GENERAL NOTES

GOVERNING CODE - ONTARIO BUILDING CODE OF CANADA, 2012 EDITION:

1. DESIGN LOADS: **(UNFACTORED)**

GROUND SNOW LOAD: Ss = 2.3 kPa
Sr = 0.4 kPa
Is = 1.0

ROOF: DEAD LOAD = 20 psf
SNOW LOAD = 47 psf

FLOOR: DEAD LOAD = 50 psf
LIVE LOAD = 40 psf
LIVE LOAD = 100 psf (EXITS)

WIND LOAD: q(1/50) = 0.41 kPa
Iw = 1.0 * SITE CLASS 'D' (TO BE CONFIRMED)

SEISMIC: Sa (0.2) = 0.225 Sa (1.0) = 0.080 Sa(5.0)= 0.0110 PGA= 0.140
Sa (0.5) = 0.142 Sa (2.0) = 0.041 Sa(10.0)= 0.0045 Ie = 1.0

DESIGN LIVE LOADS TO INCLUDE POINT LOAD REQUIREMENTS AS PER ARTICLE 4.1.6.10 OF THE 2012 ONTARIO BUILDING CODE. FACTORED LOADS SHOWN ON DRAWINGS USE LOAD FACTORS LL = 1.5 AND DL = 1.25 PER ONTARIO BUILDING CODE.

FOUNDATIONS - GENERAL:

1. THE FOUNDATION HAS BEEN DESIGNED FOR AN ASSUMED ALLOWABLE BEARING CAPACITY OF 75 kPa (1550 PSF) TO BE DETERMINED BY A THIRD PARTY GEO-TECHNICAL CONSULTANT. GEO-TECHNCIAL ENGINEER TO REVIEW BEARING SOILS, SOME ADJUSTMENTS MAY BE REQUIRED.
2. FOOTINGS MAY NOT BE POURED INTO AN EARTH-FORMED TRENCH.
3. OPEN EXCAVATIONS SHALL BE DE-WATERED AS REQUIRED. MEASURES MAY BE REQUIRED TO PROTECT BEARING MATERIALS FROM DEGRADATION DUE TO EXTREME WEATHER AND CLIMATIC CONDITIONS.
4. BOTTOM OF EXTERIOR FOOTINGS SHALL BEAR ON NATIVE SOIL. FOOTING ELEVATIONS MAY NEED TO BE ADJUSTED.
5. THE ENGINEER SHALL INSPECT ALL REBAR AND FORMWORK PRIOR TO PLACING CONCRETE. FORMWORK SHALL BE COMPLETE AT THE TIME OF INSPECTION. REINFORCEMENT MUST BE MINIMUM 95% COMPLETE AT TIME OF INSPECTION. PROVIDE MINIMUM 24 HOUR NOTICE AT THE FOLLOWING SCHEDULED EVENTS:
   - 5.1. FOOTING PLACEMENT
   - 5.2. FOUNDATION WALL PLACEMENT
   - 5.3. SLAB ON GRADE PLACEMENT
6. WHERE FOUNDATION WALLS ARE TO HAVE EARTH PLACED ON EACH SIDE, PLACE FILL SIMULTANEOUSLY SO AS TO MAINTAIN A COMMON ELEVATION ON EACH SIDE OF THE WALL. ALL FILL TO BE GRANULAR MATERIAL AS APPROVED BY ENGINEER.
7. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ADEQUATE BRACING AND SUPPORT OF FORMWORK TO ENSURE WALLS ARE PLUMB WITHIN ACCEPTABLE LIMITS (1:500).
8. GRANULAR FILL SHALL BE MINIMUM 6" GRANULAR "A" COMPACTED TO 98% S.P.D.D, ALL OTHER FILL ON SITE SHALL BE GRANULAR B TYPE II COMPACTED TO 98% S.P.D.D. U.N.O. GRANULAR FILL SHALL BE COMPACTED IN MAXIMUM 10" LIFTS. FILL NOT SPECIFIED ON THE DRAWINGS TO BE USED ON SITE MUST BE APPROVED BY THE DESIGNER PRIOR TO PLACEMENT.

