

Volume 3

Appendix

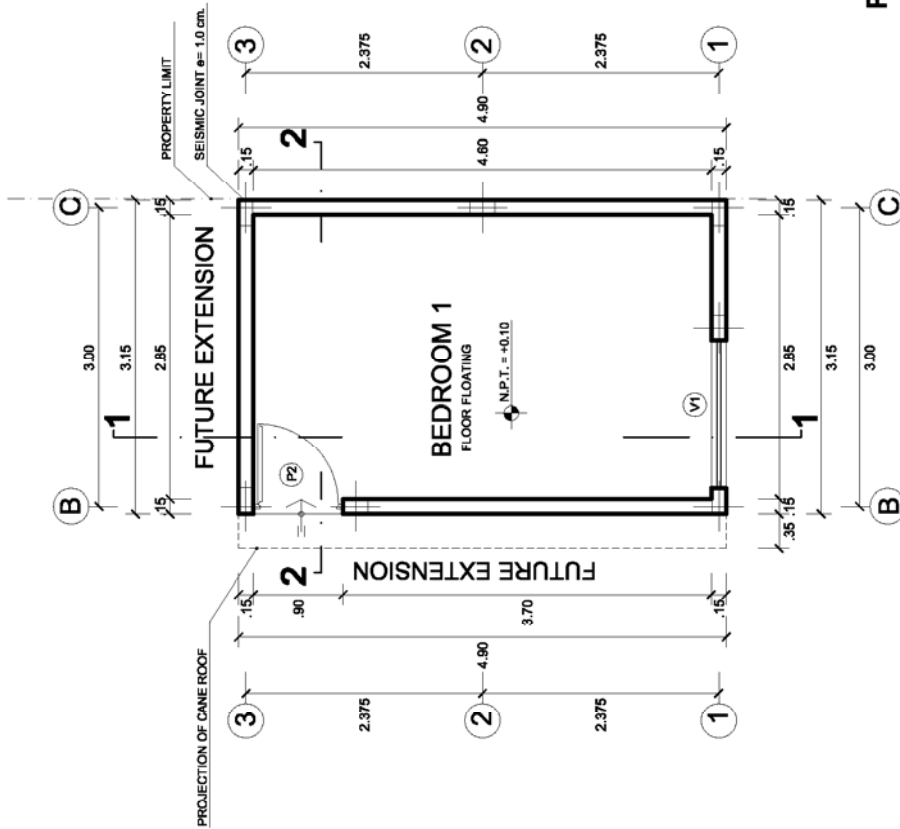
- APPENDIX 1. TYPICAL PROTOTYPE DRAWINGS FOR SAFER HOUSING
- APPENDIX 2. MINIMUM REQUIREMENTS FOR SAFER HOUSING
- APPENDIX 3. AUTHORIZATION OF MINIMUM REQUIREMENTS BY THE DIRECTOR OF CISMID
- APPENDIX 4. FINAL REPORT OF PILOT PROJECT 1 PREPARED BY THE LOCAL ENGINEERING COMPANY
CONTRACTED WITH THE JICA STUDY TEAM
- APPENDIX 5. TYPICAL SHOPPING LIST
- APPENDIX 6. ANNUAL OF IMPROVED BUILDING PERMIT FOR SAFER HOUSING
- APPENDIX 7. MANUAL OF MONITORING CONSTRUCTION FOR SAFER HOUSING
- APPENDIX 8. MANUAL OF SIMPLE INSPECTION FOR CONSTRUCTION OF SAFER HOUSING
- APPENDIX 9. POSTER OF MINIMUM REQUIREMENTS FOR SAFER HOUSING
- APPENDIX 10. POSTER OF PROTOTYPE DRAWINGS FOR SAFER HOUSING
- APPENDIX 11. LEAFLET OF PROTOTYPE DRAWINGS FOR SAFER HOUSING IN THE PROCESS OF
BUILDING PERMIT
- APPENDIX 12. TEST SHEETS OF OJT FOR TECHNICAL OFFICERS OF PUBLIC WORK SECTION IN
DISTRICT MUNICIPALITY
- APPENDIX 13. TEST RESULTS OF OJT FOR TECHNICAL OFFICERS OF PUBLIC WORK SECTION IN
DISTRICT MUNICIPALITY
- APPENDIX 14. MUNICIPALITY RESOLUTION OF DATA BANK

Appendix 1

TYPICAL PROTOTYPE DRAWINGS FOR SAFER HOUSING

Prototype 1

Prototype 1 No. 6: Simple tie beam; roofing of cane; electrical installation available; without latrine. The cost is S/. 5,942.17



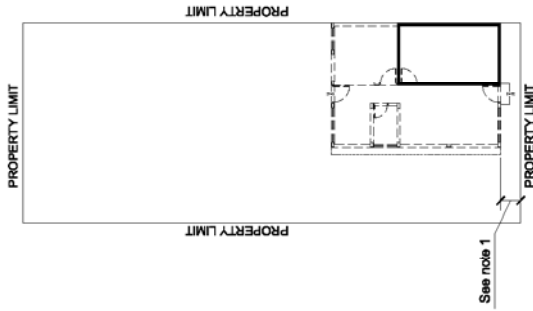
PLANT OF FIRST FLOOR
SCALE 1/75

BONUS S/6000
PROTOTYPE 1

TABLE OF BAYS

CLASS	WIDE	HEIGHT	SPLAY	QUANTITY
DOOR				
P 2	0.90	2.30	-	1
WINDOW				
V 1	1.50	1.35	0.95	1

Ply wood



LOCATION OF THE PROTOTYPE
AT THE LAND

CONSTRUCTED AREA = 15.44 m²
ROOFING AREA = 17.15 m²

NOTE 1: THE FRONTAL DISTANCE IS GIVEN BY
THE PARAMETER OF THE DISTRICT.



PROJECT :
PROVISION OF THE RECONSTRUCTIONS OF SAFER
HOUSING
RECONSTRUCTIONS STUDY OF SEISMIC RESISTANT
HOUSING IN THE REPUBLIC OF PERU

SPECIALITY:
ARCHITECTURE - PROTOTYPE 1
PLANT

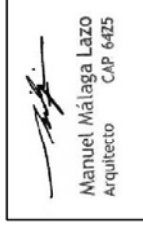
N° LAMINE:
A-01
PROTOTYPE 1
No 08

APPROVED:

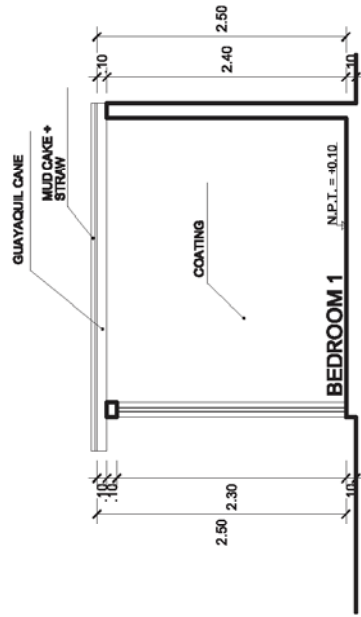
DATE:
SEPTEMBER 2008

PROJECT EXECUTOR
COMPANY :

