

Rising Tide Brewing - Expansion
 130 Fox Street
 Portland, Maine
 SI Job#: 17-0113

DESIGN LIVE LOADS: 2009 IBC/MUEBC, U.O.N.
 Snow 60 psf(Pg)
 Wind 100 mph, exp B, 3 second gust
 Rooflop Deck/ Assembly 100 psf
 Office 50 psf
 Stairs 100 psf

STRUCTURAL STEEL:
 Structural Beams: ASTM A992
 Angles, misc: ASTM A36
 Anchor Bolts: ASTM A307 or A36
 Expansion Anchors shall be ICC-ES approved, installed in accordance with manufacturers specifications.
 In concrete: Wedge Type
 In solid masonry: Sleeve Type
 Non-shrink grout beneath column base and beam bearing plates shall be non-metallic with minimum compressive strength 5000psi.
 All structural steel shall be fabricated and erected per the current edition of AISC Steel Construction Manual.
 Welding by qualified welders. E70XX electrodes. 3/16" fillet welds, unless noted otherwise.
 Except as noted, framed beam connections shall be detailed to develop 0.6 x Allowable Uniform Load values tabulated in the 9th Edition AISC Manual, Pp. 2-27 and following.
 All beams shall have full depth web stiffeners each side of webs above and below columns. (3" or as noted)
 Attach wood nailer plates to beams with 1/2" diameter machine or carriage bolts at maximum 16" o.c., or 3/8" diameter bolts at 16" with glued contact face, or 5/32" diameter powder actuated drive pins at 12" o.c., U.O.N.

Expansion anchors shall be approved "wedge" type unless specifically noted to be "sleeve" type.
 Chemical anchors shall be approved epoxy or similar adhesive type and shall have current ICC Evaluation Report. Where base material is not solid, approved screen tubes shall be used.
 Grout beneath column base and beam-bearing plates shall be minimum 28-day compressive strength of 7,500 psi, approved pre-bagged, non-metallic, non-gaseous, bleed free, non-shrink, when tested in accordance with ASTM C1107 Grade B or C at a flow cone fluid consistency of 20 to 30 seconds

LIGHT GAUGE STRUCTURAL STEEL FRAMING:
 Member forming shall conform to AISI Cold-Formed Steel Specifications.
 All structural framing (studs, joists, track, runners, bracing, and bridging) shall be galvanized sheet steel conforming to ASTM A525, G-60.

Studs and joists 54 mils (16 gauge) and heavier shall be 50 ksi yield.
 43 mils (18 gauge) and lighter shall be 33 ksi yield, unless noted otherwise on plan.
 Subcontractor shall provide bridging and blocking at a maximum of 6 foot spacing or as required for stability and stiffness of the final assembly wherever sheathing does not provide adequate bracing.
 Supplier shall design required jamps, lintels and headers at openings where not specifically detailed.
 Member sizes noted on drawings are in the new SSMA standard nomenclature:

(sd) Style Designation	Member Type	(##) Mils Thickness	Equivalent Gauge
S	Punched C-Section	18	25
J	Unpunched C-Section	27	22
T	Track	30	20 - Drywall
U	Channel	33	20 - Structural
F	Furring Channel	43	18
		54	16
		68	14
		97	12

