General Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: 40 Qua	rry Rd.				
Total Square Footage of Proposed Structure/A	rea	Square Footage of Lot		MATANCHI BEN'AND CONTRACTOR MANDENING NOT STATEMENT STATEMENT OF STATE	
30,000 sf		7 acres			
30,000 sf Tax Assessor's Chart, Block & Lot	Applicant * <u>r</u>	nust be owner, Lessee or Buye	er*	Telephone:	
Chart# 150 Block# A Lot# 3	Name Read	d St.,LLC		(207)772-2177	
	Address 1	l Bartlett Rd.		,	
	City, State &	Zip Gorham, ME 04038			
Lessee/DBA (If Applicable)	Owner (if di	fferent from Applicant)	Co	st Of	
READ ST., LLC	Name J.B.	. Brown & Sons	Wo	ork: \$\$158,000.00	
	Address Po	D Box 207 04112	C	of O Fee: \$	
		Zip Portland, ME	То	tal Fee: \$	
Current legal use (i.e. single family) Ware	ehouse - I	industrial "			
If vacant, what was the previous use?		•••		· · · · · · · · · · · · · · · · · · ·	
Proposed Specific use: Warehouse -	Storage	~			
Is property part of a subdivision? No					
Project description: Installation of 30	Ok s.f. of	self-storage units.	Con	nnect new space	
at quarry kg. with existing store	age facili	ty at 21/ Read St. C	onst	ruct 2x6 lhr rated	
wall partitions along approx. 140) ft. of 1	oading dock and arou	nd a	new 17'x 30'	
steel and concrete car dock. Plea	ise see pl	ans for details.			
Contractor's name: <u>Mainland Structure</u>	es Corpora	tion			
Address: 11a Bartlett Rd.					
City, State & Zip Gorham, ME 04038		T	'eleph	none: (207) 856–1818	
Who should we contact when the permit is read	ly: <u>Eric J</u>	ohnson T	'eleph	none: (207) 625–1223	
Mailing address: 11a Bartlett Rd. Gor	cham, ME O	4038			
Please submit all of the information	outlined or	the applicable Charlet	int I	Cailme to	

Please submit all of the information outlined on the applicable Checklist. Failure to do so will result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information or to download copies of this form and other applications visit the Inspections Division on-line at www.portlandmaine.gov, or stop by the Inspections Division office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

			1			
Signature:	Ern	-M	Johnson	Date:	8-8-11	

This is not a permit; you may not commence ANY work until the permit is issue

MAINLAND STRUCTURES CORP.



June 23, 2008

re: 217 Read St. Owner Authorization to Mainland Structures Corporation

I, J. B. Brown, Owner of Record of the referenced property, hereby grant Mainland Structures Corporation, permission and authorization to act as agent of Read Street LLC. This authorization extends to all review by the City of Portland.

Respectfully,

J. B. Brown

Stolant

3/15/08 Data

11A Bartlett Road • Gorham, ME 04038

Assessor's Office | 389 Congress Street | Portland, Maine 04101 | Room 115 | (207) 874-8486

City

Home

Departments City Council E-Services

Calendar

Jobs

This page contains a detailed description of the Parcel ID you selected. Press the **New Search** button at the bottom of the screen to submit a new query.

Current Owner Information:

CBL Land Use Type 150 A003001

Services **Property Location** MANUFACTURING & CONSTRUCTION

Owner Information

40 QUARRY RD BROWN J B & SONS

PO BOX 207

PORTLAND ME 04112

Applications Doing Business

Book and Page Legal Description

TAX ACCT NO.

Maps

Acres

150-A-3 QUARRY RD 40 305701 SF

7.018

Tax Roll

browse city services a-z

21624

OWNER OF RECORD AS OF APRIL 2010

LAND VALUE \$540,200.00 **BUILDING VALUE** \$2,769,920.00

Current Assessed Valuation:

BROWN J B & SONS PO BOX 207

NET TAXABLE - REAL ESTATE \$3,310,120.00

PORTLAND ME 04112

TAX AMOUNT

\$59,317.36



Best viewed at

800x600, with

Internet Explorer

Any information concerning tax payments should be directed to the Treasury office at 874-8490 or e-mailed.

Building Information:

Card 1 of 1

Year Built

1947

Style/Structure Type

MANUFACTURING

Units

Building Num/Name Square Feet

1 - X CAFE

167705

View Sketch

View Map

View Picture

Exterior/Interior Information:

Card 1

Levels

01/01

Size

165353

Use

MANUFACTURING

Height Walls

BRICK/STONE

Heating

UNIT HEAT

A/C

NONE

Card 1

Levels Size

M1/M1 336

Use Height SUPPORT AREA

Heating

A/C

NONE

NONE

Card 1

Levels Size

02/02 2016

Use

OFFICE ENCLOSURE

Height

12

Walls BRICK/STONE Heating UNIT HEAT

A/C

CENTRAL

Other Features:

Card 1

Structure

TRUCK AND TRAIN WELLS

Size

23554X1

Card 1

Structure

CANOPY - ONLY

Size

6X80

Card 1

Structure

CANOPY - ONLY

Size

Card 1

Structure

DOCK LEVEL FLOORS

Size

142296X1

Card 1

Structure

OVERHEAD DOOR - WD/MT

Size

8X8

Card 1

Structure

OVERHEAD DOOR - MOTOR OPR. STEEL

Size

20X14

Card 1

Structure

SPRINKLER - DRY

Size

23554X1

Card 1

Structure

DOCK LEVELERS

Size

0X0

Outbuildings/Yard Improvements:

