			PERM	IIT ISSUED
389 Congress Street	<b>Maine - Building or Use</b> , 04101 Tel: (207) 874-870	<b>Permit Applica</b> 3, Fax: (207) 874-	tion Permit No: Issue D	Pate: CBL:
Location of Construction:	o when i tuine.		Owner Address	Phone:
66 Hutchins Dr	Casco Bay Su		10 Harry Harncha Vr	PORTI AKM 42
Business Name:	Contractor Nam		Contractor Address:	TOTTLE
Lessee/Buyer's Name	Maine State F	Builders	245 Warren Ave Portland	2077735504
n/a	Phone:		Permit Type:	Zone:
Past Use:	n/a		Alterations - Commercial	I-M
Offices Space	Proposed Use:		Permit Fee: Cost of V	Journal 1
Offices Space	Office Spaces			0,000.00 3
			FIRE DEPT: Approve	d INSPECTION:
			Denied	Use Group: $\mathcal{B}$ Type: $\mathcal{ZC}$
				Tara 1030
Proposed Project Descript	ion:			BOCK 1997
l	2 business spaces for Casco Ba	v Surgery/interior	Signature: JAM	Signatura Militaria
renovations	1 20290 354	, Ber j. morror	PEDESTRIAN ACTIVITIES D	INSPECTION: Use Group: B Type: 2 C  BOCA 1949  Signature: Munical STRICT (P.A.D.)
			- 1	∫ on
			Action: Approved	Approved Conditions Denied
			Signature:	Date:
Permit Taken By:	Date Applied For:		Zoning Appro	val
gad	12/06/2001			
	cation does not preclude the	Special Zone or R	Reviews Zoning Appeal	Historic Preservation
Applicant(s) from Federal Rules.	meeting applicable State and	Shoreland New Sign	Variance	Not in District or Landmark
2. Building permits of septic or electrical	do not include plumbing, I work.	Wetland To	miscellaneous	Does Not Require Review
within six (6) mon	are void if work is not started aths of the date of issuance.	Flood Zone	Conditional Use	Requires Review
False information permit and stop al	may invalidate a building l work	Subdivision	Interpretation	☐ Approved
		Site Plan	Approved 4/2	Approved w/Conditions
		Maj Minor V	MM Denied Z	Denied Denied
		Date	Date: Surgery	Date:
		12/14/2	1	Date.
		10/17/0	1	
		CERTIFICA	TION	
jurisdiction. In addition	it, if a permit for work described	med property, or that cation as his authori I in the application i	at the proposed work is authorized agent and I agree to conform	ed by the owner of record and that in to all applicable laws of this official's authorized representative vision of the code(s) applicable to
SIGNATURE OF APPLICAL	NT	ADDR	ESS DAT	TE PHONE
RESPONSIBLE PERSON IN	N CHARGE OF WORK, TITLE			T. State of the st
	, •••		DAT	E PHONE

# All Purpose 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: 10	HARRY HARMONDEIVE /66 Hutchins D	
Total Square Footage of Proposed Structu 9600 SF	square Footage of Lot 78660 SF	
Tax Assessor's Chart, Block & Lot Chart# 238A Block# B Lot#4	Owner: CASCO BAY SURGERY Telephone: 761.6642	
Lessee/Buyer's Name (If Applicable)	Applicant name, address & Cost Of telephone: 775. Zuglo X 47  ANNE CALLENDER. ARCH.  BSI CONGRESS ST PORTUND Fee: \$ 1824	
Current use: BUSINESS DEFINITION  If the location is currently vacant, what was prior use:  Approximately how long has it been vacant:  Proposed use: BUSINESS  Project description: RENOUATION. OF EXISTING ONG STORY BUILDING FOR THE MEDICAL PRACTICE OF CASCO BAY SURGURY.		
Contractor's name, address & telephone: MAINE STATE BULLOERS 245 WARREN AVE PORTURNO 04/03 773.5504 Who should we contact when the permit is ready: BILL SKOOYLAS Mailing address: SAME AS ABOVE  Phone: 773.5504		
	UDED IN THE SUBMISSIONS THE PERMIT WILL BE AUTOMATICALLY S/PLANNING DEPARTMENT, WE MAY REQUIRE ADDITIONAL ERMIT.	

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 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

Signature of applicant:

to this permit.

- Bate: Dec 10, 200

This is not a permit, you may not commence ANY work until the permit is issued



## WHIPPLE-CALLENDER ARCHITECTS

#### CASCO BAY SURGERY BUILDING PERMIT

DATE: December 6, 2001

LOCATION: 10 Harry Harmon Drive Portland

This building permit application is for the renovation of 6,000 S.F. of an existing 9,600 S.F. building. The building will be divided into two business spaces. The 6,000 S.F. will be renovated for the building owner Casco Bay Surgery and the remainder will be divided for a tenant. The majority of the work will be interior layout reconfiguration with exterior work being limited to the addition of an exterior stair for egress and the conversion of any existing garage door into an entry. The loading bay will be filled in and the sidewalk will be extended to this new door.