STRUCTURAL MASONRY:
 Design is based on Unit Strength Method
 MSJC, Section SC-1.4 B.2.
 Compressive strength of masonry assembly used for design is 1500 psi, based on net-bedded area.
 Hollow load-bearing concrete masonry (CMU) shall be medium-weight units conforming to ASTM C90, Grade N1, minimum compressive strength 1,900 psi based on average net area.
 Mortar shall be Type S conforming to ASTM C270.
 Masonry cement shall not be used.
 Provide full shovled mortar in all head and bed joints.
 Admixtures shall not be added for any reason unless approved by the Architect.
 Except for lintels, bond beam units shall be produced from standard vertically voided units with pre-cut knockout cross walls.
 Grout used in masonry walls and block cells shall be:
 coarse grout, as defined by ASTM C476, with a minimum cube strength = 2,000 psi.
 3000 psi concrete using 3/8" diameter aggregate, placed by vibrating unless an approved self consolidating mix is used
 Lifts shall not exceed five feet in height
 If grout pour height exceeds 5 feet, clean-out holes shall be provided.
 Space continuous horizontal joint reinforcing at 16" maximum in all CMU walls.
 Joint reinforcing shall be welded type with 9 gage side-wires and 9 gage trussed or ladder cross wires.
 Reinforcing bars shall be as for reinforced concrete except as noted.
 At splices, lap bars 48 diameters.
 Provide reinforced grouted vertical cells at corners, ends of walls, jamps of openings, each side of vertical control joints, and at spacing shown on drawings.
 Reinforcement shall be secured against displacement prior to grouting by wire bar locators or other suitable devices at intervals not exceeding 200 bar diameters or 10 feet.
 Where noted on the drawings, provide clearance between masonry and structural elements, or wrap steel with polyethylene film.
 Provide vertical control joints in all masonry walls as located on architectural drawings or at 25'-0" maximum spacing, at both jamps of openings wider than six feet.
 Submit for review:
 Certificates for materials used in masonry construction indicating compliance with the contract documents
 Special Inspection is required by design. See Special Inspection Notes.
 MSJC Level 2 Quality Assurance, MSJC Table 1.14.2
 Prism and grout tests will be required prior to the start of masonry work shall consist of five (5) masonry prisms.
 Test specimens shall be made by the masons, at the direction of the owner's representative, with materials and techniques currently being used in the wall.
 Specimens shall be protected and field cured for 48 hours before being transported to a testing agency.
 The testing agent will be hired by the owner and shall be responsible for laboratory care and curing of specimens, testing, and reporting results to the owner, contractor, architect, and engineer in accordance with ASTM E447-92

LOOSE LINTELS:
 Unless noted otherwise, provide galvanized loose lintels per general notes detail.

STRUCTURAL WOOD FRAMING:
 In-Grade Base Values have been used for design.
 2x framing shall be Spruce-Pine-Fir S4S No. 2 and better unless noted.
 All lumber shall be 19% maximum moisture content, unless noted.
 Solid timber beams and posts shall be Douglas Fir-Larch No. 1.

Existing roof purlins have been analyzed using assumed allowable Fb = 1580 psi and E = 1,600,000 psi, similar to Douglas Fir Select Structural, based on findings in limited areas of the roof framing. Existing roof framing throughout the structure should be verified in the field as typical of the assumed conditions. Notify S.I. if conditions other than the indicated assumptions exist.

