

INDICATES I-BEAM PIER SUPPORT LOCATIONS (SEE IN-15 THRU IN-18 FOR BLOCKING & PIER DESIGN)

INDICATES PIERS FOR CONCENTRATED LOAD POINTS REQUIRED UNDER ALL COLUMNS. IMPOSED LOADS MUST BE CALCULATED BASED ON INDIVIDUAL PROJECT FLOOR PLANS. (REFER TO IN-16 THRU IN-18 FOR BLOCKING & PIER DESIGN)

NOTES:

1. SEE IN-12 FOR PIER SPACING & LOADING
2. SEE ACTUAL PROJECT FLOOR PLAN FOR COLUMN LOCATIONS
3. SEE IN-16 THRU IN-18 FOR BLOCKING & PIER DETAILS
4. LATERAL LOADS CAUSED BY WIND OR SEISMIC MUST BE RESISTED BY ANCHORS (SEE IN-80, IN-100, IN-110 OR IN-120 FOR ANCHORING REQUIREMENTS OF APPROPRIATE WIND LOAD)
5. PIERS MAY FALL IN AXLE AREA THUS REQUIRING REMOVAL OF RUNNING GEAR.
6. ALLOW APPROX. 1/4" @ EACH MATELINE FOR GROWTH
7. THIS LAYOUT IS SIMILAR FOR SINGLE MODULE BUILDINGS, AS WELL AS, MULTIPLE UNIT COMPLEXES, SUCH AS 3 UNIT, 4 UNIT, 5 UNIT, ETC.

NOM. MODULE WIDTH	ACTUAL WIDTH*	"X" nd	"Y" nd	"Z" ^{nc}
8 FT.	86"	55 1/2"	40 3/4"	20 1/4"
10 FT.	117"	75 1/2"	41 3/4"	20 3/4"
12 FT.	141"	75 1/2"	65 3/4"	32 3/4"
14 FT.	141"	99 1/2"	41 3/4"	20 3/4"
16 FT.	189"	99 1/2"	60 3/4"	32 3/4"
			80 3/4"	44 3/4"

* See project drawings to confirm actual width

† Confirm w/ drawings and/or factory for I-beam spacing

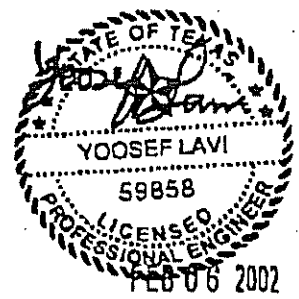
‡ If actual project width is other than listed in chart verify this dimension with the factory

§ For mateline growth 1/4" has been added to this dimension

Texas Industrial Building Service Co., Inc. IBC V IBC

FEB 20 2002

N.T.S.



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9550 FOREST LN. #108, DALLAS, TX 75243

Approved: PFS Corp. IHDR A 7

PROPERTY OF:
INDICOM BUILDINGS, INC.

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TITLE:
TYPICAL PIER LAY-OUT (OUTRIGGER FRAME)

DATE: 01-27-02

SHT. #: IN-11

STEPS TO CALCULATING LOAD PER PIER:

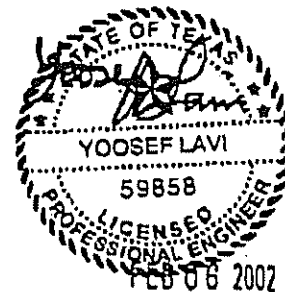
1. CALCULATE TOTAL LOAD. REFER TO PROJECT DRAWING DATA PLATE FOR ROOF LIVE LOAD AND FLOOR LIVE LOAD. KEEP IN MIND CORRIDORS, STORAGE, WAITING ROOMS, ETC. REQUIRE GREATER FLOOR LIVE LOAD THAN BALANCE OF BUILDING. THESE ADDITIONAL LOADS SHOULD BE TAKEN INTO ACCOUNT WHEN CALCULATING TOTAL LOADS, THUS PIER LOADS, IN THOSE AREAS. ACTUAL DEAD LOAD MAY NEED TO BE CALCULATED BY QUALIFIED PROFESSIONAL IF REQUIRED BY BUILDING OFFICIAL.

