

GENERAL STRUCTURAL NOTES

16-0062.1
Grime Studios
Portland, ME.

DESIGN LIVE LOADS: 2009 IBC, MUEBC
Floor 50 psf

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.
- 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 lintels and headers at openings where not specifically detailed.
- Member sizes noted on drawings are in the new SSMA standard nomenclature: (##d)(sd)(##w)-(##t)
- (##d) Member Depth (inches.hundredths)
- (sd) Style Designation (see Style Designation in table below)
- (##w) Flange Width (inches.hundredths)
- (##t) Material Thickness (mils) (see Mils vs equivalent Gauge in table below)

(sd) Style Designation	Member Type	(##t) Thickness	Mils	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

CONCRETE AND REINFORCEMENT:

- Concrete shall conform to applicable provisions of ACI-301 and 318.
- Minimum 28 day compressive strength (F_c) as follows:
 - Interior Slabs: 4,000 psi w/ W.W.F. per plans
- Cement Type: 1/II
- Deformed reinforcement: ASTM A615 grade 60, except bars specified to be field_bent, stirrups, and ties which shall be grade 40.
- Fibermesh: 100% virgin polypropylene, fibrillated fibers as manufactured by Fibermesh Co. per ASTM C-1116 type 111 4.1.3 and ASTM C-1116 performance level one, 1.5 lb. per cubic yard.
- Welded Wire Fabric (WWF): ASTM A185. See also plan.
- Typical minimum foundation reinforcing: 2 #5 top and bottom, (except as noted) continuous at corners and steps.
- Reinforcement shall be fabricated and placed per ACI Manual of Standard Practice (ACI_315). At splices, lap bars 50 diameters unless noted otherwise.
- Minimum 2 #5 around all four sides of all openings, extend min. 2'_0" beyond openings.
- Concrete cover over reinforcing: 1 1/2" for concrete placed against forms; 3" for concrete placed against earth. See also drawings.
- In continuous members, splice top bars at mid span and bottom bars over supports.
- Keep reinforcement clean and free of dirt, oil, and scale. Oil forms prior to placing reinforcement.

STRUCTURAL STEEL:

- Angles, misc.: ASTM A36
- Anchor Bolts: ASTM A307 or A36.
- Expansion Anchors shall be NER 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.
- 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 fitted web stiffeners welded to each side of webs above and below columns. (1/4" plate or as noted)
- Attach wood nailer plates to beams with 1/2" diameter machine or carriage bolts at maximum 32" o.c., or 3/8" diameter bolts at 32" with glued contact face, or 5/32" diameter powder actuated drive pins at 24" o.c., U.O.N.

STRUCTURAL ERECTION AND BRACING REQUIREMENTS

- The structural drawings illustrate the completed structure with all elements in their final positions, properly supported and braced. The contractor, in the proper sequence, shall provide proper shoring and bracing as may be required to achieve the final completed structure.
- These plans have been engineered for construction at one specific building site. Builder assumes ALL responsibility for use of these plans at Any Other building site. Plans shall not be used for construction at any other building site without specific review by the engineer.
- Observations of foundation reinforcing or framing required by the owner, lender, insurer, building department or any other party will be accomplished by the engineer at the owner's expense. At least 24 hours advance notice is requested.
- All slabs on grade shall be separated from adjacent structural and finish elements to allow free movement of the slab, unless specifically shown and noted otherwise.

SHOP DRAWINGS:

- Construction Documents are copyrighted and shall not be copied for use as erection plans or shop details.
- Use of SI Inc.'s electronic files as base for shop drawings requires prior approval by SI Inc.
- signed release of liability by subcontractor,
- payment of an administration fee of \$100 per drawing sheet to SI Inc, and
- deletion of SI Inc's name and Logo from all sheets so used.
- The General Contractor and his subcontractors shall submit in writing any requests to modify the plans or specifications.
- All shop and erection drawings shall be checked and stamped by the General Contractor prior to submission for Engineer's review.
- Unchecked submittals will be returned without review.
- Furnish one (1) reproducible and two (2) prints of shop and erection drawings to the Structural Engineer for review prior to fabrication for
- Submit in a timely manner to permit ten (10) working days for review.
- Shop drawings submitted for review do not constitute "in writing"
- unless specific suggested changes are clearly marked.
- In any event, such changes by means of the shop drawing submittal process become the responsibility of the one initiating such change.

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 for review.

ABBREVIATIONS KEY

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

Structural Drawing Index

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COORDINATION / REVIEW DRAWINGS NOT FOR CONSTRUCTION

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S1.0