



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: <u>1071 BRIGHDN AVE, PORTLAND</u>		
Total Square Footage of Proposed Structure <u>3,475 S.F. BUILDING 535 S.F. CANOPY</u>		Square Footage of Lot <u>32,216</u>
Tax Assessor's Chart, Block & Lot Chart# <u>274</u> Block# <u>B</u> Lot# <u>16</u>	Owner: <u>UNIVERSITY CREDIT UNION</u> <u>RANGLEY ROAD</u> <u>ORONO, ME 04469-5779</u>	Telephone: <u>800-</u> <u>696-8628</u> <u>Joe Genais</u>
Lessee/Buyer's Name (If Applicable) <u>/</u>	Applicant name, address & telephone: <u>UNIVERSITY CREDIT UNION</u> <u>RANGLEY RD.</u> <u>ORONO, ME, 04469-5779</u> <u>800-696-8628 JOE GENAIS</u>	Cost Of Work: \$ <u>705,000 -</u> Fee: \$ <u>7070 -</u> C of O Fee: \$ <u>75 -</u>
Current legal use (i.e. single family) <u>VACANT</u> If vacant, what was the previous use? <u>RESTAURANT</u> Proposed Specific use: <u>CREDIT UNION</u> Is property part of a subdivision? <u>NO</u> If yes, please name _____ Project description: <u>3,470 sq ft Credit Union - single story, Brick + EIFS Facade with 3 lane drive up.</u>		
Contractor's name, address & telephone: <u>BRAND PARTNERS, 10 MAIN ST. ROCHESTER, NH 03839</u> <u>603-335-1400</u> Who should we contact when the permit is ready: <u>ADAM GIUSDORF</u> Mailing address: _____ Phone: <u>603-682-8671</u>		

Please submit all of the information outlined in the Commercial Application 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.

Signature of applicant: <u>[Signature]</u>	Date: <u>5/2/07</u>
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This is not a permit; you may not commence ANY work until the permit is issued.



New Commercial Permit Application Checklist

All of the following information is required and must be submitted. Checking off each item as you prepare your application package will ensure your package is complete and will help to expedite the permitting process.

One (1) complete Set of construction drawings must include:

Note: Construction documents for costs in excess of \$50,000.00 must be prepared by a Design Professional and bear their seal.

- Cross sections w/framing details
- Detail of any new walls or permanent partitions
- Floor plans and elevations
- Window and door schedules
- Foundation plans with rebar specifications and required drainage and damp proofing (if applicable)
- Detail egress requirements and fire separations
- Insulation R-factors of walls, ceilings, floors and U-factors of windows as per the IEBC 2003
- Complete the Accessibility Certificate and The Certificate of Design
- A statement of special inspections as required per the IBC 2003
- Complete electrical and plumbing layout.
- Mechanical drawings for any specialized equipment such as furnaces, chimneys, gas equipment, HVAC equipment (air handling) or other types of work that may require special review.
- Reduced plans or electronic files in PDF format are required if originals are larger than 11" x 17"
- Per State Fire Marshall, all new bathrooms must be ADA compliant.

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Detail inspections

Separate permits are required for internal & external plumbing, HVAC and electrical installations.

^{1 copy}
Nine (9) copies of the minor (< 10,000 sf) or major (> 10,000 sf) site plan application is required that includes:

- A stamped boundary survey to scale showing north arrow, zoning district and setbacks to a scale of $\geq 1" = 20'$ on paper $\geq 11" \times 17"$
- The shape and dimension of the lot, footprint of the proposed structure and the distance from the actual property lines. Photocopies of the plat or hand draw footprints not to scale will not be accepted.
- Location and dimensions of parking areas and driveways, street spaces and building frontage
- Finish floor or sill elevation (based on mean sea level datum)
- Location and size of both existing utilities in the street and the proposed utilities serving the building
- Existing and proposed grade contours
- Silt fence (erosion control) locations

Fire Department requirements.

The following shall be submitted on a separate sheet:

- Name, address and phone number of applicant **and** the project architect. c
- Proposed use of structure (NFPA and IBC classification) c
- Square footage of proposed structure (total and per story) c
- Existing and proposed fire protection of structure.
- Separate plans shall be submitted for
 - a) Suppression system *N/A*
 - b) Detection System (separate permit is required) *N/A*
- A separate Life Safety Plan must include:
 - a) Fire resistance ratings of all means of egress
 - b) Travel distance from most remote point to exit discharge
 - c) Location of any required fire extinguishers
 - d) Location of emergency lighting
 - e) Location of exit signs
 - f) NFPA 101 code summary
- Elevators shall be sized to fit an 80" x 24" stretcher.

