

City of Portland, Maine – Building or Use Permit Application 389 Congress Street, 04101, Tel: (207) 874-8703, FAX: 874-8716

Location of Construction: 609 Congress Street		Owner: Matt Orne		Phone: 879-4525		Permit No: 000156	
Owner Address: 140 A High St. Ptld, ME 04101		Lessee/Buyer's Name: Grant Wilson		Phone: N/A		BusinessName: N/A	
Contractor Name: Nyto Bay Builders		Address: Not Given		Phone: N/A		Permit Issued:	
Past Use: Theater		Proposed Use: Entertainment Hall		COST OF WORK: \$3,000		PERMIT FEE: \$ 42.00	
Proposed Project Description: Amendment to Permit Number #000136 to include addition of handrails.		FIRE DEPT. <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied		INSPECTION: Use Group: A-1 Type: 2-3		Zone: B-3 CBL: 046-D-033	
		Signature: <i>[Signature]</i>		Signature: <i>[Signature]</i>		Zoning Approval: <i>[Signature]</i>	
		PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)		Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved with Conditions <input type="checkbox"/> Denied		Special Zone or Reviews: <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan maj <input type="checkbox"/> minor <input type="checkbox"/> mm <input type="checkbox"/>	
Permit Taken By: KA		Date Applied For: 2-28-00		Signature: _____ Date: _____		Zoning Appeal <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied	

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal rules.
 2. Building permits do not include plumbing, septic or electrical work.
 3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..
- ** Please Call for Pick Up
264-7980
Jon Ochtera

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provisions of the code(s) applicable to such permit

SIGNATURE OF APPLICANT	ADDRESS:	DATE: 2-28-00	PHONE:
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE			PHONE:

White-Permit Desk Green-Assessor's Canary-D.P.W. Pink-Public File Ivory Card-Inspector

CEO DISTRICT UB 2

THIS IS NOT A PERMIT/CONSTRUCTION CANNOT COMMENCE UNTIL THE PERMIT IS ISSUED

**Building or Use Permit Pre-Application
Attached Single Family Dwellings/Two-Family Dwelling
Multi-Family or Commercial Structures and Additions Thereto**

In the interest of processing your application in the quickest possible manner, please complete the Information below for a Building or Use Permit.

NOTEIf 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 (include Portion of Building): <i>209 Congress St. Portland Me 04101</i>			
Total Square Footage of Proposed Structure		Square Footage of Lot	
Tax Assessor's Chart, Block & Lot Number Chart# <i>0446</i> Block# <i>0</i> Lot# <i>033</i>		Owner: <i>Matt Orne</i>	Telephone#: <i>879-4525</i>
Owner's Address: <i>140A High St. Portland Me. 04101</i>		Lessee/Buyer's Name (If Applicable) <i>Grant Wilson</i>	Cost Of Work: Fee <i>\$ 3000.00</i> <i>\$ 42.00</i>
Proposed Project Description: (Please be as specific as possible) <i>Amendment to Permit # 000135 adding Hand Rails Exterior Renovations</i>			
Contractor's Name, Address & Telephone <i>Nylo Bay Builders</i>			Rec'd By: <i>(Signature)</i>
Current Use: <i>Theater - Vacant</i>		Proposed Use: <i>Entertainment Hall</i>	

Separate permits are required for Internal & External Plumbing, HVAC and Electrical installation.

- All construction must be conducted in compliance with the 1996 B.O.C.A. Building Code as amended by Section 6-Art II.
- All plumbing must be conducted in compliance with the State of Maine Plumbing Code.
- All Electrical Installation must comply with the 1996 National Electrical Code as amended by Section 6-Art III.
- HVAC (Heating, Ventilation and Air Conditioning) installation must comply with the 1993 BOCA Mechanical Code.

You must Include the following with you application:

- 1) A Copy of Your Deed or Purchase and Sale Agreement
- 2) A Copy of your Construction Contract, if available
- 3) A Plot Plan/Site Plan

Minor or Major site plan review will be required for the above proposed projects. The attached checklist outlines the minimum standards for a site plan.

4) Building Plans

Unless exempted by State Law, construction documents must be designed by a registered design professional.

A complete set of construction drawings showing all of the following elements of construction:

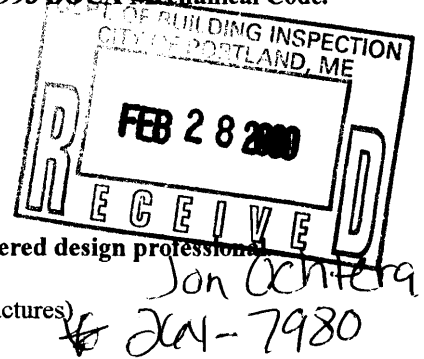
- Cross Sections w/Framing details (including porches, decks w/ railings, and accessory structures)
- Floor Plans & Elevations
- Window and door schedules
- Foundation plans with required drainage and dampproofing
- Electrical and plumbing layout. Mechanical drawings for any specialized equipment such as furnaces, chimneys, gas equipment, HVAC equipment (air handling) or other types of work that may require special review must be included.

Certification

I hereby certify that I am the Owner of record of the named property, or that the proposed work is authorized by the owner of record 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: <i>Jon M. Ochtera</i>	Date: <i>02-28-00</i>
---	-----------------------

Building Permit Fee: \$30.00 for the 1st \$1000. cost plus \$6.00 per \$1,000.00 construction cost thereafter.
Additional Site review and related fees are attached on a separate addendum



