

PROJECT OFFICE
KHAIRPUR SPECIAL ECONOMIC ZONE (KSEZ)
DISTRICT KHAIRPUR

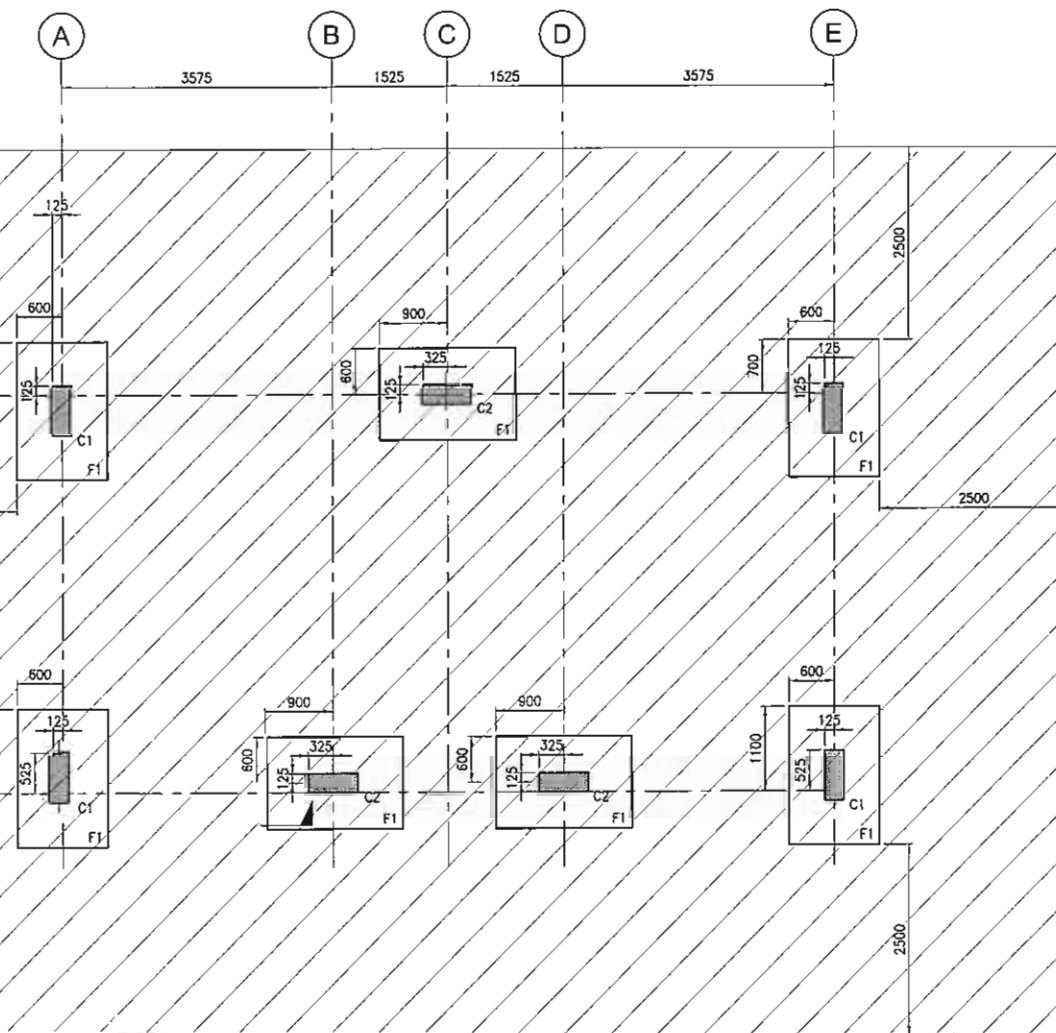
CONSTRUCTION OF
MAIN SUBSTATION

TENDER DRAWINGS
(STRUCTURAL)

DECEMBER, 2015

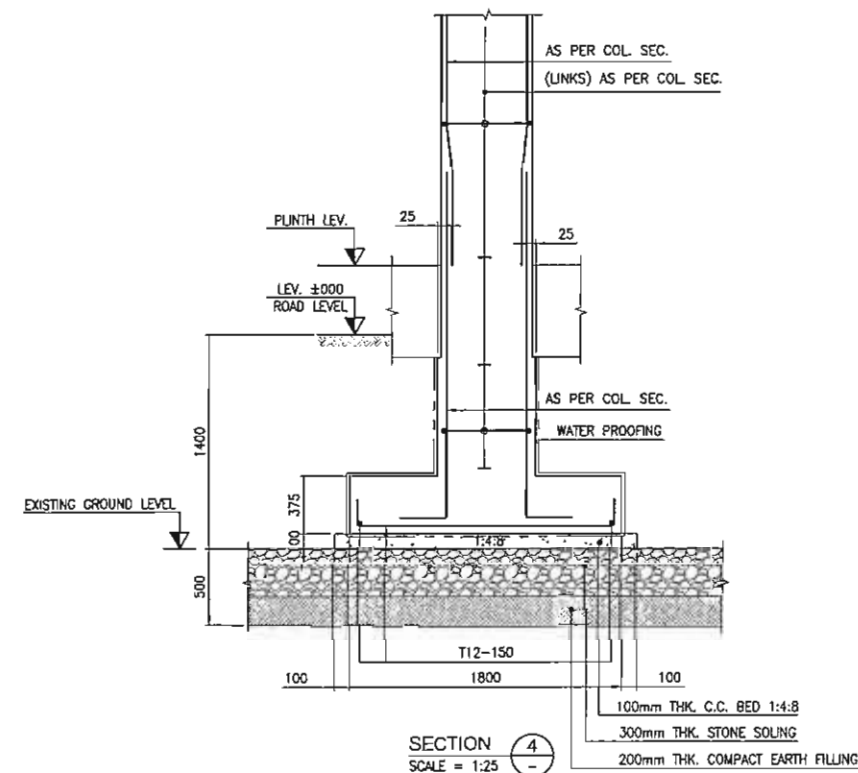


CONSULTING ENGINEERS & ARCHITECTS
ECONOMISTS AND PLANNING EXPERTS
AL-9, 15th LANE, KHAYBAN-E-HILAL, PHASE - VII, O.H.A KARACHI-75500
PHONE NO. 5841821 - 24