For questions on Fire Department requirements call the Fire Prevention Officer at (207) 874-8405.

Please submit all of the information outlined in this application checklist. If the application is incomplete, the application may be refused.

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.

Permit Fee: \$30.00 for the first \$1000.00 construction cost, \$10.00 per additional \$1000.00 cost

This is not a Permit; you may not commence any work until the Permit is issued.



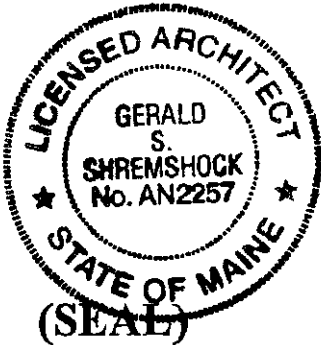
Accessibility Building Code Certificate

Designer: GERALD SHREMSHOCK

Address of Project: 1071 BRIGHTON AVE.

Nature of Project: UNIVERSITY CREDIT UNION
(COMMERCIAL BANK)

The technical submissions covering the proposed construction work as described above have been designed in compliance with applicable referenced standards found in the Maine Human Rights Law and Federal Americans with Disability Act. Residential Buildings with 4 units or more must conform to the Federal Fair Housing Accessibility Standards. Please provide proof of compliance if applicable.



Signature: [Handwritten Signature]

Title: PRESIDENT

Firm: SHREMSHOCK ARCHITECTS, INC.

Address: 6130 SUNBURY ROAD
WESTERVILLE, OH 43081

Phone: (614) 545-4550

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



Certificate of Design

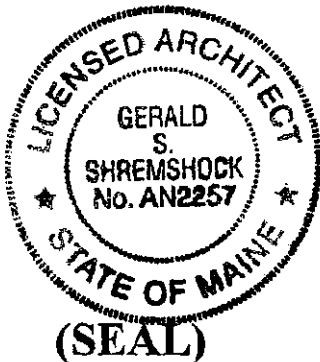
Date: MAY 2, 2007

From: GERALD SHREMSHOCK

These plans and / or specifications covering construction work on:

UNIVERSITY CREDIT UNION

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: [Handwritten Signature]

Title: PRESIDENT

Firm: SHREMSHOCK ARCHITECTS, INC.

Address: 6130 SUNBURY ROAD

WESTERVILLE, OH 43081

Phone: (614) 545-4550

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Certificate of Design Application

From Designer: GERALD SHREMSHOCK
 Date: MAY 2, 2007
 Job Name: UNIVERSITY CREDIT UNION
 Address of Construction: 1071 BRIGATON AVE.

2003 International Building Code

Construction project was designed to the building code criteria listed below:

Building Code & Year 2003 IBC Use Group Classification (s) B - BUSINESS
 Type of Construction V-B
 Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2003 IRC NO
 Is the Structure mixed use? NO If yes, separated or non separated or non separated (section 302.3) N/A
 Supervisory alarm System? NO Geotechnical/Soils report required? (See Section 1802.2) _____

Structural Design Calculations

_____ Submitted for all structural members (106.1 - 106.11)

Design Loads on Construction Documents (1603)

Uniformly distributed floor live loads (7603.11, 1807)

Floor Area Use	Loads Shown \pm
<u>CORRIDOR, FIRST FLOOR</u>	<u>100 PSF OR 1,000 CONCENTRATED</u>
<u>OFFICE</u>	<u>50 PSF OR 2,000[#] "</u>
<u>RESTROOMS</u>	<u>50 PSF</u>
<u>RETAIL</u>	<u>100 PSF OR 1,000[#] CONCENTRATED</u>

Wind loads (1603.1.4, 1609)

1609.6 Design option utilized (1609.1.1, 1609.6)
100 Basic wind speed (1809.3)
II, I=1.0 Building category and wind importance Factor, I_w table 1604.5, 1609.5
B Wind exposure category (1609.4)
+0.18 -0.18 Internal pressure coefficient (ASCE 7)
ROOF: +10, -36 Component and cladding pressures (1609.1.1, 1609.6.2.2)
WALL: +14, -16
WALL: 12.8, 12.8 Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

EQUV, LAT-FORCE Design option utilized (1614.1)
I Seismic use group ("Category")
 $S_D = 0.371, S_{D1} = 0.158$ Spectral response coefficients, S_D & S_{D1} (1615.1)
D Site class (1615.1.5)