Card 1

Year Built

1965

Structure

FENCE CHAIN

Size Units 13914

1

Grade Condition C 2

Card 1

Year Built

1965 ASPHALT PARKING

Structure Size

96800

Units Grade

1

C

Condition

Card 1

Year Built

1965

Structure

TRACK RAILROAD

Card 1

Size Units 1X1150

Grade

1

Condition

C

Year Built

1947

Structure

STACKS BRICK

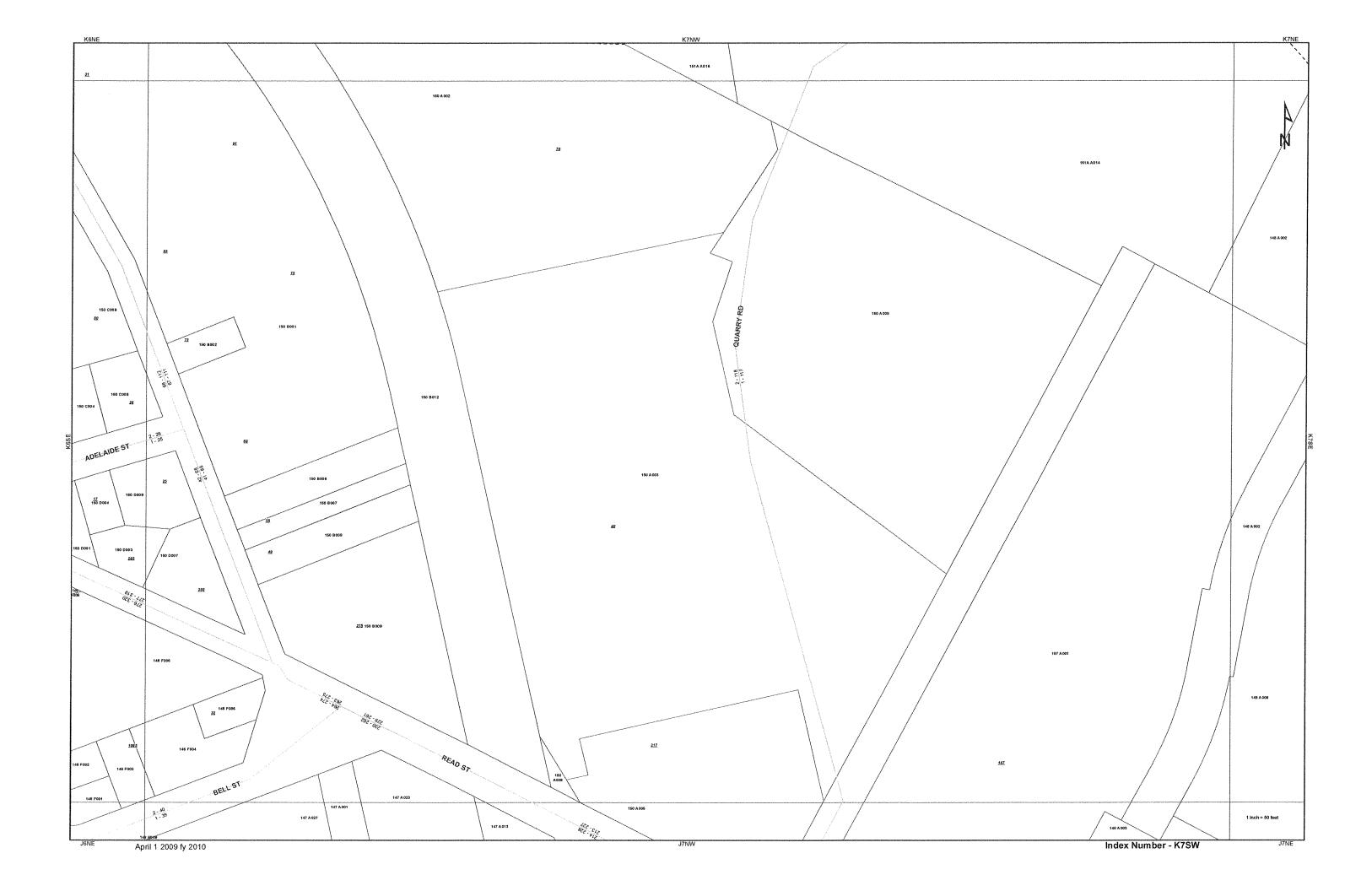
Size Units 1X870

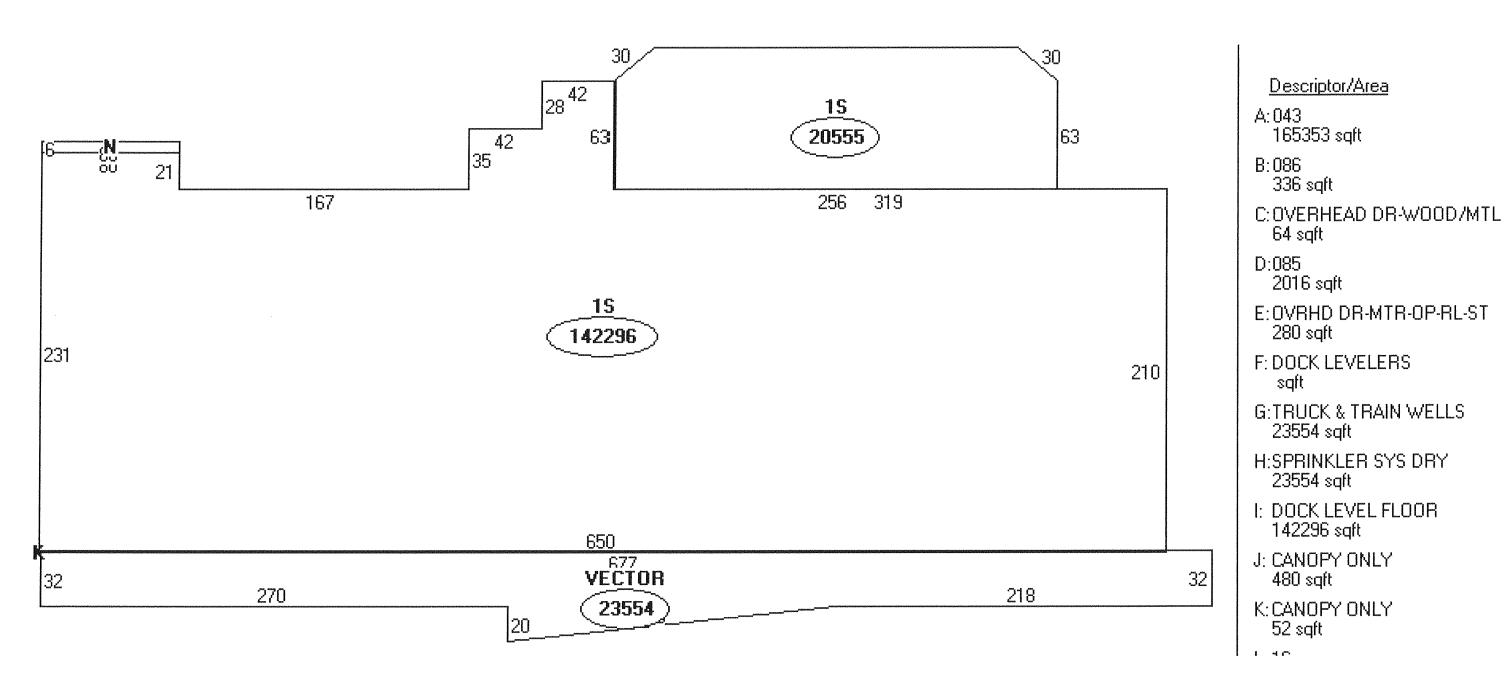
Grade

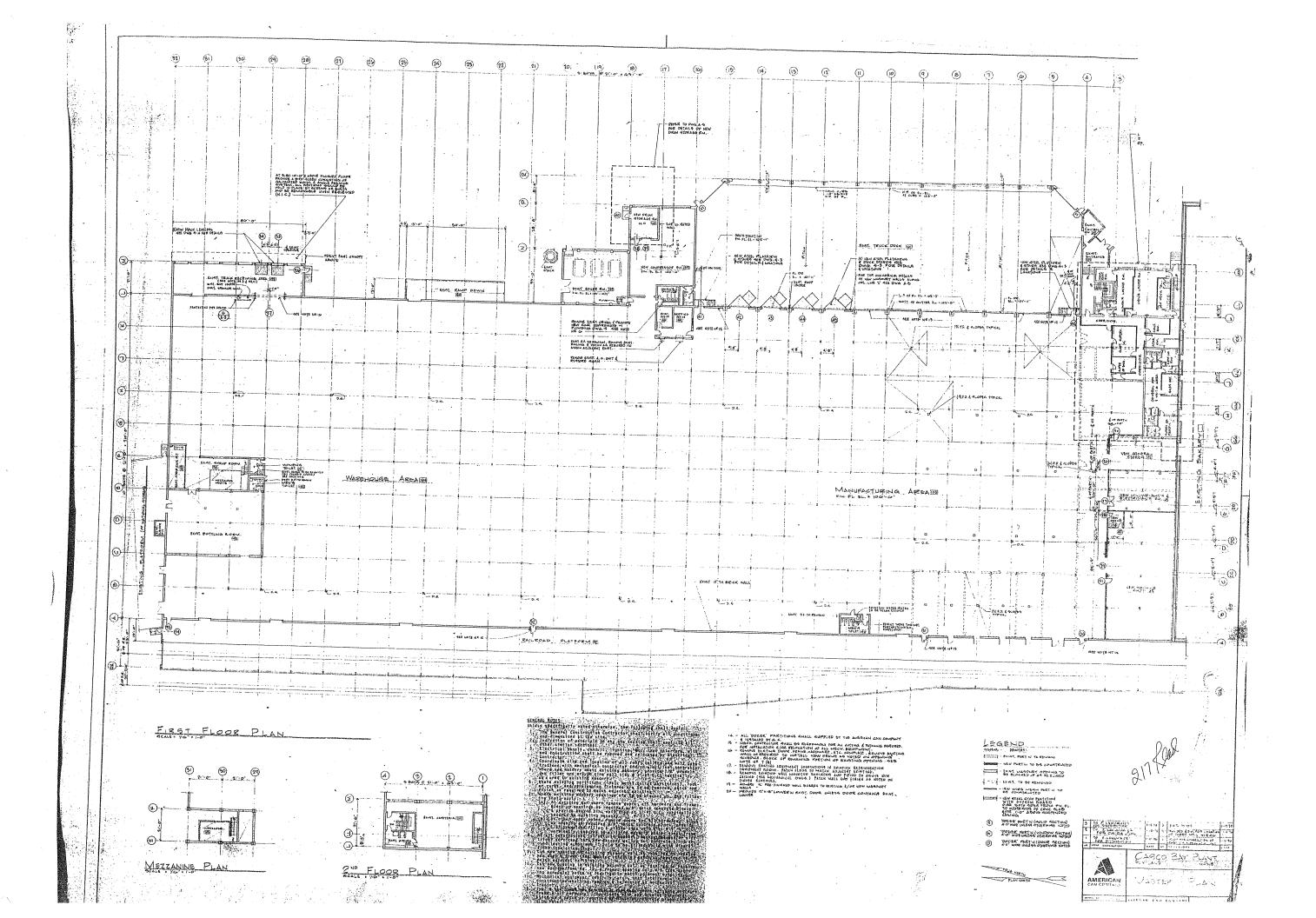
1 C 3

Condition

New Searchi









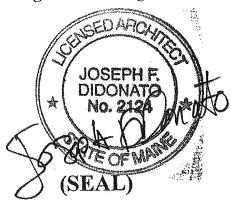
Certificate of Design

Date:	August a	04,2011	
From:	DIDONATO	ARCHITECTS	u-to-

These plans and / or specifications covering construction work on:

MILLER GYSTEMS. STORAGE AREA. FIRST FLOOR 29,745 S.F. 40 QUARRY Pd (CONNECTS TO 217 READ St.) PORTLAND, ME.

Have been designed and drawn up by the undersigned, a Maine registered Architect / Engineer according to the 2003 International Building Code and local amendments.



Signature(Title: DIDONATE ARCHITECTS Firm: Address: 184 GUINES Rd KENNEBUNKPORT, ME. 04046 207-286-2900

For more information or to download this form and other permit applications visit the Inspections Division on our website at www.portlandmaine.gov

Phone:

	Certificate of De	esign Application	
From Designer:	USEPH DIDONAT	<u>-</u> 6	manghadakigu
Date:	AUGUST 64, 2011		Maling Salam
Job Name:	MILLER SYSTEMS	STORAGE AREA FIRST FLOOR	29,74
•		CONNECTS TO 217 PEAD ST.)	,
Address of Construction:	PORTLAND, ME	(EXISTING BUILDING)	
6	2003 International	Building Code	
	•	e building code criteria listed below:	
Building Code & Year	Use Group Classification	1(s) STOPAGE GOROUP 3-1	