TYPICAL SECTION OF COLUMN C1
 SCALE = 1:15 (ABOVE GROUND)

TYPICAL SECTION OF COLUMN C2
 SCALE = 1:15 (ABOVE GROUND)

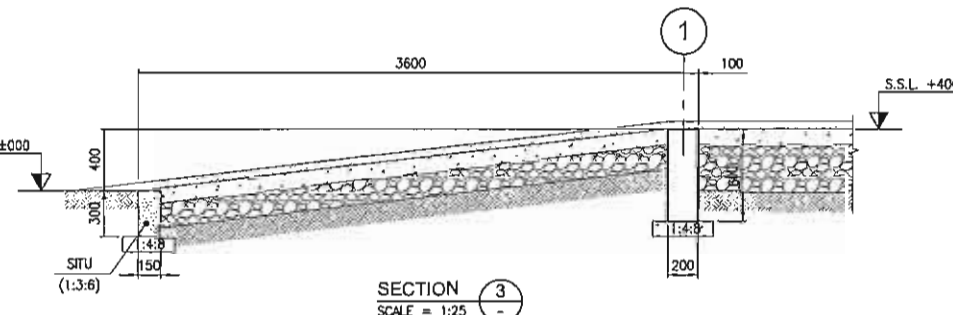
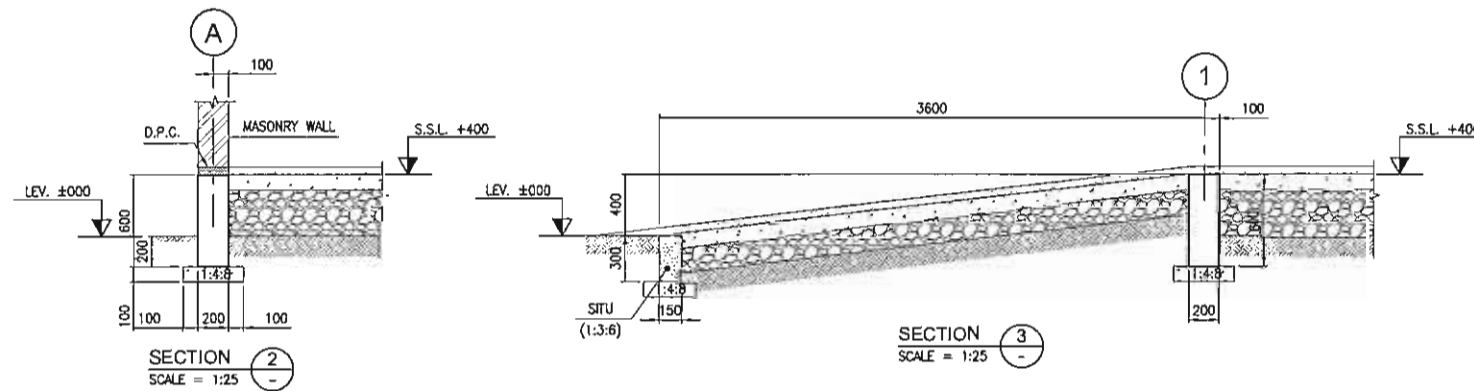
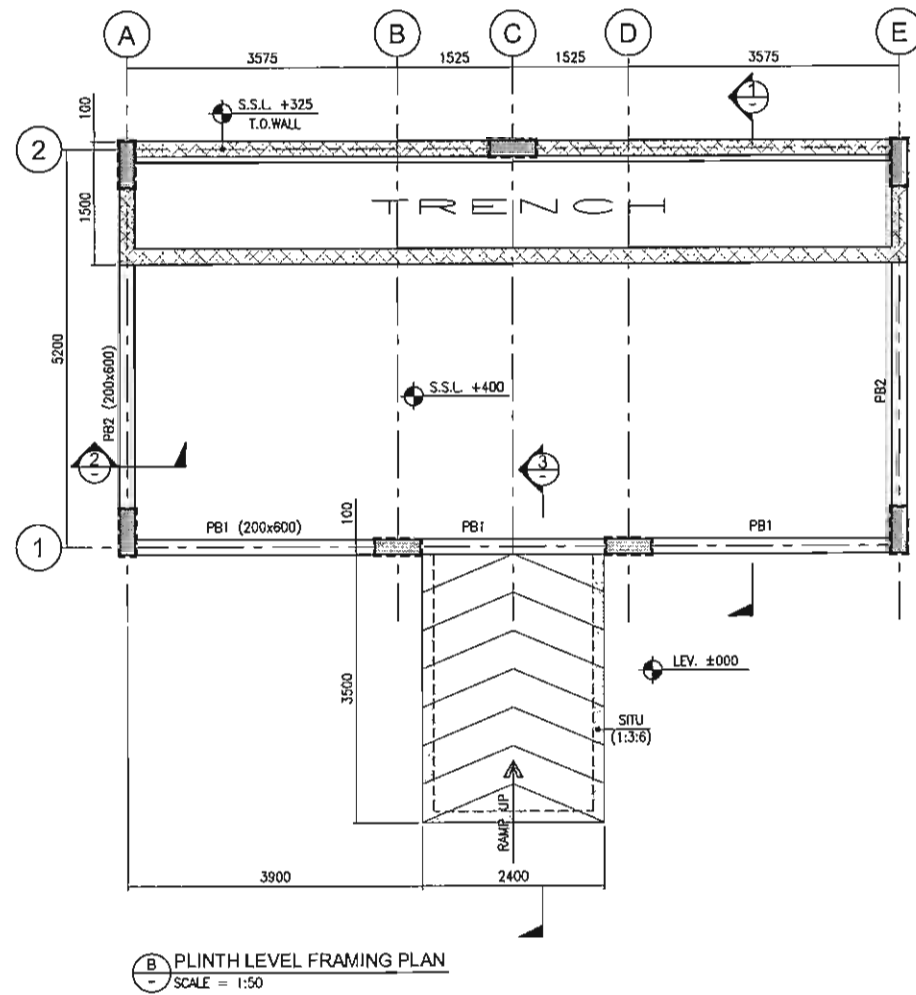
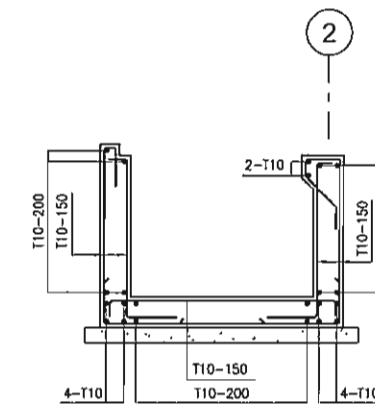
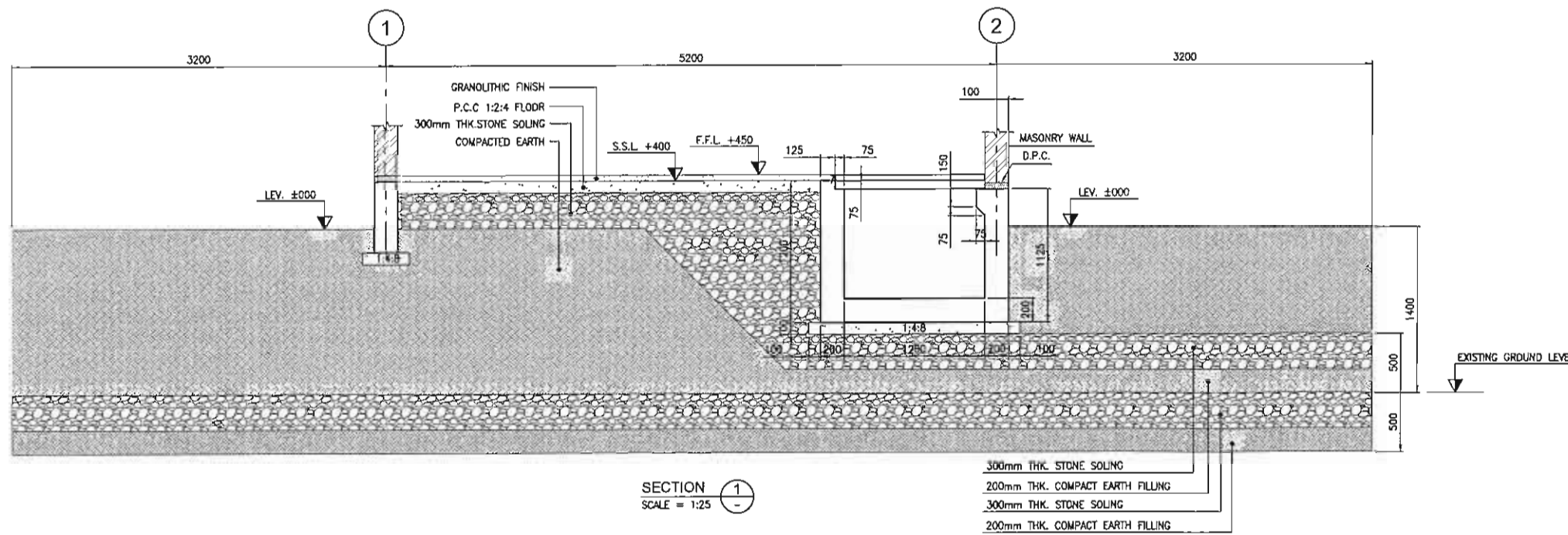