NO Live load reduction
35 Roof live loads (1603.1.2, 1607.11)
35 Roof snow loads (1603.7.3, 1608)
50 Ground snow load, P_g (1608.2)
35 If $P_g > 10$ psf, flat-roof snow load P_f
1.0 If $P_g > 10$ psf, snow exposure factor, C_e
1.0 If $P_g > 10$ psf, snow load importance factor, I_s
1.0 Roof thermal factor, C_t (1608.4)
 _____ Sloped roof snowload, P_s (1608.4)
C Seismic design category (1616.3)
WOOD ST. PANELS Basic seismic force resisting system (1617.6.2)
6/2 Response modification coefficient, R , and deflection amplification factor, C_d (1617.6.2)
EQUV, LAT. Analysis procedure (1616.6, 1617.5)
8 kips Design base shear (1617.4, 1617.5.1)
Flood loads (1803.1.6, 1612)
 _____ Flood Hazard area (1612.3)
 _____ Elevation of structure
Other loads
 _____ Concentrated loads (1607.4)
20 PSF Partition loads (1607.5)
 _____ Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.1 General.

1704.1 General.

Where application is made for construction as described in this section, the owner or the registered design professional in responsible charge acting as the owner's agent shall employ one or more special inspectors to provide inspections during construction on the types of work listed under Section 1704. The special inspector shall be a qualified person who shall demonstrate competence, to the satisfaction of the building official, for inspection of the particular type of construction or operation requiring special inspection. These inspections are in addition to the inspections specified in Section 109.

Exceptions:

1. Special inspections are not required for work of a minor nature or as warranted by conditions in the jurisdiction as approved by the building official.
2. Special inspections are not required for building components unless the design involves the practice of professional engineering or architecture as defined by applicable state statutes and regulations governing the professional registration and certification of engineers or architects.
3. Unless otherwise required by the building official, special inspections are not required for occupancies in Group R-3 as applicable in Section 101.2 and occupancies in Group U that are accessory to a residential occupancy including, but not limited to, those listed in Section 312.1.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.1 General. / 1704.1.1 Building permit requirement.

1704.1.1 Building permit requirement.

The permit applicant shall submit a statement of special inspections prepared by the registered design professional in responsible charge in accordance with Section 106.1 as a condition for permit issuance. This statement shall include a complete list of materials and work requiring special inspections by this section, the inspections to be performed and a list of the individuals, approved agencies or firms intended to be retained for conducting such inspections.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.1 General. / 1704.1.2 Report requirement.

1704.1.2 Report requirement.

Special inspectors shall keep records of inspections. The special inspector shall furnish inspection reports to the building official, and to the registered design professional in responsible charge. Reports shall indicate that work inspected was done in conformance to

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approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If the discrepancies are not corrected, the discrepancies shall be brought to the attention of the building official and to the registered design professional in responsible charge prior to the completion of that phase of the work. A final report documenting required special inspections and correction of any discrepancies noted in the inspections shall be submitted at a point in time agreed upon by the permit applicant and the building official prior to the start of work.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.2 Inspection of fabricators.

1704.2 Inspection of fabricators.

Where fabrication of structural load-bearing members and assemblies is being performed on the premises of a fabricator's shop, special inspection of the fabricated items shall be required by this section and as required elsewhere in this code.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.2 Inspection of fabricators. / 1704.2.1 Fabrication and implementation procedures.

1704.2.1 Fabrication and implementation procedures.

The special inspector shall verify that the fabricator maintains detailed fabrication and quality control procedures that provide a basis for inspection control of the workmanship and the fabricator's ability to conform to approved construction documents and referenced standards. The special inspector shall review the procedures for completeness and adequacy relative to the code requirements for the fabricator's scope of work.

Exception: Special inspections as required by Section 1704.2 shall not be required where the fabricator is approved in accordance with Section 1704.2.2.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.2 Inspection of fabricators. / 1704.2.2 Fabricator approval.

1704.2.2 Fabricator approval.

Special inspections required by this code are not required where the work is done on the premises of a fabricator registered and approved to perform such work without special inspection. Approval shall be based upon review of the fabricator's written procedural and quality control manuals and periodic auditing of fabrication practices by an approved special inspection agency. At completion of fabrication, the approved fabricator shall submit a certificate of compliance to the building official stating that the work was performed in accordance with the approved construction documents.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL

INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.3 Steel construction.

1704.3 Steel construction.

The special inspections for steel elements of buildings and structures shall be as required by Section 1704.3 and Table 1704.3. Where required, special inspection of steel shall also comply with Section 1715.

