROSTATIC OCCURES, WATERPROOFING IS REQUIRED FOR EXTERNAL SURFACE WHICH SHALL BE PREPARED BY PARGING/MORTAR AND BE FREE OF PROJECTIONS.

 14. SLAB-ON-GRADE SHALL BE 5" THICK AND REINFORCED WITH 152X152 MW18.7XMW18.7 U.N.O. PROVIDE MINIMUM 300MM OF 34"
- SIZE CRUSHER RUN LIMESTONE COMPACTED TO 98% MODIFIED PROCTOR DRY DENSITY (MPDD).

 15. UNLESS STATED OTHERWISE, SLAB-ON-GRADE SHALL BE PLACED ON SUB-GRADE CAPABLE OF SAFELY SUPPORTING 25 KPA
- (500PSF) WITHOUT RELATIVE SETTLEMENT WITH RESPECT TO BUILDING FOOTINGS.
 FOUNDATION WALL STEPPING AS PER ELEVATION CONFIRM WITH GRADING PLAN.
 ALL FOOTING ABOVE FREEZING DEPTH TO BE COVERED PROPERLY DURING WINTER TIME.

- ALL FOOLING ABOVE FREZING DEPITH TO BE COVERED PROPERTY DURING WINTER TIME.
 IF POUNDING HAPPENS LOCATION OF FOOTING BECAUSE OF RAINING OR WATER TABLE, THEE ENGINEER SHALL BE INFORMED TO REVISE THE FOOTING SIZE ACCORDINGLY.
 POURING CONCRETE SHALL TAKE PLACE IMMEDIATELY AFTER EXCAVATION.
 SUMP PIT IS REQUIRED IF BOTTOM OF FOOTING IS ABOVE STORM SEWER.
 LOCATE UTILITY PENETRATION BEFORE CONCRETE POURING.

- ALL UTILITY MUST BE DISCONNECTED PRIOR TO COMMENCING ANY EXCAVATION TO DETERMINE THE LOCATION OF ANY NEARBY UNDER GROUND SERVICES.

- MASONRY:

 1. MASONRY IS DESIGNED WITH THE REQUIREMENTS OF CSA-S304.1-04.

 2. MASONRY CONSTRUCTION AND REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF CSA-CAN3-A371-04.
- MASONRY CONNECTORS SHALL CONFORM TO CSA-CAN3-A370-04.
 REINFORCING FOR MASONRY WALLS SHALL CONFORM TO CSA-CAN3-S304-M84 (R1994).
 LOAD BEARING SOLID CONCRETE BLOCK TO CSA-A165.1-04, TYPE S/15/A/M.
- LOAD BEARING HOLLOW CONCRETE BLOCK TO CSA/A165.1-04, TYPE H/15/A/M.
- MORTAR SHALL CONFORM TO CSA-A179-04, TYPE 'S'.
- GROUT FILL SHALL BE OF HIGH SLUMP (225mm ±25mm)CONCRETE WITH A COMPRESSIVE STRENGTH OF 20MPa AT 28 DAYS.

- 9. PROVIDE VERTICAL REINFORCING 15M@24" FOR ALL 10" BLOCK WALLS.

 10. UNDERTAKE METHODS OF LAYING MASONRY FOR WEATHER PROTECTION IN ACCORDANCE WITH CSA-CAN3-A371-04.

 11. PROVIDE ADDITIONAL 1-15M VERTICAL FULL HEIGHT COMPLETE WITH MATCHING DOWELS AT CORNERS, INTERSECTIONS, EACH SIDE OF

- 11. PROVIDE ADDITIONAL 1—15M VERTICAL FULL HEIGHT COMPLETE WITH MATCHING DUWELS AT CORNERS, INTERSECTIONS, EACH SIDE OF OPENINGS, AND EACH SIDE OF OPENINGS, AND EACH SIDE OF OTHER WASONRY BLOCK CELLS WHERE WITH REINFORCEMENT.

 12. FULLY GROUT CONCRETE MASONRY BLOCK CELLS WHERE WITH REINFORCEMENT.

 13. MASONRY WALLS SHOWN ON STRUCTURAL DEARWINGS ARE LOAD BEARING U.N.O.

 14. GROUT SOLID AROUND ALL BEAM AND CHANNEL BEARING LOCATIONS IN MASONRY WALLS AS PER STANDARD DETAILS.

 15. BLOCKS SUPPORTING CONCENTRATED LOADS TO BE GROUTED SOLID 2 BLOCK COURSES BELOW BEARING U.N.O.

 16. NO MASONRY WORK PERMITTED WITH TEMPERATURES BELOW 5°C UNLESS PROVISIONS ARE MADE FOR HEATING THE MATERIALS AND PROTECTING THE WORK.
- 17 PROVIDE PRIMED/PAINTED LINTELS OVER ALL OPENINGS OR RECESSES IN MASONRY WALLS WITH EVEN AND LEVEL BEARING NOT LESS THAN 150 mm LENGTH.

