

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK CITY OF PORTLAND

Please Read Application And Notes, If Any, Attached

BUILDING INSPECTION

PERMIT

Permit Number: 070422

This is to certify that ONE MONUMENT WAY I /Yarmouth Signs

has permission to Install a 24"x 36" Sign for "Eagan Fine Art"

AT 34 CITY CTR

027 F011001

provided that the person or persons who accept this permit shall comply with all of the provisions of the Statutes of the State and of the Ordinances of the City of Portland regulating the construction, maintenance and use of buildings and structures, and of the application on file in this department.

PERMIT ISSUED
MAY 3 2007
CITY OF PORTLAND

Apply to Public Works for street line and grade if nature of work requires such information.

Notification of inspection must be given and when permission procured before this building or part thereof is altered or closed-in. 24 HOUR NOTICE IS REQUIRED.

A certificate of occupancy must be procured by owner before this building or part thereof is occupied.

OTHER REQUIRED APPROVALS

Fire Dept. _____

Health Dept. _____

Appeal Board _____

Other _____

Department Name

[Signature] 5/17/07
Director - Building & Inspection Services

PENALTY FOR REMOVING THIS CARD

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 07-0422	Issue Date:	CBL: 027 F011001
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Location of Construction: 34 CITY CTR (15 th St.)	Owner Name: ONE MONUMENT WAY LLC	Owner Address: ONE MONUMENT WAY	Phone:
Business Name: Flanagan Fine Art	Contractor Name: Yarmouth Signs	Contractor Address: P.O. Box 346 Yarmouth	Phone 2078460473
Lessee/Buyer's Name Tom Flanagan	Phone: 207-319-6818	Permit Type: Signs - Permanent	Zone: B3

Past Use: Commercial - Retail	Proposed Use: Commercial - Retail - Install a 24"x 36" Sign for "Flanagan Fine Art"	Permit Fee: \$77.00	Cost of Work: \$77.00	CEO District: 1
		FIRE DEPT: <input type="checkbox"/> Approved <input checked="" type="checkbox"/> Denied Signature: <i>N/A</i>	INSPECTION: Use Group: <i>U</i> Type: <i>Sign</i> <i>TBC 2003</i> Signature: <i>[Signature]</i>	

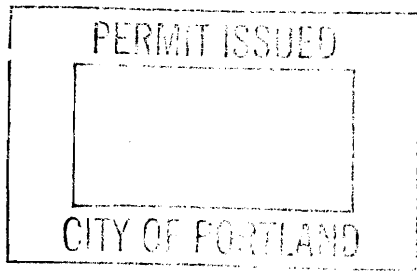
Proposed Project Description:
Install a 24"x 36" Sign for "Flanagan Fine Art"

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)
Action: Approved Approved w/Conditions Denied
Signature: *Camille M. [Signature]* Date: *05/16/07*

Permit Taken By: Idobson	Date Applied For: 04/24/2007	Zoning Approval
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- This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.
- Building permits do not include plumbing, septic or electrical work.
- 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..

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"/> Date: <i>05/11/07</i> <i>ABM</i>	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 Date:	Historic Preservation PAID <input checked="" type="checkbox"/> Not in District or Landmark <input type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Date:
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✓ decay 05/18/07 C. Marsh

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 provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT _____ ADDRESS _____ DATE _____ PHONE _____

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE _____ DATE _____ PHONE _____



Signage/Awning Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: <u>15 FREE STREET</u>		
Tax Assessor's Chart, Block & Lot Chart# Block# Lot# <u>027 F 011-001</u>	Owner: <u>ONE MONUMENT WAY, LLC</u>	Telephone: <u>207-773-0225</u> <u>KIM VOLK</u>
Lessee/Buyer's Name (If Applicable) <u>TOM FLANAGAN</u> <u>FLANAGAN FINE ART, LLC</u>	Contractor name, address & telephone: <u>YARMOUTH SIGNS</u> <u>PO BOX 346</u> <u>YARMOUTH, ME 04096</u> <u>207-846-0473</u>	Total s.f. of signage x \$2.00 Per s.f. plus \$30.00/\$65.00 For H.D. signage= Total Fee: \$ _____ Awning Fee= cost of work _____ Total Fee: \$ _____

Who should we contact when the permit is ready: TOM FLANAGAN phone: 207-319-6818

Tenant/allocated building space frontage (feet): Length: 29' Height: 14' 6"
Lot Frontage (feet) _____ Single Tenant or Multi Tenant Lot MULTI

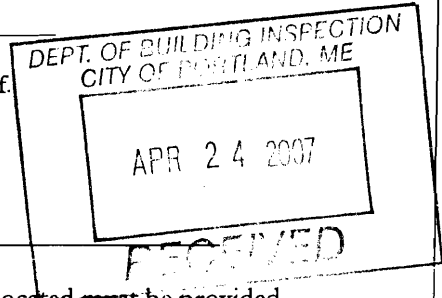
Current Specific use: RETAIL ~~Fast~~ was artist
If vacant, what was prior use: _____
Proposed Use: RETAIL ~~Fast~~ (Gallery)

Information on proposed sign(s):
 Freestanding (e.g., pole) sign? Yes _____ No X Dimensions proposed: _____ Height from grade: 124 1/2"
 ✓ Bldg. wall sign? (attached to bldg) Yes X No _____ Dimensions proposed: 24x36 ~~XXXXXXXXXX~~

Proposed awning? Yes ~~X~~ No X Is awning backlit? Yes _____ No X
 Height of awning: _____ Length of awning: _____ Depth: _____
 Is there any communication, message, trademark or symbol on it? Yes ✓ No _____
 If yes, total s.f. of panels w/communications, message, trademark or symbol: _____ s.f.

Information on existing and previously permitted sign(s):
 Freestanding (e.g., pole) sign? Yes _____ No X Dimensions: _____
 ✓ Bldg. wall sign? (attached to bldg) Yes X No _____ Dimensions: market
 Awning? Yes _____ No X Sq. ft. area of awning w/communication: _____

A site sketch and building sketch showing exactly where existing and new signage is located must be provided.
 Sketches and/or pictures of proposed signage and existing building are also required.



Please submit all of the information outlined in the Sign/Awning Application Checklist. Failure to do so may result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information visit us on-line at www.portlandmaine.gov, stop by the Building Inspections office, room 315 City Hall or call 874-8703.

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

Signature of applicant: <u>[Signature]</u>	Date: <u>1/11/07</u>
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This is not a permit, you may not commence ANY work until the permit is issued.