Exceptions:

1. Special inspection of the steel fabrication process shall not be required where the fabricator does not perform any welding, thermal cutting or heating operation of any kind as part of the fabrication process. In such cases, the fabricator shall be required to submit a detailed procedure for material control that demonstrates the fabricator's ability to maintain suitable records and procedures such that, at any time during the fabrication process, the material specification, grade and mill test reports for the main stress-carrying elements are capable of being determined.
2. The special inspector need not be continuously present during welding of the following items, provided the materials, welding procedures and qualifications of welders are verified prior to the start of the work; periodic inspections are made of the work in progress and a visual inspection of all welds is made prior to completion or prior to shipment of shop welding.
 - 2.1. Single-pass fillet welds not exceeding 5/16 inch (7.9 mm) in size.
 - 2.2. Floor and roof deck welding.
 - 2.3. Welded studs when used for structural diaphragm.
 - 2.4. Welded sheet steel for cold-formed steel framing members such as studs and joists.
 - 2.5. Welding of stairs and railing systems.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.3 Steel construction. /

1704.3.1 Welding.

1704.3.1 Welding.

Welding inspection shall be in compliance with AWS D1.1. The basis for welding inspector qualification shall be AWS D1.1.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.3 Steel construction. /

1704.3.2 Details.

1704.3.2 Details.

The special inspector shall perform an inspection of the steel frame to verify compliance with the details shown on the approved construction documents, such as bracing, stiffening, member locations and proper application of joint details at each connection.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.3 Steel construction. / 1704.3.3 High-strength bolts.

1704.3.3 High-strength bolts.

Installation of high-strength bolts shall be periodically inspected in accordance with AISC specifications.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.3 Steel construction. / 1704.3.3 High-strength bolts. / 1704.3.3.1 General.

1704.3.3.1 General.

While the work is in progress, the special inspector shall determine that the requirements for bolts, nuts, washers and paint; bolted parts and installation and tightening in such standards are met. For bolts requiring pretensioning, the special inspector shall observe the preinstallation testing and calibration procedures when such procedures are required by the installation method or by project plans or specifications; determine that all piles of connected materials have been drawn together and properly snugged and monitor the installation of bolts to verify that the selected procedure for installation is properly used to tighten bolts. For joints required to be tightened only to the snug-tight condition, the special inspector need only verify that the connected materials have been drawn together and properly snugged.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.3 Steel construction. / 1704.3.3 High-strength bolts. / 1704.3.3.2 Periodic monitoring.

1704.3.3.2 Periodic monitoring.

Monitoring of bolt installation for pretensioning is permitted to be performed on a periodic basis when using the turn-of-nut method with match marking techniques, the direct tension indicator method or the alternate design fastener (twist-off bolt) method. Joints designated as snug tight need be inspected only on a periodic basis.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.3 Steel construction. / TABLE 1704.3 REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

**TABLE 1704.3
REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION**

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VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD ^a	IBC REFERENCE
1. Material verification of high-strength bolts, nuts and washers:				
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	—	X	Applicable ASTM material specifications; AISC 335, Section A3.4; AISC LRFD, Section A3.3	—
b. Manufacturer's certificate of compliance required.	—	X	—	—
2. Inspection of high-strength bolting:				
a. Bearing-type connections.	—	X	AISC LRFD Section M2.5	1704.3.3
b. Slip-critical connections.	X	X		
3. Material verification of structural steel:				
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	—	—	ASTM A 6 or ASTM A 568	1708.4
b. Manufacturers' certified mill test reports.	—	—	ASTM A 6 or ASTM A 568	
4. Material verification of weld filler materials:				
a. Identification markings to conform to AWS specification in the approved construction documents.	—	—	AISC, ASD, Section A3.4; AISC LRFD, Section A3.5	—
b. Manufacturer's certificate of compliance required.	—	—	—	—
5. Inspection of welding:				
a. Structural steel:	—	—		
1) Complete and partial penetration groove welds.	X	—	AWS D1.1	1704.3.1
2) Multipass fillet welds.	X	—		
3) Single-pass fillet welds $> \frac{5}{16}$ "	X	—		
4) Single-pass fillet welds $\leq \frac{5}{16}$ "	—	X		
5) Floor and deck welds.	—	X	AWS D1.3	—
b. Reinforcing steel:	—	—		
1) Verification of weldability of reinforcing steel other than ASTM A 706.	—	X	AWS D1.4 ACI 318: 3.5.2	1903.5.2
2) Reinforcing steel-resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls and shear reinforcement.	X	—		
3) Shear reinforcement.	X	—		
4) Other reinforcing steel.	—	X		
6. Inspection of steel frame joint details for compliance with approved construction documents:		X		
a. Details such as bracing and stiffening.	—	—	—	1704.3.2
b. Member locations.	—	—		
c. Application of joint details at each connection.	—	—		

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For SI: 1 inch = 25.4 mm.

a. Where applicable, see also Section 1707.1, Special inspection for seismic resistance.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.3 Steel construction. / TABLE 1704.3 REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION / 1704.3.3.3 Continuous monitoring.