* THE FOUNDATION DEPTH IS ASSUMED TO BE PLACED AT 2m BELOW EXISTING GROUND LEVEL WITH A BEARING CAPACITY 125 kpa. IT SHOULD BE CONFIRMED PRIOR TO START OF CONSTRUCTION BY CONDUCTING SOIL INVESTIGATION OF THE SITE.

- iv) MEASUREMENT AND PAYMENT
ACCEPTED QUANTITIES MEASURED SHALL BE PAID AT THE CONTRACT UNIT PRICE OF NET VOLUME OF EXCAVATION INCLUDING BACKFILL FOR THE ITEMS LISTED BELOW, AND SHOWN IN BILL OF QUANTITIES WHICH PRICE AND PAYMENT WILL CONSTITUTE FULL COMPENSATION FOR ALL COST INVOLVED IN PROPER COMPLETION OF WORK.

1. ALL DIMENSIONS IN MILLIMETER.
2. ALL LEVELS IN METERS.
3. CONCRETE CYLINDRICAL STRENGTH IS 21 Mpa (3000 psi).

Drawing No. : EA-660-MST-S-0100



Project :
SPECIAL ECONOMIC ZONE KHAIRPUR

Consultant Architect :
EA Consulting Pvt Ltd
Head Office AL-9, 15th Lane, Khayaban-e-Hayat Phase 7, Defence Housing Authority, Karachi, 75500 - Pakistan
Phone No. 111-111-5041 Fax No. 594-1025
Email : info@eaworld.com | www.eaworld.com

Client :
CITY DISTRICT GOVERNMENT KHAIRPUR

NOTES:
1. ALL DIMENSIONS IN MILLIMETER.
2. ALL LEVELS IN METERS.
3. CONCRETE CYLINDRICAL STRENGTH IS 21 Mpa (3000 psi).
4. FOR BEAM SCHEDULE REFER DWG. NO. EA-660-MST-S-0102.

