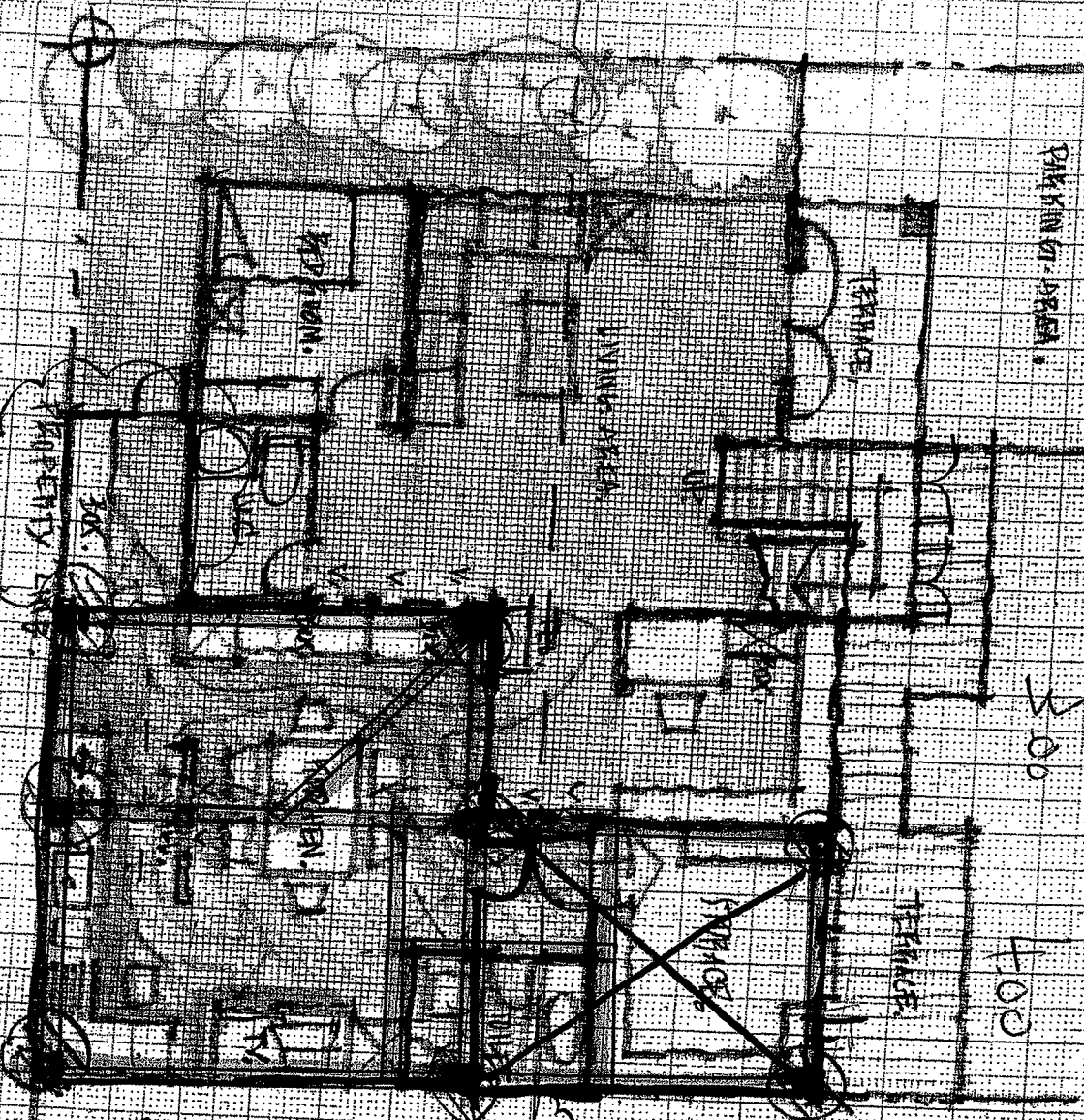


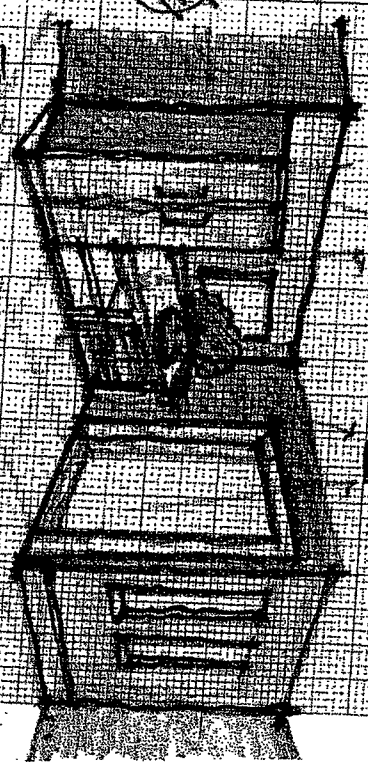
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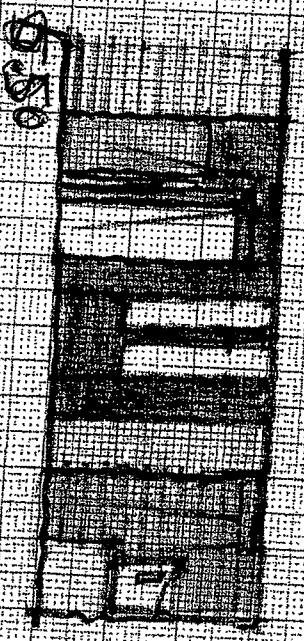


GROUND FLOOR PLAN.  
SCALE: 1/4"=1'-0"

SHMS-100-



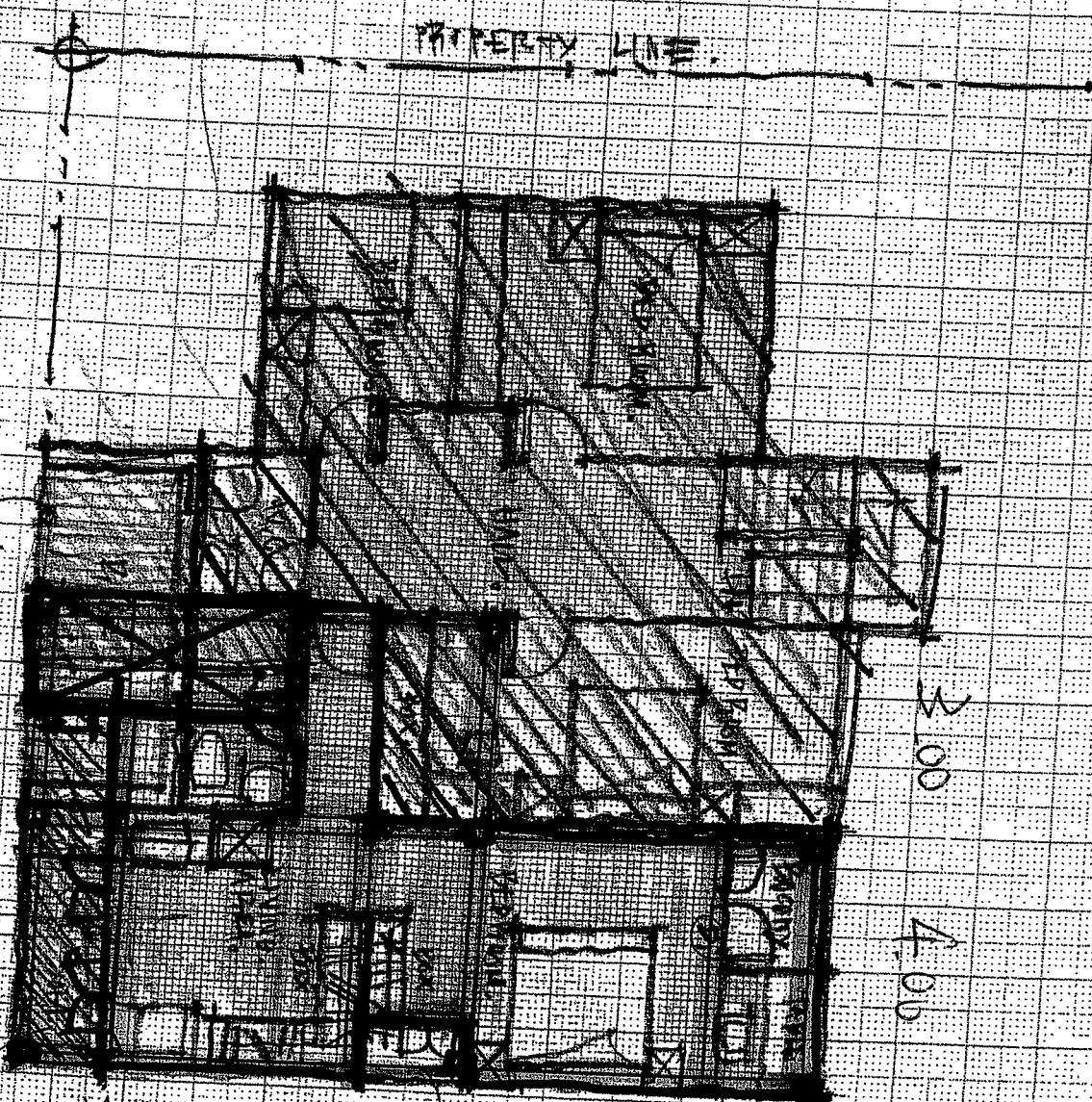
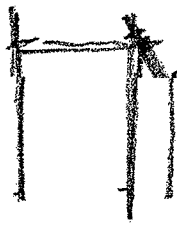
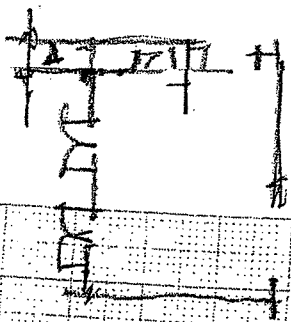
PERSPECTIVE VIEW.