Type of Construction	YPE II B-000		
	pression system in Accordance with S	Section 903.3.1 of the 2003 IRC	Martin the filter was the comment of
		arated or non separated (section 302.3)	
	S Geotechnical/Soils report re	N 28	- OUNCEP - GARAGE
		<i>d</i>	
Structural Design Calculations		Live load reduction	
Submitted for all	structural members (106.1 – 106.11)	Roof live loads (1603.1.2, 1607.11)	
Design Loads on Construction	Documents (1603)	Roof snow loads (1603.7.3, 1608)	
Uniformly distributed floor live load		Ground snow load, Pg (1608.2)	
	Loads Shown	If Pg > 10 psf, flat-roof snow load	BL
CTOPAGE		If Pg > 10 psf, snow exposure factor	or, G
-)(If Pg > 10 psf, snow load importan	ce factor, I_{t}
		Roof thermal factor, $_{G}$ (1608.4)	
		Sloped roof snowload, p ₃ (1608.4)	
Wind loads (1603.1.4, 1609)		Seismic design category (1616.3)	
	zed (1609.1.1, 1609.6)	Basic seismic force resisting system	(1617.6.2)
Basic wind speed (1		Response modification coefficient,	R, and
Building category a	and wind importance Factor,	deflection amplification factor (1617.6.2)
Wind exposure cate	table 1604.5, 1609.5) (1609.4)	Analysis procedure (1616.6, 1617.5)	
Internal pressure coel	fficient (ASCE 7)	Design base shear (1617.4, 16175.5.1)
	ding pressures (1609.1.1, 1609.6.2.2)	Flood loads (1893.1.6, 1612)	
Main force wind pres	sures (7603.1.1, 1609.6.2.1)		

Earth design data (1603.1.5, 1614-1623)

Design option utilized (1614.1)

Site class (1615.1.5)

Seismic use group ("Category")

Spectral response coefficients, SDs & SD1 (1615.1)

Flood Hazard area (1612.3)

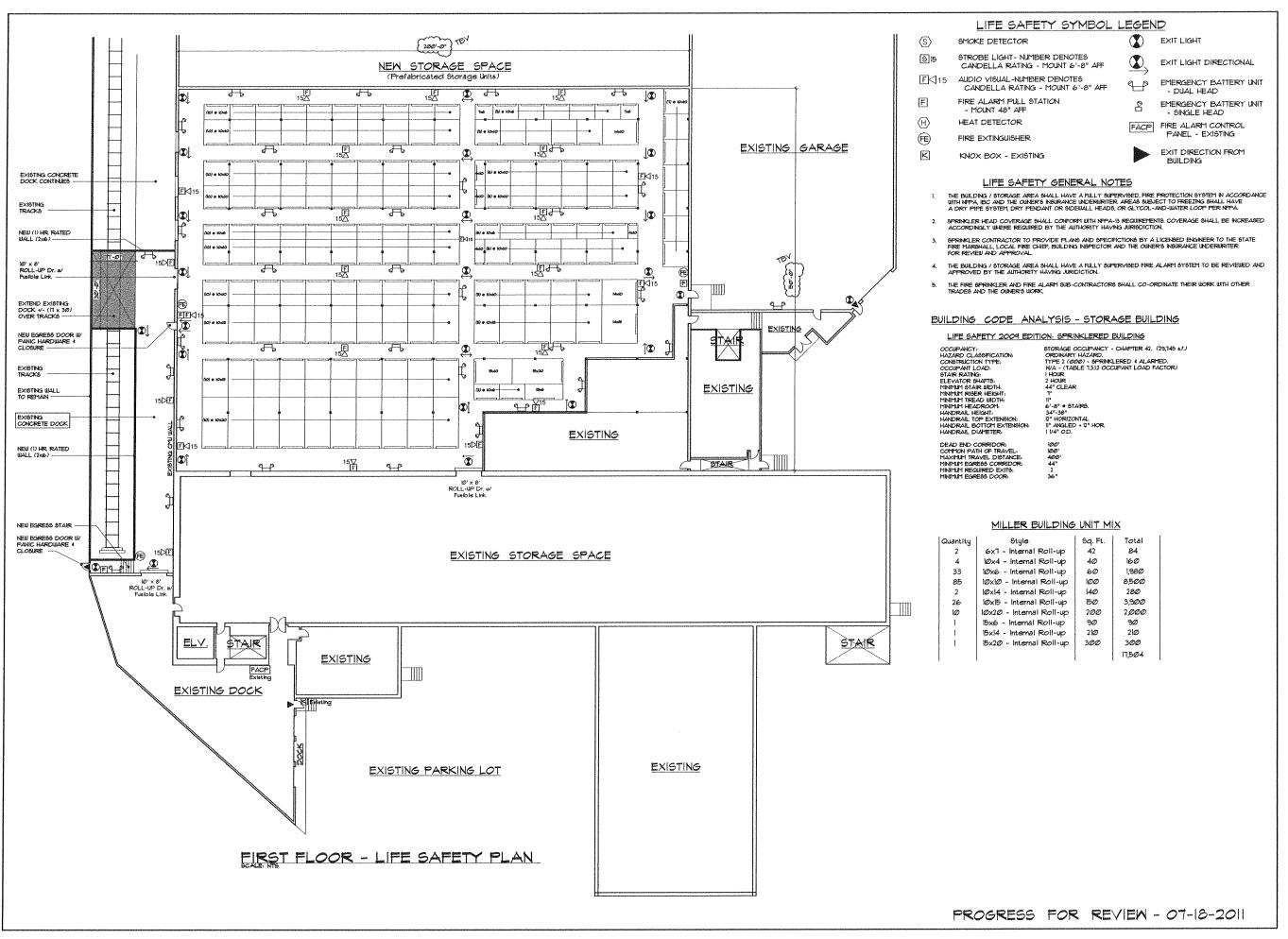
Concentrated loads (1607.4)

