

BUILDING EVALUATION SUMMARY (Table 3410.7)

Existing occupancy _____	Proposed occupancy _____
Year building was constructed _____	Number of stories _____ Height in feet _____
Type of construction _____	Area per floor _____
Percentage of frontage _____%	Corridor wall rating _____
Completely suppressed: Yes _____ No _____	Required door closers: Yes _____ No _____
Compartmentation: Yes _____ No _____	
Fire resistance rating of vertical opening enclosures _____	
Type of HVAC system _____	serving number of floors _____
Automatic fire detection: Yes _____ No _____	type and location _____
Fire alarm system: Yes _____ No _____	type _____
Smoke control: Yes _____ No _____	type _____
Adequate exit routes: Yes _____ No _____	Dead ends: Yes _____ No _____
Maximum exit access travel distance _____	Elevator controls: Yes _____ No _____
Means of egress emergency lighting: Yes _____ No _____	Mixed occupancies: Yes _____ No _____

Safety parameters	Fire safety (FS)	Means of egress (ME)	General safety (GS)
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3410.6.1 Building height	
3410.6.2 Building area	
3410.6.3 Compartmentation	
3410.6.4 Tenant and dwelling unit separations	
3410.6.5 Corridor walls	
3410.6.6 Vertical openings	
3410.6.7 HVAC systems	
3410.6.8 Automatic fire detection	
3410.6.9 Fire alarm system	
3410.6.10 Smoke control	****
3410.6.11 Means of egress	****
3410.12 Dead ends	****
3410.13 Max. exit access travel distance	****
3410.6.14 Elevator control	
3410.6.15 Means of egress emergency lighting	****
3410.6.16 Mixed occupancies	****
3410.6.17 Automatic sprinklers	+ 2 =
3410.6.18 Incidental use area protection	
Building score — total value	

**** No applicable value to be inserted.

BUILDING SAFETY EVALUATION SCORE (Table 3410.9)

Formula	Table 3410.7	Table 3410.8	Score	Pass	Fail
FS-MFS ≥ 0	(FS)	—	(MFS) =		
ME-MME ≥ 0	(ME)	—	(MME) =		
GS-MGS ≥ 0	(GS)	—	(MGS) =		

- | | |
|----------------------|---------------------------------|
| FS = Fire Safety | MFS = Mandatory Fire Safety |
| ME = Means of Egress | MME = Mandatory Means of Egress |
| GS = General Safety | MGS = Mandatory General Safety |

APPENDICES A - J

Appendices adopted (101.2.1)

Compliance verified

RUBB.7

INTERNATIONAL BUILDING CODE
2003 INTERNATIONAL BUILDING CODE®
2003 PLAN REVIEW RECORD

Plan Review # 05 0630
 Date: 6/13/05
 Valuation: 2,410,000.
 Fee: 21,711.

JURISDICTION: PORTLAND
 (City, County, Township, etc.)

BUILDING LOCATION: 601 DARTMOUTH ST.
 (Street address)

BUILDING DESCRIPTION: 170 x 330 MEMBRANE STRUCTURE
52 USE

REVIEWED BY: [Signature]

Numerals indicated in parenthesis are applicable code sections of the 2003 International Building Code. The plan review accomplished as indicated in this record is limited to those code sections specifically identified herein. This record references commonly applicable code sections. It does not reference all code provisions which may be applicable to specific buildings. This record is designed to be used only by those who are knowledgeable and capable of exercising competent judgement in evaluating construction documents for code compliance.

CORRECTION LIST		
No.	DESCRIPTION	Code Section
1	NEED NFPA STATEMENT OF FLAME RES.	
2	STAIRS / GUARDS	
3	ASCHRAE OR IBC COND.	