ELEVATION VIEW.  
ATTACHED ROOM.

SCALE: 1/4"=1'-0"

500  
500  
CLARENCE  
KNOX



MULLER'S FLOOR PLAN

DATE 1:100

USON

MEMPHIS 2

6'50"

CON. AIR

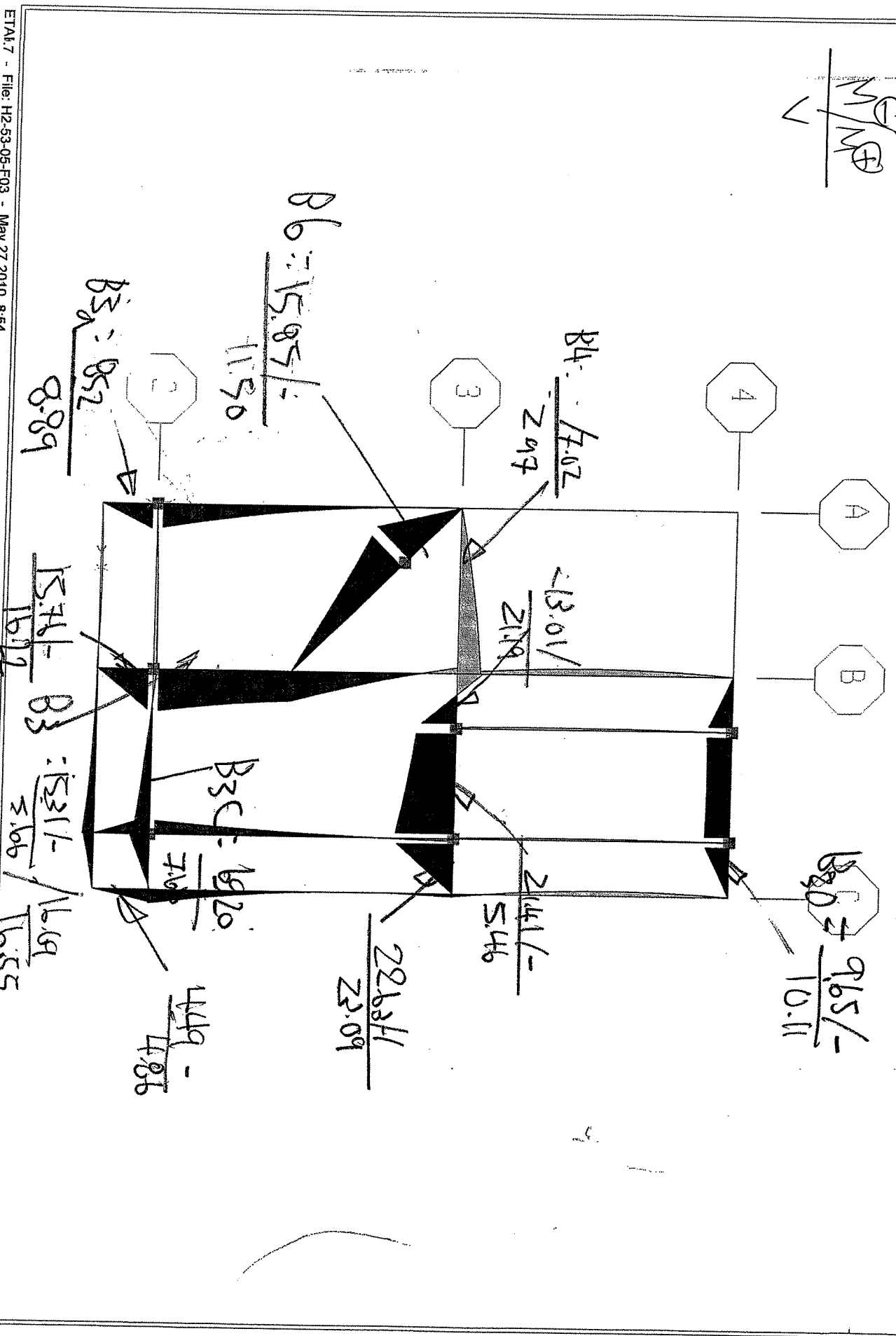
5'00"

3'00"

4'00"