B3 - multi tenant - ind ground floor - 2' x 29' = 58 sq ft 24" x 36" = 864 sq in = 6 sq ft

City of Portland, Maine - Building or Use Permit

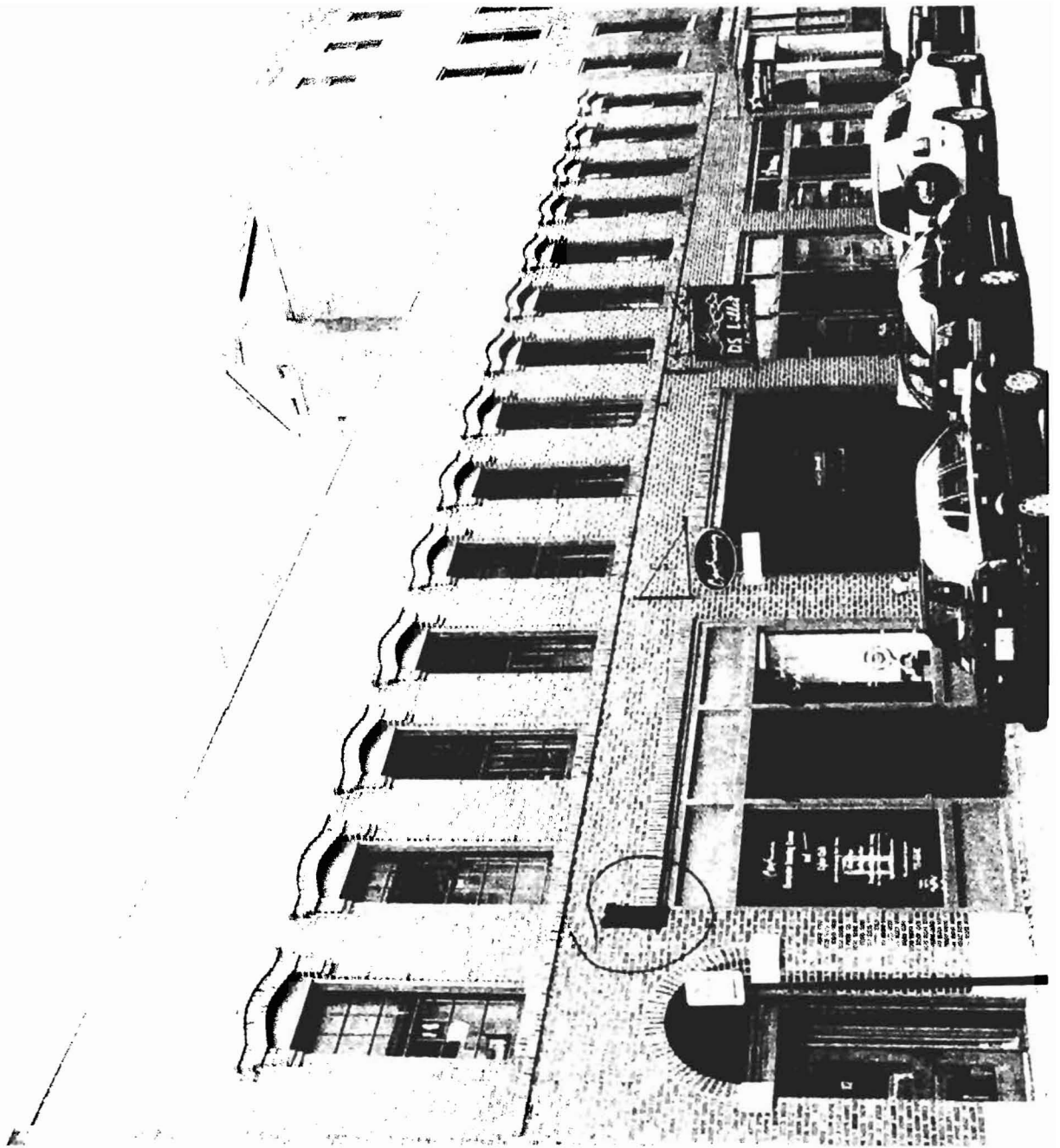
389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

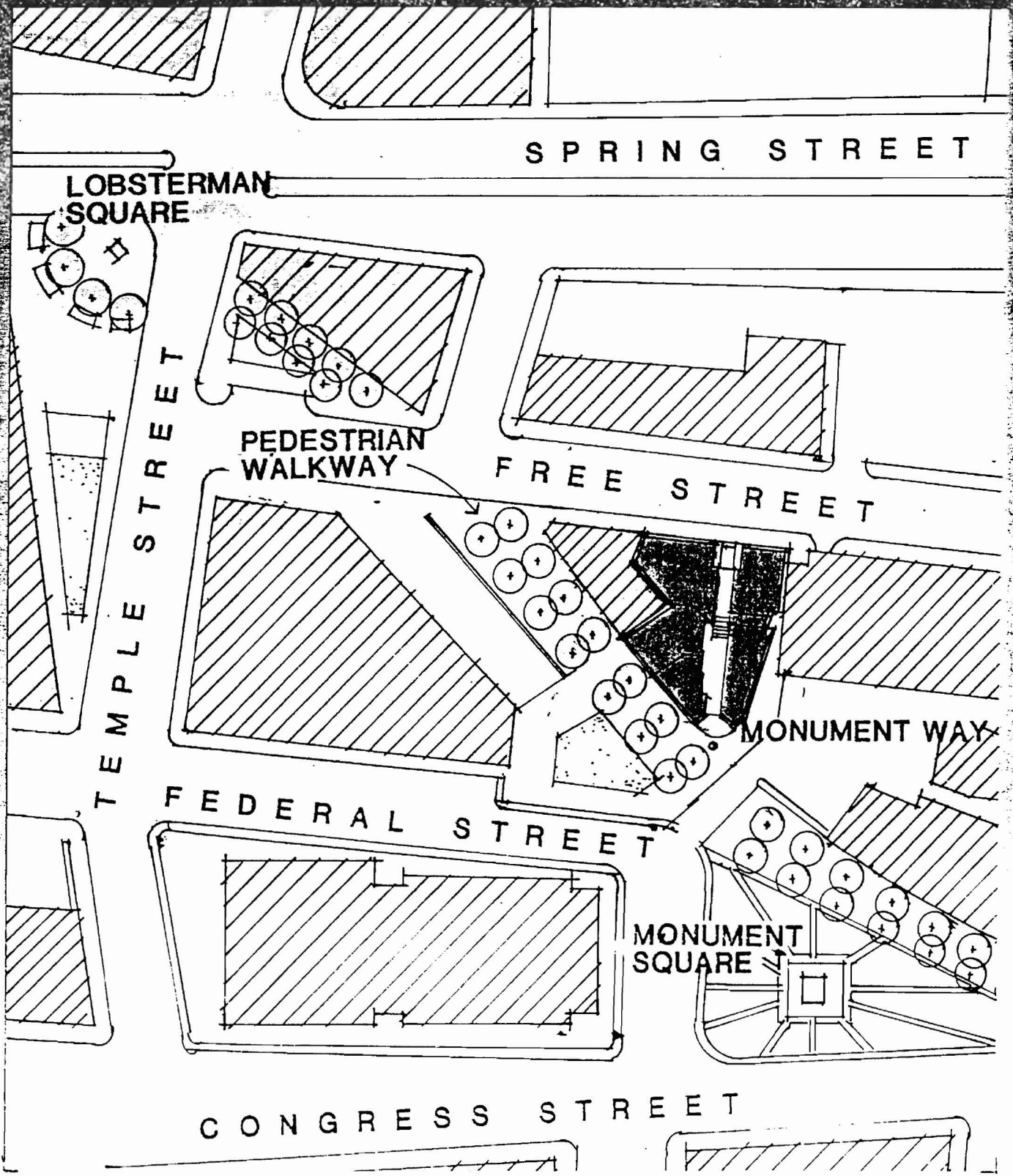
Permit No: 07-0422	Date Applied For: 04/24/2007	CBL: 027 F011001
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Location of Construction: 34 CITY CTR (15 Free Street)	Owner Name: ONE MONUMENT WAY LLC	Owner Address: ONE MONUMENT WAY	Phone:
Business Name: Flanagan Fine Art	Contractor Name: Yarmouth Signs	Contractor Address: P.O. Box 346 Yarmouth	Phone (207) 846-0473
Lessee/Buyer's Name Tom Flanagan	Phone: 207-319-6818	Permit Type: Signs - Permanent	

