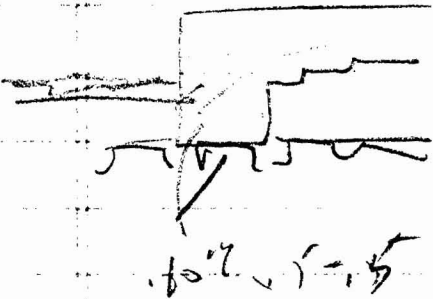


Secondary Design - Roof
 Lense unit



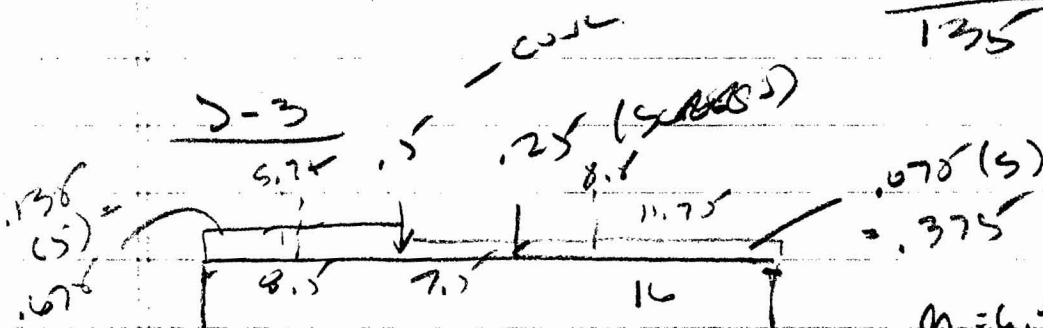
+ 3/4"
 6" (1.5)

50
 -17 — PDAW. Roof
 33 + 2 Roof Fin. only

35
 23 — OTM - 2500 LWS
 58
 + 42 — UNIT LWS + 1/2
 100
 35 LWS
 135

1150
 350

20" UNIT



130 (5)
 675
 4.96
 .37
 .126
 3.23
 8.7 = 8

.76
 .13
 .126
 5.57
 6.585

M = 6.585 (16.8) = 111.27
 - .375 (16.8) = 53.55
 - .25 (1.9) = 2.25
 55.47
 = 665.9

18kcs4
 M_r = 817
 R = 9.7 — N.G!
 20kcs5 R = 8.9 (20 k/ft)



CITY OF PORTLAND
BUILDING CODE CERTIFICATE
389 Congress St., Room 315
Portland, Maine 04101

TO: Inspector of Buildings City of Portland, Maine
Department of Planning & Urban Development
Division of Housing & Community Service

FROM: NEIL P. HOFFMANN @ FRANCIS CAUFFMAN FOLEY HOFFMANN
ARCHITECTS

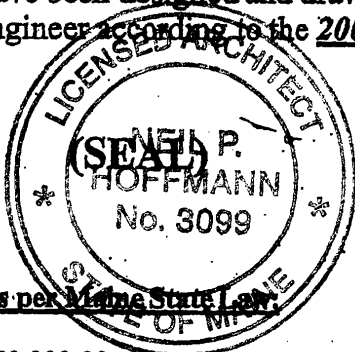
RE: Certificate of Design

DATE: 12-4-06

These plans and / or specifications covering construction work on:

FOXP RIVER MEDICAL PAVILION @ MERCY HOSPITAL FORD
RIVER CAMPUS FOR BUILDING SHELL & POOR CONSTRUCTION

Have been designed and drawn up by the undersigned, a Maine registered Architect /
Engineer according to the 2003 International Building Code and local amendments.



As per Maine State Law:

\$50,000.00 or more in new construction, repair
expansion, addition, or modification for
Building or Structures, shall be prepared by a
registered design Professional.

Signature: Neil P. Hoffmann

Title: CEO

Firm: FRANCIS CAUFFMAN
FOLEY HOFFMANN, ARCHITECTS LTD.

Address: 2120 ARCH ST.
PHILADELPHIA, PA 19103

FRANKS CAUFFMAN POLYHOFFMAN ARCHITECTS
 FROM DESIGNER: ROBERT E. CHESTER ASSOCIATES, STRUCTURAL

DATE: 12/11/06
 Job Name: FORE PLER MEDICAL PAVILION
 Address of Construction: MERCY OF MAINE FORE PLER CAMPUS

2003 International Building Code

Construction project was designed according to the building code criteria listed below:

Building Code and Year IBC 2003 Use Group Classification(s) BUSINESS (B)
 Type of Construction 2B
 Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2003 IRC YES
 Is the Structure mixed use? NO if yes, separated or non separated (see Section 302.3)
 Supervisory alarm system? YES Geotechnical/Soils report required? (See Section 1802.2) YES

STRUCTURAL DESIGN CALCULATIONS

Submitted for all structural members (103.1, 103.1.1)

DESIGN LOADS ON CONSTRUCTION DOCUMENTS (1603)

Uniformly distributed floor live loads (7603.11, 1607)

Floor Area Use	Loads Shown
TENANT SPACE (CORRIDORS)	50 PSF +
STAIRS/LOBBIES	20 PSF
CORRIDORS AND 1 st FLOOR	100 PSF
MECH./ELEC. ROOMS	80 PSF
COVER LEVELS	150 PSF

Wind loads (1603.1.4, 1609)

- Design option utilized (1603.1.7, 1609.6)
- Basic wind speed (1609.3)
- Building category and wind importance factor, I_w (Table 1604.6, 1609.5)
- Wind exposure category (1609.4)
- Internal pressure coefficient (ASCE 7)
- Component and cladding pressures (1603.1.1, 1609.6.2.2)
- Main force wind pressures (7603.1.1, 1609.6.2.1)

Earthquake design data (1603.1.5, 1614-1623)

- Design option utilized (1614.1)
- Seismic use group ("Category") (Table 1604.5, 1616.2)
- Spectral response coefficients, S_{DS} & S_{D1} (1615.1)
- Site class (1615.1.5)