EXAMPLE: 20 PSF ROOF LIVE LOAD
 50 PSF FLOOR LIVE LOAD
 + 20 PSF DEAD LOAD
 90 PSF TOTAL LOAD

2. REFER TO PROJECT DRAWING FOR BUILDING & I-BEAM SIZE.

3. REFER TO CHARTS BELOW BASED ON DESIRED PIER SPACING TO DETERMINE LOAD @ EACH PIER.

NOTE: 70 LB. PER LF. HAVE BEEN ADDED TO CHARTS BELOW FOR WALL DEAD LOADS.



PIER SPACING = 6 FT.					
LOAD PER PIER (in lbs.)					
NOM. UNIT WIDTH (FT.)	MIN. I-BEAM SIZE*	TOTAL LOAD (PSF) ^{bc}			
		90	100	120	150
8	6"	2580	2820	3300	4020
8	8"	2580	2820	3300	4020
10	8"	3120	3420	4020	4920
10	10"	3120	3420	4020	4920
10	12"	3120	3420	4020	4920
12	10"	3680	4020	4740	5820
12	12"	3680	4020	4740	5820
14	10"	4290	4620	5460	6720
14	12"	4290	4620	5460	6720
16	12"	4740	5220	6180	7620

PIER SPACING = 8 FT.					
LOAD PER PIER (in lbs.)					
NOM. UNIT WIDTH (FT.)	MIN. I-BEAM SIZE*	TOTAL LOAD (PSF) ^{bc}			
		90	100	120	150
8	6"	3440	3760	4400	NA
8	8"	3440	3760	4400	5360
10	8"	4160	4560	5360	NA
10	10"	4160	4560	5360	6560
10	12"	4160	4560	5360	6560
12	10"	4880	5360	6320	7760
12	12"	4880	5360	6320	7760
14	10"	5600	6160	7280	NA
14	12"	5600	6160	7280	8960
16	12"	6320	6960	8240	10,160

* If beam size is other than those listed use the next size larger listed in chart.

^b When total load exceeds 150 psf foundation is to be designed by qualified professional based on imposed loads & site conditions.

^c Areas such as corridors, waiting rooms, file rooms, etc. require additional loading in accordance with 2000 IBC see drawing for these locations.

* If beam size is other than those listed use the next size larger listed in chart.

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PIER SPACING = 9 FT.					
LOAD PER PIER (in lbs.)					
NOM. UNIT WIDTH (FT.)	MIN. I-BEAM SIZE*	TOTAL LOAD (PSF) ^{bc}			
		90	100	120	150
8	6"	3870	NA	NA	NA
8	8"	3870	4230	4950	NA
10	8"	4680	5130	NA	NA
10	10"	4680	5130	6030	7380
10	12"	4680	5130	6030	7380
12	10"	5490	6030	7110	NA
12	12"	5490	6030	7110	8730
14	10"	6300	6930	NA	NA
14	12"	6300	6930	8190	10080
16	12"	7110	7830	9270	10710

PIER SPACING = 10 FT.					
LOAD PER PIER (in lbs.)					
NOM. UNIT WIDTH (FT.)	MIN. I-BEAM SIZE*	TOTAL LOAD (PSF) ^{bc}			
		90	100	120	150
8	6"	4300	4700	NA	NA
8	8"	4300	4700	5500	NA
10	8"	5200	5700	NA	NA
10	10"	5200	5700	6700	NA
10	12"	5200	5700	6700	NA
12	10"	6100	6700	7900	NA
12	12"	6100	6700	7900	9700
14	10"	7000	7700	NA	NA
14	12"	7000	7700	9100	NA
16	12"	7900	8700	10300	NA

