

FROM DESIGNER: Archetype, P.A.  
 DATE: 11/8/05  
 Job Name: Congress Square Plaza  
 Address of Construction: 10 Congress Square Plaza

**2003 International Building Code**

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

Building Code and Year 2003 IBC Use Group Classification(s) R-2 & B

Type of Construction III

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2003 IRC Yes

Is the Structure mixed use? Yes if yes, separated or non separated (see Section 302.3) N/A, existing

Supervisory alarm system? Yes Geotechnical/Soils report required?( See Section 1802.2) No

**STRUCTURAL DESIGN CALCULATIONS**

N/A Submitted for all structural members  
(106.1, 106.1.1)

60 PSF

Live load reduction  
(1603.1.1, 1607.9, 1607.10)

42 PSF

Roof live loads (1603.1.2, 1607.11)

**DESIGN LOADS ON CONSTRUCTION DOCUMENTS (1603)**

Uniformly distributed floor live loads (1603.1.1, 1607)

Floor Area Use	Loads Shown
<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>
<u>N/A</u>	<u>N/A</u>

Roof snow loads (1603.1.3, 1608)

1.0

Ground snow load,  $P_g$  (1608.2)

1.0

If  $P_g > 10$  psf, flat-roof snow load,  $P_f$   
(1608.3)

1.0

If  $P_g > 10$  psf, snow exposure factor,  $C_e$   
(Table 1608.3.1)

N/A

If  $P_g > 10$  psf, snow load importance factor,  $I_s$  (Table 1604.5)

N/A

Roof thermal factor,  $C_t$  (Table 1608.3.2)

N/A

Sloped roof snowload,  $P_s$  (1608.4)

N/A

Seismic design category (1616.3)

N/A

Basic seismic-force-resisting system  
(Table 1617.6.2)

N/A

Response modification coefficient,  $R$ ,  
and deflection amplification factor,  $C_d$   
(Table 1617.6.2)

N/A

Analysis procedure (1616.6, 1617.5)

N/A

Design base shear (1617.4, 1617.5.1)

**Wind loads (1603.1.4, 1609)**

N/A Design option utilized (1609.1.1, 1609.6)  
N/A Basic wind speed (1609.3)  
N/A Building category and wind importance factor,  $I_w$  (Table 1604.5, 1609.5)  
N/A Wind exposure category (1609.4)  
N/A Internal pressure coefficient (ASCE 7)  
N/A Component and cladding pressures (1609.1.1, 1609.6.2.2)  
N/A Main force wind pressures (1609.1.1, 1609.6.2.1)

**Flood loads (1603.1.6, 1612)**

N/A

Flood hazard area (1612.3)

N/A

Elevation of structure

**Other loads**

N/A

Concentrated loads (1607.4)

Partition loads (1607.5)

Impact loads (1607.8)

Misc. loads (Table 1607.6, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)

**Earthquake design data (1603.1.5, 1614 - 1623)**

N/A Design option utilized (1614.1)  
N/A Seismic use group ("Category")  
(Table 1604.5, 1616.2)  
N/A Spectral response coefficients,  $S_{DS}$  &  $S_{D1}$  (1615.1)  
N/A Site class (1615.1.5)

NOTE: Structural work is limited to additional roof framing at the existing roofs of buildings A & C.

Special Inspection Agencies	Firm	Address, Telephone
1. Special Inspection Coordinator	<i>Structural Design Consulting, LLC</i>	<i>21 Oakmont Drive Old Orchard Beach, ME 04064-4121 207-934-8038</i>
2. Inspector		
3. Inspector		
4. Testing Agency	<i>Elite Inspection Services</i>	<i>220 Industrial Way Portland, ME (207) 797-2284</i>
5. Testing Agency		
6. Other		

**Note:** The inspectors and testing agencies shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Witnessing Official, prior to commencing work.

## **Quality Assurance Plan**

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### **Quality Assurance for Seismic Resistance**

Seismic Design Category *C*

Quality Assurance Plan Required (Y/N) *N*

Description of seismic force resisting system and designated seismic systems:

### **Quality Assurance for Wind Requirements**

Basic Wind Speed (3second gust) *100 mph*

Wind Exposure Category *C*

Quality Assurance Plan Required (Y/N) *N*

### **Statement of Responsibility**

Each contractor responsible for the construction or fabrication of a system or component designated above must submit a Statement of Responsibility.

## Qualifications of Inspectors and Testing Technicians

The qualifications of all personnel performing Special Inspection and testing activities are subject to the approval of the Building Official. The credentials of all Inspectors and testing technicians shall be provided if requested.

### Key for Minimum Qualifications of Inspection Agents:

When the Registered Design Professional in Responsible Charge deems it appropriate that the individual performing a stipulated test or inspection have a specific certification or license as indicated below, such designation shall appear below the Agency Number on the Schedule.

