

City of Portland, Maine – Building or Use Permit Application 380 Congress Street, 04101, Tel: (207) 874-8703, FAX: 874-8716

Location of Construction: 1050 Westbrook St		Owner: PJH Associates LLC		Phone:		Permit No: 980201	
Owner Address:		Lessee/Buyer's Name: Embassy Suites		Phone:		BusinessName:	
Contractor Name: Omnipoint		Address: 705 Myles Standish Blvd Taunton, MA		Phone: 02710		Permit Issued: MAR 11 1998	
Past Use: Hotel		Proposed Use: Same		COST OF WORK: \$ 56,000.00		PERMIT FEE: \$ 300.00	
Proposed Project Description: Install antennae & equipment				FIRE DEPT. <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied		INSPECTION: Use Group: Type:	
				Signature: <i>[Signature]</i>		Signature: <i>[Signature]</i>	
Permit Taken By: Mary Greisk				Date Applied For: 06 March 1998			

PERMIT ISSUED
MAR 11 1998
CITY OF PORTLAND

Zone: **AB** CBL: **210-A-A-005**
Zoning Approval:
[Signature]
Special Zone or Reviews:
 Shoreland *3/4/98*
 Wetland
 Flood Zone
 Subdivision
 Site Plan maj minor mm

Zoning Appeal
 Variance
 Miscellaneous
 Conditional Use
 Interpretation
 Approved
 Denied

Historic Preservation
 Not in District or Landmark
 Does Not Require Review
 Requires Review

Action:
 Approved
 Approved with Conditions
 Denied
Date: *3/6/98*

PERMIT ISSUED WITH REQUIREMENTS

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..

Call Michael Polakowick for pick-up at 468-7475

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]
SIGNATURE OF APPLICANT **Michael Polakowick** ADDRESS: DATE: **06 March 1998** PHONE:

RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE PHONE:

CEO DISTRICT **3**
T. Munson

COMMENTS

1/24/00 Membrane & equipment
has been installed
as per plans and
OK to close permit

210A-A-005

permit # 980201

Inspection Record

Type	Date
Foundation: _____	_____
Framing: _____	_____
Plumbing: _____	_____
Final: _____	_____
Other: _____	_____

LAND USE - ZONING REPORT

ADDRESS: 1050 Westbrook St DATE: 3/9/98

REASON FOR PERMIT: erect Antennae & Equipment on roof of Embassy Suites

BUILDING OWNER: PJH Associated C-B-L: 210A-A-5

PERMIT APPLICANT: Michael Polakewich

APPROVED: with conditions DENIED: _____
#9

CONDITION(S) OF APPROVAL

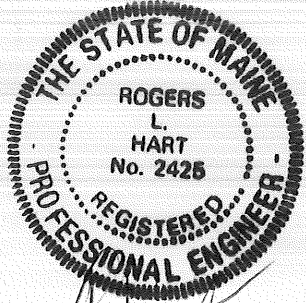
1. During its existence, all aspects of the Home Occupation criteria, Section 14-410, shall be maintained.
2. The footprint of the existing _____ shall not be increased during maintenance reconstruction.
3. All the conditions placed on the original, previously approved, permit issued on _____ are still in effect for this amendment.
4. 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 garage in place and in phases.
5. This property shall remain a single family dwelling. Any change of use shall require a separate permit application for review and approval.
6. 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.
7. Separate permits shall be required for any signage.
8. Separate permits shall be required for future decks and/or garage.
9. Other requirements of condition This office shall receive written

confirmation from Jeff Schultes or other appropriate official from The Portland Jetport, that this installation shall not interfere with the Airport operations in any way

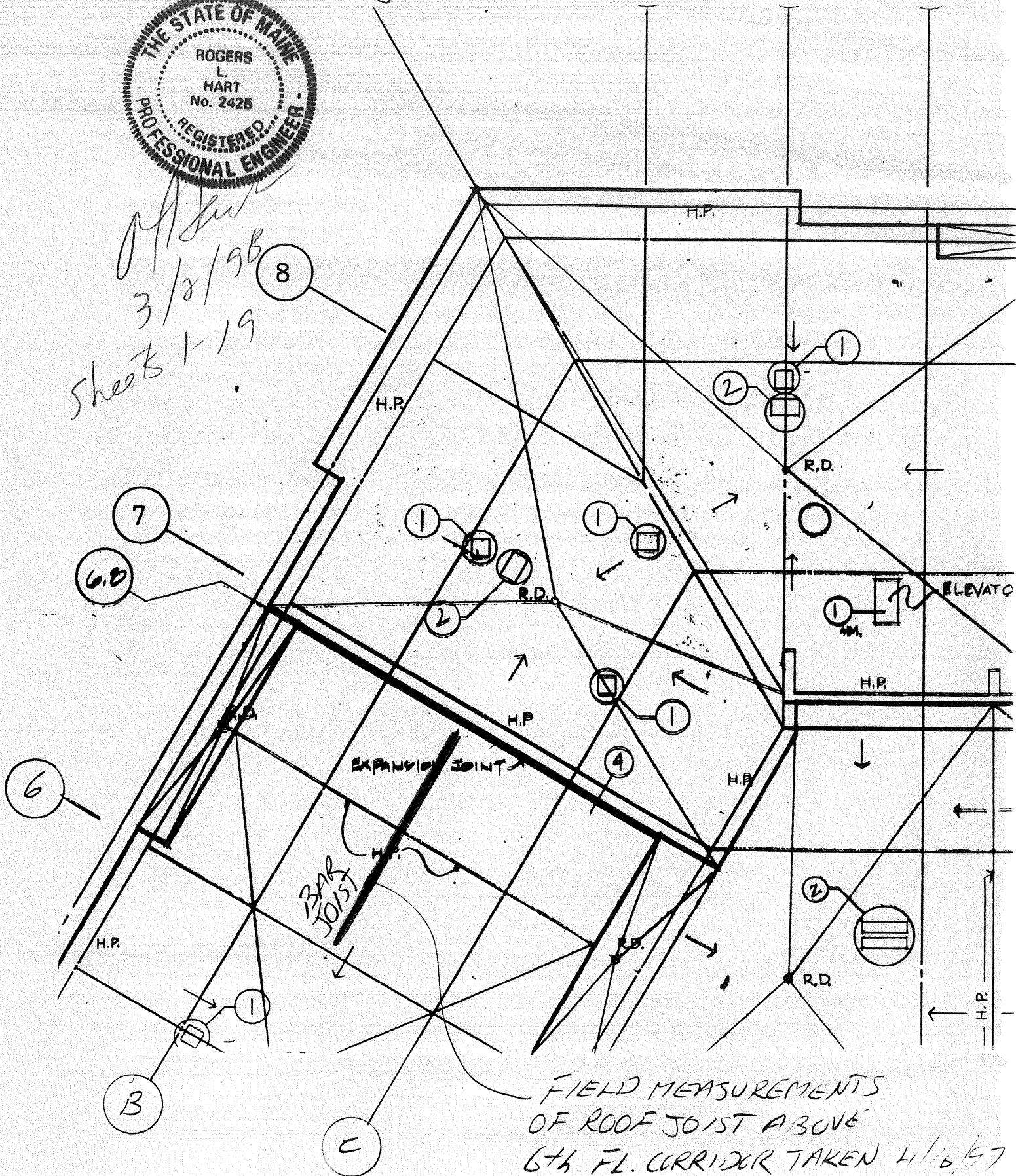
Marge Schmuckal Marge Schmuckal, Zoning Administrator,
Asst. Chief of Code Enforcement