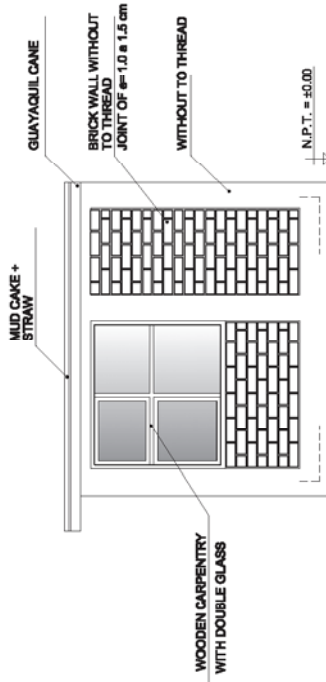
MBI SAC
MASTERBUILDING INGENIEROS SAC



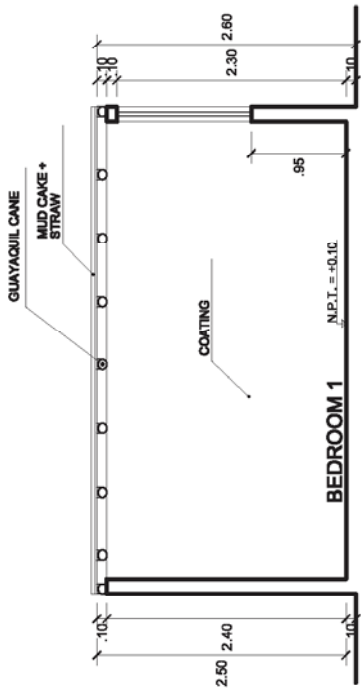
Manuel Malaga Lazo
Arquitecto
CAP 6425



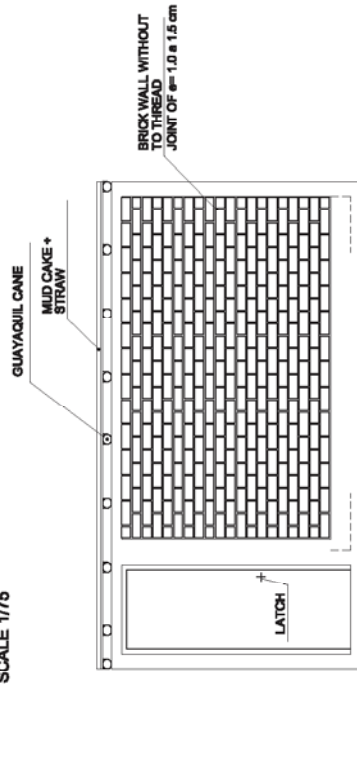
SECTION 2-2
SCALE 1/75



FRONT ELEVATION
SCALE 1/75




SECTION 1-1
SCALE 1/75



LEFT SIDE ELEVATION
SCALE 1/75

BONUS S/ 6000
PROTOTYPE 1


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Arquitecto
CAP 6425

PROJECT EXECUTOR
COMPANY :
MBI SAC
MASTERBUILDING INGENIEROS SAC

DATE:
SEPTEMBER 2008

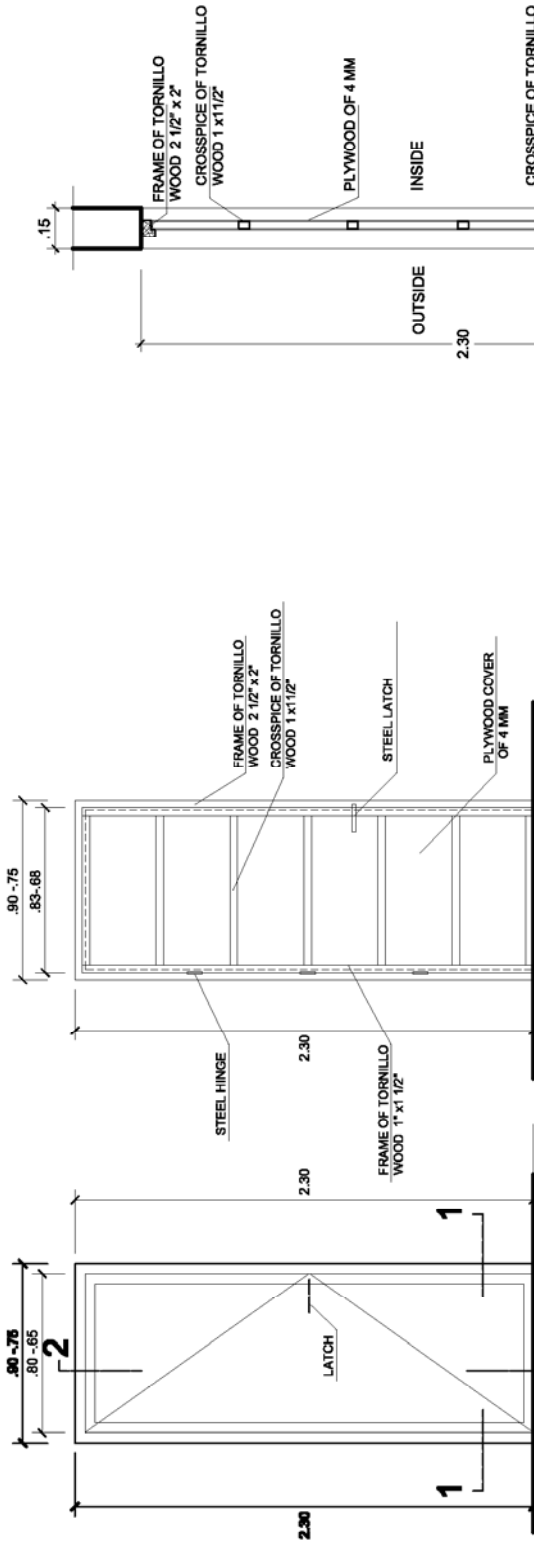
APPROVED:

N° LAMINE:
A-02
PROTOTYPE 1
No 08

SPECIALITY:
ARCHITECTURE - PROTOTYPE 1
CUTS AND ELEVATIONS

PROJECT :
PROVISION OF THE RECONSTRUCTIONS OF SAFER
HOUSING
RECONSTRUCTIONS STUDY OF SEISMIC RESISTANT
HOUSING IN THE REPUBLIC OF PERÚ

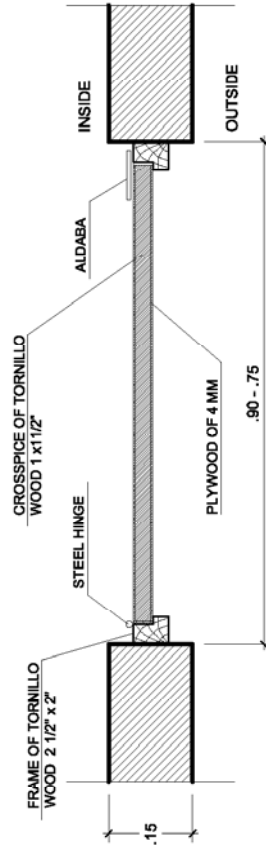




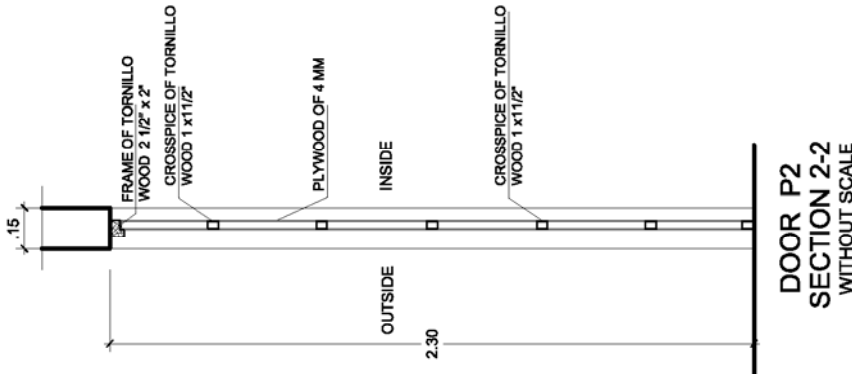
DETAILS OF DOOR P2
WITHOUT SCALE

DETAILS OF DOOR P2


DOOR P2
PLYWOOD
WITHOUT SCALE



SECTION 1 - 1 (P2)
WITHOUT SCALE



DOOR P2
SECTION 2-2
WITHOUT SCALE


 Manuel Málaga Lazo
 Arquitecto
 CAP 6425



PROJECT:
 PROVISION OF THE RECONSTRUCTIONS OF SAFER
 HOUSING
 RECONSTRUCTIONS STUDY OF SEISMIC RESISTANT
 HOUSING IN THE REPUBLIC OF PERÚ

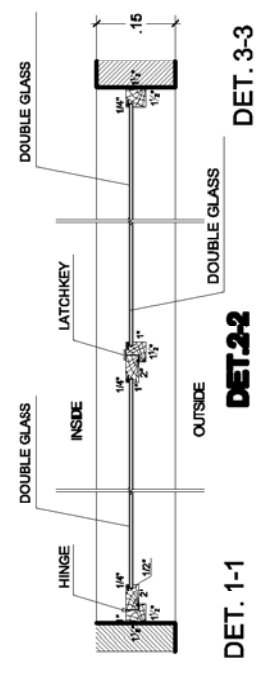
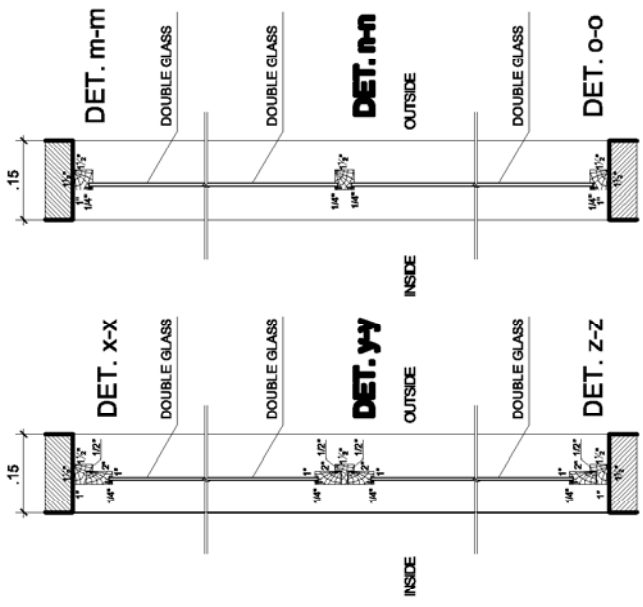
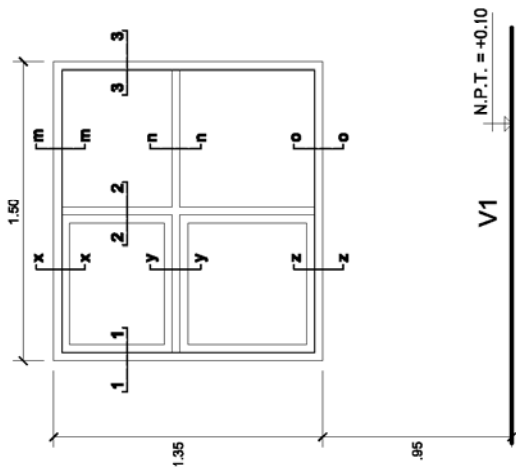
SPECIALITY:
 ARCHITECTURE -
 PROTOTYPE 1
 CARPENTRY DETAILS