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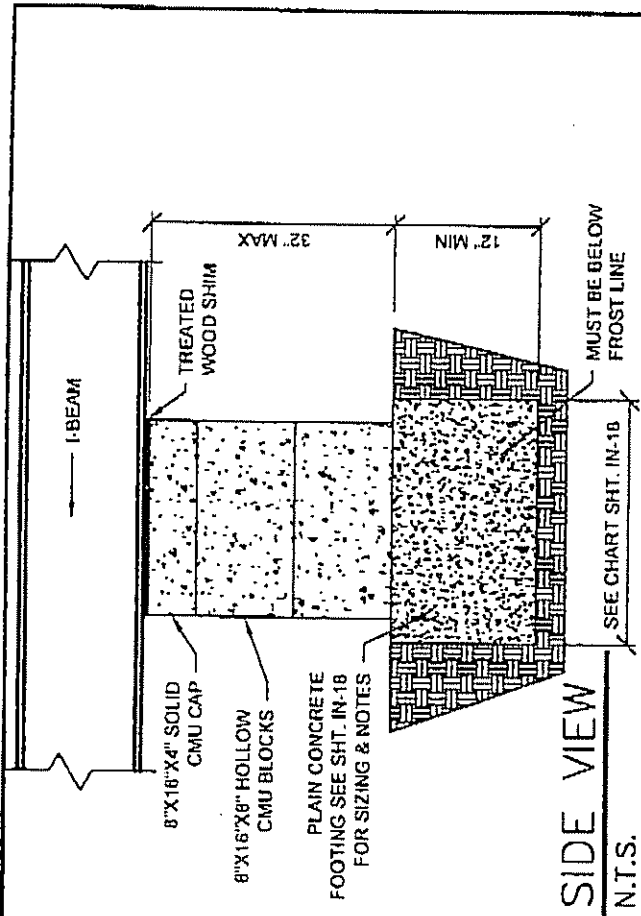
TITLE:

OUTRIGGER PIER
 LOADING

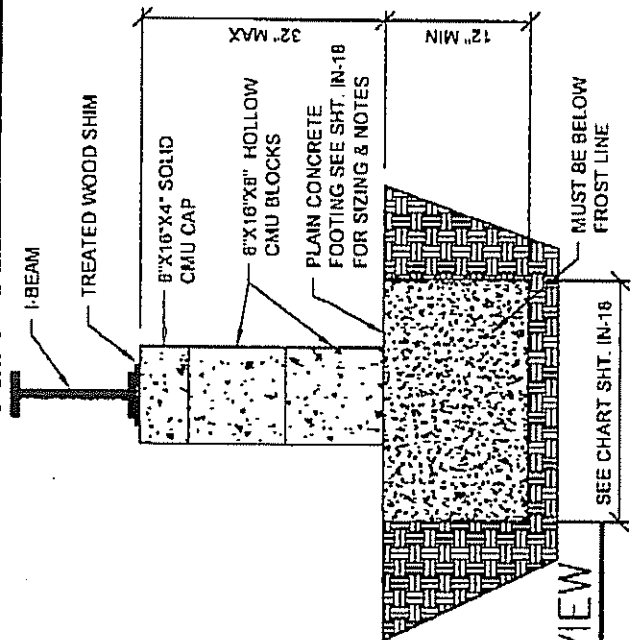
DATE: 01-27-02

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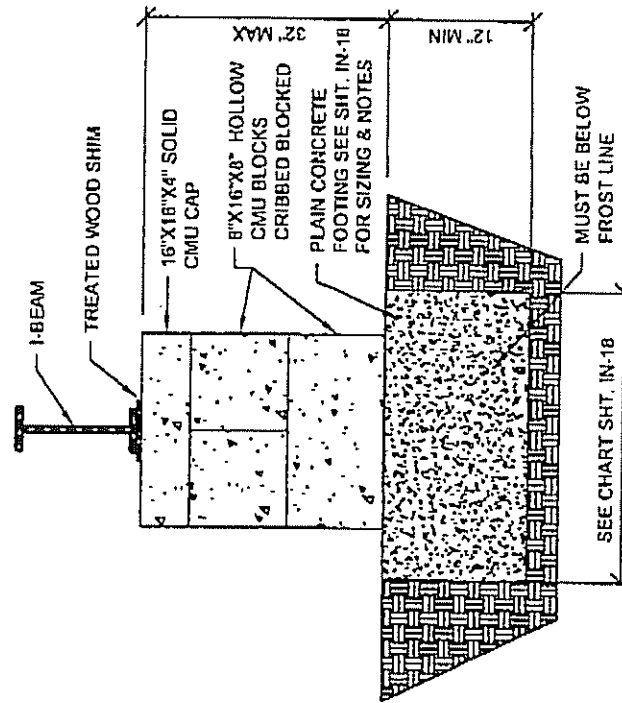
SHT. #: IN-12



SIDE VIEW
N.T.S.