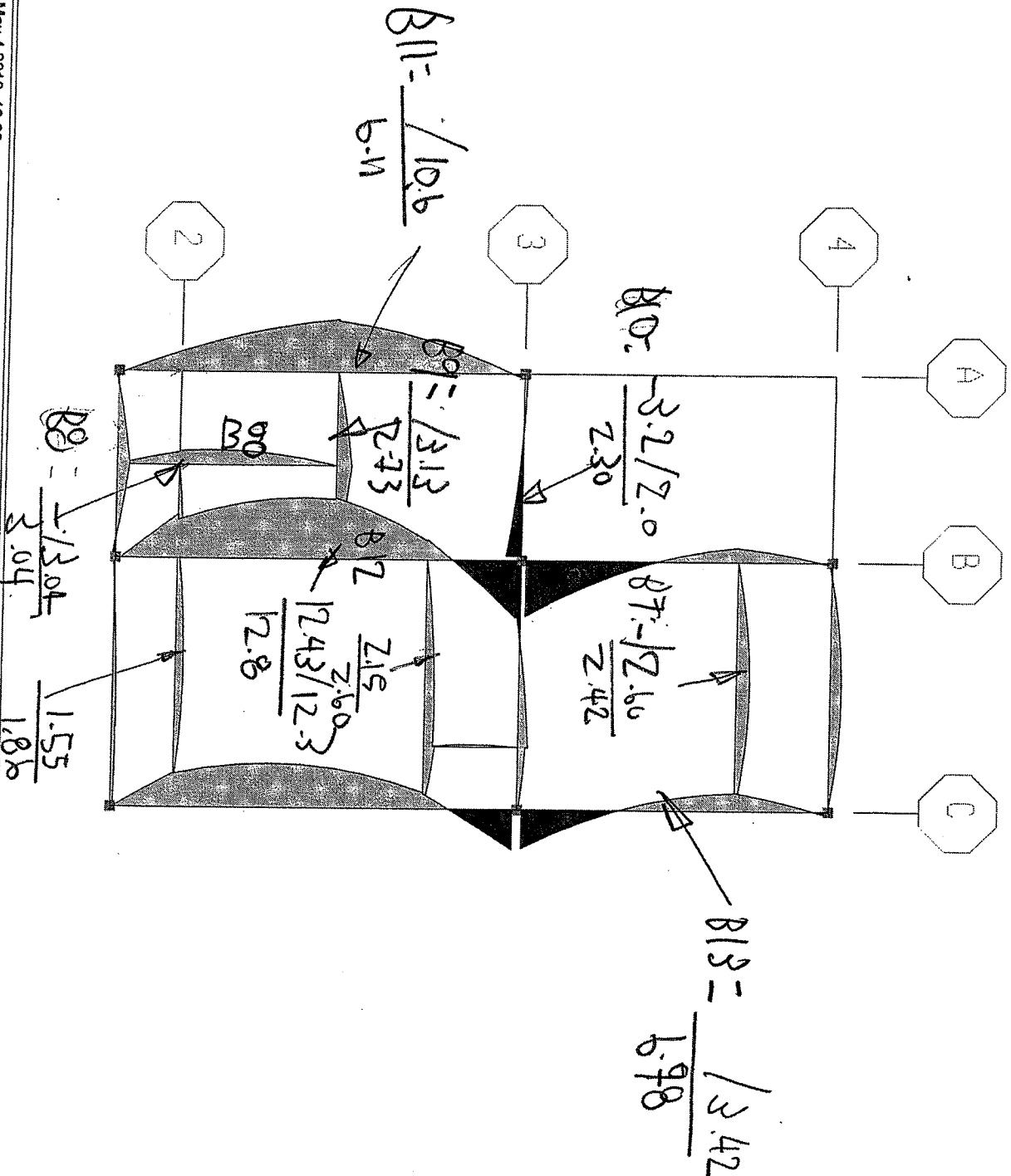
PROPERTY LINE

$\frac{E}{M} \frac{V}{V}$



ET/A: 7 - File: H2-53-05-F03 - May 27, 2010 8:54  
 Plan STORY1 - Elevation 1 Moment 3-3 Diagram (S2DL) - Ton-m Units

$$\frac{M/m \oplus}{V}$$



ETA: 7 - File: H2-53-04-F03 - May 4, 2010 13:20  
 Plan STORY2 - Elevation 4 Moment 3-3 Diagram (S2DL) - Ton-m Units

Job Title : อาคารพักอาศัย 2 ชั้น	Date : May-10	Subject : Design of Steel Purlin	
Designed : PSJ	Date :	Sheet :	Page :
Checked :			

A) Properties of Materials

Fy	Yield Strength	=	2,400 ksc
Es	Modulus of Elasticity	=	2.10E+06 ksc

Section Properties	
Section	: Tube-38x38x2.3 mm.
Unit weight	= 2.47 kg/m
Ix	= 6.54 cm <sup>4</sup>
Iy	= 6.54 cm <sup>4</sup>
SX	= 3.44 cm <sup>3</sup>
SY	= 3.44 cm <sup>3</sup>

B) Roof Configuration & Loading

Concrete Roofing Tile ;

L	Span	=	1.00 m	
@	Spacing of Purlin	=	1.00 m	
s	Angle of Roof	=	35 °	( Slope ≥ 17 ° )
SW	Self weight of Purlin	=	2.47 kg/m	
DL	Deal load of Roof Sheet	=	15 kg/m <sup>2</sup>	
LL	Live Load	=	30 kg/m <sup>2</sup>	
WL	Wind Pressure	=	50 kg/m <sup>2</sup>	

C) Check Bending Stresses

SW	Self weight of Purlin	=	2.47 kg/m
dl	Roof Sheet = DL*@	=	15.00 kg/m
ll	Live Load = LL*@	=	30.00 kg/m
wt	Total load	=	
	wt = SW+dl+ll	=	47.47 kg/m
wl	Wind Load Perpen. to Purlin	=	
	wl = WL*@*Sin θ	=	28.68 kg/m
wy	Wy = wt*Cos θ +wl	=	67.56 kg/m
wx	Wx = wt*Sin θ	=	27.23 kg/m
cmx	Moment coefficient for X-axis	=	0.125
cmy	Moment coefficient for Y-axis	=	0.125
Mx	Mx = cmx*wy*L <sup>2</sup>	=	8.45 kg.m
My	My = cmy*wx*L <sup>2</sup>	=	3.40 kg.m
fb	fb = (Mx/SX)+(My/(SY/2))	=	443 ksc
Fb	Alloable Stress	=	
	Fb = 0.6*Fy	=	1,440 ksc

fb < Fb OK

D) Check Deflection

cd	Deflection coefficient	=	0.0130
Δy	Deflection	=	
	Δy = (cd*wy*L <sup>3</sup> )/(Es*Ix)	=	0.07 cm
Δ-all	Allowable Deflection	=	
	Δ-all = L/240	=	0.42 cm

dy < Δ-all OK

Job Title : อาคารพักอาศัย 2 ชั้น	Date : May-10	Subject :
Designed : PSJ	Date :	Sheet :
Checked :		Page :

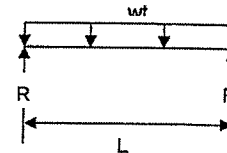
A) Properties of Materials

Fy	Yield Strength	=	2,400 ksc
Es	Modulus of Elasticity	=	2.10E+06 ksc

Section Properties	
Section	: 2C-150x50x20x3.2
Unit Weight	= 13.52 kg/m
Ix	= 560.00 cm <sup>4</sup>
SX	= 74.80 cm <sup>3</sup>

B) Roof Configuration & Loading

L	Span, L	=	4.00 m
θ	Angle of Roof	=	35 °
SW	Rafter DL	=	13.52 kg/m
W	Total Load from Rafter	=	520 kg/m
wt	Total load	=	
	wt = (SW+W)	=	533.52 kg/m



C) Check Bending Stresses

M+max	$M+max = 0.125 \cdot wt \cdot L^2$	=	1,067.04 kg.m
fb	$fb = M+max/SX$	=	1,427 ksc
Fb	Alloable Stress	=	
	$Fb = 0.6 \cdot Fy$	=	1,440 ksc