LAND USE - ZONING REPORT

ADDRESS: 609 Congress St DATE: 3/1/00

REASON FOR PERMIT: Amendment for standing rails with shelves

BUILDING OWNER: Matt Orne C-B-L: 46-D-33

PERMIT APPLICANT: _____

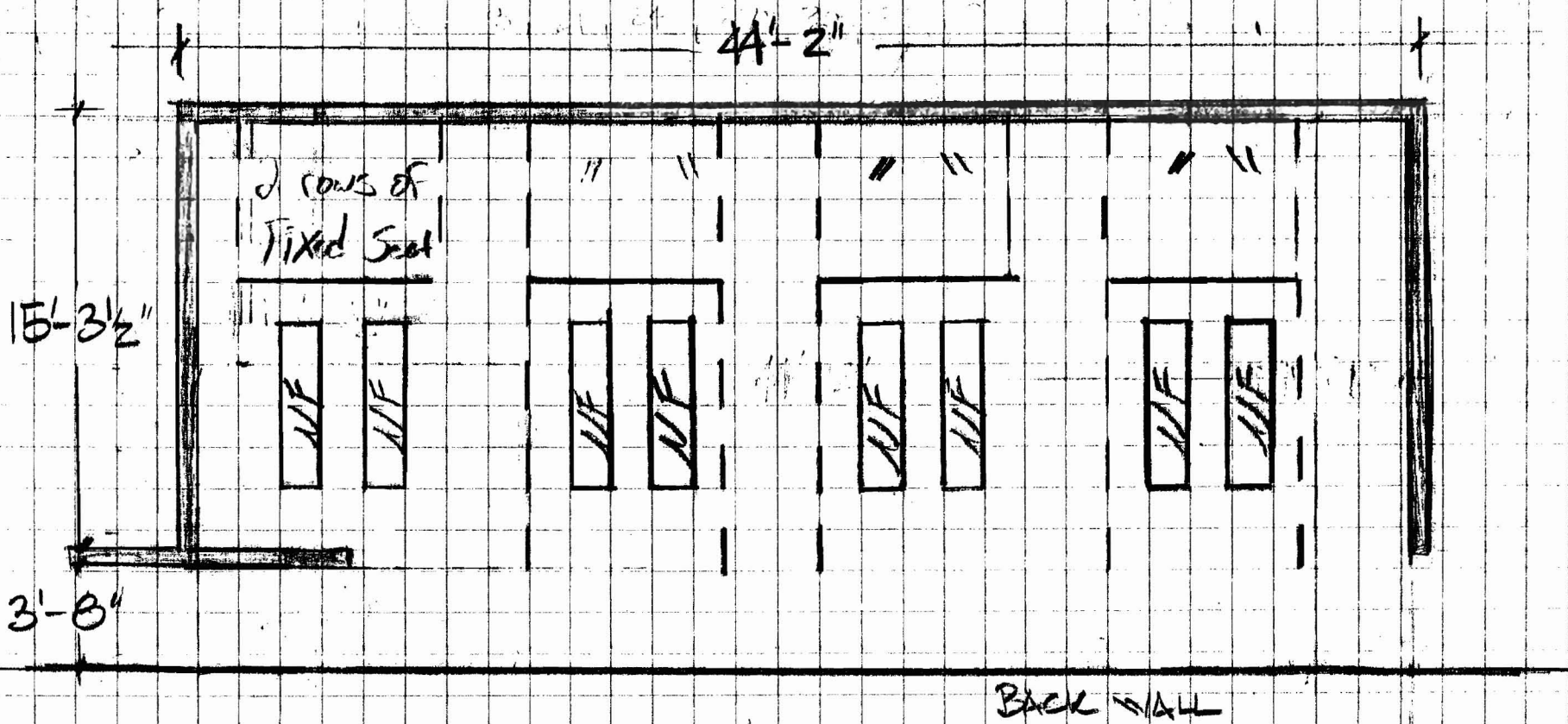
APPROVED: with conditions

DENIED: _____

#1, #11, #4

CONDITION(S) OF APPROVAL

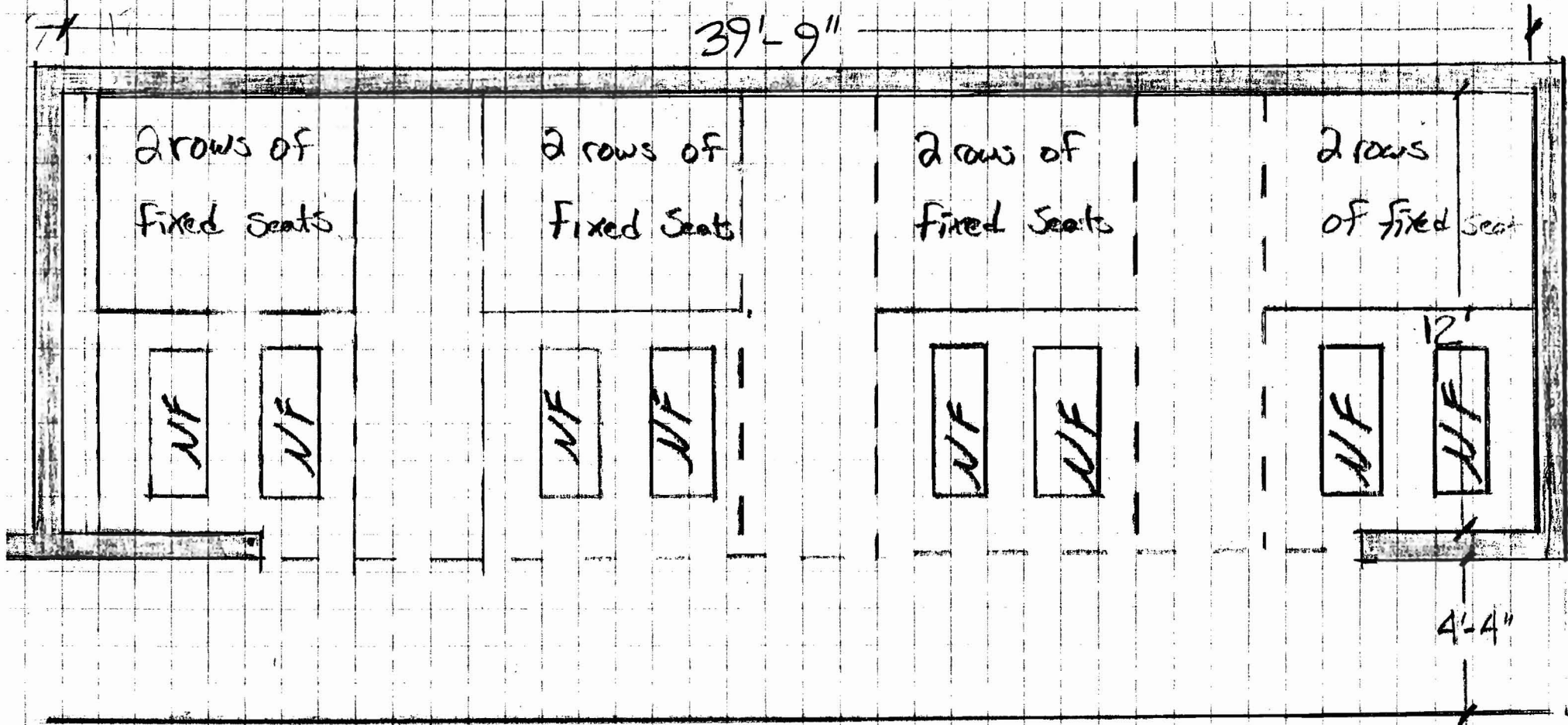
1. This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.
2. During its existence, all aspects of the Home Occupation criteria, Section 14-410, shall be maintained.
3. The footprint of the existing _____ shall not be increased during maintenance reconstruction.
4. All the conditions placed on the original, previously approved, permit issued on 2/23/2000 are still in effect for this amendment. # 000135
5. Your present structure is legally nonconforming as to rear and side setbacks. If you were to demolish the building on your own volition, you will not be able to maintain these same setbacks. Instead you would need to meet the zoning setbacks set forth in today's ordinances. In order to preserve these legally non-conforming setbacks, you may only rebuild the _____ in place and in phases.
6. This property shall remain a single family dwelling. Any change of use shall require a separate permit application for review and approval.
7. Our records indicate that this property has a legal use of _____ units. Any change in this approved use shall require a separate permit application for review and approval.
8. Separate permits shall be required for any signage.
9. Separate permits shall be required for future decks, sheds, pool(s), and/or garage.
10. This is not an approval for an additional dwelling unit. You shall not add any additional kitchen equipment, such as stoves, microwaves, refrigerators, or kitchen sinks, etc. without special approvals.
11. Other requirements of condition HA1 The principal use shall remain a SAN "Entertainment/Theatre type" use. If there is any change to use this as a bar use or restaurant use as it's primary use, a separate permit for review and approval is required!
Marge Schmuckal Marge Schmuckal, Zoning Administrator



UPPER SECTION

NF = Non Fixed

SCALE 1 SQ. = 18"



NF = Non Fixed

LOWER SECTION

SCALE 1 SQ. = 12"

2 LAYERS OF 3/4" PLYW. —
 PROVIDE NOSING :
 FINISH WITH FORMICA
 SHELF BRACKETS @ 48"oc.

CONTINUOUS RAILING
 POSTS @ 6'-0" o.c.
 STEEL PIPE.

1/4" MIN DIA.
 2" MAX DIA.

STANCHION w/ SET SCREW

1/2" OR
 5/8" — 1/4 ROUND

5/8" PLYWOOD EACH FACE

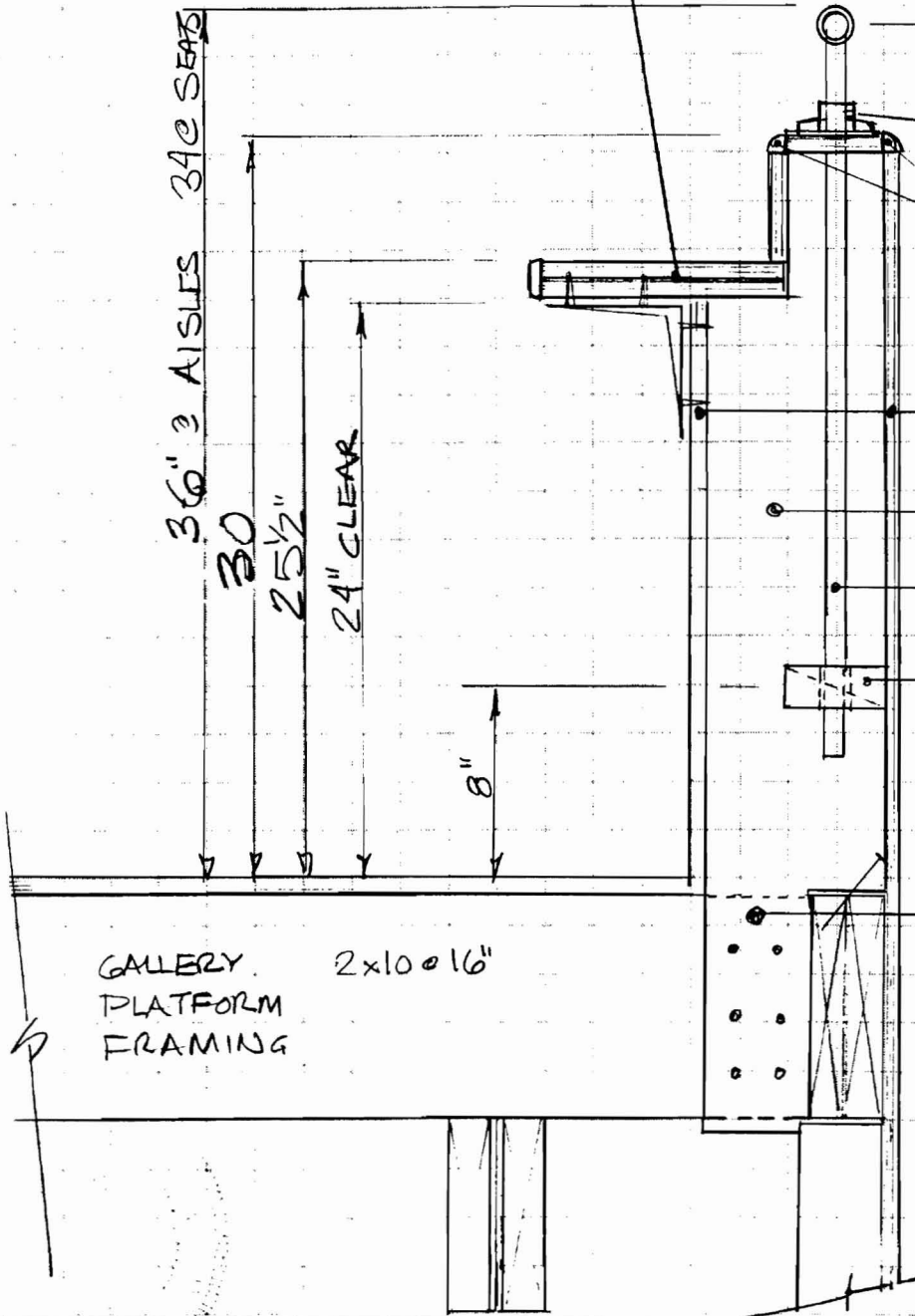
2x8's @ 16" oc.

1/4" Posts @ 6'-0" oc.