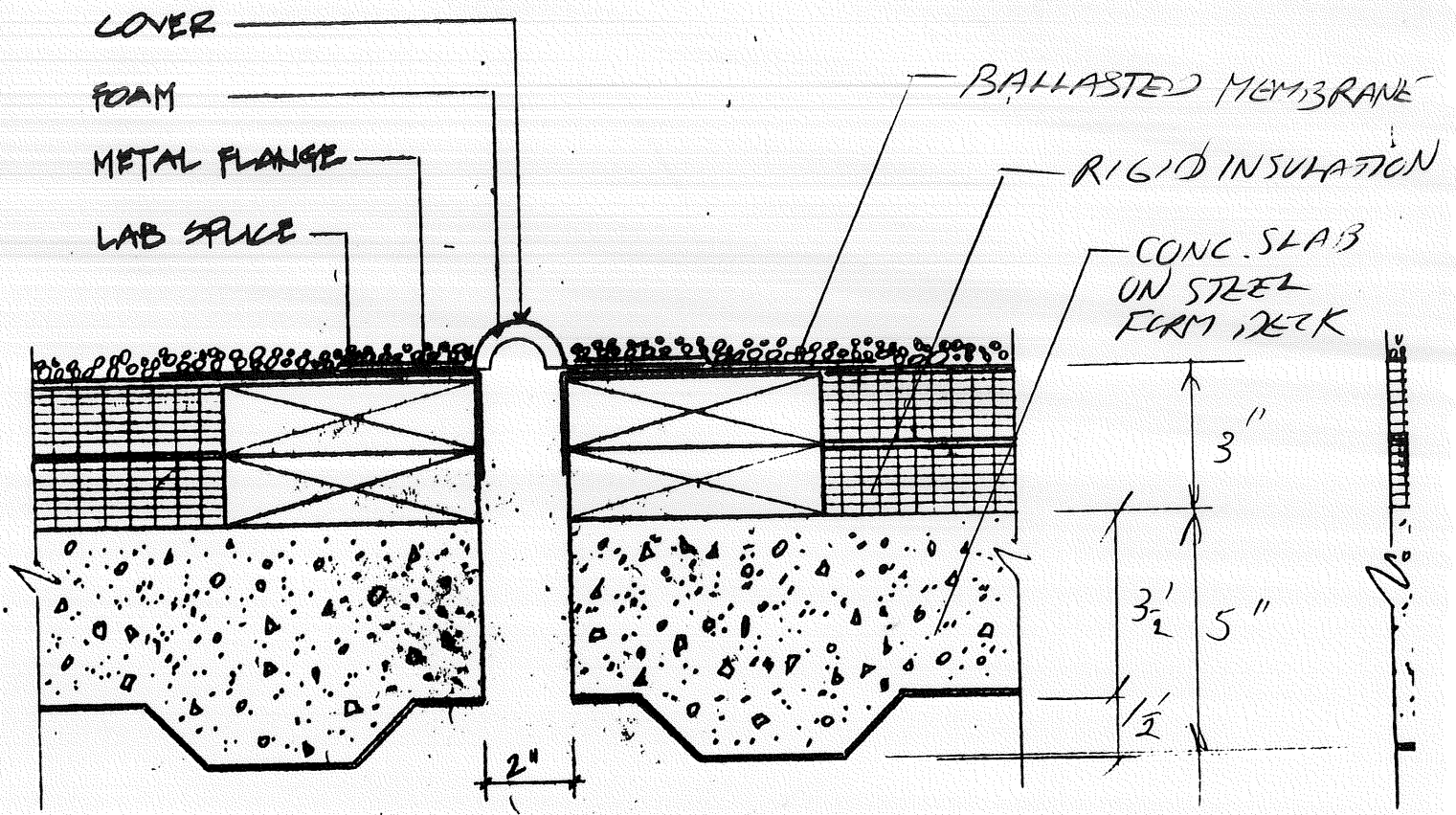
EMBASSY SUITES
PORTLAND, ME.
JETPORT

2720101.
R. HART
4/18/97



[Signature]
3/8/98
Sheets 1-19





COVER
 FOAM
 METAL FLANGE
 LAB SPACE

BALLASTED MEMBRANE
 RIGID INSULATION
 CONC. SLAB
 ON STEEL
 FORM DECK

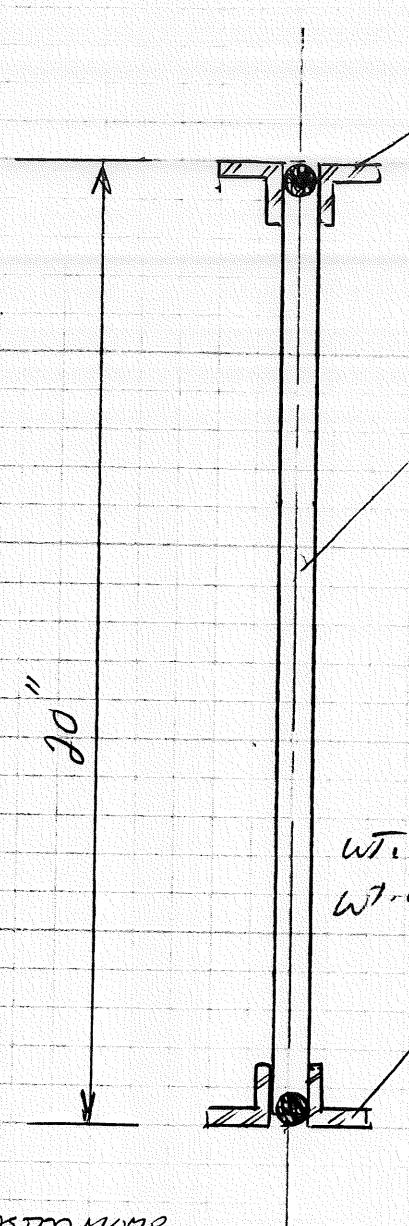
TYP. ROOF CONSTRUCTION

4 ROOF DETAIL @ EXPANSION JOINT
 3" = 1'-0"

EMBASSY SUITE
 R. MARK
 4/18/57
 2720101
 2

OEST ASSOCIATES, INC.

PREPARED BY R. HART DATE 4/18/59 PROJECT NO. 2720101
 CALCULATIONS CHECKED BY _____ DATE _____ SHEET NO. 3 OF _____
 SUBJECT EMBASSY SUITES



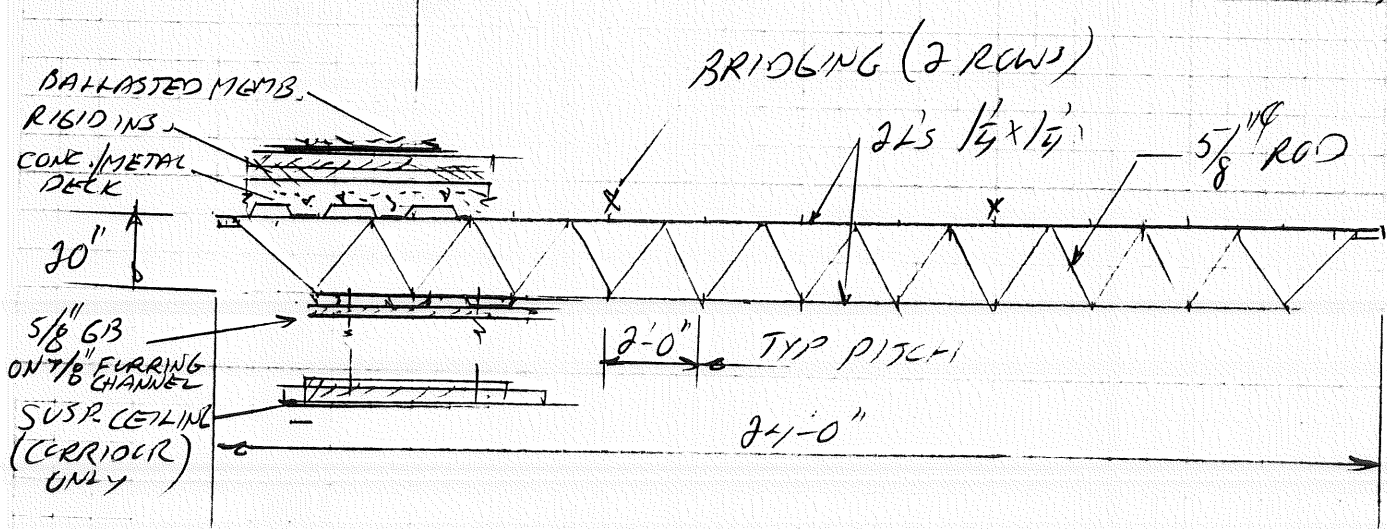
2 L'S $1\frac{1}{4} \times 1\frac{1}{4} \times 0.210$ (MEASURED) $(1\frac{1}{4} \times 1\frac{1}{4} \times \frac{3}{4})$ NOMINAL