**fb < Fb OK**

D) Check Deflection

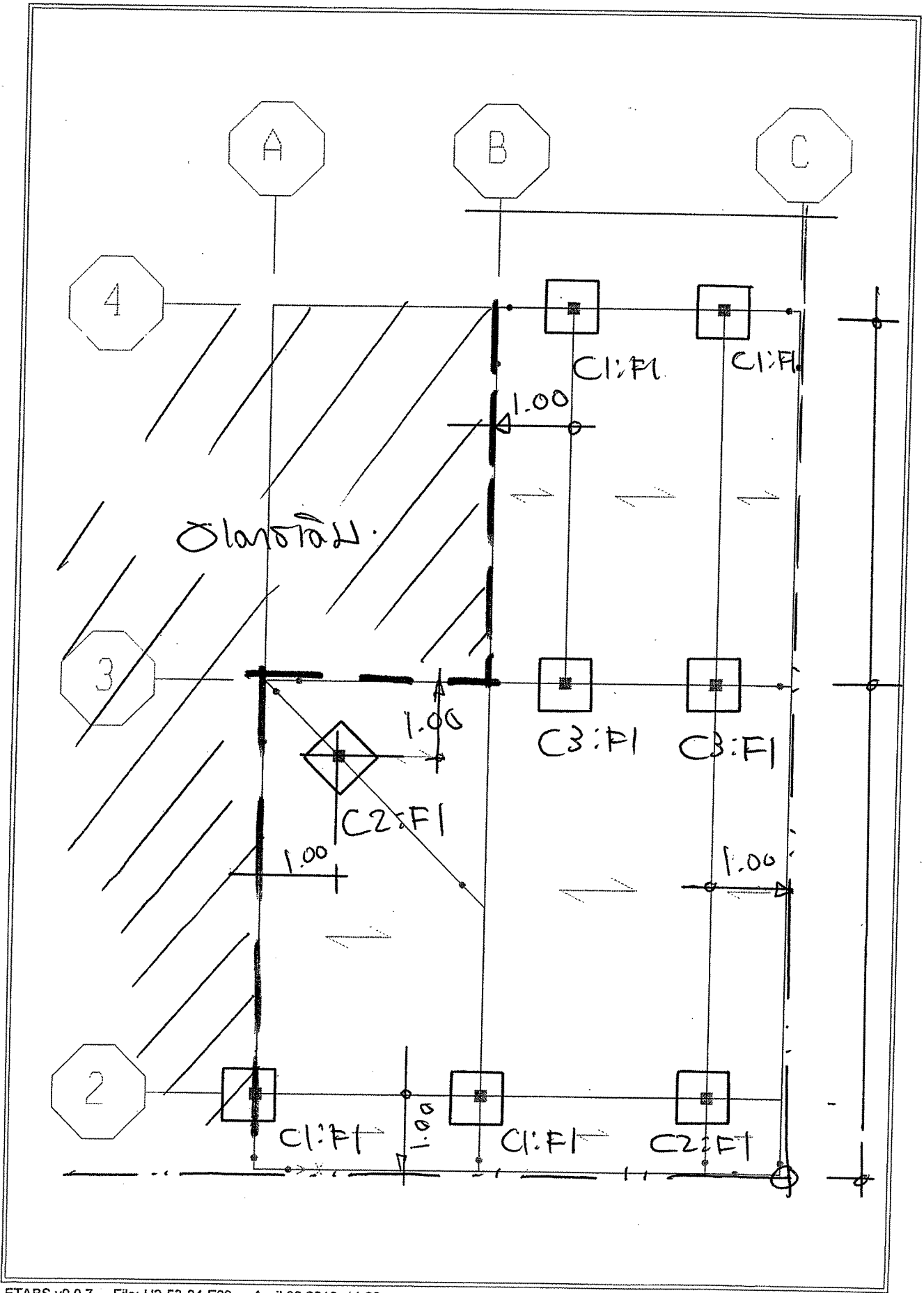
Δo	Deflection in span	=	
	$\Delta o = (5 \cdot wt \cdot L^3) / (384 \cdot Es \cdot Ix)$	=	1.51 cm
Δ-all	Allowable Deflection	=	
	$\Delta\text{-allowable} = L/240$	=	1.67 cm