2x4 BLOCKING WITH
 HOLE TO ACCEPT
 POST - FRAME
 BETWEEN 2x8 UPRIGHTS

FASTEN 2x8 UPRIGHTS
 TO HORIZ. JOISTS
 @ 16" o.c. - (6) 10d NAIL

FASCIA RAIL



GALLERY. 2x10 @ 16"
 PLATFORM
 FRAMING

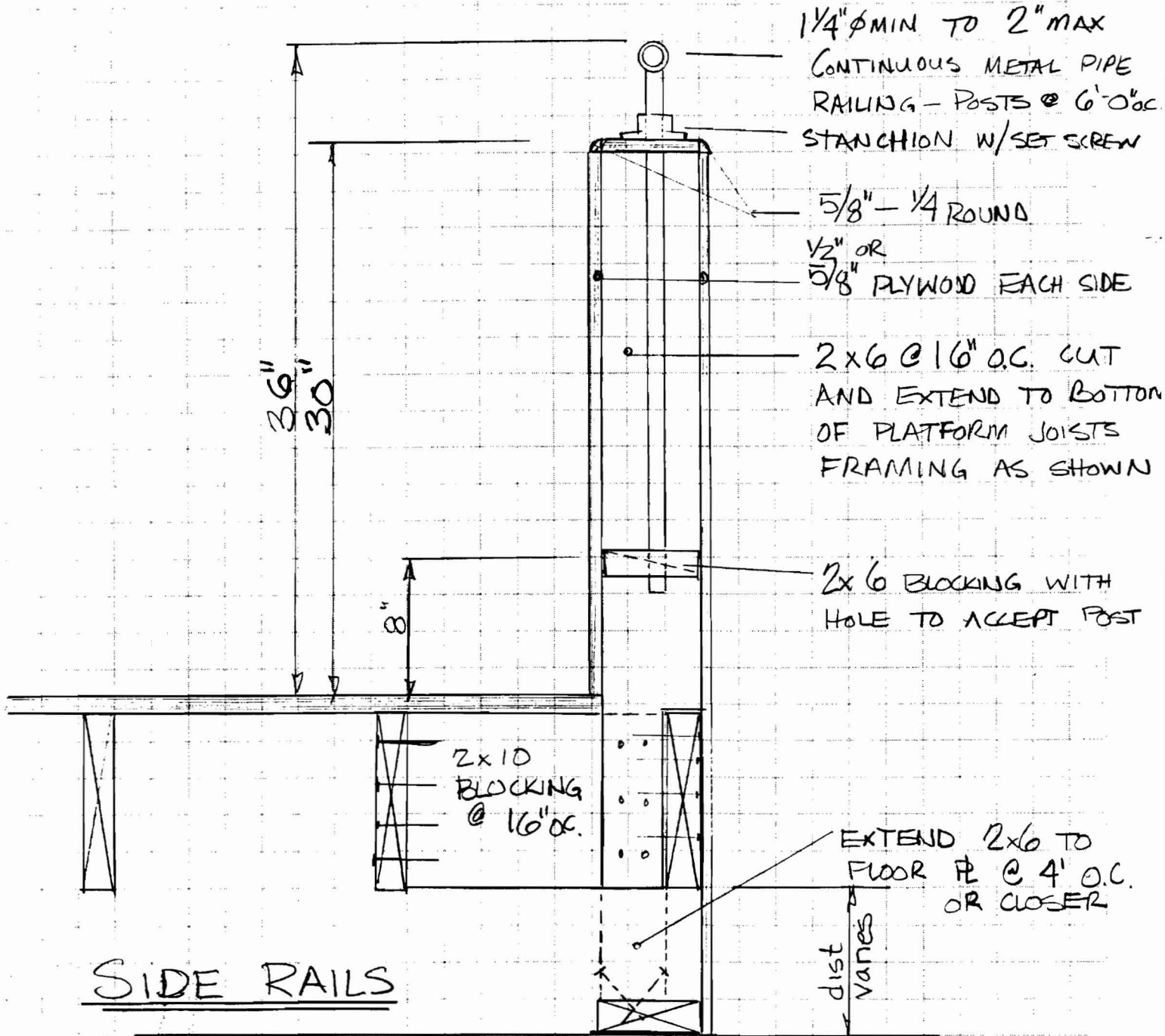
PROJECT: STATE
 THEATER
 SHEET TITLE: PLATFORM
 RAILINGS

ASSOCIATED DESIGN
 PARTNERS INC.

80 Leighton Rd.
 Falmouth, ME 04105

Tel: 878-1751
 Fax: 878-1788

DATE: 2-25-00
 SCALE:
 DRAWN BY: JAT
 FILE No.
 PROJECT NUMBER:
 00032
 SHEET: OF



JAT

PROJECT:	STATE THEATER PLATFORM RAILINGS
SHEET TITLE:	

 ASSOCIATED DESIGN PARTNERS INC.	
80 Leighton Rd. Falmouth, ME 04105	Tel: 878-1751 Fax: 878-1788

DATE:	2-25-00
SCALE:	
DRAWN BY:	JAT
FILE No.	
PROJECT NUMBER:	00032
SHEET:	OF

00032

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

1020.4 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 906.2.2. 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 fire resistance 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 exit 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 a minimum clear ceiling height of 8 feet (2438 mm).

1020.6 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.

NOT REQUIRED PER 1005.5

SECTION 1021.0 GUARDS

1021.1 Design and construction: Where required by the provisions 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.

1021.2 Height: The guards shall be at least 42 inches (1067 mm) in height measured vertically above the leading edge 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.

1021.3 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

1. The triangular openings formed by the riser, tread and bottom rail at the open side of a *stairway* shall be of a maximum size such that a sphere 6 inches (152 mm) in diameter cannot pass through the opening.
2. 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 1/2 inches (38 mm), except that the clear space shall not be less than 2 1/4 inches (57 mm) for *stairways*. Edges shall have a minimum radius of 1/8 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).

1022.2.2 Height: Handrails shall not be less than 34 inches (864 mm) nor more than 38 inches (965 mm), measured vertically, above the leading edge of the treads or above the finished floor of the landing or walking surfaces.

Exception: Handrails that form part of a guard shall have a height not less than 36 inches (914 mm) and not more than 42 inches (1067 mm).

1022.2.3 Handrail ends: At locations where handrails are not continuous between *stairway* flights, including the top and bottom of a *stairway*, the handrails shall extend horizontally at least 12 inches (305 mm) beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. The handrail ends shall be returned to a wall or post.

Where handrails are not continuous between ramp segments, including the top and bottom of a ramp, the handrails shall extend at least 12 inches (305 mm) beyond the top and bottom of the ramp segment and shall be parallel with the floor or ground surface. The handrail ends shall be returned to a wall or post.

The handrail extensions shall be parallel with the run of stairways and ramps or shall be located at an angle to the run of the stairway or ramp provided that the angled extensions do not protrude into the width of the stairway, ramp and associated landings beyond that permitted by Section 1022.2.1.

Exceptions

1. Within a *dwelling unit*, the horizontal extension beyond the top riser of the *stairway* flight and the extension beyond the bottom riser of the *stairway* flight is not required.
2. Within a *dwelling unit*, the use of a volute, turnout or starting easing is allowed on the lowest tread provided that the height of the handrail at this termination does not exceed 42 inches (1067 mm) measured vertically from the floor at the base of the *stairway*.
3. Within a dwelling unit not required to be accessible by Section 1107.4.2, the horizontal extension beyond the top of the ramp segment, and the extension beyond the bottom riser of the ramp segment, is not required.

1022.2.4 Handrail grip size: All *stairway* and ramp handrails shall have a circular cross section with an outside diameter of at least 1 $\frac{1}{4}$ inches (32 mm) and not greater than 2 inches (51 mm).

Exceptions

1. Any other shape with a perimeter dimension of at least 4 inches (100 mm), but not greater than 6 $\frac{1}{4}$ inches (158 mm) with the largest cross-sectional dimension not exceeding 2 $\frac{1}{4}$ inches (57 mm).
2. Approved rails of equivalent graspability.

1022.2.5 Handrails of alternating tread stairways: Stair handrails of *alternating tread stairways* shall be of such a configuration as to provide an adequate hand-hold for a person grasping the handrail to avoid falling. A minimum distance of 6 inches (152 mm) shall be provided between the stair handrail and any other object. A minimum distance of 12

inches (305 mm) shall be provided between the stair handrails of adjacent *alternating tread stairways*. Handrails on *alternating tread stairways* shall be spaced a minimum width of 17 inches (432 mm), not to exceed 24 inches (610 mm), between the handrails.

SECTION 1023.0 EXIT SIGNS AND LIGHTS

1023.1 Location: In all buildings, rooms or spaces required to have more than one *exit* or *exit access*, all required *means of egress* shall be indicated with approved signs reading "Exit," visible from the *exit access* and, where necessary, supplemented by directional signs in the *exit access corridors* indicating the direction and way of egress. All "Exit" signs shall be located at *exit doors* or *exit access areas*, so as to be readily visible. Sign placement shall be such that any point in the *exit access* shall not be more than 100 feet (30480 mm) from the nearest visible sign.

Exceptions

1. "Exit" signs are not required in sleeping room areas in occupancies in Use Group I-3.
2. Main exterior *exit doors* which are obviously and clearly identifiable as *exits* are not required to have "Exit" signs where approved.

1023.2 Size and color: "Exit" signs shall have red letters at least 6 inches (152 mm) high and the minimum width of each stroke shall be $\frac{3}{4}$ inch (19 mm) on a white background or in other approved distinguishable colors. The word "Exit," except the letter I, shall have letters having a width of not less than 2 inches (51 mm) and the minimum spacing between letters shall not be less than $\frac{3}{8}$ inch (10 mm). Signs larger than the minimum size herein required shall have letter widths and spacing in the same proportions to the height as indicated in this section. If an arrow is provided as part of an "Exit" sign, the construction shall be such that the arrow direction cannot be readily changed. The word "Exit" shall be clearly discernible when the sign illumination means is not energized.

1023.3 Illumination: Each sign shall be illuminated by a source providing not less than 5 footcandles (54 lux) at the illuminated surface and shall have a contrast ratio of not less than 0.5.

Exception: Approved self-luminous signs which provide evenly illuminated letters shall have a minimum luminance of 0.06 foot lamberts (0.21 cd/m²).

1023.4 Power source: All "Exit" signs shall be illuminated at all times that the building is occupied. To assure continued illumination for a duration of not less than 1 hour in case of primary power loss, the "Exit" signs shall be connected to an emergency electrical system that complies with Section 2706.0.

Exception: Approved self-luminous signs which provide continuous illumination independent of external power sources are not required to comply with Section 2706.0.

SECTION 1024.0 MEANS OF EGRESS LIGHTING

1024.1 Artificial lighting: All *means of egress* in other than occupancies in Use Group R-3, the interior of *dwelling units* in occupancies in Use Group R-2 and Use Group U which are *accessory structures* to an occupancy in Use Group R-3, shall be equipped with artificial lighting facilities to provide the intensity of illumination herein prescribed continuously during the time

less than the minimum uniformly distributed unit loads required by Table 4-1.

4.2.2 Provision for Partitions. In office buildings or other buildings, where partitions will be erected or rearranged, provision for partition weight shall be made, whether or not partitions are shown on the plans, unless the specified live load exceeds 80 lb/sq ft (3.83 kN/m²).

*4.3 Concentrated Loads

Floors and other similar surfaces shall be designed to support safely the uniformly distributed live loads prescribed in 4.2 or the concentrated load, in pounds (kN), given in Table 4-1, whichever produces the greater load effects. Unless otherwise specified, the indicated concentration shall be assumed to be uniformly distributed over an area 2.5 ft (762 mm) square [6.25 sq ft (0.58 m²)] and shall be located so as to produce the maximum load effects in the structural members.

Any single panel point of the lower chord of exposed roof trusses or any point along the primary structural members supporting roofs over manufacturing, commercial storage and warehousing, and commercial garage floors shall be capable of carrying safely a suspended concentrated load of not less than 2,000 lb (poundforce) (8.90 kN) in addition to dead load. For all other occupancies, a load of 200 lb (0.89 kN) shall be used instead of 2,000 lb (8.90 kN).

*4.4 Loads on Handrails, Guardrail Systems, Grab Bar Systems, and Vehicle Barrier Systems

4.4.1 Definitions

Handrail: a rail grasped by hand for guidance and support. A handrail assembly includes the handrail, supporting attachments, and structures.

