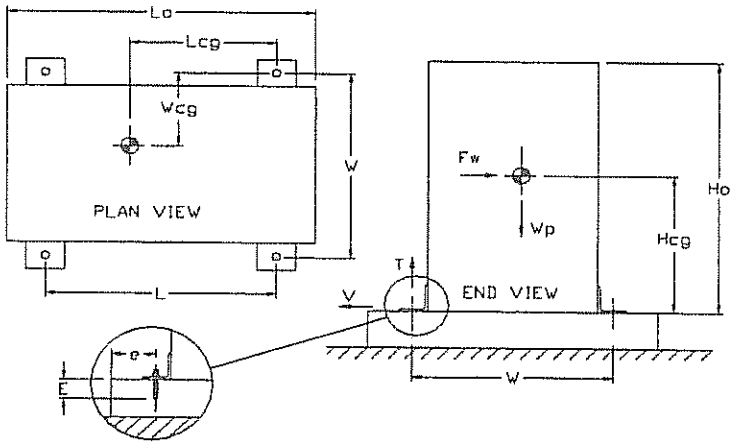

IBC 2006 CALC **Project Location:** Evansville IN

Fw=QzGCfLoHo

Qz:	0.24	Velocity pressure at hight z (psi)	**Exposure:**	D	
G	0.85	Gust effect factor	**f:**	1.9	factor for building height<=60 ft
Cf:	1.30	Force coefficient	**z:**	50	(ft, roof height above grade)

where $Qz=0.00256KzKztKdV^2I$

Kz:	1.5	Velocity pressure coefficient	**V:**	90	Basic wind speed (mph)
Kzt:	1.00	Topographic factor	**I:**	1.15	Importance factor
Kd:	0.95	Wind directionality factor			

Wp: component operating Wt.

Anchor Pullout: $T = (FwHo/2-WpWcg)/W*2/N*2Lcg/L$

Anchor Shear: $V = F_p/N$

N: Anchor Quantity

F_t: Anchor Allowable Tension

F_v: Anchor Allowable Shear

E: Embedment required to obtain allowable load

e: Distance to edge of slab, housekeeping pad, or cmu required to obtain allowable load.

Site Class: A=hard rock, B=rock, C=very dense soil and soft rock, D=stiff soil, D=soft soil

Note: Four anchors shown in diagram, additional anchors may be used. See anchor quantity in table below.

Equipment Tag.	Equip. QTY	Anchor Type	Note (2)	N	Anchor Diam.	E	e	L	W	Lcg	Wcg	Lo	Ho	Wp	h_x	Site Class	Fw	T	V	Ft (lbs)	Fv (lbs)	$(T/Ft)^{5/3}+(V/Fv)^{5/3}$ (<1.00)
Duct Stand	1	Hilti KBTZ	C3	4	1/2	3 1/4	4	8	60	3	30	120	50	1100	2	D	2973	230	743	2085	1242	0.45

NOTE: (1) Contractor to mount anchors through equipment mounting holes, field holes drilled through equipment support, or install supplementary angle welded or bolted to equipment. Any supplemental drilling, welding, or screw added to equipment must be approved by equipment manufacturer. Calculation is for minimum anchor requirements. If equipment has additional anchor mounting holes, anchors must be installed in the extra holes with appropriate size anchors to fit hole diameter. Equipment design not included in this review. Equipment manufacturer must determine if equipment can adequately transfer seismic loads to restraints and resist loads shown.

(2) Attachment Substructure: C2 = Normal weight stone aggregate 2000 psi concrete, C3 = 3000 psi concrete, C4 = 4000 psi concrete. LC3 = Lightweight aggregate 3000 psi concrete, LC4 = 4000 psi concrete, LC6 = 6000 psi concrete. CMU = medum weight concrete masonry units per ASTM C90. GMCU = grout filled CMU. S = structural steel. SM = sheetmetal. W = wood with min. specific gravity g = 0.42. Structural Engineer of record must review loads imparted to substructure to verify its' capacity.

(3) Unless otherwise noted, concrete anchor allowables have an 8:1 safety factor relative to the manufacturer's ultimate test loads as published in latest ICBO report, which corresponds to ICBO report values w/o special inspection. If the w/sp insp. box is marked, then the anchor allowables have a 4:1 safety factor. This corresponds to ICBO report values w/special inspection. Installer must check with local jurisdiction to determine if a special inspector is required to witness installation of anchors using a 4:1 safety factor.

WIND LOAD ANCHORAGE CALCULATION - EQUIPMENT RIGIDLY ON CONCRETE PAD

JOB : VA Evansville Outpatient Clinic
Customer: Allied Technologies of Kentucky
Consultant: Army Corp of Engineers

Customer P.O. No.:	V-A Project No.:	V-A Project Manager:
ATK10-3129	102536	Veishal Teeka

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CHK	DATE		