**dy < d-all OK**

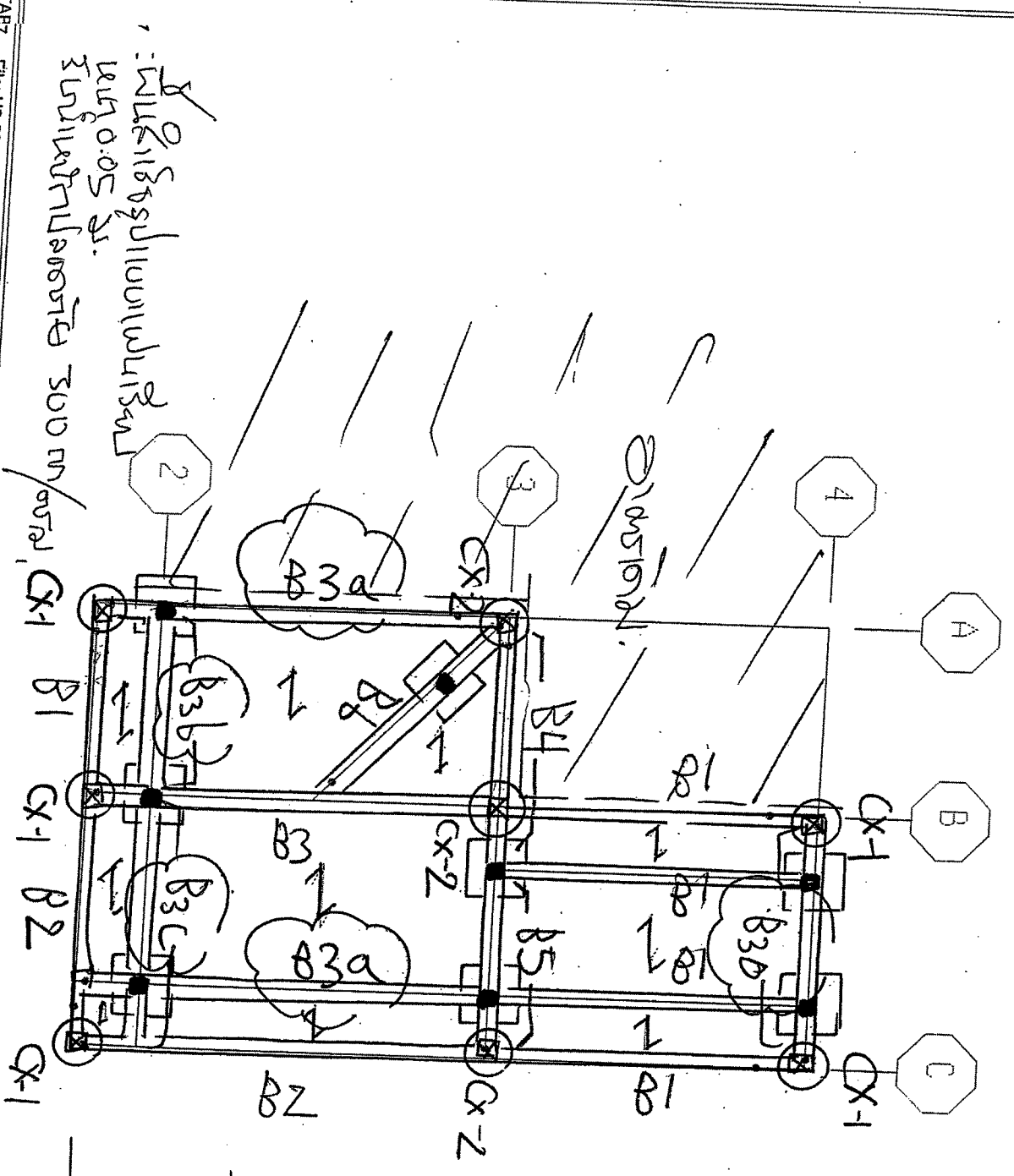
D) Reaction

R		=	1,067 kg
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ΑΝΑΛΟΓΩΣΗ

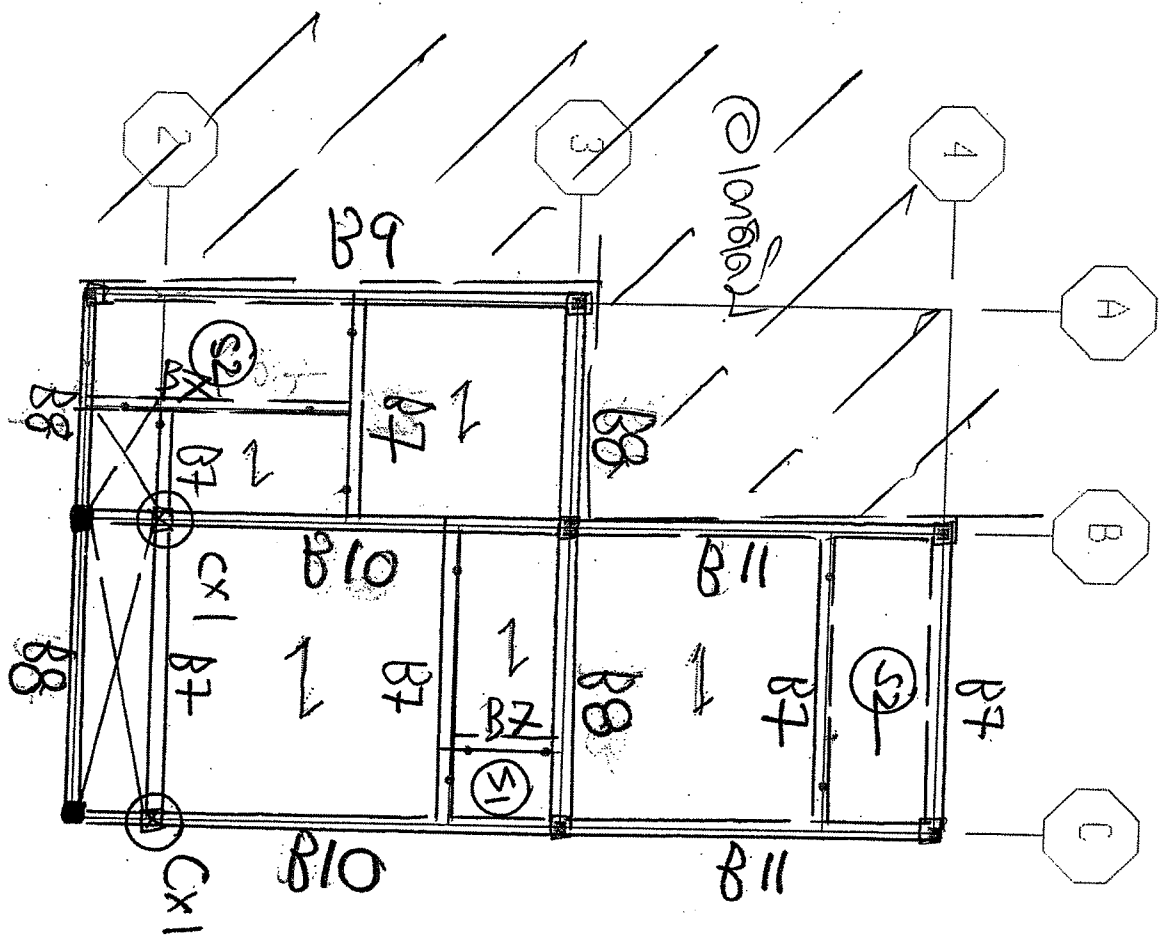


Παρήση 02-881-7749

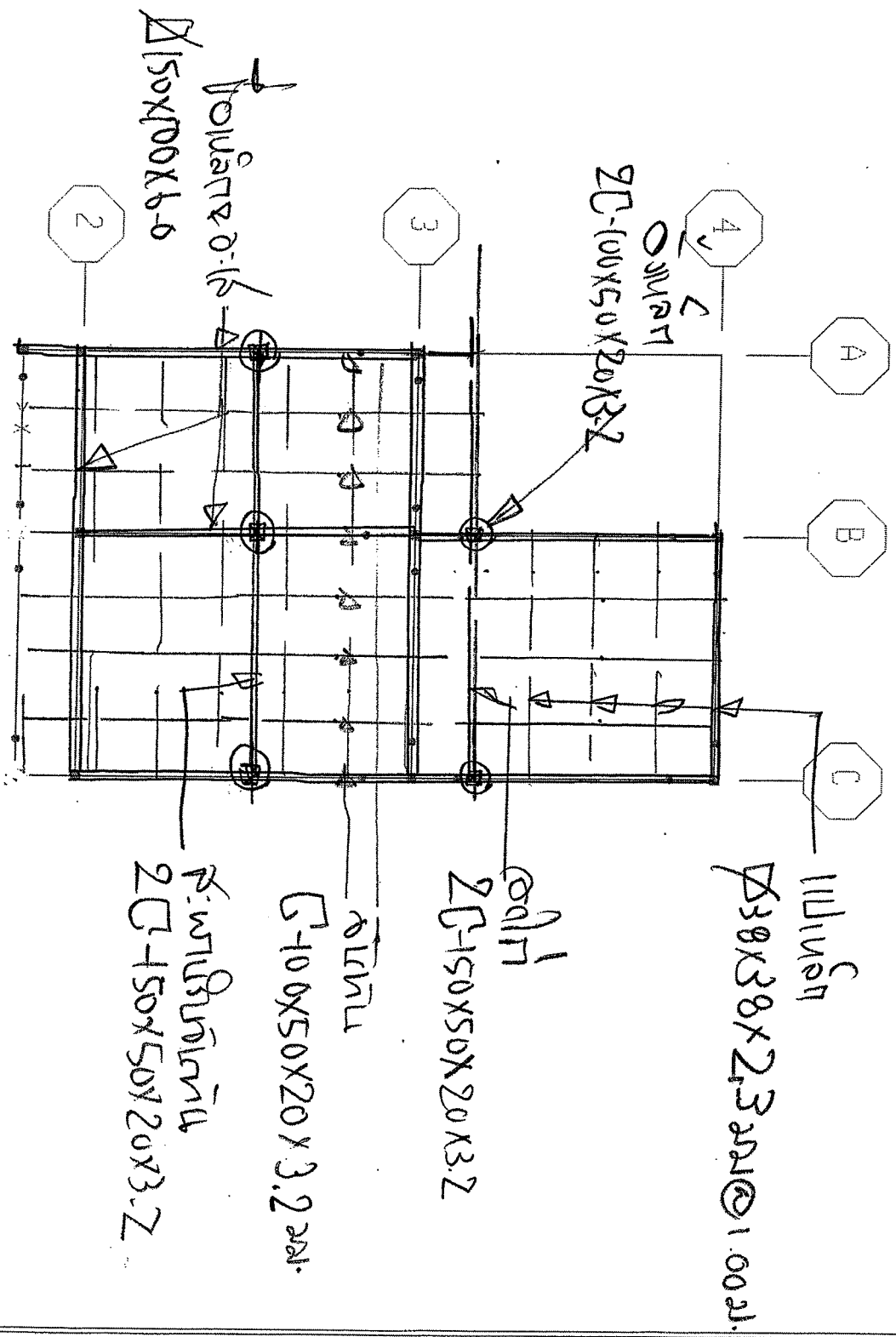


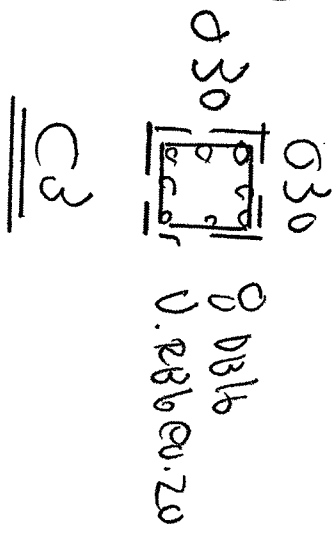
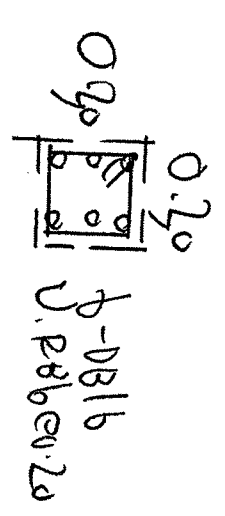