Nº LAMINE:
D-01
 PROTOTYPE 1
 No 06

APPROVED:

DATE:
 SEPTEMBER 2008

PROJECT EXECUTOR
 COMPANY:
MBI SAC
 MASTERBUILDING INGENIEROS SAC



**DETAILS OF WINDOW V1
WITHOUT SCALE**

Manuel Málaga Lazo
Arquitecto
CAP 6425

PROJECT EXECUTOR
COMPANY :
MBI SAC
MASTERBUILDING INGENIEROS SAC

DATE:
SEPTEMBER 2008

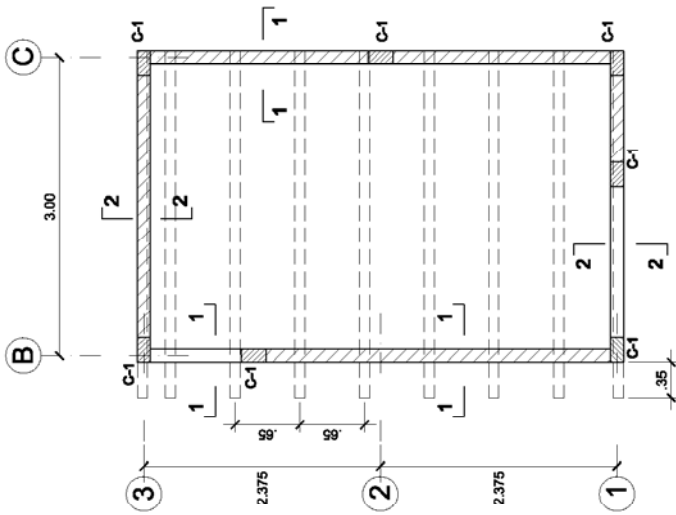
APPROVED:

N° LAMINE:
D-02
PROTOTYPE 1
No 08

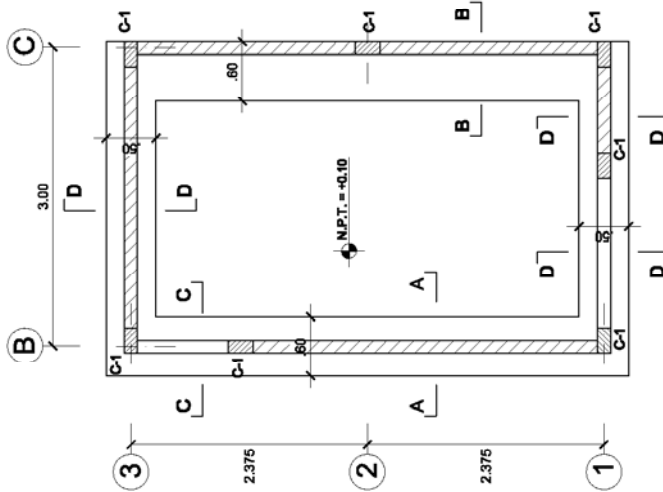
SPECIALITY:
ARCHITECTURE -
PROTOTYPE 1
CARPENTRY DETAILS

PROJECT :
PROVISION OF THE RECONSTRUCTIONS OF SAFER
HOUSING
RECONSTRUCTIONS STUDY OF SEISMIC RESISTANT
HOUSING IN THE REPUBLIC OF PERÚ





**CANE COVERING ROOF +
CRUSHED CANE + MUD CAKE**
SCALE 1/75



FOUNDATION
SCALE 1/75

BONUS S/6000
PROTOTYPE 1

PROJECT :
PROVISION OF THE RECONSTRUCTIONS OF SAFER
HOUSING
RECONSTRUCTIONS STUDY OF SEISMIC RESISTANT
HOUSING IN THE REPUBLIC OF PERU

SPECIALITY :
FOUNDATION AND SLAB
ESTRUCTURE - PROTOTYPE 1

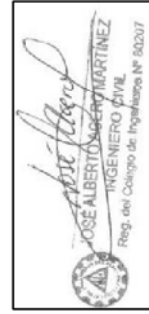
N° LAMINE:
E-01
PROTOTYPE 1
No 08

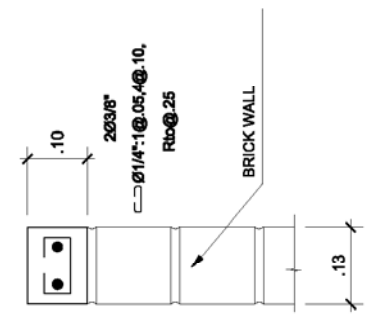
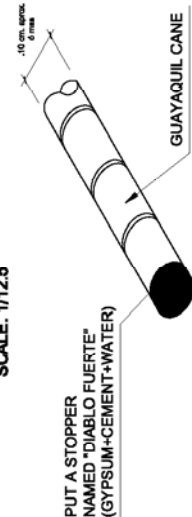
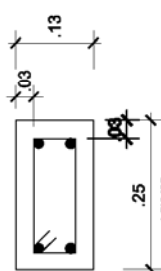
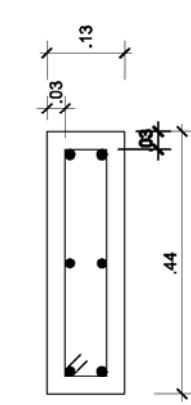
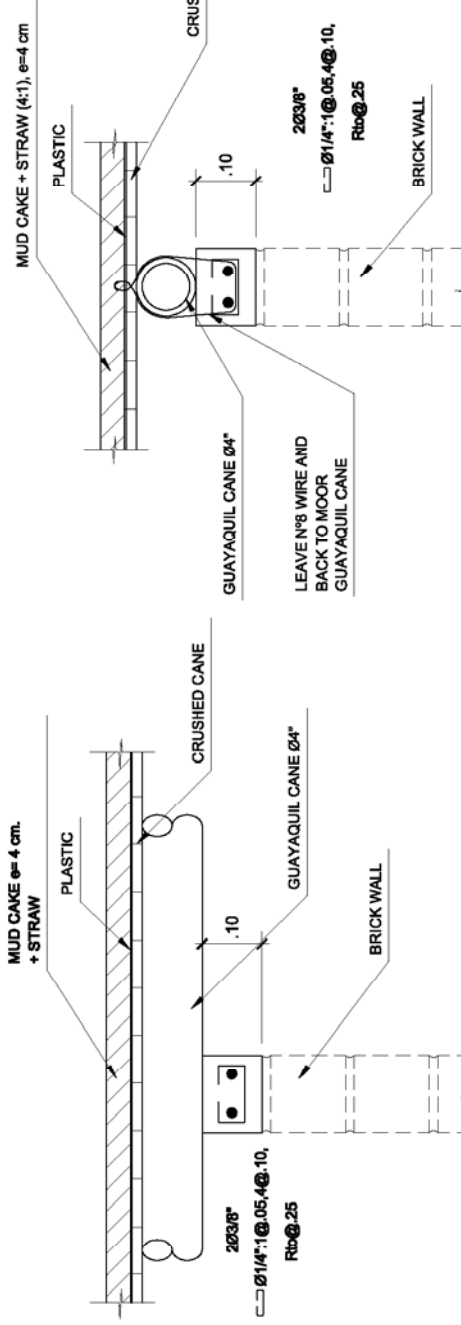
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DATE:
SEPTEMBER 2008

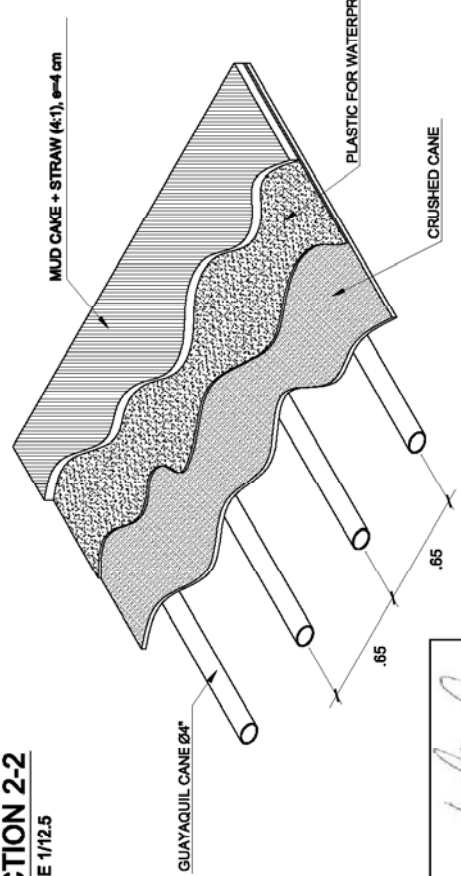
**PROJECT EXECUTOR
COMPANY :**

MBI SAC
MASTERBUILDING INGENIEROS SAC





SECTION 2-2
SCALE 1/12.5



Jose Alberto Aguirre Martinez
INGENIERO CIVIL
Reg. del Colegio de Ingenieros N° 80207