Proposed Use: Commercial - Retail - Install a 24"x 36" Sign for "Flanagan Fine Art"	Proposed Project Description: Install a 24"x 36" Sign for "Flanagan Fine Art"
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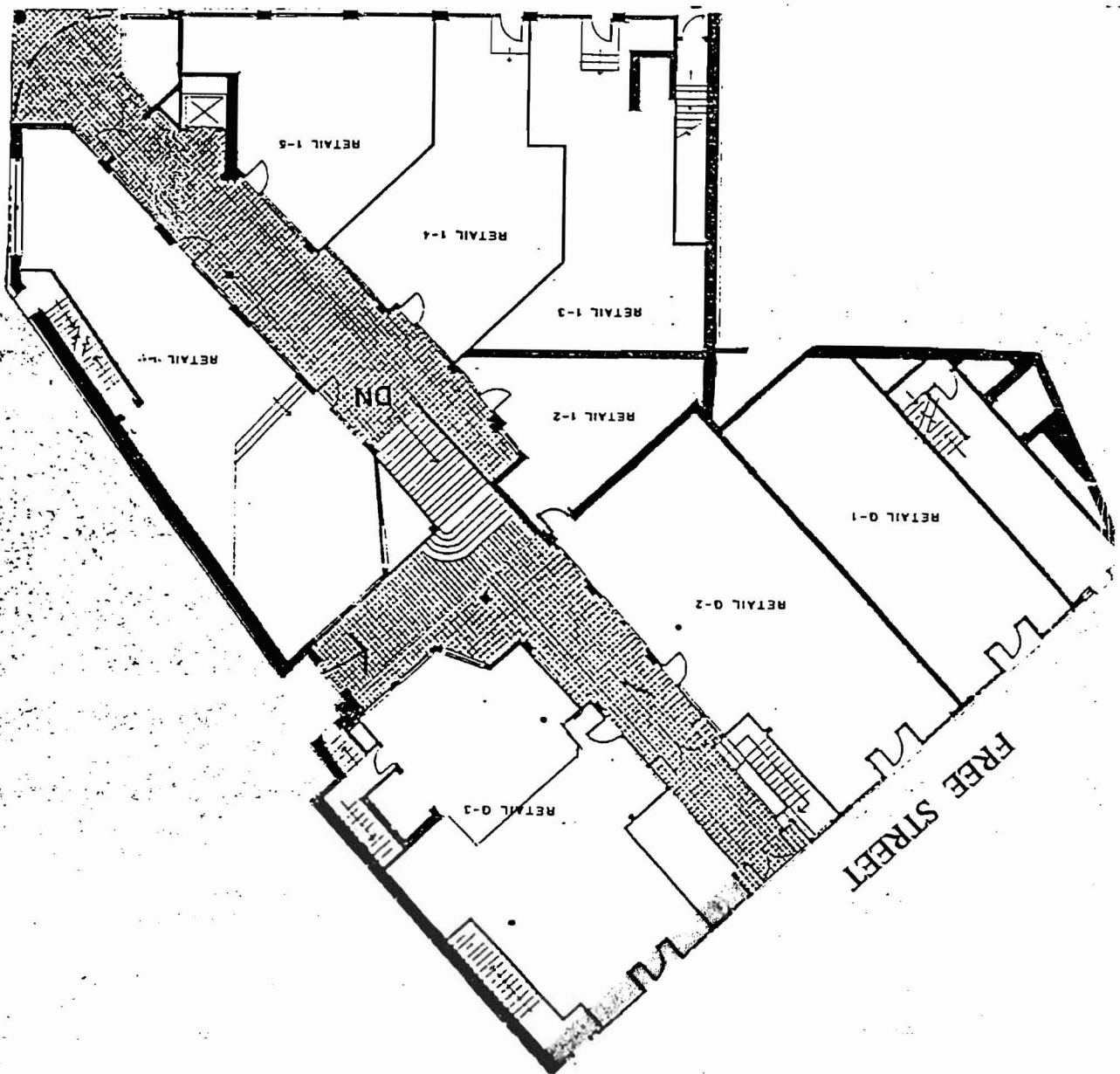
Dept: PAD	Status: Approved	Reviewer: Carrie Marsh	Approval Date: 05/16/2007
Note:			Ok to Issue: <input checked="" type="checkbox"/>
Dept: Zoning	Status: Approved	Reviewer: Ann Machado	Approval Date: 05/16/2007
Note: Address of specific tenant is 15 Free Street			Ok to Issue: <input checked="" type="checkbox"/>
Dept: Building	Status: Approved with Conditions	Reviewer: Tammy Munson	Approval Date: 05/17/2007
Note:			Ok to Issue: <input checked="" type="checkbox"/>
1) Signage Installation to comply with Chapter 31 of the IBC 2003 building code.			