- Live load reduction (1603.1.7, 1607.9, 1607.10)
- Roof live loads (1603.1.2, 1607.11)
- Roof snow loads (7603.7.3, 1608)
- Ground snow load, P_g (1608.2)
- If $P_g > 10$ psf, flat-roof snow load, P_f (1608.3)
- If $P_g > 10$ psf, snow exposure factor, C_e (Table 1608.3.1)
- If $P_g > 10$ psf, snow load importance factor, I_s (Table 1604.5)
- Roof thermal factor, C_t (Table 1608.3.2)
- Sloped roof snowload, P_s (1608.4)
- Seismic design category (1613.9)
- Basic seismic-force-resisting system (Table 1617.6.2)
- Response modification coefficient, R , and deflection amplification factor, C_d (Table 1617.6.2)
- Analysis procedure (1616.6, 1617.5)
- Design base shear (1617.4, 1617.8.1)

Flood loads (1603.1.6, 1612)

- Flood hazard area (1612.3)
- Elevation of structure

Other loads

- Concentrated loads (1607.4)
- Partition loads (1607.5)
- Impact loads (1607.8)
- Misc. loads (Table 1607.8, 1607.8.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)

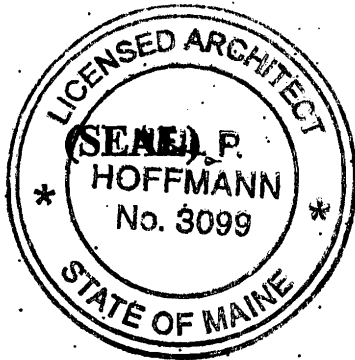


CITY OF PORTLAND
BUILDING CODE CERTIFICATE
389 Congress St., Room 315
Portland, Maine 04101

ACCESSIBILITY CERTIFICATE

Designer: FRANCIS CAUFFMAN FOLEY (HOFFMANN) ARCHITECTS LTD
Address of Project: MERRY OF MAINE FORD POWER CAMPUS
Nature of Project: COPE & SHELL DESIGN FOR A 4-STORY
MEDICAL OFFICE BUILDING

The technical submissions covering the proposed construction work as described above have been designed in compliance with applicable referenced standards found in the Maine Human Rights Law and Federal Americans with Disability Act.



Signature: *Sean P. Hoffmann*
Title: CEO
Firm: FRANCIS CAUFFMAN FOLEY
HOFFMANN ARCHITECTS LTD
Address: 2120 ARCH STREET
PHILADELPHIA, PA 19103
Phone: (215) 568-8250

NOTE: If this project is a new Multi Family Structure of 4 units or more, this project must also be designed in compliance with the Federal Fair Housing Act. On a separate submission, please explain in narrative form the method of compliance.

Special Inspections Program
(2003 International Building Code)

In accordance with the provisions of Chapter 17 of the 2003 International Building Code, this form is to list the special inspections as required for the proposed construction located at:

PROPERTY ADDRESS (print): Fore River Medical Pavilion, Portland, Maine

OWNER'S NAME (print): Landmark Healthcare Facilities, LLC

The design professional(s) of record shall indicate by a checkmark which of the special inspections listed below are required for the above mentioned construction site:

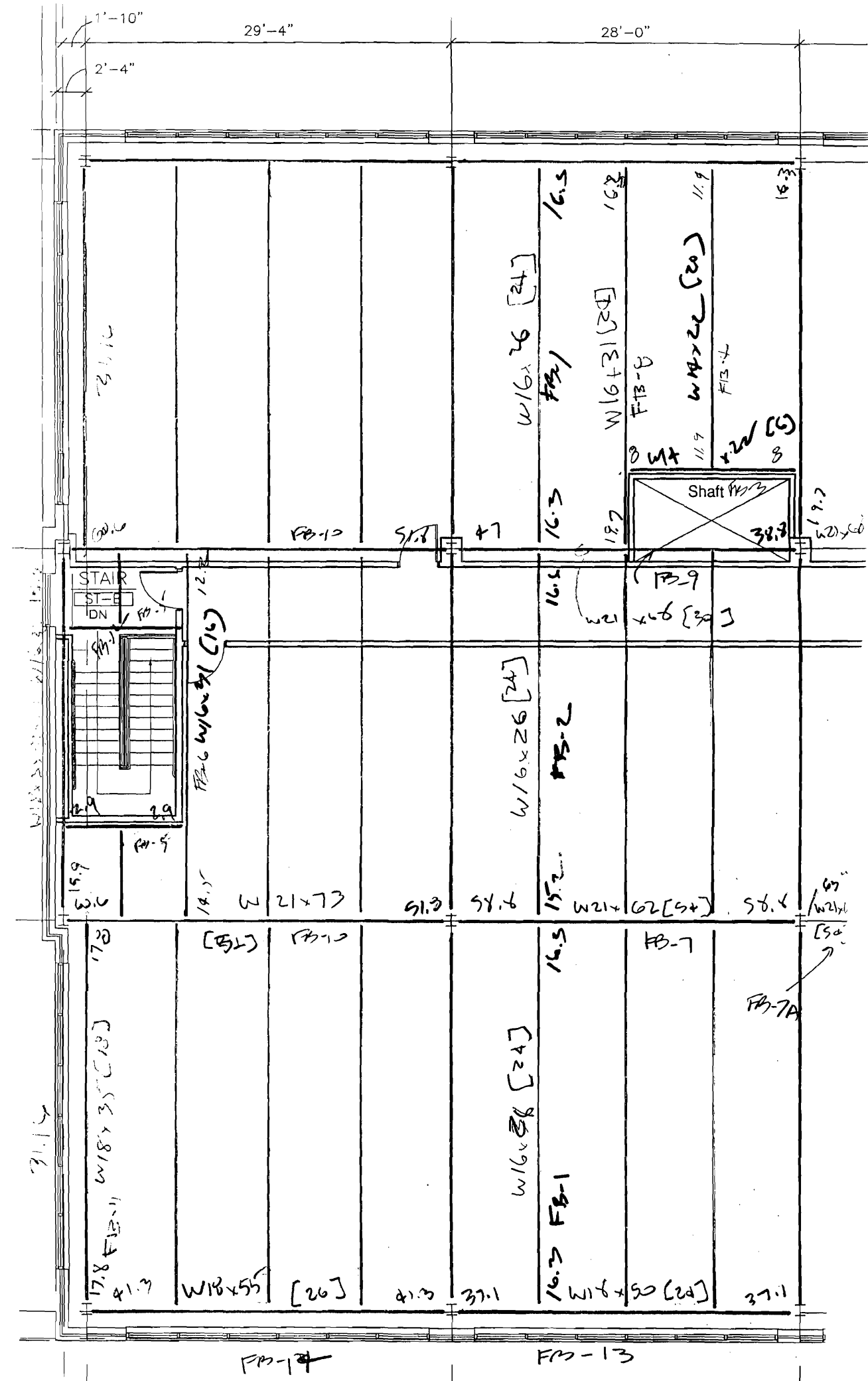
VERIFICATION & INSPECTION ITEM	REQUIRED
Fabrication of structural load-bearing members and assemblies (1704.2)	<input type="checkbox"/>
<u>Steel:</u> (1704.3) Welding	<input checked="" type="checkbox"/>
Weld Filler Materials	<input checked="" type="checkbox"/>
Steel frame Joint Details	<input type="checkbox"/>
High Strength Bolts, Nuts, and Washers	<input checked="" type="checkbox"/>
<u>Concrete:</u> (1704.4) Materials	<input checked="" type="checkbox"/>
Reinforcing Steel	<input checked="" type="checkbox"/>
Pre-Cast Concrete	<input type="checkbox"/>
Shotcrete Application	<input type="checkbox"/>
Pre-stressed Concrete	<input type="checkbox"/>
In-situ Concrete Strength	<input type="checkbox"/>
<u>Masonry:</u> (1704.5)	<input checked="" type="checkbox"/>
Fabrication process of prefabricated wood structural elements and assemblies (1704.6)	<input type="checkbox"/>
Existing site soil conditions, Fill placement, load bearing requirements (1704.7)	<input checked="" type="checkbox"/>
Pile/ Caisson/ Pier Foundations (1704.8 & 1704.9)	<input checked="" type="checkbox"/>
Wall panels and Veneers (<i>Seismic design category "E" or "F" buildings only</i>) (1704.10)	<input type="checkbox"/>
Spray fire-resistant materials, Mastic & Intumescent Coatings (1704.11)	<input checked="" type="checkbox"/>
Exterior Insulation and Finish Systems (EIFS) (1704.12)	<input checked="" type="checkbox"/>
Special Cases (Attach separate sheet, if necessary) (1704.13)	<input type="checkbox"/>
Smoke control systems (1704.14)	<input type="checkbox"/>
Seismic resistance (1707)	<input type="checkbox"/>