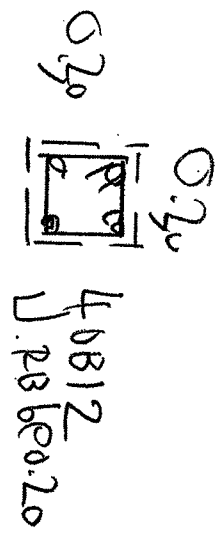
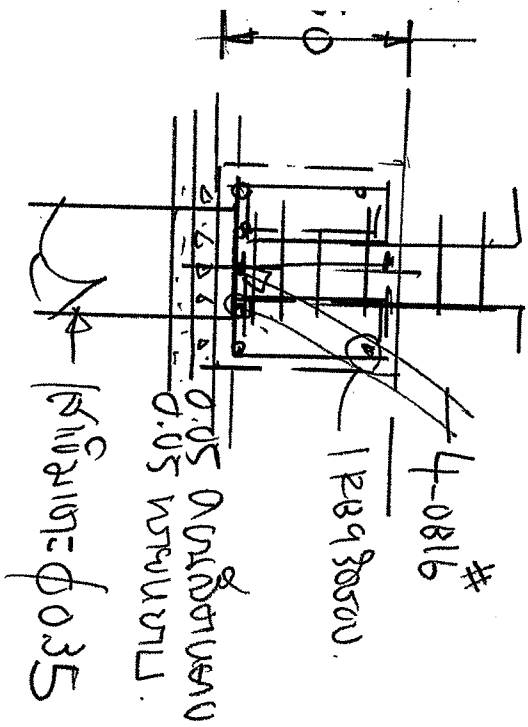
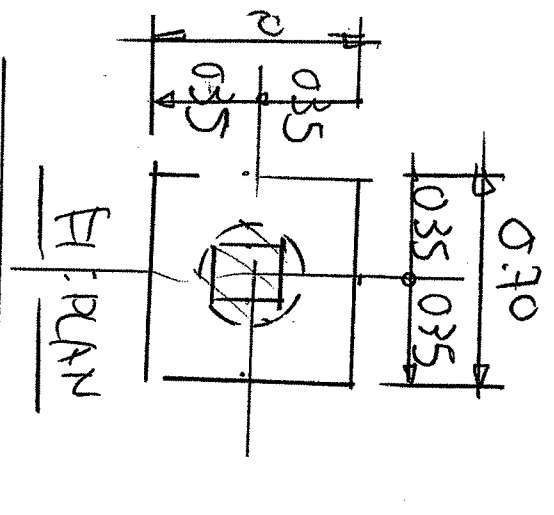
Επίπεδο 300 mm/οροφή  
 Επίπεδο 0.05 γ.κ.

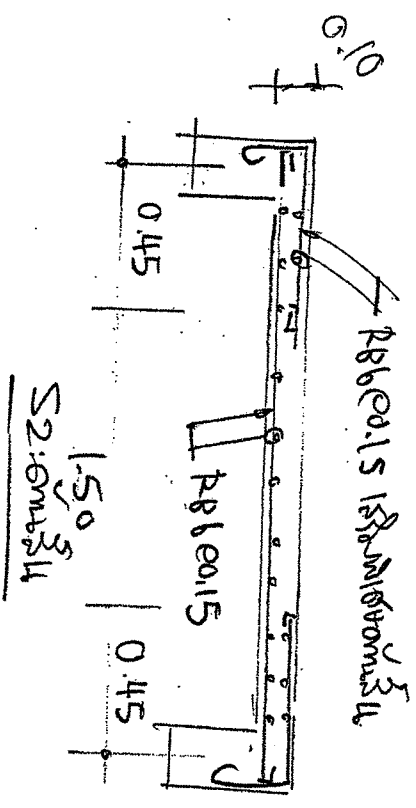
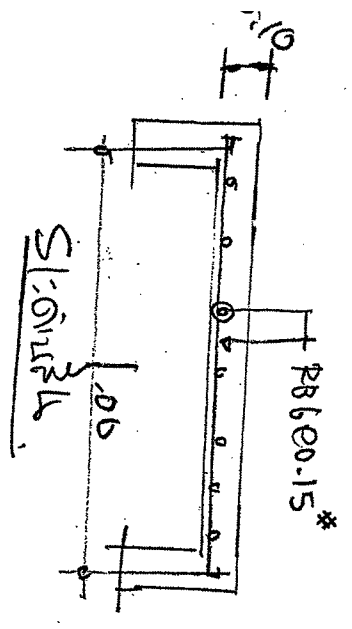
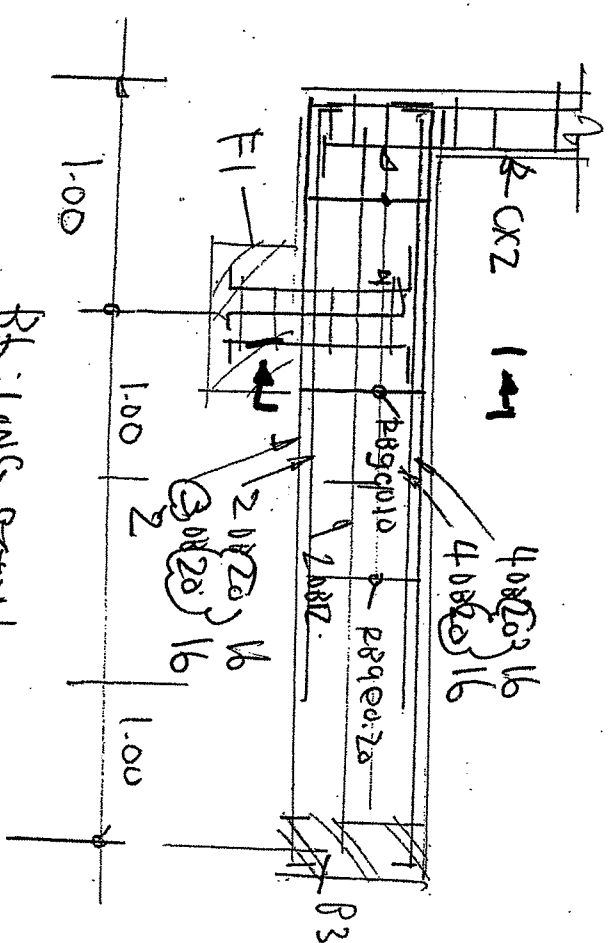
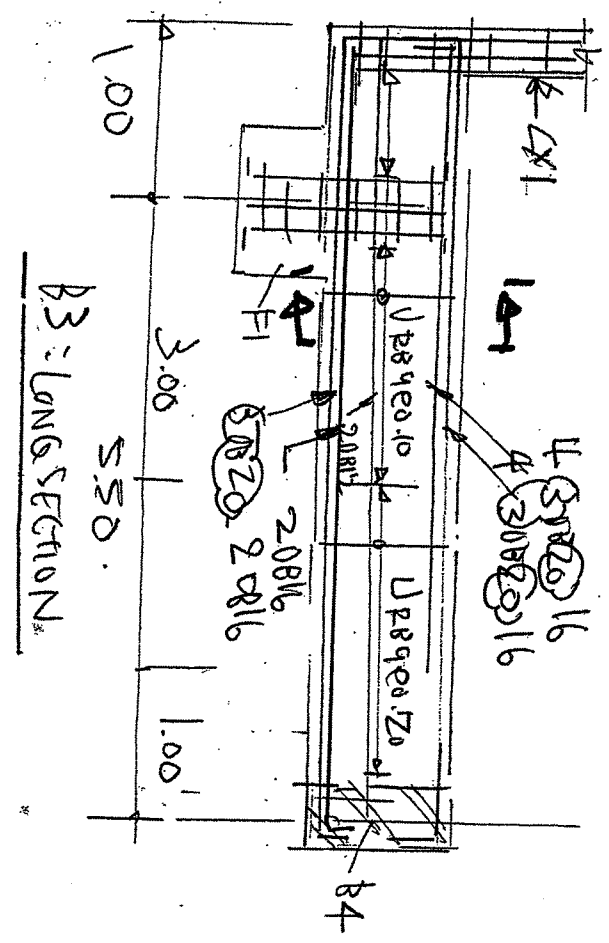
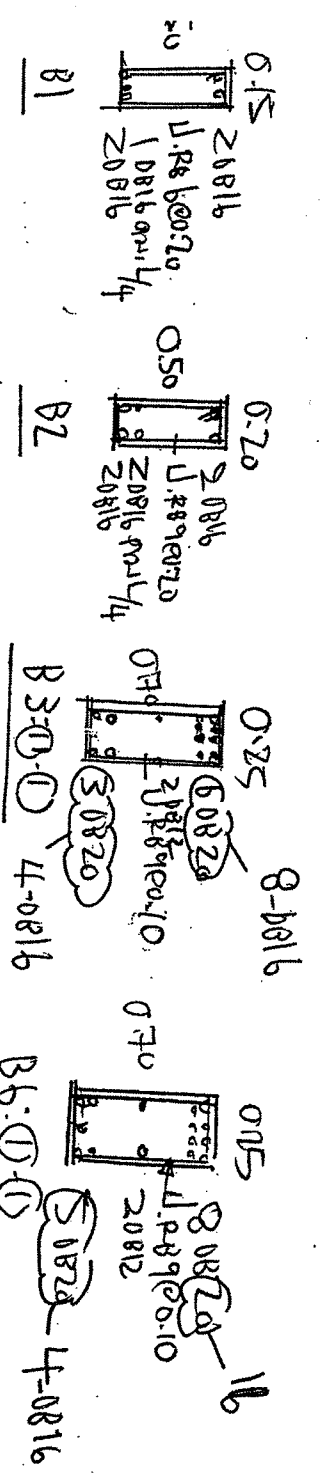