1704.3.3.3 Continuous monitoring.

Monitoring of bolt installation for pretensioning using the calibrated wrench method or the turn-of-nut method without matchmarking shall be performed on a continuous basis.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.4 Concrete construction.

1704.4 Concrete construction.

The special inspections and verifications for concrete construction shall be as required by this section and Table 1704.4.

Exception: Special inspections shall not be required for:

1. Isolated spread concrete footings of buildings three stories or less in height that are fully supported on earth or rock.
2. Continuous concrete footings supporting walls of buildings three stories or less in height that are fully supported on earth or rock where:
 - 2.1. The footings support walls of light frame construction;
 - 2.2. The footings are designed in accordance with Table 1805.4.2; or 2.3. The structural design is based on a f_c no greater than 2,500 pounds per square inch (psi) (17.2 Mpa).
3. Nonstructural concrete slabs supported directly on the ground, including prestressed slabs on grade, where the effective prestress in the concrete is less than 150 psi (1.03 Mpa).
4. Concrete foundation walls constructed in accordance with Table 1805.5(1), 1805.5(2), 1805.5(3) or 1805.5(4).
5. Concrete patios, driveways and sidewalks, on grade.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.4 Concrete construction. / 1704.4.1 Materials.

1704.4.1 Materials.

In the absence of sufficient data or documentation providing evidence of conformance to quality standards for materials in Chapter 3 of ACI 318, the building official shall require

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testing of materials in accordance with the appropriate standards and criteria for the material in Chapter 3 of ACI 318. Weld ability of reinforcement, except that which conforms to ASTM A706, shall be determined in accordance with the requirements of Section 1903.5.2.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.4 Concrete construction. / TABLE 1704.4 REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

TABLE 1704.4
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD*	IBC REFERENCE
1. Inspection of reinforcing steel, including prestressing tendons, and placement.	—	X	ACI 318: 3.3, 7.1-7.7	1903.5, 1907.1, 1907.7, 1914.4
2. Inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5B.	—	—	AWS D1.4 ACI 318: 3.5.2	1903.5.2
3. Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased.	X	—	—	1912.5
4. Verifying use of required design mix.	—	X	ACI 318: Ch. 4, 5.2-5.4	1904, 1905.2-1905.4, 1914.2, 1914.3
5. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	—	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1905.6, 1914.10
6. Inspection of concrete and shotcrete placement for proper application techniques.	X	—	ACI 318: 5.9, 5.10	1905.9, 1905.10, 1914.6, 1914.7, 1914.8
7. Inspection for maintenance of specified curing temperature and techniques.	—	X	ACI 318: 5.11-5.13	1905.11, 1905.13, 1914.9
8. Inspection of prestressed concrete: a. Application of prestressing forces. b. Grouting of bonded prestressing tendons in the seismic-force-resisting system.	X X	—	ACI 318: 18.20 ACI 318: 18.18.4	—
9. Erection of precast concrete members.	—	X	ACI 318: Ch. 16	—
10. Verification of in-situ concrete strength, prior to stressing of tendons in posttensioned concrete and prior to removal of shores and forms from beams and structural slabs.	—	X	ACI 318: 6.2	1906.2

For SI: 1 inch = 25.4 mm.

a. Where applicable, see also Section 1707.1, Special Inspection for seismic resistance.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL

INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.5 Masonry construction.

1704.5 Masonry construction.

Masonry construction shall be inspected and evaluated in accordance with the requirements of this section, depending on the classification of the building or structure or nature of occupancy, as defined by this code (see Table 1604.5 and Section 1617.6).

Exception: Special inspections shall not be required for:

1. Empirically designed masonry, glass unit masonry or masonry veneer designed by Section 2109, 2110 or ACI 530/ASCE 5/TMS 402, Chapters 5, 6 or 7, when they are part of nonessential buildings (see Table 1604.5 and Section 1617.6).
2. Masonry foundation walls constructed in accordance with Table 1805.5(1), 1805.5(2), 1805.5(3) or 1805.5(4).

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.5 Masonry construction. / 1704.5.1 Empirically designed masonry, glass unit masonry and masonry veneer in essential facilities.

1704.5.1 Empirically designed masonry, glass unit masonry and masonry veneer in essential facilities.

The minimum inspection program for masonry designed by Chapter 14, Section 2109 or 2110, or by Chapter 5, 6 or 7 of ACI 530/ASCE 5/TMS 402, in essential facilities listed in Table 1604.5 and Section 1616.2, shall comply with Table 1704.5.1.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.5 Masonry construction. / 1704.5.2 Engineered masonry in nonessential facilities.