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INTERIOR ENVIRONMENT (Chapter 12)

<input checked="" type="checkbox"/> Ventilation openings (1203)	<input type="checkbox"/> Sound transmission (1207)
<input checked="" type="checkbox"/> Temperature control (1204)	<input type="checkbox"/> Interior space dimensions (1208)
<input checked="" type="checkbox"/> Lighting (1205)	<input type="checkbox"/> Access to unoccupied spaces (1209)
<input type="checkbox"/> Yards or courts (1206)	<input type="checkbox"/> Surrounding materials (1210, 2509)

BUILDING ENVELOPE (Chapters 13*, 14, 15)

*See Energy Conservation Code Plan Review Record

EXTERIOR WALLS (Chapter 14)

<input type="checkbox"/> Performance requirements (1403)	<input type="checkbox"/> Exterior wall coverings/MCM's (1405, 1407)
<input type="checkbox"/> Materials (1404)	<input type="checkbox"/> Combustible material restrictions (1406)

ROOF ASSEMBLIES AND ROOFTOP STRUCTURES (Chapter 15)

<input type="checkbox"/> Weather protection (1503)	<input type="checkbox"/> Materials (1506)
<input type="checkbox"/> Flashing (1503.2, 1507.2.9, 1507.3.9, 1507.5.6, 1507.7.6, 1507.8.7, 1507.9.8)	<input type="checkbox"/> Roof coverings (1507)
<input type="checkbox"/> Performance requirements (1504)	<input type="checkbox"/> Roof insulation (1508)
<input type="checkbox"/> Fire classification (1505)	<input type="checkbox"/> Rooftop structures (1509)
	<input type="checkbox"/> Reroofing (1510)

STRUCTURAL SYSTEMS (Chapters 16, 17, 18)

STRUCTURAL DESIGN (Chapter 16)

STRUCTURAL DESIGN CALCULATIONS

Submitted for all structural members (106.1, 106.1.1)

DESIGN LOADS ON CONSTRUCTION DOCUMENTS (1603)

Uniformly distributed floor live loads (1603.1.1, 1607)

Floor Area Use	Loads Shown

<input type="checkbox"/> Live load reduction (1603.1.1, 1607.9, 1607.10)
<input type="checkbox"/> Roof live loads (1603.1.2, 1607.11)
<input type="checkbox"/> Roof snow loads (1603.1.3, 1608)
<input type="checkbox"/> Ground snow load, P_g (1608.2)
<input type="checkbox"/> If $P_g > 10$ psf, flat-roof snow load, P_f (1608.3)
<input type="checkbox"/> If $P_g > 10$ psf, snow exposure factor, C_e (Table 1608.3.1)
<input type="checkbox"/> If $P_g > 10$ psf, snow load importance factor, I_s (Table 1604.5)
<input type="checkbox"/> Roof thermal factor, C_t (Table 1608.3.2)
<input type="checkbox"/> Sloped roof snowload, P_s (1608.4)

NOTES: N.R. — Not required
N.A. — Not applicable

ADMINISTRATION (Chapter 1)

<input checked="" type="checkbox"/> Complete construction documents (106.1, 106.2)	<input checked="" type="checkbox"/> Signed/sealed construction documents (106.1, State laws vary)
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BUILDING PLANNING (Chapters 3, 4, 5, 6)

OCCUPANCY CLASSIFICATION (302.0-312.0)

<input checked="" type="checkbox"/> Single Occupancy (302.1)	<input type="checkbox"/> Incidental use areas (302.1.1)
<input type="checkbox"/> Mixed Occupancy (302.3)	<input type="checkbox"/> Accessory use areas (302.2)

GENERAL BUILDING LIMITATIONS (Chapters 5 & 6)

Apply Case 1 to determine the allowable height and area and permitted types of construction for a building containing a single occupancy or nonseparated mixed occupancies. Apply Case 2 to determine the allowable height and area and permitted types of construction for a building containing separated mixed occupancies.