Mark	Date	Description	Sig.
REVISIONS			
0	DEC, 15	ISSUED FOR TENDER	

Date of Issue : December, 2015
Issued To : Client
Issued For : Tender

STRUCTURAL

Status: **TENDER**

Building Name: **MAIN SUBSTATION**

Drawing Title :
PLINTH LEVEL FRAMING PLAN AND DETAILS

Designed :	Checked :	Approved :
A.K.	K.M.	M.S.

Drawn :	Date :	Scale / Sheet :
A.A.G.	DEC, 2015	AS SHOWN

Project Code	Rev. :
660	0

Drawing No. : **EA-660-MST-S-0101**

**SPECIAL
ECONOMIC
ZONE
KHAIRPUR**

Consultant Architect:

EA Consulting Pvt Ltd

Head Office: AL-9, 15th Lane, Khayaban-e-Hal Phase 7,
Defence Housing Authority, Karachi, 75300 - Pakistan
Phone No. 111-111-5541 Fax No. 594-1825
Email: info@eaconsulting.com www.eaconsulting.com

Client:

**CITY DISTRICT
GOVERNMENT
KHAIRPUR**

NOTES:

1. ALL DIMENSIONS IN MILLIMETER.
2. ALL LEVELS IN METERS.
3. CONCRETE CYLINDRICAL STRENGTH IS 21 Mpa (3000 psi).

Mark	Date	Description	Sig.
0	DEC.15	ISSUED FOR TENDER	

REVISIONS

Date of Issue	December, 2015
Issued To	Client
Issued For	Tender

STRUCTURAL

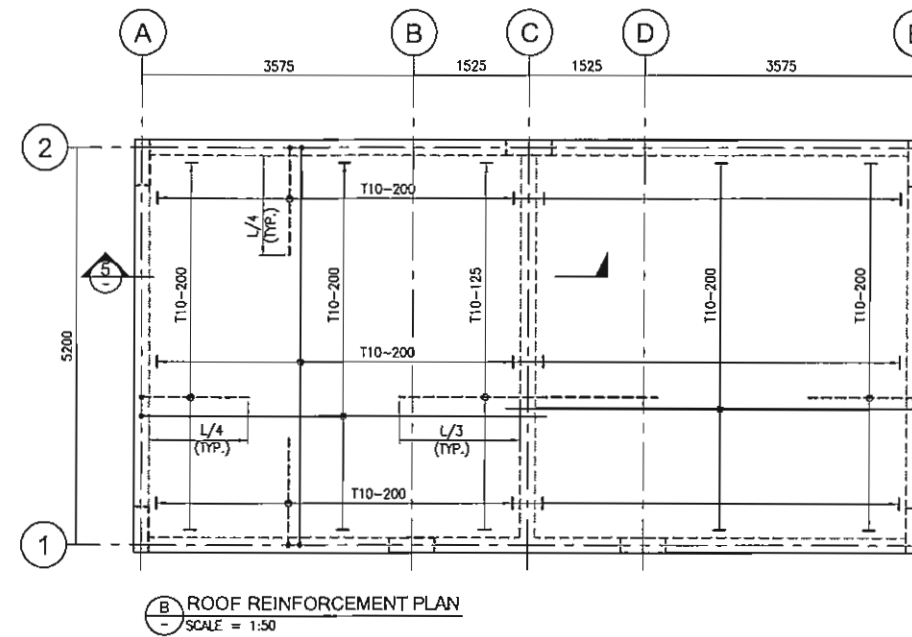
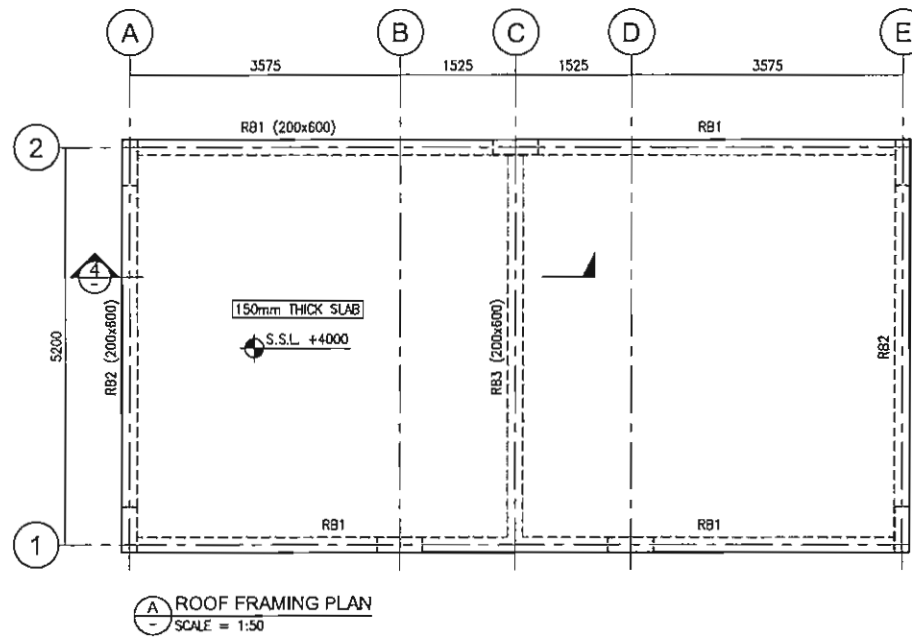
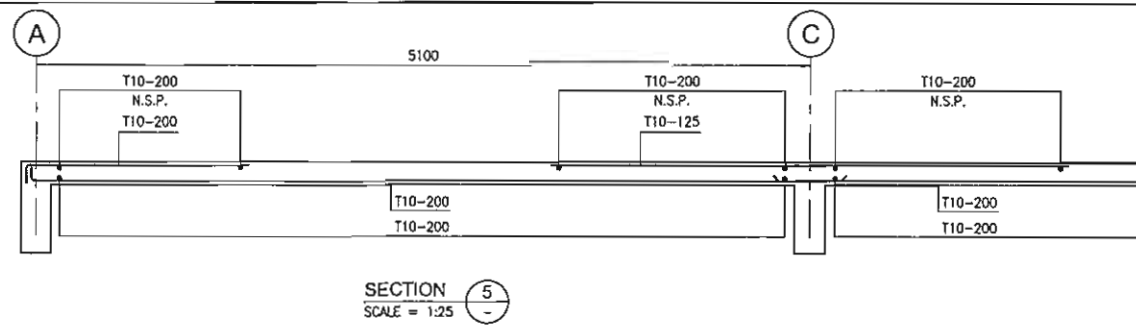
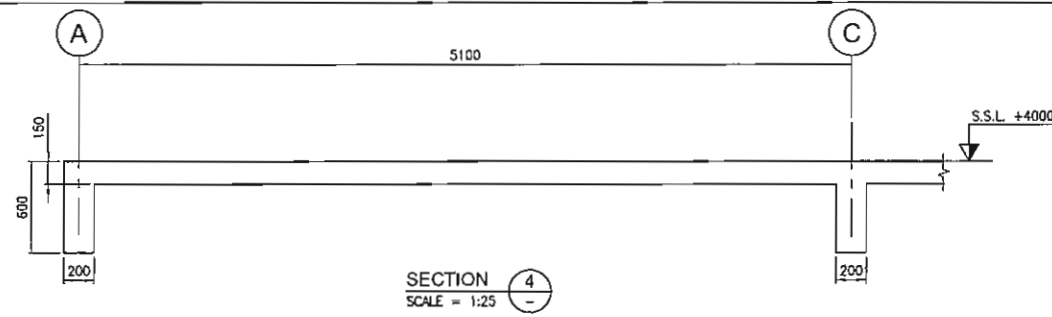
Status: **TENDER**