END VIEW
N.T.S.



END VIEW (DBL. STACK)
N.T.S.

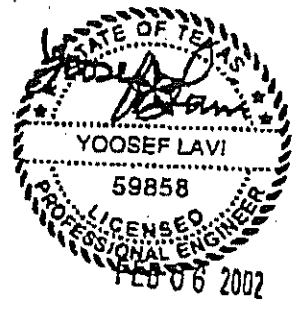
NOTES:

- 1) HOLLOW CONCRETE MASONRY UNITS SHALL BE GRADE M NORMAL WEIGHT CONFORMING TO STANDARDS & SPECIFICATIONS FOR HOLLOW LOAD BEARING CONCRETE MASONRY UNITS ASTM C 90.
- 2) ALLOWABLE LOAD ON SINGLE STACK OF BLOCK IS 9000 POUNDS. USE DOUBLE STACK FOR PIER LOADS 9000 POUNDS TO 15,000 POUNDS.
- 3) CONCRETE BLOCKS ARE DRY STACKED WITHOUT MORTAR JOINTS.
- 4) A LATERAL LOAD CANNOT BE APPLIED TO THESE PIERS. ALL LATERAL LOADS MUST BE RESISTED BY ANCHORS (SEE IN-80, IN-100, IN-110, OR IN-120).
- 5) MAXIMUM HEIGHT OF SINGLE STACK OF BLOCKS ABOVE GRADE IS 32". ALL STACKS REQUIRED TO BE BETWEEN 32" & 48" ABOVE GRADE MUST BE DOUBLE STACK. PIERS MORE THAN 48" ABOVE GRADE MUST BE DESIGNED BY REGISTERED PROFESSIONAL ENGINEER.
- 6) SEE FOOTER SIZING CHART ON IN-18.

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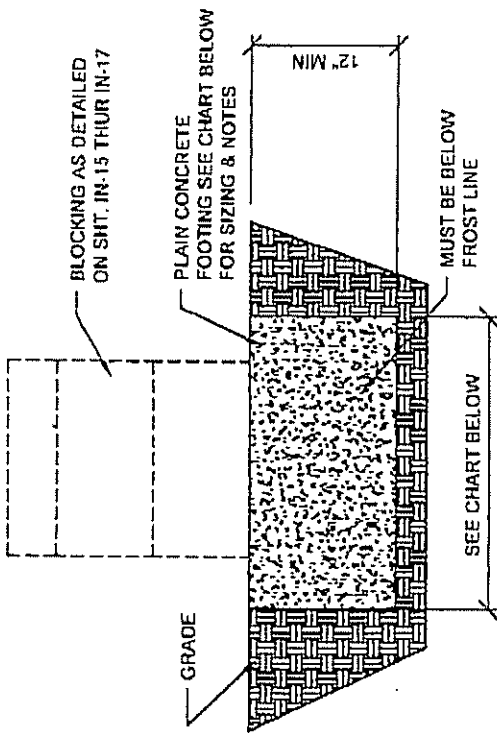


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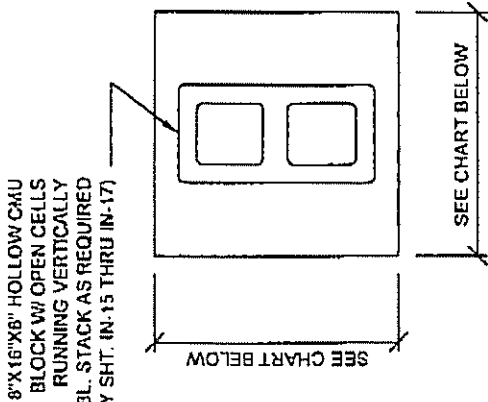
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TITLE:
**OUTRIGGER BEAM
BLOCKING DETAILS**

DATE: **01-27-02**
SHT. #: **IN-15**



SIDE VIEW
N.T.S.