Misc. loads (Fable 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404

Partition loads (1607.5)

Elevation of structure

Other loads



ARCHITECTS, II
, KENNEBUNKPORT, NE. 04,
1900 Fax. (201) 283-4895
Jididonato-eroadrumer.com DIDONATO

134 GUINEA ROAD, KE
phone: (201) 286-296

"E" Mail Address: jfdic
www.didonator Systems - Storage Area RRY ROAD (CONNECTS TO 211 READ ST.)
MAINE MAINE MAINLAND STRUCTURES
hartleit Road Gorham, ME 04038 Project.
Miller 9

PROMINGS THIS SHEET

FIRST FLOOR
LIFE SAFETY PL

REVISION DATE: DRAWN BY:

JFD

SHEET:

.. OF ..

© COPYRIGHT
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PERMISSION OF DIDONATO
ASSAURCE OR IN PROJECTION



DRAWINGS PROVIDED FOR REFERENCE ONLY - NOT TO BE USED FOR CONSTRUCTION

GENERAL INFORMATION:

- Applicable building code should be L&I, Fire & Panic and IBC 2006. Construction type Prefabricated Steel & Steel Studs
- Occupancy Condition Storage Group S-1
- Do not scale drawings.
 MBS designates Miller Building Systems components and details. SassCo Engineering does not warrant or guarantee MBS components and details. Contact MBS directly.

DESIGN CRITERIA:

- 1. Loads shall be actual weights of building materials and permanently affixed items.
- 2. Work performed shall comply with the following:

 a) These general notes unless otherwise noted on plans or specifications.

 b) Building Code as specified on the engineering drawings.

- c) All applicable local and state codes, ordinances and regulations.
 d) In areas where the drawings do not address methodology, the contractor shall be bound to perform in strict compliance with
- manufacturer's specifications and/or recommendations.

 3. On sits verification of all dimensions and conditions shall be the responsibility of the general contractor and his sub contractors. 4. Noted dimensions take precedence over scale. Never scale directly from drawings. Contractor should consult engineer in case of
- 5. The general notes and typical details apply throughout the job unless otherwise noted or shown.
- 6. Discrepancies: The contractor shall compare and coordinate all drawings; when in the opinion of the contractor, a discrepancy exists he shall promptly notify the Engineer, in writing, before proceeding with the work or he shall be responsible for the same and any indirect results of his action.
- 7. Omissions: Drawings and specifications shall be considered as part of the conditions for work. In the event that certain features of the construction are not fully shown on the drawings, current national, state and local codes, ordinances, regulations or agreements as well as current acceptable building practices shall govern, and their construction shall be of the same character s for similar conditions that are shown or noted.
- procedures, or for safety precautions and programs in connection with the work, and will not be responsible for the failure of the Client or his contractors, sub contractors, or anyone performing any of the work, to carry out the work in accordance with the approved contract documents. 8. The Project will not be responsible for and will not have control over construction means, methods, techniques, sequences or
- 9. Any and all drawings and specifications for sitework, plumbing supply or waste, electrical circuitry and heating, ventilating Any and an arewings and specifications for scework, plumoning supply or wester, electrical creatory and reading, venturering, from the analysis of the client by the Engineer unless included under their agreement. Any discrepancies with these documents by any of the above listed services as shown in documents prepared by others should be indicated in writing to the Engineer immediately.
- 10. Use of these documents without the written permission of the Engineer is forbidden.
 11. The conditions and assumptions stated in these specifications shall be verified by the Contractor for conformance to local codes and conditions. In the event of a discrepancy between these specifications and local codes or conditions, the Contractor shall notify the Engineer in writing of the discrepancy and special engineering requirements shall be applied to insure the building's
- 12. These requirements may be superseded by more stringent information contained within the drawings. The more stringent shall
- 13. Self-conditions shall conform to or exceed the following conditions:
- Beering Capacity: Min. 2000 psf, field verify by a licensed soll engineer, under all footings and stabs on grade.

 Water Table: Min. 2' 0" below bottom of all concrete stabs and footings. Footings, foundations, walls and stabs shall not be
- placed on or in Marine Clay, Pest and other organic materials.

 14. Assemble storage units according to Miller Building Systems Construction Manuals. Engineer provides no warranty and assumes responsibility for Miller Building System construction details or instructions.

- 1. Anchor bolts and connection bolts shall conform to ASTM A325. .
- 2. Structural steel shall conform to the requirements of the AISC Manual of Steel Construction latest edition. Structural steel shall conform to ASTM A36 - R4A.

CONCRETE:

1. The concrete properties shall be as follows:

Item	Min 28 days Fc (psl)	Min Aggregate Size	Slump
Footings	3,500	1/2"	4" +/-1"
Slab on Grade	3,000	1/2*	4" +/- 1½"
Wells	3,000	1/2°	4" +/- ½°
Ext. Sleb	3,500	1/2"	4" w/ 7% air entrainment
2. Concrete v	vork shall conform to al	I requirements of ACI 3	18-89 and ACI 301-72, American

- Concrete Institute specifications for structural concrete for buildings.
- Concrete instruce specifications for structural concrete for buildings.

 3. All reinforcing, snichor boits, snichor straps, pipe sleeves and other inserts shall be positively secured in place and located according to the appropriate architectural drawings and details before concrete is placed.

 4. Reinforcing Steel to be intermediate grade new billet deformed bers grade 60 conforming to ASTM A615.

 5. Minimum concrete cover for Reinforcement as follows:
 Footings or work cast on soils

 3*

- 6. Detailing, febricating and placing of reinforcement shall be in accordance with ACI 315 Manual of Standard Practice for Detailing Reinforced Concrete Structures. Furnish support bars and all required accessories in accordance with CRSI
- standards.
 7. All reinforcing bars which intersect perpendicular elements shall terminate in hooks, placed two (2) inches clear from outer
- 8. The Contractor shall notify the building official at least forty-eight (48) hours prior to each concrete pour. No concrete shall be poured into frottings containing standing water or mud. Footings shall be drained prior to placement of concrete. No concrete shall be placed until all reinforcing has been installed by the contractors and inspected by the building official.

POLINDATIONS:

- FOUNDATIONS:

 1. Footing depths are shown on the drawings. Footings shall bear a minimum of 1'-0" into original undisturbed soil and a minimum of 3'-0" below finished grade. Where required, step footings to ratio of 2 horizontal to 1 vertical, horizontal length of step to be a minimum of 2'-0". Limit vertical step, to 2'-0" menticaln thickness of footing in vertical step.

 2. Fecus of Footing to be set back from descending slope a minimum of the height of slope (H) divided by 3 (H/3) but need not exceed 40 feet.

 3. All footing excervations shall be inspected by the building official prior to the placement of any concrets. The building official shall be given forty-eight (49) hours notice for this observation.

