

# Industrialized Buildings Commission

◆ An Interstate Compact ◆

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## MINUTES

**Interstate Industrialized Buildings Commission**  
**Wednesday, July 20, 2016**  
**Herndon, Virginia**

Warren Ducharme called the annual meeting of the Interstate Industrialized Buildings Commission to order on Wednesday, July 20, 2016, at 1:23 p.m. at the Crowne Plaza Dulles Airport, 2200 Centreville Road in Herndon, Virginia. Attendance was taken as noted below:

<b>Members</b>	Michael Baier, State of New Jersey
<b>Present:</b>	Warren Ducharme, State of Rhode Island
	Bruce Hagen, State of North Dakota
	Scott McKown, State of Minnesota
	Dennis Quittschreiber, Dynamic Homes
<b>Others</b>	Daniel G. Arevalo, Mobile Modular
<b>Present:</b>	Debbie Becker, Industrialized Buildings Commission
	Barbara Bieganski, Vanguard Modular Building Systems
	Denise Beer, Williams Scotsman
	Andrew Carlson, Pyramid1, Inc.
	N. Kevin Eğilmez, Industrialized Buildings Commission
	Robert Gorleski, PFS Corporation
	Daren Lehman, TRA
	Chuck Osterday, NTA
	Harold Raup, PFS Corporation

## **Approval of Minutes**

On a motion by Mike Baier, seconded by Dennis Quittschreiber, the minutes of the July 15, 2015, meeting were unanimously approved.

## **Correspondence**

The Secretariat noted that a list of correspondence was available.

**Commissioners' Reports:**

Bruce Hagen announced that North Dakota was moving into their code adoption cycle. The 2015 codes including the energy code are scheduled to into effect January 1, 2017.

Warren Ducharme reported that Rhode Island expected to adopt the 2015 codes in October 2016. Industrialized building manufacturers have a six-month grace period.

Mike Baier reported that New Jersey adopted the 2015 I-codes in September of last year and the 2015 National Standard Plumbing Code in January of this year.

Scott McKown reported that Minnesota just finished adopting the 2012 I-codes and the 2012 Uniform Plumbing Code. He also announced that Minnesota will now review codes for adoption every six years beginning with the 2018 editions and grant a 270 day grace period following the notice of adoption.

Kevin Egilmez reported that he provided Minnesota and North Dakota with suggested revisions to their regulations to comply with 2009 edition of the UAP and MRR. Their current regulations are based on the 1993 editions.

Kevin Egilmez briefed the Commission regarding entering into an interim reciprocity agreement with New Mexico. He and Scott McKown met with the state representatives and gave a brief presentation to interested parties in September 2015 in Albuquerque. Based on follow up questions, there still seems to be some misunderstandings regarding the IIBC program.

The new IIBC seal was unveiled (Attachment A). A motion was made by Mike Baier to accept the new seal, seconded by Scott McKown, and approved unanimously.

**New Business**

The Commission postponed further discussion on a procedure for approving used chassis (Attachment B) pending submittal of proposed procedures by the RDC.

The Commission reiterated the need to develop standards for assessing and approving reconfigured buildings (Attachment C). It decided to postpone any discussion pending submittal of proposed guidelines from the RDC.

The Commission discussed label fees which were last increased in 2009. Kevin Egilmez reported that current label fees have failed to generate revenues needed to fully fund the program because annual production has been averaging 7,000 instead of the estimated 10,000 modules (Attachment D). Dennis Quittschreiber stated \$100 fee recommended by the RDC would nearly double the cost for domestic manufacturers. The Commission decided to adjust the fees using the budget for a reduced staff and to consider additional sources of revenues, such as annual registration fees, at next year's meeting. It was also decided that the additional cost of monitoring foreign manufacturers justified charging different fees as well as serving as an incentive to join the program. A motion was made by Mike Baier, seconded by Bruce Hagen, and approved unanimously to set the label fees at \$70 and \$90 for domestic and foreign manufacturers respectively.

The Commission discussed ICC-ES AC462 *Proposed Acceptance Criteria for Shipping Container Building Modules* (Attachment E). Warren Ducharme and Mike Baier will form a study group to obtain additional details from ICC on the proposed procedure and the type of information that would be in a typical evaluation report. The Commission decided not to take any action on the *used shipping container resolution* until the group reported its findings.

Label and inspection requirements for certain types of exterior wall panels were discussed (Attachment F). The panels, which are open construction except for the exterior sheathing and finish, are the only part of the building that is fabricated off site. The Commission agreed with the RDC recommendation to require one label for every 125 linear feet of wall and to set the minimum inspection frequency at 20 percent. The Commission will vote by letter ballot once RDC approves the final wording.