TOP VIEW
N.T.S.

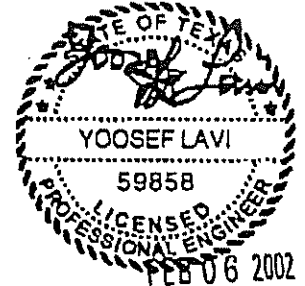
MINIMUM SIZE OF SQUARE FOOTER ^{a,b,c,d,e}		MAXIMUM LOAD @ EACH PIER (LBS.) ^h						
ALLOW. SOIL CAPACITY (PSF) ^g		3000	4000	5000	7000	9000	11,000	15,000
2000	18"X18"	18"X18"	20"X20"	20"X20"	24"X24"	28"X28"	30"X30"	36"X36"
2500	18"X18"	18"X18"	18"X18"	20"X20"	24"X24"	24"X24"	28"X28"	32"X32"
3000	18"X18"	18"X18"	18"X18"	16"X16"	20"X20"	24"X24"	24"X24"	30"X30"

^a Minimum allowable concrete compressive strength shall be 3000 psi at 28 days.
^b Base of footings must be established below frost line.
^c Minimum depth of footing must be 12" except as allowed by local building official.
^d Concrete piers may be used. Pier size must be determined by qualified professional based on soil bearing capacity and all other site conditions.
^e All concrete construction shall meet ACI 318-99 Building Code Requirements for Structural Concrete.
^f Top surface of footings must be troweled smooth.
^g Sites where soil bearing capacity is less than 2000 psf, foundation should be designed by registered professional engineer based on site conditions.
^h Determination of actual soil bearing capacity is the responsibility of the site contractor and must be determined in accordance with the requirements of the local building official.
ⁱ Footings are not designed to resist lateral loads. All lateral loads must be resisted by anchors for appropriate wind load as required by IN-50, DN-100, IN-110, or IN-120 of the Indicom State Package.

Texas Industrialized Building Code Council
1501 IBC

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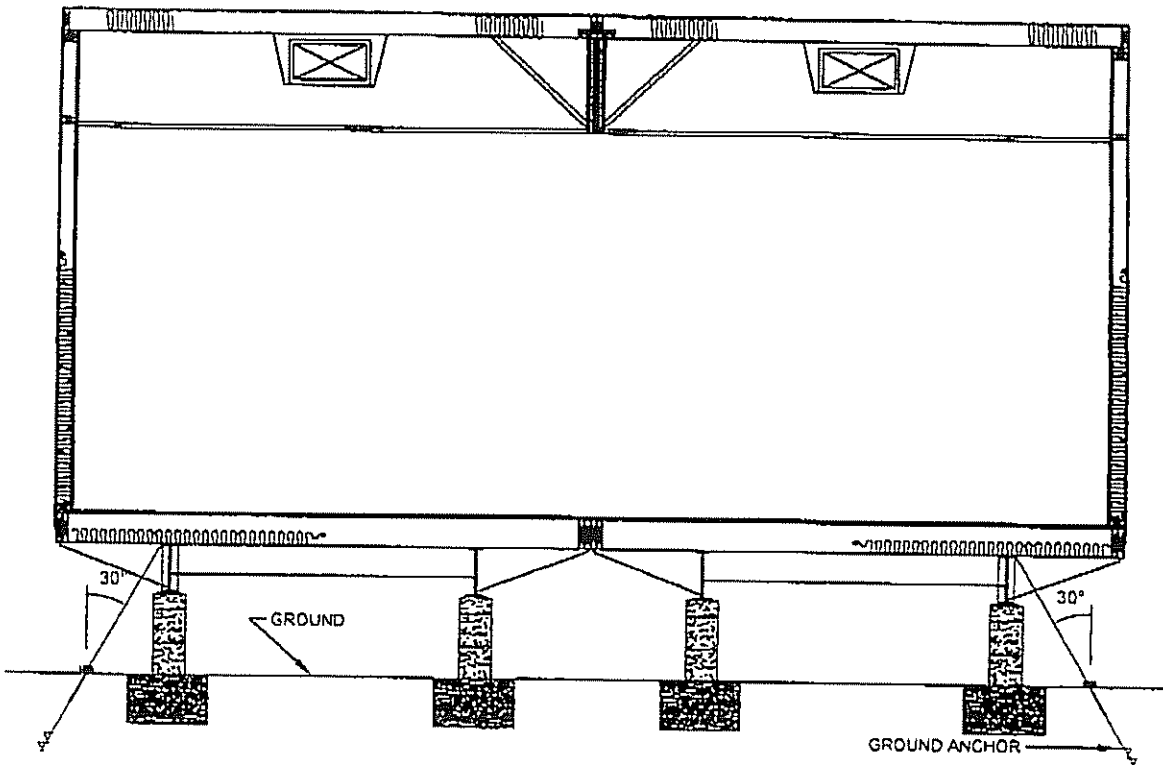
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TITLE:
FOOTING SIZING