 18. PROVIDE CHASES AND POCKETS IN WALLS FOR STRUCTURAL STEEL BEARING AND INSTALL ALL BEARING PLATES.

 19. ALL OPENINGS IN MASONRY WALLS SHALL BE SPANNED BY LINTELS AS REQUIRED BY THE SPECIFICATIONS, UNLESS OTHERWISE NOTED.

- <u>DESIGN_CODES_AND_LOADS:</u>
 1. STRUCTURAL_DESIGN_IS_BASED_ON_NATIONAL_BUILDING_CODE_OF_CANADA._2015_AND
- ONTARIO BUILDING CODE REGULATIONS, 2012.

 2. LOADS SHOWN ON STRUCTURAL DRAWINGS ARE UNFACTORED U.N.O.

 3. DESIGN LOADS AS SHOWN ON STRUCTURAL DRAWINGS SHALL NOT BE EXCEEDED DURING CONSTRUCTION
- 6. CLIMATIC LOADS (BASED ON SUPPLEMENTARY STANDARD SB-1, TABLE 1.2):
- LOCATION: TORONTO, ONTARIO
- 6.2. WIND PRESSURE (1/50): 0.44 kPa 6.3. SNOW LOAD (1/50): Ss= 2.0 kpa, Sr=0.4 kPa
- DESIGN LOADS (SERVICE): 7.1. LIVE LOAD = 40 psf
- 7.1. LIVE LOAD = 40 psf 7.2. FLOOR DEAD LOAD (HARDWOOD FLOORING) = 12 psf
- FLOOR DEAD LOAD (3/8" CERAMIC FLOORING FLOORING) = 15 psf EXTERNAL WALL DEAD LOAD = 7 psf
- PARTITION LOAD= 6 psf ROOF DEAD LOAD= 18 psf SNOW LOAD= 2.16 kpa 7.6. ROOF DEAD LOAD= 18 psf 7.7. SNOW LOAD= 2.16 kpa 7.8. WIND LATERAL LOAD=1.32 kpa 7.9. WIND UPLIFT LOAD= 0.54 kPa

- ALL FABRICATION, ERECTION AND DESIGN TO CONFORM TO CSA CAN3-086.1 (LATEST EDITION), CODE OF RECOMMENDED PRACTICE FOR ENGINEERING DESIGN IN WOOD.
 MATERIAL SHALL BE IDENTIFIED BY A GRADE STAMP:
- REGULAR LUMBER : SPF No.1/No.2
- ENGINEERED LUMBER: LVL GRADE 2.0E, Fb=2900 GLULAM: SPRUCE-FINE 20F-E,
- LSL: 2360Fb-1.3E
- MOISTURE CONTENT OF LUMBER SHALL NOT MORE THAN 19% AT TIME OF INSTALLATION.
- WOOD FRAME CONSTRUCTION SHALL BE IN ACCORDANCE WITH SECTION 9.23 OF THE ONTARIO BUILDING CODE 2012. BUILDING FRAMES SHALL BE ANCHORED TO THE FOUNDATION. ALL EXTERIOR EXPOSED WOOD TO BE NON—INCISED, PRESSURE TREATED.

- NAILS AND SPIKES TO CSA STANDARD B111 (LATEST EDITION).

 ALL WOOD COLUMNS TO BE CONTINUOUS TO FOUNDATION WALL OR SUPPORTING BEAM.

 ALL WOOD COLUMNS ON FOOTING OR FOUNDATION WALLS SHALL BE CONNECTED WITH GALVANIZED METAL SHOE BY SIMPSON STRONG TIE OR FOUIVALENT.
- 10. ALL HARDWARE EXPOSED TO HUMIDITY INCLUDING BOLTS, LAGS, PINS, ETC. SHALL BE HOT DIP GALVANIZED

 11. LOAD BEARING WALLS SHALL BE 2"x6" @ 16" c/c UNLESS OTHERWISE NOTED.
- 12. ALL LINTELS IN LOAD BEARING WALLS SHALL BE 2-2"x8" MIN. UNLESS OTHERWISE SPECIFIED.
- 13. PROVIDE FULL WIDTH SILL PLATES, MIN. 38x89 (2x4) ANCHORED TO FOUNDATION WITH 1/2" DIAMETER BOLTS x 8" LONG SET IN
- CONCRETE.

 14. ALL PARTITIONS TO BE SUPPORTED WITH DOUBLE JOISTS.

 15. DOUBLE TOP PLATE FOR ALL BEARING PARTITIONS. DOUBLE STUDS AT ALL CORNERS AND EACH SIDE OF OPENINGS. DOUBLE JOIST UNDER ALL NON—BEARING PARTITIONS. TRIMMER JOISTS AROUND FLOOR OPENINGS SHALL BE DOUBLED.
- 16. JOIST SHALL HAVE MINIMUM 12" BEARING. BEAMS TO HAVE 3" BEARING.
- 17. ALL JOIST TO HAVE BRIDGING MAXIMUM 7'-0" O.C. WITH 1"x3" OR 13x14" CROSS BRIDGING.