Existing building is steel framed with metal and brick exterior cladding. It is a single story building with slab on grade. The interior is metal framed with 5/8" sheetrock. A one-hour partition will be constructed between the owner and rental units. The building is sprinkled and has a fire alarm system.

Anne Callender Registered architect



# **CITY OF PORTLAND MAINE**

389 Congress St., Rm 315 Portland, ME 04101 Tel. - 207-874-8704 Fax - 207-874-8716

TO: Inspector of Buildings City of Portland, Maine Planning & Urban Development Division of Housing & Community Services
FROM DESIGNER: Whipple · Callender Architects.  55 / Congress St Portland
55 1 Congress St Portland
DATE: DCC. 4, 2001
Job Name: Casso Bay Surgery
Address of Construction: 10 Harry Harmon Drive
THE BOCA NATIONAL BUILDING CODE/1999 FourteenthEDITION  Construction project was designed according to the building code criteria listed below:  ONGINACY - WAREHOUSE
Building Code and Year Wally 1985 Use Group Classification(s) Pobliness. SINUS 1993
Type of Construction 2C Bldg. Height /6 70 2/ Bldg. Sq. Footage 9600 SF
Seismic Zone ? EXISTING Group Class_
Roof Snow Load Per Sq. Ft. 7 EXISTING. Dead Load Per Sq. Ft. 7 EXISTING.
Basic Wind Speed (mph)Effective Velocity Pressure Per Sq. Ft
Floor Live Load Per Sq. Ft. 250+ - EXISTING CONCRETE SCAPS ON GRADE
Structure has full sprinkler system? Yes No Alarm System? Yes No Sprinkler & Alarm systems must be installed according to BOCA and NFPA Standards with approval from the Portland Fire Department.
Is structure being considered unlimited area building: Yes_No
If mixed use, what subsection of 313 is being considered
List Occupant loading for each room or space, designed into this Project.
PSH 6/07/2K (Designers Stamp & Signature)





## CITY OF PORTLAND BUILDING CODE CERTIFICATE 389 Congress St., Rm 315 Portland, ME 04101

-	_	
11	11	•
	v	•

Inspector of Buildings City of Portland, Maine Department of Planning & Urban Development Division of Housing & Community Service

FROM:

Anne Callender, Whipple Callender Archites

RE:

Certificate of Design

DATE:

Dec. 6, 2001

These plans and/or specifications covering construction work on:

Casco Bay Surgery at 10 Harry Harmon Drive

Have been designed and drawn up by the undersigned, a Maine registered architect/engineer according to the BOCA National Building Code/1999 Fourteenth Edition, and local amendments.

(SEAL)

Signature Co. Call

Title Anne Callender Registered Architect

Firm Whipple. Callender Architect

Address 551 Congress St

Portland ME 0410t

ion, repair,
for Building or

## As per Maine State Law:

\$50,000.00 or more in new construction, repair, expansion, addition, or modification for Building or Structures, shall be prepared by a registered design Professional.

PSH 6/20/2k



# City of Portland, Maine 389 Congress St., Rm 315 Portland, ME 04101

# **ACCESSIBILITY CERTIFICATE**

то:	Inspector of Buildings City of Portland, Maine Department of Planning & Urban Development Division of Housing & Community Services
FROM:	Anne Callender
RE:	Certificate of Design, HANDICAP ACCESSIBILITY
DATE:	Dec. 6, 2001
These plans	and/or specifications covering construction work on:
Cas	sco Bay Surguy
Res	novations to 10 Harry Harmon Drive.
	•
engineer/arc	lesigned and drawn up by the undersigned, a Maine registered chitect according to State Regulations as adopted by the State of Maine on d Accessibility.
	Signature Conne Calla
(SEAL)	Title Registered Architect
•	Title Registered Architect  Firm (Uhippu- Callender Architect  Address 551 Congress Street  Fortland ME 04101
	Address 551 Congress Street
	11 o Portland ME 04101
	a Call



# State of Maine Department of Public Safety Construction Permit



Reviewed for Barrier Free

# 12077

Sprinkled
Sprinkler Supervised

#### **CASCO BAY SURGERY**

Located at: 10 HARRY HARMON DRIVE

**PORTLAND** 

Occupancy/Use: BUSINESS

Permission is hereby given to:

**CASCO BAY SURGERY** 

261 GORHAM ROAD SOUTH PORTLAND, ME 04106

to construct or alter the afore referenced building according to the plans hitherto filed with the Commisioner and now approved. no departure from application form/plans shall be madewithout prior approval in writing. This permit is issued under the provision of Title 25, Chapter 317, Section 2448 and the provisions of Title 5, Section 4594 - F.

Nothing herein shall excuse the holder of this permit for failure to comply with local ordinances, zoning laws, or other pertinent legal restrictions. Each permit issued shall be displayed/available at the site of construction.