1704.5.2 Engineered masonry in nonessential facilities.

The minimum special inspection program for masonry designed by Section 2106, 2107 or 2108, or by chapters other than Chapters 5, 6 or 7 of ACI 530/ASCE 5/TMS 402, in nonessential facilities (see Table 1604.5 and Section 1617.6), shall comply with Table 1704.5.1.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.5 Masonry construction. / 1704.5.3 Engineered masonry in essential facilities.

1704.5.3 Engineered masonry in essential facilities.

The minimum special inspection program for masonry designed by Section 2106, 2107 or 2108, or by chapters other than Chapters 5, 6 or 7 of ACI 530/ASCE 5/TMS 402, in essential facilities (see Table 1604.5 and Section 1616.2), shall comply with Table 1704.5.3.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.6 Wood construction.

1704.6 Wood construction.

Special inspections of the fabrication process of prefabricated wood structural elements and assemblies shall be in accordance with Section 1704.2. Special inspections of site-built assemblies shall be in accordance with Section 1704.1.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.6 Wood construction. / 1704.6.1 Fabrication of high-load diaphragms.

1704.6.1 Fabrication of high-load diaphragms.

High-load diaphragms using values from Table 2306.3.2 shall be installed with special inspections as indicated in Section 1704.1. The special inspector shall inspect the wood structural panel sheathing to ascertain whether it is of the grade and thickness shown on the approved building plans. Additionally, the special inspector must verify the nominal size of framing members at adjoining panel edges, the nail or staple diameter and length, the number of fastener lines and that spacing between fasteners in each line and at edge margins agrees with the approved building plans.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.7 Soils.

1704.7 Soils.

The special inspections for existing site soil conditions, fill placement and load-bearing requirements shall follow Sections 1704.7.1 through 1704.7.3. The approved soils report, required by Section 1802.2, shall be used to determine compliance.

Exception: Special inspections not required during placement of fill less than 12 inches (305 mm) deep.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.7 Soils. / 1704.7.1 Site preparation.

1704.7.1 Site preparation.

Prior to placement of the prepared fill, the special inspector shall determine that the site has been prepared in accordance with the approved soils report.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.7 Soils. / 1704.7.2 During fill placement.

1704.7.2 During fill placement.

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During placement and compaction of the fill material, the special inspector shall determine that the material being used and the maximum lift thickness comply with the approved report, as specified in Section 1803.5.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.7 Soils. / 1704.7.3

Evaluation of in-place density.

1704.7.3 Evaluation of In-place density.

The special inspector shall determine, at the approved frequency, that the in-place dry density of the compacted fill complies with the approved report.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.8 Pile foundations.

1704.8 Pile foundations.

A special inspector shall be present when pile foundations are being installed and during tests. The special inspector shall make and submit to the building official records of the installation of each pile and results of load tests. Records shall include the cutoff and tip elevation of each pile relative to a permanent reference.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.9 Pier foundations.

1704.9 Pier foundations.

Special inspection is required for pier foundations for buildings assigned to Seismic Design Category C, D, E or F in accordance with Section 1616.3.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.10 Wall panels and veneers.

1704.10 Wall panels and veneers.

Special inspection is required for exterior and interior architectural wall panels and the anchoring of veneers for buildings assigned to Seismic Design Category E or F in accordance with Section 1616.3. Special inspection of such masonry veneer shall be in accordance with Section 1704.5.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.11 Sprayed

fire-resistant materials.

1704.11 Sprayed fire-resistant materials.

Special inspections for sprayed fire-resistant materials applied to structural elements and decks shall be in accordance with Sections 1704.11.1 through 1704.11.5. Special inspections shall be

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based on the fire-resistance design as designated in the approved construction documents.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.11 Sprayed fire-resistant materials. / 1704.11.1 Structural member surface conditions.

1704.11.1 Structural member surface conditions.

The surfaces shall be prepared in accordance with the approved fire-resistance design and the approved manufacturer's written instructions. The prepared surface of structural members to be sprayed shall be inspected before the application of the sprayed fire-resistant material.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.11 Sprayed fire-resistant materials. / 1704.11.2 Application.