CONCRETE:

1. DESIGN OF CONCRETE ELEMENTS SHALL CONFORM TO CSA-A23.3-14. PROVIDE CONCRETE AND PERFORM WORK TO CSA A23.3-04.
2. TEST CONCRETE IN ACCORDANCE WITH CSA-A23.3-14.
3. CONCRETE REQUIREMENTS:

LOCATION CONDITION	MIN. DESIGN STR. Mpa = TYPE (DAYS) C = COMPRESSION F= FLEXURAL	CEMENT	AIR (mm)	MAX AGG.	EXP.
INTERIOR SLAB	25C (28)	GU	< 3	20	N
FOOTINGS	20C (28)	GU	< 3	20	N
FOUNDATION WALLS	25C (28)	GU	4-7	20	F-2
EXTERIOR CONC & GARAGE SLAB	35C (28)	GU	4-7	20	C-1

- WHERE SPECIFIED STRENGTH EXCEED THOSE IMPLIED BY EXPOSURE CLASS, SPECIFIED STRENGTH GOVERNS.
- ALL CONCRETE TO BE NORMAL WEIGHT 2400 KG/CUBIC METER
- WATER CEMENT RATIOS FOR EXPOSURE CLASSES AS PER TABLES 7 - 9, CAN/CSA-A23.1-14.
- DO NOT USE ANY ADMIXTURE CONTAINING CHLORIDE FOR CONCRETE WITH S-2 EXPOSURE.
- NORMAL PORTLAND CEMENT TO BE USED FOR CONCRETE.

4. NO COLUMN OR WALL FORMS SHALL BE REMOVED BEFORE CONCRETE HAS REACHED 10 Mpa FOR ARCHITECTURAL CONCRETE AND 8 Mpa FOR OTHER COLUMNS OR WALLS.
5. NO SLAB FORMS OR BEAM FORMS SHALL BE REMOVED BEFORE CONCRETE HAS REACHED 17 Mpa.
6. STRENGTH OF CONCRETE FOR STRIPPING TO BE DETERMINED BY FIELD-CURED CYLINDERS. ALTERNATE METHODS, IF ACCEPTABLE TO THE STRUCTURAL DESIGN ENGINEER, MAY BE USED.
7. RESHORING TO BE APPROVED BY THE ENGINEER PRIOR TO STRIPPING.
8. ALL SLABS, BEAMS, GIRDERS, ETC. TO BE SHORED UNTIL CONCRETE REACHES DESIGN STRENGTH.
9. BE RESPONSIBLE FOR THE MIX DESIGN. MIX DESIGN SHALL BE PROPORTIONED WITH DUE CONSIDERATION TO EXTREME TEMPERATURES - WINTER OR SUMMER AND CONSULT GENERAL CONTRACTOR TO DETERMINE REQUIREMENTS. ADMIXTURES AND ADDITIVES SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.

REINFORCING NOTES:

1. REINFORCING STEEL: NEW DEFORMED BARS TO CSA/G30.18-09 (R2014), "BILLET STEEL BARS FOR CONCRETE REINFORCEMENT", GRADE 400R, BARS TO BE WELDED CONFORM TO CAN/CSA G30.18-09, GRADE 400W. ANCHOR BOLTS TO ASTM A307. EPOXY COATED REBAR TO ASTM A775. PLACE REBAR TO CAN/CSA-A23.1-14.
2. PROVIDE CLEAR CONCRETE COVER OVER REBAR AS FOLLOWS:

A) SURFACE POURED AGAINST GROUND	75 mm
B) FORMED SURFACES EXPOSED TO GROUND OR WEATHER	40 mm
C) FORMED SURFACES NOT EXPOSED TO GROUND OR WEATHER:	
BEAMS (TO STIRRUPS)	40 mm
COLUMNS (TO VERTICALS)	50 mm
SLABS, WALLS	20 mm
D) PARKING SURFACES AND EXTERIOR TOP OF SLAB:	40 mm

3. REINFORCING WORK TO BE INSPECTED BY THE ENGINEER. NOTIFY THE ENGINEER 24 HOURS IN ADVANCE. CONTRACTOR MUST ENSURE MINIMUM 95% STEEL ARE IN PLACE FOR THE INSPECTION.
4. REBAR LAP SPLICE LENGTHS (UNLESS NOTED ON DRAWINGS)

BAR SIZE	COMP. SPLICES (mm)	TENSION SPLICE "CLASS B" 25 Mpa	30 Mpa	FOR CONCRETE STRENGTHS (mm) 35 Mpa	40 Mpa
10M	330	430 (560)	380 (510)	360 (460)	330 (430)
15M	480	610 (790)	535 (790)	510 (660)	480 (610)
20M	580	740 (940)	660 (865)	610 (815)	580 (760)
25M	740	1170 (1525)	1065 (1400)	990 (1295)	940 (1220)

TOP BAR SPLICE LENGTHS ARE DENOTED IN BRACKETS AND SHOULD BE USED WHEN HORIZONTAL SPLICE BARS ARE PLACED SUCH THAT THERE IS MORE THAN 300mm OF CONCRETE POURED BELOW THE BAR.