The Commission discussed a proposal which would emphasize that certification labels are the property of the Commission (Attachment G). It may also help in recovering unused labels from manufacturers that have declared bankruptcy. It was proposed to amend the UAP so that each certification label is imprinted with the words "IIBC Property" and to include language on the label order form stressing various UAP provisions and Commission policies regarding certification labels. The Commission agreed that the language should be added to the form and to vote by letter ballot once RDC approves the final wording. Part IV, Section 4(A)(2)(c) of the UAP will be amended when it can be combined with other changes.

The Commission agreed that limits should be set based on aggregate gross floor area when labeling auxiliary attachments and room additions (Attachment H) with a maximum of 600 and an exemption for those under 50 square feet. A vote will be taken by letter ballot once RDC approves the final wording.

### **Financial Report and Approval of FY '17 Budget**

The Commission discussed the audited financial statements and annual report for fiscal year 2015. A motion was made by Mike Baier, seconded by Scott McKown, and approved unanimously to accept the audited financial statements for fiscal year 2015.

Kevin Egilmez said that the Commission had decided to switch auditors every five years and that 2016 would be the fifth financial statement to be prepared by the current auditors. The Commission agreed to send a request for proposal and select a new firm for 2017 fiscal year.

A motion was made by Mike Baier, seconded by Bruce Hagen, and approved unanimously to accept the 2015 Annual Report as drafted.

A motion was made by Bruce Hagen, seconded by Scott McKown, and approved unanimously to adopt the fiscal year 2017 budget with a salary increase pool revised to include all eligible employees. Kevin Egilmez added that revenues from label sales should increase when the new fees go into effect on November 1.

Kevin Egilmez said that NCSBCS provided the Commission with monthly financial statements because of the contract and that Section 6 of the bylaws only required the secretariat

to submit quarterly statements of revenues and expenditures. The Commission agreed to change to quarterly statements to help keep expenses down.

Mike Baier made a motion to enter an executive session to discuss designated agency renewals and staff related issues. The motion, seconded by Dennis Quittschreiber, carried and the IIBC entered an executive session. The motion to reconvene in an open session, made by Mike Baier and seconded by Bruce Hagen, carried unanimously.

A motion was made by Mike Baier, seconded by Bruce Hagen, to redesignate ABI, HWC, Minnesota, NTA, PEI, PFS, Pyramid1, RADCO, EMC, and TRA subject to limitations or conditions, if any, established during the executive session. The motion carried.

### **Election of Officers**

Mike Baier made a motion, seconded by Scott McKown, to elect Rhode Island commissioner as chairman; North Dakota commissioner as vice chairman; and Minnesota commission as treasurer. The motion carried unanimously.

### **Secretariat's Work Assignments**

Kevin Egilmez reviewed secretariat's work assignments:

1. Issue notice regarding label fee increase.
2. Distribute RDC approved documents for review and approval by letter ballot.
  - a. Formal interpretation regarding inspection and labeling of exterior wall panels.
  - b. Statement to be included on forms regarding label control.
  - c. Formal Interpretation regarding aggregate gross floor areas of room additions and auxiliary attachments.
3. Develop proposals for additional revenue sources.

### **Date and Location of Next Meeting**

The next IIBC meeting was tentatively scheduled for July 19, 2017, the third Wednesday in July. The secretariat stated that notice would be sent out regarding the meeting's location.

Mike Baier, seconded by Dennis Quittschreiber, moved to adjourn the meeting and the motion carried. The meeting adjourned at 4:45 p.m.

Respectfully submitted,



N. Kevin Egilmez  
Secretariat Staff

Attachments

ATTACHMENT A



ONE TINT



B&W



INVERTED

## **PYRAMID1, INC.**

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ENGINEERING • DESIGN • REVIEW & INSPECTION AGENCY

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July 9, 2014

N. Kevin Engilmez  
Industrialized Buildings Commission  
505 Huntmar Park Drive  
Herndon, VA 20170

RE: IBC Meeting - 7/16/2014 supplied info  
ModSpace, Elizabethtown, PA

Dear Mr. Egilmez:

Enclosed please find justification for allowing previously used frames to automatically be evaluated and utilized in new construction:

### References

**International Building Code, IBC-12**  
**Specification for Structural Steel Buildings, AISC 360-10**  
**14th Edition of the AISC Steel Construction Manual**  
**AISC Rehabilitation and Retrofit Guide, AISC Steel Design**  
**Guide 15**  
**Uniform Administrative Procedures, July 2007**

### Preface

Modular building are acquired, the existing building removed, with only the frame remaining. This allows a complete assessment of the frame component by Pyramid1 to approved plans. New construction to approved plans is then done on top of the recycled frame, to create a new modular building to be inspected and labeled.