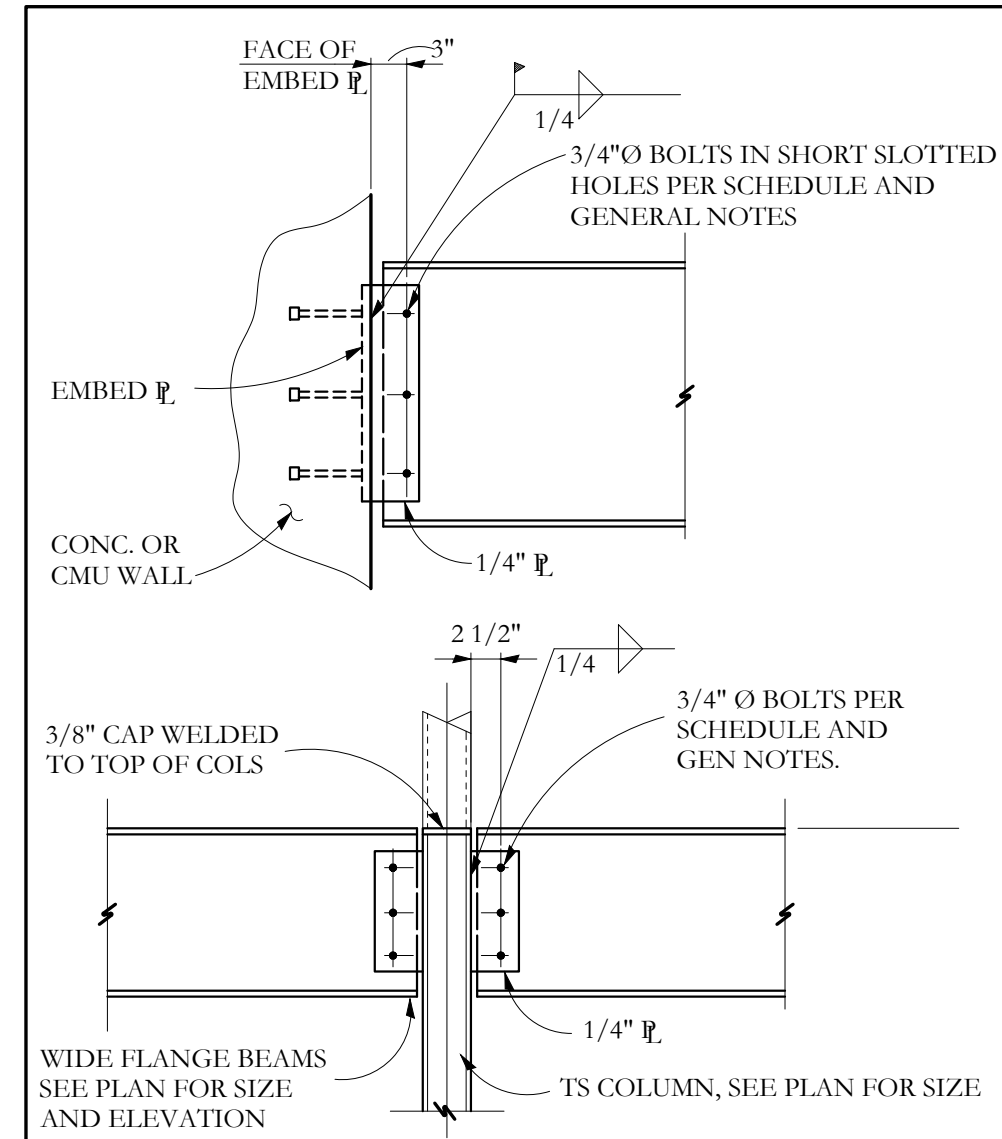
Studs shall be Spruce-Pine-Fir S4S No. 2 and better.
 Top and bottom plates shall be Spruce-Pine-Fir S4S No. 2 and better.
 Wood in contact with concrete shall be pressure-treated Spruce-Pine-Fir S4S No. 2 or Southern Yellow Pine.
 Conventional light framing shall comply with IBC Section 2308.
 Except as noted otherwise, minimum nailing shall be provided as specified in IBC Table 2304.9.1 "Fastening Schedule."
 Plywood and oriented strand board (OSB) floor and roof sheathing shall be APA graded with panel identification index, thickness, and nailing as noted on the drawings.
 Nail (or screw to light gauge structural steel framing) wall sheathing with 8d commons (or #10 tek screws to light gauge structural steel framing) at 4" o.c. at panel edges, and 12" o.c. at intermediate framing except as noted.
 SHEATH ALL EXTERIOR WALLS. SHEATH INTERIOR WALLS AS SHOWN ON THE DRAWINGS.
 BLOCK AND NAIL/SCREW ALL EDGES BETWEEN STUDS.
 Sheathing shall be continuous from bottom plate to top plate. Cut in "L" and "T" shapes around openings. Lap sheathing over rim joists min. 4" at all floors to tie upper and lower stud walls together.
 Minimum height of sheathing panels shall be 16" to assure that plates are tied to studs.
 Minimum 3-8d per stud and nail plates with "edge nail" spacing
 Sole plate at all perimeter walls and at designated shear walls shall be nailed as for braced panels with 3-16d x 3 1/2" long box nails (coated or deformed shank) per 16". 12d nails are not acceptable.
 Provide solid blocking between joists under jamb studs of openings.
 Pre-engineered, prefabricated trusses shall be designed for the fabricator by a Professional Engineer Registered in the State of construction, and shall comply with Code Requirements.
 Truss supplier shall specify all floor and roof truss bracing and bridging.
 All roof rafters, joists, trusses, and beams shall be anchored to supports with metal framing anchors.
 Light gage framing anchors shown or required, shall be Simpson "Strong Tie" and installed with the number and type of nails recommended by the manufacturer to develop the rated capacity.
 Note that heavy-duty hangers and skewed hangers may not be stocked locally and require special order from the factory.
 All beams and trusses shall be braced against rotation at points of bearing.
 Unless otherwise indicated, install two lengths of solid blocking x joist depth x 12 inches long in floor framing under column loads. Columns must have a continuous load path to foundation.
 Lead holes for lag screws shall be drilled in accordance with Table 6.23 of the AITC Timber Construction Manual, 3rd edition.