ROD 0.640 " ϕ (NOMINAL $5/8$ " ?) MEASURED
 0.625
 1.044 P/L

APPROX. $I = 2Ay^2 = 2(2 \times 434)(9.62)^2 = 160.7$
 $A (2 \times 1\frac{1}{4} \times 1\frac{1}{4} \times \frac{3}{16}) = 434$ IN²
 $y = 10 - .381 = 9.62$ ", $2y = 19.24$ "

WT. W/ $3/16$ " L'S = 8.0 P/L
 WT. W/ $1/4$ " L'S = 9.7 P/L (1.05) = 6

2 L'S $1\frac{1}{4} \times 1\frac{1}{4} \times 0.140$ (NOMINAL ?) $1\frac{1}{4} \times 1\frac{1}{4} \times \frac{3}{16}$
 0.163
 MEASUREMENTS
 WT. = 1.48 P/L



BRIDGING (2 ROWS)

2 L'S $1\frac{1}{4} \times 1\frac{1}{4}$ $5/8$ " ROD

2'-0" TYP PITCH

24'-0"

5/8" GIB ON 1/8" FURRING
 SUSP. CEILING (CARRIOCR ONLY)

BALLASTED MEMB.
 RIGID INS.
 CONC./METAL DECK

20"

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PREPARED BY R. HART DATE 4/8/97 PROJECT NO. 2720/01
CALCULATIONS CHECKED BY _____ DATE _____ SHEET NO. 4 OF _____
SUBJECT EMBASSY SUITES

ROOF LOADS

A. COMPONENT WEIGHTS (DEAD LOAD)

1. BALLASTED MEMBRANE - 10 TO 15 psf, USE 12.5 psf
2. 3" RIGID INSULATION - 4.5 psf
3. 5" CONC. SLAB ON STEEL FORM/DECK - 55 psf
4. 5/8" GYP. BD. FIREPROOFING - 4 psf
ON 7/8" FURRING CHANNELS
5. SUSP. ACC. CEILING - (CORRIDOR ONLY) - 2 psf
6. JOIST WT - 3.0 psf
7. COLLATERAL LOADS (CONDUIT WEIGHTS,
(CORRIDOR ONLY) PIPE, DUCTS) - 10 psf

B. LIVE LOAD (SNOW)

BOCA '96

$$P_f = C_e Z P_g$$

$C_e = 0.7$
 $P_g = 60 \text{ psf}$
 $Z = 1.0$

$$P_f = (0.7)(1.0)(60) = 42 \text{ psf}$$

PORTLAND SPECIAL SNOW LOAD PROVISIONS:

ROOF PITCH 0 TO 5 USE $P_f = 50 \text{ psf}$

≥ 6 $P_f = 40 \text{ psf}$

EMBASSY SUITES - FLAT ROOF PITCH ≤ 0 , USE 50 psf

5

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PREPARED BY R. HART DATE 4/18/97 PROJECT NO. 2720101
CALCULATIONS CHECKED BY _____ DATE _____ SHEET NO. 5 OF _____
SUBJECT EMBASSY SUITES

JOIST DESIGN LOADS

A. ROOM JOISTS

1. DEAD LOAD

- a. BALLASTED MEMBRANE - 12.5
- b. 3" RIGID INSULATION - 4.5
- c. 5" CONC. ON STEEL FORM DECK - 55.0
- d. JOIST - 3.0
- e. 5/8" GYP. BD. FIREPROOFING - 4.0

T.DL - 79.0 psf

2. SNOW LOAD

SL 50.0 psf

TOTAL 129.0 psf
(USE 130.0 psf)

B. CORRIDOR JOISTS

1. DEAD LOAD

- a. ROOM JOIST D.L. (AS ABOVE) - 79.0 psf
- b. ADD FOR SUSP. CEILING - 2.0 psf
- c. ADD FOR COLLATERAL LOADS - 10.0 psf

T.DL - 91.0 psf

2. SNOW LOAD

SL - 50.0 psf

TOTAL - 141.0 psf
(USE 140.0 psf)

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PREPARED BY R. HART DATE 4/18/57 PROJECT NO. 7720101
 CALCULATIONS CHECKED BY _____ DATE _____ SHEET NO. 6 OF _____
 SUBJECT EMBASSY SUITES

JOIST LOAD

A. AT MEASURED LOCATION BETWEEN COL. LINES (6) - (6.8)

JOIST LENGTH = 24' (SCALED FROM DRAWINGS)

JOIST SPACING = 30" (MEASURED)

JOIST LOCATION - OVER CORRIDOR

$$\therefore \text{JOIST LOAD} = (140 \text{ psf}) \left(\frac{30''}{12} \right) = 350 \text{ p/ft TOT. LOAD}$$

$$\text{TOTAL LOAD} = (350) (24') = 8,400 \text{ \#}$$

$$V_{\text{MAX}} = \frac{8,400}{2} = 4,200 \text{ \#}$$

$$M_{\text{MAX}} = \frac{(350)(24)^2}{8} = 25,200 \text{ FT-LBS} = 25.2 \text{ }^{\text{K}}$$

$$\approx M_{\text{CAPACITY JOIST MEASURED}} = (0.95)(20)^{\text{K}} (30.0 \text{ KS}) (0.66) = 376 \text{ M-K} = 31.35 \text{ }^{\text{K}}$$

$$\left(2A_{\text{BOT-CHORD}} = 2(1.25 + (1.25 - .140)) (1.40) = 0.66 \text{ IN}^2 \right)$$

$$W_{\text{ALL}} = \frac{6M}{L^2} = \frac{(8)(31.35 \text{ }^{\text{K}})}{(24)^2 \text{ FT}^2} = .435 \text{ K/L}$$

SIDEWAY CAPACITY ? (INSUFFICIENT INFORMATION)

TRY NEW LOCATION, SUPPORT RBS JOIST CABINET DIRECTLY OVER STRUCTURAL STEEL WITH T.O.S. ELEV. = TO TOP OF JOIST ELEV.

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PREPARED BY R. HART DATE 4/23/57 PROJECT NO. 2720101
 CALCULATIONS CHECKED BY _____ DATE _____ SHEET NO. _____ OF _____
 SUBJECT EMBASSY SUITES

WIND LOADS

BOCA '96

$$1609.1.3 \quad M \leq \frac{2}{3} M_{OT} \quad R(D.L.)$$

SLIDING \leq 1.0 SLIDING RESISTANCE
WIND

h = MEAN ROOF HEIGHT = 70'

BASIC WIND SPEED - 85 mph

EXP. C

CABINET HT.