### Code Citations

#### **IBC Section 2205.1 General.**

*The design, fabrication and erection of structural steel for buildings and structures shall be in accordance with AISC 360. ....*

## **AISC Steel Construction Manual, Part 2 - General Design**

### **Consideration, Renovation Retrofit of Existing Structures.**

*The provisions in **AISC Specification** Section B6 governs the evaluation of existing structures. Historical data on available steel grades and hot-rolled structural shapes, including dimensions and properties, is available in **AISC Design Guide 15, Rehabilitation and Retrofit Guild** (Brockenbrough, 2002) and the companion database of historical shape properties from 1873-1999 available at [www.aisc.org](http://www.aisc.org).*

### **AISC Design Guide 15, Section 1.1**

*AISC and other specification for the design of structural steel usually refer to standards published by the American Society for Testing and Materials (ASTM). Table 1.1a presents a historical summary of the pertinent ASTM standards for structural steels for buildings over the last century, with the relevant yield points and tensile strengths specified. ...*

#### **Code Compliance**

If the approximate age of the unit is known, the steel can be calculated based on the AISC specification. To make sure the worst case specification is utilized, a +/- 10 year worst-case value from AISC Design Guide 15 Table 1.1a can be utilized to ensure structural compliance.

Pyramid1 proposes to separately inspect each frame component before introduction into the manufacturing process to assess that the frame can be proven to meet new construction. Any additional repairs to the frame will be done by a certified welder with new, traceable steel members.

#### **Requested Variance**

As all of the construction above the frame is new, ModSpace asks the Commission to allow this type of structure to be automatically allowed under UAP Part IV(A)(7)(h)(i), as the frame can be assessed thru the design evaluation and inspection agency.

If you have any questions, please feel free to contact me at your convenience.

Sincerely,

Andrew Carlson, CBO, MCP  
Review and Inspection Services

ARC/arc

## INTERNATIONAL BUILDING CODE 2012

### Chapter 1. Scope and Administration

#### Section 104.1 Duties and Powers of Building Official

**104.9.1 Used materials and equipment.** The use of used materials which meet the requirements of this code for new materials is permitted. Used equipment and devices shall not be reused unless *approved* by the *building official*.

### Chapter 17. Special Inspections and Tests

#### Section 1701. General

**1701.3 Used materials.** The use of second-hand materials that meet the minimum requirements of this code for new materials shall be permitted.

## UNIFORM ADMINISTRATIVE PROCEDURES

### Part IV. Administration

#### Section 4(A)(7) Relocatable Buildings

When industrialized/modular buildings or building components are relocated, the local enforcement agency shall accept buildings labeled in accordance with these Uniform Administrative Procedures.

(a) – (f) ---

(g) If the previously insigniaed building has not been modified or altered, the building will be eligible for issuance of a new certification label without updating to current codes, since it was built before the effective date of these Uniform Administrative Procedures.

(h) If a previously insigniaed building is altered or modified, Subsection (A)(7)(a),(b),(c) will also be applicable.

(i) Industrialized/modular buildings that do not have a previously affixed state insignia(s), are not automatically eligible for re-labeling. Industrialized/ modular buildings that can be proven or assessed by a designated evaluation and inspection agency to meet these Uniform Administrative Procedures may be approved and labeled in accordance with these Uniform Administrative Procedures and the Model Rules and Regulations.



ANSI/AISC 360-10  
An American National Standard

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# Specification for Structural Steel Buildings

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June 22, 2010

Supersedes the  
*Specification for Structural Steel Buildings*  
dated March 9, 2005  
and all previous versions of this specification

Approved by the AISC Committee on Specifications



AMERICAN INSTITUTE OF STEEL CONSTRUCTION  
One East Wacker Drive, Suite 700  
Chicago, Illinois 60601-1802

*Specification for Structural Steel Buildings*, June 22, 2010  
AMERICAN INSTITUTE OF STEEL CONSTRUCTION

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## APPENDIX 5

### EVALUATION OF EXISTING STRUCTURES

This appendix applies to the evaluation of the strength and *stiffness* under static vertical (gravity) *loads* of existing structures by *structural analysis*, by load tests or by a combination of structural analysis and load tests when specified by the *engineer of record* or in the contract documents. For such evaluation, the steel grades are not limited to those listed in Section A3.1. This appendix does not address load testing for the effects of seismic loads or moving loads (vibrations).

The Appendix is organized as follows:

- 5.1. General Provisions
- 5.2. Material Properties
- 5.3. Evaluation by Structural Analysis
- 5.4. Evaluation by Load Tests
- 5.5. Evaluation Report

#### 5.1. GENERAL PROVISIONS

These provisions shall be applicable when the evaluation of an existing steel structure is specified for (a) verification of a specific set of design loadings or (b) determination of the *available strength* of a *force* resisting member or system. The evaluation shall be performed by *structural analysis* (Section 5.3), by *load tests* (Section 5.4), or by a combination of structural analysis and load tests, as specified in the contract documents. Where load tests are used, the *engineer of record* shall first analyze the applicable parts of the structure, prepare a testing plan, and develop a written procedure to prevent excessive permanent deformation or catastrophic collapse during testing.