 18. WHERE JOISTS FRAME INTO THE SIDE OF A STEEL BEAM, JOISTS OR LEGGER BLOCKING SHALL BE SUPPORTED ON THE BOTTOM FLANGE OF THE BEAM OR ON NOT LESS THAN 2"x3" LUMBER BOLTED TO THE FLANGE WITH MINIMUM 1/4" DIAMETER BOLTS AT MAX. 24" CENTRES
- UNLESS NOTED OTHERWISE.

 19. HEADER JOISTS OVER 4'-O" TO A MAXIMUM 10'-8" TO BE DOUBLED. TRIMMER JOIST TO BE DOUBLED IF SUPPORTED HEADER IS BETWEEN 2'-8" AND 6'-8" LONG. JOIST PARALLEL TO WALLS TO HAVE LATERAL SUPPORT MAXIMUM 6'-8" O.C

- Z = ANU 0 = 0 LOVIG. JUISI PARALLEL IO WALLS ID HAVE LAIERAL SUPPORT MAXIMUM 6"-8" O.C.

 20. ALL WOOD IN CONTACT WITH CONCRETE SLAB TO HAVE MINIMUM 2 mm POLYETHYLENE FILM OR TYPE S ROLL ROOFING UNDERNEATH.

 21. PROVIDE SOLID STUDDING UNDER ALL BEAMS, LINTELS AND DOUBLE JOIST U.N.O.

 22. HOLES DRILLED IN ROOF, FLOOR OR CEILING FRAMING MEMBERS SHALL BE NOT LARGER THAN ONE—QUARTER THE DEPTH OF THE MEMBER AND SHALL BE LOCATED NOT LESS THAN 50 MM FROM THE EDGES, UNLESS THE DEPTH OF THE MEMBER IS INCREASED BY THE SIZE OF THE HOLE.
- AND SHALL BE LOCATED NOT LESS THAN 90 MM FROM THE EDGES, ONLESS THE DEPTH OF THE MEMBER IS INCREASED BY THE SIZE OF THE HOLE.

 23. FLOOR, ROOF AND CEILING FRAMING MEMBERS ARE PERMITTED TO BE NOTCHED PROVIDED THE NOTCH IS LOCATED ON THE TOP OF THE MEMBER WITHIN HALF THE JOIST DEPTH FROM THE EDGE OF BEARING AND IS NOT DEEPER THAN ONE—THIRD THE JOIST DEPTH, UNLESS THE DEPTH OF THE INCREASED BY THE SIZE OF THE NOTCH.

 24. WALL STUDS SHALL NOT BE NOTCHED, DRILLED, INCISED DR OTHERWISE DAMAGED SO THAT THE UNDAMAGED PORTION OF THE STUD IS LESS THAN TWO—THIRDS THE DEPTH OF THE STUD IF THE STUD IS LOAD—BEARING OR 40 mm IF THE STUD IS NON—LOADBEARING, UNLESS THE WEAKENED STUDS ARE SUITABLY REINFORCED.

 25. STUD WALLS DESIGNED FOR DRY SERVICE CONDITION AND SHOULD EFFECTIVELY PINNED AND LATERALLY RESTRAINED AT BOTH ENDS, AND PREVENT FROM BUCKLING ABOUT THE WEAK AXIS BY WALL SHEATHING.

 26. STUD WALL SYSTEM CONSIST OF AT LEAST 3 STUDS SPACED NO FARTHER APART THAN 610 mm.

 27. MINIMUM DOUBLE STUDS AT OPENINGS AND TRIPLE STUDS AT CORNERS UNLESS OTHERWISE SPECIFIED.

 28. PROVIDE MID—HEIGHT BLOCKING FOR ALL STUD WALLS, UNLESS AT LEAST ONE SIDE IS SHEATHED.

 29. TOP PLATES IN WALLS SHALL NOT BE NOTCHED, DRILLED, INCISED OR OTHERWISE WEAKENED TO REDUCE THE UNDAMAGED WIDTH TO LESS THAN 50 MM UNLESS THE WEAKENED PLATES ARE SUITABLY REINFORCED.