1704.11.2 Application.

The substrate shall have a minimum ambient temperature before and after application as specified in the approved manufacturer's written instructions. The area for application shall be ventilated during and after application as required by the approved manufacturer's written instructions.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.11 Sprayed fire-resistant materials. / 1704.11.2 Application. / TABLE 1704.5.1 LEVEL 1 SPECIAL INSPECTION

**TABLE 1704.5.1
LEVEL 1 SPECIAL INSPECTION**

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INSPECTION TASK	FREQUENCY OF INSPECTION		REFERENCE FOR CRITERIA		
	Continuous during task listed	Periodically during task listed	IBC section	ACI 530/532/532.2	ACI 530.1/530.2/530.3
1. As masonry construction begins, the following shall be verified to ensure compliance:					
a. Proportions of site-prepared mortar.		X			Art. 2.6A
b. Construction of mortar joints.	—	X	—	—	Art. 3.3B
c. Location of reinforcement and connectors.		X			Art. 3.4, 3.6A
d. Prestressing technique.	—	X	—	—	Art. 3.6B
e. Grade and size of prestressing tendons and anchorages.	—	X	—	—	Art. 2.4E, 2.4H
2. The inspection program shall verify:					
a. Size and location of structural elements.	—	X	—	—	Art. 3.3G
b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.	—	X	—	Sec. 1.2.2(e), 2.1.4, 3.1.6	—
c. Specified size, grade and type of reinforcement.	—	X	—	Sec. 1.12	Art. 2.4, 3.4
d. Welding of reinforcing bars.	X	—	—	Sec. 2.1.10.6.2, 3.2.3.4(b)	—
e. Protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F).	—	X	Sec. 2104.3, 2104.4	—	Art. 1.8C, 1.8D
f. Application and measurement of prestressing force.	—	X	—	—	Art. 3.6B
3. Prior to grouting, the following shall be verified to ensure compliance:					
a. Grout space is clean.		X		—	Art. 3.2D
b. Placement of reinforcement and connectors and prestressing tendons and anchorages.	—	X	—	Sec. 1.12	Art. 3.4
c. Proportions of site-prepared grout and prestressing grout for bonded tendons.		X		—	Art. 2.6B
d. Construction of mortar joints.		X		—	Art. 3.3B
4. Grout placement shall be verified to ensure compliance with code and construction document provisions.	X	—	—	—	Art. 3.5
a. Grouting of prestressing bonded tendons.	X	—	—	—	Art. 3.6C
5. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.	X	—	Sec. 2105.2.2, 2105.3	—	Art. 1.4
6. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.	—	X	—	—	Art. 1.5

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For SI: °C = (°F - 32)/1.8.

a. The specific standards referenced are those listed in Chapter 35.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.11 Sprayed fire-resistant materials. / 1704.11.3 Thickness.

1704.11.3 Thickness.

The average thickness of the sprayed fire-resistant materials applied to structural elements shall not be less than the thickness required by the approved fire-resistant design. Individual measured thickness, which exceeds the thickness specified in a design by 1/4 inch (6.4 mm) or more, shall be recorded as the thickness specified in the design plus 1/4 inch (6.4 mm). For design thicknesses 1 inch (25 mm) or greater, the minimum allowable individual thickness shall be the design thickness minus 1/4 inch (6.4 mm). For design thicknesses less than 1 inch (25 mm), the minimum allowable individual thickness shall be the design thickness minus 25 percent. Thickness shall be determined in accordance with ASTM E 605. Samples of the sprayed fire-resistant materials shall be selected in accordance with Sections 1704.11.3.1 and 1704.11.3.2.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.11 Sprayed fire-resistant materials. / 1704.11.3 Thickness. / 1704.11.3.1 Floor, roof and wall assemblies.

1704.11.3.1 Floor, roof and wall assemblies.

The thickness of the sprayed fire-resistant material applied to floor, roof and wall assemblies shall be determined in accordance with ASTM E 605, taking the average of not less than four measurements for each 1,000 square feet (93m²) of the sprayed area on each floor or part thereof.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.11 Sprayed fire-resistant materials. / 1704.11.3 Thickness. / 1704.11.3.2 Structural framing members.

1704.11.3.2 Structural framing members.

The thickness of the sprayed fire-resistant material applied to structural members shall be determined in accordance with ASTM E 605. Thickness testing shall be performed on not less than 25 percent of the structural members on each floor.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.11 Sprayed fire-resistant materials. / 1704.11.3 Thickness. / TABLE 1704.5.3 LEVEL 2 SPECIAL INSPECTION