I = 1.1

$P_v = 18.5$ psf TABLE 1609.7(3)

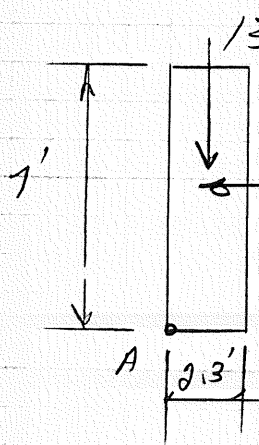
$K_z = 1.24$ TABLE 1609.7(4)

$G_z = 1.19$ TABLE 1609.7(5)

$C_f = 1.2$ TABLE 1609.9(5)

$$F = P_v I K_z G_z C_f A_f = (18.5)(1.1)(1.24)(1.19)(1.2) A_f = 36 A_f \text{ psf}$$

$$F = 36 (4.3' \times 70') = 1084 \text{ psf}$$



$$M_{OT} = (1084) \left(\frac{7}{2} \right) = 3794 \text{ ft}$$

$$M_R = 1324 \left(\frac{2.3}{2} \right) = 1522 \text{ ft}$$

$$F.S. = \frac{\frac{2}{3} M_R}{M_{OT}} = \frac{\frac{2}{3} (1522)}{3794} = \frac{1015}{3794} = 0.27 \text{ NG}$$

ADD BALLAST OR WIDEN BASE

$$M_R (\text{REQD}) = \frac{2}{3} (3794) = 5059 \text{ ft}$$

$$\text{REQD. BASE WIDTH} = 2 \left(\frac{5059}{1324} \right) = 7.60'$$

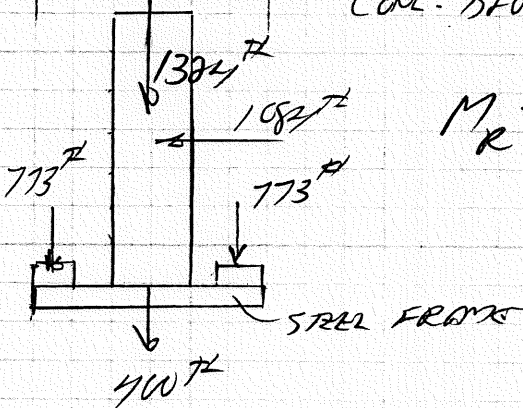
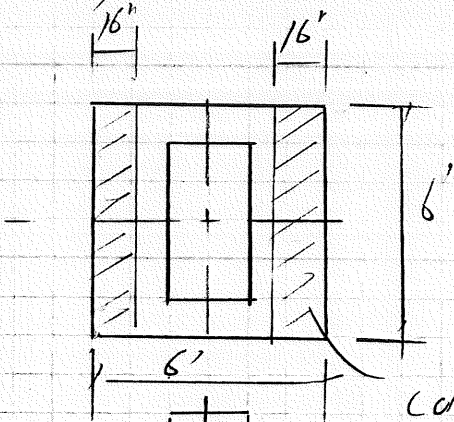
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PREPARED BY R. HART DATE 4/23/97 PROJECT NO. 2720101
 CALCULATIONS CHECKED BY _____ DATE _____ SHEET NO. _____ OF _____
 SUBJECT EMBASSY SUITES

WIND LOADS

BALLAST - SOLID CONCRETE BLOCKS 8" x 8" x 16"
 $e = 145 \text{ pcf} = 85 \text{ psf}$ $(7\frac{5}{8} + 7\frac{5}{8} + 15\frac{5}{8})$

TRY 6' x 6' FRAME W/ BALLAST



$$M_R = 3'(1772)^2 + 5.33'(773)^2 + .67'(773)^2 = 9810$$

$$\frac{2}{3} M_R = \frac{2}{3}(9810) = 6540 > \frac{1}{6} W = 3795$$

TRY BLOCKS 8" x 16" x 4"

$$WT. = \frac{(7\frac{5}{8})(3\frac{5}{8})(15\frac{5}{8})(145 \text{ pcf})}{1728} = 36 \text{ psf}$$

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PREPARED BY R. HART DATE 4/21/97 PROJECT NO. 7780101
 CALCULATIONS CHECKED BY _____ DATE _____ SHEET NO. _____ OF _____
 SUBJECT EMBASSY SUITES

LOCATION BETWEEN COL. LINES 12 AND 13, D & C

1. ADDITIONAL STRESS ON W16X26 DUE TO 1^k CONCENTRATION

W16X26 A = 7.68 I_x = 301
 b_f = 5.50 S_x = 38.4
 t_f = .345 t_w = .250
 SPAN = 25'-4"

$$M_{MAX} = \frac{PL}{4} = \frac{(1^k)(25.33')}{4} = 6.33 \text{ FT-K} = 1.083 (M_R = 76^k)$$

$$f_b = \frac{M}{S} = \frac{(6.33)(12) \text{ IN-K}}{38.4 \text{ IN}^3} = 1.98 \text{ KSI} = 1.083 F_b = 8.3\% F_b$$

M_R = 76^k (L_c = 5.6', L_u = 6.0') F_b = 23.75 KSI
 W16X26 W_{all} = $\frac{8 \text{ in}}{L^2} = \frac{8}{(25.33)^2} = .012 \text{ K/IN}$ (1.66 F_y)
 F_v = .40 F_y = 14.4 KSI V_R = 6 (14.4) = 86.4 Ksf
 V_R = (14.4)(16)(.25) = 57.6 K W_{ACTUAL} = .130 (6.75) = 0.88 K/IN

$$\frac{V = 1^k}{V_R = 57.6K} = .017 = 1.7\% \text{ (OK)}$$

2. ADDITIONAL STRESS ON W18X60 DUE TO 1^k CONCENTRATION

W18X60 A = 17.6 b_f = 7.535 I_x = 984
 d = 18.24 t_f = .695 S_x = 108
 t_w = .415 SPAN = 25'-4"

$$M_R = 214^k (L_c = 8', L_u = 13.3'), F_b = 23.77 \text{ KSI} = 1.66 F_y$$

$$\frac{6.33^k}{214^k} = .030 = 3.0\%$$

OEST ASSOCIATES, INC.

PREPARED BY R. HART DATE _____ PROJECT NO. 2720/01
 CALCULATIONS CHECKED BY _____ DATE _____ SHEET NO. _____ OF _____
 SUBJECT EMBASSY SUITES

3. ADDN'L STRESS ON W18x40 (COL. LINE 13)

W18x40

$A = 11.6$ $f_w = .315$ $f_t = .525$

SPAN = 13.854'

$d = 17.9"$ $b_f = 6$ $I_x = 612$

$M_R = 135$ $(L_c = 6.3', L_v = 8.2')$

$S_x = 68.4$

$F_b = 23,68$ $K5$ $\approx .66 F_y$

$$M_{1K} = \frac{PL}{4} = \frac{(1.0^k)(13.854)'}{4} = 3.46^k = 2.6\% \left(\frac{M_R = 135^k}{R} \right)$$

ROOF LOAD ON W18x40 (COL. LINE 13)

$$W = 140 \text{ psf} \times 25.33' = 3,546 \text{ K/L} = 3,546 \text{ K/L}$$

$$M_{\text{ROOF LOAD}} = \frac{(3,546)(13.854)^2}{8} \text{ FT}^2 = 85^k \ll M_R = 135^k$$