 30. THE EXISTING FLOOR JOISTS SHALL BE SHORED ON BOTH SIDES OF THE WALL TO BE CUT.

STRUCTURAL STEEL:

- DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL IN ACCORDANCE WITH CSA-S16 "DESIGN OF STEEL STRUCTURES", LAST
- 1.2. SHEAR CONNECTIONS SHALL BE DESIGNED BASED ON 50% OF BEAM'S SHEAR CAPACITY , NOT LESS THAN 50 kN FOR SHEAR
- MOMENT CONNECTION SHALL BE DESIGNED BASED ON 100% OF BEAM'S MOMENT CAPACITY. 2 MATERIAI
- ROLLED W SHAPES SECTIONS: CSA G40.21, GRADE 350W PLATES, ANGLES AND CHANNELS: CSA G40.21, GRADE 300W
- HSS: CSA-G40.21, GRADE 350W CLASS H
- ROUND BAR: CSA G30.18, GRADE 400W AND SHALL BE DEFORMED BAR
- WELDED WIRE FABRIC: SMOOTH WIRE (CSA G30.3-M1983) , DEFORMED WIRE (CSA G30.14-M1983) BOLTS AND NUTS: A325M
- 2.6.
- CORROSION PROTECTION.

 3.1. STEELWORK TO BE COATED SHALL, AS A MINIMUM, BE GIVEN A ONE-COAT SHOP PAINT THAT MEETS THE REQUIREMENTS OF CISC/CPMA

 3.1. STEELWORK TO BE COATED SHALL, AS A MINIMUM, BE GIVEN A ONE-COAT SHOP PAINT THAT MEETS THE REQUIREMENTS OF CISC/CPMA STANDARD 1-73A AND 2-75. THE COATING SHALL BE APPLIED THOROUGHLY AND EVENLY TO DRY, CLEAN SURFACES. (CSA/S16-28.8.3.3)

- (CSA/S16-28.8.3.3)
 EXTERIOR STEEL BEAMS SUSCEPTIBLE TO CORROSION SHALL BE SHOP PRIMED WITH RUST-INHIBITIVE PAINT.
 STEEL ANGLE LINTELS SUPPORTING MASONRY SHALL BE PRIMED OR PAINTED OR OTHERWISE PROTECTED FROM CORROSION.
 EXTERIOR STEEL COLUMNS SUSCEPTIBLE TO CORROSION SHALL BE TREATED ON THE OUTSIDE SURFACE WITH AT LEAST ONE COAT OF
 RUST-INHIBITIVE PAINT. (9.17.3.3) ALT SIGNATURE TO BE HOT-DIP GALVANIZED SHALL COMPLY WITH CSA STANDARD G164. (CSA/S16-28.8.7.1)

 4. ALL DIMENSIONS SHOULD BE VERIFIED ON SITE BEFORE FABRICATION.

 5. ALL FIELD BOITED CONNECTIONS WILL BE BEARING TYPE U.N.O USING ASTM A325 BOLTS M20 MINIMUM DIAMETER (U.N.O.) C/W NUT AND ONE HARDENED WASHER, MINIMUM TWO BOLTS PER CONNECTION.

 6. BURNING OF HOLES FOR BOLTED CONNECTIONS WILL NOT BE PERMITTED.

- MINIMUM CONNECTION MATERIAL THICKNESS $\frac{1}{8}$ "
 WELDING CONFORM TO CSA W59, USING E49XX ELECTRODES, AND TO BE UNDERTAKEN BY A FABRICATOR FULLY APPROVED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF THE CSA SPECIFICATION W47.1

- WELDING BUREAU TO THE REQUIREMENTS OF THE CSA SPECIFICATION W47.1

 9. MINIMUM SHOP/FIELD WELD SHALL BE ¼" CONTINUOUS FILLET U.N.O.

 10. ALL WELDS OF STEEL MEMBERS SHALL BE TOUCHED—UP WITH PAINT COAT.

 11. PROVIDE WELDED STIFFENER PLATES ON BOTH SIDES OF BEAMS AT POINTS OF CONCENTRATED LOADS INCLUDING BEAMS SUPPORTING COLUMNS OR RUNNINING OVER TOP OF COLUMNS.

 12. ALL WELDS SHALL BE VISUAL INSPECTED. COMPLETE PENETRATION JOINTS SHALL BE NDT TESTED.

 13. DEBURR AND REMOVE ALL SHARP EDGES.

 14. ATTACHMENTS TO STRUCTURAL STEEL AND OPEN WEB STEEL JOIST FOR MECHANICAL, ELECTRICAL AND OTHER SERVICES SHALL BE MADE BY APPROVED CLAMPING DEVICES OR U—BOLT TYPE CONNECTORS. NO CUTTING, DRILLING OR WELDING OF STEEL MEMBERS WILL BE PERMITTED LINIFES. 15. GROUT UNDER BASE PLATES TO BE NON-METALIC TYPE (SIKA TYPE 211 OR STRENSON TYPE M-BED). AFTER GROUT HAS CURED, THE
- ANCHOR BOLTS ARE TO BE BACKED OFF AND RE-TICHTENED IN ORDER TO OBTAIN A PRE-TENSION. NOMINAL GROUT HICKNESS = 1" U.N.O.