FIELD VERIFICATION OF EXISTING CONDITIONS:
 Contractor shall thoroughly inspect and survey existing structure to verify conditions that affect the work shown on the drawings. Contractor shall report any variations or discrepancies to the Architect before proceeding.

STRUCTURAL ERECTION AND BRACING REQUIREMENTS:
 The structural drawings illustrate the completed structure with elements in their final positions, properly supported and braced. These construction documents contain typical and representative details to assist the contractor. Details shown apply at all similar conditions unless otherwise indicated.
 Although due diligence has been applied to make the drawings as complete as possible, not every detail is illustrated, nor is every exceptional condition addressed.
 All proprietary connections shall be installed in accordance with the manufacturers' recommendations.
 All work shall be accomplished in a workmanlike manner and in accordance with the applicable code and local ordinances.
 The general contractor is responsible for coordination of all work, including layout and dimension verification, materials coordination, shop drawing review, and the work of subcontractors.
 Any discrepancies or omissions discovered in the course of the work shall be immediately reported to the architect for resolution.
 Continuation of work without notification of discrepancies relieves the architect and engineer from all consequences.
 Unless otherwise specifically indicated, the drawings do not describe methods of construction.
 The contractor, in the proper sequence, shall perform or supervise all work necessary to achieve the final completed structure, and to protect the structure, workmen, and others during construction.
 Such work shall include, but not be limited to, bracing, shoring for construction equipment, shoring for excavation, formwork, scaffolding, safety devices and programs of all kinds, support and bracing for cranes and other erection equipment.
 Do not backfill against basement or retaining walls until supporting slabs and floor framing are in place and securely anchored, unless adequate bracing is provided.
 Temporary bracing shall remain in place until all floors, walls, roofs and any other supporting elements are in place.
 The architect and engineer bear no responsibility for the above items, and observation visits to the site do not in any way include inspection of them.

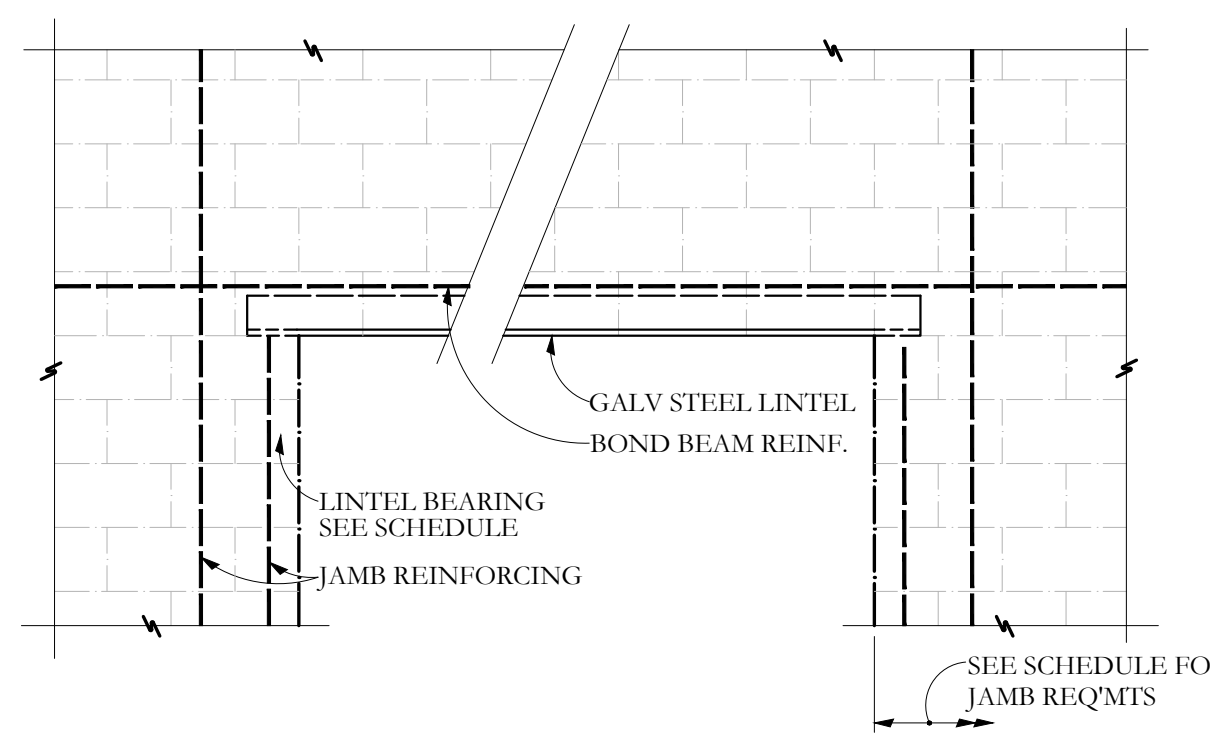
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BM. SIZE	# OF 3/4"Ø BOLTS	L. (in.)	CONN CAP. (kips)
W8, W10	2	6	16.3
W12, W14	3	9	25.6
W16	4	12	34.8
W18	5	15	43.5
W21	6	18	51.6
W24	7	21	59.7