This permit will expire at midnight on the 18th of May 2002

Dated the 19th day of November A.D. 2001

Commissioner

Fee:

\$150.00

\$50.00

**Copy-2 Architect** 

Comments:

WHIPPLE CALENDER ARCHITECTS C/O JOE DELANSEY 551 CONGRESS STREET PORTLAND, ME 04101

# CITY OF PORTLAND, MAINE

# ZONING BOARD OF APPEALS

To: City Clerk

From: Marge Schmuckal, Zoning Officer

Date: October 4, 2001

RE: Action taken by the Zoning Board of Appeals on September 20, 2001.

#### APPEAL AGENDA

The Board of Appeals held a public hearing on Thursday, September 20, 2001 at 7:00 p.m. on the second floor in the Council Chambers at the Portland City Hall 389 Congress Street, Portland, Maine to hear the following appeals:

- 1. Unfinished Business:
- 2. New Business:

#### A. Conditional Use Appeal

Clara Allen of 36 Nevens Street. Tax Map #130, Block E, Lot #011 in the R-5 Zone is requesting a Conditional Use Appeal from section 14-118 of the Portland Zoning Ordinance to run a Daycare business consisting of up to 12 children in a 2 unit apartment building. Clara Allen is the applicant. The Board voted 6-0 to continue to the next regular meeting.

#### B. Interpretation Appeal

Greater Portland Municipal Credit Union of 873 Brighton Avenue, Tax Map #284, Block E, Lot #001 in the B-1/R-3 Zone is seeking a Interpretation Appeal under section 14-382 (increase in no-conforming uses) & 14-162 (permitted uses). The applicant would like to demolish the existing retail redemption center and build a credit union, to include a drive-through window. The Zoning Officer has determined that this would not be feasible under section 14-382 & 14-162 from the Portland Zoning Ordinance. Richard Bryant, Esq. is representing the applicant. The Board voted 6-0 to continue to the next regular meeting. The Board wanted more evidence that the drive-thru was expressly permitted, and evidence of when there were ordinance changes.

#### C. Interpretation Appeal

Casco Bay Surgery. P.A. of 10 Harry Harmon Drive. Tax Map #238A, Block #B, Lot #4 in the I-M Zone is seeking a Interpretation Appeal under section 14-382 (increase in no-conforming uses) & 14-384 (change of a non-conforming use). The applicant argues that the Zoning Officer has determined the use of the property is a "business services/general offices" use rather than a "professional office" use. The Zoning Officer has also determined that the change from one use to another in this situation would be a considerable change from one "non-conforming use" to another "non-conforming use". David Currier from Warren Currier & Buchanan will be representing the applicant. The Board granted the Interpretation Appeal.

- 3. Other Business: Election of Officers; The Board voted the Chair to be Elizabeth Bordowitz and the Secretary will be Lee Lowry
- 4. Adjournment:

Enclosure:

Agenda of September 20, 2001 Copy of Board's Decisions 3 standard size tapes

CC:

Joseph Gray, City Manager

Mark Adelson, Housing & Community Services

Alex Jaegerman, Planning Department

# Warranty Deed

PLC Associates, a Maine General Partnership with an address of 10 Harry Harmon Drive, Portland, County of Cumberland, State of Maine, for consideration paid, grants to CBS Realty, LLC of 261 Gorham Road, South Portland, County of Cumberland, State of Maine, with Warranty Covenants, the land in the City of Portland, County of Cumberland, State of Maine, with any buildings thereon, bounded and described in Exhibit "A" hereto attached.

Witness my hand and seal this 20 day of November, 2001.

PLC Associates

TALLED & CANOLING

Peter L. Poulin, its Partner, duly authorized

State of Maine Cumberland, ss.

November 20, 2001

Then personally appeared the above-named Peter L. Poulin in his capacity as Partner of PLC Associates and acknowledged the foregoing instrument to be his free act and deed in said capacity and the free act and deed of PLC Associates.

Before me.

Notary Public Attorney-at-Law

JWG\db\Hi\Clients\POULIN\Sale of Herry Harmon Drive\Warranty Dead

## Exhibit "A" to Warranty Deed

A Certain Lot or Parcel of Land with the buildings thereon situated on the westerly side of Hutchins Drive in the City of Portland, County of Cumberland and State of Maine, being Lot 10 on a Plan entitled "Stroudwater Estates Final Plan-Phase II" by H. I. and E.C. Jordan-Surveyors dated October 12, 1984 and recorded in the Cumberland County Registry of Deeds in Plan Book 144, Page 73, as amended by Plan recorded in Plan Book 153, Page 12.

Excepting from the above parcel the property conveyed to the City of Portland by PLC Associates by Deed dated June 10, 1997 and recorded in Book 13454, Page 208.