#### 5.2. MATERIAL PROPERTIES

##### 1. Determination of Required Tests

The *engineer of record* shall determine the specific tests that are required from Sections 5.2.2 through 5.2.6 and specify the locations where they are required. Where available, the use of applicable project records shall be permitted to reduce or eliminate the need for testing.

##### 2. Tensile Properties

Tensile properties of members shall be considered in evaluation by *structural analysis* (Section 5.3) or *load tests* (Section 5.4). Such properties shall include the *yield stress*, *tensile strength* and *percent elongation*. Where available, certified material test reports or certified reports of tests made by the fabricator or a testing laboratory in accordance with ASTM A6/A6M or A568/A568M, as applicable, shall be permit-

ted for this purpose. Otherwise, tensile tests shall be conducted in accordance with ASTM A370 from samples cut from components of the structure.

### 3. Chemical Composition

Where welding is anticipated for repair or modification of existing structures, the chemical composition of the steel shall be determined for use in preparing a welding procedure specification (WPS). Where available, results from certified material test reports or certified reports of tests made by the fabricator or a testing laboratory in accordance with ASTM procedures shall be permitted for this purpose. Otherwise, analyses shall be conducted in accordance with ASTM A751 from the samples used to determine tensile properties, or from samples taken from the same locations.

### 4. Base Metal Notch Toughness

Where welded tension *splices* in heavy shapes and plates as defined in Section A3.1d are critical to the performance of the structure, the Charpy V-notch toughness shall be determined in accordance with the provisions of Section A3.1d. If the notch toughness so determined does not meet the provisions of Section A3.1d, the *engineer of record* shall determine if remedial actions are required.

### 5. Weld Metal

Where structural performance is dependent on existing welded *connections*, representative samples of *weld metal* shall be obtained. Chemical analysis and mechanical tests shall be made to characterize the weld metal. A determination shall be made of the magnitude and consequences of imperfections. If the requirements of AWS D1.1/D1.1M are not met, the *engineer of record* shall determine if remedial actions are required.

### 6. Bolts and Rivets

Representative samples of bolts shall be inspected to determine markings and classifications. Where bolts cannot be properly identified visually, representative samples shall be removed and tested to determine *tensile strength* in accordance with ASTM F606 or ASTM F606M and the bolt classified accordingly. Alternatively, the assumption that the bolts are ASTM A307 shall be permitted. Rivets shall be assumed to be ASTM A502, Grade 1, unless a higher grade is established through documentation or testing.

## 5.3. EVALUATION BY STRUCTURAL ANALYSIS

### 1. Dimensional Data

All dimensions used in the evaluation, such as spans, *column* heights, member spacings, *bracing* locations, cross section dimensions, thicknesses, and *connection* details, shall be determined from a field survey. Alternatively, when available, it shall be permitted to determine such dimensions from applicable project design or shop drawings with field verification of critical values.

## 2. Strength Evaluation

*Forces (load effects)* in members and connections shall be determined by *structural analysis* applicable to the type of structure evaluated. The load effects shall be determined for the static vertical (gravity) *loads* and *factored load* combinations stipulated in Section B2.

The *available strength* of members and connections shall be determined from applicable provisions of Chapters B through K of this Specification.

## 3. Serviceability Evaluation

Where required, the deformations at *service loads* shall be calculated and reported.

# 5.4. EVALUATION BY LOAD TESTS

## 1. Determination of Load Rating by Testing

To determine the *load* rating of an existing floor or roof structure by testing, a test load shall be applied incrementally in accordance with the *engineer of record's* plan. The structure shall be visually inspected for signs of distress or imminent failure at each load level. Appropriate measures shall be taken if these or any other unusual conditions are encountered.

The tested strength of the structure shall be taken as the maximum applied test load plus the in-situ dead load. The live load rating of a floor structure shall be determined by setting the tested strength equal to  $1.2D + 1.6L$ , where  $D$  is the nominal dead load and  $L$  is the nominal live load rating for the structure. The nominal live load rating of the floor structure shall not exceed that which can be calculated using applicable provisions of the specification. For roof structures,  $L_r$ ,  $S$  or  $R$  as defined in ASCE/SEI 7, shall be substituted for  $L$ . More severe *load combinations* shall be used where required by *applicable building codes*.

Periodic unloading shall be considered once the *service load* level is attained and after the onset of inelastic structural behavior is identified to document the amount of permanent set and the magnitude of the inelastic deformations. Deformations of the structure, such as member deflections, shall be monitored at critical locations during the test, referenced to the initial position before loading. It shall be demonstrated that the deformation of the structure does not increase by more than 10% during a one-hour holding period under sustained, maximum test load. It is permissible to repeat the sequence if necessary to demonstrate compliance.