Guardrail system: a system of building components near open sides of an elevated surface for the purpose of minimizing the possibility of a fall from the elevated surface by people, equipment, or material.

Grab bar system: a bar provided to support body weight in locations such as toilets, showers, and tub enclosures.

Vehicle barrier system: a system of building components near open sides of a garage floor or ramp, or building walls that act as restraints for vehicles.

*4.4.2 Loads

- A. Handrail assemblies and guardrail systems shall be designed to resist a load of 50 lb/ft (pound-force per linear foot) (0.73 kN/m) ap-

plied in any direction at the top and to transfer this load through the supports to the structure. For one- and two-family dwellings, the minimum load shall be 20 lb/ft (0.29 kN/m).

Further, all handrail assemblies and guardrail systems shall be able to resist a single concentrated load of 200 lb (0.89 kN), applied in any direction at any point along the top, and have attachment devices and supporting structure to transfer this loading to appropriate structural elements of the building. This load need not be assumed to act concurrently with the loads specified in the preceding paragraph.

Intermediate rails (all those except the handrail), balusters, and panel fillers shall be designed to withstand a horizontally applied normal load of 50 lb (0.22 kN) on an area not to exceed 1 ft square (305 mm square) including openings and space between rails. Reactions due to this loading are not required to be superimposed with those of either preceding paragraph.

- B. Grab bar systems shall be designed to resist a single concentrated load of 250 lb (1.11 kN) applied in any direction at any point.
- C. Vehicle barrier systems for passenger cars shall be designed to resist a single load of 6,000 lb (26.70 kN) applied horizontally in any direction to the barrier system, and shall have anchorages or attachments capable of transferring this load to the structure. For design of the system the load shall be assumed to act at a minimum height of 1 ft 6 in. (460 mm) above the floor or ramp surface on an area not to exceed 1 ft square (305 mm square), and is not required to be assumed to act concurrently with any handrail or guardrail loadings specified in the preceding paragraphs of 4.4.2. Garages accommodating trucks and buses shall be designed in accordance with an approved method which contains provision for traffic railings.

4.5 Loads Not Specified

For occupancies or uses not designated in 4.2 or 4.3, the live-load shall be determined in accordance with a method approved by the authority having jurisdiction.

*4.6 Partial Loading

The full intensity of the appropriately reduced live-load applied only to a portion of a structure

equipment; electrical; transformer; telephone equipment; elevator machine; or similar room. The actuation of any detector shall sound an alarm at a constantly attended location.

405.5.2 Activation: The smoke exhaust system shall be activated in the compartment of origin by actuation of the following, independently of each other:

1. Automatic sprinkler system;
2. Smoke detectors required by Section 405.5.1; and
3. Manual controls provided for fire department use.

405.6 Fire alarm system: Where the lowest level of a structure is more than 60 feet (18288 mm) below the lowest level of exit discharge, the structure shall be equipped throughout with a fire alarm system in accordance with Section 918.0, including a voice/alarm signaling system installed in accordance with Section 918.9 and activated in accordance with Section 918.7.1.

405.7 Public address: Where a fire alarm system is not required by Sections 405.6 or 918.4, a public address system shall be provided which shall be capable of transmitting voice communications to the highest level of exit discharge serving the underground portions of the structure and all levels below.

405.8 Standby power: A standby power system of sufficient capacity and rating and conforming to the requirements of Section 2707.0 shall be provided.

405.8.1 Fuel supply: If the standby system is a generator set inside a structure, the system shall be located in a separate room enclosed with 2-hour fire resistance rated fire separation assemblies. System supervision with manual start and transfer features shall be provided at the central station.

405.8.2 Capacity: The standby system shall supply the following required systems:

1. Smoke exhaust system.
2. Smokeproof enclosure.
3. Fire pumps.
4. One elevator to serve all floors with the capability of transferring power to any elevator.
5. Emergency electrical system.

405.9 Emergency power: An emergency electrical system of sufficient capacity and rating and conforming to the requirements of Section 2706.0 shall be provided. The emergency system shall supply the following required systems:

1. Voice communication system.
2. Fire alarm system.
3. Fire detection systems.
4. Elevator car lighting.
5. Means of egress lighting and exit sign illumination.

SECTION 406.0 OPEN PARKING STRUCTURES

406.1 General: Open parking structures are those structures used for the parking or storage of passenger motor vehicles designed to carry not more than nine persons, wherein provision for the repair of such vehicles is not made and where the exterior walls of the structure have openings on not less than two sides. Open parking structures are not required to conform to Section 408.0 for public garages.

406.1.1 Openings: The exterior walls of the open parking structure shall have uniformly distributed openings on not less

than two sides totaling not less than 40 percent of the building perimeter. The aggregate area of such openings in exterior walls in each level shall not be less than 20 percent of the total perimeter wall area of each level. Interior wall lines and column lines shall be at least 20 percent open with openings distributed to provide ventilation.

Exception: Openings are not required to be distributed over 40 percent of the building perimeter where the required openings are uniformly distributed over two opposing sides of the building.

406.1.2 Separation: Exterior walls containing openings shall have a fire separation distance of greater than 10 feet (3048 mm).

406.2 Construction requirements: Passenger vehicle structures shall be constructed of approved noncombustible materials throughout, including structural framing, floors, roofs and walls. Any enclosed room or space on the premises shall comply with the applicable requirements of this code.

Exception: Asphalt paving surfaces are permitted at grade level.

406.3 Fuel dispensing: Areas where fuel is dispensed shall conform to the requirements of Section 408.4.

406.4 Heights and areas: Heights and areas of open parking structures shall not exceed the limitations specified in Table 406.4, except as provided for in Section 406.4.1. The heights and areas are subject to the increases indicated in Sections 504.0 and 506.0. The above height limitations permit parking on the roof.

**Table 406.4
HEIGHT AND AREA LIMITATIONS FOR OPEN
PARKING STRUCTURES**

Type of construction	Height ^a	Area (square feet) ^a
1A and 1B	Unlimited	Unlimited
2A	12 Stories — 120 feet	Unlimited
2B	10 Stories — 100 feet	50,000
2C	8 Stories — 85 feet	50,000

Note a. 1 foot = 304.8 mm; 1 square foot = 0.093 m².

406.4.1 Unlimited area: Structures with all sides open shall be unlimited in area provided that the height does not exceed 75 feet (22860 mm). For a side to be considered open, the total area of openings along the side shall not be less than 50 percent of the exterior area of the side at each parking level and such openings shall be equally distributed along the length of each level. All portions of each parking level shall be within 200 feet (60960 mm) horizontally from an exterior wall opening on any permanent open space.

406.5 Guards: All open-sided floor areas shall be provided with a guard in accordance with Section 1021.0, except that in those structures wherein vehicles are hoisted to the desired level and placed in the parking space entirely by approved mechanical means, the guard is not required on the side of the parking levels adjacent to the space occupied by the hoisting and placing equipment.

406.6 Wheel guards: Wheel guards made of approved noncombustible material shall be placed wherever required.

DNA

99 BOCA

Handrail: A horizontal or sloping rail intended for grasping by the hand for guidance or support, for arresting falls on the adjacent walking surface and for providing a visual cue for change in elevations (see Section 1022.0).

Means of egress: A continuous and unobstructed path of travel from any point in a building or structure to a *public way*. A means of egress consists of three separate and distinct parts: the *exit access*; the *exit*; and the *exit discharge*. A means of egress comprises the vertical and horizontal means of travel and shall include intervening room spaces, doors, hallways, *corridors*, passageways, balconies, ramps, stairs, enclosures, lobbies, *horizontal exits*, *courts* and yards (see Section 1006.0).

Occupant load: The total number of persons that are permitted to occupy a building or portion thereof at any one time.

Public way: Any street, alley or other parcel of land open to the outside air leading to a public street, which has been deeded, dedicated or otherwise permanently appropriated to the public for public use and which has a clear width and height of not less than 10 feet (3048 mm).

Slidescape: A straight or spiral chute, erected on the interior or exterior of a building, which is designed as a *means of egress* direct to a street or other *public way* (see Section 1026.0).

Smokeproof enclosure: An enclosed *stairway*, with access from the floor area of the building either through outside balconies or ventilated vestibules, opening at the level of *exit discharge* directly to the exterior or into an interior *exit* element that leads directly to the exterior (see Section 1015.0).

Stairway: One or more flights of stairs, and the necessary landings and *platforms* connecting them, to form a continuous and uninterrupted passage from one floor to another (see Section 1014.0).

Winder: A step in a winding *stairway* (see Section 1014.6.3).

SECTION 1003.0 CONSTRUCTION DOCUMENTS

1003.1 Arrangement of egress: The *construction documents* shall show in sufficient detail the location, construction, size and character of all *exits*, together with the arrangement of *aisles*, *corridors*, passageways and hallways leading thereto in compliance with the provisions of this code.

1003.2 Number of occupants: In other than occupancies in Use Groups R-2, R-3 and I-1, the *construction documents* and the application for a permit shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces as required by the code official. Unless otherwise specified, the minimum number of occupants to be accommodated by the *exits* shall be determined by the occupant load prescribed in Section 1008.0. The posted occupant load of the building shall be limited to that number. The fire prevention code official shall be informed in *writing* of the calculated occupant load.

1003.3 Posted occupant load: Every assembly room or space in an assembly occupancy shall have the approved occupant load of the room or space posted in a conspicuous place, near the main entrance to the room or space. Rooms or spaces which have multiple-use capabilities shall be posted for all such occupancies.

All posted signs shall be of an approved legible permanent design.

SECTION 1004.0 USE GROUP AND OCCUPANCY REQUIREMENTS

1004.1 New buildings: Every building and structure, and part thereof, hereafter erected shall have the prescribed number of *exits* of one or more of the approved types defined in this chapter. *Exits*, in combination with the *exit access* and *exit discharge*, shall provide safe and continuous *means of egress* to a street or to an open space with direct access to a street.

1004.2 Multiple occupancies: Where a building is occupied by two or more occupancies, the *means of egress* requirements shall apply to each portion of the building based on the occupancy of that space.

1004.3 Multiple tenants: Where more than one tenant occupies any one floor of a building or structure, each tenant shall be provided with direct access to required *exits*.

SECTION 1005.0 GENERAL LIMITATIONS

1005.1 Exits: An *exit* shall not be utilized for any purpose that interferes with its function as a *means of egress*.

1005.2 Floor openings: Manholes or floor access panels which reduce the clearance to less than 32 inches (813 mm) shall not be located in the line of *means of egress*.