DETAIL OF THE CLOSING OF THE END CANE FOR PROTECTION
WITHOUT SCALE

PROJECT:
PROVISION OF THE RECONSTRUCTIONS OF SAFER HOUSING
RECONSTRUCTIONS STUDY OF SEISMIC RESISTANT HOUSING IN THE REPUBLIC OF PERU

SPECIALITY:
TYPICAL DETAILS OF THE SLAB STRUCTURE -
PROTOTYPE 1

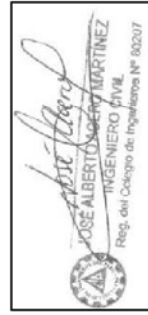
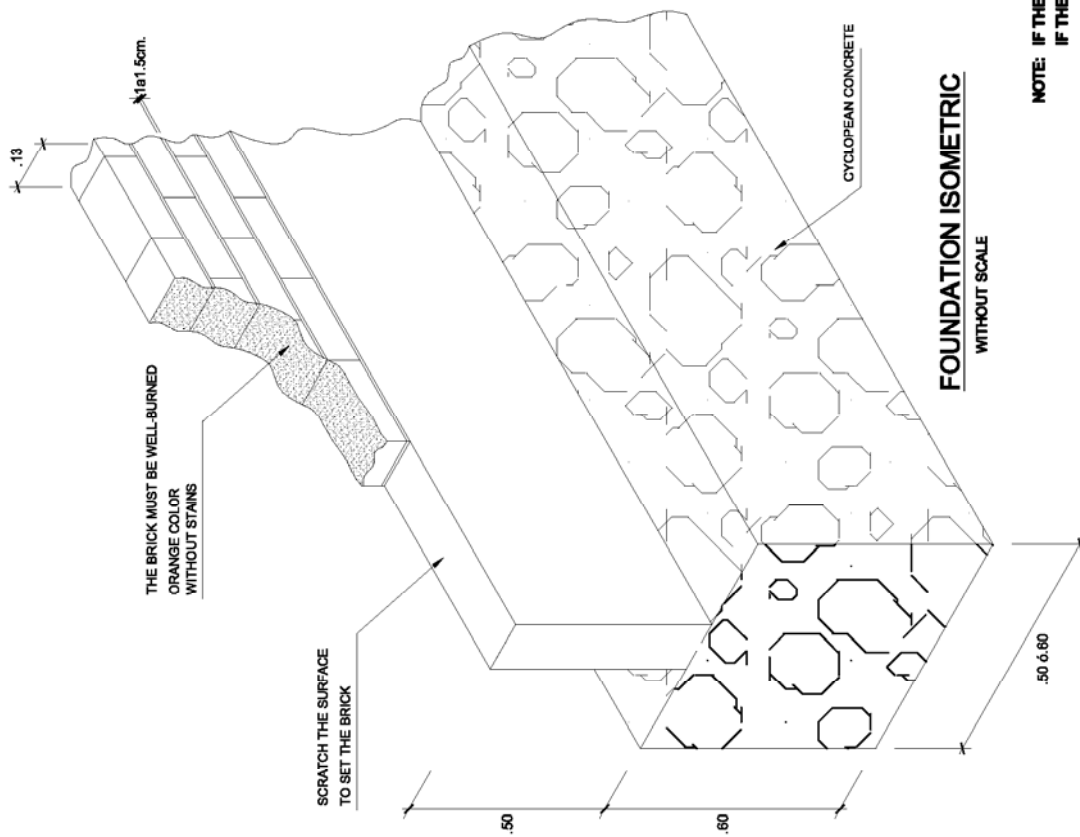
N° LAMINE:
E-02
PROTOTYPE 1
No 06

APPROVED:

DATE:
SEPTEMBER 2008

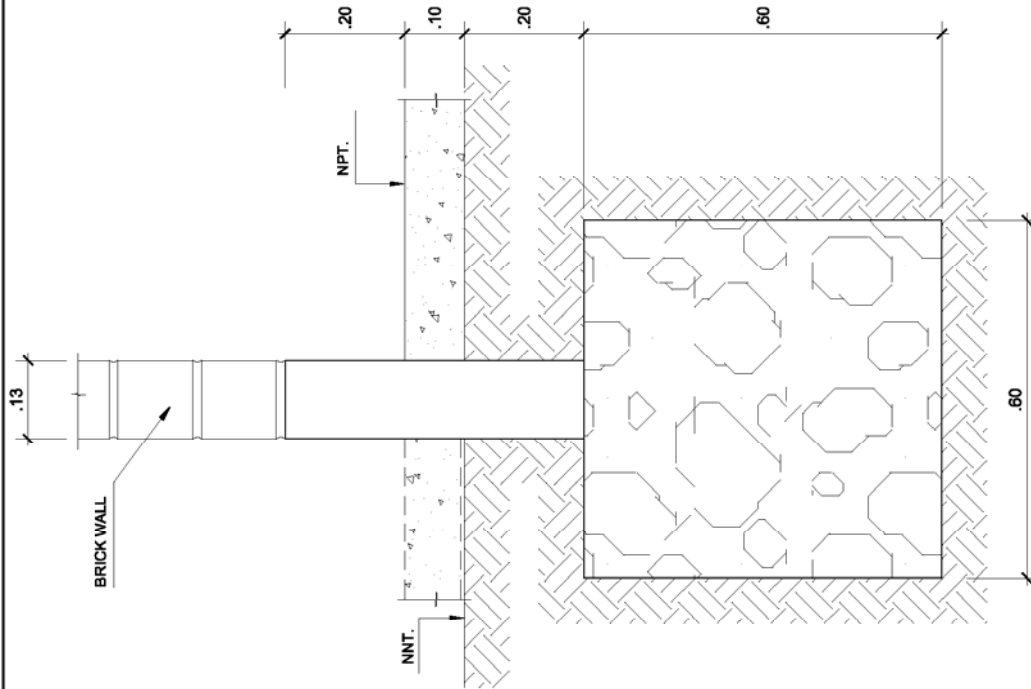
PROJECT EXECUTOR COMPANY:
MBI SAC
MASTERBUILDING INGENIEROS SAC





NOTE: IF THE SOIL HAS BAD RESISTANCE PUT REINFORCEMENT IN THE TIE BEAM
IF THE SOIL HAS GOOD RESISTANCE NOT PUT REINFORCEMENT IN THE TIE BEAM

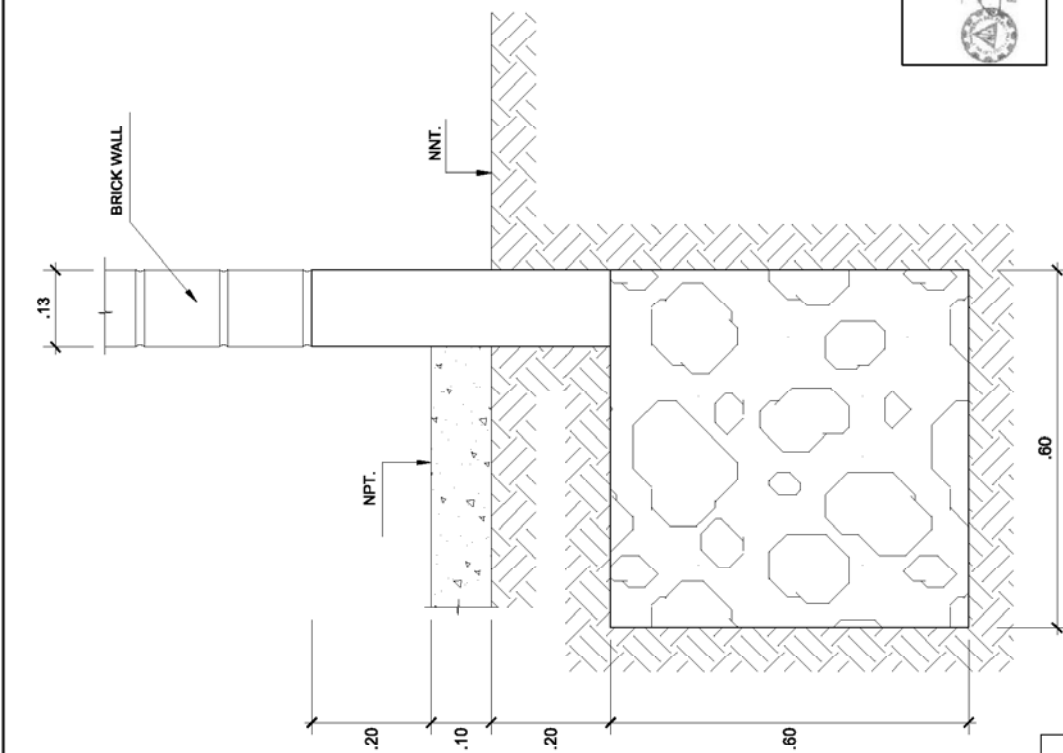
	PROJECT : PROVISION OF THE RECONSTRUCTIONS OF SAFER HOUSING RECONSTRUCTIONS STUDY OF SEISMIC RESISTANT HOUSING IN THE REPUBLIC OF PERU	SPECIALITY: TYPICAL DETAILS OF FOUNDATIONS - PROTOTYPE 1	Nº LAMINE: E-03 PROTOTYPE 1 No 06	APPROVED:	DATE: SEPTEMBER 2008	PROJECT EXECUTOR COMPANY : MBI SAC MASTERBUILDING INGENIEROS SAC
	(Empty space for additional notes or signatures)					