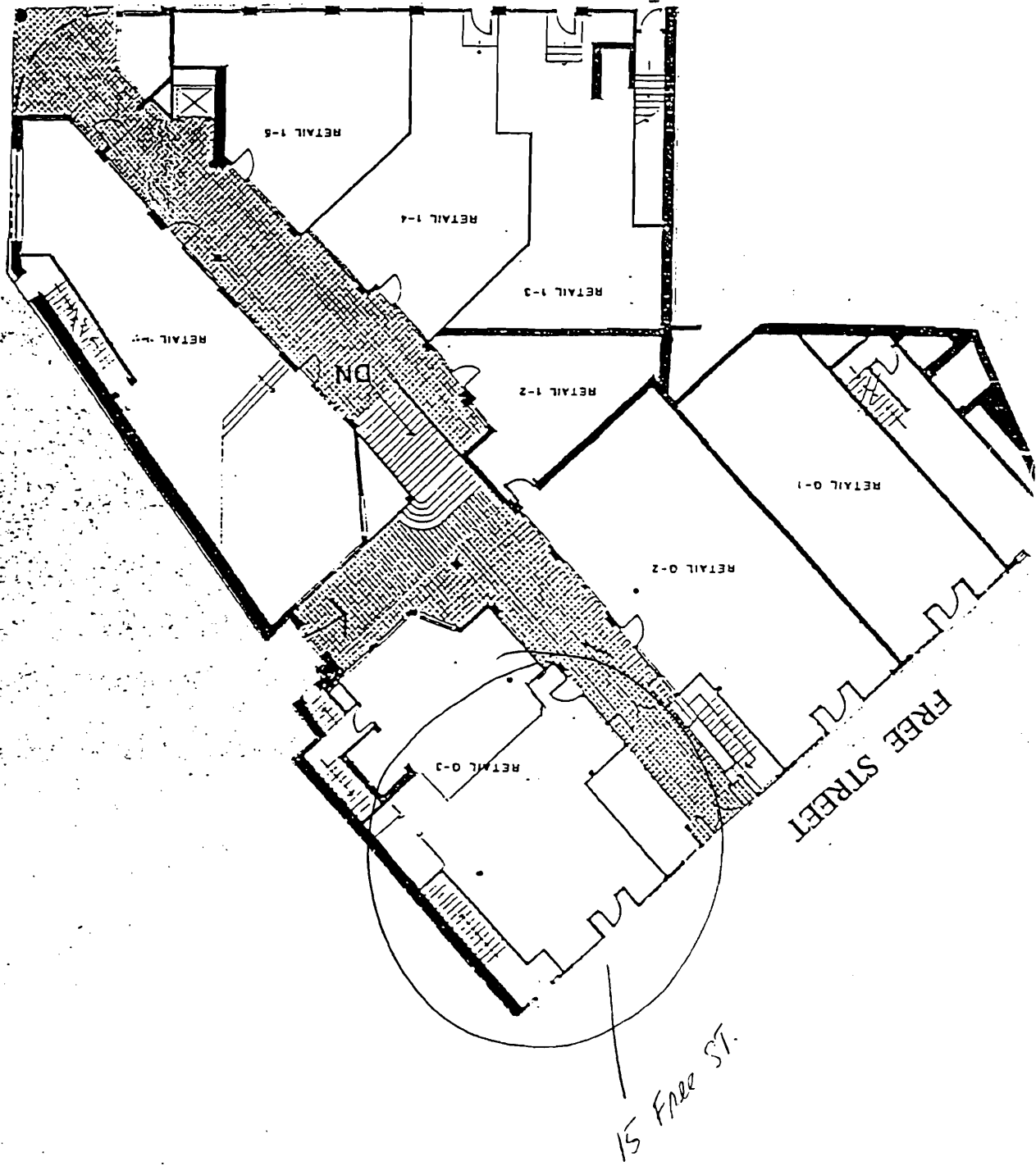


LOCATION MAP

GROUND FLOOR



GROUND FLOOR



36"



24"

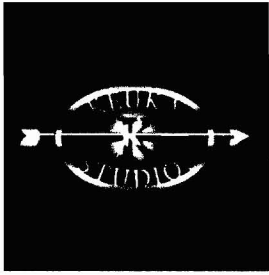


FLANAGAN

FINE ART

Chocolate Brown w/ white

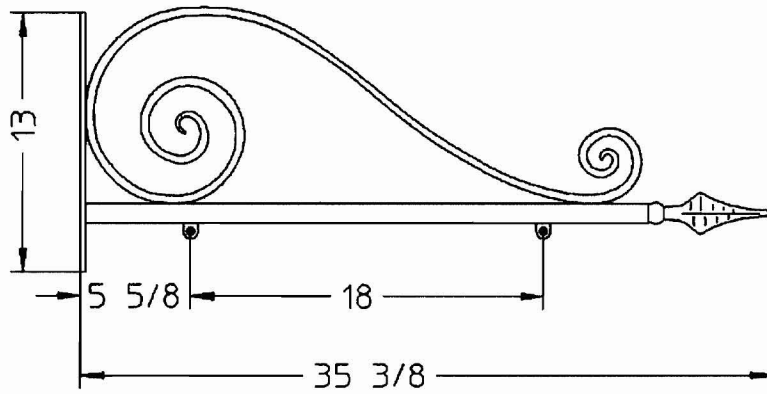




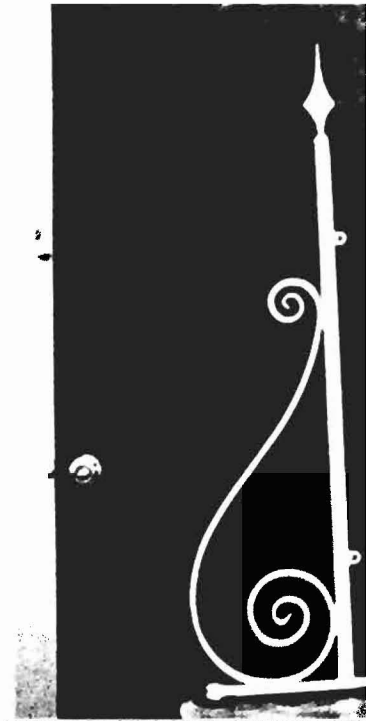
Classic scroll sign bracket

Sign hanger pictures

Simple yet elegant. Forged round scrolls with fish tail ends finished with a forged finial. Ask about free customizing of sign hanger hole spacing.



Standard Sign Bracket Dimensions.