1005.3 Protruding objects: A minimum headroom of 80 inches (2032 mm) shall be provided for any walking surface, including walks, halls, *corridors*, aisles and passageways. Structural elements, fixtures or furnishings shall not project from either side more than 4 inches (102 mm) over any walking surface between the heights of 27 (686 mm) and 80 inches (2032 mm) above the walking surface. A free-standing object mounted on a post(s) or pylon(s) shall not overhang that post(s) or pylon(s) more than 12 inches (305 mm) where the lowest point of the leading edge is more than 27 inches (686 mm) and less than 80 inches (2032 mm) above the walking surface. Door closers and stops shall not reduce headroom to less than 78 inches (1981 mm).

1005.4 Floor surface: All walking surfaces, including the floors of *corridors*, *stairways* and other components of the *means of egress*, shall have a slip-resistant surface.

1005.5 Open-sided walking areas: Guards shall be located along open-sided walking surfaces, *mezzanines*, *stairways*, ramps and landings which are located more than 15½ inches (394 mm) above the floor or grade below. The guards shall be constructed in accordance with Section 1021.0.

*** Exception:** Guards are not required for the following locations:

1. On the loading side of loading docks.
2. On the auditorium side of *stages* and raised *platforms*.
3. On raised *stage* and *platform* floor areas such as runways, ramps and side *stages* utilized for entertainment or presentations.
4. At vertical openings in the performance area of *stages* and *platforms*.
5. At elevated walking surfaces appurtenant to *stages* and *platforms* for access to and utilization of special lighting or equipment.

1005.5.1 Screen porches: Porches and decks which are enclosed with insect screening shall be provided with guards in accordance with Section 1021.0 where the walking surface is located more than 30 inches (762 mm) above the floor or grade below.

Exception: Guards are not required where a protective bar is installed 34 inches to 38 inches (864 mm to 965 mm) above the porch or deck on the side of the screening having access thereto. The bar shall be capable of resisting a horizontal *load* of 50 pounds per linear foot (730 N/m) without contacting the screen and be a minimum of 1½ inches (38 mm) in height.

1005.6 Elevation change: Where changes in elevation exist in the *means of egress*, ramps complying with Section 1016.0 shall be used where the difference in elevation is less than 12 inches (305 mm). The ramp shall be equipped either with handrails or with *floor finish* materials that contrast with adjacent *floor finish* materials.

Exceptions

1. A maximum step height of 8 inches (203 mm) shall be permitted for buildings with occupancies in Use Groups F, H, R, S and U at exterior doors not required to be accessible by Chapter 11.
2. Fewer than three risers shall be permitted, provided that the risers and treads comply with Section 1014.0, the minimum depth of the tread is 13 inches (330 mm), and at least one handrail complying with Section 1022.0 is provided within 30 inches (762 mm) of the normal path of travel on the *stairway*, or the *floor finish* material of treads shall contrast with the adjacent *floor finish* material.

1005.7 Air movement in egress elements: *Exits* and *exit access corridors* shall not serve as supply, return, exhaust, relief or *ventilation* air ducts or plenums.

Exceptions

1. Utilization of an *exit access corridor* as a source of makeup air for exhaust systems in rooms that open directly onto such *corridors*, including toilet rooms, bathrooms, dressing rooms, smoking lounges and janitor closets, shall not be prohibited, provided that each such *corridor* is directly supplied with outdoor air at a rate not less than the rate of makeup air taken from the *corridor*.
2. The utilization of the space between the *corridor* ceiling and the floor or roof structure above as a return air plenum shall not be prohibited for one or more of the following conditions:
 - 2.1. The *corridor* is not required to be of fire-resistance rated construction;
 - 2.2. The *corridor* is separated from the plenum by the underside membrane of a fire-resistance rated floor/ceiling or roof/ceiling assembly;
 - 2.3. The *corridor* is separated from the plenum by fire-resistance rated construction;
 - 2.4. The air handling system serving the *corridor* is shut down upon activation of the air handling

unit smoke detectors required by the mechanical code listed in Chapter 35;

- 2.5. The air handling system serving the *corridor* is shut down upon detection of *sprinkler* water-flow where the building is equipped throughout with an *automatic sprinkler system*; or
- 2.6. The space between the *corridor* ceiling and the floor or roof structure above the *corridor* is utilized as a component of an approved engineered smoke control system.
3. Where located within a *dwelling unit*, the utilization of *egress corridors* as return air plenums shall not be prohibited.
4. Where located within tenant spaces of 1,000 square feet (92 m²) or less in area, utilization of *exit access corridors* as return air plenums shall not be prohibited.

SECTION 1006.0 TYPES AND LOCATION OF MEANS OF EGRESS

1006.1 General: All approved *means of egress*, including doorways, passageways, *corridors*, interior *stairways*, exterior *stairways*, *smokeproof enclosures*, ramps, *horizontal exits*, bridges, balconies, fire escapes and combinations thereof, shall be arranged and constructed as provided for in this code.

1006.2 Arrangement: All required *exits* shall be so located as to be discernable with unobstructed access thereto.

1006.2.1 Egress through adjoining spaces: Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas are accessory to the area served; are not a high-hazard occupancy; and provide a discernible path of travel to an *exit*. A maximum of one *exit access* shall be permitted to pass through a kitchen, storeroom, restroom, closet or similar space provided that passage through such space is not the only means of access to an *exit*. An *exit access* shall not pass through a room subject to locking. *Means of egress* from *dwelling units*, or sleeping areas shall not lead through other *dwelling units* or sleeping areas and shall not lead through toilet rooms or bathrooms.

1006.2.2 Assembly buildings: All buildings occupied for assembly purposes shall have a main entrance and *exit discharge* that fronts on at least one street or an unoccupied space of not less than 10 feet (3048 mm) in width that adjoins a street or *public way*. Where there is a single main entrance, the entrance shall be capable of serving as the main *exit* and shall provide an egress capacity for at least one-half of the total occupant load. In addition to having access to a main *exit*, each level of an occupancy in Use Group A shall be provided with additional *exits* which shall provide a *means of egress* capacity for at least one-half of the total occupant load served by that level.

1006.2.3 Skating rinks: Places of assembly used for skating rinks shall not be located below the floor nearest grade.

1006.2.4 Foyers and waiting spaces: The term "foyer" shall mean an enclosed space surrounding, or in the rear of, the auditorium of a theater or other place of assembly which is completely separated from the auditorium and is used as an assembly or waiting space for the occupants. In Use Group

not be more than 9½ inches (241 mm). A minimum headroom of 6 feet 6 inches (1981 mm) shall be provided.

1014.6.5 Circular stairways: Circular stairways shall have a minimum tread depth and a maximum riser height in accordance with Section 1014.6 and the smaller radius shall not be less than twice the width of the stairway. The minimum tread depth measured 12 inches (305 mm) from the narrower end of the tread shall not be less than 11 inches (279 mm).

1014.6.6 Alternating tread stairways: Alternating tread stairways are permitted as an element of a means of egress in buildings from a mezzanine area not more than 250 square feet (23 m²) in area and 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. Alternating tread stairways are also permitted for access to roofs as provided for in Section 1027.0.

1014.6.6.1 Handrails of alternating tread stairways: Handrails shall be provided on both sides of alternating tread stairways and shall conform to Section 1022.0.

1014.6.6.2 Treads of alternating tread stairways: Alternating tread stairways shall have a minimum projected tread of 5 inches (127 mm), a minimum tread depth of 8½ inches (216 mm), a minimum tread width of 7 inches (178 mm) and a maximum riser to the next surface of the alternating tread of 9½ inches (241 mm). The initial tread of the stairway shall begin at the same elevation as the platform, landing or floor surface.

Exception: Alternating tread stairways used as an element of a means of egress in buildings from a mezzanine area not more than 250 square feet (23 m²) in area which serves not more than five occupants shall have a minimum projected tread of 8½ inches (216 mm) with a minimum tread depth of 10½ inches (267 mm). The rise to the next alternating tread surface shall not be more than 8 inches (203 mm).

1014.7 Stairway guards and handrails: Stairways shall have continuous handrails on both sides. Guards shall be provided where required by Section 1005.5. Intermediate handrails are required so that all portions of the required width of stairs are within 30 inches (762 mm) of a handrail. On monumental stairs, handrails shall be located along the most direct path of egress travel. Handrails shall be provided for alternating tread stairways in accordance with Section 1014.6.6.1. Guards shall be constructed in accordance with Section 1021.0. Handrails shall be constructed in accordance with Section 1022.0.

Exceptions

1. Stairways with fewer than three risers are not required to have handrails where serving a single dwelling unit or where such stairways are not in an exit access corridor or aisle, exit or exit discharge.
2. Aisle stairs provided with a center handrail or serving seating on one side shall be equipped with a minimum of one handrail.
3. Stairways within a dwelling unit shall be equipped with a minimum of one handrail.

4. Spiral stairways shall be equipped with a minimum of one handrail.

1014.8 Egress doors: Means of egress stairway doors shall provide an egress capacity of not less than the required capacity of the stairway which serves the floor or area from which the egress door leads.

1014.8.1 Width: The minimum required width of every door to or from a means of egress stairway shall be determined by the most restrictive of the following criteria:

1. 29¾ inch (756 mm) clear width within a dwelling unit that is not required to be accessible.
2. 32-inch (813 mm) clear width in all other cases.

1014.8.2 Direction of swing: All means of egress doors shall swing on a landing in the direction of egress travel. When opening, egress doors shall not reduce the width of landings to less than one-half of the required width. When fully open, means of egress doors shall not project more than 7 inches (178 mm) into the required width.

Exception: Doors leading from a room or tenant space to a stairway in buildings in which only one exit is required are not required to swing in the direction of egress travel.

1014.8.3 Door construction: All doorway opening protectives shall be fire doors complying with Section 717.0.

1014.8.4 Maximum transmitted temperature: Labeled means of egress fire doors shall have a maximum transmitted temperature end point of not more than 450 degrees F. (232 degrees C.) above ambient at the end of 30 minutes of standard fire test exposure.

Exception: The maximum transmitted temperature end point is not required in buildings equipped throughout with an automatic sprinkler system in accordance with Section 906.2.1 or 906.2.2.

1014.9 Stairway construction: All stairways shall be built of materials consistent with the types of materials permitted for the type of construction of the building; except that wood handrails shall be permitted for all types of construction. Such stairways shall have solid treads and landing platforms, and all finish floor surfaces shall be of securely attached, slip-resistant materials.