**TABLE 1704.5.3
LEVEL 2 SPECIAL INSPECTION**

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INSPECTION TASK	FREQUENCY OF INSPECTION		REFERENCE FOR CRITERIA		
	Continuous during task listed	Periodically during task listed	IBC section	ACI 308/ACI 308.1/ACI 308.2	ACI 308.1/ACI 308.2
1. From the beginning of masonry construction, the following shall be verified to ensure compliance:					
a. Proportions of site-prepared mortar, grout and prestressing grout for bonded tendons.	—	X	—	—	Art. 2.6A
b. Placement of masonry units and construction of mortar joints.	—	X	—	—	Art. 3.3B
c. Placement of reinforcement, connectors and prestressing tendons and anchorages.	—	X	—	Sec. 1.12	Art. 3.4, 3.6A
d. Grout space prior to grouting.	X	—	—	—	Art. 3.2D
e. Placement of grout.	X	—	—	—	Art. 3.5
f. Placement of prestressing grout.	X	—	—	—	Art. 3.6C
2. The inspection program shall verify:					
a. Size and location of structural elements.	—	X	—	—	Art. 3.3C
b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.	X	—	—	Sec. 1.2.2(e), 2.1.4.3.1.6	—
c. Specified size, grade and type of reinforcement.	—	X	—	Sec. 1.12	Art. 2.4, 3.4
d. Welding of reinforcement.	X	—	—	Sec. 2.1.10.6.2, 3.2.3.4(b)	—
e. Protection of masonry during cold weather (temperature below 40°F) or hot weather (temperature above 90°F).	—	X	Sec. 2104.3, 2104.4	—	Art. 1.8C, 1.8D
f. Application and measurement of prestressing force.	X	—	—	—	Art. 3.6B
3. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed.	X	—	Sec. 2105.2.2, 2105.3	—	Art. 1.4
4. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.	—	X	—	—	Art. 1.5

For SI: C = (F - 32)/1.8.

a. The specific standards referenced are those listed in Chapter 35.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.11 Sprayed fire-resistant materials. / 1704.11.4 Density.

1704.11.4 Density.

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The density of the sprayed fire-resistant material shall not be less than the density specified in the approved fire-resistant design. Density of the sprayed fire-resistant material shall be determined in accordance with ASTM E 605.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.11 Sprayed fire-resistant materials. / 1704.11.5 Bond strength.

1704.11.5 Bond strength.

The cohesive/adhesive bond strength of the cured sprayed fire-resistant material applied to structural elements shall not be less than 150 pounds per square foot (psf) (7.18 kN/m²). The cohesive/adhesive bond strength shall be determined in accordance with the field test specified in ASTM E 736 by testing in-place samples of the sprayed fire-resistant material selected in accordance with Sections 1704.11.5.1 and 1704.11.5.2.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.11 Sprayed fire-resistant materials. / 1704.11.5 Bond strength. / 1704.11.5.1 Floor, roof and wall assemblies.

1704.11.5.1 Floor, roof and wall assemblies.

The test samples for determining the cohesive/adhesive bond strength of the sprayed fire-resistant materials shall be selected from each floor, roof and wall assembly at the rate of not less than one sample for every 10,000 square feet (929 m²) or part thereof of the sprayed area in each story.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.11 Sprayed fire-resistant materials. / 1704.11.5 Bond strength. / 1704.11.5.2 Structural framing members.

1704.11.5.2 Structural framing members.

The test samples for determining the cohesive/adhesive bond strength of the sprayed fire-resistant materials shall be selected from beams, girders, joists, trusses and columns at the rate of not less than one sample for each type of structural framing member for each 10,000 square feet (929 m²) of floor area or part thereof in each story.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.12 Exterior insulation and finish systems (EIFS).

1704.12 Exterior insulation and finish systems (EIFS).

Special inspections shall be required for all EIFS applications.

Exceptions:

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1. Special inspections shall not be required for EIFS applications installed over a water-resistive barrier with a means of draining moisture to the exterior.
2. Special inspections shall not be required for EIFS applications installed over masonry or concrete walls.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.13 Special cases.

1704.13 Special cases.

Special inspections shall be required for proposed work that is, in the opinion of the building official, unusual in its nature, such as, but not limited to, the following examples:

1. Construction materials and systems that are alternatives to materials and systems prescribed by this code.
2. Construction materials and systems that are alternatives to materials and systems prescribed by this code.. Unusual design applications of materials described in this code.
3. Materials and systems required to be installed in accordance with additional manufacturer's instructions that prescribe requirements not contained in this code or in standards referenced by this code.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.14 Special inspection for smoke control.

1704.14 Special inspection for smoke control.

Smoke control systems shall be tested by a special inspector.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.14 Special inspection for smoke control. / 1704.14.1 Testing scope.

1704.14.1 Testing scope.

The test scope shall be as follows:

1. During erection of duct work and prior to concealment for the purposes of leakage testing and recording of device location.
2. During erection of duct work and prior to concealment for the purposes of leakage testing and recording of device location.. Prior to occupancy and after sufficient completion for the purposes of pressure difference testing, flow measurements and detection and control verification.

2003 International Building Code / CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS / SECTION 1704 SPECIAL INSPECTIONS / 1704.14 Special inspection for smoke control. / 1704.14.2 Qualifications.