Deformations of the structure shall also be recorded 24 hours after the test loading is removed to determine the amount of permanent set. Because the amount of acceptable permanent deformation depends on the specific structure, no limit is specified for permanent deformation at maximum loading. Where it is not feasible to load test the entire structure, a segment or zone of not less than one complete bay, representative of the most critical conditions, shall be selected.

## 2. Serviceability Evaluation

When *load* tests are prescribed, the structure shall be loaded incrementally to the *service load* level. Deformations shall be monitored during a one hour holding period under sustained service test load. The structure shall then be unloaded and the deformation recorded.

## 5.5. EVALUATION REPORT

After the evaluation of an existing structure has been completed, the *engineer of record* shall prepare a report documenting the evaluation. The report shall indicate whether the evaluation was performed by *structural analysis*, by *load* testing, or by a combination of structural analysis and load testing. Furthermore, when testing is performed, the report shall include the loads and load combination used and the load-deformation and time-deformation relationships observed. All relevant information obtained from *design drawings*, material test reports, and auxiliary material testing shall also be reported. Finally, the report shall indicate whether the structure, including all members and *connections*, is adequate to withstand the *load effects*.

# RECONFIGURING BUILDINGS

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## PART IV. ADMINISTRATION

### SECTION 4. CERTIFICATION

#### (E) Alterations of Certified Units

Industrialized/modular buildings or building components certified and labeled pursuant to these Uniform Administrative Procedures shall not be altered in any way prior to the issuance of a certificate of occupancy without resubmission to the evaluation agency for approval of the alteration and of the unit which includes the alteration.

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#### Background:

Certified modules are being combined to form new buildings that bear little resemblance to the original building. These modules may have been part of bigger or smaller buildings; manufactured to different codes; and classified under different use or occupancy groups. The reconfigured buildings may also incorporate newly manufactured modules.

#### Discussion:

1. What is the date of manufacture for determining applicable codes and standards?
2. Which on-site installation instructions/requirements apply?
3. How is the 50-percent alteration rule applied?
4. Which aspects of the plan review responsibilities are transferred to the local authority?

#### Recommendation:

Develop standards for addressing reconfigured buildings.

## NOTES/COMMENTS:

### Bump-outs:

1'x8' bump-out (2015-114), 2' x 5' ship-loose fireplace (2015-112); 14' x 14' Dining Room AND 9' x 22' Garage section (2015-110); (2) 2' x 8' bump-out (2015-099); PERFECT! 11x27 Dining & Great Room bump-out, 14 x 22 Bedroom bump-out, 6' x 14 Den bump-out, 6' x 14' bedroom bump-out (2015-091).



# ATTACHMENT D

## INTERSTATE INDUSTRIALIZED BUILDINGS COMMISSION

### Model Budget

#### Program Costs:

Consolidated G&A Expenses	\$ 157,705
Consolidated Fringe Expenses	\$ 123,992
Task 3: Rules & Regulations Maintenance	\$ 2,948
Task 4: Certification Program	\$ 8,844
Task 5: Training Seminars	\$ 24,714
Task 6: Label Program	\$ 53,616
Task 7: Library Maintenance	\$ 43,496
Task 8: Plant Monitoring	\$ 185,857
Task 9: Headquarters Monitoring	\$ 18,874
Task 10: Design Review	\$ 219,275
Task 11: IT Services	\$ 20,386
Task 12: Marketing & Outreach	\$ 17,836
<b>Total:</b>	<b>\$ 596,000</b>
<b>Label Fee Distribution:</b>	<b>\$ 115,000</b>
<b>Total Costs:</b>	<b>\$ 711,000</b>

#### Reduced Staff

\$ 153,640
\$ 91,777
\$ 3,291
\$ 9,874
\$ 27,187
\$ 59,866
\$ 48,567
\$ 199,377
\$ 20,958
\$ 67,381
\$ 21,574
\$ 19,799
<b>\$ 478,000</b>
<b>\$ 115,000</b>
<b>\$ 593,000</b>

#### Revenue Sources:

Designation Fees	\$ 4,500
Seminar Fees	\$ 3,500
Certification Fees	\$ 2,000
HQ Audit Reimbursements	\$ 5,500
Misc. Income (interest, etc.)	\$ 3,600
<b>Total Revenues exc. Label Fees:</b>	<b>\$ 19,100</b>