As Architect of Record and Structural Engineer of Record, we are identifying items to be inspected and to be administered by the Owner, Landmark Healthcare Facilities LLC who will be responsible for maintaining records of all inspections; furnishing reports to the Building Inspector; and verifying that the special inspector for each required item above is qualified to perform that inspection.

Architect of Record
Francis Cauffman Foley Hoffmann
2120 Arch Street
Philadelphia, PA 19103
(215) 568-8250

Engineer of Record
Robert E. Chester Associates
119 Coulter Avenue, Suite 175
Ardmore, PA 19003
(610) 645-9570

Special Inspections Administer
Fore River Medical Complex LLC
839 North Jefferson Street
Milwaukee, WI 53202
(414) 277-0500



FB-14

FB-13

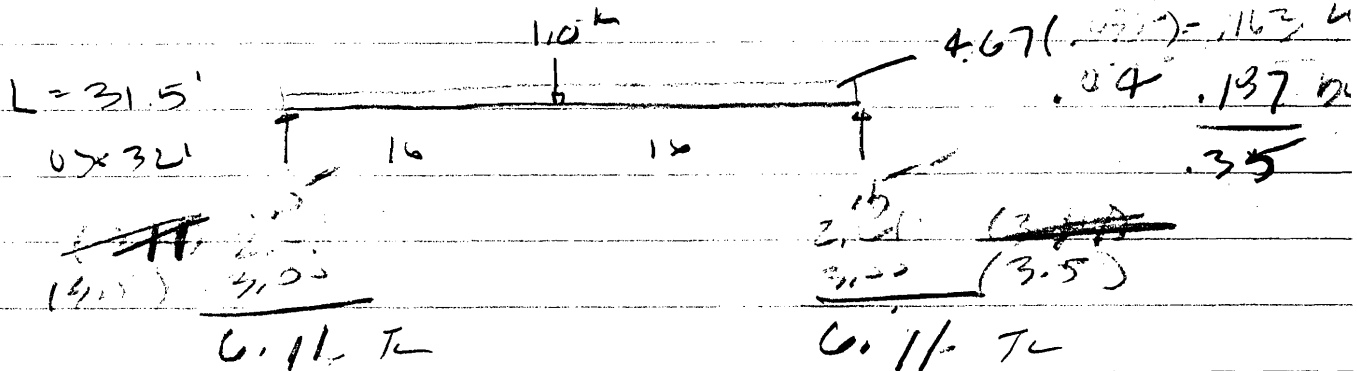
Raf - Final Design

Refer to SD-1.1 for ROOF LOADS AND SLOPE DESIGN

Refer to SD-1.3 FOR LOADS AT HVAC

POST LOAD FOR SECTION WITH = $10' - 0" (.10^4 \text{ KN}) = 1.0^4 \text{ KN}$

RB-1



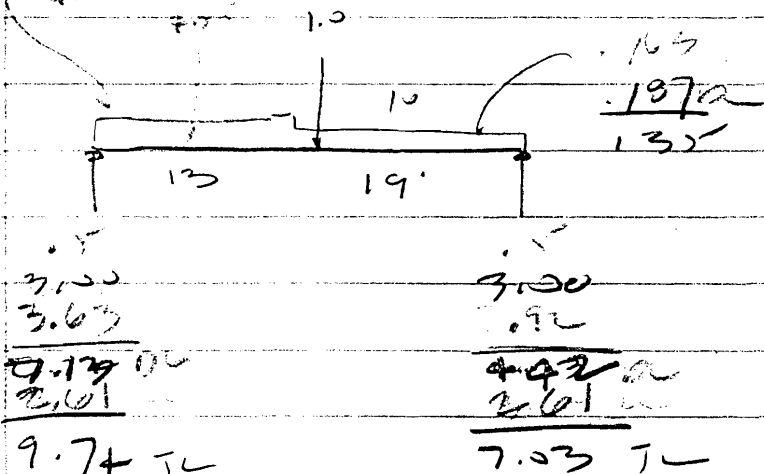
$M = 6.11 (10) = 197.7 \text{ KN}\cdot\text{m}$

$- .35 (10^2) = 44.3$
 $\frac{197.7 - 44.3}{2} = 52.96 \text{ KN}\cdot\text{m}$

$S_{30} = 21.2$

$\Delta_{\text{DEF}} = \frac{17.3}{F} + \frac{5.1}{F} = \frac{22.9}{F}$ $L/240 \text{ TL}$
 $\frac{22.9}{1.0} = 22.9 \text{ mm}$