∴ ADDNL. RBSS JOU LOAD OK ←

4. ADDNL. STRESS ON W18x35 (COL. LINE 12)

W18x35

$A = 10.3$ $b_f = 6.0$ $I_x = 570$

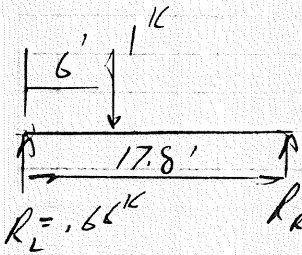
SPAN = 17.8'

$d = 17.70$

$f_w = .300$ $f_t = .425$ $S_x = 52.6$

$$M_R = 114^k \text{ (} L_c = 6.3', L_v = 6.7' \text{)}$$

$$F_b = 23.75 = .66 F_y$$



$$V_R = 141.4 \text{ (} 17.7 \times .30 \text{)} = 76^k$$

$$W = 2,878 \text{ K/L, } W = 251^k$$

$$f_b = \frac{(4)(12)}{52.6} = 1,833 \text{ K5} = 3.5\% \text{ of } F_b$$

$$W_{\text{ROOF LOAD}} = 140 \text{ psf} (16.67') = 2,334 \text{ K/L, } V_{\text{MAX}} = 2,334 \left(\frac{17.8}{2} \right) = 82.8^k$$

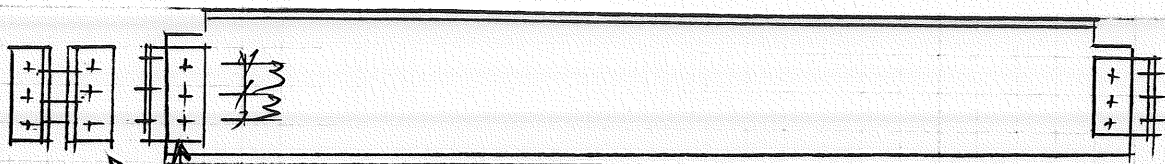
$$M_{\text{ROOF LOAD}} = \frac{(2,334)(17.8)^2}{8} = 92.43^k + 4^k = 96.43^k \ll M_R = 114^k$$

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PREPARED BY R. HART DATE 4/22/97 PROJECT NO. 2780101
 CALCULATIONS CHECKED BY _____ DATE _____ SHEET NO. _____ OF _____
 SUBJECT EMERGENCY SUITES

CONNECTIONS

185A W16x26x25'-2 1/2" , W = 224 K
 T_w = .250 , ALL.



2L's 3 1/2 x 3 1/2 x 5/16 x C'9" } TYP. EA. END
 w/ 3B - DOUBLE SHEAR
 6B - SINGLE SHEAR

CONNECTION CAPACITY:

1. Bolt shear $V = 3(18.6) = 55.8^k$ TABLE 1-D, ASD 9+2
 $6(9.3) = 55.8^k$
 2. Bolt bearing (WEB MATERIAL) $V = (13.1)(3) = 39.3^k$ TABLE 1-E
 3. Bolt bearing (Bolts) $V = .250(36.3)(3) = 27.2^k$ TABLE 1-F ←
 $l_v = 1 1/4$
 4. BLOCK SHEAR $V = C_1 + C_2(F_u)A_t = (1.00 + .99)(58)(.25) = 28.9^k$
 $l_v = 1 1/4, l_t = 1 1/2, n = 3, d = 3/4$
 5. SHEAR ON ANGLE $V = 65.9^k$ TABLE 12
- CONNECTION CAPACITY = 27 > $\frac{W = 224^k}{2 \cdot 2} = 12^k$ OK

ACTUAL LOAD = $(7)(.130 \text{ KSF}) = .910 \text{ K/L}$

$V_{ACT} = (.910)(25.20) = 11.47^k$

$W_{ACT} = .910(25.20) = 23^k \approx \text{MAX ALLOW} = 22^k \text{ FOR BENDING MOMENT}$

(LOCATE CABINET NEAR END OF W16)

1^k ADDNL. LOAD ON CONNECTION FROM RBS JOU CABINET OK ←

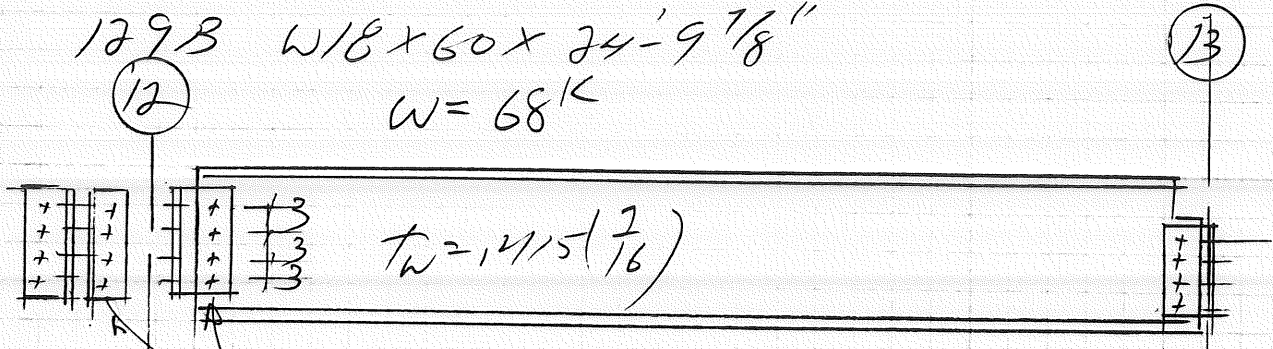
OEST ASSOCIATES, INC.

PREPARED BY R. HART
CALCULATIONS CHECKED BY _____
SUBJECT EMBASSY SUITES

DATE 4/22/97 PROJECT NO. 2720101
DATE _____ SHEET NO. _____ OF _____

CONNECTIONS

129B W18x60x24-9 1/8"
W = 68^k



2L's 3 1/2 x 3 1/2 x 5/16 x 1'-1"
(4) A325 N-3/4" BOLTS
8B-SS. / 4B-D.S.

2L's 4 x 3 1/2 x 5/16 x 0'-1 1/2"
w/ (4) Bolts A325 N 3/4"
4B-D.S. / 8B-SS.

W = 68^k
∴ R = 34^k vs V = 109^k (OK)

CONNECTION CAPACITY: (COL. LINE 12)

1. Bolt Shear - $V = (4)(18.6) = 74.4^k$ (DOUBLE SHEAR)
TABLE 1-D $(8)(9.3) = 74.4^k$ (S.S.)
2. Bolt Bearing - $V = (4)(22.8) = 91.2^k$ (7/16 WEB)
TABLE 1-E $(8)(16.3) = 130.4^k$ (5/16 L'S)