\$ 4,500
\$ 3,500
\$ 2,000
\$ 5,500
\$ 3,600
<b>\$ 19,100</b>

**Revenues from Label Fees: \$ 691,900**

**\$ 573,900**

#### Label Fee Calculations

Annual Production (10-yr avg.):	7,000
Domestic Production (25%):	1,750
Foreign Production (75%):	5,250
<b>Domestic Label Fee:</b>	<b>\$ 82</b>
<b>Foreign Label Fee:</b>	<b>\$ 104</b>

*Foreign Label Fee multiplier = \$70/\$55 = 1.2727*

7,000
1,750
5,250
<b>\$ 68</b>
<b>\$ 87</b>

**10,000**  
2,500  
7,500

**\$ 58**  
**\$ 73**

# INTERSTATE INDUSTRIALIZED BUILDINGS COMMISSION

## Model Budget

### Task 1: Consolidated G&A Expenses

Labor	\$	49,770
Fringes, G&A Labor	\$	24,839
Office Rent	\$	28,080
Telephone/Conf. Calls	\$	5,100
Equipment Rental, Maintenance	\$	1,000
Consulting, Accounting	\$	14,760
Professional Insurances	\$	2,666
Business License, Taxes	\$	150
Annual Meeting & Travel	\$	7,500
Financial Audit	\$	7,200
Label Supplies	\$	2,000
Legal Fees	\$	3,500
Liability Insurance	\$	4,250
Office Supplies	\$	1,500
Postage & Shipping	\$	750
Printing	\$	500
Depreciation, Computers	\$	1,500
Storage	\$	2,640
<b>Total:</b>	<b>\$</b>	<b>157,705</b>

### Task 2: Consolidated Fringe Expenses

Tax, Unemployment, Workers comp.	\$	500
Tax, Social Security & Medicare	\$	26,572
Insurance, Life & Disability	\$	9,360
Insurance, Medical & Dental	\$	45,120
401k Contribution	\$	18,147
Leave, Vacation	\$	21,076
Leave, Sick & Emergency	\$	14,696
Leave, Holidays	\$	13,360
Fringes, G&A Labor	\$	(24,839)
<b>Total:</b>	<b>\$</b>	<b>123,992</b>

### Task 3: Rules and Regulations Maintenance

Labor	Cost
	\$ 1,381
Fringe:	\$ 689
G&A:	\$ 877
<b>Total:</b>	<b>\$ 2,948</b>

### Task 4: Certification Program

Labor	Cost
	\$ 4,144
Fringe:	\$ 2,068
G&A:	\$ 2,631
<b>Total:</b>	<b>\$ 8,844</b>

### Task 5: Training Seminars

Labor	Cost
	\$ 9,942
Fringe:	\$ 4,962
G&A:	\$ 6,311
Travel Costs	\$ 2,000
Room rental & incidentals	\$ 1,500
<b>Total:</b>	<b>\$ 24,714</b>

# INTERSTATE INDUSTRIALIZED BUILDINGS COMMISSION

## Model Budget

### Task 6: Label Control Program

Labor	Cost
	\$ 25,127
Fringe:	\$ 12,540
G&A:	\$ 15,949
<b>Total:</b>	<b>\$ 53,616</b>

### Task 7: Library Maintenance

Labor	Cost
	\$ 20,384
Fringe:	\$ 10,173
G&A:	\$ 12,939
<b>Total:</b>	<b>\$ 43,496</b>

### Task 8: In-Plant Monitoring

Labor	Cost
	\$ 74,447
Fringe:	\$ 37,154
G&A:	\$ 47,256
Direct Costs	
Auditor Consultant .....	\$ -
Travel Costs	
Secretariat .....	\$ 27,000
State .....	\$ -
<b>Total:</b>	<b>\$ 185,857</b>

### Task 9: Headquarters Audits

Labor	Cost
	\$ 8,377
Fringe:	\$ 4,180
G&A:	\$ 5,317
Travel Costs .....	\$ 1,000
<b>Total:</b>	<b>\$ 18,874</b>

### Task 10: Design Review

Labor	Cost
	\$ 91,983
Fringe:	\$ 45,905
G&A:	\$ 58,387
Direct Costs	
Engineer Consultant .....	400 \$ 23,000
<b>Total:</b>	<b>\$ 219,275</b>

### Task 11: IT Services

Labor	Cost
	\$ 4,774
Fringe:	\$ 2,382
G&A:	\$ 3,030
Direct Costs	
Domain Name (.com, .org) .....	\$ 100
Web Hosting .....	\$ 600
Website Development .....	\$ 5,000
IT Consultant .....	\$ 1,500
Hardware & Software .....	\$ 3,000
<b>Total:</b>	<b>\$ 20,386</b>

### Task 12: Marketing & Outreach

Labor	Cost
	\$ 7,890
Fringe:	\$ 3,938
G&A:	\$ 5,008
Travel .....	\$ 1,000
<b>Total:</b>	<b>\$ 17,836</b>