RB-2



$M = 7.03 (17.23) = 121.13$

$- .35 (17.23^2) = 51.95$

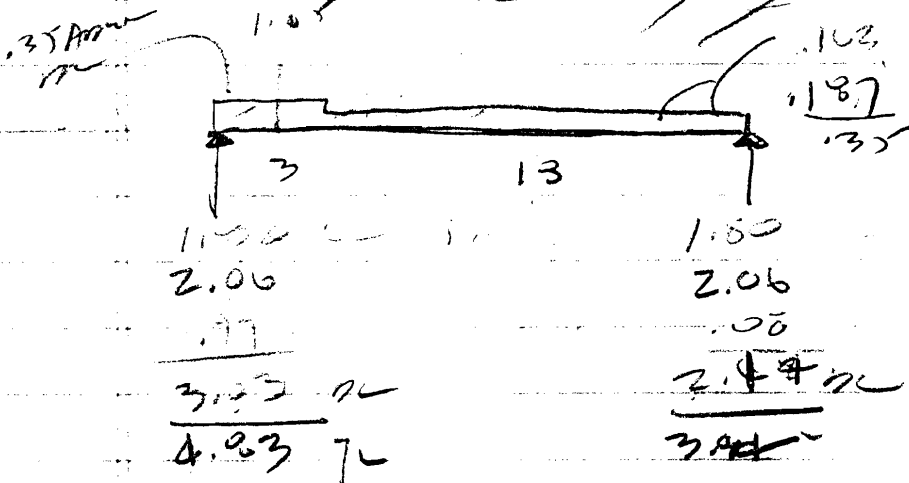
$\frac{121.13 - 51.95}{2} = 1.23$

$S_{30} = 27.18$

RB-3 L = 22'

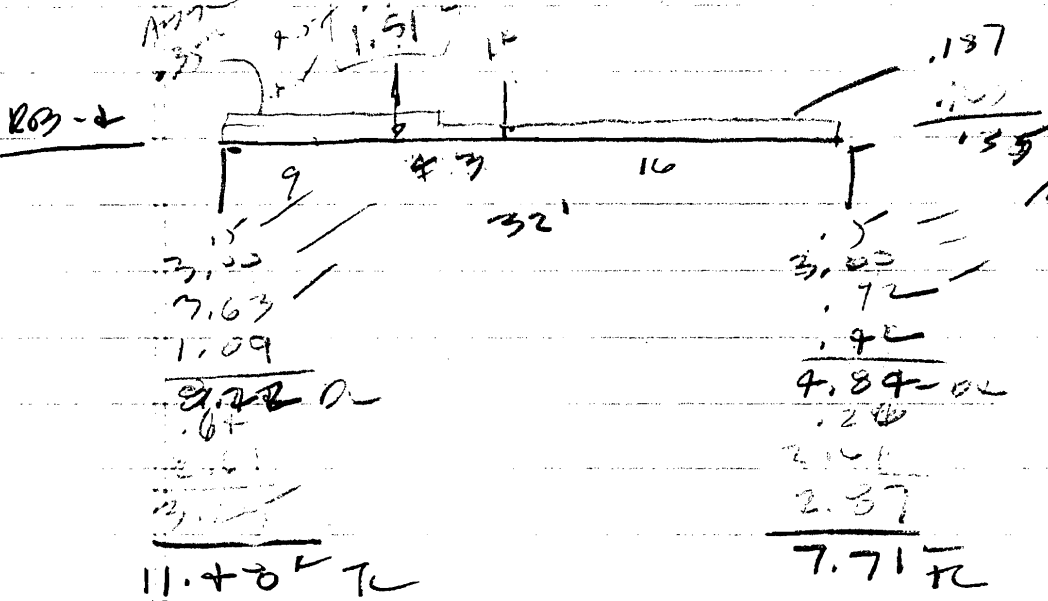
W = .165
 .137 m
 .35 kN

~~M = 81.18~~
~~S = 8.47~~



$M = 3.94 (11.24) = 44.4$
 $- .35 \left(\frac{11.24^2}{2} \right) = -22.2$
22.2

S = 8.88

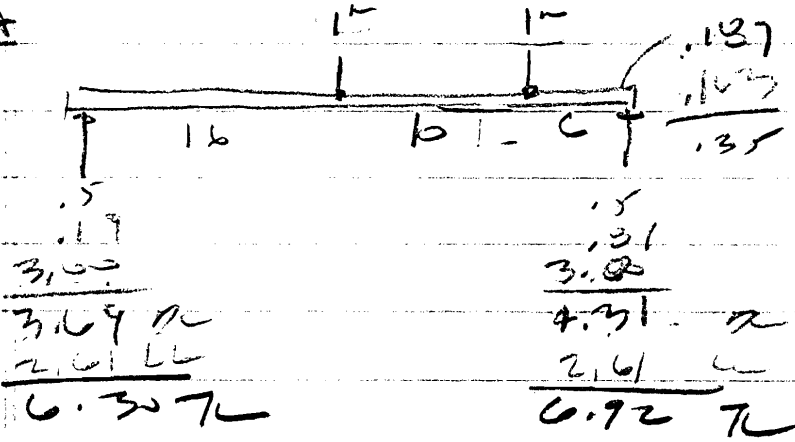


$M = 7.71 (19.2) = 148.03$
 $- .35 \left(\frac{19.2^2}{2} \right) = -61.77$
 $- 1 (3.2) = -3.2$
93.06