REBAR EMBEDMENT LENGTHS (UNLESS NOTED ON DRAWINGS)

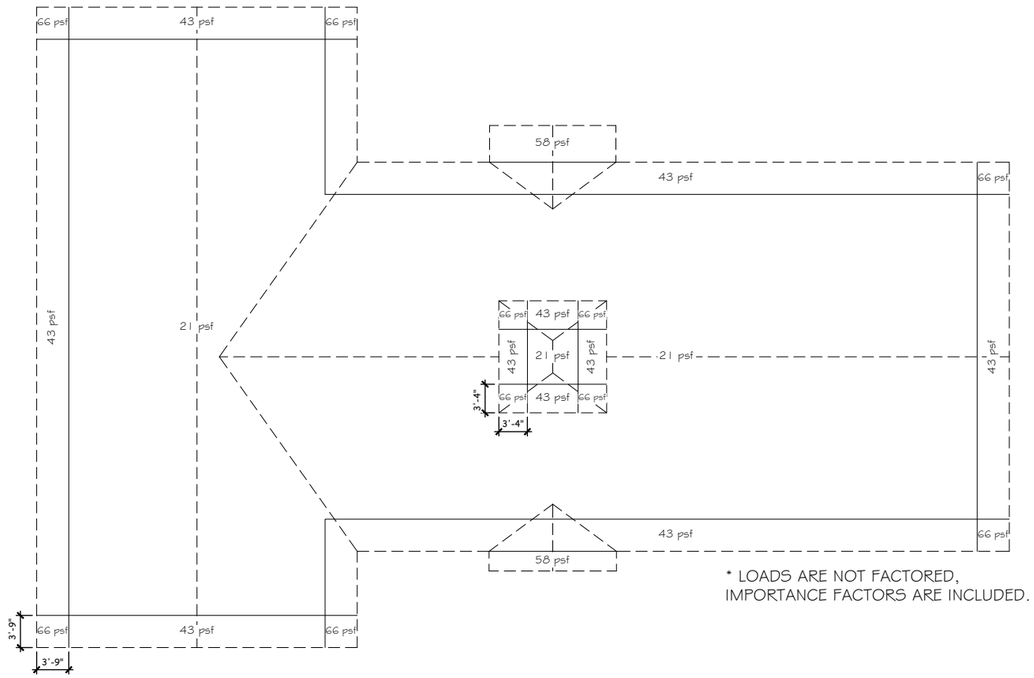
BAR SIZE	COMPRESSION EMBEDMENT FOR CONCRETE STRENGTH (mm) 20 Mpa	25 Mpa	30 Mpa	TENSION EMBEDMENT FOR CONCRETE STRENGTH (mm) 25 Mpa	30 Mpa	35 Mpa	40 Mpa
10M	250(330)	230 (280)	200 (250)	330 (430)	305 (380)	80 (360)	50 (330)
15M	360 (450)	300 (400)	275 (360)	460 (610)	430 (530)	80 (510)	360 (480)
20M	430 (535)	380 (485)	360 (450)	560 (735)	510 (660)	80 (610)	60 (585)
25M	535 (710)	485 (635)	450 (585)	915 (1170)	840 (1070)	760 (990)	10 (940)
30M	635 (840)	585 (740)	535 (685)	1070 (1400)	90 (1270)	15 (1170)	40 (1120)
35M	760 (990)	685 (900)	635 (810)	1295 (1675)	170 (1525)	090 (1420)	1015 (1320)

TOP BAR DEVELOPMENT LENGTHS ARE DENOTED IN BRACKETS AND SHOULD BE USED WHEN HORIZONTAL BARS ARE PLACED SUCH THAT THERE IS MORE THAN 300 mm OF CONCRETE POURED BELOW THE BAR.

5. MIN. REINFORCING AROUND OPENINGS LARGER THAN 300 mm: 2 - 15M EACH SIDE OF OPENING, EXTENDED 600 mm PAST CORNERS.
6. DOWELS SHALL BE PLACED BEFORE CONCRETE IS POURED. TEMPLATES SHALL BE USED TO ENSURE CORRECT PLACEMENT OF DOWELS. DOWELS TO MATCH VERTICAL BARS.
7. PROVIDE SUFFICIENT CHAIRS AND SUPPORT BARS TO MAINTAIN CONCRETE COVER AS SPECIFIED.