A custom version of this design with a longer arrow and white

* Diameter of holes in Bracket where sign bolts to wall = .24"

ONE MONUMENT WAY, LLC

ONE MONUMENT WAY
SECOND FLOOR
PORTLAND, MAINE 04101
207/773-0225
TELEFAX 207/773-8832

January 11, 2007

City of Portland
389 Congress Street
Portland, ME 04101

Dear Sir or Madam,


This letter is to confirm that Kim Volk of One Monument Way, LLC ("Lessor"), the owner of the building located at 6-15 Monument Square and 9-17 Free Street and referred to as One Monument Way, does hereby give permission to Tom Flanagan of Flanagan Fine Art, LLC ("Lessee"), to erect a hanging sign attached to the building above their location at 15 Free Street, in a manner consistent with existing signs on that block of Free Street.

Lessor reserves the right to approve sign design before installation.

Sincerely,



Kim Volk



Seen & Agreed by Lessee

By: Tom Flanagan
Flanagan Fine Art, LLC
Its: Owner

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
10/16/2006

PRODUCER

Marsh Commercial Business Center
9830 Colonnade Blvd. #400
PO Box 659520
San Antonio, TX 78265-9520
INSURED Flanagan Fine Art LLC

15 Free St
Portland, ME 04101

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURERS AFFORDING COVERAGE

NAIC#

INSURER A: TRAVELERS INDEMNITY CO
INSURER B:
INSURER C:
INSURER D:
INSURER E:


COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR ADD'L LTR INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE(MM/DD/YY)	POLICY EXPIRATION DATE(MM/DD/YY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC	680-8024C353	10/12/2006	10/12/2007	EACH OCCURRENCE \$ 2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 2,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 4,000,000
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				AUTO ONLY - EA ACCIDENT \$ OTHER THAN EA ACC \$ AUTO ONLY: AGG \$
	EXCESS/UMBRELLA LIABILITY <input type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE DEDUCTIBLE RETENTION \$				EACH OCCURRENCE \$ AGGREGATE \$ \$ \$ \$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below				WC STATU-TORY LIMITS <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
	OTHER				

FAKED 10/22/06

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

CERTIFICATE HOLDER	CANCELLATION
Flanagan Fine Art LLC 15 Free St Portland ME 04101	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE 

IMPORTANT

If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

- cert of insurance
- sq ft of sign
- photo of bracket
- How sign is attached to wall

Power-Stud™ Wedge Expansion Anchor

PRODUCT DESCRIPTION

The Power-Stud anchor, formerly known as the *Rawl-Stud*, is a fully threaded, torque-controlled, wedge expansion anchor which is designed for consistent performance. It is available in threaded, rod hanger and tie-wire versions suitable for applications in solid concrete and grout-filled concrete masonry. The threaded version is produced in carbon steel and stainless steel to offer various levels of corrosion resistance depending on use. The drill bit diameter necessary for proper installation is the same as the anchor diameter.

GENERAL APPLICATIONS AND USES

- Water Treatment Plants and Marine Applications
- Lighting Standards
- Sill Plates and Support Ledgers
- Structural Anchorage
- Retrofit Projects and Machinery Anchorage
- Seismic Attachments
- Food and Beverage Facilities

FEATURES AND BENEFITS

- Heavy and medium duty all-purpose anchor
- Tested in accordance with ASTM E488 and AC01 criteria
- Qualified for seismic and wind load applications
- Drill bit diameter is the same as the anchor diameter
- Length ID stamped on each threaded anchor
- Anchors can be installed through the fixture, no need for hole spotting
- Chamfered impact section prevents damage to threads
- Length of holes can be over-drilled or bottomless
- Convenient, fully threaded body – no shims required
- Clip design prevents spinning during installation

APPROVALS AND LISTINGS

International Code Council, Evaluation Service (ICC-ES) ESR-1532
 (formerly listed in ICBO ES ER-5225)
 Southern Building Code Conference International (SBCCI) #9943A
 City of Los Angeles (COLA) Research Report LARR-24960
 Florida Building Code Approval – FL2209.6
 Miami-Dade County Notice of Acceptance (NOA) 03-0311.08
 Factory Mutual Research Corporation (FM Approvals) – File No. J.I. OK3A9.AH
 Underwriters Laboratory (UL Listed) – File No. EX1289
 Federal GSA Specification – Meets the proof load requirements of FF-S-325C, Group II, Type 4, Class 1 (superseded) and CID A-A-1923A, Type 4
 Various North American Departments of Transportation (DOT) – See www.powers.com, including CalTrans listing for “Stud Mechanical Expansion Anchors”

GUIDE SPECIFICATIONS

CSI Divisions: 03151-Concrete Anchoring, 04081-Masonry Anchorage and 05090-Metal Fastenings. Expansion Anchors shall be Power-Stud anchors as supplied by Powers Fasteners, Inc., Brewster, NY.

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Threaded Power-Stud



Rod Hanger Power-Stud



Tie-Wire Power-Stud

HEAD STYLES

- Threaded
- Rod Hanger
- Tie-Wire

ANCHOR MATERIALS

- Zinc Plated Carbon Steel
- Mechanically Galvanized Carbon Steel
- Type 304 Stainless Steel
- Type 316 Stainless Steel

ANCHOR SIZE RANGE (TYP.)

- 1/4" diameter x 1-3/4" length to
- 1 1/4" diameter x 12" length

SUITABLE BASE MATERIALS

- Normal-Weight Concrete
- Structural Lightweight Concrete
- Grouted Concrete Masonry

INSTALLATION SPECIFICATIONS

Carbon Steel Power-Stud

Dimension	Anchor Diameter, <i>d</i>							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"
ANSI Drill Bit Size, d_{bit} (in.)	1/4	3/8	1/2	5/8	3/4	7/8	1	1-1/4
Fixture Clearance Hole, d_h (in.)	5/16	7/16	9/16	11/16	13/16	15/16	1-1/8	1-3/8
Thread Size (UNC)	1/4-20	3/8-16	1/2-13	5/8-11	3/4-10	7/8-9	1-8	1 1/4-7
Nut Height (in.)	7/32	21/64	7/16	35/64	41/64	3/4	55/64	1 1/16
Washer O.D., d_w (in.)	5/8	13/16	1 1/16	1 3/4	2	2 1/4	2 1/2	3
Wrench Size (in.)	7/16	9/16	3/4	15/16	1 1/8	1 5/16	1 1/2	1 7/8
Max. Tightening Torque, T_{max} (ft-lbs)	8	28	60	90	175	250	300	450

Maximum tightening torque is listed for anchors installed in normal-weight concrete. Consult performance data tables for other base materials.

