16-0113
93 Washington Ave.
Portland, ME

DESIGN LIVE LOADS: 2009 IBC/MUEBC, U.O.N.

* Snow 60 psf(Pg)
* Wind 100 mph, exp B, 3 second gust
* Floors
  1st floor retail 100 psf

FOUNDATION:

* Foundations are designed without an engineer's soil investigation. Foundation design criteria was assumed for purpose of foundation design and shall be confirmed by a soils engineer, by open hole verification at owner's expense, prior to construction. (This procedure may require revisions to foundation design, at additional expense to the owner, if soils engineer determines that such design criteria are inappropriate for this building site.)
* Footings shall be placed on compacted structural fill compacted structural fill tested and approved by soils engineer.
* Maximum design soil pressure assumed: 2,000 psf on approved, consolidated fill, or virgin soil.

WALLS:

* Backfill all retaining walls with free draining granular material except the top ten inches.
* Provide perimeter drain system with invert minimum of 6" below bottom of basement slab. Extend perimeter drain to daylight or to sump.
* Slope perimeter grade away from building.
* Place concrete continuously without horizontal cold joints.

CONCRETE AND REINFORCEMENT:

* Concrete shall conform to applicable provisions of ACI-301 and 318.
  Minimum 28 day compressive strength ($f'c$)
  as follows:
  Footings : 3,500 psi
* Cement Type: I/II
* Deformed reinforcement: ASTM A615 grade 60, except bars specified to be field-bent, stirrups, and ties which shall be grade 40.
* Fibremesh: 100% virgin polypropylene, fibrillated fibers as manufactured by Fibremesh 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 #4 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 #4 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:
Structural steel shall be detailed, fabricated, and erected in accordance with latest AISC Specifications, and Code of Standard Practice.
Structural steel wide flange beams shall conform to ASTM A992.
Except as noted, framed beam connections shall be bearing-type with 3/4" diameter, snug tight, A325-N bolts, detailed in conformance with Part 4, Tables II and III, for 0.6 times the allowable maximum uniform loads tabulated in Part 2 of the AISC Manual, 9th Edition unless loads are otherwise noted on plan. Install bolts in accordance with AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts".
All beams shall have full depth web stiffeners each side of webs above and below columns
Anchor rods shall conform to ASTM F1554, Grade 55), with weldability supplement S1.
Headed anchor studs (HAS) shall be attached to structural steel with equipment approved by the stud manufacturer according to the stud manufacturer's recommendations.
Welding shall be done by a certified welder in accordance with AISC and AWS specifications and recommendations using E70-electrodes. Where not specifically noted, minimum weld shall be 3/16" fillet by length of contact edge.
All post-installed anchors shall have current ICC Evaluation Report, and shall be installed in accordance with the manufacturer's requirements.
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

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.

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

Fabricator and / or supplier of rebar, structural steel, and pre-engineered wood trusses shall submit shop and erection drawings for architect and engineer review. Submit one reproducible and two prints for each drawing. Allow five working days for review.

SPECIAL INSPECTIONS AND REVIEWS:

All site soils related work and footing excavations prior to placing forms, as well as site drainage, shall be reviewed by the project geotechnical engineer.

Normal reviews by Local Building Department.

Required special inspections per I.B.C. Section 1704 by an approved special inspector retained by owner to include:

- Concrete: Observation of reinforcing and forms prior to placement of concrete and observation during placement of concrete as well as taking and testing of specimens. Refer to Section 1704.4 of the I.B.C.
- Grading, Excavation and Placement of Fills: Observation during grading, earthwork excavations and placement of fills, as well as testing for required compaction of fills.
- Welds connecting containers to embed base plates to be observed prior to setting of next unit, as well as final outside connection per plan. 1

Duties and responsibilities of the special inspector shall be to observe and/or test the work assigned and outlined above for conformance with the approved construction documents. All discrepancies shall be brought to the immediate attention of the contractor for correction.

The special inspector shall furnish regular reports to the building official, the engineer and architect of record, and other designated persons. Progress reports for continuous inspection shall be furnished weekly. Individual reports of periodic inspections shall be furnished within one week of inspection dates. The reports shall note uncorrected deficiencies, correction of previously reported deficiencies, and changes to the approved construction documents authorized by engineer of record.

The special inspector shall submit a final signed report within 10 days of the final special inspection stating whether the work requiring special inspection was, to the best of the inspector's knowledge and belief, in conformance with the approved construction documents and the applicable workmanship provisions of the International Building Code. Work not in compliance shall be noted in the report.

Special inspection firm shall be:
To be determined, Please contact S.I. Inc. if you would like to retain us to conduct special inspections coordination and or inspection services.

ABBREVIATIONS KEY

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

Structural Drawing Index

S1.0	General Notes, Etc.
S1.1	Foundation / Sections

Reviewed for Code Compliance
Inspection Division
Date: 02/28/18

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SI Job# 16-0113

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Oct. 18th, 2016

93 Washington Ave.
Portland, Maine

Document Title:
Shipping Container Building Foundation, Stairs & Deck Structural Drawings

Sheet Title:
GENERAL NOTES

Scale: AS NOTED

Date: 10/18/2016

Revisions
1 3/24/2017

Sheet
S1.0

Reviewed for Code Compliance
Inspections Division
Portland, Maine

Date: 02/28/18

MODIFIED SHIPPING CONTAINER PLAN

0' 1' 5' 10'

SCALE 1/4"=1'-0"

NOTES:
1. SHIPPING CONTAINERS ARE TO BE STRUCTURALLY SOUND WITHOUT MAJOR DENTS, OR SUBSTANTIAL RUST TO FRAME OR STRUCTURAL METAL SHEATHING.

BACKGROUND UPDATED
1

SECTION C S1.1 3/4"=1'-0

SECTION A S1.1 3/4"=1'-0

SECTION B S1.1 3/4"=1'-0

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