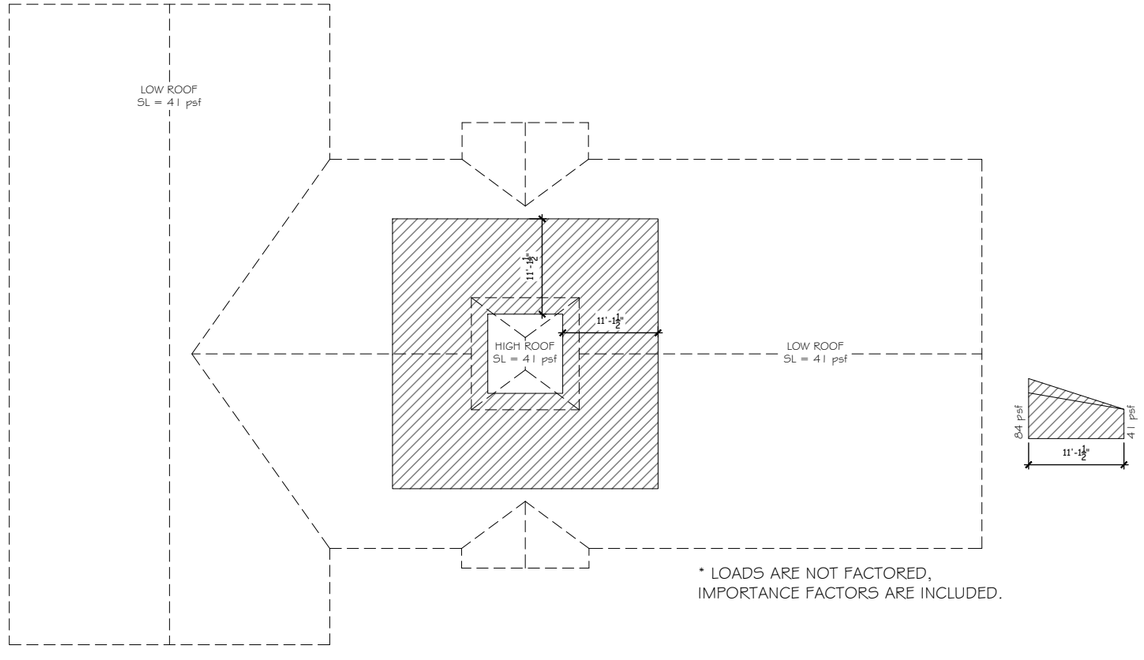
WOOD

1. ALL LUMBER TO BE MIN. NO. 2 SPF TO CSA 086-14 ENGINEERING DESIGN IN WOOD, UNO.
2. ROOF TRUSSES TO BE DESIGNED TO PART 4 OF THE ONTARIO BUILDING CODE TO THE LOADS SPECIFIED. TRUSS MANUFACTURER TO SUPPLY SHOP DRAWINGS AND LAYOUT DRAWING STAMPED BY PROFESSIONAL ENGINEER LICENSED IN PROVINCE OF ONTARIO. TRUSSES TO BE DESIGNED FOR BEARING SURFACES AS SHOWN ON DRAWINGS. ALL ROOF TO HAVE HURRICANE CLIPS TO RESIST UPLIFT LOADS.
3. NAILING TO ONTARIO BUILDING CODE UNLESS NOTED OTHERWISE. BOLTS FOR WOOD CONNECTIONS SHALL BE MIN GRADE A307.
4. WHERE FASTENERS ARE EXPOSED TO EXTERIOR CLIMATE ALL COMPONENTS, FASTENERS AND BRACKETS SHALL BE HOT DIP GALVANIZED.
5. PRE-MANUFACTURED COMPOINENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND INSTALLATION GUIDELINES. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION.



ROOF PLAN - WIND UPLIFT

N.T.S.



ROOF PLAN - SNOW LOAD

N.T.S.

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06	AM	2024 02 21	ISSUED FOR PERMIT/TENDER
05	AM	2024 02 20	95% REVIEW - NOT FOR CONST.
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Project Title:
PORTLAND COMMUNITY HALL & LIBRARY
24 WATER STREET
PORTLAND, ONTARIO