 4. Soil investigation and report: All senth work, compection and supervisions shall be done according to the recommendations of the soil investigation report properal by a licensed geoschriched engineer. Concrets size and footing calculations are beening capacity of 2,000 pst. If ones to be to bringe indicate lesser values, notify Engineer in writing, so that recessary structurel modifications can be made.

 5. Siab on grade shall be 4" thick reinforced with W10 x W10 WW7 6" specing each way and shall be placed on 6 mil vepor berrier on 4" crushed stone.

- stone.

 6. Siab on grade at porches shell be 4" thick unless otherwise noted.

 7. Install anchor strape as per mig. recommendations; 12 inches from corners, 12 inches from mudsili joints and intervals of not more than 4" 0".

 Notinium embedment for anchors shell be as specified by menufecturer.

 8. Beam pockets shell be formed into concrete waits to provide a continuous level flat solid bearing surface for all beams.

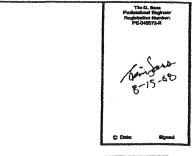
 9. Where becidili is placed on both sides of foundation wait, place equally and compact.

1. Place all HVAC, plumbing and electrical conduits in stone sub-base under the floor siab before pouring the floor siab.

2. Reinforce siab with W10xW10 weld wine fabric with 6* specing each way at 1 %" from top of stab.

METAL STUDS, Z-PURLINS, GIRTS & ROOF SHEATHING:

- 1. Vendors to be certified by the Light Gauge Steel Institute (LGSI)
- 2. Minimum Yield Strength 55 KSI, Fu = 57.7 ksl.
- 3. Minimum Delivered Thickness 14 Gage, 0.0677 inch unless otherwise specified on blueprint or manufacturer's specifications.
- 4. Cold-Formed Steel Sheet: Complying with ASTM A1003/A 1003M. Galvanized Coating G90 Coating Weight Minimum Complying with ASTM C955.
- Faster components using self tapping screws or welding.
 Screws to be #10 Tek Screws unless otherwise specified on blueprint. Minimum of (4) four screws per connection. Screw length to be sufficient to result in a minimum three exposed threads on side of joint
- 7. Welds to be installed by weld operators qualified in accordance with Section 6.0 of AWS D.1.3. All weldings shall be in accordance to the American Welding Society Code and be performed by welders qualified in accordance with AWS procedures. Electrodes shall confrom to ASTM A-233 E70 series. All bolts and anchors shall conform to ASTM A345.
- 8. Touch up all welds with zinc rich paint in compliance with ASTM A 780.
- 9. Follow manufacturer's recommendations. In the event that the manufacturer's specifications and drawing conflict, the most restrictive requirements apply.





Miller Buildings / Reed Street



	MANUFACT	URED PARTS LIST	
PART ND.	DESCRIPTION	MFR	MFR PART/DWG NO.
1	SERIES 650 ROLLUP DOOR	Miller Building Systems 1804 Bethlehen Pike Flourtown, PA 19031 t.800-323-6464 x103 www.nillerbldgs.com	SERIES 650 INSTALLATION & PARTS MANUAL
5	SYSTEM 300 SVING DOOR	Miller Building Systems 1804 Bethlehem Pike Flourtown, PA 19031 t.800-323-6464 x103 www.millerbldgs.com	SYSTEM 300 SWING DEOR INSTALLATION MANUAL, SPECS & DWGS
3	HALLWAY & PARTITION WALLS	Miller Building Systens 1804 Bethlehem Pike Flourtown, PA 19031 t.800-323-6464 ×103 www.millerbldgs.com	TRIM LINE SYSTEM 300 SPECS, DWGS & INSTALLATION INSTRUCTIONS

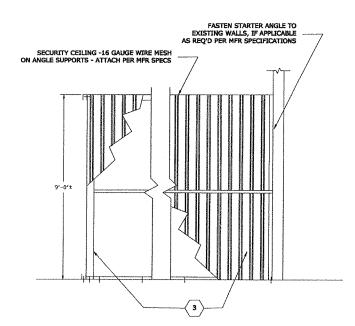
SYMBOLS

NUMBER INSIDE POLYGON CORRESPONDS TO MANUFACTURED PARTS LIST TABLE PART NUMBER AND DENOTES MANUFACTURES SUPPLIED DRAWINGS AND SPECIFICATIONS APPLY

1

MANUFACTURER'S PARTS LIST

SCALE: NONE



PARTITION ELEVATION - TYP.

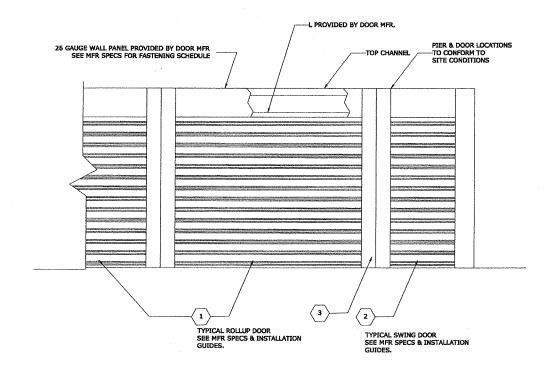
SCALE: 1/2": 1'-0"

	Miller Building Uni	t Mix	
Quantity	Style	Sq Ft	Total
38	10×10 - Internal Rollup	100 SF	100 SF*38 SI
30	10x20 ~ Internal Rollup	200 SF	200 SF×30 SI
9	10x25 - Internal Rollup	250 SF	250 SF*9 SI
14	10x30 - Internal Rollup	300 SF	300 SF*14 SF
ë	10x5 - Internal Rollup	50 SF	50 SF*2 SF
6	5x10 - Internal Rollup	50 SF	50 SF *6 SF
2	5x10 - Internal Swing	40 SF	40 SF*2 SF
6	5x10 - Internal Swing	50 SF	50 SF*6 SF
1	Standard	400 SF	400 SF*1 SF
6	Standard	80 SF	80 SF*6 SF

MILLER BUILDING SYSTEM UNIT MIX

SCALE: NONE

*





The D. Sesse
Professional Engineer
Registration Number:
PE-049372-R

C. Deta: Signed

SassCo Engineering inc. moset consulting & Design

Consulting & Design

224 Berwind Road Wayne RA 19687

FAX: 6 1 0 9 9 5 2 1 7 6

FAX: 6 1 0 9 7 1 2 4 0 6

MILLER BUILDING SYSTEMS

——
ELLSWORTH GORHAM SELF STORAGE
217 READ STREET
GORHAM, ME

job number:

drown by:
TDS
checked by:

dote: 15 AUG 08

STORAGE UNITS

A 2

MILLER BUILDING SYSTEMS

Read Street Conversion

Included items

26 ga uge galvalume plus interior partitions designed to provide resistance to smudging, staining and corrosion.

Interior structural steel is galvanized.

Jambs between interior doors are white flush structural steel.

Hallway walls and partition walls are held at 9' tall.

26 gauge interior roll-up doors with corrugated door headers. 20 colors are available with a 20 year manufacturer's paint warranty.

Tension control and ball-bearings included for all roll up doors.

16 gauge wire mesh with angle supports for security over all units.

All unit doors are quoted as roll ups.

High gloss white standard interior hallway system which includes the top and bottom trim, inside and outside corners and white corrugated hallway walls. Wire mesh for security over all units.

Girt at midpoint of vertical hallway panels to provide extra support for partitions.

3'8" x 6'8" interior corrugated roll-up doors with corrugated headers on 5' wide units. (20 year manufacturer's paint warranty).

8'8" x 6'8" interior corrugated roll-up doors with corrugated headers on 10' wide units. (20 year manufacturer's paint warranty).

Anchor bolts to fasten the bottom tracks into concrete floor.

Installation by Miller Certified Crew per Miller's erection manual (5 year parts and labor single source warranty).