This conveyance is made subject to the following encumbrances:

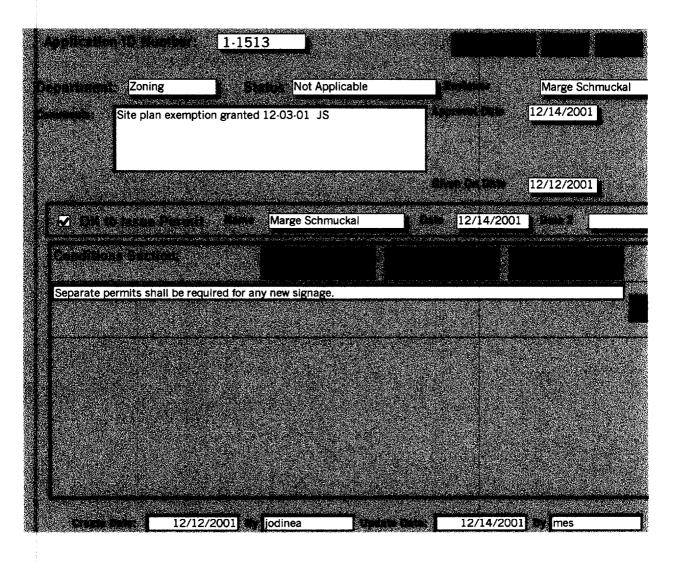
- 1. Rights and easements granted to Central Maine Power Company and New England Telephone and Telegraph Company by instrument dated January 31, 1986 and recorded in said Registry of Deeds in Book 7091, Page 73.
- 2. Terms, restrictions and provisions of the State of Maine Department of Environmental Protection Site Location Order dated June 14, 1984 and recorded in Book 6499, Page 194 as amended by instruments dated October 31, 1984 and recorded in Book 6610, Page 319, dated June 14, 1984 and recorded in Book 7050, Page 252, dated February 12, 1986 and recorded in Book 7078, Page 319, April 3, 1987 and recorded in Book 7737, Page 10, dated June 19, 1987 and recorded in Book 7887, Page 159, and dated April 3, 1987 and recorded in Book 8002, Page 137.
- 3. Drainage, sewer and access easements and conditions relative thereto as shown on "Plan of Property in Stroudwater Estates" dated July 27, 1984 and recorded in said Registry of Deeds in Plan Book 144, Page 73, as amended by "Plan of Property in Portland, Maine" dated December 13, 1985 and recorded in said Registry of Deeds in Plan Book 153, Page 12; and further conditions as set forth in deed from Stroudwater Estates to the City of Portland dated August 3, 1984 and recorded in Book 7044, Page 110.
- 4. General conditions and restrictions applicable to Lots in Phase II of Stroudwater Estates as set forth in Deed from George M. Hutchins to Cadcam Associates dated January 28, 1988 and recorded in said Registry of Deeds in Book 8170, Page 139.

Also conveying rights of Grantor as set forth in the Agreement between George M. Hutchins, et al, and Portland Water District dated October 30, 1979 and recorded in said Registry of Deeds in Book 4521, Page 85 subject to the obligations contained therein.

JWG/db/H//Clienta/POULIN/Sale to Casoo Bay Surgery/Exhibit A to Warranty Daed

MEANING AND INTENDING to describe a portion of those premises conveyed by George M. Hutchins to PLC Associates by Quitclaim Deed with Covenant dated September 30, 1993 and recorded in the Cumberland County Registry of Deeds, Book 11002, Page 312.

Application ID Number:	1-1513	Delete	Save   Close
<b>epariment:</b> Building	Status; Approved	Reviewer	Tammy Munson
omments:		Approval Date	01/08/2002
		Given On Date	12/21/2001
✓ OK to Issue Permit	Name Tammy Munson	<b>Date</b> 01/08/2002	Date 2
Conditions Section:	Add New Condition From	Add New Condition	Delete Constition
Stairs to equipment area mu Delaney of Whipple and Cal	st be 7" rise w/ 11" tread as dro lender architectural firm on 01	awn on original plan. Relayed t /08/2002.	his info to Joe
Create Date: 12/12	2/2001 <b>By</b> jodinea	Update Date: 01/08/200	



1-8-02 WHIPPLE-CALLENDER ARCHITECTS Relayed Message to Joe Delaney that stairs to equipment area have to be 7/11 as down on be 7/11 as down on uilding Inspection original plan. T.M.

**FAX TRANSMITTAL** 

DATE: January 7, 2002

**ATTENTION: Tammy Munson** 

**COMPANY:** City of Portland, Building Inspection

FAX NUMBER: 874-8716

**SENT BY:** Anne Callender

NUMBER OF PAGES INCLUDING COVER LETTER: & 6

Casco Bay Surgery at 10 Harry Harmon/66 Hutchens Drive.

Hi Tammy -

I found what I was thinking about in Chapter 28, Section 2802.0 with the definition of an equipment platform being an unoccupied elevated platform and can be accessed by a ladder. Under 1202.0 there is a definition of habitable and occupiable space, which we are neither and we are closely aligned to the attic definition which only requires a 22" x 30" access hatch.

Since we would like to provide a stair, I looked at section 1014.0, which says all stairs must comply with this section. I looked to 1014.3 for width and Exceptions 1 and 4 apply to allow for a 36" width, and under 1014.6 Exception 8 allows 7 3/4" riser with 10" tread for use group U where it is an accessory to chaoccupancy, which I believe this is.