LEGEND

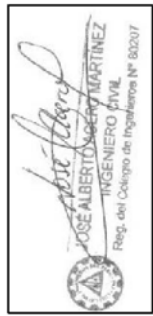
NNT	Natural level of land
NPT	Level of finished floor

SECTION A-A
SCALE 1/12.5



SECTION B-B
SCALE 1/12.5

NOTE: IF THE SOIL HAS BAD RESISTANCE PUT REINFORCEMENT IN THE TIE BEAM
IF THE SOIL HAS GOOD RESISTANCE NOT PUT REINFORCEMENT IN THE TIE BEAM



PROJECT:
PROVISION OF THE RECONSTRUCTIONS OF SAFER HOUSING
RECONSTRUCTIONS STUDY OF SEISMIC RESISTANT HOUSING IN THE REPUBLIC OF PERU

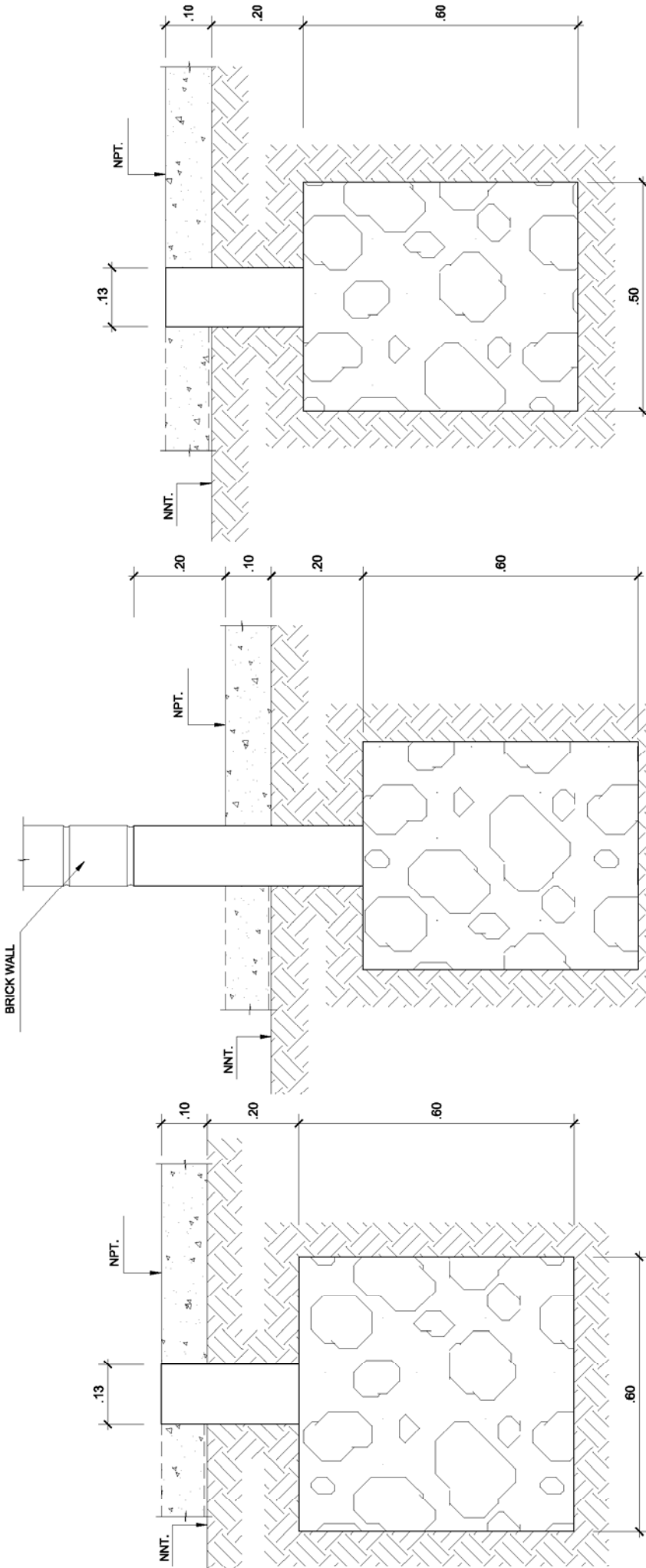
SPECIALITY:
TYPICAL DETAILS OF FOUNDATION - PROTOTYPE 1

N° LAMINE:
E-04
PROTOTYPE 1
No 08

APPROVED:

DATE:
SEPTEMBER 2008

PROJECT EXECUTOR COMPANY:
MBI SAC
MASTERBUILDING INGENIEROS SAC



SECTION C-C
SCALE 1/12.5

SCALE 1/12.5

SECTION D-D
SCALE 1/12.5

SCALE 1/12.5

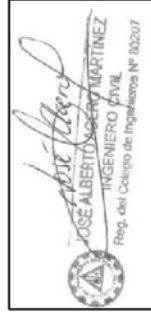
SECTION E-E
SCALE 1/12.5

SCALE 1/12.5

LEGEND

NNT	Natural level of land
NPT	Level of finished floor

NOTE: IF THE SOIL HAS BAD RESISTANCE PUT REINFORCEMENT IN THE TIE BEAM
IF THE SOIL HAS GOOD RESISTANCE NOT PUT REINFORCEMENT IN THE TIE BEAM



PROJECT: PROVISION OF THE RECONSTRUCTIONS OF SAFER HOUSING
RECONSTRUCTIONS STUDY OF SEISMIC RESISTANT HOUSING IN THE REPUBLIC OF PERU

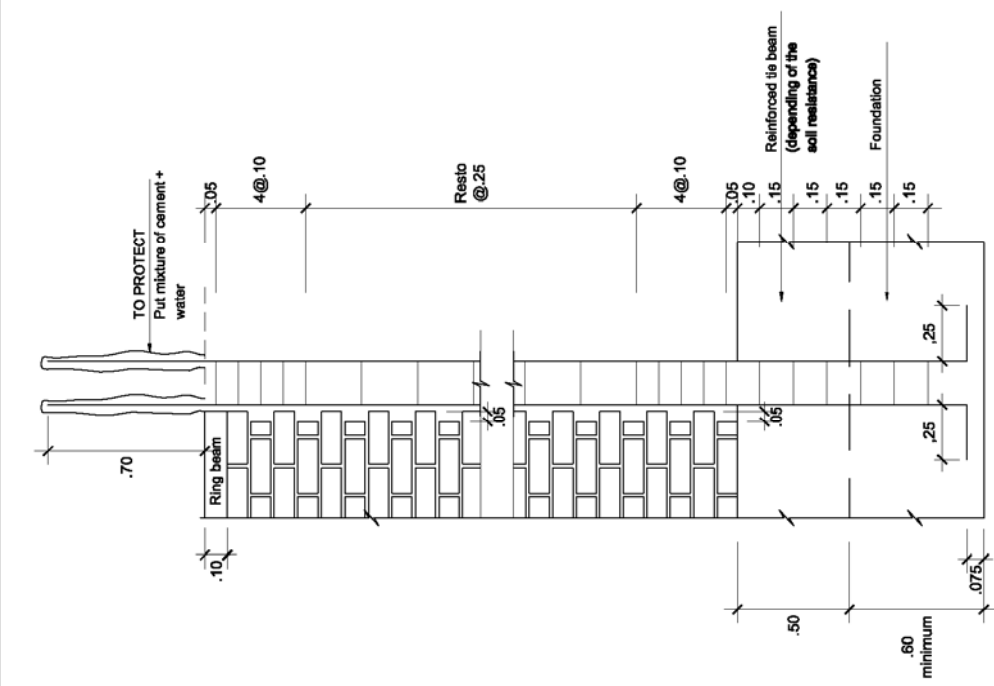
SPECIALITY: TYPICAL DETAILS OF FOUNDATION - PROTOTYPE 1