Building Name:
MAIN SUBSTATION

Drawing Title:
**ROOF FRAMING & REINFORCEMENT PLAN
AND SECTION / BEAM SCHEDULE**

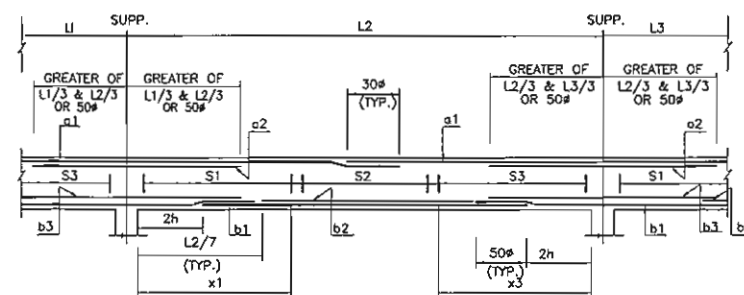
Designed:	Checked:	Approved:
A.K.	K.M.	M.S.
Drawn:	Date:	Scale / Sheet:
A.A.G.	DEC.2015	AS SHOWN
Project Code:	660	Rev.: 0

Drawing No.: **EA-660-MST-S-0102**

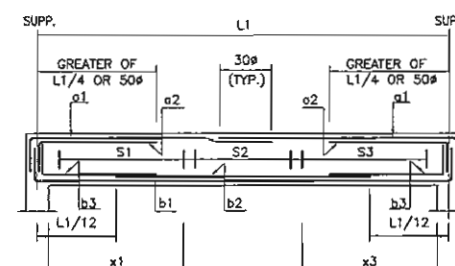


SCHEDULE OF BEAMS

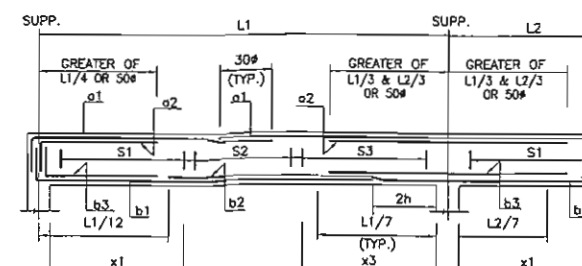
S.NO	MARK	SIZE		TOP REINFORCEMENT (SUPPORTS)				BOTTOM REINFORCEMENT (SPAN)				STIRRUP (ALL T10 UNLESS SPECIFIED)			MID DEPTH REINF. (EF)	REMARKS
				LEFT/TOP SUPPORT		RIGHT/TOP SUPPORT										
		B	H	a1	a2	a1	a2	b1	b2	b3 (LEFT)	b3 (RIGHT)	s1(x1)	s2	s3(x3)		
PLINTH BEAM																
1	PB1	200	600	2-T16	2-T12	2-T16	2-T12	2-T16	-	-	-	100	200	100		EXTERNAL
2	PB2	200	600	2-T16	2-T16	2-T16	2-T16	2-T16	-	2-T12	2-T12	100	200	100		SINGLE
ROOF BEAM																
3	RB1	200	600	2-T16	2-T12	2-T16	2-T12	2-T16	-	-	-	100	200	100		EXTERNAL
4	RB2	200	600	2-T16	2-T12	2-T16	2-T12	2-T16	-	-	-	100	200	100		SINGLE
5	RB3	200	600	2-T16	-	2-T16	-	2-T16	2-T12	-	-	100	200	100		SINGLE