## PROPOSED ACCEPTANCE CRITERIA FOR SHIPPING CONTAINER BUILDING MODULES

AC462

Proposed December 2015

### PREFACE

Evaluation reports issued by ICC Evaluation Service, LLC (ICC-ES), are based upon performance features of the International family of codes. (Some reports may also reference older code families such as the BOCA National Codes, the Standard Codes, and the Uniform Codes.) Section 104.11 of the *International Building Code*® reads as follows:

The provisions of this code are not intended to prevent the installation of any materials or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

ICC-ES may consider alternate criteria for report approval, provided the report applicant submits data demonstrating that the alternate criteria are at least equivalent to the criteria set forth in this document, and otherwise demonstrate compliance with the performance features of the codes. ICC-ES retains the right to refuse to issue or renew any evaluation report, if the applicable product, material, or method of construction is such that either unusual care with its installation or use must be exercised for satisfactory performance, or if malfunctioning is apt to cause injury or unreasonable damage.

NOTE: The Preface for ICC-ES acceptance criteria was revised in July 2011 to reflect changes in policy.

*Acceptance criteria are developed for use solely by ICC-ES for purposes of issuing ICC-ES evaluation reports.*

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## PROPOSED ACCEPTANCE CRITERIA FOR SHIPPING CONTAINER BUILDING MODULES (AC462)

### 1.0 INTRODUCTION

**1.1 Purpose:** The purpose of this acceptance criteria is to establish requirements for shipping container building modules to be recognized in an ICC Evaluation Service, LLC (ICC-ES), evaluation report under the 2015 *International Building Code*® (IBC) and the 2015 *International Residential Code*® (IRC). The bases of recognition are IBC Section 104.11 and IRC Section R104.11.

**1.2 Scope:** The acceptance criteria is limited to the evaluation of the reuse of shipping containers as building modules, where the shipping containers are modified for each building project, with the steel components of the shipping containers designed for use in the construction of steel structures under Sections 104.9, 2204, 2205, 2210, and 2211 of the IBC and R104.9 and R301.1.3 of the IRC. The intent of the acceptance criteria is to evaluate the building module's quality control procedures to establish and verify the dimensions, chemical and physical properties of the steel components of the shipping containers being modified into building modules.

### 1.3 Codes and Referenced Standards:

**1.3.1** 2015 *International Building Code*® (IBC), International Code Council.

**1.3.2** 2015 *International Residential Code*® (IRC), International Code Council.

**1.3.3** International Convention for Safe Containers, 1972, International Maritime Organization (IMO).

**1.3.4** Rules for Certification of Cargo Containers, dated 1998, American Bureau of Shipping (ABS).

## **2.0 BASIC INFORMATION**

**2.1 General:** The following information shall be submitted:

**2.1.1 Product Description:** Description of the shipping containers, including the names of each container manufacturer and the name of the agency certifying the shipping container.

**2.1.2 Packaging and Identification:** A description of the method of field identification of the shipping container building modules delivered to the jobsite for final installation. Identification provisions shall include the evaluation report number.

## **3.0 REQUIRED DATA**

**3.1 Shipping Container Manufacturer:** All shipping container manufacturers, from which shipping containers are to be accepted for modification into building modules, shall be identified.

**3.2 Shipping Container Certification:** The shipping containers shall have been initially certified for compliance to the Rules for Certification of Cargo Containers and the International Convention for Safe Containers (CSC) for use as shipping containers by the American Bureau of Shipping (ABS). A current copy of the certification, in English, shall be submitted.

**3.3 Shipping Container Specifications:** Copies of the shipping container specifications and detail drawings for each shipping container manufacturer shall be submitted in English.

**3.4 Material Cross-Reference:** Portions/items of the shipping container to be used in the building modules shall be identified. A cross-reference between the shipping container components, material specification applicable to each component, and the equivalent IBC reference standard shall be submitted. A copy of any standards not referenced directly by the IBC or not referenced by IBC referenced documents shall be submitted in English.

**3.5 Quality Control Program:** Used shipping containers shall have been inspected and accepted for seaworthiness in accordance with the International Convention for Safe Containers (CSC) ~~before being accepted for use as a structural building component~~ after removal from service as a shipping container and prior to conversion into a shipping container building module. ~~A~~ The quality control program shall require a copy of the current inspection shall to be submitted for each shipping container. The quality control program for accepting shipping containers for use as a structural building component shall be submitted.

#### **4.0 QUALITY CONTROL**

**4.1** Quality documentation complying with the ICC-ES Acceptance Criteria for Quality Documentation (AC10) shall be submitted. The submitted quality documentation shall include the information required under Sections 2.1.1, 2.1.2, and 3.1 through 3.5 of this acceptance criteria.