N° LAMINE: **E-05**
PROTOTYPE 1
No 06

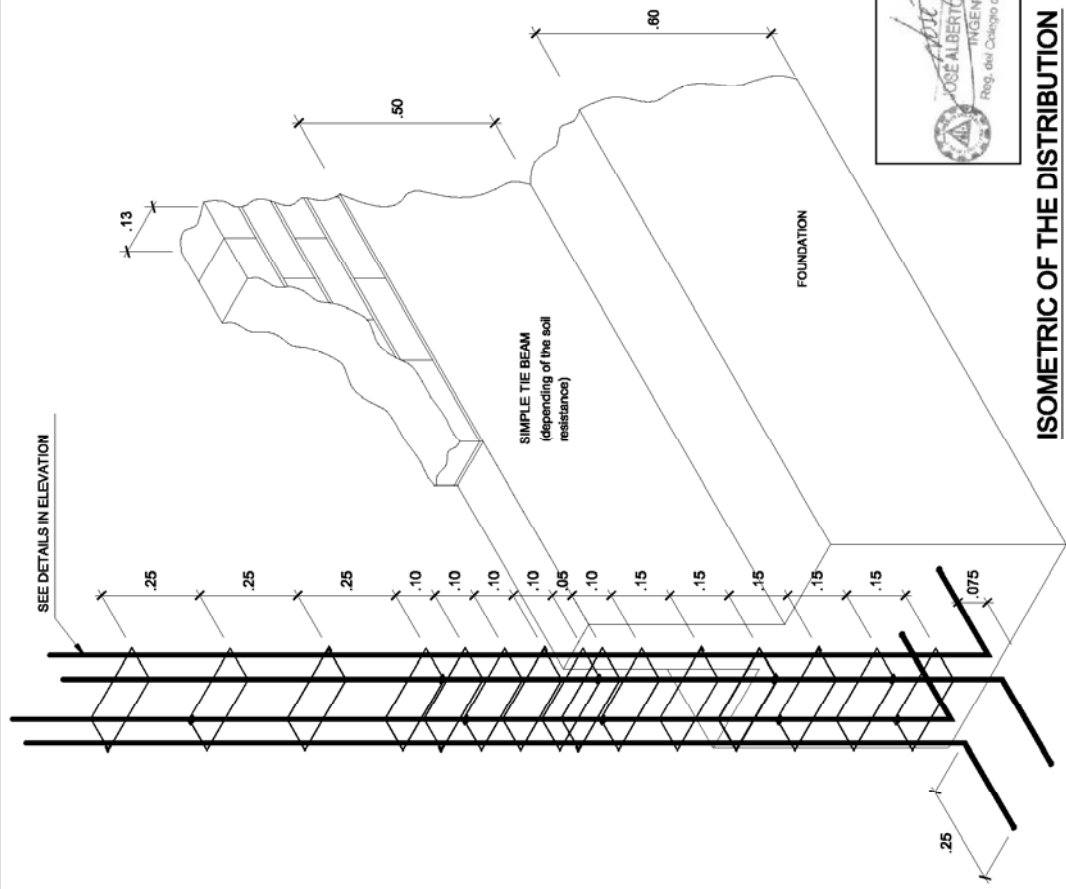
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DATE: SEPTEMBER 2008

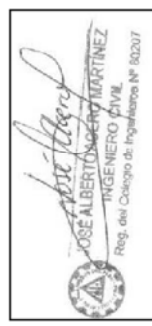
PROJECT EXECUTOR COMPANY: **MBI SAC**
MASTERBUILDING INGENIEROS SAC



**ELEVATION OF THE CONFINEMENT WALL
(GEARED ALTERNATIVE)**
WITHOUT SCALE



**ISOMETRIC OF THE DISTRIBUTION
OF STEEL IN THE WALL CONFINEMENT
COLUMN (GEARED ALTERNATIVE)**
WITHOUT SCALE



PROJECT :
PROVISION OF THE RECONSTRUCTIONS OF SAFER
HOUSING
RECONSTRUCTIONS STUDY OF SEISMIC RESISTANT
HOUSING IN THE REPUBLIC OF PERU

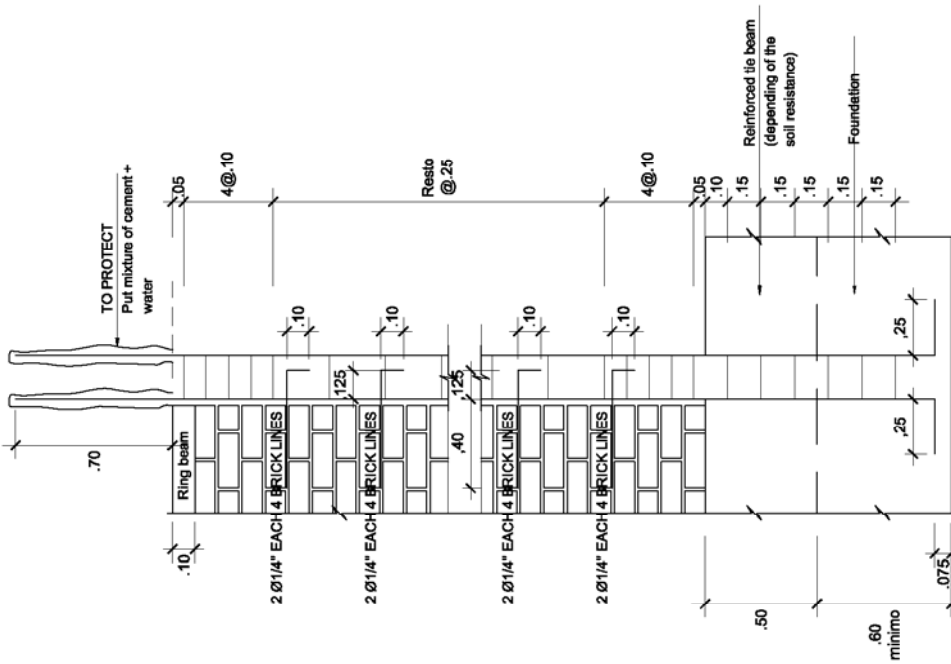
SPECIALITY:
TYPICAL DETAILS OF
FOUNDATION -
PROTOTYPE 1

N° LAMINE:
E-06
PROTOTYPE 1
No 06

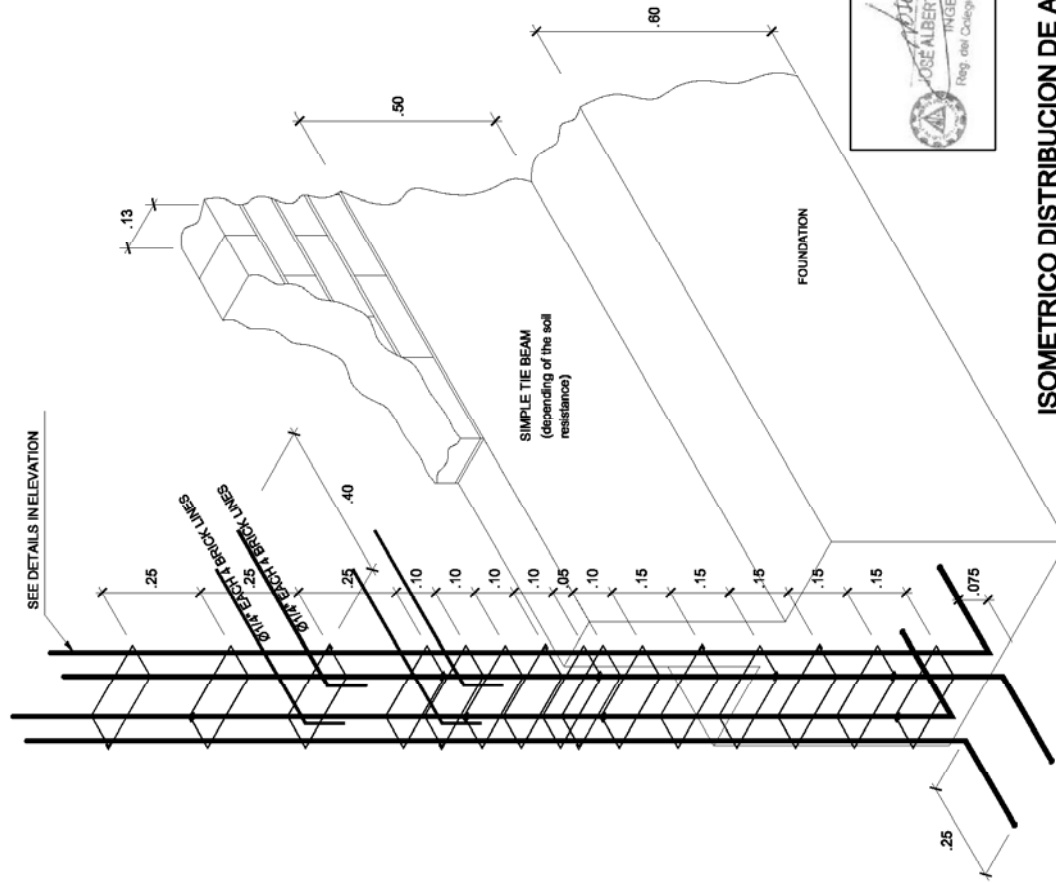
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DATE:
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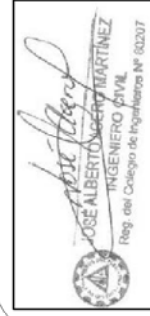
PROJECT EXECUTOR
COMPANY :
MBI SAC
MASTERBUILDING INGENIEROS SAC