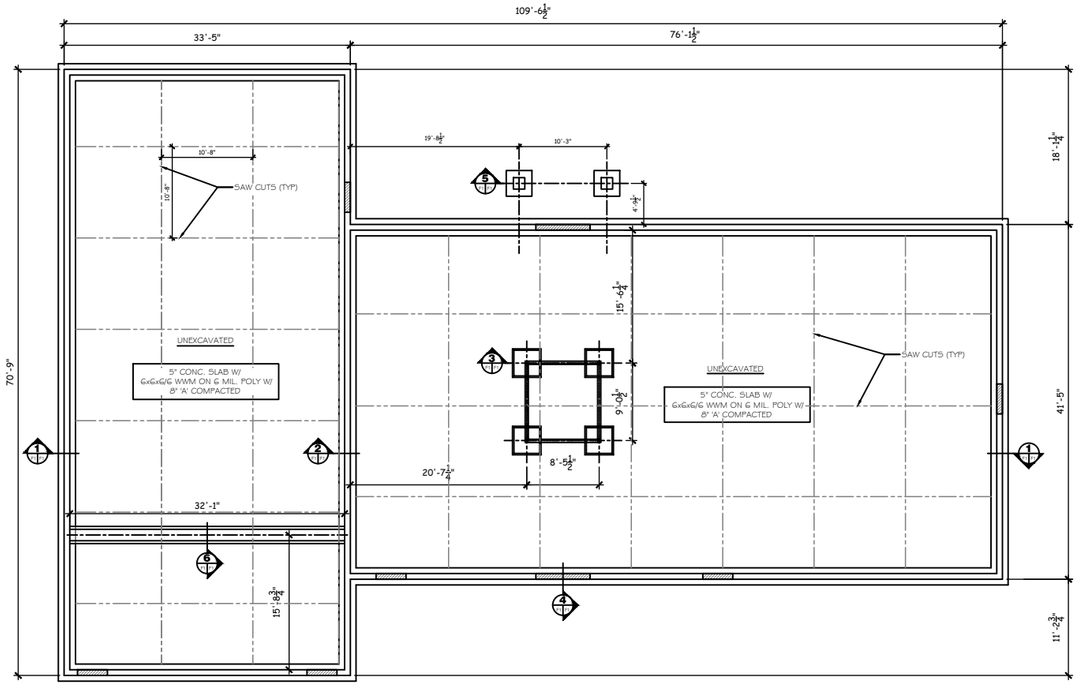
Drawing Title:
STRUCTURAL NOTES

Design:	Checked:	Approved:	Project No.
ED			10984
Drawn:	Checked:	Date:	Contract No.:
ED		2023 10 31	

Scale: Horizontal: AS SHOWN; Vertical: AS SHOWN

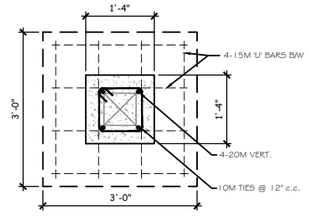
Drawing No.: S0

REV DATE: 2/21/2024



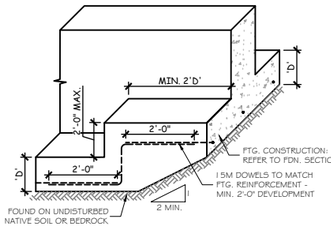
FOUNDATION PLAN

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



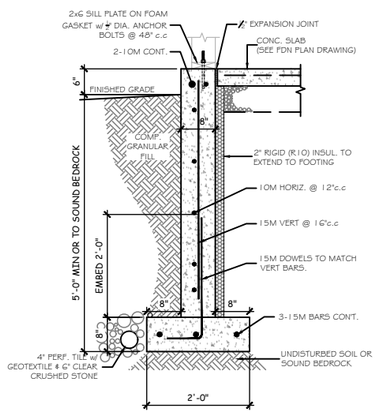
PLAN

SCALE: ½" = 1'-0"



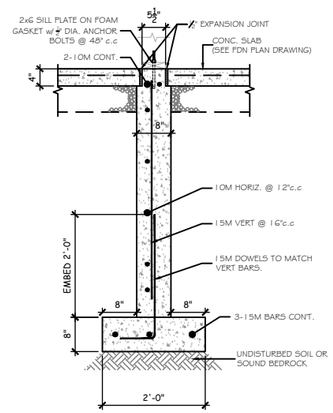
TYP. STEP FOOTING

N.T.S.



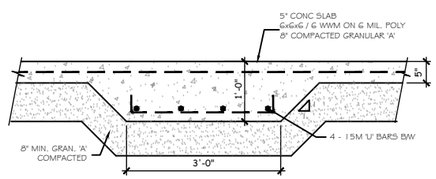
1 F1 F1 TYP. 8" FOUNDATION WALL

SCALE: ¼" = 1'-0"



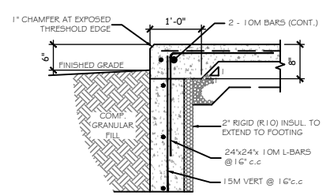
2 F1 F1 TYP. 8" FOUNDATION WALL

SCALE: ¼" = 1'-0"