Exception: In Use Group F, H and S occupancies, other than areas of parking structures accessible to the public, openings in treads and landing platforms shall not be prohibited provided a sphere with a diameter of 1.125 inches (28 mm) cannot pass through any opening.

1014.9.1 Strength: All stairways, platforms and landings shall be adequate to support a live load of 100 pounds per square foot (4788 Pa) and a concentrated load of 300 pounds (1334 N).

1014.10 Discharge identification: Exit stairways which continue beyond the level of exit discharge shall be interrupted at the level of exit discharge by partitions, doors or other effective means of preventing persons from continuing past the floor of discharge while egressing.

1014.11 Interior stairway enclosures: Interior exit stairways shall be enclosed with fire separation assemblies having a

0.10 inch of water column (29 Pa) in the *shaft* relative to the vestibule with all doors closed.

1015.7 Stair pressurization alternative: Where the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 906.2.1, the vestibule is not required, provided that all interior *exit stairways* are pressurized to a minimum of 0.15 inch of water column (44 Pa) and a maximum of 0.35 inch of water column (102 Pa) in the *shaft* relative to the building measured with all *stairway* doors closed under maximum anticipated stack pressures.

1015.8 Ventilating equipment: The activation of *ventilating equipment* required by the alternatives in Sections 1015.6 and 1015.7 shall be by smoke detectors installed at each floor level at an approved location at the entrance to the *smokeproof enclosure*. When the closing device for the stair *shaft* and vestibule doors is activated by smoke detection or power failure, the mechanical equipment shall activate and operate at the required performance levels. Smoke detectors shall be installed in accordance with Section 919.8.

1015.8.1 Ventilation systems: *Smokeproof enclosure ventilation systems* shall be independent of other building *ventilation systems*. The equipment and ductwork shall comply with one of the following:

1. Equipment and ductwork shall be located exterior to the building and shall be directly connected to the *smokeproof enclosure* or connected to the *smokeproof enclosure* by ductwork enclosed by 2-hour fire-resistance rated *fire separation assemblies*.
2. Equipment and ductwork shall be located within the *smokeproof enclosure* with intake or exhaust directly from and to the outside or through ductwork enclosed by 2-hour fire-resistance rated *fire separation assemblies*.
3. Equipment and ductwork shall be located within the building if separated from the remainder of the building, including other mechanical equipment, by 2-hour fire-resistance rated *fire separation assemblies*.

1015.8.2 Standby power: Mechanical vestibule and stair *shaft ventilation systems* and automatic fire detection systems shall be powered by an approved standby power system conforming to Sections 403.9.1 and 2707.0.

1015.8.3 Acceptance and testing: Before the mechanical equipment is approved, the system shall be tested in the code official's presence to confirm that the system is operating in compliance with these requirements.

SECTION 1016.0 RAMPS

1016.1 Capacity: The capacity of a ramp used as a *means of egress* component shall be computed in accordance with Section 1009.0.

1016.2 Minimum dimensions: The minimum dimensions of *means of egress ramps* shall comply with Sections 1016.2.1 through 1016.2.3.

1016.2.1 Width: The minimum width of a *means of egress ramp* shall be 36 inches (914 mm), and not less than that required for *corridors* by Section 1011.3.

1016.2.2 Headroom: The minimum headroom in all parts of the *means of egress ramp* shall not be less than 80 inches (2032 mm).

1016.2.3 Restrictions: *Means of egress ramps* shall not reduce in width in the direction of egress travel. Projections into the required ramp and landing width are prohibited except at and below handrail height where, at each handrail, the projections shall not exceed 3½ inches (89 mm) into the required width. Projections shall not reduce the clear width to less than 36 inches (914 mm). Doors opening onto a landing shall not reduce the clear width to less than 42 inches (1067 mm).

1016.2.4 Rise: Ramps shall not have a vertical rise greater than 30 inches (762 mm) between landings.

Exception: Aisles in areas of Use Group A shall comply with Section 1012.0.

1016.3 Maximum slope: The maximum slope of *means of egress ramps* in the direction of travel shall be one unit vertical in 12 units horizontal (1:12). The maximum slope across the direction of travel shall be one unit vertical in 48 units horizontal (1:48).

Exception: Aisles in areas of Use Group A shall comply with Section 1012.0.

1016.4 Landings: Ramps shall have landings at the top and bottom of each ramp run. Landings shall comply with Sections 1016.4.1 through 1016.4.4.

1016.4.1 Slope: The maximum slope and cross slope of landings shall be one unit vertical in 48 units horizontal (1:48).

1016.4.2 Width: The landing shall be at least as wide as the widest ramp run leading to the landing.

1016.4.3 Length: The landing length shall be not less than 60 inches (1524 mm).

1016.4.4 Change in direction: Where ramps change direction between runs at a landing, the landing shall be at least 60 inches by 60 inches (1524 mm by 1524 mm).

1016.5 Guards and handrails: Guards shall be provided where required by Section 1005.5 and shall be constructed in accordance with Section 1021.0. Handrails conforming to Section 1022.0 shall be provided on both sides of every ramp having a vertical rise between landings greater than 6 inches (152 mm).

Exceptions

1. Handrails in aisles in occupancies in Use Group A shall comply with Section 1012.0.
2. Handrails are not required on curb ramps.

1016.6 Edge protection: Edge protection complying with Section 1016.6.1 or 1016.6.2 shall be provided on each side of ramp runs and at each side of ramp landings.

Exceptions

1. Edge protection is not required on ramps not required to have handrails and having flared sides or returned curbs as required by ICC A117.1 for curb ramps.
2. Edge protection is not required on the sides of ramp landings serving an adjoining ramp run or stairway.

- Edge protection is not required on the sides of ramp landings having a vertical drop-off of no more than 1/2 inch (13 mm) within 10 inches (254 mm) horizontally of the required landing area.

1016.6.1 Extended floor or ground surface: The floor or ground surface of the ramp run or landing shall extend 12 inches (305 mm) minimum beyond the inside face of a hand-rail complying with Section 1022.0.

1016.6.2 Curb or barrier: A curb or barrier shall be provided that prevents the passage of a 4-inch-diameter (102 mm) sphere, where any portion of the sphere is within 4 inches (102 mm) of the floor or ground surface.

1016.7 Ramp construction: Ramps used as an *exit* shall conform to the applicable requirements of Section 1014.9 as to materials of construction and the applicable requirements of Section 1014.11 as to enclosure.

1016.7.1 Surface: For all slopes exceeding one unit vertical in 20 units horizontal (1:20) and where the use is such as to involve danger of slipping, the ramp shall be surfaced with approved slip-resistant materials.

1016.7.2 Exterior ramps: Exterior ramps and landings shall be designed and constructed to prevent water from accumulating on the walking surface.

SECTION 1017.0 MEANS OF EGRESS DOORWAYS

1017.1 General: The requirements of this section shall apply to all doorways serving as a component or element of a *means of egress*, except as provided for in Sections 1014.8, 1014.12.2, 1015.5.1, 1015.5.2 and 1015.6.1.

1017.1.1 Floor surface: The floor surface on both sides of a door shall be at the same elevation. The floor surface over which the door swings shall be at the same elevation as the floor level at the threshold and shall extend from the door in the closed position a distance equal to the door width.

Exception: This requirement shall not apply to:

- Exterior doors, as provided for in Section 1005.6, which are not on an accessible route.
- Variations in elevation due to differences in finish materials, but not more than 1/2 inch (13 mm).
- Exterior decks, patios, or balconies that are part of Type B dwelling units and have impervious surfaces, and that are not more than 4 inches (102 mm) below the finished floor level of the adjacent interior space of the dwelling unit.

Thresholds at doorways shall not exceed 3/4 inch (19 mm) in height above the finished floor surface for exterior sliding doors serving dwelling units or 1/2 inch (13 mm) for all other doors. Raised thresholds and floor level changes greater than 1/4 inch (6 mm) at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (1:2).

1017.2 Number of doorways: Each occupant of a room or space shall have access to at least two *exits* or *exit access* doors from the room or space where the occupant load of the space exceeds

that listed in Table 1017.2, or where the travel distance from any point within the space to an *exit* or *exit access* door exceeds that listed in Table 1017.2. Where the occupant load of a room or space is between 501 and 1,000, a minimum of three *exits* or *exit access* doors shall be provided. Where the occupant load of a room or space exceeds 1,000, a minimum of four *exits* or *exit access* doors shall be provided.

Exceptions

- Occupancies in Use Group R-3.
- Boiler, incinerator and furnace rooms shall be provided with two egress doorways where the area exceeds 500 square feet (47 m²) and individual fuel-fired equipment exceeds 400,000 Btuh (117 kW) input capacity. Doorways shall be separated by a horizontal distance equal to not less than one-half of the diagonal dimension of the room. Where two doorways are required by this exception, a fixed ladder access out of the room shall be permitted in lieu of one doorway.
- In an occupancy in Use Group I-2, any patient sleeping room and any suite of rooms as permitted in Section 1011.1.2, Exception No. 3, of more than 1,000 square feet (93 m²), shall have at least two *exit access* doors remote from each other. Any room or any suite of rooms, other than patient sleeping rooms of more than 2,500 square feet (230 m²) shall have at least two *exit access* doors remote from each other.

**Table 1017.2
SPACES WITH ONE MEANS OF EGRESS**

Use Group	Maximum occupant load	Maximum travel distance (feet) ^c
A, B ^a , E, F, M	50	75
H-1 ^b , H-2, H-3	3	25
H-4	10	75
I, R	10	75
S, U	30	100

Note a. In Use Group B, travel distance shall not be more than 100 feet, provided that the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 906.2.1. In Use Group B, travel distance shall not be more than 100 feet, provided the occupant load of the space is not more than 30.

Note b. For requirements for areas and spaces in Use Group H-1, see Section 418.2.2.

Note c. 1 foot = 304.8 mm.

1017.2.1 Entrance and egress doorways: Where separate doors are provided for entrance and *means of egress*, the entrance door shall be clearly identified in an approved manner "Entrance Only" in letters not less than 6 inches (152 mm) in height and legible from both inside and outside.

1017.2.2 Location of doors: The required doorways opening from a room or space within a building and leading to an *exit access* shall be located as remote as practicable from each other and shall conform to Section 1006.4.1. The distance of *exit access* travel from any point in a room or space to a required *exit* door shall not exceed the limitations of Section 1006.5.

4. Level or ramped *means of egress* with slopes less than one unit vertical in eight units horizontal (1:8), shall have at least 0.2 inch (5 mm) of clear width for each person served.