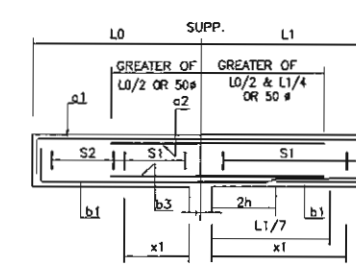
INTERIOR SPAN



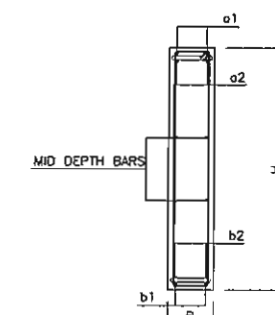
SINGLE SPAN BEAM



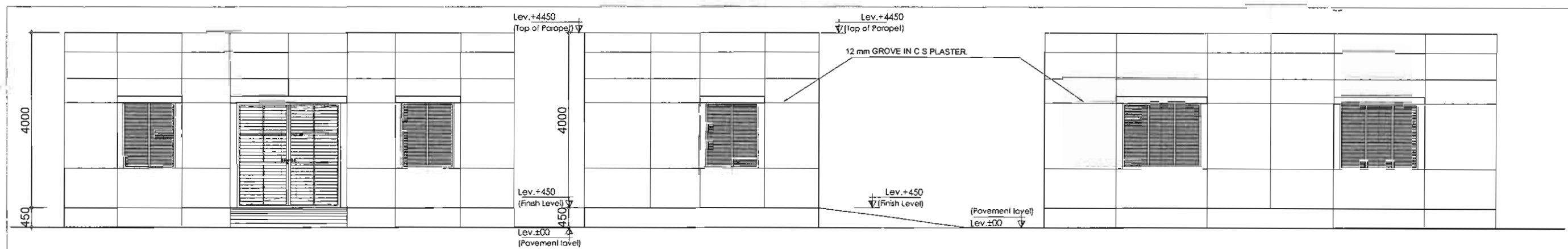
EXTERIOR SPAN



CANTILEVER BEAM



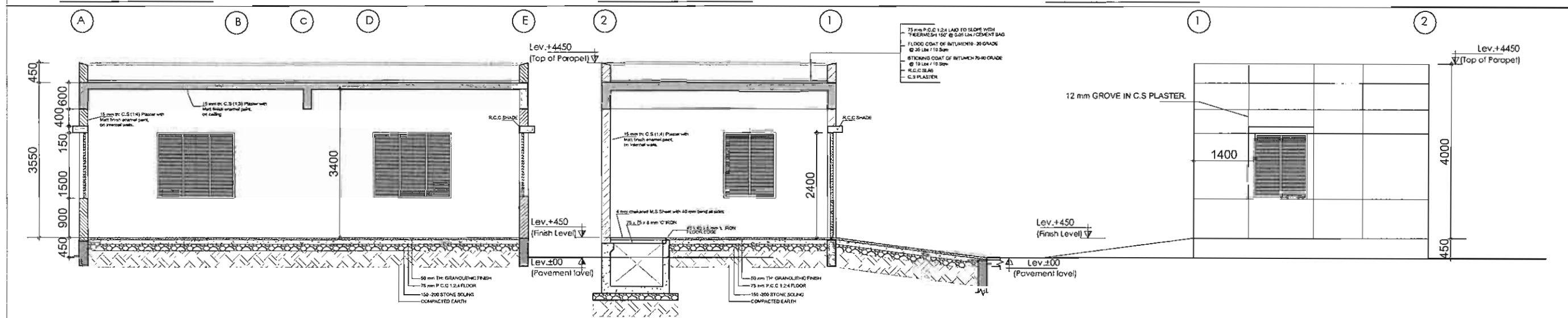
TYP. SECTION
(REINF. AS PER SCHEDULE)