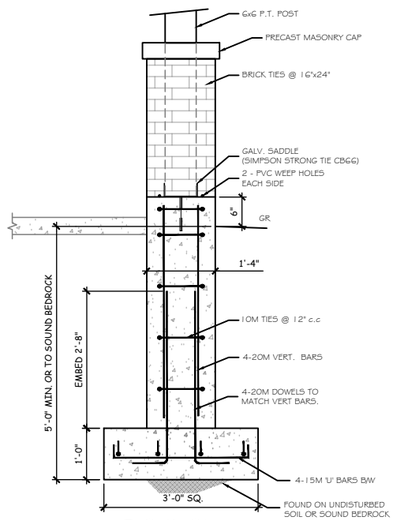
3 F1 F1 TYP. CONC. WALL SECTION

SCALE: ¼" = 1'-0"



4 F1 F1 FOUNDATION AT EXTERIOR DOOR

SCALE: ¼" = 1'-0"



5 F1 F1 SECTION

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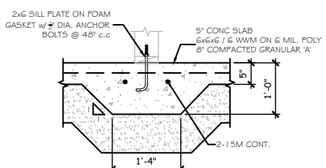

6 F1 F1 TYP. CONC. WALL SECTION

SCALE: ¼" = 1'-0"

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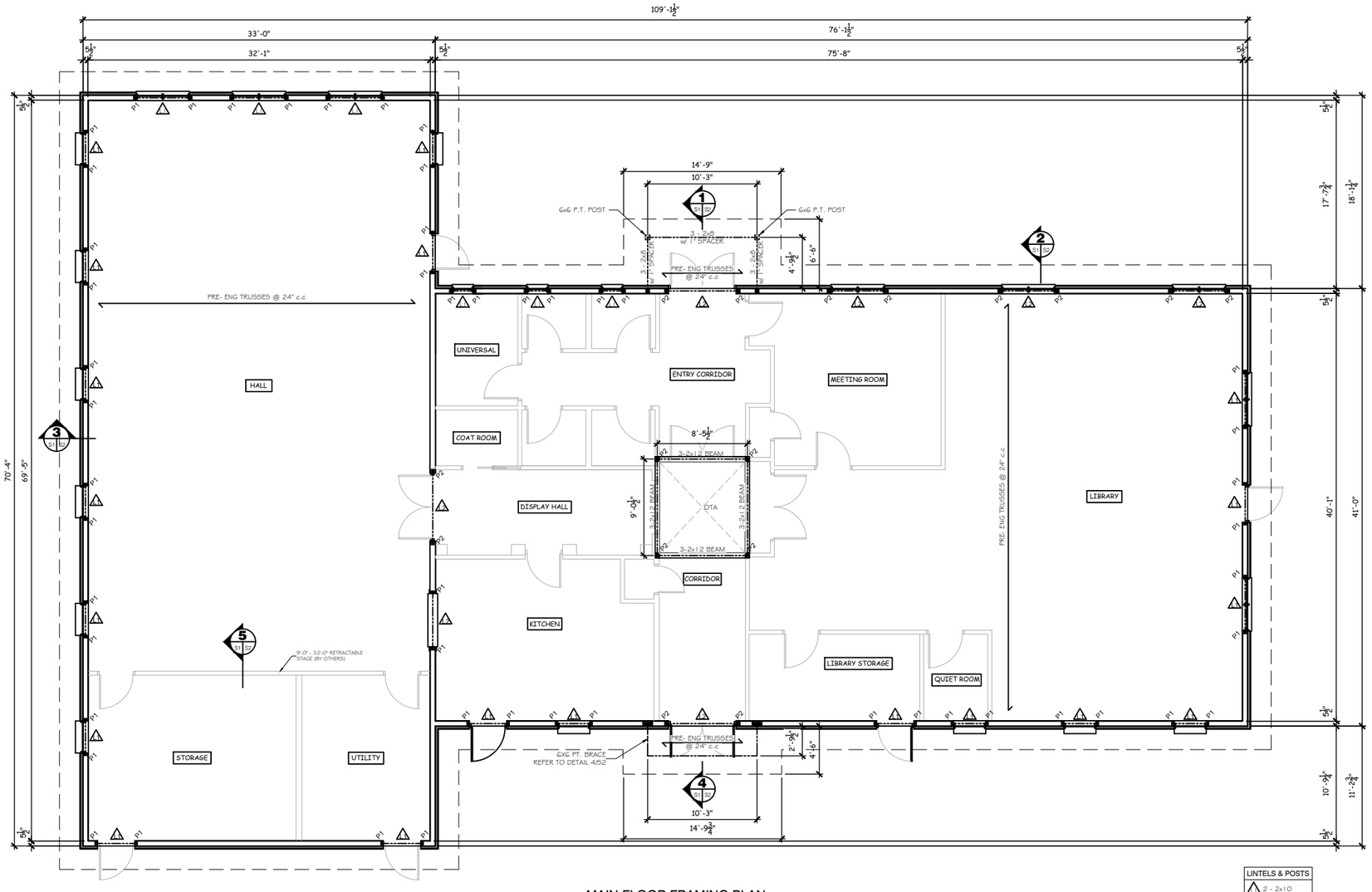
FOUNDATION PLAN AND SECTION