 16. PROVIDE TEMPORARY SUPPORTS, SUCH AS TEMPORARY GRIPS, BRACES, FLATWORK, CRIBBING, OR OTHER ELEMENTS REQUIRED FOR THE ERECTION OPERATION, THESE TEMPORARY SUPPORTS WILL SECURE THE STEEL FRAMING, OR ANY PARTLY ASSEMBLED STEEL AGAINST LOADS COMPARABLE IN INTENSITY TO THOSE FOR WHICH THE STRUCTURE WAS DESIGNED, RESULTING FROM WIND, SEISMIC AND ERECTION OPERATION.
- 17. PROVIDE MINIMUM LENGTH OF BEARING OF 4" FOR ALL STEEL BEAM BEARINGS ON CONCRETE/CONCRETE BLOCK U.N.O.
- 18. MAINTAIN TEMPORARY BRACING UNTIL COMPLETION OF ENTIRE STRUCTURE ELEMENTS, WHICH OF PART OF THE LATERAL LOAD RESISTING

Date Key Plan

77 AURORA HEIGHTS DR AURORA, ON

drawina title

STRUCTURAL NOTES

drawing no. MAR 2024 A8-2 3/16"=1'checked by:

last edit date: SEP 7, 2023

77 AURORA HEIGHTS DR.

ilename:

CONCRETE:

- CUNCRETE: MEMBERS ARE DESIGNED IN ACCORDANCE WITH CSA—A23.3—04 "DESIGN OF CONCRETE STRUCTURES"

 2. THE CONSULTANT'S APPROVAL SHALL BE OBTAINED PRIOR TO PLACEMENT OF ANY CONCRETE.
- 3. CONCRETE: TO CSA-A23.1-04 "CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION"

•	CLASS OF EXPOSURE	MAXIMUM WATER/ CEMENTING MATERIALS (W/C RATIO)	MINIMUM 28D COMPRESSIVE STRENGTH (MPA)	AIR CONTENT (%)	SPECIFIED SLUMP (MM)
FOOTING	R-1	0.70	30	3-6	100
FOUNDATION WALL	R-2	0.70	30	4-7	80
INTERIOR SLAB	R-3	0.65	20	-	60
GARAGE FLOOR, WALKWAY, RAISING AND PORCH	C-2	0.45	32	5-8	70

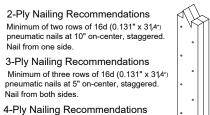
- NOTE: CONCRETE FOR WALLS TO BE MINIMUM 12 MPa PRIOR TO STRIPPING FORMS.
 USING NORMAL PORTLAND CEMENT TYPE GU, U.N.O.
 ADDITION OF FLY ASH TO THE CONCRETE MIXES IS NOT PERMITTED. ADMIXTURES CONTAINING CALCIUM CHLORIDE ARE NOT

- 6. ABSORPTION TO BE A MAXIMUM OF 5%.
 7. MIX DESIGN FOR CONCRETE WALLS PROPORTIONED IN ORDER TO MEET FREEZE THAW DURABILITY REQUIREMENTS.
 8. MAXIMUM AGGREGATE SIZE IS 19 mm (¾")
 9. WHEN AIR TEMPERATURE IS BELOW 5°C, CONCRETE SHALL BE KEPT AT A TEMPERATURE OF NOT LESS THAN 10°C OR MORE THAN 25°C WHILE BEING MIXED AND PLACED, AND MAINTAINED AT A TEMPERATURE OF NOT LESS THAN 10°C FOR 72h AFTER PLACING.
 10. NOT FROZEN MATERIAL OR ICE SHALL BE USED IN CONCRETE.
 11. SLAB ON GRADE 4" THICK AS SHOWN ON THE DRAWINGS SHALL BE REINFORCED WITH WWM152X152 MW18.7XMW18.7
- CONCRETE U.N.O. PROVIDE MINIMUM OF MIN. 5" DEEP OF GRANULAR SUB-GRADE MATERIAL COMPACTED TO 98% MODIFIED PROCTOR DENSITY
- 12. CONCRETE FOR WALLS SHALL BE DEPOSITED CONTINUOUSLY IN APPROXIMATELY EQUAL HORIZONTAL LIFTS NOT EXCEEDING 4'.

- 13. REINFORCING STEEL: Fy = 400 MPa
 ANCHOR BOLTS: ASTM A307 (MIN.)
 EMBEDDED STEEL: Fy = 300 MPa
 WELDED WIRE FABRIC: Fy = 440 MPa
 WELDED WIRE FABRIC: Fy = 440 MPa
 14. REINFORCING FOR MASONRY WALLS SHALL CONFORM TO CSA-CAN3-S304, LATEST REVISION.
 15. NON-CONTACT LAP SPLICING IS RECOMMENDED. WHEN LAPS ARE NECESSARY REFER TO CSA-A23.3-94. NOT MORE THAN 50%
 OF REBAR TO BE SPLICED AT ANY ONE LOCATION. MINIMUM LENGTH OF OVERLAP LISTED BELOW:
 - 10M _____ 23" 15M ____ 33"
 - 20M _____
- 16. ALL EXPOSED EDGES TO BE CHAMFERED ¼" x ¾"
 17. CLEAR COVER TO PRIMARY REINFORCEMENT. TO CSA-A23.1-04 U.N.O:
 CONCRETE DEPOSITED AGAINST EARTH 3"
 BEAMS COLUMNS 2"

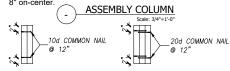
 - WALLS ______ 1½"
 - SLAB

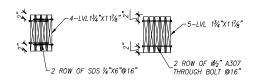
- SUPERPLASTICIZERS AND VISCOSITY-MODIFY ADMIXTURES (VMAs) IN ACCORDANCE WITH CSA/A23.1 (8.b) SHALL BE USED.