**4.2** The shipping container building modules shall be manufactured under an approved quality control program with inspections by ICC-ES or by a properly accredited inspection agency that has a contractual relationship with ICC-ES.



**4.3** A qualifying inspection shall be conducted at each building module manufacturing facility in accordance with the requirements of the ICC-ES Acceptance Criteria for Inspections and Inspection Agencies (AC304).

**5.0 EVALUATION REPORT RECOGNITION**

**5.1** The evaluation report shall provide a statement indicating the scope of the report is limited to the evaluation of the steel used in the construction of the shipping containers for use in design in accordance with the applicable steel design standard.

**5.2** The evaluation report shall require the submittal of plans and calculations to the authority having jurisdiction for the final structure being constructed from the shipping container modules. ■

# PANELIZED CONSTRUCTION

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## PART IV. ADMINISTRATION

### SECTION 4. CERTIFICATION

#### (A) Labels

##### (1) Number Required

(b) Closed panel construction shall require one certification label for every 600 square feet, or part thereof, of finished floor area.

## PART VIII. RESPONSIBILITIES OF INSPECTION AGENCIES

### SECTION 3. PRODUCTION SURVEILLANCE

(B) Frequency. The inspection agency shall inspect each unit for which it is responsible under its implementing contract with the manufacturer in at least one stage of its production.

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#### Background:

There are companies that manufacture panelized exterior walls that are open except for the exterior finish that is applied over wood structural panels. The walls are placed on concrete slabs poured on site and the roof is constructed on site.

#### Discussion:

- Labeling requirements (one per 600 SF of floor area) for such manufacturers may be overly burdensome.
- The method of specifying the minimum frequency of inspections based on units is difficult to apply to manufacturers of panelized exterior walls.

#### Recommendation:

- Labeling requirements for manufacturers of panelized walls only should be based on linear feet of walls per project (e.g., one label per 125 linear feet).
- Inspection frequency should be based on a percentage of the linear feet of wall produced per project.

# PANELIZED CONSTRUCTION

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# LABEL – IIBC PROPERTY

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## PART IV. ADMINISTRATION

### SECTION 4. CERTIFICATION

#### (A) Labels

(2) Contents. A certification label shall bear the following information:

(c) The words, “See Data Plate.”

(4) Issuance. The label shall be issued in accordance with the following.

(a) ... Certification labels are attached only to buildings or building components manufactured pursuant to an approved building system and inspected pursuant to an approved compliance assurance program.

(b) ... If the conditions of custody are violated, the inspection agency shall immediately regain possession of all certification labels.

#### (C) Violations and Remedial Actions

(3) Program Nonconformance

(c) ... The manufacturer shall return all certification labels allocated ... to the issuing agency within ten calendar days of the effective date of the suspension.

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#### Background:

Over the years, a number of manufacturing facilities where unused certification labels were being kept have closed or declared bankruptcy. Many of the labels were never recovered because the buildings could not be accessed. Furthermore, stating explicitly that certification labels are the property of the Commission may help in the recovery of the labels if a manufacturer declares bankruptcy.

#### Recommendations:

- Insert the following language to the Label Order Form or to Part IV, Section 4(A)(4) of the UAP adding the following sentence: “Assigned certification labels are not transferable and shall remain the property of the Commission. Certification labels may be confiscated if conditions of custody are violated and are void when not affixed in accordance with the Uniform Administrative Procedures.”
- Amend Part IV, Section 4(A)(2)(c) of the UAP by adding the following : “IIBC PROPERTY”

# LABEL – AUXILIARY ATTACHMENTS

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## PART IV. ADMINISTRATION

### SECTION 4. CERTIFICATION

#### (A) Labels

##### (1) Number Required

(a) All industrialized/modular buildings shall require one certification label per module except:

4. Auxiliary attachments or room additions to a labeled dwelling shall require one certification label regardless of the number of pieces shipped.

(From the definitions: "MODULE" means a closed wall structure or substantial part of a closed wall structure incorporating one or more rooms used as habitable, occupiable, or mechanical/equipment space.)

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#### Background:

Many custom homes have one or more attachments of varying sizes – from (1) 1' x 8' to (5) with an aggregate gross floor area of nearly 800 square feet. Many of the larger sections fit the description of a module, an auxiliary attachment and a room addition making it difficult to apply the above provisions.

#### Discussion:

It would be impractical to develop guidelines to distinguish a module from a room addition or an auxiliary attachment since they all contain the same elements. A better approach would be to base label requirements on the aggregate gross floor area similar to panelized construction (i.e., one label per 600 square feet). An exemption should be granted if the one or more attachments are small (e.g., an aggregate floor area of less than 50 square feet).

#### Recommendation:

Issue a Formal Interpretation that the maximum aggregate gross floor area of room additions and auxiliary attachments per label is 600 square feet with an exemption for those that are less than 50 square feet.