Design: TB	Checked: BDC	Approved:	Project No.: 10984
Drawn: TB	Checked:	Date: 2023 08 31	Contract No.:

Scale:
Horizontal: AS SHOWN
Vertical: AS SHOWN

Drawing No.: F1

REV DATE: 2/21/2024

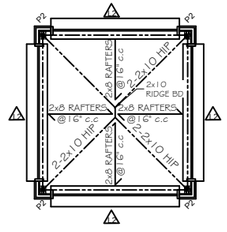


MAIN FLOOR FRAMING PLAN

SCALE: 3/16" = 1'-0"

LINTELS & POSTS

- 2 - 2x10
- 3 - 2x10
- P1 2 - 2x6
- P2 3 - 2x6



CUPOLA FRAMING PLAN

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

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MAIN FLOOR FRAMING PLAN

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Drawn:	Checked:	Date:	Contract No.:
TB		2023 08 31	

Scale:
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Drawing No.:

S1

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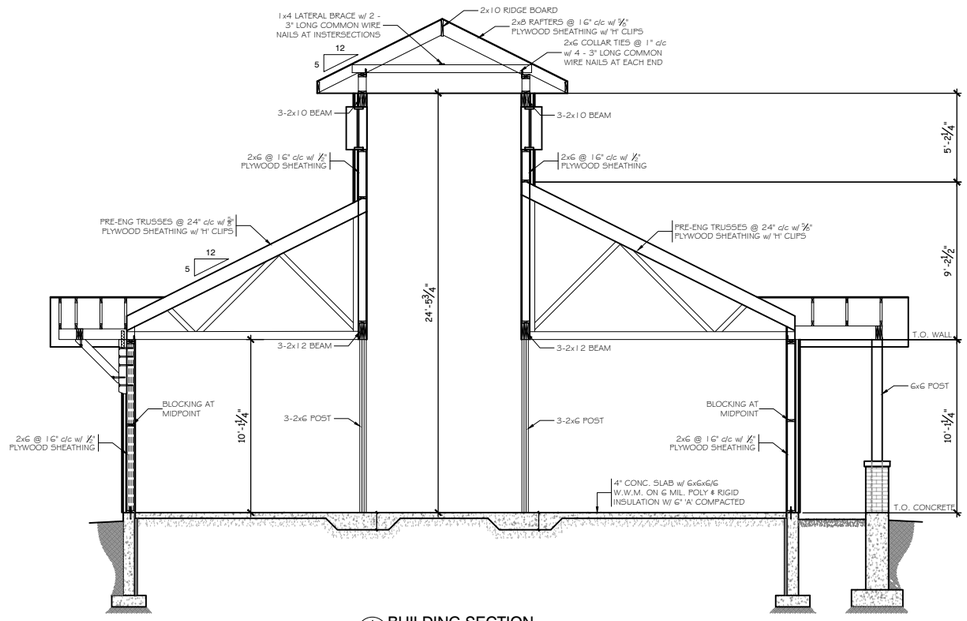
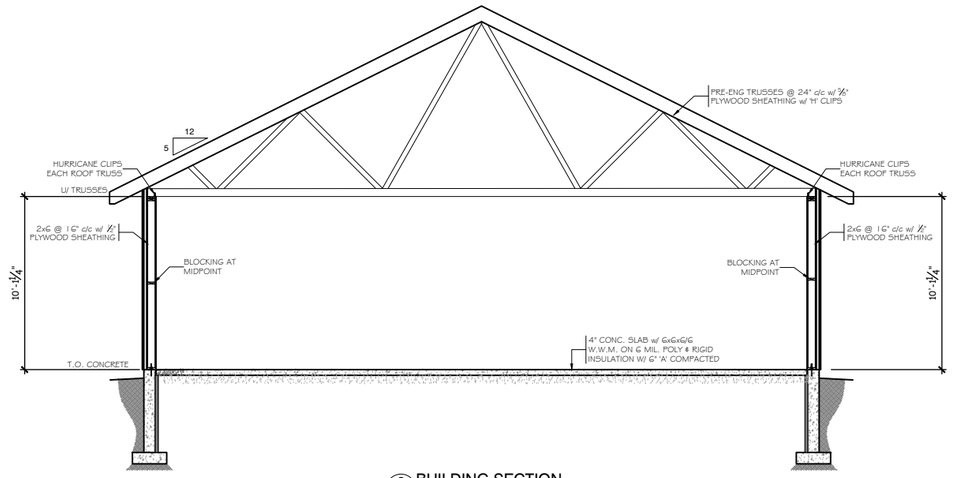