Stainless Steel Power-Stud

Dimension	Anchor Diameter, <i>d</i>							
	1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"
ANSI Drill Bit Size, d_{bit} (in.)	1/4	3/8	1/2	5/8	3/4	7/8	1	1 1/4
Fixture Clearance Hole, d_h (in.)	5/16	7/16	9/16	11/16	13/16	15/16	1-1/8	1-3/8
Thread Size (UNC)	1/4-20	3/8-16	1/2-13	5/8-11	3/4-10	7/8-9	1-8	1 1/4-7
Nut Height (in.)	7/32	21/64	7/16	35/64	41/64	3/4	55/64	1 1/16
Washer O.D (304 SS), d_w (in.)	5/8	13/16	1 1/16	1 3/4	2	2 1/4	2 1/2	3
Washer O.D (316 SS), d_w (in.)	5/8	7/8	1 1/4	1 1/2	1 3/4	2	2	2
Wrench Size (in.)	7/16	9/16	3/4	15/16	1 1/8	1 5/16	1 1/2	1 7/8
Max. Tightening Torque, T_{max} (ft-lbs)	8	28	60	90	175	250	300	450

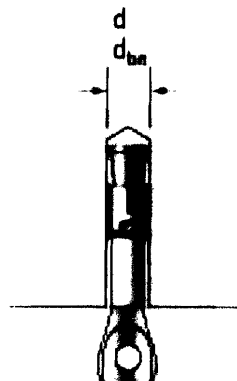
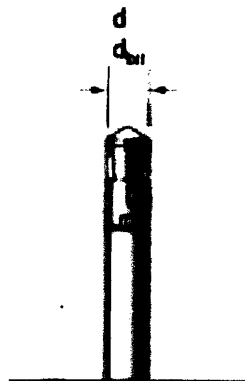
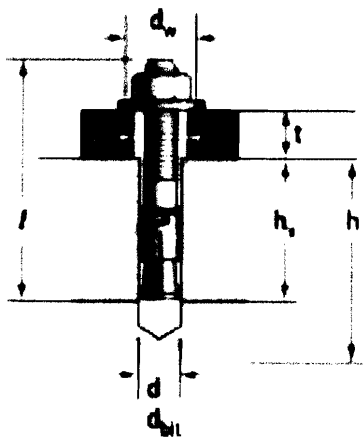
Maximum tightening torque is listed for anchors installed in normal-weight concrete. Consult performance data tables for other base materials.

Rod Hanger Power-Stud

Dimension	Rod Diameter, <i>d</i>		
	3/8"	1/2"	5/8"
Anchor Diameter (in.)	1/2	5/8	7/8
ANSI Drill Bit Size, d_{bit} (in.)	1/2	5/8	7/8
Thread Size (UNC)	3/8-16	1/2-13	5/8-11

Tie-Wire Power-Stud

Dimension	Anchor Diameter, <i>d</i>
	1/4"
ANSI Drill Bit Size, d_{bit} (in.)	1/4
Tie-Wire Hole Size (in.)	9/32
Head Height (in.)	3/4



Nomenclature

- d* = Diameter of anchor
- d_{bit} = Diameter of drill bit
- d_h = Diameter of fixture clearance hole
- d_w = Diameter of washer
- h* = Base material thickness.
The minimum value of *h* should be 1.5 *h_s*.
- h_s* = Minimum embedment depth
- l* = Overall length of anchor
- t* = Fixture thickness
- T_{max} = Maximum tightening torque

MECHANICAL ANCHORS

INSTALLATION PROCEDURES

Threaded Stud Version

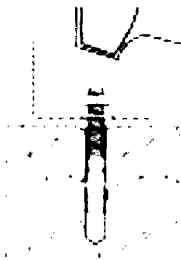
Using the proper diameter bit, drill a hole into the base material to a depth of at least 1/2" or one anchor diameter deeper than the embedment required. The tolerances of the drill bit used should meet the requirements of ANSI Standard B212.15



Blow the hole clean of dust and other material. Do not expand the anchor prior to installation



Position the washer on the anchor and thread on the nut. Drive the anchor through the fixture into the anchor hole until the nut and washer are firmly seated against the fixture. Be sure the anchor is driven to the required embedment depth.



Tighten the anchor by turning the nut 3 to 5 turns past finger tight or by applying the guide installation torque from the finger tight position.

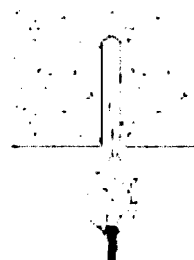


Rod Hanger Version

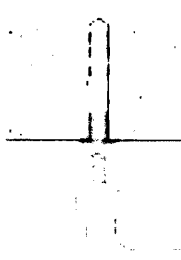
Using the proper diameter bit, drill a hole into the base material to a depth of at least 1/2" or one anchor diameter deeper than the embedment required. The tolerances of the drill bit used should meet the requirements of ANSI Standard B212.15



Blow the hole clean of dust and other material. Do not expand the anchor prior to installation



Thread the anchor onto the rod to be used along with a nut and washer. Drive the anchor into the hole until the anchor is at the required embedment depth. The anchor body should be recessed in the hole.



Run the nut and washer up to the concrete surface and tighten the anchor by turning the nut 3 to 5 turns past finger tight or by applying the guide installation torque from the finger tight position.



Tie-Wire Version

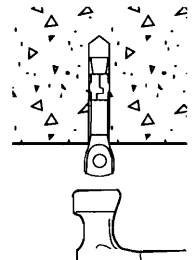
Using the proper diameter bit, drill a hole into the base material to a depth of at least 1/2" or one anchor diameter deeper than the embedment required. The tolerances of the drill bit used should meet the requirements of ANSI Standard B212.15



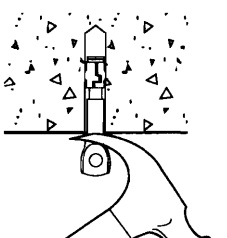
Blow the hole clean of dust and other material. Do not expand the anchor prior to installation



Drive the anchor into the hole until the head is firmly seated against the base material. Be sure the anchor is driven to the required embedment depth.



Set the anchor with a prying action using a claw hammer.