DATE: 01-27-02

SHT. #: IN-18

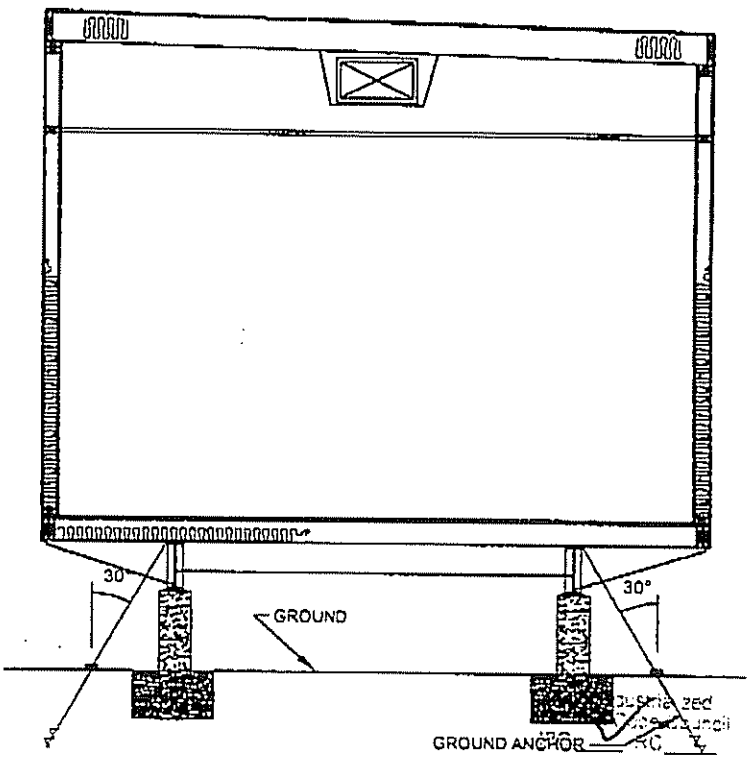


TYPICAL SINGLE WIDE INSTALLATION

N.T.S.

NOTES:

1. THIS TYPICAL INSTALLATION FOLLOWS BASIC RECOMMENDATION OF MINUTE MAN MODEL 650-S. ALL MINUTE MAN INSTALLATION REQUIREMENTS SHOULD BE FOLLOWED.
2. OTHER ANCHORS CERTIFIED TO HAVE EQUAL HOLDING VALUE MAY BE USED. IF THIS IS DONE, REFER TO INSTALLATION REQUIREMENTS OF THE ANCHORS USED.
3. ANCHORS SHOULD BE SPACED ALONG SIDEWALLS FOR THE APPROPRIATE WIND LOAD AS REQUIRED BY IN-90, IN-100, IN-110, OR IN-120.
4. FEWER ANCHORS MAY BE USED ONLY IF CALCULATED TO RESIST IMPOSED LOADS BY REGISTERED PROFESSIONAL ENGINEER.