*ALL BOLTS TO BE ASTM A325 -TYP UNO
 TYPICAL SINGLE PLATE SHEAR CONNECTION
 (PROVIDE SIMILAR BOLTING AT BEAM-TO-BEAM CONNECTION)



TYPICAL LOOSE LINTEL INSTALLATION
 NO SCALE

OPENING SIZE	LINTEL SIZE	GROUTED JAMB WIDTH
LESS THAN 4'-0"	L 4" x 3-1/2" x 3/8" LLV	8"
4'-1" TO 5'-4"	L 5" x 3-1/2" x 1/4" LLV	8"
5'-5" TO 6'-6"	L 6" x 3-1/2" x 5/16" LLV	1'-4"

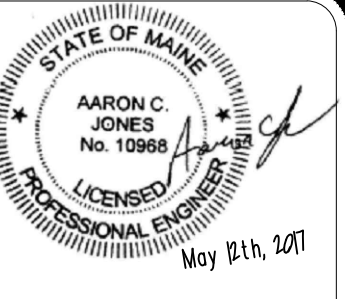
* Minimum lintel except as noted, one angle for each 4" of wall thickness to bear 4" each end

ABBREVIATIONS KEY			
AB	Anchor Rod (Bolt)	EF	Each Face
ADDL	Additional	EJ	Expansion Joint
ADJ	Adjustable	ELEV	Elevation
AFF	Above Finished Floor	ELEC	Electric (Electrical)
ALT	Alternate	ENGR	Engineer
AMT	Amount	EQ	Equal
ANCH	Anchor, Anchorage	EQUIP	Equipment
APPROX	Approximate	EQUIV	Equivalent
ARCH	Architect, -ural	ES	Each Side
ATR	All Thread Rod	EST	Estimate
AVG	Average	E-W	East to West
BC	Bottom of Concrete	EXC	Excavate
BL	Brick Ledge	EXP	Expansion
BLKG	Block	EXT	Exterior
BM	Beam	FND	Foundation
BOT	Bottom	FF	Far Face, Finished Floor
BRG	Bearing	F-F	Face to Face
BW	Bottom of Wall	FIG	Figure
CB	Counterbore	FL	Flush
CF	Cubic Foot	FLG	Flange
CG	Center of Gravity	FLR	Floor
CIP	Cast in Place	FO	Face of
CJ	Construction Joint (Control Joint)	FP	Full Penetration
CLG	Ceiling	FS	Far Side
CLR	Clear	FTG	Footing
CM	Construction Manager (Management)	GA	Gage (Gauge)
CMU	Concrete Masonry Unit	GALV	Galvanized
COL	Column	GC	General Contractor
COM	Common	GEN	General
COMB	Combination	GL	Glue laminated (Glulam)
CONC	Concrete	GND	Ground
CONN	Connection	GR	Grade
CONT	Continue (Continuous)	GT	Girder/Truss
COORD	Coordinate, -tion	GYP BD	Gypsum Board
CS	Countersink	HAS	Headed Anchor Stud
CTR	Center	HORIZ	Horizontal
CY	Cubic Yard	HT	Height
DAB	Deformed Anchor Bar	ID	Inside Diameter
DET	Detail	IF	Inside Face
DEV	Develop	INT	Interior (Intermediate)
DIAG	Diagonal	JB	Joist Bearing
DIM	Dimension	JST	Joist
DL	Dead Load	JT	Joint
DN	Down	K	Kip (1,000 lbs.)
DP	Drilled Pier	LD	Load
DT	Double Tee	LL	Live Load
DWG	Drawing	LLH	Long Leg Horizontal
DWL	Dowel	LLV	Long Leg Vertical
EA	Each	LOC	Location
ECC	Eccentric	LSL	Laminated Strand Lumber (generic term)
E-E	End to End	LT	Light
		LVL	Laminated Veneer Lumber (generic term)
		MACH	Machine
		MASY	Masonry
		MATL	Material
		MAX	Maximum
		MB	Machine bolt
		MECH	Mechanical
		MEZZ	Mezzanine
		MFR	Manufacture, -er, -ed
		MIN	Minimum
		ML	Microlam (Truss-joist brand LVL)
		MO	Masonry Opening
		MTL	Metal
		NF	Near Face
		NIC	Not In Contract