S₉₀ = 37.22 in.³

W16x31

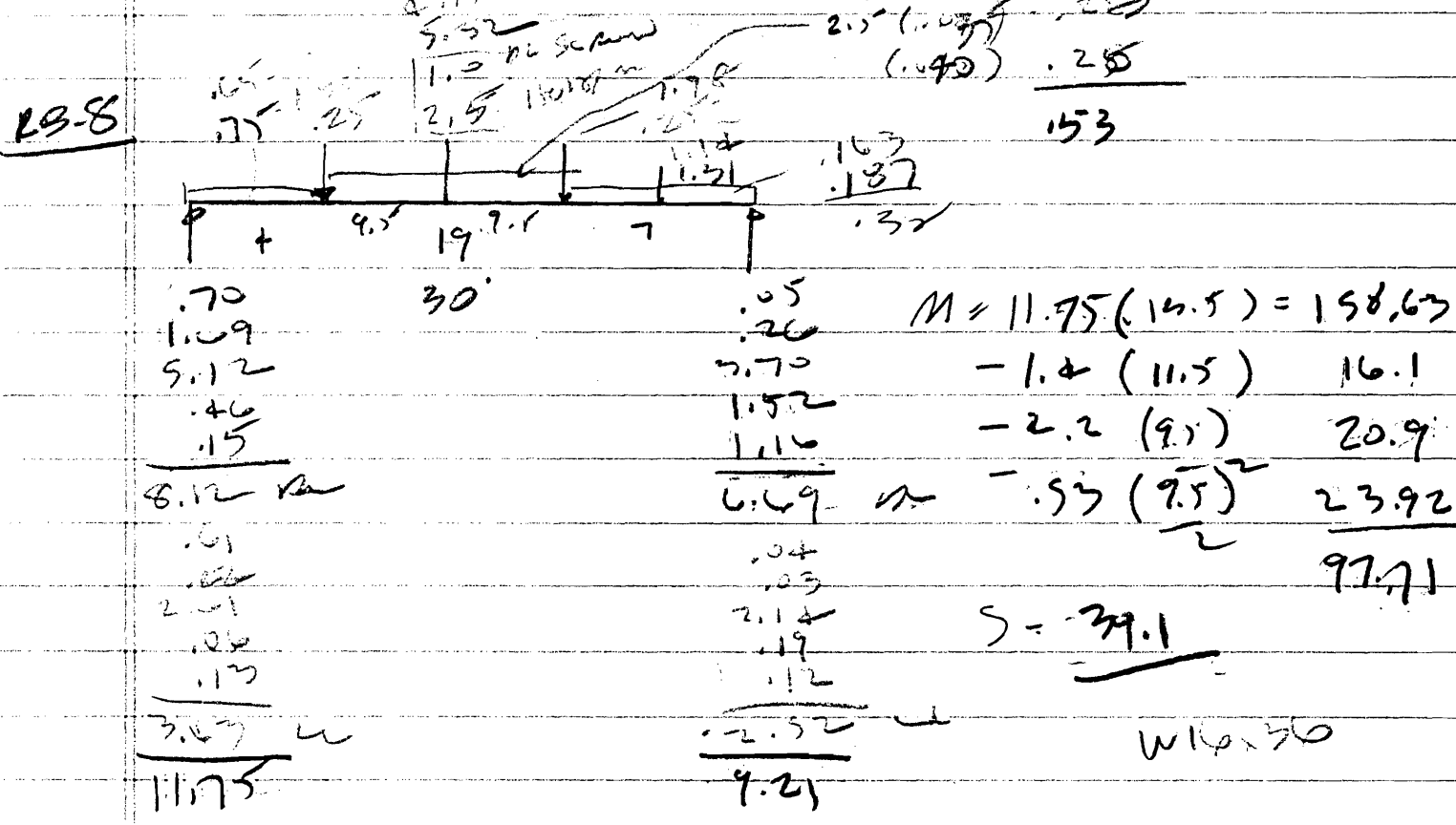
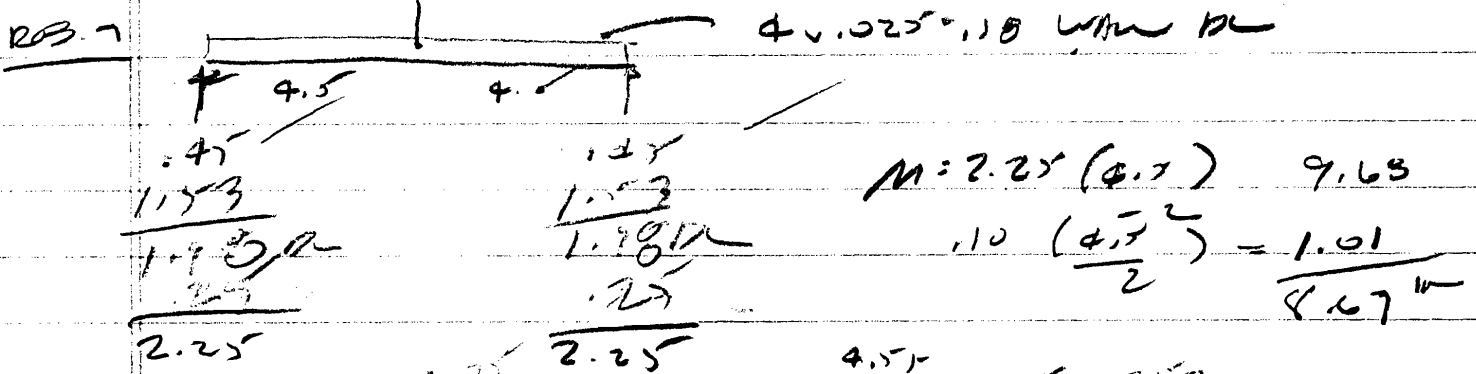
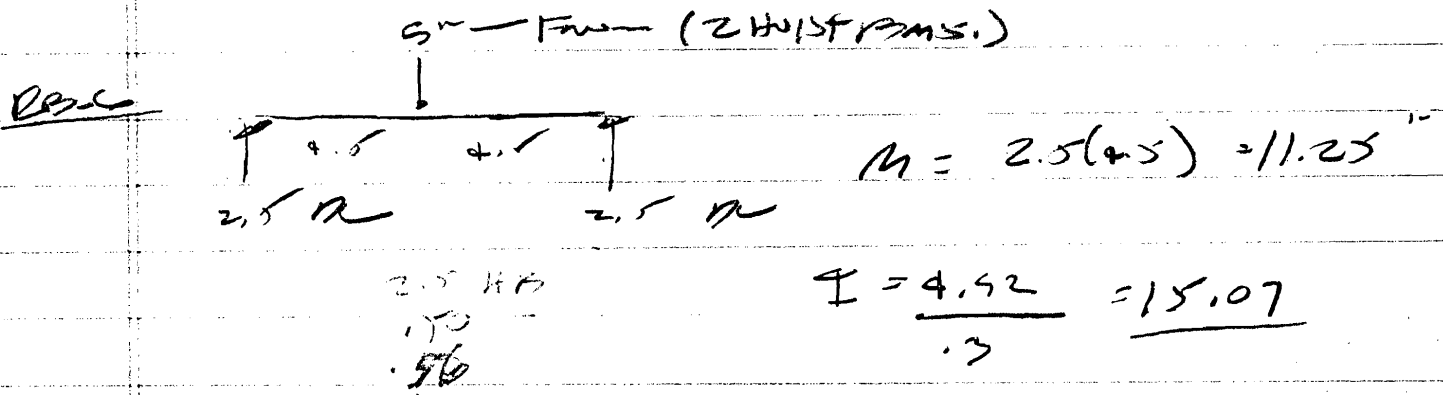
RB-1A