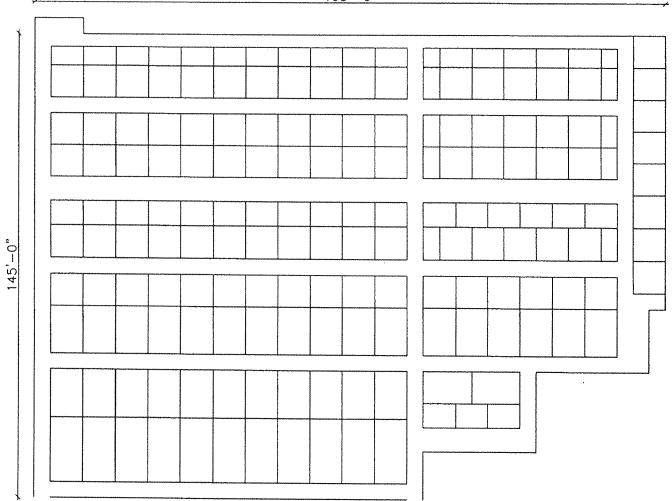
Standard industry latches.

All above manufacturer's warranties are available upon request.

Delivery and unloading.

Excluded Items

Freight costs incurred by additional phasing due to either site considerations or customer requests. Labor or materials to cut and fit frames around any mechanical components (sprinklers, HVAC ...).



Miller Building Unit Mix									
Quantity	Style	Sq	Ft	Tota	٦l				
89	10×10 - Internal Rollup	100	ŞF	8900	SF				
30	10×15 - Internal Rollup	150	SF	4500	SF				
11	10×20 - Internal Rollup	200	SF	2200	SF				
8	10×5 - Internal Rollup	50	SF	400	SF				
16	10x6 Non Standard	60	SF	960	SF				
2	5x6 Non Standard	30	SF	60	SF				
20 1	0x7.5 Non Standard	75	SF	1500	SF				
				18520	SF				

2

Table 1 One-Hour Fire-Rated Loadbearing Wood-Frame Wall Assemblies

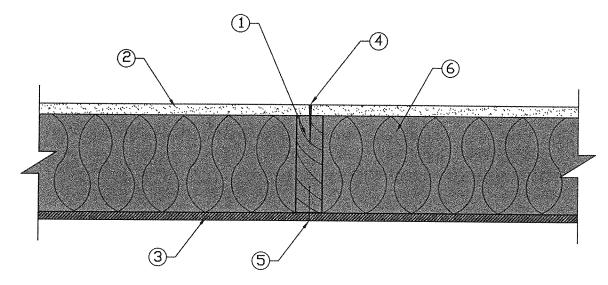
			Assemblies Rated From Both S	Sides	
Studs	Insulation		Sheathing on Both Sides	Fasteners	Details
2x4 @ 16" o.c.	3½" mineral wool batts		5/8" Type X Gypsum Waliboard (H)	2¼" #6 Type S drywall screws @ 12" o.c.	WS4-1.1
2x6 @ 16" o.c.	(none)	The second secon	5/8" Type X Gypsum Wallboard (H)	21/4" #6 Type S drywall screws @ 7" o.c.	WS6-1.1
2x6 @ 16" o.c.	5½" mineral wool batts		5/8" Type X Gypsum Wallboard (H)	2¼" #6 Type S drywall screws @ 12" o.c.	WS6-1.2
2x6 @ 16" o.c.	R-19 fiberglass insulation		5/8" Type X Gypsum Wallboard (V)	2¼" #6 Type S drywall screws @ 12" o.c.	WS6-1.4
	Asser	nblie	s Rated From One Side (Fire o	on Interior Only)	
Studs	Insulation	New Spirit	Sheathing	Fasteners	
2x4 @ 16" o.c.	3½" mineral wool batts	I E	5/8" Type X Gypsum Wallboard (H) 3/8" wood structural panels (V)	21/4" #6 Type S drywall screws @ 12" o.c. 6d common nails @ 6" edges/12" field	WS4-1.2
2x4 @ 16" o.c.	4 mil polyethylene 3½" mineral wool batts	E	5/8" Type X Gypsum Wallboard (V) ½" fiberboard (V) 3/8" hardboard shiplapped panel siding	6d cement coated box nails @ 7" o.c. 1½" roofing nails @ 3" edges/6" field 8d galv. nails @ 4" edges/8" field	WS4-1.3
2x6 @ 16" o.c.	5½" mineral wool batts	I E	5/8" Type X Gypsum Wallboard (H) 7/16" wood structural panels (V)	2½" #6 Type S drywall screws @ 12" o.c. 6d common nails @ 6" edges/12" field	<u>WS6-1.3</u>
2x6 @ 16" o.c.	R-19 fiberglass insulation	I E	5/8" Type X Gypsum Wallboard (V) 3/8" wood structural panels (V)	2¼" #6 Type S drywall screws @ 12" o.c. 6d common nails @ 6" edges/12" field	WS6-1.5
The second of the property of the second			ontally with vertical joints over studs ally with vertical joints over studs	I- Interior sheathing E- Exterior sheathing	

Table 2 Two-Hour Fire-Rated Loadbearing Wood-Frame Wall Assemblies

2x6 @ 24" o.c. 5½" mineral wool batts B 5/8" Type X Gypsum Wallboard (H) 2¼" #6 Type S drywall screws @ 24" o.c.	
	WS6-2.
F 5/8" Type X Gypsum Wallboard (H) 2¼" #6 Type S drywall screws @ 8" o.c.	- Annual Manag

WS6-1.3 One-Hour Fire-Resistive Wood-Frame Wall Assembly

2x6 Wood Stud Wall - 100% Design Load - ASTM E 119/NFPA 251



- 1. Framing Nominal 2x6 wood studs, spaced 16 in. o.c., double top plates, single bottom plate
- 2. Interior Sheathing 5/8 in. Type X gypsum wallboard, 4 ft. wide, applied horizontally. Horizontal joints are unblocked. Horizontal application of wallboard represents the direction of least fire resistance as opposed to vertical application.
- 3. Exterior Sheathing 7/16 in. wood structural panels (oriented strand board), applied vertically, horizontal joints blocked
- 4. Gypsum Fasteners 2-1/4 in. #6 Type S drywall screws, spaced 12 in. o.c.
- 5. Panel Fasteners 6d common nails (bright) 12 in. o.c. in the field, 6 in. o.c. panel edges
- 6. Insulation 5-1/2 in. thick mineral wool insulation (2.5 pcf, nominal)
- Joints and Fastener Heads Wallboard joints covered with paper tape and joint compound, fastener heads covered with joint compound

Tests conducted at the Fire Test Laboratory of National Gypsum Research Center

Test No: WP-1244 (Fire Endurance & Hose Stream) February 25, 2000

Third Party Witness: Intertek Testing Services Report J99-27259,2

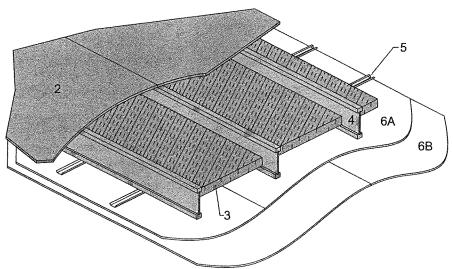
This assembly was tested at 100% design load, calculated in accordance with the 2005 *National Design Specification®* for Wood Construction. The authority having jurisdiction should be consulted to assure acceptance of this report.