WSE	Structural Engineer – a licensed SE or PE specializing in the design of building structures
PE/GE	Geotechnical Engineer – a licensed PE specializing in soil mechanics and foundations
EIT	Engineer-In-Training – a graduate engineer who has passed the Fundamentals of Engineering examination

### American Concrete Institute (ACI) Certification

ACI-CFTT	Concrete Field Testing Technician – Grade 1
ACI-CCI	Concrete Construction Inspector
ACI-LTT	Laboratory Testing Technician – Grade 1&2
ACI-STT	Strength Testing Technician

### American Welding Society (AWS) Certification

AWS-CWI	Certified Welding Inspector
AWS/AISC-SSI	Certified Structural Steel Inspector

### American Society of Non-Destructive Testing (ASNT) Certification

ASNT	Non-Destructive Testing Technician – Level II or III.
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### International Code Council (ICC) Certification

ICC-SMSI	Structural Masonry Special Inspector
ICC-SWSI	Structural steel and Welding Special Inspector
ICC-SFSI	Spray-Applied Fireproofing Special Inspector
ICC-PCSI	Prestressed Concrete Special Inspector
ICC-RCSI	Reinforced Concrete Special Inspector

### National Institute for Certification in Engineering Technologies (NICET)

NICET-CT	Concrete Technician – Levels I, II, III & IV
NICET-ST	Soils Technician - Levels I, II, III & IV
NICET-GET	Geotechnical Engineering Technician - Levels I, II, III & IV

### Other

**Soils and Foundations**

Item	Req'd Y/N	Agency # (Qualif.)	Scope
1. Shallow Foundations	N		
2. Controlled Structural Fill	N		
3. Deep Foundations	N		
4. Load Testing	N		
k. Other			

**Cast-in-Place Concrete**

Item	Req'd R/N	Agency # Agency	Scope Scope
1. Mix Design	N		
2. Material Certification	N		
3. Reinforcement Installation	N		
4. Post-Tensioning Operations	N		
5. Welding of Reinforcing	N		
6. Anchor Rods	N		
7. Concrete Placement	N		
8. Sampling and Testing of Concrete	N		
9. Curing and Protection	N		
10. Other:	N		

**Precast Concrete**

Item	Req'd Y/N	Agency # (Qualif.)	Scope
1. Plant Certification / Quality Contrl Procedures	N		
2. Mix Design	N		
3. Material Certification	N		
4. Reinforcement Installation	N		
5. Prestress Operations	N		
6. Concrete Placement	N		
7. Sampling and Testing of Concrete	N		
8. Curing and Protection	N		
9. Erected Precast Elements	N		



**Masonry**

Required Inspection Level:  1  2

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Item	Req'd Y/N	Agency # (Qualif.)	Scope
1. Material Certification	Y	1 PE/SE	Anchors and ties
2. Mixing of Mortar and Grout	NY		
3. Installation of Masonry	Y	1 PE/SE	Inspect size, layout, bonding and placement of masonry units.
4. Mortar Joints	N		
5. Reinforcement Installation	N		
6. Prestressed Masonry	N		
7. Grouting Operations	N		
7. Weather Protection	Y	1 PE/SE	Inspect cold weather protection and hot weather protection procedures. Verify that wall cavities are protected against precipitation.
9. Evaluation of Masonry Strength	N		
10. Anchors and Ties	Y	1 PE/SE	Inspect size, location, spacing and embedment of dowels, anchors and ties
11. Other:	N		



**Structural Steel**

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Item	Req'd Y/N	Agency # (Qualif.)	Scope
1. Fabricator Certification/ Quality Control Procedures <input type="checkbox"/> Fabricator Exempt	N		
2. Material Certification	Y	1 PE/SE	Review certified mill test reports and identification markings on wide-flange shapes, high-strength bolts, nuts and welding electrodes
3. Open Web steel Joists	N		
4. Bolting	N		
5. Welding	Y	4 AWS-CWI ASNT	Visually inspect all welds. Inspect pre-heat, post-heat and surface preparation between passes. Verify size and length of fillet welds.  Ultrasonic testing of all full-penetration welds.
6. Shear Connectors	N		
7. Structural Details	Y	1 PE/SE	Inspect steel frame for compliance with structural drawings, including bracing, member configuration and connection details.
8. Metal Deck	N		
9. Other:	Y	1&4 PE/SE AWS/AISC- SSI ICC-SWSI	Verify condition and thickness of existing steel columns after removal of exterior brick.

**Cold-Formed Steel Framing**

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Item	Req'd Y/N	Agency # (Qualif.)	Scope
1. Member Sizes	N		
2. Material Thickness	N		
3. Material Properties	N		
4. Mechanical Connections	N		
5. Welding	N		
6. Framing Details	N		
7. Trusses	N		
8. Permanent Truss Bracing	N		
9. Other:	N		

**Wood Construction**

Item	Req'd Y/N	Agency # (Qualif.)	Scope
1. Fabricator Certification/ Quality Control Procedures			
2. Material Grading	Y	I PE/SE	Verify material grading marks.
3. Connections	Y	I PUSE	Verify that connections and fastenings comply with Contract Documents
4. Framing and Details	Y	I PE/SE	Verify conformance with Contract Documents
5. Diaphragms and Shearwalls	N		
6. Prefabricated Wood Trusses	N		