1012.2.6 Minimum width of aisles: The minimum clear width of aisles shall be: 48 inches (1219 mm) for stairs having seating on each side; 36 inches (914 mm) for stairs having seating on only one side; 23 inches (584 mm) between a stair handrail or guardrail and seating where the aisle is subdivided by a handrail (see Section 1012.5); 42 inches (1067 mm) for level or ramped aisles having theater-style seating on both sides; 36 inches (914 mm) for all other level or ramped aisles; and 23 inches (584 mm) between a stair handrail and seating where an aisle does not serve more than five rows on one side.

1012.2.7 Minimum width of aisle accessways: *Aisle accessways* shall conform to the requirements of Section 1012.6 in the case of theater-type seating and to the requirements of Section 1012.7 in the case of all seating at tables or counters.

1012.3 Termination: Each end of a cross aisle shall terminate at an aisle, foyer, doorway or vomitory giving access to an *exit*. Dead-end aisles which terminate only at one end with a cross aisle, foyer, doorway or vomitory giving access to an *exit* shall not be greater than 20 feet (6096 mm) in length.

Exception: A longer dead-end aisle is permitted where seats served by the dead-end aisle are not more than 24 seats from another aisle, measured along a row of seats having a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15 mm) for each additional seat above seven in the row.

1012.4 Walking surfaces: Aisles with a gradient of one unit vertical in eight units horizontal (1:8) or less shall consist of a ramp having a slip-resistant walking surface. Aisles with a gradient exceeding one unit vertical in eight units horizontal (1:8) shall consist of a series of risers and treads which extend across the full width of aisles and comply with Sections 1012.4.1 and 1012.4.2.

1012.4.1 Treads: Tread depths shall be a minimum of 11 inches (279 mm) and be uniform within each aisle.

Exception: Nonuniformities shall not exceed $\frac{3}{16}$ inch (5 mm) between adjacent treads.

1012.4.2 Risers: Where the gradient of aisle stairs is to be the same as the gradient of adjoining seating areas, the riser height shall not be less than 4 inches (102 mm) nor more than 8 inches (203 mm) and shall be uniform within each flight.

Exception: Riser height nonuniformity shall be limited to the extent necessitated by changes in the gradient of the adjoining seating area to maintain adequate sightlines. Where nonuniformities exceed $\frac{3}{16}$ inch (5 mm) between adjacent risers, the exact location of such nonuniformities shall be indicated with a distinctive marking stripe on each tread at the nosing or leading edge adjacent to the nonuniform risers. Such stripe shall be a minimum of 1 inch (25 mm) wide and a maximum of 2 inches (51 mm) wide.

1012.5 Handrails: Ramped aisles having a gradient exceeding one unit vertical in fifteen units horizontal (1:15) and aisle stairs

shall be provided with handrails located either at the side or within the aisle width.

Exceptions

1. Handrails are not required if, at the side of the aisle, there is a guardrail that complies with the requirements for handrails.
2. Handrails are not required for *aisles* with seating on both sides unless there is more than one riser per row of seating. The single riser shall be indicated by a distinctive marking stripe on the leading edge of the tread.

1012.5.1 Discontinuous rails: Where there is seating on both sides of the aisle, the handrails shall be discontinuous with gaps or breaks at intervals not exceeding five rows to facilitate access to seating and to permit crossing from one side of the aisle to the other. These gaps or breaks shall have a clear width of at least 22 inches (559 mm) and not greater than 36 inches (914 mm), measured horizontally, and the handrail shall have rounded terminations or bends.

1012.5.2 Intermediate rails: Where handrails are provided in the middle of aisle stairs, there shall be an additional intermediate handrail located approximately 12 inches (305 mm) below the main handrail.

1012.6 Row width: The minimum clear row width shall not be less than 12 inches (305 mm) measured as the clear horizontal distance from the back of the row ahead and the nearest projection of the row behind. Where chairs have automatic or self-rising seats, the measurement shall be made with the seats in the raised position. Where any chair in the row does not have an automatic or self-rising seat, the measurement shall be made with the seat in the down position. Where tablet-arm chair seating is used, the measurement shall be made with the tablet-arm in the usable position.

1012.6.1 Dual access: For rows of seating served by aisles or doorways at both ends, there shall not be more than 100 seats per row. The minimum clear width of 12 inches (305 mm) between rows shall be increased by 0.3 inch (7.5 mm) for every additional seat beyond 14 seats, but the minimum clear width is not required to exceed 22 inches (559 mm).

1012.6.2 Single access: For rows of seating served by an aisle or doorway at only one end of the row, the minimum clear width of 12 inches (305 mm) between rows shall be increased by 0.6 inch (15 mm) for every additional seat beyond seven seats, but the minimum clear width is not required to exceed 22 inches (559 mm). The path of travel, however, shall not exceed 30 feet (9144 mm) from any seat to a point where a person has a choice of two paths of travel to two *exits*. Where one of the two paths of travel is across the aisle through a row of seats to another aisle, there shall not be more than 24 seats between the two aisles and the minimum clear width between rows for the row between the two aisles shall be 12 inches (305 mm) plus 0.6 inch (15 mm) for each additional seat above seven in the row between aisles.

1012.7 Aisle accessways for tables and seating: *Aisle accessways* serving arrangements of seating at tables or counters shall have sufficient clear width to conform to the capacity requirements of Section 1012.2.5, but shall not have less than the appropriate minimum clear width specified in Section 1012.7.1.

1012.7.1 Width: In addition to the width required by Section 1012.2, *aisle accessways* shall provide a minimum of 12 inches (305 mm) plus 0.5 inch (13 mm) of width for each additional 1 foot (305 mm), or fraction thereof, beyond 12 feet (3660 mm) of *aisle accessway* length measured from the center of the seat farthest from an aisle.

Exception: Portions of an *aisle accessway* having a length not exceeding 6 feet (1830 mm) and used by a total of not more than four persons.

1012.7.2 Length: The length of travel along the *aisle accessway* shall not exceed 36 feet (10973 mm) from any seat to the closest aisle. The path of travel shall not exceed 30 feet (9144 mm) from any seat to the point where a person has a choice of two or more paths of travel to separate *exits*.

1012.8 Railings: Railings shall be provided on balconies and galleries in accordance with Section 1021.4.

SECTION 1013.0 GRANDSTANDS

1013.1 Scope: These provisions shall apply to all structures with an occupancy in Use Group A which provide permanent, temporary or portable tiered or stepped seating facilities, such as *grandstands*, *bleachers*, folding and telescopic seating. Except as modified by this section, Section 1012.0 shall apply to all such structures.

1013.2 General: Bleachers, grandstands and folding or telescopic seating shall be constructed, installed and maintained in accordance with the provisions of this code and NFPA 102 listed in Chapter 35.

1013.3 Smoke-protected assembly seating: Assembly seating which is served by a *means of egress* that is not subject to blocking by smoke accumulation within or under a structure shall be considered smoke protected and shall comply with the requirements of Sections 1013.3.1 through 1013.3.3.

1013.3.1 Roof height: A smoke-protected assembly seating area with a roof shall have the lowest portion of the roof not less than 15 feet (4572 mm) above the highest aisle or *aisle accessway*.

1013.3.2 Automatic sprinklers: All areas enclosed with walls and ceilings in structures containing smoke-protected assembly seating shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 906.0.

Exception: An *automatic sprinkler system* is not required for either of the following:

1. The floor area used for a contest, performance or entertainment provided that the roof construction is more than 50 feet (15240 mm) above the floor level and the use of the floor is restricted to low fire-hazard occupancies.
2. Press boxes and storage facilities less than 1,000 square feet (93 m²) in area in conjunction with outdoor seating facilities where all *means of egress* in the seating area are essentially open to the outside.

1013.3.3 Smoke control: All *means of egress* serving a smoke-protected assembly seating area shall be provided with a smoke control system complying with Section 922.0 or natural *ventilation* designed to maintain the smoke level at least 6 feet (1829 mm) above the floor of the *means of egress*.

1013.4 Travel distance: The *exit access* travel distance shall comply with Section 1006.5 except that in a smoke-protected assembly seating area, the travel distance from each seat to the nearest entrance to an egress vomitory portal or egress concourse shall not exceed 200 feet (60960 mm). The travel distance from the entrance to a vomitory portal or egress concourse to an approved egress stair, ramp or walk at the building exterior shall not exceed 200 feet (60960 mm). Where aisles are required, the distance shall be measured along the aisles and *aisle accessways* without travel over or on the seats.

1013.5 Minimum egress widths: The minimum clear width of *stairways*, *passageways*, *doorways*, *ramps* and other *means of egress* shall provide sufficient capacity in accordance with the provisions of this chapter, except as modified by Table 1013.5.

**Table 1013.5
MINIMUM EGRESS WIDTHS
SMOKE-PROTECTED ASSEMBLY SEATING**

Number of seats in the space	Inches ^b of clear width per seat served			
	Stairs with handrails ^a within 30 inches	Stairs without handrails ^a within 30 inches	Aisles, accessways, doorways and ramps not steeper than 1 in 10 slope	Ramps steeper than 1 in 10 slope
2,000 or less	0.300	0.375	0.200	0.220
5,000	0.200	0.250	0.150	0.165
10,000	0.130	0.163	0.100	0.110
15,000	0.096	0.120	0.070	0.077
20,000	0.076	0.095	0.056	0.066
25,000 or more	0.060	0.075	0.044	0.048

Note a. If risers exceed 7 inches in height, the minimum clear width of stairs determined from the table shall be multiplied by factor A where $A = 1 + [(Riser Height - 7.0) \div 5]$.

Note b. 1 inch = 25.4 mm.

1013.6 Aisles: Aisles shall be provided in all seating facilities. An aisle is not required where all of the following conditions exist:

1. Seats are without backrests.
2. The rise from row to row does not exceed 6 inches (152 mm) per row.
3. The row spacing does not exceed 28 inches (711 mm) unless the seatboards and footboards are at the same elevation.
4. The number of rows does not exceed 16 in height.
5. The first seatboard is not more than 12 inches (305 mm) above the ground, floor surface or cross aisle below.
6. Seatboards have a continuous flat surface.
7. Seatboards provide a walking surface with a minimum width of 11 inches (279 mm).
8. Egress from seating is not restricted by rails, guards or other obstructions.

1606.4 Loads on handrails, guards, grab bars and vehicle barriers: All required handrails, guards, grab bars and vehicle barriers shall be designed and constructed to the structural loading conditions in Section 4.4 of ASCE 7 listed in Chapter 35.