AREA MODIFICATIONS TO TABLE 503

% of Allowable tabular area, A_t (Table 503)	<u>100%</u>
% Increase for frontage, I_f (506.2)	<u>+135%</u>
% Increase for automatic sprinklers, I_s (506.3)	<u>+ 0%</u>
Total percentage factor	<u>= 235%</u>
Conversion factor	<u>$\frac{235}{100} = 2.35$</u>

Frontage (506.2)	<u>379</u> North	<u>170</u> East	<u>379</u> South	<u>170</u> West
Total Frontage (F)	<u>978</u> ft.			
Perimeter (P)	<u>978</u> ft.			
Width of open space (W)	<u>AVERAGE 54</u>			
% Frontage increase (I_f) (506.2)	<u>135%</u>			
	$I_f = 100 \left[\frac{F}{P} - 0.25 \right] \frac{W}{30}$			

CASE 1 — SINGLE OCCUPANCY OR NONSEPARATED USES (302.3.1)

Using Table 503, identify the allowable height and area of the single occupancy or the most restrictive of the nonseparated mixed occupancies. Construction types that provide an allowable tabular area equal to or greater than the adjusted building area and allowable heights (as modified by Section 504) equal to or greater than the actual building height are permitted.

DETERMINE CONSTRUCTION TYPE	CHECK ALLOWABLE AREA (506.4)
Actual building area <u>54,230</u> ft ²	Allowable area per floor (A_a)
Adjusted building area <u>64,000</u> ft ² <small>actual building area + conversion factor</small>	<u> </u> × <u> </u> = <u> </u> ft ² <small>conversion factor tabular area (Table 503)</small>
Actual building height <u>53.5</u> feet <u>1</u> stories	Total floor area (all stories) <u> </u> ft ²
Allowable building height <u>55</u> feet <u>4</u> stories	Allowable floor area (all stories) <u> </u> ft ²
Permitted types of construction <u>2 + UP</u>	<u> </u> × <u> </u> = <u> </u> ft ² <small>Allowable area per floor (A) number of stories (maximum 3)</small>
Type of construction assumed for review (602.1.1) <u>2B</u>	Compliance verified (Single Occ. or Nonsep.) <input checked="" type="checkbox"/>

OCCUPANT NEEDS (Chapters 10, 11, 12)

MEANS OF EGRESS (Chapter 10)

OCCUPANT LOAD (1004.1.2 and Table 1004.1.2)

Location	Floor Area	Sq.ft./person	Occt. load	Other occt. loads	Total
LST.	54230	÷500		NA	110

CAPACITY OF EGRESS COMPONENTS (1005.1 and Table 1005.1)

Egress width (inch/occupant)

Stairways 3
Other egress components 2

CAPACITY

Location	Stairways	Other egress components
4	NONE	DOORS 36"

22⁴ REQ.
144 SHOWN

NUMBER OF EXITS (1018.1, 1018.2)

Location	Required	Shown
LST	2	4

HIGH-RISE BUILDINGS (403)

- Automatic sprinkler system (403.2)
- Fire-resistance rating reduction (403.3)
- Automatic fire detection (403.5)
- Emergency voice/alarm systems (403.6)
- Fire department communication (403.7)
- Fire command center (403.8)
- Elevators (403.9)
- Standby power (403.10)
- Emergency power (403.11)
- Stairway doors (403.12)
- Smokeproof exit (403.13)

ATRIUMS (404)

- Atrium use (404.2)
- Automatic sprinkler system (404.3)
- Smoke control (404.4)
- Enclosure (404.5)
- Standby power (404.6)
- Interior finish (404.7)
- Travel distance (404.8)

OTHER SPECIAL USE AND OCCUPANCY

- Underground structures (405)
- Motor vehicle related occupancies (406, 508)
- Group I-2 (407)
- Group I-3 (408)
- Motion picture projection rooms (409)
- Stages and platforms (410)
- Special amusement buildings (411)
- Aircraft-related occupancies (412)
- Combustible storage (413)
- Hazardous materials (307.9, 414)
- Groups H-1, H-2, H-3, H-4, and H-5 (415)
- Application of flammable finishes (416)
- Drying rooms (417)
- Organic coatings manufacturing (418)

FIRE PROTECTION (Chapters 6, 7, 8, 9)

FIRE-RESISTANCE-RATED CONSTRUCTION (Tables 601 & 602 and Chapter 7)

Note: Entry in indicates required rating in hours. NC indicates noncombustible construction required.