Table 3 One-Hour Fire-Rated Wood Floor/Ceiling Assemblies

Wood I-Joist Assemblies									
Insulation	Furring		Ceiling Sheathing	Fasteners	Details				
1-1/2" mineral wool batts (2.5 pcf-nominal) Resting on hat-shaped channels	Hat-shaped channels	F	5/8* Type C Gypsum Wallboard (GWB)	1-1/8" Type S drywall screws spaced 12" o.c. in GWB field spaced 8" o.c. at GWB end joints (see fastening details)	WIJ-1.1				
1-1/2" mineral wool batts (2.5 pcf-nominal) Resting on resilient channels	Resilient channels	F	5/8* Type C Gypsum Wallboard (GWB)	1" Type S drywall screws spaced 12" o.c. in GWB field spaced 8" o.c. at GWB end joints (see fastening details)	WIJ-1.2				
2" mineral wool batts (3.5 pcf-nominal) Resting on 1x4 setting strips	Resilient channels	F	5/8" Type C Gypsum Wallboard (GWB)	1-1/8" Type S drywall screws spaced 7" o.c. in GWB field spaced 7" o.c. at GWB end joints (see fastening details)	WIJ-1.3				
mineral wool batts (6 pcf-nominal) Resting on hat-shaped channels under I-joist bottom flange	Hat-shaped channels supported by CSC clips	F	1/2* Type C Gypsum Wallboard (GWB)	1" Type S drywall screws spaced 12" o.c. in GWB field spaced 6" o.c. at GWB end joints (see fastening details)	WIJ-1.4				
(none)	(none)	В	1/2" Type C Gypsum Wallboard (GWB)	1" Type S drywall screws spaced 12" o.c. in GWB field spaced 12" o.c. at GWB end joints	WIJ-1.5				
		Commence of the commence of th	1/2" Type C Gypsum Wallboard (GWB)	1-5/8" Type S drywall screws spaced 12" o.c. in GWB field spaced 8" o.c. at GWB end joints 1-1/2" Type G drywall screws spaced 8" o.c. at GWB end joints (see fastering details)					
(none)	Resilient channels	В	1/2" Type X Gypsum Wallboard (GWB)	1-1/4" Type S drywall screws spaced 12" o.c. in GWB field spaced 12" o.c. at GWB end joints	WIJ-1.6				
		F	1/2" Type X Gypsum Wallboard (GWB)	1-5/8" Type S drywall screws spaced 12" o.c. in GWB field spaced 12" o.c. at GWB end joints 1-1/2" Type G drywall screws	to the second se				
	And the second s	A - Charles	No making no	(see fastening details)	To the second				
Fiberglass batts Resting on resilient channels	Resilient channels	В	1/2" Type X Gypsum Wallboard (GWB)	1-1/4" Type S drywall screws spaced 12" o.c. in GWB field spaced 12" o.c. at GWB end joints	WIJ-1.7				
		F	1/2* Type X Gypsum Wallboard (GWB)	1-5/8" Type S drywall screws spaced 12" o.c. in GWB field spaced 12" o.c. at GWB end joints 1-1/2" Type G drywall screws					
•	1	1 1		spaced 8" o.c. at GWB end joints (see fastening details)	}				
	1-1/2" mineral wool batts (2.5 pcf-nominal) Resting on hat-shaped channels 1-1/2" mineral wool batts (2.5 pcf-nominal) Resting on resilient channels 2" mineral wool batts (3.5 pcf-nominal) Resting on 1x4 setting strips 1" mineral wool batts (6 pcf-nominal) Resting on hat-shaped channels under I-joist bottom flange (none) (none)	Insulation 1-1/2" mineral wool batts (2.5 pcf-nominal) Resting on hat-shaped channels 1-1/2" mineral wool batts (2.5 pcf-nominal) Resting on resilient channels 2" mineral wool batts (3.5 pcf-nominal) Resting on 1x4 setting strips 1" mineral wool batts (6 pcf-nominal) Resting on hat-shaped channels under I-joist bottom flange (none) (none) Resilient channels upported by CSC clips under I-joist bottom flange (none) Resilient channels channels upported by CSC clips under I-joist bottom flange Resilient channels channels upported by CSC clips under I-joist bottom flange (none) Resilient channels Resilient channels upported by CSC clips under I-joist bottom flange (none) Resilient channels Resilient channels upported by CSC clips	Insulation 1-1/2" mineral wool batts (2.5 pcf-nominal) Resting on hat-shaped channels 1-1/2" mineral wool batts (2.5 pcf-nominal) Resting on resilient channels 2" mineral wool batts (3.5 pcf-nominal) Resting on 1x4 setting strips 1" mineral wool batts (6.5 pcf-nominal) Resting on hat-shaped channels (6.5 pcf-nominal) Resting on hat-shaped channels under I-joist bottom flange (none) (none) Resilient channels Fiberglass batts Resilient channels Resilient channels Resilient channels Fiberglass batts Resilient channels Resilient channels Resilient channels Resilient channels Fiberglass batts Resilient channels Resilient channels Fiberglass batts Resilient channels Fiberglass batts Resilient channels Resilient channels	Insulation	Insulation Furring Celling Sheathing Fasteners				

WIJ-1.7 One-Hour Fire-Resistive Ceiling Assembly

Floor^a/Celling - 100% Design Load - 1 Hour Rating - ASTM E 119 / NFPA 251



- 1. Floor Topping (optional, not shown): Gypsum concrete, lightweight or normal concrete topping.
- 2. Floor Sheathing: Minimum 23/32 inch thick tongue-and-groove wood sheathing (Exposure 1). Installed per code requirements with minimum 8d common nails.
- 3. Insulation: Fiberglass insulation placed between I-joists supported by the resilient channels.
- 4. Structural Members: Wood I-joists spaced a maximum of 24 inches on center.

Minimum I-joist flange depth: 1-1/2 inches

Minimum I-joist flange area: 2.25 inches²

Minimum I-joist web thickness: 3/8 inch

Minimum I-joist depth: 9-1/2 inches

See ASTM D 5055-07 for qualification requirements.