Under section 1021.0 Guards, 1021.3 Opening limitations there is an exception for equipment platforms, where the guard balusters need to limit a 21" sphere from passing. So another 2x4 at the center of the guard coening detail we showed would work. I am revising the detail to use plywood and am including it in this fax.

Please call if you don't agree with this interpretation or if you need any thing else from me.

Sincerely,

Anne Callender

# **CHAPTER 28**

# MECHANICAL SYSTEMS

#### **SECTION 2801.0 GENERAL**

2801.1 Scope: The provisions of this chapter shall control the construction, inspection and maintenance of all mechanical equipment and systems in respect to structural strength, fire safety and operation.

2801.2 Mechanical code: All mechanical equipment and systems shall be constructed, installed and maintain: d in accordance with the mechanical code listed in Chapter 35.

#### SECTION 2802.0 DEFINITIONS

Equipment platform: An unoccupied elevated platform used exclusively for building mechanical system: or industrial process equipment. An equipment platform shall include the associated elevated walkways, stairs, and ladders accessing the platform.

## SESTION 2305 TO CONSTRUCTION DOCUMENTS

2803.1 General: The construction documents for the installation, repair, extension or removal of any mechanical equipment or system shall be submitted in accordance with the mechanical code listed in Chapter 35, and a permit shall be secured prior to the commencement of any work.

2803.2 Matter covered: The construction documents shall show in sufficient detail applicable features and clearances of the appliances and systems, including: size and type of apparatus; construction of flue, stack or chimney; stack connections; type of fuel; method of operation; and the method of compliance with all regulations for the class and type of equipment installed.

2803.3 Details: An application for permit shall be accompanied by construction documents complying with the provisions of the mechanical code listed in Chapter 35 before a permit shall be issued for the mechanical equipment or system. The construction documents shall be drawn to a scale of not less than 1/8 inch to the foot (1:100), and shall show the location and arrangement of all equipment and distribution elements including safeties and pressure-controlling devices.

#### **SECTION 2804.0 FEES**

2804.1 General: A permit to begin work for new construction or alteration shall not be issued until the prescribed application and permit fees have been paid, nor shall an amendment to a permit necessitating an additional fee because of the additional work involved be issued until the additional fee has been paid.

### SECTION 2885.0 EQUIPMENT PLATFORMS

2805.1 General: Equipment platforms in compliance with this section shall not be considered as a portion of the floor below. Such platforms shall not contribute to the building area as regulated by Section 503.0. Such platforms shall not contribute to the number of stories as regulated by Section 503.3. The area of such platforms shall not be included in determining the fire area. Such platforms shall not be a part of any mezzanine. Such platforms shall not serve as a means of egress for any mezzanine.

2805.2 Equipment platforms: In buildings of Use Group F, meeting the requirements of Section 507.0 for unlimited area, and special industrial occupancies as defined in Section 202.0, equipment platforms shall be permitted in accordance with Sections 2805.2.1 through 2805.2.5.

2805.2.1 Construction: Equipment platforms shall be constructed of noncombustible construction.

2805.2.2 Area limitation: The aggregate area of such platform or platforms within a room shall not exceed two-thirds of the area of the room in which they are located. Where an equipment platform is located in the same room as a mezzanine, the combined aggregate area of the equipment platforms and mezzanines shall not exceed two-thirds of the room in which they occur.

2805.2.3 Fire suppression: Each equipment platform shall be fully protected by an automatic fire suppression system, installed in accordance with Sections 906.0 and 906.2.1. The area immediately beneath each such equipment platform shall also be fully protected by additional heads installed under the platform.

2805.2.4 Access: Walkways, stairs, and ladders providing access to equipment platforms shall not serve as a means of egress from any occupied space. Walkways, stairs, alternating tread stairs, ladders with cages and ship ladders providing access to an equipment platform shall be provided in accordance with Section 1027.1.1.

2805.2.5 Guards: Equipment platforms open to the room in which they occur shall have guards along the open sides of the platform in accordance with Section 1021.0.

### SECTION 2806.0 INSPECTIONS AND TESTS

2806.1 Inspection: All mechanical equipment and systems requiring a permit shall be inspected in accordance with the me-

**MEANS OF EGRESS** 

self-closing doors and the equivalent of 1/4-inch-thick wired glass in steel frames.

1029.4 Exit discharge lobby: Where an exit stairway discharges into an interior exit discharge lobby located at the level of exit discharge, the story containing the exit discharge lobby shall be equipped throughout with an automatic sprinkler system installed in accordance with Section 906.2.1 or 905.2.2. Opening protectives shall be required in accordance with Table 717.1 where an enclosed exit stairway discharges into an exit discharge lobby.

Exception: An automatic sprinkler system is not required in portions of the story that are separated from the exit discharge lobby by fire separation assemblies (see Section 709.0) having a fireresistance rating of not less than that required for the exit stairways that discharge into the exit discharge lobby.