$M = 6.3 (16) = 100.8$
 $- .35 \left(\frac{16^2}{2} \right) = -44.8$
56.0

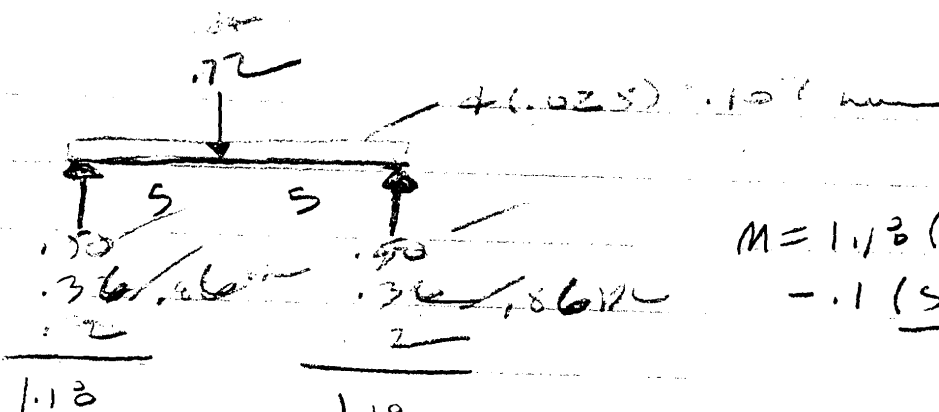
S = 22.4

2B.5 L = 7' w = 4 .1035 .117
 .035 .16
.13044 M = 1.31
 R = .49 LL
 .96 DL



CPR -1.3

RB-9

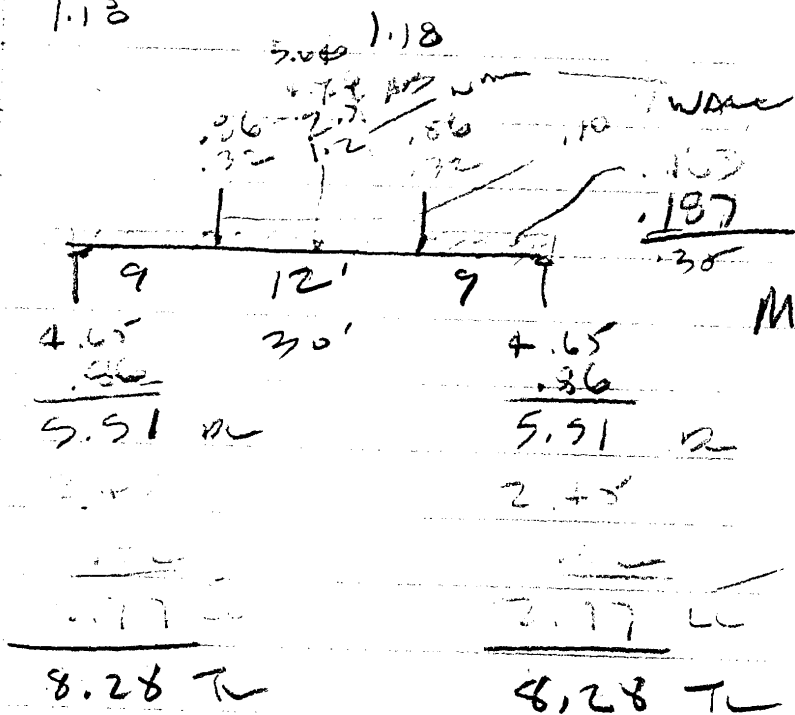


$$M = 1.18(5) = 5.9$$

$$- .1(5) = 1.25$$

$$4.65$$

RB-10



$$M = 8.28(15) = 124.2$$

$$- .35(15) = 39.4$$

$$1.13(6) = 7.08$$

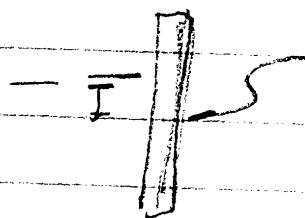
$$.10(6) = 1.30$$

$$8.28 TL$$

$$8.28 TL$$

$$S = 30.4$$

SPANONA PANNY
ROOF -



$$6.33 \times .04 = .253$$

$$\times .02 = .127$$

$$.38$$

RB-11 L = 32'