		NS	Near Side
		N-S	North to South
		NTS	Not to Scale
		OCJ	OSHA Column Joist
		OD	Outside Diameter
		OF	Outside Face
		OH	Opposite Hand
		OPNG	Opening
		OPP	Opposite
		OSB	Oriented Strand Board
		PAF	Powder Actuated Fast'n
		PC	Precast
		PCF	Pounds Per Cubic Foot
		PEN	Penetration
		PERP	Perpendicular
		PL	Property Line
		PLF	Pounds per Linear Foot
		PNL	Panel
		PP	Panel Point
		PS	Prestressed
		PSF	Pounds per Square Foot
		PSI	Pounds per Square Inch
		PSL	Parallel Strand Lumber (generic term)
		PT (1)	Post Tensioned
		PT (2)	Pressure Treated
		PTN	Partition
		PWD	Plywood
		QTY	Quantity
		R	Radius
		RE	Reference (refer to)
		RECT	Rectangle
		REINF	Reinforce, -ed, -ing
		REQ	Required
		REQ/MT	Requirement
		RET	Retaining
		RM	Room
		RMO	Rough Masonry Opening
		RO	Rough Opening
		SC	Slip Critical
		SCH	Schedule
		SDST	Self Drilling Self Tapping
		SECT	Section
		SF	Square Feet
		SHT	Sheet
		SIM	Similar
		SITFG	Sheathing
		SLH	Short Leg Horizontal
		SLV	Short Leg Vertical
		SOG	Slab on Grade
		SP	Spaces
		SPEC	Specifications
		SQ	Square
		ST	Snug Tight
		STD	Standard
		STIFF	Stiffener
		STL	Stile
		STRUCT	Structure, -al
		SUPP	Support
		SY	Square Yard
		SYM	Symmetrical
		T&B	Top and Bottom
		T&G	Tongue and Groove
		TB	Top of Beam
		TC	Top of Concrete
		TD	Top of Deck
		THD	Thread
		THK	Thick, -ness
		TI	Top of Joist
		TL	Total Load
		TPG	Topping
		TRANS	Transverse
		TW	Top of Wall
		TYP	Typical
		ULT	Ultimate
		UNO	Unless Noted Otherwise
		VERT	Vertical
		VIF	Verify in Field
		WA	Wedge Anchor
		WP	Work Point
		WT	Weight
		WWF	Welded Wire Fabric
		XS	Extra Strong
		XSECT	Cross-section
		XXS	Double Extra Strong
		(E)	Existing
		(N)	New
		(R)	Remove

Structural Drawing Index	
S1.0	General Notes, Etc.
S1.1	Mezzanine Framing Plan
S1.2	Roof Framing Plan
S2.1	Details

FOR PERMIT

Structural Integrity
 Consulting Engineers, Inc.
 77 Oak Street
 Portland, ME, 04101
 p. 207-774-4614
 f. 866-793-7835
 www.structuralintegrity.com
 BUILD WITH CONFIDENCE



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**103 FOX STREET
 PORTLAND, MAINE 04101**



RYAN SENATORE ARCHITECTURE
 565 CONGRESS ST. SUITE 304
 PORTLAND, MAINE 04101
 207-650-6414
 senatorearchitecture.com

CONSULTANTS:
STRUCTURAL:
 Structural Integrity
 77 Oak Street
 Portland, ME 04101
 207-774-4614

REVISIONS:

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 PROJECT No. 1718
 DRAWN BY: BDH
 CHECKED BY: ACJ
 SCALE: AS NOTED
 SHEET TITLE:

GENERAL NOTES

S1.0