1020.5 Width and height: The clear width of exil passageways, exit discharge vestibules and exit discharge lobbies shall not be less than the width required for the capacity of the exit stairway leading thereto and all required exit doorways opening into the exit passageway, exit discharge vestibule or exit discharge lobby. Exit passageways, exit discharge vestibules, and exit discharge lobbies shall have a minimum width of 44 inches (1118 mm) and minimum clear ceiling height of 8 feet (2438 rum).

1929.6 Limitations: Not more than 50 percent of the required number of exits, nor more than 50 percent of the required exit capacity, shall discharge through areas on the level of exit discharge.

#### **SECTION 1021.0 GUARDS**

1021.1 Design and construction: Where required by the provitions of Sections 406.5, 408.3.2, 1005.5, 1014.7, 1016.5 and 1825.5, guards shall be designed and constructed in accordance with the requirements of this section and Section 1606.4.

1621.2 Height: The guards shall be at least 42 in: hes (1067 mm) in height measured vertically above the leading or ge of the tread or adjacent walking surface.

Exception: Guards along open-sided floor areas and along stairs located less than 30 inches (762 mm) above the floor or grade below shall not be less than 36 inches (914 mm) in height.

1621.3 Opening limitations: In occupancies in Use Groups A, B, E, H-4, I-1, I-2, M and R, and in public garages and open parking structures, open guards shall have balusters or be of solid material such that a sphere with a diameter of 4 inches (102 mm) cannot pass through any opening. Guards shall not have an ornamental pattern that would provide a ladder effect.

#### Exceptions

 The triangular openings formed by the riser, tread and bottom rail at the open side of a stairnesy shall be of a maximum size such that a sphere 6 inches (152 mm) in diameter cannot pass through the opening.

 At elevated walking surfaces for access to and utilization of electrical, mechanical, or plumbing systems or equipment, guards shall have balusters or be of solid materials such that a sphere with a diameter of 21 inches (533 mm) cannot pass through any opening.

In occupancies in Use Groups I-3, F, H-1, H-2, H-3, S (other than public garages and open parking structures), and along open-sided floor areas located less than 30 inches (762 mm) above the floor or grade below, balusters, horizontal intermediate rails or other construction shall not permit a sphere with a diameter of 21 inches (533 mm) to pass through any opening.

1021.4 Railings: Metal or other approved noncombustible railings shall be provided on balconies and galleries as prescribed in Sections 1021.4.1 through 1021.4.3.

1021.4.1 At fascia: Railings shall be provided at the fascia of boxes, balconies and galleries and shall not be less than 26 inches (660 mm) in height; at the end of aisles extending to the fascia for the full width of the aisle and shall not be less than 36 inches (914 mm) in height; and at the foot of steps for the full width of the steps and shall not be less than 42 inches (1067 mm) in height.

1021.4.2 At cross aisles: Railings shall be provided along cross aisles, and shall not be less than 26 inches (660 mm) in height except that railings are not required where the backs of the seats along the front of the aisles project 24 inches (610 mm) or more above the floor of the aisle.

1021.4.3 Successive tiers: Where seatings are arranged in successive tiers, and where the height of rise between platforms exceeds 18 inches (457 mm), railings not less than 26 inches (660 mm) in height shall be provided along the entire row of seats at the edge of the platform.

#### **SECTION 1022.0 HANDRAILS**

1022.1 General: Where required by the provisions of Sections 1012.5, 1013.0, 1014.6.6.1, 1014.7 and 1016.5, handrails shall be designed and constructed in accordance with this section and Section 1606.4.

1022.2 Handrail details: Handrails shall be continuous, without interruption by newel posts, other structure elements or obstructions. A handrail and any wall or other surface adjacent to the handrail shall be free of any sharp or abrasive elements. The clear space between the handrail and the adjacent wall or surface shall not be less than  $1\frac{1}{2}$  inches (38 mm), except that the clear space shall not be less than  $2\frac{1}{4}$  inches (57 mm) for stairways. Edges shall have a minimum radius of  $\frac{1}{4}$  inch (3 mm).

Exception: Handrail brackets or balusters attached to the bottom surface of the handrail and which do not project horizontally beyond the sides of the handrail within 1 inch (25 mm) of the bottom of the handrail shall not be considered to be obstructions.

1022.2.1 Projection: Handrails shall not project more than  $3^{1}/_{2}$  inches (89 mm) into the required passageway, aisle, corridor or ramp width, and not more than  $4^{1}/_{2}$  inches (114 mm) into the required stairway width. Handrails shall not reduce the clear width of a ramp to less than 36 inches (914 mm).

**MEANS OF EGRESS** 

1014.3.2 Landing width: The least dimension of landings and platforms in means of egress stairways shall not be less than the required width of the stairway, except that the landing dimension in the direction of egress travel is not required to exceed 4 feet (1219 mm) where the travel from one stair flight to the next stair flight is a straight run.

1014.4 Headroom: The minimum headroom in all parts of a stairway shall not be less than 80 inches (2032 inm), or 78 inches (1981 mm) for a spiral stairway, measured vertically from the tread nosing or from the floor surface of the leading or platform.

1014.5 Vertical rise: A means of egress stairway shall not have a height of vertical rise of more than 12 feet (3658 mm) between landings and intermediate platforms.