2.5 Construction classification (602)

COMBUSTIBILITY (602.2, 602.3, 602.4, 602.5, 603)

- Exterior walls
- Interior elements
- Roof

FIRE-RESISTANCE RATINGS AND FIRE TESTS (703)

- 0 Ratings / Combustibility (703.2, 703.4)
- N/A Alternative methods (703.3, 718, 720, 721)

BUILDING ELEMENTS (Table 601)

- Structural frame (714)
- Interior bearing walls
- Interior nonbearing walls
- Floor construction (711)
- Roof construction (711)

EXTERIOR WALLS (507, Table 602, 704, 706.6)

	North	East	South	West
Fire separation distance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Bearing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nonbearing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

EXTERIOR WALLS (continued)

- Opening protection (704.8, 704.12, 704.14)
- Vertical fire spread protection (704.9, 704.10)
- Parapets (704.11)

FIRE BARRIERS (706)

- Shaft enclosures (706.3.1)
- Exit enclosures (706.3.2, 706.3.3)
- Horizontal exits (706.3.4)
- Incidental use areas (706.3.5)
- Mixed occupancy and fire area separations (706.3.6, 706.3.7)

SHAFTS (707)

- Exceptions (707.2)
- Construction (707.3 - 707.14)

OTHER FIRE RESISTANT CONSTRUCTION

- Fire walls (705)
- Fire partitions (708)
- Smoke barriers (709)
- Smoke partitions (710)
- Penetrations (712)
- Fire resistant joint systems (713)
- Opening protectives (715)
- Dampers (716)
- Concealed spaces (717)
- Thermal and sound-insulating materials (719)

ALTERNATIVE AUTOMATIC FIRE-EXTINGUISHING SYSTEMS (904)

- Installation (904.3)
- Wet-chemical systems (904.5)
- Dry-chemical systems (904.6)
- Foam systems (904.7)
- Carbon dioxide systems (904.8)
- Halon systems (904.9)
- Clean-agent systems (904.10)
- Commercial cooking systems (904.2.1, 904.11)

STANDPIPE SYSTEMS (905)

- Installation standards (905.2)
- Building height (905.3.1)
- Group A (905.3.2)
- Covered malls (905.3.3)
- Stages (905.3.4)
- Underground buildings (905.3.5)
- Helistops/heliports (905.3.6)
- Hose connections and locations (905.1, 905.4, 905.5, 905.6)
- Cabinets (905.7)
- Dry standpipes (905.8)
- Valve supervision (905.9)

PORTABLE FIRE EXTINGUISHERS (906)

- Required locations - IFC (906.1)

FIRE ALARM AND DETECTION SYSTEMS (907) (Where required)

- Construction documents (907.1.1)
- Assembly (A-1, A-2, A-3, A-4, A-5) (907.2.1)
- Business (B) (907.2.2)
- Educational (E) (907.2.3)
- Factory (F-1, F-2) (907.2.4)
- High-hazard (H-1, H-2, H-3, H-4, H-5) (907.2.5)
- Institutional (I-1, I-2, I-3, I-4) (907.2.6)
- Mercantile (M) (907.2.7)
- Residential (R-1, R-2) (907.2.8, 907.2.9)

- Single/multiple station smoke alarms (907.2.10)
- High rise buildings (907.2.12)
- Atriums (907.2.13)
- Other buildings/areas (907.2.11, 907.2.14 - 907.2.23)

FIRE ALARM AND DETECTION SYSTEMS (907) (Design)