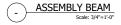


Nail each ply to the other with a minimum of three rows of 16d (0.131" x 31/4") pneumatic nails at 5" on-center. When connecting each ply, offset nail rows by 2" from the ply below.or,

Minimum of two rows of 1/2" diameter bolts spaced at







ITEM	CONSTRUCTION DETAIL	MINIMUM LENGTH OF NAILS	MINIMUM NUMBER OF MAXIMUM SPACING OF NAILS
1	FLOOR JOIST TO PLATE - TOE NAIL	3/4"	2
2	WOOD OR METAL STRAPPING TO	2/4"	2
3	UNDERSIDE OF FLOOR JOISTS CROSS BRIDGING TO JOISTS	2/4"	2 at each end
4	DOUBLE HEADER OR TRIMMER JOISTS	3"	11 ¹³ / ₆ " (o.c.)
5	FLOOR JOIST TO STUD (BALLOON	3"	2
6	CONSTRUCTION) LEDGER STRIP TO WOOD BEAM	3/4"	2 per joist
7	JOIST TO JOIST SPLICE (SEE ALSO	3"	2 at each end
	TABLE 9.23.13.8.) HEADER JOIST END NAILED TO JOISTS		
8	ALONG PERIMETER	4"	3
9	TAIL JOIST TO ADJACENT HEADER JOIST (END NAILED) AROUND OPENINGS	3/4"	5
	(END MALED) ANOSHO OF ENINGS	4"	3
10	EACH HEADER JOIST TO ADJACENT TRIMMER JOIST (END NAILED) AROUND	3/4''	5
	OPENINGS -	4"	3
11	STUD TO WALL PLATE (EACH END) TOE NAIL	Z/16''	4
	OR END NAIL	3√4"	2
12	DOUBLED STUDS AT OPENINGS, OR STUDS AT WALLS OR WALL INTERSECTIONS AND CORNERS	3"	29½" (o.c.)
13	DOUBLED TOP WALL PLATES	3"	23%" (o.c.)
14	BOTTOM WALL PLATE OR SOLE PLATE TO JOISTS OR BLOCKING (EXTERIOR WALLS)(1)	3/4"	15¾" (o.c.)
15	INTERIOR WALLS TO FRAMING OR SUBFLOORING	3/4"	23%" (o.c.)
16	HORIZONTAL MEMBER OVER OPENINGS IN NON-LOADBEARING WALLS -EACH END	3/4''	2
17	LINTELS TO STUDS	3/4"	2 at each end
18	CEILING JOIST TO PLATE - TOE NAIL EACH END	3/4"	2
19	ROOF RAFTER, ROOF TRUSS OR ROOF JOIST TO PLATE - TOE NAIL	3/4"	3
20	RAFTER PLATE TO EACH CEILING JOIST	4"	2
21	RAFTER TO JOIST (WITH RIDGE SUPPORTED)	3''	3
22	RAFTER TO JOIST (WITH RIDGE UNSUPPORTED)	3"	See Table 9.23.13.8.
23	GUSSET PLATE TO EACH RAFTER AT PEAK	2/4"	4
24	RAFTER TO RIDGE BOARD -TOE NAIL - END NAIL	3/4"	3
25	COLLAR TIE TO RAFTER -EACH END	3"	3
26	COLLAR TIE LATERAL SUPPORT TO EACH COLLAR TIE	2/4"	2
27	JACK RAFTER TO HIP OR VALLEY RAFTER	3/4"	2
28	ROOF STRUT TO RAFTER	3"	3
29	ROOF STRUT TO LOADBEARING WALL — TOE NAIL	3/4"	2
30	2X6 OR LESS PLANK DECKING TO SUPPORT	3/4"	2
31	PLANK DECKING WIDER THAN 2X6 TO SUPPORT	3/4"	3
32	2" EDGE LAID PLANK DECKING TO SUPPORT (TOE NAIL)	3"	1
33	2" EDGE LAID PLANK TO EACH OTHER	3"	17¾" (o.c.)