CONNECTION CAPACITY = 74.4^k > MAX R = 34^k

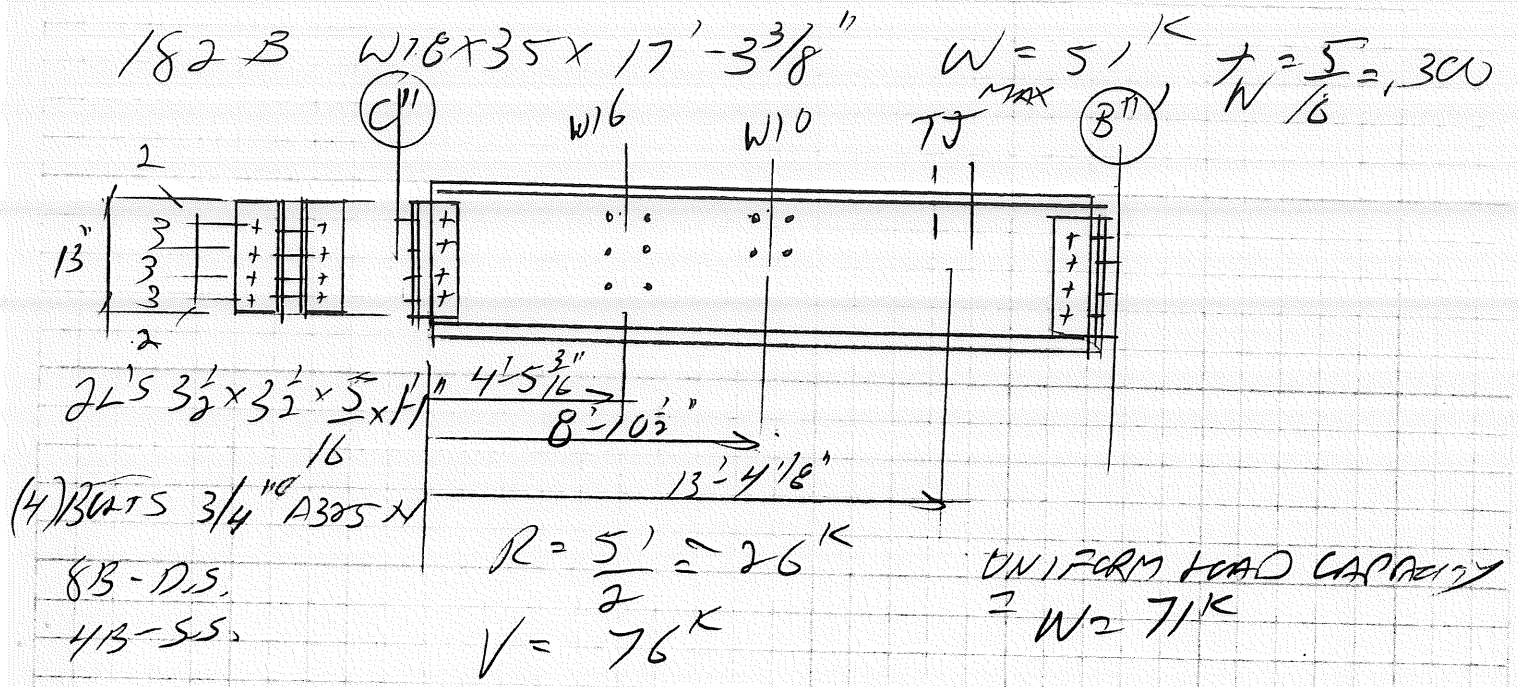
1^k A325 N2. HAD FROM RBS JOU CABINET OK

OEST ASSOCIATES, INC.

PREPARED BY R. HART
CALCULATIONS CHECKED BY _____
SUBJECT EMBASSY SUITES

DATE 4/22/57 PROJECT NO. 272 0101
DATE _____ SHEET NO. _____ OF _____

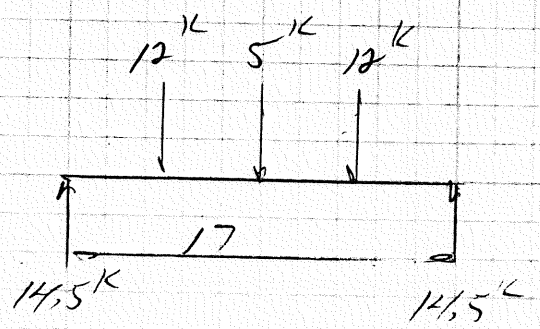
CONNECTIONS



CONNECTION CAPACITY:

1. BOLT SHEAR - $V = 4(18.6) = 74.4$
 $8(9.3) = 74.4$
2. BOLT BEARING - $V = 4(16.3) = 65.2 K$
3. ANGLE SHEAR - $V = 106 K$

W16 REACTION = 12 K
W10 REACTION = 5 K
TJ REACTION = 12 K



2 K ± ADDNL LOAD FROM RPS2000 CABINET - OK

CURTAIN WALL AREA = (25' x 13') = 325 sq ft $\left(\frac{130 \text{ psf}}{1000}\right) = 36.725 K$
L 71 K

COL. LINE 12 (B TO C) OK

OEST ASSOCIATES, INC.

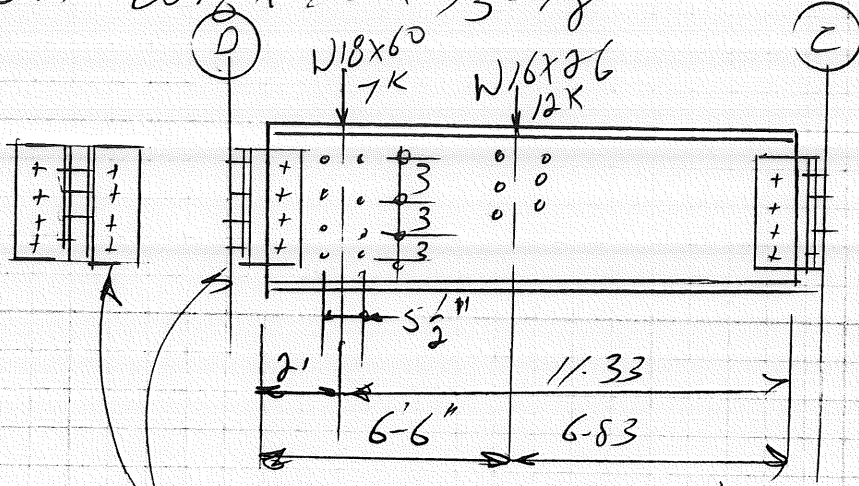
PREPARED BY R. HART DATE 4/23/97 PROJECT NO. 2720101
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 SUBJECT EMBASSY SUITE

CONNECTIONS

146A W18x40x 13'-4 7/8"

$$f_w = 1,315 \left(\frac{5}{16}\right)$$

$$V_2 = 81^k$$



$$R_2 = \frac{11.33(2)}{13.33} + \frac{6.53(12)}{13.33} = 7.85$$

2L'S 3 1/2 x 3 1/2 x 5/16 x 1'-1"
 (8B-S.S / 4B-D.S.)
 (4) 3/4" A325 N BOLTS

CONNECTION CAPACITY:

1. Bolt shear - $V = 8(9.3) = 74.4^k$
 $4(18.6) = 74.4^k$
2. Bolt bearing - $V = 4(16.3) = 65.2^k$
3. ANGLE SHEAR - $V = 106^k$

$2 \pm$ ADD'L LOAD FROM RIBS CABINET OK

15A

OEST ASSOCIATES, INC.