1014.6 Treads and risers: Maximum riser height shall be 7 inches (178 mm) and minimum riser height shall be 4 inches (102 mm). The riser height shall be measured vertically between the leading edges of the adjacent treads. Minimum tread depth shall be 11 inches (279 mm), measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge.

#### Exceptions.

- 1. Winders in accordance with Section 1014.6.3.
- 2. Spiral stairways in accordance with Section 1014.6.4.
- Circular stairways in accordance with Section 1014.6.5.
- Alternating tread stairways in accordance with Section 1014.6.6.
- 5. Stairways serving as aisles in assumbly seating areas where the stairway pitch or slope is set, for sightline reasons, by the slope of the adjacent seating area.
- Any stairway replacing an existing stairway within a space where, because of existing construction, the pitch or slope cannot be reduced.
- Existing stairways.
- 8. In occupancies in Use Group R-3, within dwelling units in occupancies in Use Group R-2 and in occupancies in Use Group Use Group Use Group II which are accessor in an occupancy in Use Group R-3, the maximum riser height shall be 734 inches (197 mm) and the minimum tread depth shall be 10 inches (254 mm). A nosing not less than 34 inches (19 mm) but not more than 144 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).
- Stairways in penal facilities serving guard towers, observation stations and control rooms not more than 250 square feet (23 m³) in area shall be permitted to have risers not exceeding 8 inches (263 mm) in height and treads not less than 9 inches (229 mm) in depth.

1014.6.1 Profile: The radius of curvature at the leading edge of the tread shall not be greater than  $\frac{1}{2}$  inch (13 mm). Bevelling of nosings shall not exceed  $\frac{1}{2}$  inch (13 mm). Risers shall be solid and vertical or sloped from the underside of the leading edge of the tread above at an angle not more than 30 degrees (0.52 rad) from the vertical. The leading edge of

treads shall project not more than 11/4 inches (32 mm) beyond the tread below.

#### Exceptions

- Solid risers are not required for stairways serving dwelling units which are not required to be accessible in accordance with Section 1107.4.2, provided that the opening between treads does not permit the passage of a sphere with a diameter of 4 inches (102 mm).
- Solid risers are not required for occupancies in Use Group I-3.
- Solid risers are not required for stairways serving factory or storage occupancies which are not required to be accessible.

1014.6.2 Dimensional uniformity: There shall not be variation exceeding  $^{1}/_{16}$  inch (5 mm) in the depth of adjacent treads or in the height of adjacent risers. The tolerance between the largest and smallest riser or between the largest and smallest tread shall not exceed  $^{3}/_{8}$  inch (10 mm) in any flight of stairs.

#### **Exceptions**

- Where the bottom riser adjoins a sloping public way, walk or driveway which has an established grade and serves as a landing, a variation in the height of the bottom riser shall not exceed 3 inches (76 mm) in every 3 feet (914 mm) of stairway width.
- 2. On stairways serving as aisles in assembly seating, where necessitated by changes in the gradient of adjoining seating areas to maintain adequate sightlines, the maximum nonuniformity of riser heights within a flight and the nonuniformity between adjacent risers shall not apply. Where a nonuniformity exceeds 3/16 inch (5 mm) between adjacent risers, the exact location of the nonuniformity shall be indicated with a distinctive marking stripe on each tread at the nosing or leading edge adjacent to the nonuniform risers.

1014.6.3 Winders: Winders shall not be permitted in required means of egress stairways except stairways serving a single dwelling unit. Such winders shall have a tread depth of not less than 10 inches (254 mm) at a point not more than 12 inches (305 mm) from the side where the tread is narrower and the minimum tread depth shall not be less than 6 inches (152 mm). The continuous handrail required by Section 1014.7 shall be located on the side where the tread is narrower.

as an element of a means of egress except: within a single dwelling unit; from a mezzanine area not more than 250 square feet (23 m²) in area which serves not more than five occupants; and in penal facilities from a guard tower, observation station or control room not more than 250 square feet (23 m²) in area. The minimum width of all spiral stairways shall be 26 inches (660 mm) with each tread having a 7½-inch (191 mm) minimum tread depth at 12 inches (305 mm) from the narrow edge. All treads shall be identical and the rise shall

#### THE BOCA NATIONAL BUILDING CODE/1999

1013.6.1 Aisle termination: Each end of an aisle shall terminate at a cross aisle, foyer, doorway, or somitory having access to an exit.

#### Exceptions

- 1. Where seats are without backress, dead-ends in vertical aisles shall not exceed 16 moss.
- For smoke-protected assembly seating, with or without backrests, dead-end aisles shall not exceed 21 rows.
- 3. For smoke-protected assembly seating, with or without backrests, dead-end aisles longer than 21 rows are permitted where the seats beyond 21 rows are not more than 40 seats from another aisle, measured along a row of seats having an aisle accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inches (8 mm) for each additional seat above seven in a row.