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Key Plan



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STRUCTURAL NOTES

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GENERAL NOTES

- 1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH PART 9 OF THE ONTARIO BUILDING CODE (MOST RECENT EDITION) AND LOCAL ORDINANCES. SOIL CONSULTANT TO VERIFY SOIL CONDITIONS AND REPORT FINDINGS TO THE CONTRACTOR.
- 2. ALL EXTERIOR DOORS TO BE INSULATED H.M. TYPE C/W WEATHER STRIPPING AND ALUMINUM THRESHOLD, UNLESS OTHERWISE SHOWN.
- VAPOUR BARRIERS ARE TO BE OVERLAPPED MIN. 4" AND BE SEALED W/ ACOUSTIC SEALANT.
- 4. WOOD FRAMING MEMBERS THAT ARE NOT TREATED WITH A WOOD PRESERVATIVE AND WHICH ARE SUPPORTED ON THE CONCRETE IN CONTACT WITH THE GROUND OR FILL SHALL BE SEPARATED FROM THE CONCRETE BY MIN. 6" MIL. POLYURETHANE OR OTHER APPROVED DAMP PROOFING MATERIAL EXCEPT THAT SUCH DAMP PROOFING IS NOT REQUIRED WHERE THE WOOD MEMBER US AT LEAST 6" ABOVE THE GROUND.
- CONTRACTOR: TO VERY ALL EXISTING DIMENSIONS AND GRADING WITH RESPECT TO THE PROPOSED BUILDING AND REPORT ANY DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH FURTHER CONSTRUCTION.
- 6. SMOKE ALARMS: SHALL BE INSTALLED ON ALL FLOOR LEVELS AS PER O.B.C
- CO DETECTORS: AT FURNACE ROOM AND WOOD-BURNING FIREPLACE LOCATIONS. INSTALL AS PER MANUFACTURER'S SPECIFICATIONS.
- 8. SURFACE FLAME SPREAD RATING: ALL NEW INTERIOR FINISHES NOT TO EXCEED 150
- JOINTS BETWEEN FOUNDATION WALLS, AROUND PIPES, CONDUITS OR DUCTS THAT PENETRATE SUCH, SHALL BE FILLED W/ BITUMEN RUBBER OR COIL TAR
- 10. FOOTING: TO BE POURED ON NATURALLY UNDISTURBED SOIL CAPABLE OF BEARING 3 K.S.F. AT MIN 4'-0" BELLOW GRADE. USE 3600 P.S.I. CONCRETE @ 28 DAYS FOR FOOTING AND FOUNDATION WALLS. STEP FOOTINGS HORIZONTAL STEPS SHALL BE MIN. 2'-0" AND VERTICAL STEPS SHALL BE NO GRATER THAN $\frac{2}{3}$ OF HORIZONTAL STEP TO A MAX. OF 2'-0" AS PER O.B.C. 9.15.3.8. FOOTING OVER TRENCHES TO BE REINFORCED W/ 2-#4 BARS @ $\frac{1}{3}$ POINTS
- 11. DRAINAGE: Ø4" WEEPING TILE W/ 6" CRUSHED STONE COVER
- 12. ALL STRUCTURAL STEEL TO CONFORM TO REQUIREMENTS FOR GRADE 300W STEEL IN CAN. CSA.G40.21, "STRUCTURAL QUALITY STEELS"
- 13. MASONRY: DRAINAGE LAYER OVER 2 COATS OF BITUMINOUS DAMP PROOFING ON POURED CONCRETE FOUNDATION WALL, MOISTURE BARRIER TO HEIGHT OF EXTERIOR GRADE, 2x3 WOOD STRAPPING, MIN. R12 BATT INSUL. W/ 6 MIL FULL HEIGHT POLY AIR/ VAPOUR BARRIER ON THE WARM SIDE, $\frac{1}{2}$ " INTERIOR DRYWALL FINISH
- 14. MASONRY: 4" NATURAL STONE OR ARISCROFT STONE OR BRICK LAYER W/ WEEP HOLES AT 31"O.C., 1" AIR SPACE. 0.03 THK. $\frac{7}{8}$ " WIDE GALVANIZED METAL TIES INSTALLED W/ GALVANIZED SPIRAL NAILS OR SCREWS 52" O.C. HORIZONTAL 16"O.C. VERTICAL, 20 MIL POLY FLASHING MIN. 6" UP BEHIND THE SHEATHING PAPER, SHEATHING PAPER LAYERS TO OVERLAP EACH OTHER, $\frac{1}{2}$ " THK. EXTERIOR TYPE PLYWOOD SHEATHING, 2x6 WOOD STUDS @ 16" O.C., R19 BATT INSUL. IN CONTINUOUS CONTACT W/ EXTERIOR SHEATHING, 6 MIL CONTINUOUS POLY AIR/ VAPOUR BARRIER ON WARM SIDE, $\frac{1}{2}$ " INTERIOR DRYWALL FINISH, DOUBLE PLATE @ TOP, SOLE PLATE @ BOTTOM
- **15. GRADE:** SLOPE GRADE AWAY FROM BUILDING FACE
- 16. SILL PLATE: 2x6 SILL PLATE FASTENED TO FOUNDATION WALL WITH