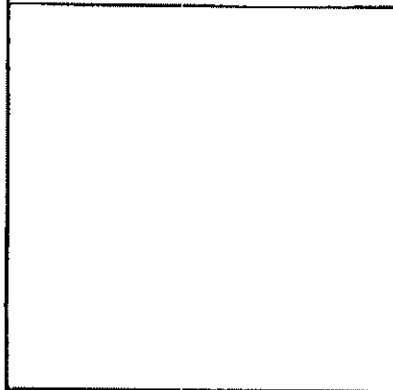


TYP. SINGLE WIDE INSTALLATION

N.T.S.

FEB 20 2002

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TITLE:
**TYP. ANCHOR
INSTALLATION**
(SGL. & DBL. WIDES)

DATE: **01-27-02**
SHT. #: **IN-41**

TIE-DOWN ANCHORAGE REQUIREMENT (GROUND ANCHORS)

WL = 90 MPH, EXPOSURE "B" PER IBC 2000

Number of Anchors Required

Unit Length

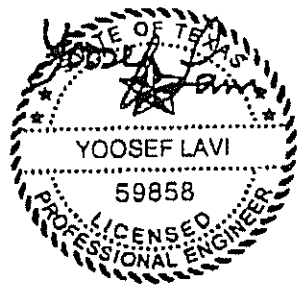
W = 12 ft Unit Length

H = 10 ft Unit Height

B = 99.5 in I Beam Spacing

N = 1 Number of Units

NOTE: NUMBER OF GROUND ANCHORS MUST BE ROUNDED UP TO NEAREST WHOLE NUMBER.



JAN 10 2002

NA _{ul} =	X _{ul} =
1.5	20 ft
1.9	24
2.2	28
2.5	32
2.8	36
3.1	40
3.4	44
3.7	48
4.0	52
4.3	56
4.6	60
5.0	64
5.3	68
5.6	72
5.9	76
6.2	80
6.5	84

GENERAL NOTES

GROUND ANCHORS MUST BE INSTALLED ACCORDING TO THESE INSTRUCTIONS AND THE ANCHOR MANUFACTURERS' RECOMMENDATIONS.

- THESE TABLES ARE BASED ON "MINUTE MAN" MODEL 650-S ANCHORS AND SHOULD BE VALID FOR OTHER MANUFACTURERS ANCHORS CERTIFIED FOR A MINIMUM HOLDING STRENGTH OF 4,725 POUNDS. THIS ANCHOR IS DESIGNED AND APPROVED FOR USE IN SOIL TYPES 2, 3, AND 4. THESE SOILS ARE DESCRIBED AS FOLLOWS:

TYPE 2 VERY DENSE AND/OR CEMENTED SANDS, COARSE GRAVEL AND COBBLES, PRE-LOADED SILTS, CLAYS, AND CORALS.

TYPE 3 MEDIUM DENSE COARSE SANDS, SANDY GRAVEL, VERY STIFF SILTS, AND CLAYS.

TYPE 4 LOOSE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS, AND ALUVIAN FILL.

- GROUND ANCHOR, STRAP, AND CONNECTION HARDWARE MUST BE CORROSION-RESTISTANT.
- COMPLETE TIE-DOWN ANCHORAGE SYSTEM MUST BE INSPECTED AND APPROVED BY A COMPETANT, EXPERIENCED PERSON WHO IS QUALIFIED TO INSPECT THIS WORK AND DETERMINE IF IT HAS BEEN DONE CORRECTLY.
- ANCHORS MUST BE SPACED EVENLY ALONG THE LENGTH OF THE UNIT.

Building Code Council
IBC 2000

FEB 20 2002

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PFS Corp.
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PROPERTY OF:
INDICOM BUILDINGS, INC.

TITLE:
TIE-DOWN ANCHORAGE
(GROUND ANCHORS)
SINGLE WIDE UNIT

DATE: 1-2-2002

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SHT. #:
IN-90-8