**ELEVATION OF WALL CONFINEMENT
WITH JUNKS**
WITHOUT SCALE



**ISOMETRICO DISTRIBUCION DE ACERO
EN COLUMNA CON CHICOTES**
SIN ESCALA



PROJECT: PROVISION OF THE RECONSTRUCTIONS OF SAFER HOUSING RECONSTRUCTIONS STUDY OF SEISMIC RESISTANT HOUSING IN THE REPUBLIC OF PERU

SPECIALITY: TYPICAL DETAILS OF FOUNDATION - PROTOTYPE 1

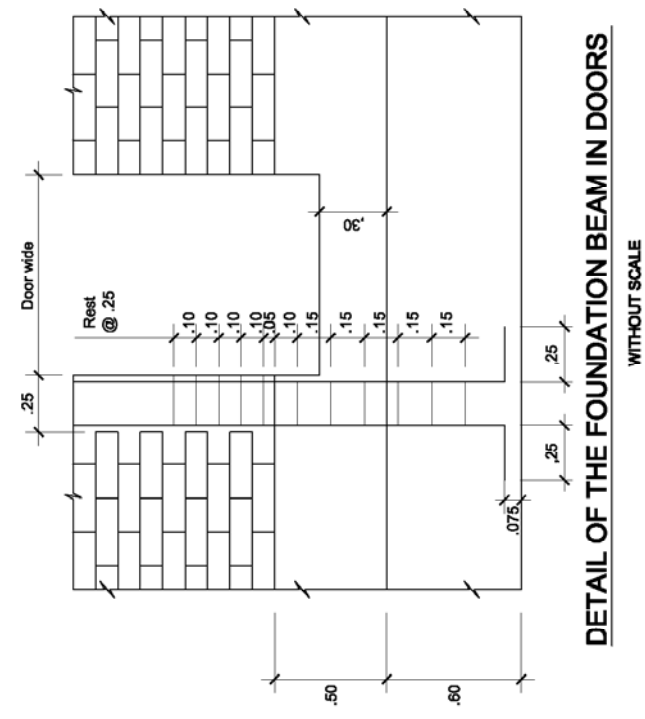
N° LAMINE: **E-07**
PROTOTYPE 1
No. 06

APPROVED:

DATE: SEPTEMBER 2008

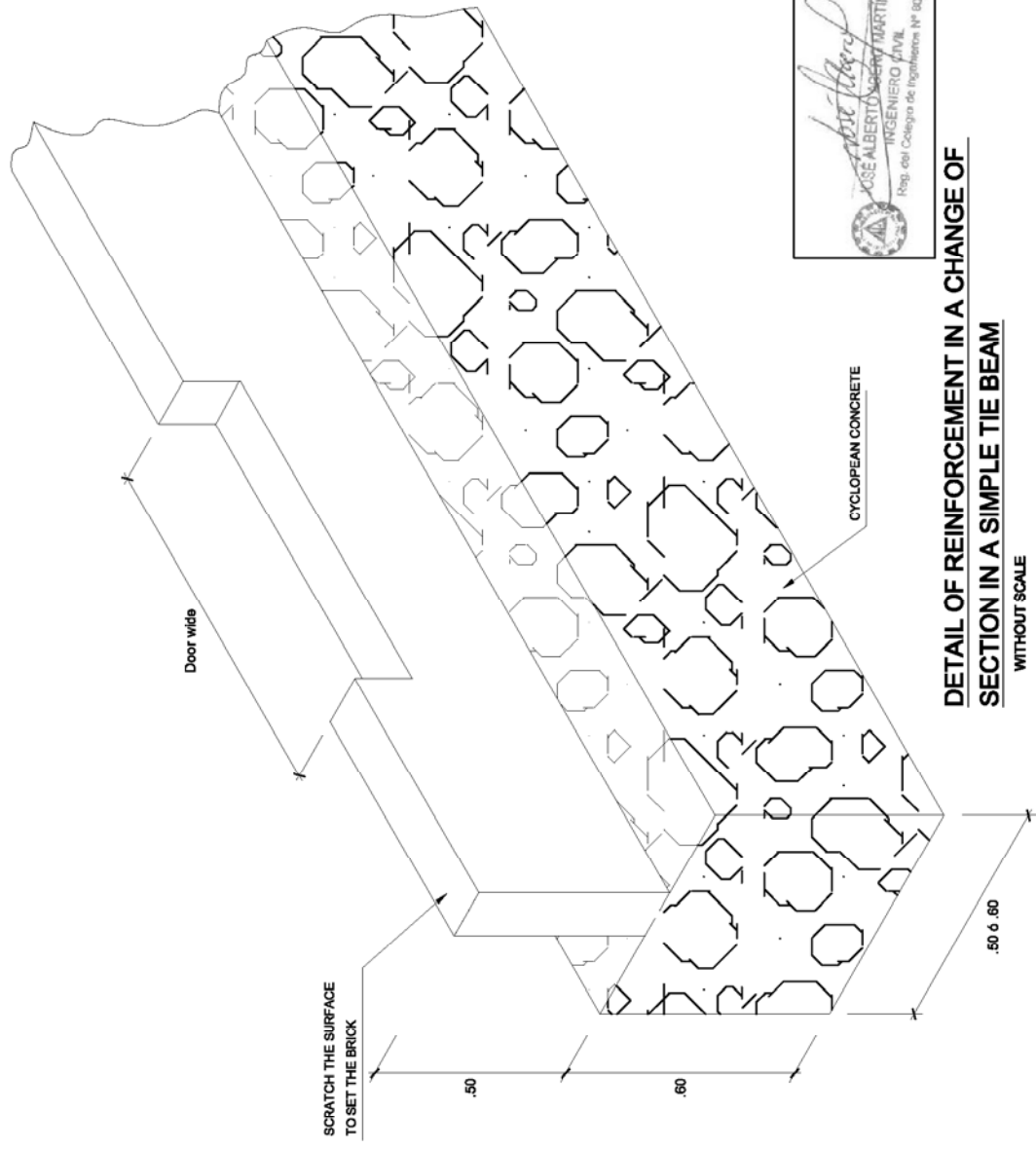
PROJECT EXECUTOR COMPANY: **MBI SAC**
MASTERBUILDING INGENIEROS SAC



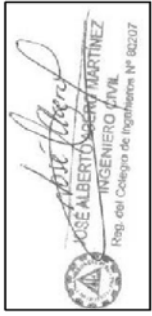


DETAIL OF THE FOUNDATION BEAM IN DOORS
WITHOUT SCALE

NOTE: IF THE SOL HAS BAD RESISTANCE PUT REINFORCEMENT IN THE TIE BEAM
IF THE SOL HAS GOOD RESISTANCE NOT PUT REINFORCEMENT IN THE TIE BEAM



DETAIL OF REINFORCEMENT IN A CHANGE OF SECTION IN A SIMPLE TIE BEAM
WITHOUT SCALE



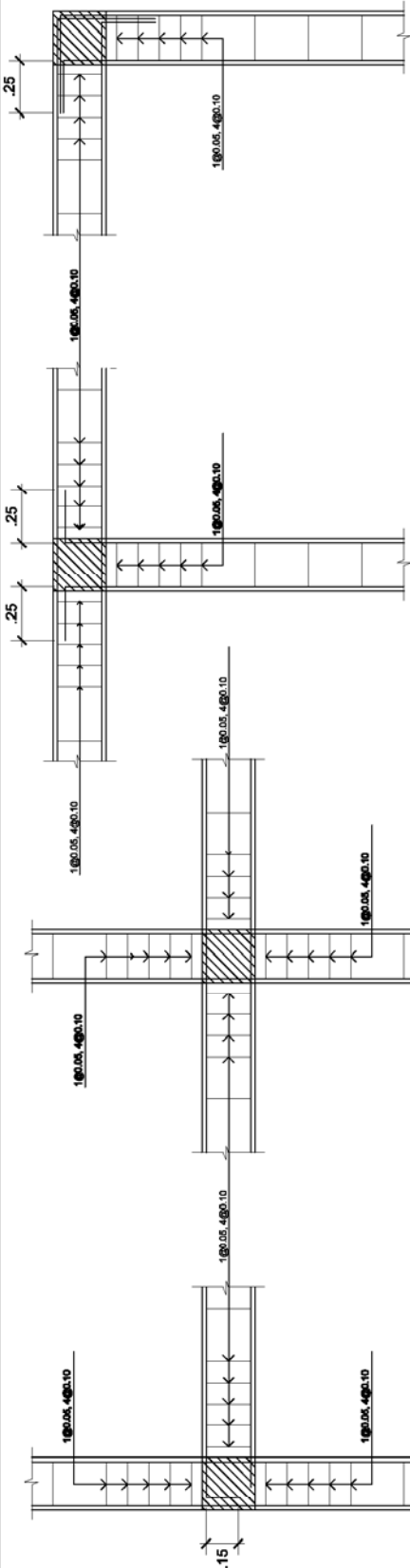
PROJECT : PROVISION OF THE RECONSTRUCTIONS OF SAFER HOUSING RECONSTRUCTIONS STUDY OF SEISMIC RESISTANT HOUSING IN THE REPUBLIC OF PERÚ	SPECIALITY: TYPICAL DETAILS OF FOUNDATION - PROTOTYPE 1	APPROVED:	DATE: SEPTEMBER 2008	PROJECT EXECUTOR COMPANY : MBI SAC <small>MASTERBUILDING INGENIEROS SAC</small>
	N° LAMINE: E-08 <small>PROTOTYPE 1 No 08</small>			