$$\frac{6}{2} \times 1.33 = 3.83 \times .45 = .175$$

R_{max} 2.71

R_{min} 8.35

M = 94.11

594

W_{max} 164

S = 38A

= 928.2

594 W18x40

x .04

.153

.40

.553 DL

.726

W10x54

$$573 / 1.05 = 546$$

DL Roof

WALL

W10x40

W21x

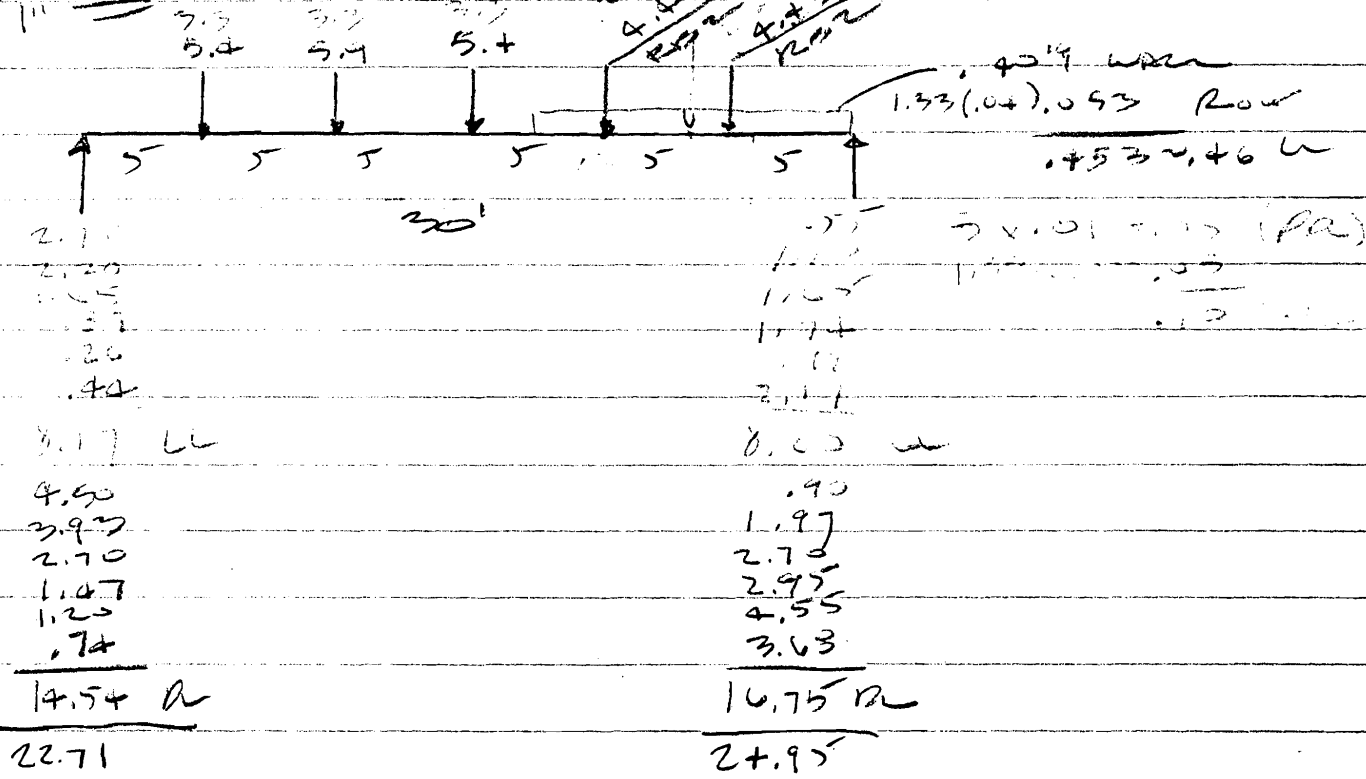
RSP-2

$L = 30'$
 $w = .175 \text{ LL}$
 $.55 \text{ RL}$
 $.726 - .75 \text{ RL}$
 $I = \frac{456.9}{1.40} = 326.36$
 1.10
 459.2
 $M = 94.4$
 $S = 33.75$
 $R = 2.0$
 8.3 RL
 $W18 \times 46$
 $W13 \times 55$

RSP-3 $L = 29.5' \sim 30'$ $w = 17 (.04) = .68 \text{ Row RL}$

$M = 194.7$ $W18 \times 46$ $S_x = 78.0$
 $S = 77.9$ $W18 \times 50$ $12 (.075) = .9$
 $R = 10.2 \text{ RL}$ $S_x = 88.9$ 5 $.225 \text{ (Per RL)}$
 $F_b = 800$ 4 (Per RL) $.645 \sim .65 \text{ RL}$
 1037 $X = 184$ $1037 (1070)$ 4 (Per RL) 5.75
 1.73 RL

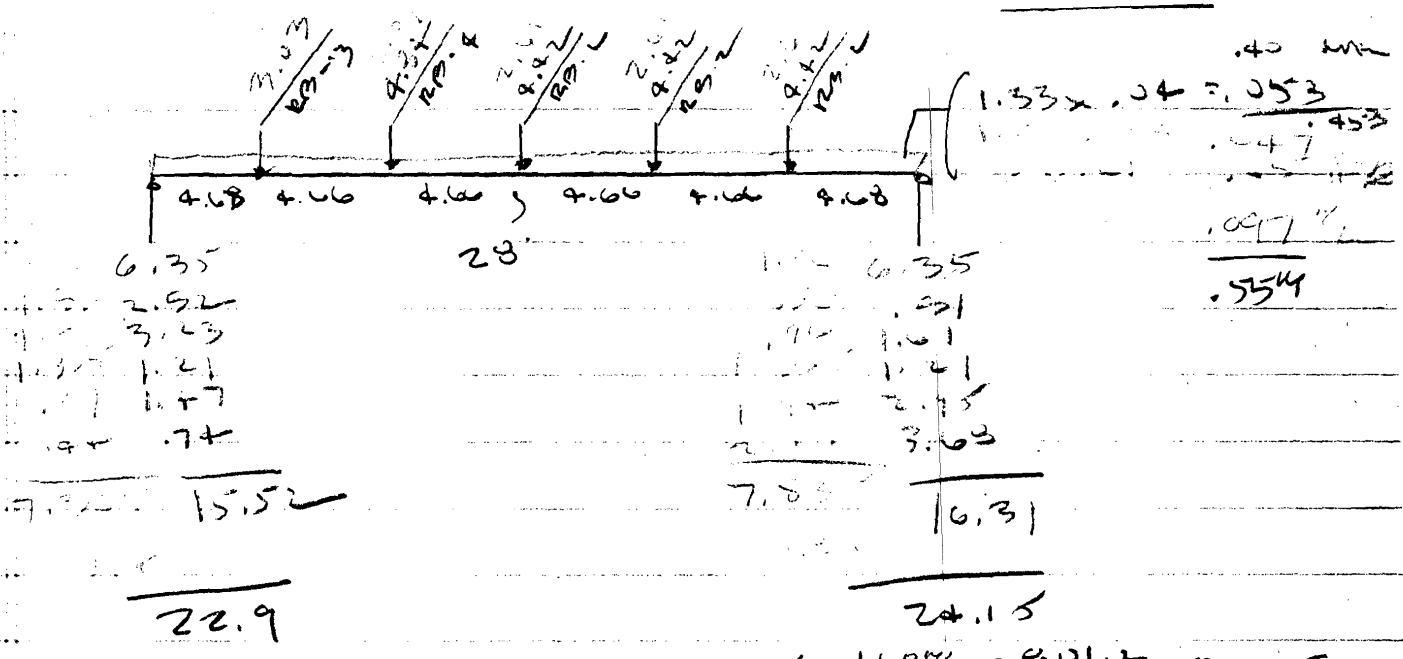
RSP-3A



$M = 22.71 (15) = 340.7$
 $- 8.7 (10) = 87$
 $- 9.2 (5) = 46$
 $\underline{207.7}$

$S_{30} = 83.1 \text{ W18} \times 50$
 $\Delta_{UNR} = (1.6 \text{ in}) = \frac{1005.5}{1005.5} = 1675$
 160 1005.5 $W18 \times 65$