- Residential smoke alarm power source (907.2.10.2)
- Residential smoke alarm interconnection (907.2.10.3)
- Location/Power supply/Wiring (907.3 - 907.5)
- Activation/Presignal/Zones (907.6 - 907.8)
- Alarm notification appliances (907.9)
- Detectors (907.10 - 907.12)
- Monitoring (907.14)

EMERGENCY ALARM SYSTEMS (908)

- Detection system applicable (908.1 - 908.6)

SMOKE CONTROL SYSTEMS (909)

- Where required (402.9, 404.4, 405.5, 408.8, 410.3.7.2, 1019.1.8, 1024.6.2.1)
- Design requirements (909.1 - 909.4)
- Smoke barriers (909.5)
- Pressurization method (909.6)
- Airflow method (909.7)
- Exhaust method (909.8)
- Equipment/Power (909.10, 909.11)
- Detection and control (909.12 - 909.18)
- Smokeproof enclosures (909.20)
- Underground buildings (909.21)

SMOKE AND HEAT VENTS (910)

- Requirements (910.1 - 910.3)
- Mechanical alternative (910.4)

FIRE COMMAND CENTER (911)

- Features (911.1)

INTERIOR FINISHES (Chapter 8)

- Smoke development (803.1)
- Flame spread (803.1)
- Non-textile finish (803.2)
- Floor finish (804)
- Decorations and trim (805)

FIRE PROTECTION (Chapter 9)

AUTOMATIC SPRINKLER SYSTEMS (903) (Where required)

- Assembly (A-1, A-2, A-3, A-4, A-5) (903.2.1)
- Educational (E) (903.2.2)
- Factory/Industrial (F-1) (903.2.3)
- High-hazard (H-1, H-2, H-3, H-4, H-5) (903.2.4)
- Institutional (I-1, I-2, I-3, I-4) (407.5, 903.2.5)
- Mercantile (M) (903.2.6)
- Residential (R) (903.2.7)
- Storage/Repair garage (S-1) (903.2.8)
- Parking garages (903.2.9)
- Windowless story (903.2.10.1)
- Rubbish and linen chutes (903.2.10.2)
- Buildings over 55 ft. high (903.2.10.3)
- Incidental use areas (302.1.1)

Additional required systems (Table 903.2.13)

- International Fire Code (IFC 903.2.13)

AUTOMATIC SPRINKLER SYSTEMS* (903) (Design)

- Shop drawings (106.1.1.1)
- NFPA 13 system (903.3.1.1)
- NFPA 13R system (903.3.1.2)
- NFPA 13D system (903.3.1.3)
- Quick-response and residential heads (903.3.2)
- Actuation (903.3.4)
- Water supply (903.3.5)
- Hose connections (903.3.6, 903.3.7)
- Sprinkler monitoring and alarms (903.4, 907.13)

* Also see Fire Code Sprinkler Plan Review Record

6 FIRE CONNECTIONS WITHIN THE STRUCTURE.

CASE 2 — MIXED OCCUPANCY SEPARATED USES (302.3.2)

Using Table 503, identify the allowable height and area of each of the separated uses within the building. Construction types that provide, for each story of the building, tabular areas (as modified by Section 506) which result in a sum of the ratios of 1.00 or less and allowable heights (as modified by Section 504) equal to or greater than the actual height of the use are permitted.