16

PREPARED BY R. HART DATE 4/29/97 PROJECT NO. 2720101
 CALCULATIONS CHECKED BY _____ DATE _____ SHEET NO. _____ OF _____
 SUBJECT EMBASSY SUITES

$$L 2 \times 2 \times \frac{1}{4}$$

$$b/r = \frac{2}{.25} = 8 < \frac{65}{\sqrt{F_y}} = \frac{65}{\sqrt{36}} = 10.83$$

$$F_b = .66 F_y = .66(36) = 23.76 \text{ ksi}$$

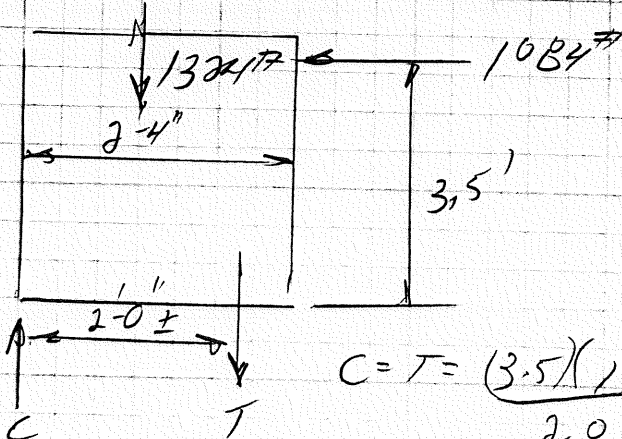
$$W = \frac{(C)(36)^2}{(2)(5.33)} = 27 \text{ PL}$$

$$\text{SPAN} = 4'$$

$$M = \frac{(27)(4)^2}{6} = 54 \text{ FT-LBS}$$

$$f_b = \frac{(54)(12)}{1609 \text{ IN}^3} = 1.064 \text{ psi (OK)}$$

CABINET BASE FASTENERS



$$C = T = \frac{(3.5)(1084) - 1.167(1324)}{2.0} = 1124 \text{ lbs}$$

$$\text{TRY (4) FASTENERS @ } \frac{1124}{4} = 281 \text{ lbs/ea.}$$

HITE-POWDER ACTUATED THREADED STUDS

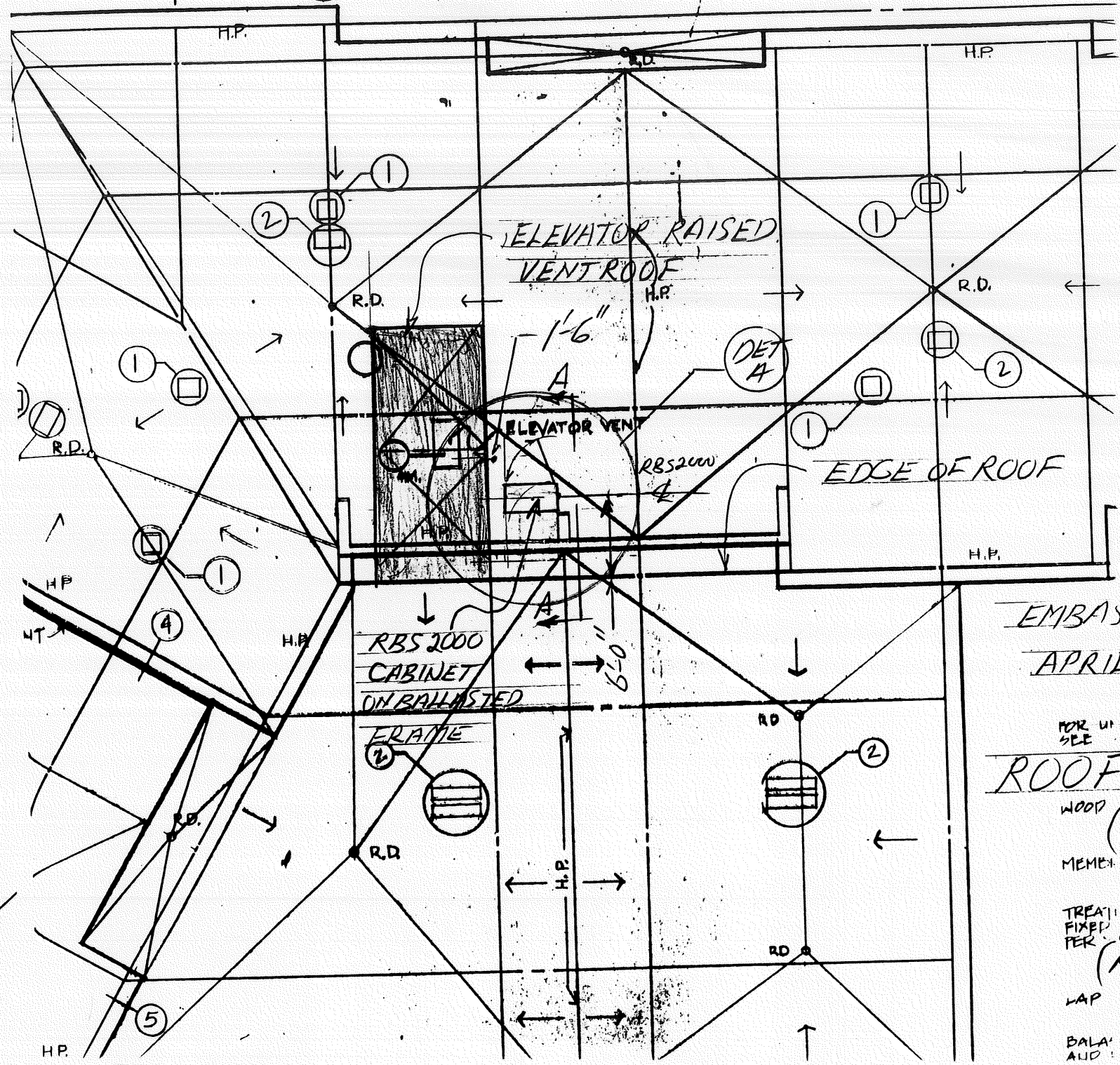
$$\frac{1}{4}'' - 20 \text{ ENG}$$

$$\frac{3}{8}'' - 16 \text{ ENG}$$

ANCHOR BOLTS ON 490 # }
 NUTS 570 # } BASIC MATERIAL
 T- 800 # }
 S- 750 # } 3/16" STEEL

10 11 12 12.5

91



OEST ASSOC.

EMBASSY SUITES
APRIL 22, 1997

2720101
FOR USE SEE

ROOF PLAN

WOOD (N.T.S.)

MEMO: 2720101

TREAT: REV. 1 4/23
FIXED: (ROTATE ABS 90°)
PER:

LAP

BALA:
AND:



OEST ASSOCIATES, INC.