ELEVATION-1

ELEVATION-2

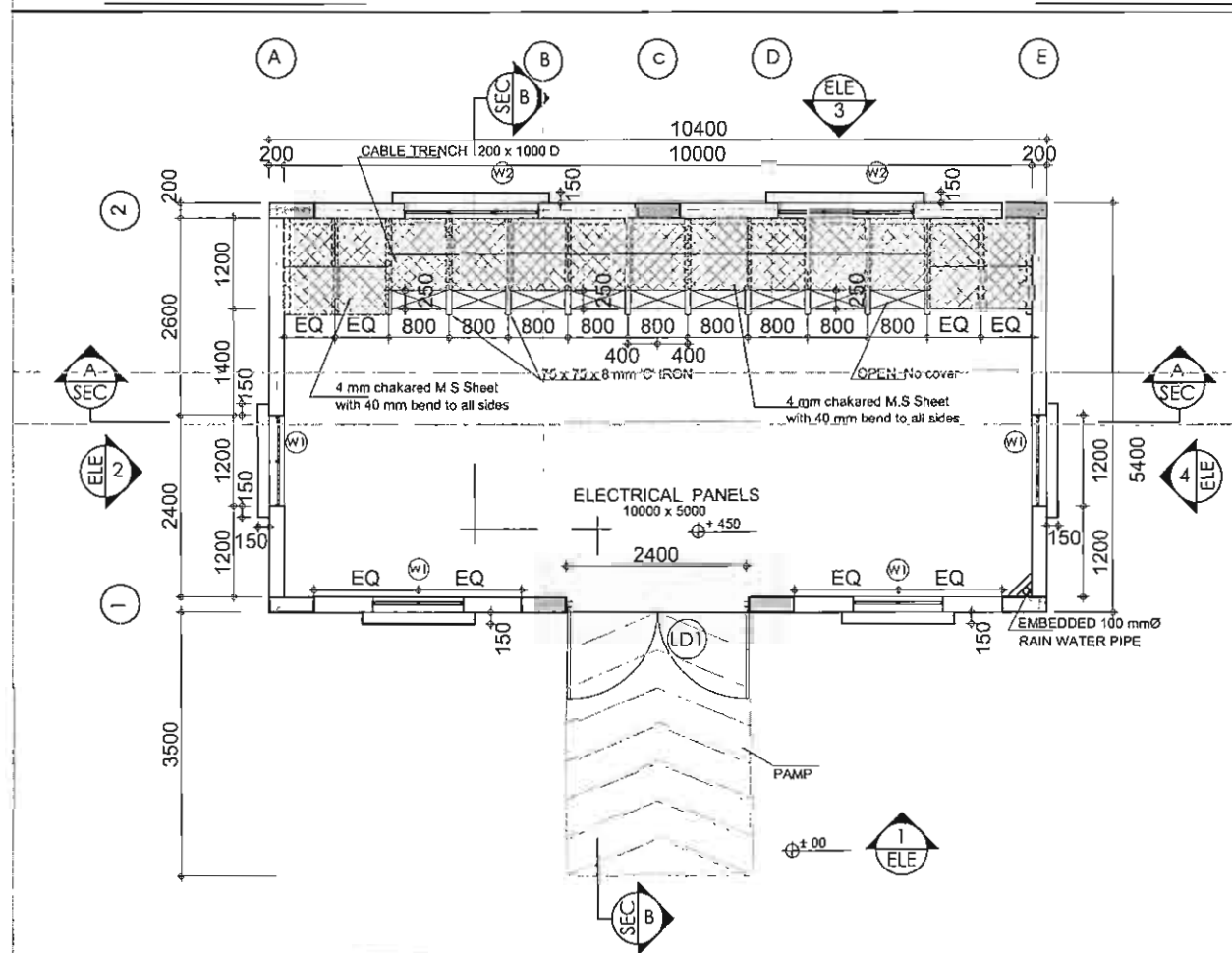
ELEVATION-3



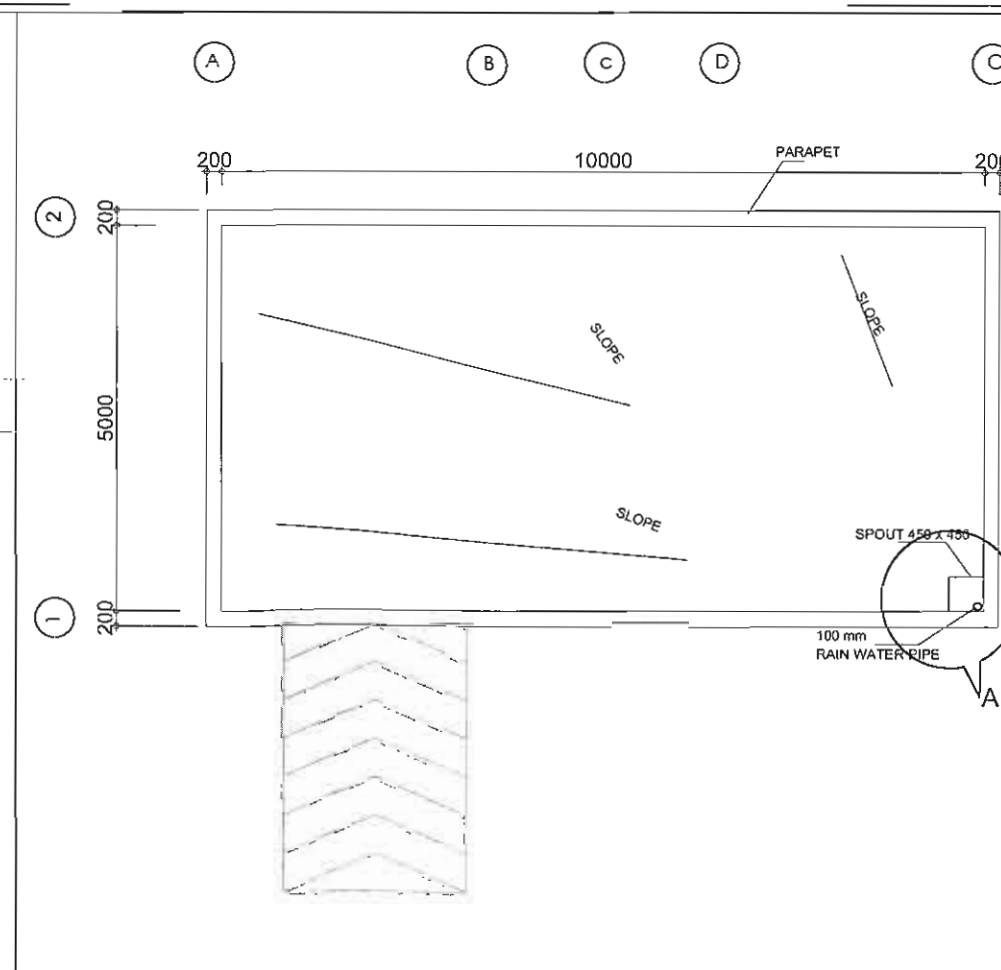
SECTION - BB

SECTION - AA

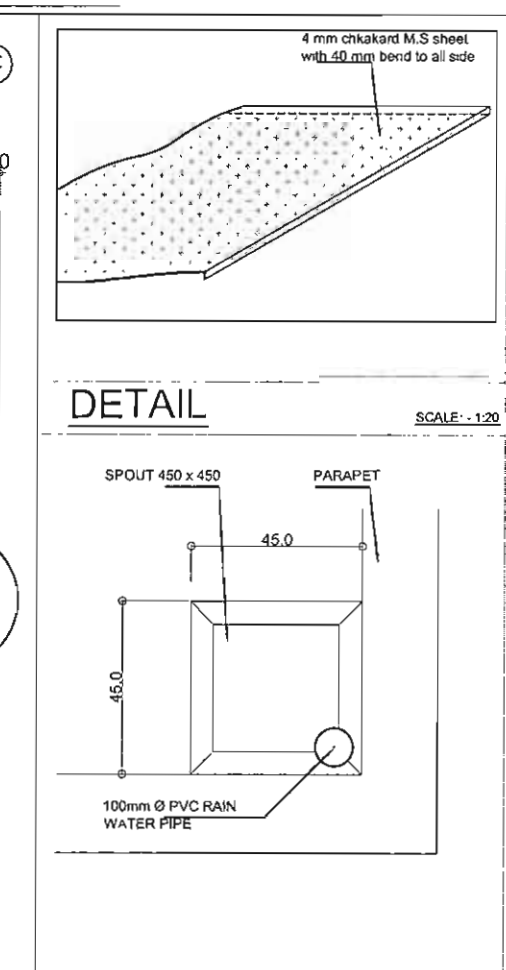
ELEVATION-4



PLAN



ROOF PLAN



DETAIL 'A'