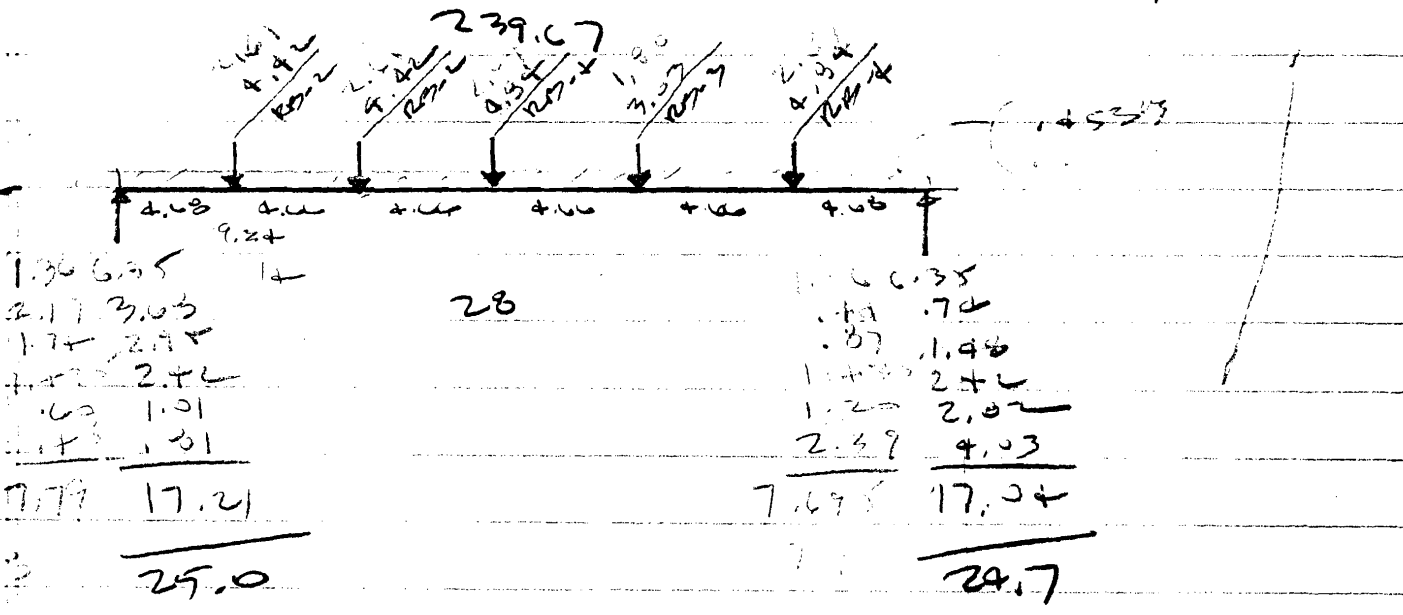
RSB-4



$M = 22.9 (1+) \quad 320.0$
 $- 4.03 (9.32) \quad 45.0$
 $- 7.71 (4.66) \quad 39.93$
239.67

$\Delta = 1.1687 = \frac{801.2}{193} = 901.5$
 $S_{30} = 95.9$
 $W_{13} \times 95$
 $S = 93.3$
 $F = 890$

RSB-4A

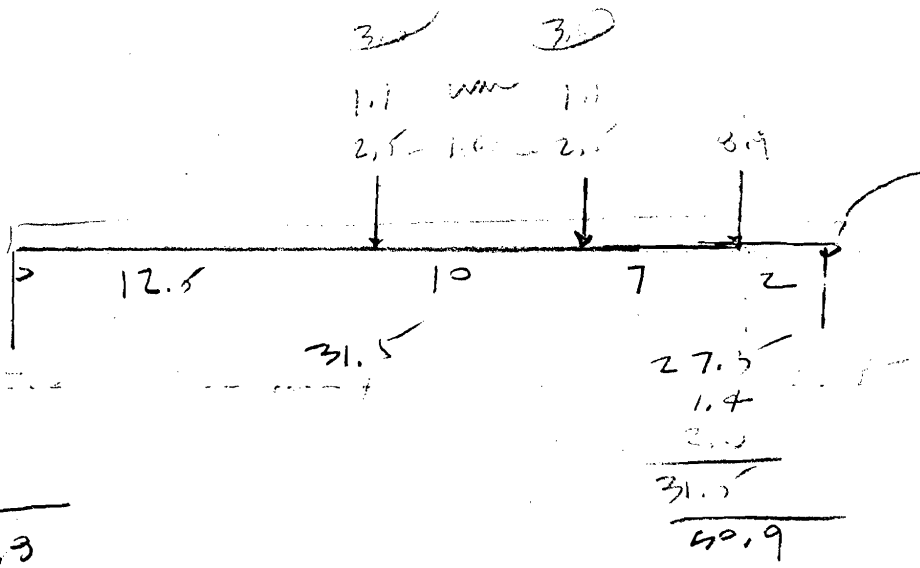


$M = 25.0 (14) = 350.0$
 $- 7.03 (9.32) = 65.5$
 $7.03 (4.66) \quad 32.8$
251.7

$S = 100.68$
 $W_{13} \times 60 \quad S = 100$
 $F = 984$

CDR-1.3

CG-7



$$\frac{1.12}{2.29}$$

$$\begin{array}{r} 19.6 \\ 2.29 \\ 1.1 \\ \hline 22.99 \\ 39.3 \\ \hline 62.29 \end{array}$$

$$\begin{array}{r} 27.5 \\ 1.4 \\ 2.29 \\ \hline 31.19 \\ 40.9 \\ \hline 72.09 \end{array}$$

$$M = (12.5 + 3.3) 39.3 - 62.29$$

$$- 2.29 \left(\frac{15.8^2}{2} \right) - 285.94$$

$$- 3.6 (3.3)$$

$$\frac{11.33}{331.12} \text{ MC}$$

$$S_{30} = \frac{132.5}{W_{30} = 70}$$

$$L = 30' \quad w = 6(1.075) = .48$$

$$M = 52.625$$
$$S = 20.28$$

$$\frac{282.8}{1} = 282.8 \text{ MW.F}$$

USE W116x20 $T = 601$

(with 22 F = 199)

(with 30 RESUM.)

$$L = 32'$$

$$\Delta = \frac{366}{1.06} = 345 - \text{W116x31}$$

(100
K.S.P.3)