PREPARED BY R. HART

DATE 4/24/97

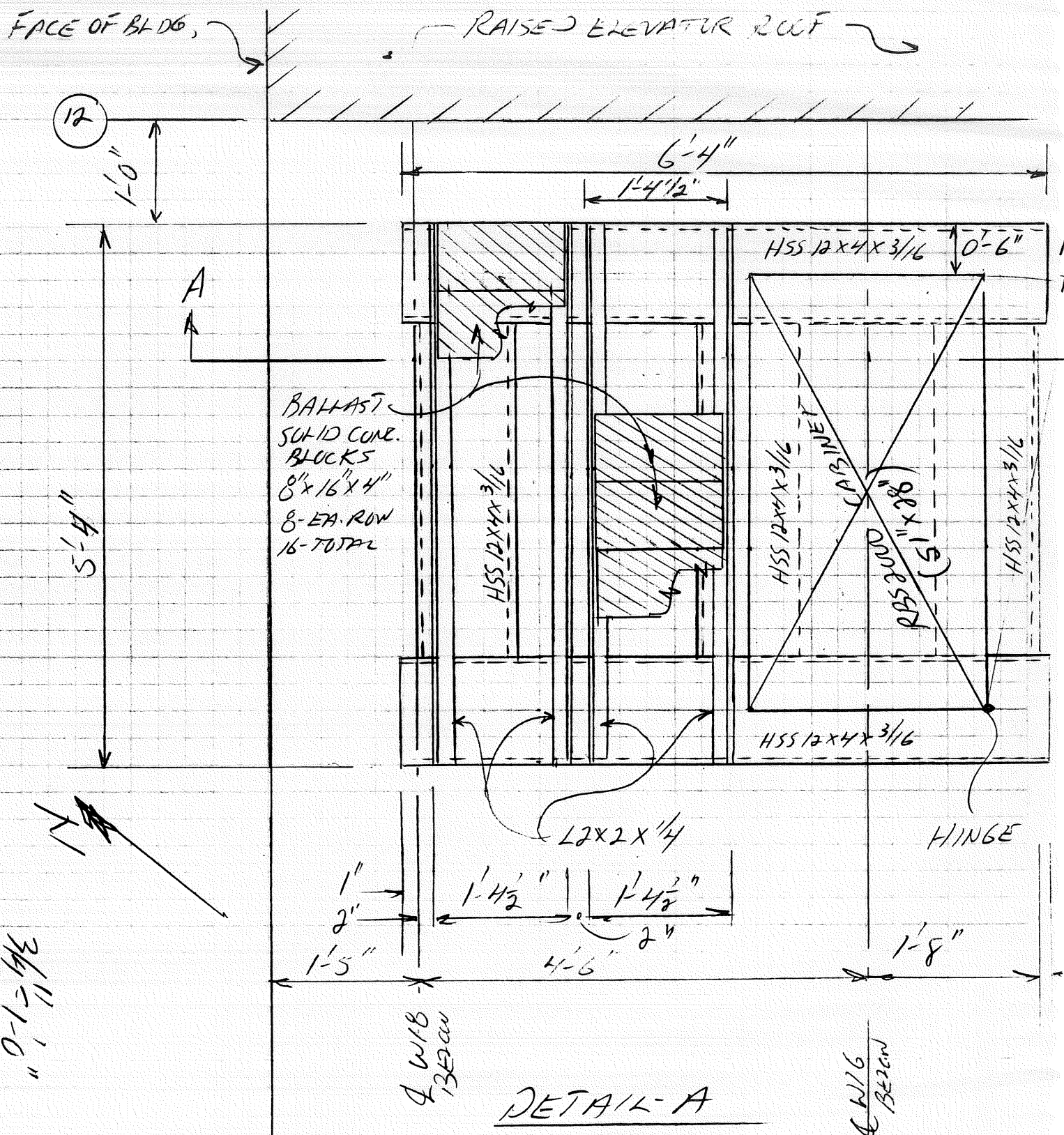
PROJECT NO. 272016

CALCULATIONS CHECKED BY _____

DATE _____

SHEET NO. _____ OF _____

SUBJECT EMBASSY SUITES



DETAIL-A

PLAN - STEEL SUPPORT FRAME FOR RBS 2000 CABINET

CHECK OVERTURNING/SLIDING

$$\text{STEEL WT.} = [(6.17)(2) + 3(3)](20 \text{ plf}) = 426 \text{ \#}$$

$$\text{CONC. BLOCK WT./ROW} = (8)(36 \text{ \#}) = 288 \times 2 = 576 \text{ \#}$$

$$\text{CABINET WT.} = 1324 \text{ \#}$$

$$\text{TOTAL} = 2324 \text{ \#}$$

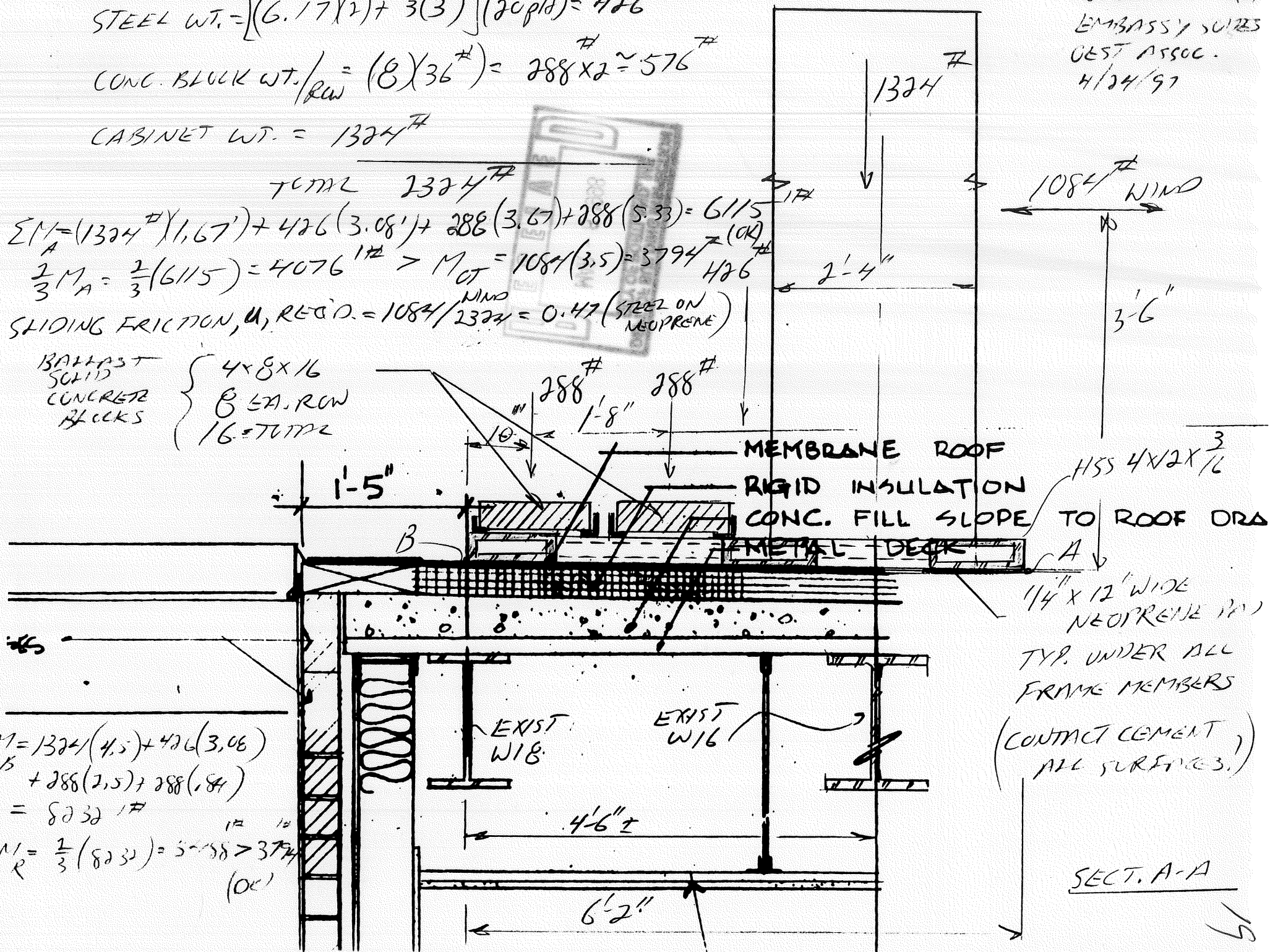
$$\Sigma M_A = (1324 \text{ \#})(1.67') + 426(3.08') + 288(3.67') + 288(5.33') = 6115 \text{ (OK)}$$

$$\frac{2}{3} M_A = \frac{2}{3}(6115) = 4076 \text{ \#} > M_{OT} = 1084(3.5) = 3794 \text{ \#}$$

$$\text{SLIDING FRICTION, } \mu, \text{ REQ'D.} = 1084 / 2324 = 0.47 \text{ (STEEL ON NEOPRENE)}$$

BALLAST
SOLID
CONCRETE
BLOCKS

- 4x8x16
- 8 EA. ROW
- 16 = TOTAL



2720101
EMBASSY SUITES
BEST ASSOC.
4/24/97

$$\Sigma M_B = 1324(4.5) + 426(3.06) + 288(2.5) + 288(1.84) = 8232 \text{ \#}$$

$$\frac{2}{3} M_R = \frac{2}{3}(8232) = 5488 > 3794 \text{ (OK)}$$

SECT. A-A