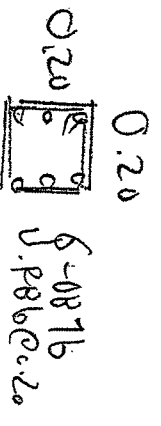
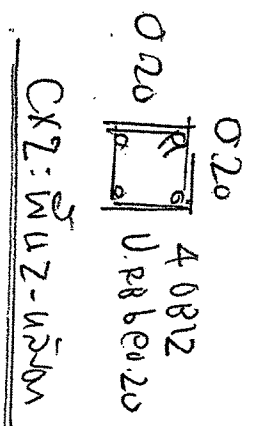
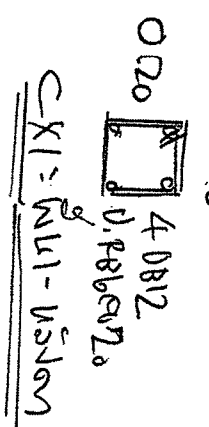
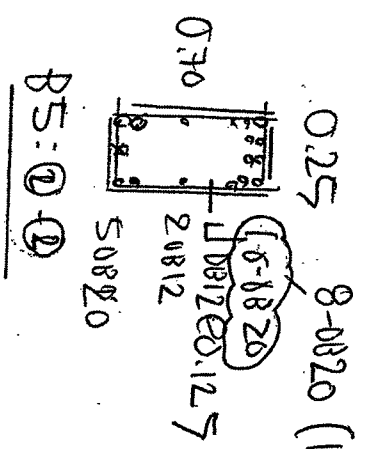
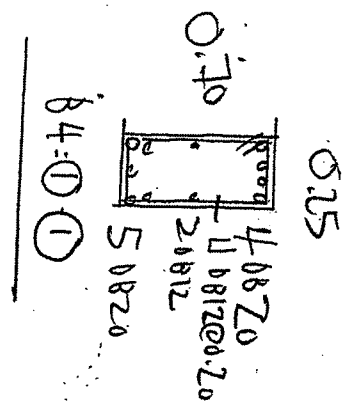
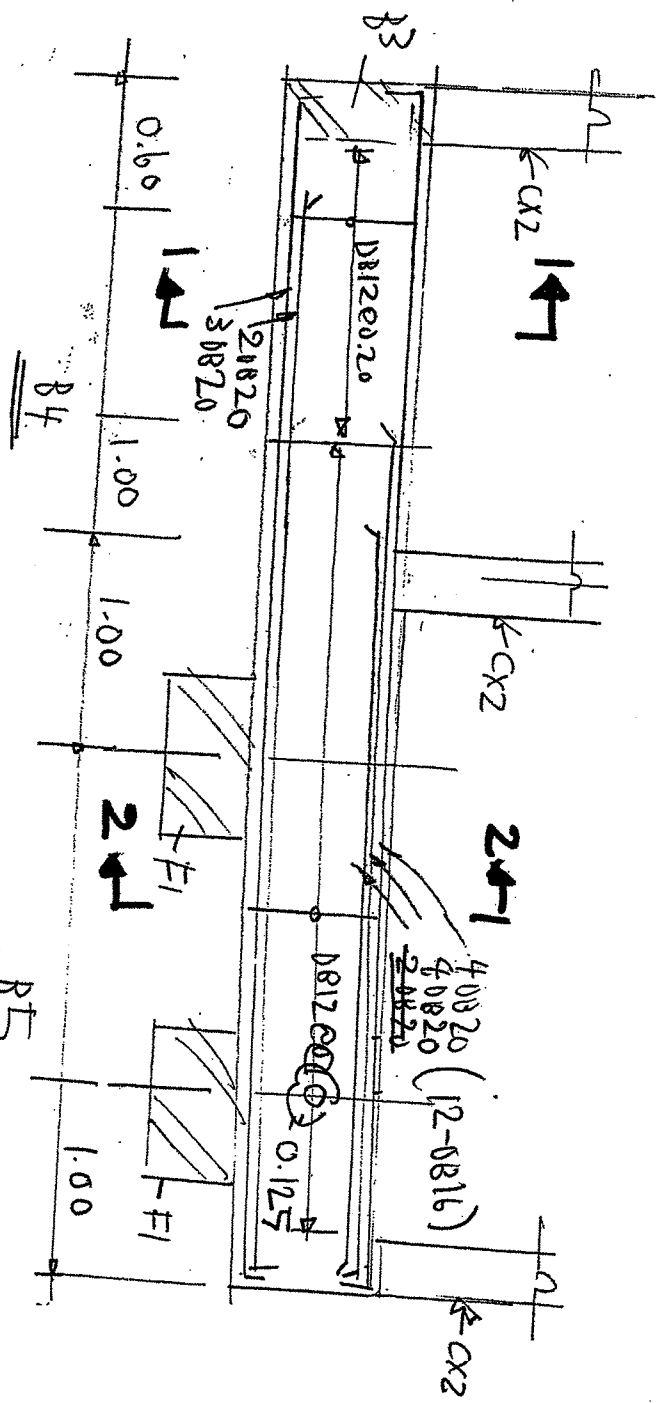