1013.6.2 Row width: For smoke-protected assembly seating, the maximum number of seats in a row that has a minimum clear aisle accessway width of 12 inches (305 mm) shall be as specified in Table 1013.6.2.

Where the number of seats per row exceeds that specified in Table 1013.6.2, the minimum clear aisle aicessway width for rows served by aisles or doorways at both ends shall be 12 inches (305 mm) plus 0.3 inch (7.5 mm) for every additional seat beyond that specified in Table 1013.6.2 and there shall be not more than 100 seats per row; and for rows served by an aisle or doorway at only one end of the row, the minimum clear aisle accessway width shall be 12 inches (305 mm) plus 0.6 inch (15 mm) for every additional seat beyond that specified in Table 1013.6.2.

Table 1013.6.2

ROW LENGTH WITH 12-INCH AISLE ACCESSWAY
SMOKE-PROTECTED ASSEMBLY SEATING

Total number of seats in the space	No. of seats per row permated to have a minimum 12-inch <sup>a</sup> clear width aisle accessway		
the space	Aisle or doorway at both ends of row	Alsie or doorway at	
Less than 4,000	14	7	
4,000	15	, <del>,</del>	
7,000	16	8	
16,000	19	9	
19,000	20	10	
22,000 or more	21	11	

Note a, 1 inch = 25.4 mm.

1013.6.3 Single access row: For rows of scating served by an aisle or doorway at only one end of the row in smoke-protected assembly seating, the common path of travel from any seat to a point where a person has a choice of two directions of egress travel shall not exceed 50 feet (15240 mm).

1013.7 Bleacher footboards: Bleacher footboards shall be provided for all rows of seats above the third row or beginning at such a point where the seatboard is more than ? feet (610 mm) above the ground or floor surface below. A separate footboard is

not required where the seatboard is used for both seating and the footboard, provided that each level or platform is not less than 24 inches (610 mm) wide. On a horizontally projected plane, horizontal gaps between footboards and seatboards shall not exceed \(^{1}/\_{4}\) inch (6 mm). Openings between footboards and seatboards which are located more than 30 inches (762 mm) above the floor or grade below shall be provided with intermediate construction such that a sphere with a diameter of 4 inches (102 mm) cannot pass through the opening.

1013.8 Spaces underneath seats: Spaces underneath grandstand seats shall be kept free of all combustible and flammable materials and shall not be occupied or used for other than exits; except that where enclosed in not less than 1-hour fireresistance rated construction, the code official shall approve the use of such spaces for other purposes, provided that the safety of the public is not endangered.

#### **SECTION 1014.0 STAIRWAYS**

1014.1 General: All stairways shall comply with the provisions of this section. Section 1014.11 shall be applicable only to interior stairways. Section 1014.12 shall be applicable only to exterior stairways.

1014.1.1 Walking surface slope: The maximum slope of the walking surface of treads and landings shall be one unit vertical in 48 units horizontal (1:48).

Exception: The maximum slope shall not apply to portions of treads that are rounded or beveled in accordance with Section 1014.6.1.

1014.2 Egress capacity: The egress capacity of stairways and doors shall be computed in accordance with Section 1009.0.

1014.3 Width: All means of egress stairways shall not be less than 44 inches (1118 mm) in width.

#### Exceptions

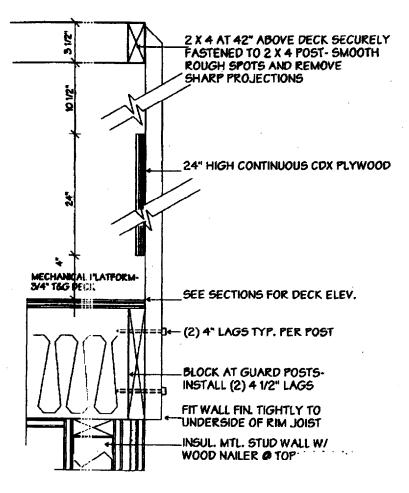
- Stairways serving buildings of single-exit construction where permitted by Section 1010.3 shall not be less than 36 inches (914 mm) in width.
- 2. Spiral stairways as provided for in Section 1014.6.4.
- 3. Stairways serving a single residential dwelling unit shall not be less than 36 inches (914 mm) in width.
- 4. Stairways serving buildings having a total occupant load of 50 or less shall not be less than 36 inches (914 mm) in width.
- 5. Where a stairway lift is installed on stairways serving occupancies in Use Group R-3 or within dwelling units in occupancies in Use Group R-2, a clear passage width not less than 20 inches (508 mm) shall be provided.

1014.3.1 Restrictions: Means of egress stairways shall not reduce in width in the direction of egress travel. Projections into a required stairway width are prohibited.

#### Exceptions

- 1. At and below handrail height where, at each handrail, projections into the required width of a stairway shall not exceed 41, inches (114 mm).
- Above the minimum headroom height required in Section 1014.4, projections into the required width shall not be limited.

JOB: CASCOBAY SURGERY DATE: 1.7.2002 SCALE: 1'h"-1'-0"



GUARD DETAIL 11/2" = 1' ()"

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