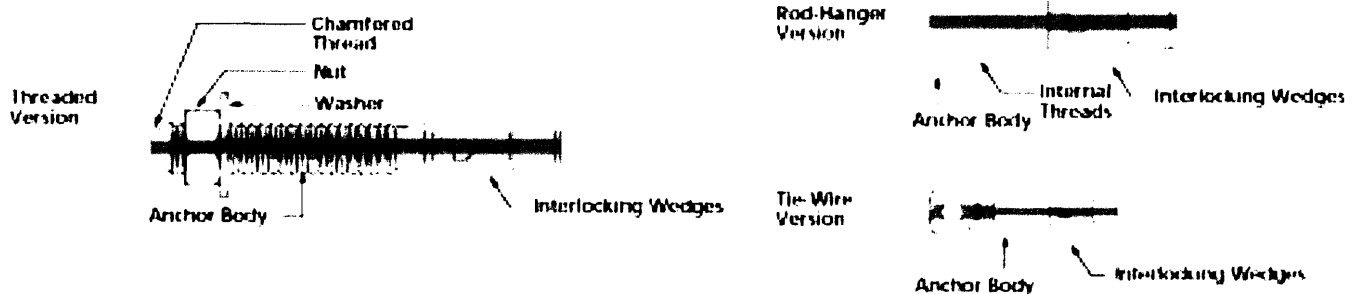
MATERIAL SPECIFICATIONS

Anchor Component	Carbon Steel Power-Stud	Mechanically Galvanized Power-Stud
Anchor Body	AISI 1018 (1/4" – 3/4", lengths up to 7")	AISI 1018 (1/4" – 3/4", lengths up to 7")
	AISI 12L14 (7/8" – 1-1/4" and all lengths over 7")	AISI 12L14 (7/8" – 1-1/4" and all lengths over 7")
Nut	Carbon Steel, ASTM A563, Grade A	Carbon Steel, ASTM A563, Grade A
Washer	AISI 1010 Carbon Steel, Meets Dimensional Requirements of ANSI/ASME 8.22.1, Type A Plain	AISI 1010 Carbon Steel, Meets Dimensional Requirements of ANSI/ASME 8.22.1, Type A Plain
Expansion Wedge	Tempered AISI 1010 Carbon Steel	Type 304 Stainless Steel
Zinc Plating	ASTM B633, SC1, Type III (Fe/Zn 5)	ASTM B695, Class 65, Type I

Anchor Component	Type 304 Stainless Steel Power-Stud	Type 316 Stainless Steel Power-Stud
Anchor Body	Type 304Cu (1/4" – 3/4", lengths up to 7")	Type 316L Stainless Steel
	Type 304 (7/8" – 1", lengths over to 7")	
Nut	Type 18-8 (300 Series) Stainless Steel	Type 316L Stainless Steel
Washer	Type 18-8 (300 Series) Stainless Steel	Type 316L Stainless Steel
Expansion Wedge	Type 304 Stainless Steel	Type 316L Stainless Steel

Stainless steel anchor components are passivated.

Anchor Component	Rod Hanger Power-Stud	Tie-Wire Power-Stud
Anchor Body	AISI 12L14 Carbon Steel	AISI 1018 Carbon Steel
Expansion Wedge	Tempered AISI 1010 Carbon Steel	Tempered AISI 1010 Carbon Steel
Zinc Plating	ASTM B633, SC1, Type III (Fe/Zn 5)	ASTM B633, SC1, Type III (Fe/Zn 5)



Length Identification

Mark	◆	■	A	B	C	D	E	F	G	H	I
From	1/2"	1"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"	5"	5-1/2"
Up to but not including	1"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"	4-1/2"	5"	5-1/2"	6"

Mark	J	K	L	M	N	O	P	Q	R	S	T
From	6"	6-1/2"	7"	7-1/2"	8"	8-1/2"	9"	9-1/2"	10"	11"	12"
Up to but not including	6-1/2"	7"	7-1/2"	8"	8-1/2"	9"	9-1/2"	10"	11"	12"	13"

PERFORMANCE DATA

Allowable Load Capacities for Carbon and Stainless Steel Power-Stud in Normal-Weight Concrete^{1,2,3}

Anchor Diameter <i>d</i> in. (mm)	Minimum Embedment Depth <i>h_v</i> in. (mm)	Minimum Concrete Compressive Strength (<i>f'_c</i>)					
		2,000 psi (13.8 MPa)		4,000 psi (27.6 MPa)		6,000 psi (41.4 MPa)	
		Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)	Tension lbs. (kN)	Shear lbs. (kN)
1/4 (6.4)	1 1/8 (28.6)	310 (1.4)	395 (1.8)	360 (1.6)	405 (1.8)	435 (2.0)	405 (1.8)
	1 1/2 (38.1)	410 (1.8)	395 (1.8)	520 (2.3)	405 (1.8)	525 (2.4)	405 (1.8)
	2 (50.8)	475 (2.1)	395 (1.8)	520 (2.3)	405 (1.8)	525 (2.4)	405 (1.8)
	2 3/4 (69.9)	585 (2.6)	415 (1.9)	590 (2.7)	520 (2.3)	635 (2.9)	520 (2.3)
3/8 (9.5)	1 5/8 (41.3)	480 (2.2)	890 (4.0)	760 (3.4)	940 (4.2)	760 (3.4)	940 (4.2)
	2 (50.8)	700 (3.2)	890 (4.0)	965 (4.3)	940 (4.2)	1,020 (4.6)	940 (4.2)
	3 (76.2)	1,025 (4.6)	890 (4.0)	1,505 (6.8)	940 (4.2)	1,505 (6.8)	940 (4.2)
	4 1/4 (108.0)	1,260 (5.7)	960 (4.3)	1,505 (6.8)	1,295 (5.8)	1,505 (6.8)	1,295 (5.8)
1/2 (12.7)	2 1/4 (57.2)	860 (3.9)	1,635 (7.4)	1,390 (6.3)	1,700 (7.7)	1,635 (7.4)	1,700 (7.7)
	3 (76.2)	1,275 (5.7)	1,635 (7.4)	2,040 (9.2)	1,700 (7.7)	2,300 (10.4)	1,700 (7.7)
	4 (101.6)	1,425 (6.4)	1,635 (7.4)	2,040 (9.2)	1,700 (7.7)	2,300 (10.4)	1,700 (7.7)
	6 (152.4)	1,980 (8.9)	1,755 (7.9)	2,390 (10.8)	1,800 (8.1)	2,685 (12.1)	1,800 (8.1)
5/8 (15.9)	2 3/4 (69.9)	1,560 (6.9)	2,320 (10.4)	2,075 (9.3)	2,975 (13.4)	2,465 (11.1)	2,975 (13.4)
	4 (101.6)	2,400 (10.8)	2,320 (10.4)	2,705 (12.2)	2,975 (13.4)	3,375 (15.2)	2,975 (13.4)
	5 (127.0)	2,660 (11.8)	2,320 (10.4)	3,130 (14.1)	2,975 (13.4)	4,105 (18.5)	2,975 (13.4)
	7 (177.8)	3,125 (13.9)	2,440 (11.0)	3,970 (17.9)	3,045 (13.7)	4,105 (18.5)	3,045 (13.7)
3/4 (19.1)	3 3/8 (85.7)	1,855 (8.3)	3,095 (13.9)	2,500 (11.3)	3,765 (16.9)	3,135 (14.1)	3,765 (16.9)
	5 (127.0)	2,660 (11.8)	3,095 (13.9)	3,660 (16.5)	3,765 (16.9)	4,315 (19.4)	3,765 (16.9)
	6 (152.4)	2,660 (11.8)	3,095 (13.9)	4,270 (19.2)	3,765 (16.9)	5,045 (22.7)	3,765 (16.9)
	8 (203.2)	3,500 (15.6)	3,400 (15.3)	5,710 (25.4)	4,280 (19.3)	6,225 (28.0)	4,280 (19.3)
7/8 (22.2)	3 7/8 (98.4)	1,900 (8.6)	4,490 (20.2)	3,075 (13.8)	6,040 (27.2)	4,325 (19.5)	6,040 (27.2)
	4 1/2 (114.3)	2,400 (10.8)	4,490 (20.2)	3,905 (17.6)	6,040 (27.2)	5,305 (23.6)	6,040 (27.2)
	5 3/4 (146.1)	2,660 (11.8)	4,490 (20.2)	4,970 (22.4)	6,040 (27.2)	6,950 (30.9)	6,040 (27.2)
	7 (177.8)	3,170 (14.1)	4,490 (20.2)	5,110 (23.0)	6,040 (27.2)	8,590 (38.2)	6,040 (27.2)
	8 (203.2)	3,790 (16.9)	4,660 (21.0)	5,710 (25.4)	6,430 (28.9)	7,795 (35.1)	6,430 (28.9)
1 (25.4)	4 1/2 (114.3)	2,185 (9.8)	6,605 (29.7)	3,455 (15.5)	7,775 (35.0)	5,305 (23.6)	7,775 (35.0)
	5 1/2 (139.7)	3,195 (14.4)	6,605 (29.7)	5,070 (22.8)	7,775 (35.0)	6,950 (30.9)	7,775 (35.0)
	6 1/2 (165.1)	4,150 (18.7)	6,605 (29.7)	6,370 (28.7)	7,775 (35.0)	8,590 (38.2)	7,775 (35.0)
	8 (203.2)	5,590 (25.2)	6,605 (29.7)	6,760 (30.4)	7,775 (35.0)	11,055 (49.7)	7,775 (35.0)
	9 (228.6)	6,550 (29.5)	6,755 (30.4)	8,550 (38.5)	8,095 (36.4)	11,055 (49.7)	8,095 (36.4)
1 1/4 (31.8)	5 1/2 (139.7)	4,200 (18.9)	10,205 (45.9)	6,745 (30.4)	10,205 (45.9)	9,230 (41.5)	10,205 (45.9)
	7 (177.8)	6,340 (28.5)	10,205 (45.9)	8,855 (39.8)	10,205 (45.9)	11,210 (50.4)	10,205 (45.9)
	10 (254.0)	7,200 (32.4)	10,205 (45.9)	13,070 (58.8)	10,205 (45.9)	15,175 (68.3)	10,205 (45.9)