- MIN. \emptyset_2^{1} ". ANCHOR BOLTS EMBEDDED MIN. 4" INTO CONCRETE @ 4' O.C. a PROVIDE CAULKING OR GASKET BETWEEN PLATE & FOUNDATION WALL
- 17. FLOOR INSULATION: CONTINUOUS HEADER JOIST W/ RI9 BATT INSUL., EXTEND VAPOUR/ AIR BARRIER & SEAL TO JOIST & SUB FLOOR
- **18. BASEMENT SLAB:** 3" POURED CONCRETE SLAB (3600 PSI CONC. STRENGTH) 6" CRUSHED STONE BELOW. THICKEN THE SLAB TO 6" UNDER THE STAIRCASE AREA.
- 19. ROOF CONSTRUCTION: 20 YEARS ASPHALT SHINGLES (2 LAYERS OF FELT ROOFING MEMBRANE WHERE FLAT ROOF) ON 3" EXTERIOR PLYWOOD HEATING ON APPROVED ROOF TRUSSES
- 20. OVERHANG CONSTRUCTION: PRE FINISHED ALUMINUM FACIA, EAVES TROUGH & RAIN WATER LEADERS TO MATCH THE EXTERIOR FINISHES. PROVIDE DRIP EDGE AT FACIA & VENTED SOFFIT, EXTEND DOWNSPOUT TO GRADE LEVEL, PROVIDE PRECAST CONCRETE SPLASH PAD
- 21. ROOF VENTILATION: 1/300 OF THE INSULATED CEILING AREA UNIFORMLY DISTRIBUTED
- 22. EAVES PROTECTION: EAVES TROUGH PROTECTION MEMBRANE TO EXTEND FROM THE EDGE OF THE ROOF 36" UP THE SLOPE BUT NOT LESS THAN 12" BEYOND THE INTERIOR FACE OF THE EXTERIOR WALL
- 23. CEILING CONSTRUCTION: §" THK. INTERIOR DRYWALL FINISH, CONTINUOUS AIR/ VAPOUR BARRIER W/ MIN. R40 BATT INSULATION.
- 24. FLOOR CONSTRUCTION: ³/₄" T&G PLYWOOD SUB FLOOR GLUE-NAILED ON TJI FLOOR JOISTS @ 16"O.C. UNLESS NOTED OTHERWISE, DOUBLE ALL JOISTS UNDER PARTITIONS THAT ARE PARALLEL TO THE FLOOR JOISTS UNLESS OTHERWISE NOTED
- 25. INTERIOR STUD PARTITION: ½" DRYWALL FINISH BOTH SIDES OF 2x4 WOOD STUDS @16"O.C., 2 TOP PLATES & 1 BOTTOM PLATE, PROVIDE SOUND ATTENUATION INSULATION IN BATHROOM WALLS & WHERE INDICATED ON DRAWINGS, USE MOISTURE RESISTANT DRYWALL IN BATHROOMS
- 26. MECHANICAL VENTILATION: PROVIDE MIN I AIR CHANGE PER HOUR IN ROOMS SPECIFIED TO BE MECHANICALLY VENTED, 80 CFM FOR BATH PRIMARY VENTS
- 27. STAIRS INTERIOR/EXTERIOR:
- 27.1. MAXIMUM RISE 7_8^7
- 27.2. MINIMUM RISE 4-JIB"
- 27.3. MINIMUM RUN $8\frac{1}{4}$ "
- 27.4. MAXIMUM RUN 14"
- 27.5. MINIMUM TREAD 9¹/₄
- 27.6. MAXIMUM TREAD 14"
- 27.7. MAXIMUM NOSING 1"
- 27.8. MINIMUM WIDTH 2'-10"27.9. MINIMUM HEADROOM 6'-0"
- 28. GUARDS:
- 28.1. INTERIOR LANDINGS 2'-11"
- 28.2. EXTERIOR BALCONY 3'-6"
- 28.3. INTERIOR STAIRS 2'-11" 28.4. EXTERIOR STAIRS 2'-11"
- 28.5. MAXIMUM BETWEEN PICKETS 4" GUARD HEIGHT IF DECK TO GRADE IS GREATER THAN 5'-11", 3 '-6", S'-11" OR LESS 2'-1 1" NO MEMBER OR ATTACHMENT BETWEEN 4" & 2'-11" HIGH SHALL FACILITATE CLIMBING
- 29. SKYLIGHT: 24"X36" VELUX ELECTRIC VENTILATION BLIND FOR THE BATHROOM

NOTE TO CONTRACTOR

SHOP DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR FOR THE WINDOWS, DOORS, TRUSSES, AND OTHER PREFABRICATED STRUCTURE, MILLWORK, CUT STONE TRIM, OR PRECAST AND OTHER FABRICATED ITEMS

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