1 S1 S2 BUILDING SECTION

SCALE: ¼" = 1'-0"



2 S1 S2 BUILDING SECTION

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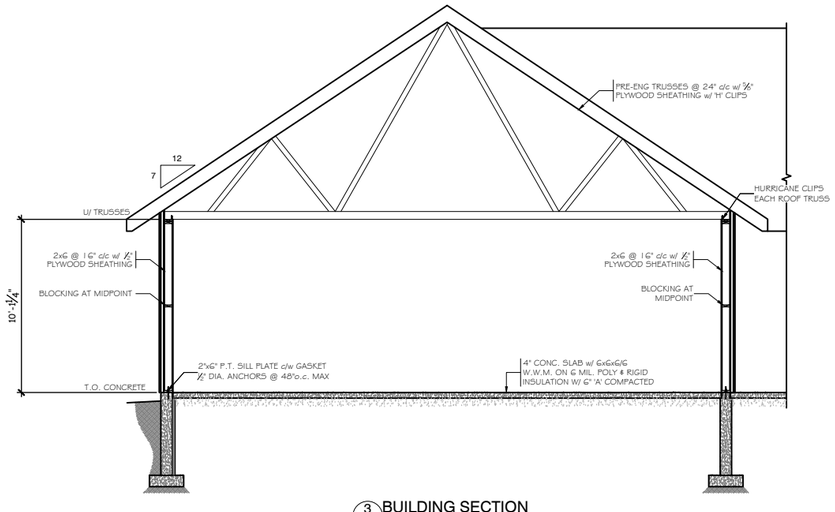
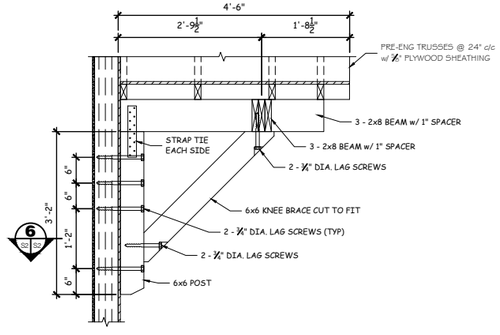


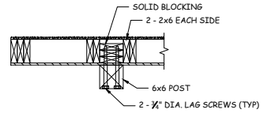
3 S1 S2 BUILDING SECTION

SCALE: ¼" = 1'-0"



4 S1 S2 CANOPY SECTION

SCALE: ½" = 1'-0"



6 S2 S2 CANOPY SECTION

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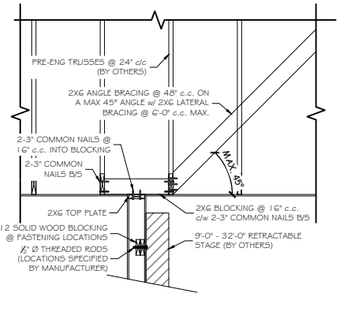
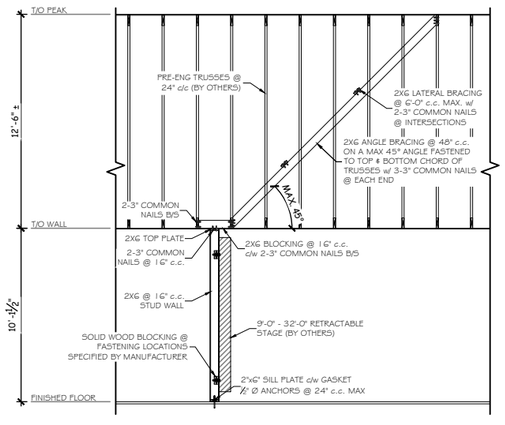


(FOR RETRACTABLE STAGE)

TOP PLATE DETAIL

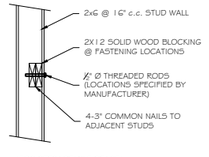
SCALE: ½" = 1'-0"



5 S1 S2 RETRACTABLE STAGE FRAMING DETAIL

SCALE: ½" = 1'-0"

WOOD BLOCKING AND FASTENING TO BE VERIFIED WITH RECEIPT OF FOLDING STAGE SHOP DRAWINGS



(FOR RETRACTABLE STAGE)

FASTENING LOCATION DETAIL

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SECTIONS & DETAILS

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ED			10984
Drawn:	Checked:	Date:	Contract No.:
ED		2023 10 31	

Scale:
Horizontal: AS SHOWN
Vertical: AS SHOWN

Drawing No.:

S2

REV DATE: 2/21/2024