1. Allowable load capacities listed are calculated using an applied safety factor of 4.0.
 2. Linear interpolation may be used to determine allowable loads for intermediate embedments and compressive strengths.
 3. Allowable loads for anchors to resist short-term loads such as earthquake or wind may be increased by 33-1/3 percent for the duration of the load, where permitted by code.

MECHANICAL

PERFORMANCE DATA**Ultimate and Allowable Load Capacities for Carbon and Stainless Steel Power-Stud in Structural Lightweight Concrete^{1,2,3}**

Anchor Diameter <i>d</i> in. (mm)	Max. Guide Torque <i>T_{max}</i> ft.-lbs.	Min. Embed. Depth <i>h_v</i> in. (mm)	Minimum Concrete Compressive Strength (<i>f_c</i>)						Shear, lbs (kN)	
			Tension, lbs (kN)							
			3,000 psi (20.7 MPa)		4,000 psi (27.6 MPa)		5,000 psi (34.5 MPa)		<i>f_c</i> ≥ 3,000 psi (20.7 MPa)	
			Ultimate Load	Allowable Load	Ultimate Load	Allowable Load	Ultimate Load	Allowable Load	Ultimate Load	Allowable Load
1/4 (6.4)	4	1 1/8 (28.6)	720 (3.2)	180 (0.8)	960 (4.3)	240 (1.1)	1,200 (5.4)	300 (1.4)	720 (3.2)	180 (0.8)
3/8 (9.5)	20	1 5/8 (41.3)	1,600 (7.2)	400 (1.8)	1,940 (8.7)	485 (2.2)	2,300 (10.4)	575 (2.6)	1,840 (8.3)	460 (2.1)
		3 (76.2)	–	–	2,860 (12.9)	715 (3.2)	–	–	1,840 (8.3)	460 (2.1)
1/2 (12.7)	30	2 1/4 (57.2)	2,820 (12.7)	705 (3.2)	3,180 (14.3)	795 (3.6)	3,560 (16.0)	890 (4.0)	5,040 (22.7)	1,260 (5.7)
		3 (76.2)	–	–	4,020 (18.1)	1,005 (4.5)	–	–	5,040 (22.7)	1,260 (5.7)
		5 (127.0)	–	–	4,200 (18.9)	1,050 (4.7)	–	–	5,040 (22.7)	1,260 (5.7)
5/8 (15.9)	65	2 3/4 (69.9)	4,380 (19.7)	1,095 (4.9)	4,980 (22.4)	1,245 (5.6)	5,580 (25.1)	1,395 (6.3)	6,940 (31.2)	1,735 (7.8)
		3 1/2 (88.9)	–	–	4,840 (21.8)	1,210 (5.4)	–	–	6,940 (31.2)	1,735 (7.8)
		5 (127.0)	–	–	6,920 (31.1)	1,730 (7.8)	–	–	6,940 (31.2)	1,735 (7.8)
3/4 (19.1)	90	3 3/8 (85.7)	5,060 (22.8)	1,265 (5.7)	5,600 (25.2)	1,400 (6.3)	6,140 (27.6)	1,535 (6.9)	9,880 (44.5)	2,470 (11.1)
		4 (101.6)	–	–	8,240 (37.1)	2,060 (9.3)	–	–	9,880 (44.5)	2,470 (11.1)
		5 (127.0)	–	–	9,300 (41.9)	2,325 (10.5)	–	–	9,880 (44.5)	2,470 (11.1)

1. The values listed above are ultimate and allowable load capacities for anchors installed in sand-lightweight concrete.
2. Allowable load capacities are calculated using an applied safety factor of 4.0.
3. Linear interpolation may be used to determine loads for intermediate embedments and compressive strengths.