1606.5 Partial loading: The full intensity of the appropriately reduced *live load* applied only to a portion of the length of a structure or member shall be considered if such applied *load* produces a more unfavorable effect than the same intensity applied over the full length of the structure or member.

1606.6 Impact loads: The live loads specified in Section 1606.2 include allowance for impact conditions. Provisions shall be made in the structural design for occupancies and loads which involve vibration and impact forces as required in Section 4.7 of ASCE 7 listed in Chapter 35.

1606.7 Reduction in live loads: The minimum required design live load reduction shall be limited to that in Sections 1606.7.1 and 1606.7.2.

1606.7.1 Permissible reduction: Except as otherwise indicated in Section 1606.7.2, the minimum required design *live load* for members having an influence area of 400 square feet (37.20 m²) or more is permitted to be reduced in accordance with the following equation:

$$L = L_o \left(0.25 + \frac{15}{\sqrt{A_i}} \right)$$

where:

- L = Reduced design *live load* in pounds per square foot.
- L_o = Unreduced design *live load* in pounds per square foot from Table 1606.
- A_i = Influence area in square feet, taken as four times the tributary area for a column, two times the tributary area for a beam and the panel area for a two-way slab.

1606.7.2 Limitations: The provisions of Sections 1606.7.2.1 through 1606.7.2.3 shall limit the applications of *live load* reductions permitted by this section.

1606.7.2.1 Maximum reduction: The reduced design *live load* permitted by Section 1606.7.1 shall not be less than 50 percent of the unreduced *live load* for members supporting one floor and not less than 40 percent of the unreduced *live load* for members supporting more than one floor.

1606.7.2.2 Live loads 100 psf or less: For *live loads* of 100 psf (4788 Pa) or less, reductions shall not be made for occupancies in Use Groups A and E, for *public garages* or open parking structures (except as indicated in Section 1606.7.2.3), for one-way slabs or for roofs (except as indicated in Section 1607.0).

1606.7.2.3 Live loads greater than 100 psf: For *live loads* which exceed 100 psf (4788 Pa) and for Group 2 *public garages* and open parking structures, minimum design *live loads* on members supporting more than one floor shall be reduced by 20 percent.

1606.8 Crane loads: All craneways and supporting construction shall be designed and constructed to comply with Section 4.10 in ASCE 7 listed in Chapter 35.

1606.9 Interior walls and partitions: Interior walls and partitions, including their finish materials, shall have adequate strength to resist a horizontal load of not less than 5 psf (239 Pa).

SECTION 1607.0 ROOF LOADS

1607.1 General: The structural supports of roofs and marquees shall be designed to resist *wind* (see Section 1609.0) and, where applicable, snow (see Section 1608.0) and *earthquake loads* (see Section 1610.0), in addition to the *dead load* of construction and the appropriate *live loads* as prescribed in this section, or in Table 1606.

1607.2 Definitions: The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

Fabric awning: A fabric awning is an architectural projection that provides weather protection, identity or decoration and is wholly supported by the building to which it is attached. An awning is comprised of a lightweight, rigid or retractable skeleton structure over which a fabric cover is attached.

Fabric canopy: A fabric canopy is an architectural projection that provides weather protection, identity or decoration and is ground supported in addition to being supported by the building to which the canopy is attached. A canopy is comprised of a lightweight skeleton structure over which a fabric cover is attached. A fabric canopy is not a primary structure or a roof.

1607.3 Minimum roof live loads: Ordinary roofs, either flat, pitched or curved, shall be designed for the *live loads* as specified in Table 1607.3 or Section 4.9 of ASCE 7 listed in Chapter 35.

1607.4 Overhanging eaves: In other than occupancies in Use Group R-3, and except where the overhang framing is a continuation of the roof framing, overhanging eaves, cornices and other roof projections shall be designed for a minimum uniformly distributed *live load* of 60 psf (2873 Pa).

**Table 1607.3
MINIMUM ROOF LIVE LOADS^a**

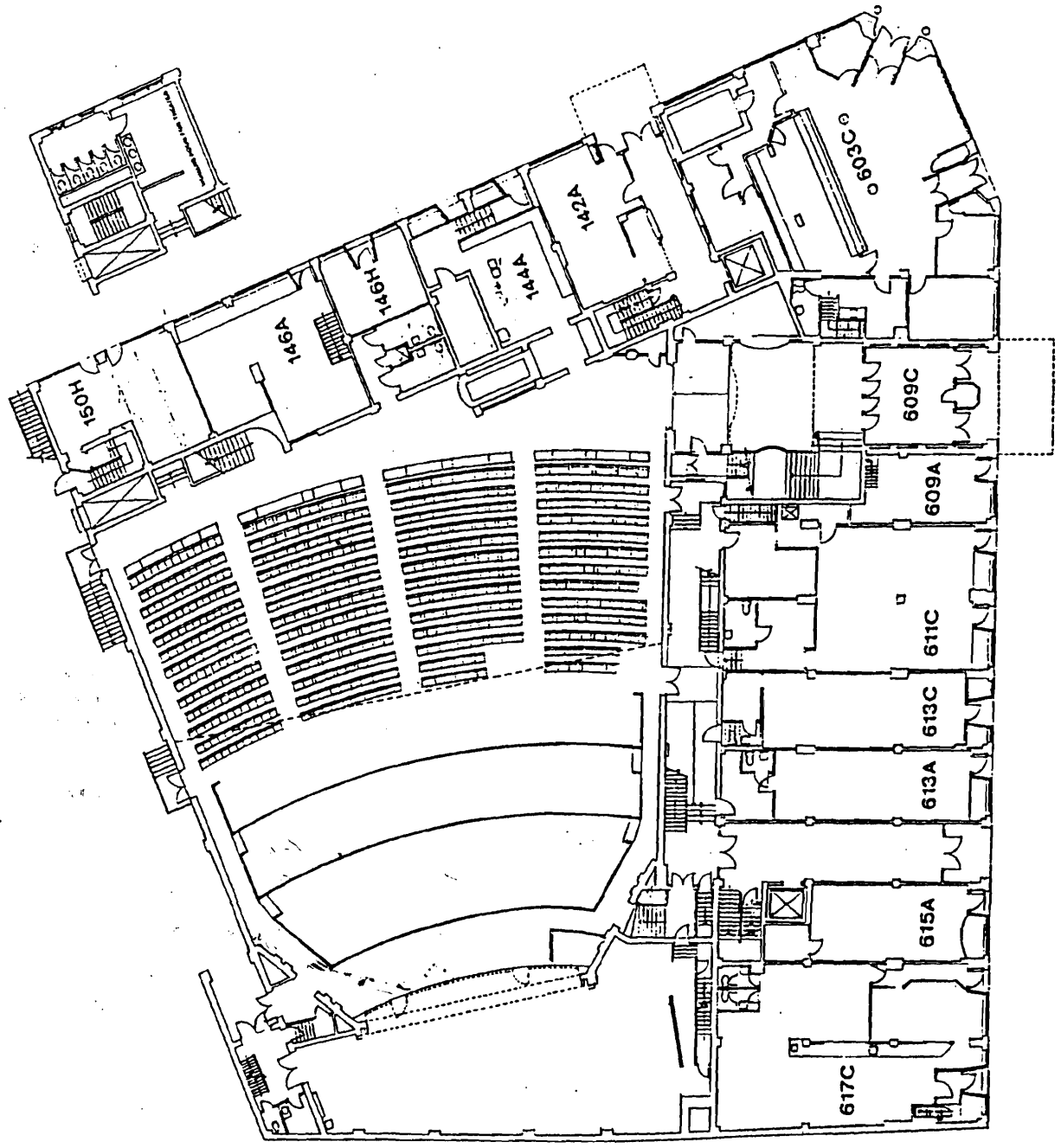
Roof slope	Tributary loaded area in square feet ^b for any structural member		
	0 to 200	201 to 600	Over 600
Flat or rise less than 4 inches per foot (1:3) Arch or dome with rise less than 1/8 of span	20	16	12
Rise 4 inches per foot (1:3) to less than 12 inches per foot (1:1) Arch or dome with rise 1/8 of span or less than 3/8 of span	16	14	12
Rise 12 inches per foot (1:1) and greater Arch or dome with rise 3/8 of span or greater	12	12	12

Note a. Loads are expressed in pounds per square foot of horizontal projection.
Note b. 1 square foot = 0.093 m²; 1 psf = 47.9 Pa.

1000 Congress Properties, Inc.
1000 Congress Properties, Inc.
1000 Congress Properties, Inc.
1000 Congress Properties, Inc.
1000 Congress Properties, Inc.

CONGRESS
PROPERTIES

1ST FLOOR PLAN



Nyto Bay Builders

Douglas Meader & Paul Saunders
Thompsons Point, Portland, Maine
207-775-9379 / 207-771-5630

Proposal Submitted to: GRANT WILSON

Date: 2-28-00

Phone:

Location of Job: Statz Theater

Scope of Job:

Change Order:

We hereby submit estimates for the scope of work outlines above to be completed according to the following specifications.

1. CONSTRUCT PLATFORM RAILINGS IN ACCORDANCE
2. WITH ASSOCIATED DESIGN PARTNERS INC. PLANS
- 3.
- 4.
5. - WITH EXTRA MATERIALS TO COST APPROX. \$3000
- 6.
7. - ALL LABOR INCLUDED IN ORIGINAL BID
- 8.
- 9.
- 10.

We propose to furnish material: Y / N

We propose to furnish labor: Y / N

Complete in accordance with the above specifications for the sum of: _____

Payment will be as follows:

All material is guaranteed to be as specified. All work to be completed in a work man like manner according to standard practices. We are not responsible for strikes, accidents, acts of God, or delays beyond our control. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. Unless otherwise noted above not included in this proposal.

Any modification to the above specified job by the owner/contractor or by any person affiliated with the owner/contractor voids this contract and warranty in it's entirety. Any additional costs associated with a change in the above specified job will be the responsibility of the owner/contractor.

Owner to carry fire, tornado and other necessary insurance.

Acceptance of proposal - The above price, specifications and conditions are satisfactory and hereby accepted. You are authorized to do the work as specified.

Payment will be made as outlined above. This proposal may be withdrawn at the option of Nyto Bay Builders. The above specified bid is guaranteed for 30 days.

Representative of Nyto Bay Builders

Owner / Contractor of above Specifications

Date

Date

02-28-00

02-28-00