FACTORS USED TO DESIGN ANALYSIS	
SEISMIC FACTOR	Zone 3
SOIL PARAMETER	Soil Type B Type II $f_{sp} = 0.8$
BUILDING CATEGORIES	Category C (Housing)
COMPONENT OF STRUCTURE	Walls of non-ventilated masonry
FACTORS OF SEISMIC AMPLIFICATION	C=2.0 (Type C)
Code	Chile

NOTE

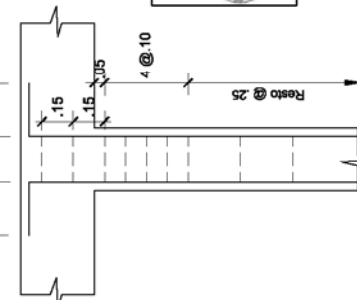
- For seismic use the drawing of masonry walls must be based on 1:1 scale.
- The masonry walls must be shown in the foundation depth. It is not allowed to reduce the wall, down with a slope base to reach the reduced wall.
- The structural drawing corresponds to a building with two levels.



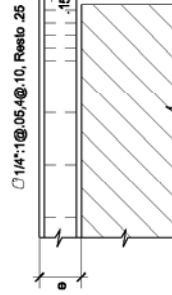
BEAM PLANT

BEAM PLANT
ELEVATION COLUMN
DETAILS OF KNOTS OF COLUMNS AND BEAMS

ELEVATION COLUMN



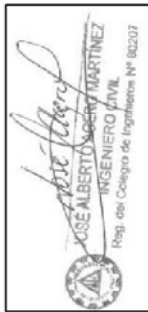
REMATE DE COLUMNAS



ANCLAJE DE VIGAS SOLERAS

SUMMARY OF FOUNDATION CONDITIONS

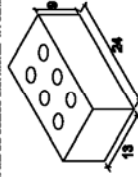
KIND OF FOUNDATION	RUNNING FOUNDATIONS
STATUS OF SUPPORT OF FOUNDATION	SAND FAIRLY DENSE TO DENSE
DESIGN PARAMETER OF FOUNDATION	FOUNDATION DEPTH : 0.80 m
ACCEPTABLE PRESSURE	0.8 kg/cm ² (SUD SOIL)
SECURITY FACTOR BY CUT	1.2 kg/cm ² (REGULAR SOIL)
TOTAL SETTLEMENT	MAJOR TO 3
ADHESION OF SOIL TO FOUNDATION	2.50 cm
FREATIC LEVEL	NOT PRESENT
	NOT DETECTED



GENERAL SPECIFICATIONS

- REINFORCED CONCRETE : $f_c = 210 \text{ kg/cm}^2$
 THE BEAM : $f_c = 100 \text{ kg/cm}^2$ (1:10 + 25% RA)
 SIMPLE CONCRETE : CALENTOS : $f_c = 100 \text{ kg/cm}^2$ (1:10 + 20% RA)
 STEEL BAR : $f_y = 4200 \text{ kg/cm}^2$
 BRICK MASONRY :

$f_c = 45 \text{ kg/cm}^2$
 $f_c = 120 \text{ kg/cm}^2$
 All the masonry units with the indicated dimensions shown in the drawing. They must be of clay or long-burn type or similar. If they have asbestos they have not to exceed the 25% of the column.
 It will be verified with mortar 1:4 cement - sand



- LAND : See summary of foundation conditions
 DESIGN CODES : R.A.L.C. - N.T.E.-A.80 - N.T.E. 0.70 - N.T.E. 0.30
 COVERINGS :
 COLUMNS : 3.0 cm.
 BEAMS AND SLABS : 3.0 cm.
 REBES SLABS : 2.8 cm.
 FOUNDATIONS : 7.8 cm.
 COATING: Surface of masonry, cement : sand (1:8)

Ø	Slabs and beams L (cm)	Columns L (cm)	CONNECTIONS		STIRRUPS IN COLUMNS, BEAMS AND PLATES
			SLABS AND BEAMS	IN COLUMNS	
1/4	30				<p>The L connections : They will be located in the central third part. It is not recommended to connect more of the 50 % of the framework in a same direction.</p>
Ømm	40	30			
3/8					
1/2	80	40			
5/8	80	50			

e	d
.20	.15

PROJECT : PROVISION OF THE RECONSTRUCTIONS OF SAFER HOUSING RECONSTRUCTIONS STUDY OF SEISMIC RESISTANT HOUSING IN THE REPUBLIC OF PERU

SPECIALITY : TYPICAL DETAILS PROTOTYPE 1

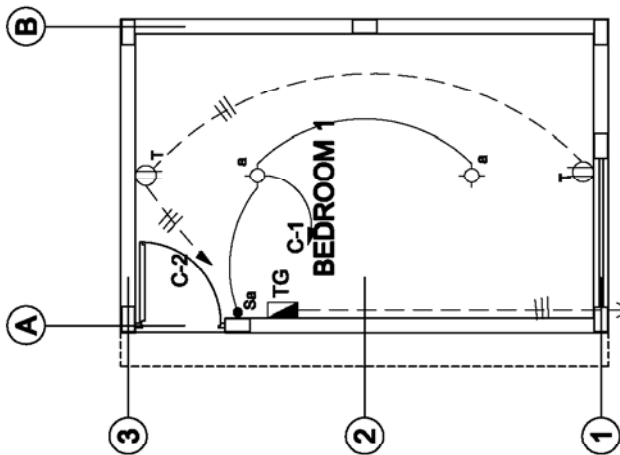
NO LAMINE : E-09 PROTOTYPE 1 No 08

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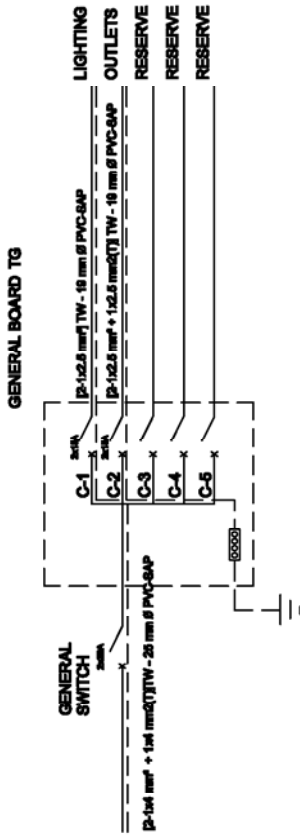
DATE : SEPTEMBER 2008

PROJECT EXECUTOR COMPANY : MBI SAC MASTERBUILDING INGENIEROS SAC





TO EXTERNAL MET
ELECTRICAL INSTALLACIONTS BONUS 82/0000
PROTOTYPE
 SCALE 1/10



VOLTAGE TABLE - GENERAL BOARD

DESCRIPTION	F.L.(Kw)	F.D.(%)	M.D.(Kw)
LIGHTING AND OUTLETS AREA : 16.44m² x 20W/m²	0.39	100	0.39
TOTAL (KW)			0.39

GENERAL LEGEND

SYMBOL	DESCRIPTION	BOXES (mm)	HEIGHT (mm)
⊕	EXIT FOR LIGHTING, ROOF (CENTER OF LIGHT)	OCT. 10x40	ROOF
4S	SIMPLE SINGLE-POLE SWITCH (10A, 220V) ROCKER TYPE	100x65x60	1.20
⊕	DOUBLE TWO-POLE OUTLET W/ LINE TO GROUND, 10A - 250V.	100x65x60	0.30
⊕	LIGHTING GENERAL BOARD, OUTLETS	SPECIAL	1.00 (B.S.)
⊕	AUTOMATIC SWITCH NO FUSE TYPE, THERMOMAGNETIC 10 KA 250 V 30 CS.		
⊕	CIRCUIT FILLED IN THE ROOF OR WALL 3-1x2.5mm-2TW-19 mmØPVC.		
⊕	CIRCUIT FILLED IN THE FLOOR 3-1x2.5 mm.2 TW+1x2.5 mm.2 (T) TW - 19 mm.Ø PVC. FOR OUTLETS		

Cardos Armijo
 Cardos Armijo Cantu Pejuelo
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PROJECT EXECUTOR
 COMPANY : **MBI SAC**
 MASTERBUILDING INGENIEROS SAC

DATE : **SEPTEMBER 2008**

APPROVED:

N° LAMINE : **IE-01**
 PROTOTYPE 1
 No 06

SPECIALITY :
 ELECTRICAL INSTALLATIONS -
 PROTOTYPE 1

PROJECT :
 PROVISION OF THE RECONSTRUCTIONS OF SAFER
 HOUSING
 RECONSTRUCTIONS STUDY OF SEISMIC RESISTANT
 HOUSING IN THE REPUBLIC OF PERU