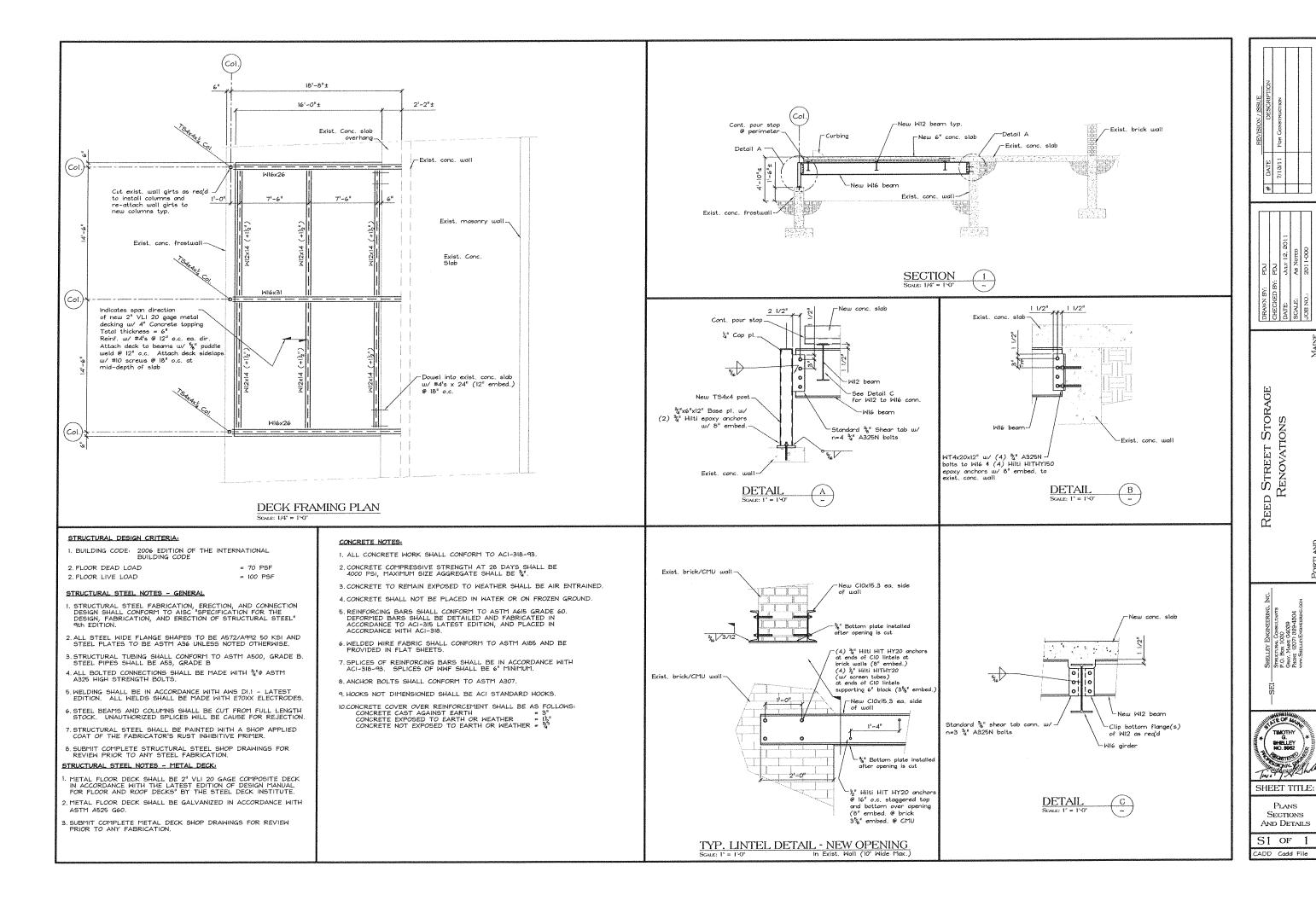
- 5. Resilient Channels: Minimum 0.019 inch thick galvanized steel resilient channel attached perpendicular to the bottom flange of the I-joists with one 1-1/4 inch drywall screw. Channels spaced a maximum of 16 inches on center [24 inches on center when I-joists are spaced a maximum of 16 inches on center].
- **6. Gypsum Wallboard:** Two layers of minimum 1/2 inch Type X gypsum wallboard attached with the long dimension perpendicular to the resilient channels as follows:
 - **6a.** Wallboard Base Layer: Base layer of wallboard attached to resilient channels using 1-1/4 inch Type S drywall screws at 12 inches on center.
 - **6b. Wallboard Face Layer:** Face layer of wallboard attached to resilient channels through base layer using 1-5/8 inch Type S drywall screws spaced 12 inches on center. Edge joints of wallboard face layer offset 24 inches from those of base layer. Additionally, wallboard face layer attached to base layer with 1-1/2 inch Type G drywall screws spaced 8 inches on center, placed 1-1/2 inches from face layer end joints.
- 7. Finish System (not shown): Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.

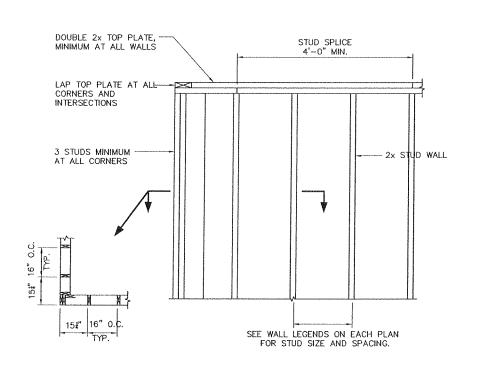
Fire Test conducted at National Research Council of Canada Report No. A-4219.13.2 March 23, 1998

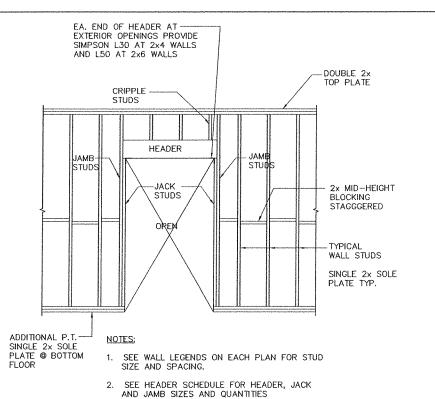
and the second second second	and the second second	STC and IIC	Sound Ratin	ngs for Listed As	sembly		
V	Vithout Gypsur	n Concrete			With Gypsum	Concrete	
Cushione	d Vinyl	Carpet &	& Pad	Cushioned	l Vinyl	Carpet	& Pad
STC	IIC	STC	IIC	STC	IIC	STC	IIC
59	50	55 ^b	68 b	65	51	63 ^b	65 ^b

^a This assembly may also be used in a fire-rated roof/ceiling application, but only when constructed exactly as described.

^b STC and IIC values estimated by David L. Adams Associates, Inc



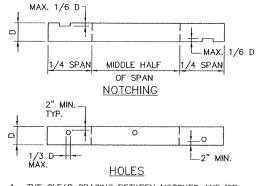




WALL CORNER & TOP PLATE SPLICE DETAIL

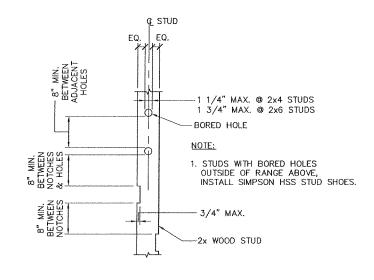
WOOD FRAMING FOR DOOR FRAMING

3 S2.4

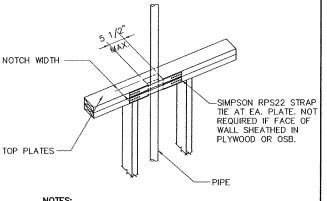


- THE CLEAR SPACING BETWEEN NOTCHES AND/OR BOREHOLES SHALL BE AT LEAST 12" HORIZONTALLY.
- 2. NOTCHES AND HOLES OTHER THAN SHOWN SHALL BE APPROVED BY THE ENGINEER.
- 3. SEE THE WOOD I JOIST MANUFACTURER'S INSTALLATION INFORMATION FOR HOLES ALLOWED IN WOOD I JOISTS.

NOTCHING AND HOLES ALLOWED
IN WOOD JOISTS DETAIL



NOTCHING AND HOLES
ALLOWED IN 2x WOOD STUDS DETAIL



NOTES:
1. PROVIDE STRAP WHEN NOTCH WIDTH IS BETWEEN:
1 3/4" TO 2 1/2".

2. NOTCHES GREATER THAN 2 1/2" ARE NOT PERMITTED

<u>NOTCHING ALLOWED</u> IN 2x WALL TOP PLATES DETAIL

EA. END OF HEADER AT -EXTERIOR OPENINGS PROVIDE SIMPSON L30 AT 2x4 WALLS AND L50 AT 2x6 WALLS -DOUBLE 2x TOP PLATE STUDS HEADER JACK 2x MID-HEIGHT STUDS BLOCKING STAGGERED U.N.O. SILL -TYPICAL WALL STUDS ABOVE AND BELOW EA. END OF SILL AT SINGLE 2x SOLE PLATE TYP. EXTERIOR OPENINGS PROVIDE SIMPSON AND L50 AT 2x6 WALLS ADDITIONAL P.T. SINGLE — 2x SOLE PLATE @ BOTTOM FLOOR CRIPPLE STUDS

NOTES:

- 1. SEE WALL LEGENDS ON EACH PLAN FOR STUD SIZE AND SPACING.
- 2. SEE HEADER SCHEDULE FOR HEADER, JACK AND JAMB SIZES AND QUANTITIES.
- 3. PROVIDE 2-2x6 SILL FOR ROUGH OPENINGS 6'-0" AND SMALLER. PROVIDE 3-2x6 SILL FOR ROUGH OPENINGS UP TO 9'-0" WIDE.

WOOD FRAMING FOR WALL OPENING

7

4

S2.4