Story	Group	Actual floor area	Adjusted floor area*	Actual height	Allowable height
_____	_____	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories
_____	_____	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories
_____	_____	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories
_____	_____	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories
_____	_____	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories
_____	_____	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories
_____	_____	_____ ft ²	_____ ft ²	_____ ft _____ stories	_____ ft _____ stories

Adjusted floor area *
 $\sum \frac{\text{Allow. tab. area, } A_i \text{ (Table 503)}}{\text{Actual floor area}} \leq 1.00$

*Adjusted floor area = actual floor area + conversion factor

CHECK ALLOWABLE AREA (506.4)

Allowable area per floor (A_a)

$\frac{\text{conversion factor}}{\text{tabular area (Table 503)}} \times \text{ft}^2 = \text{Permitted types of construction}$

Total floor area (all stories) _____ ft² Type of construction assumed for review (602.1.1)

Allowable floor area (all stories) _____ ft² Compliance verified (Mixed Occ. Separated)

$\frac{\text{Allowable area per floor (A}_a\text{)}}{\text{number of stories (maximum 3)}} \times \text{ft}^2$

MEZZANINES (505)

_____ Area limitation (505.2)	_____ Openness (505.4)
_____ Egress (505.3)	_____ Equipment platforms (505.5)

UNLIMITED AREA BUILDINGS (507)

_____ Unsprinklered, one story (507.1)	_____ High-hazard use groups (507.6)
_____ Sprinklered, one story (507.2)	_____ Aircraft paint hangar (507.7)
_____ Two story (507.3)	_____ Group E buildings (507.8)
_____ Reduced open space (507.4)	_____ Motion picture theaters (507.9)
_____ Group A-3 buildings (507.5)	

SPECIAL PROVISIONS (508)

_____ Special condition applicable (508.1)	_____ Compliance verified
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SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY (Chapter 4)

COVERED MALL BUILDINGS (402)	_____ Standpipe system (402.8.1)
_____ Egress (402.4, 402.11)	_____ Smoke control (402.9)
_____ Mall width (402.5)	_____ Kiosk requirements (402.10)
_____ Unlimited area (402.6)	_____ Emergency voice/alarm (402.12, 402.13)
_____ Fire separations (402.7)	_____ Plastic signs (402.14)
_____ Automatic sprinkler system (402.8)	_____ Fire department access (402.15)

MEANS OF EGRESS (continued)

GENERAL MEANS OF EGRESS

✓ Design requirements (1003.2 - 1003.7)	_____ Door landings/Thresholds/Arrangement (1008.1.4 - 1008.1.7)
✓ Means of egress illumination (1006)	_____ Door hardware (1008.1.8, 1008.1.9)
✓ Exit signs (1011)	NEED Stairways (1009)
N/A Accessible means of egress (1007)	↓ Handrails (1009.11)
✓ Means of egress doors (1008.1-1008.1.2)	_____ Roof access (1009.12)
N/A Special doors/Gates/Turnstiles (1008.1.3, 1008.2, 1008.3)	_____ Ramps (1010)
	NEED Guards (1012)

EXIT ACCESS

✓ Door number and arrangement (1013.2, 1014.1, 1014.2)	NON Egress balconies (1013.5, 1015.3)
✓ Exit access travel distance (1013.3, 1015.1)	↓ Corridors (1016)
NON Aisles (1013.4)	↓ Air movement in corridors (1016.4)

EXITS / EXIT DISCHARGE

✓ Exits/Exit doors (1017, 1018)	NON Horizontal exits (1021)
NON Interior exit stairways (1019)	NEED Exterior exit ramps/stairways (1022)
N/A Exit passageways (1020)	✓ Exit discharge (1023)

OTHER MEANS OF EGRESS

NON Miscellaneous egress requirements (1014.3 - 1014.6)	NON Assembly aisles & features (1024.6 - 1024.15)
NON Bleachers (1024.7-1)	NON Emergency escape and rescue (1025)
NON Assembly exits & egress (1024.2 - 1024.5)	

ACCESSIBILITY* (Chapter 11)

PER STATE - See CERT. Scoping requirements (1103)	_____ Dwelling units and sleeping units (1107)
✓ Accessible route (1104)	_____ Special occupancies (1108)
✓ Accessible entrances (1105)	_____ Features and facilities (1109)
✓ Parking and passenger loading (1106)	_____ Signage (1110)

*Also see Accessibility Plan Review Record