111/12/2011  
R/L 2

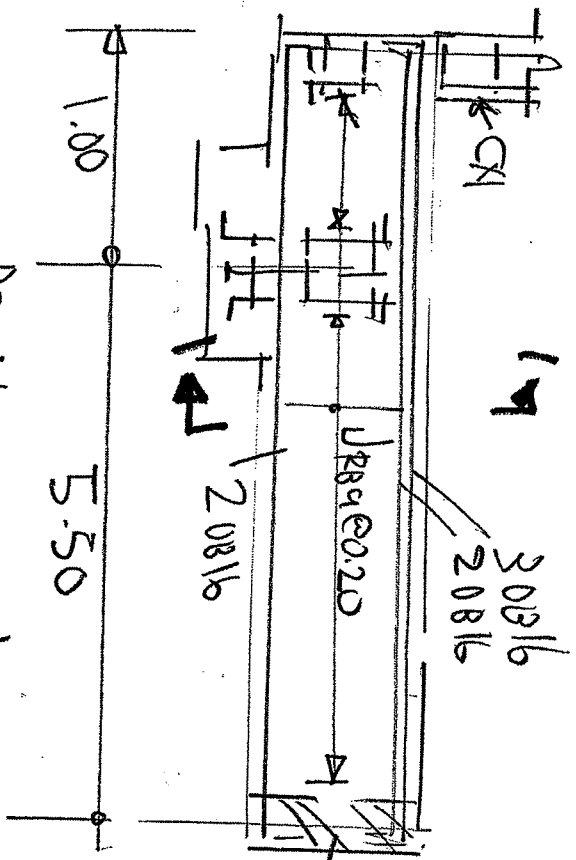




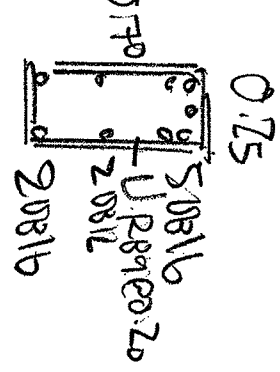




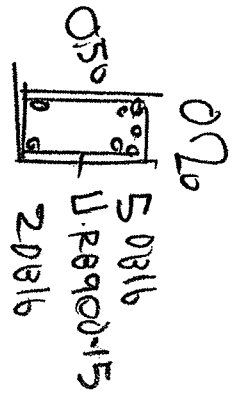
CX2:  $\vec{N}u\vec{B}u11 - \vec{N}u\vec{B}u2$



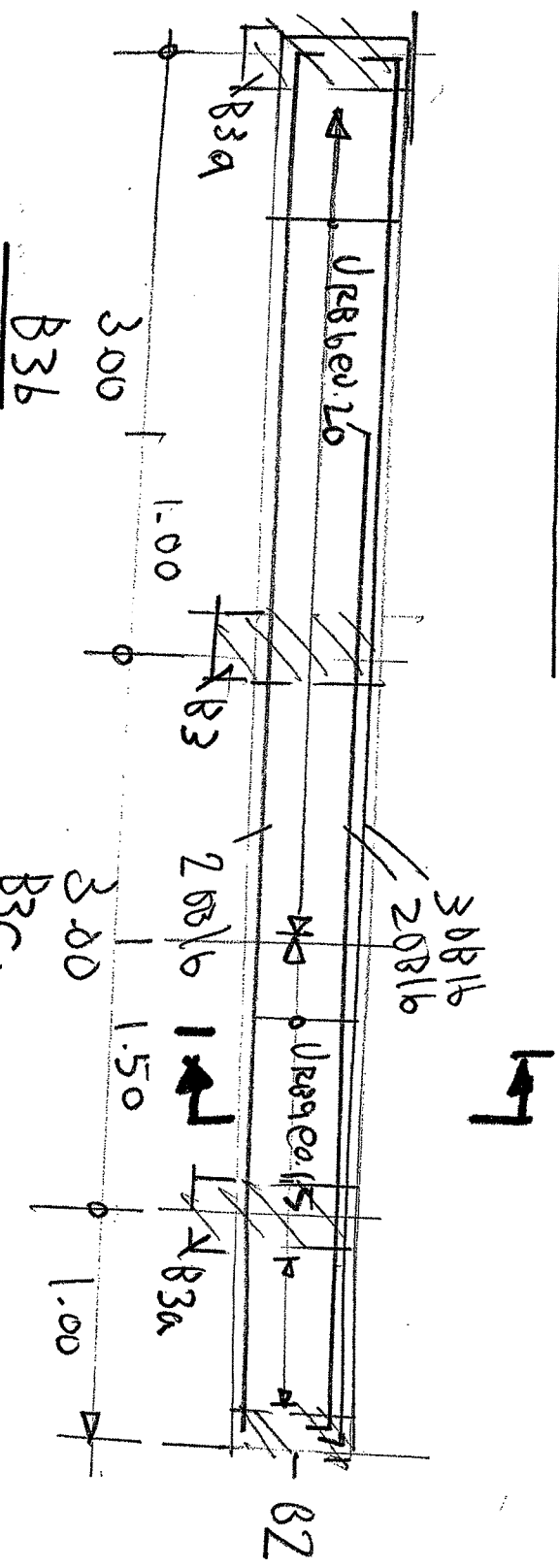
B3a: LONG SECTION



B3a: 1-1

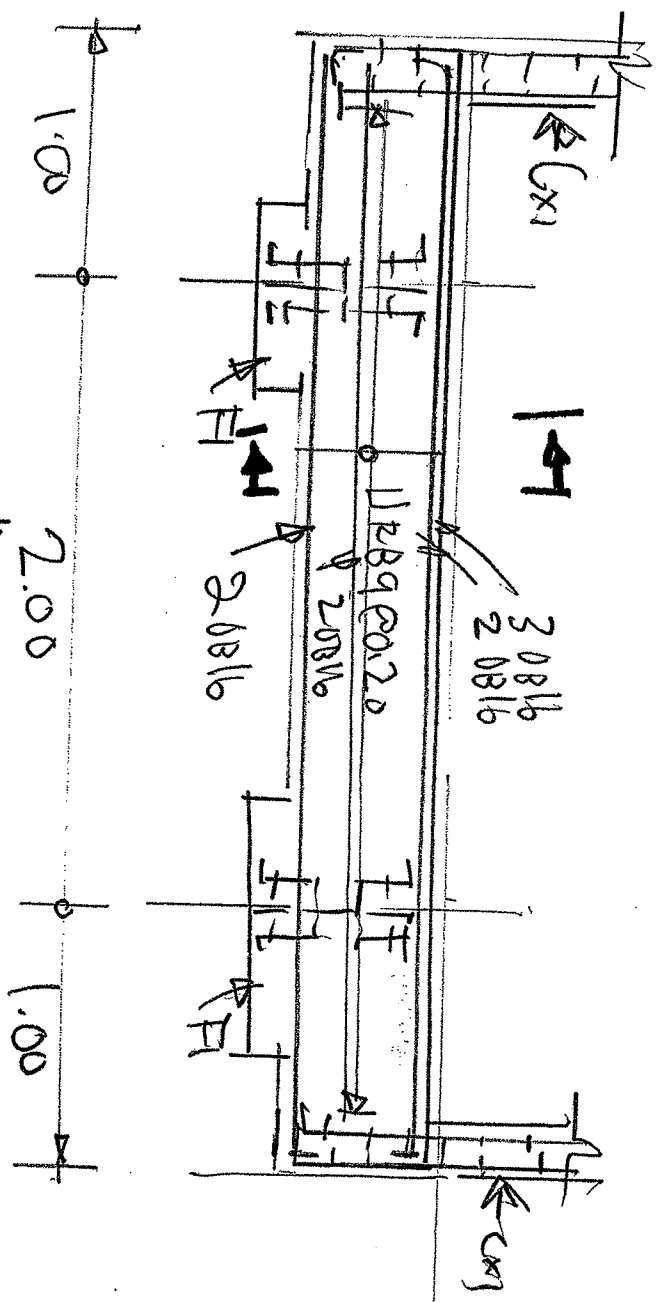


B3c: 1-1

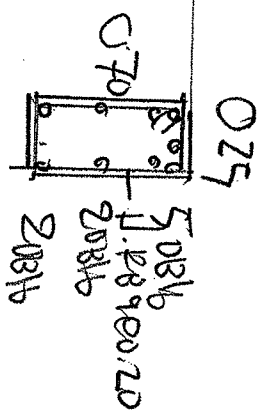


B3b

B3c



B3D: Long section



B3D: 1-1