Project

SPECIAL ECONOMIC ZONE KHAIRPUR

Client

PROJECT OFFICE KHAIRPUR SPECIAL ECONOMIC ZONE (KSEZ) DISTRICT KHAIRPUR

Consultant Architect

EA Consulting (Pvt.) Limited
Formerly Engineering Associates
Head Office AL-9 15th Lane Khayaban-e-Haq Phase 7
Deliver Housing Authority Karachi 75500 - Pakistan
Phone No. 111-111-584 Fax No. 584-1825
Email info@eaconsult.com www.eaconsult.com

Mark	Date	Description	Sig
01	FEB.16	DOORS & WINDOWS SIZES REV	

REVISIONS

Date of Issue	Issued To	Issued For
DECEMBER - 2015	CLIENT	TENDER

ARCHITECTURAL

Building Name

MAIN SUBSTATION

Drawing Title

PLANS ELEVATIONS & SECTIONS

Designed	Checked	Approved
S.K.	N.K.	N.K.

Drawn Date Scale / Sheet

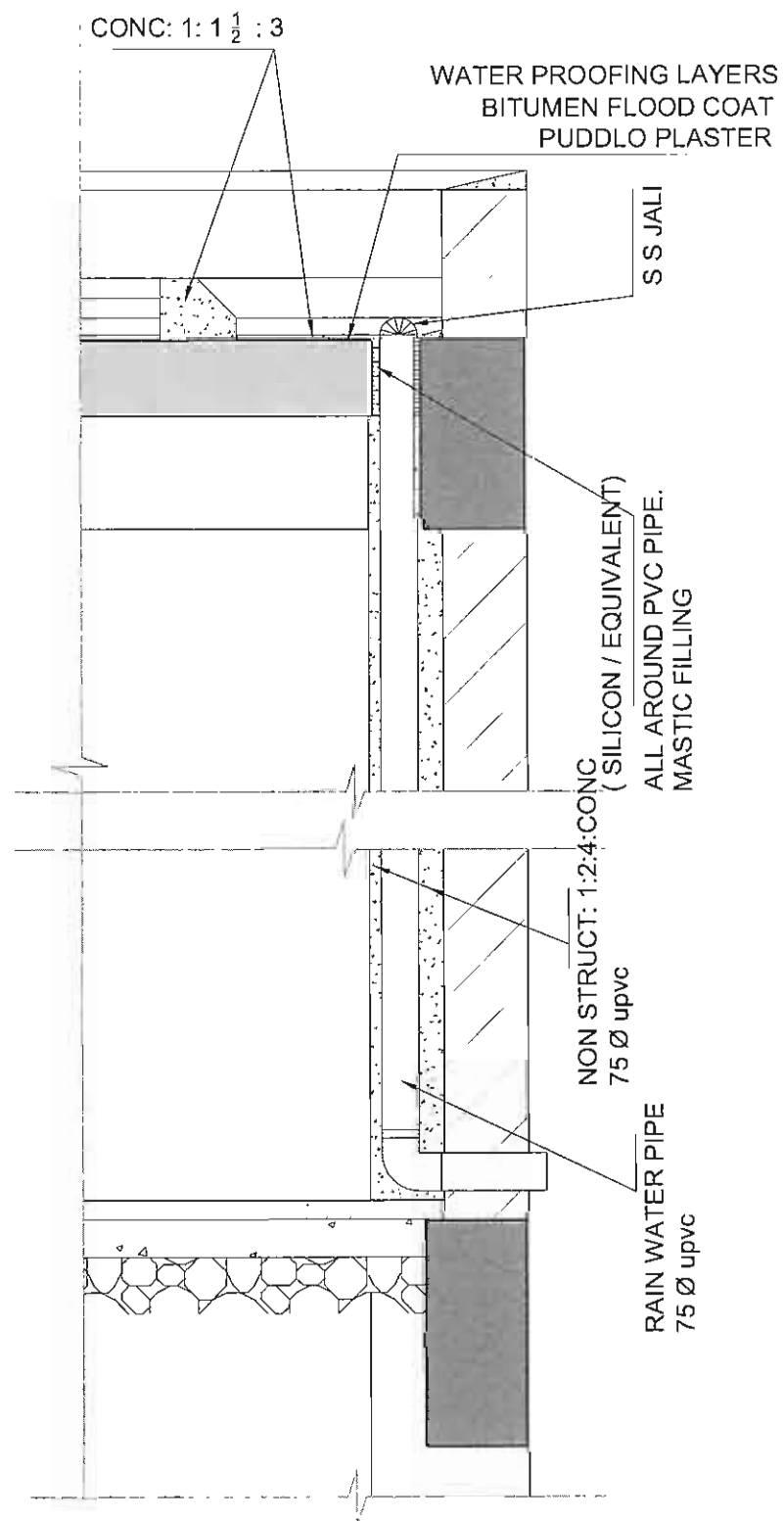
FA DEC 2015 1 50 @ A1

Project Code Rev

660 01

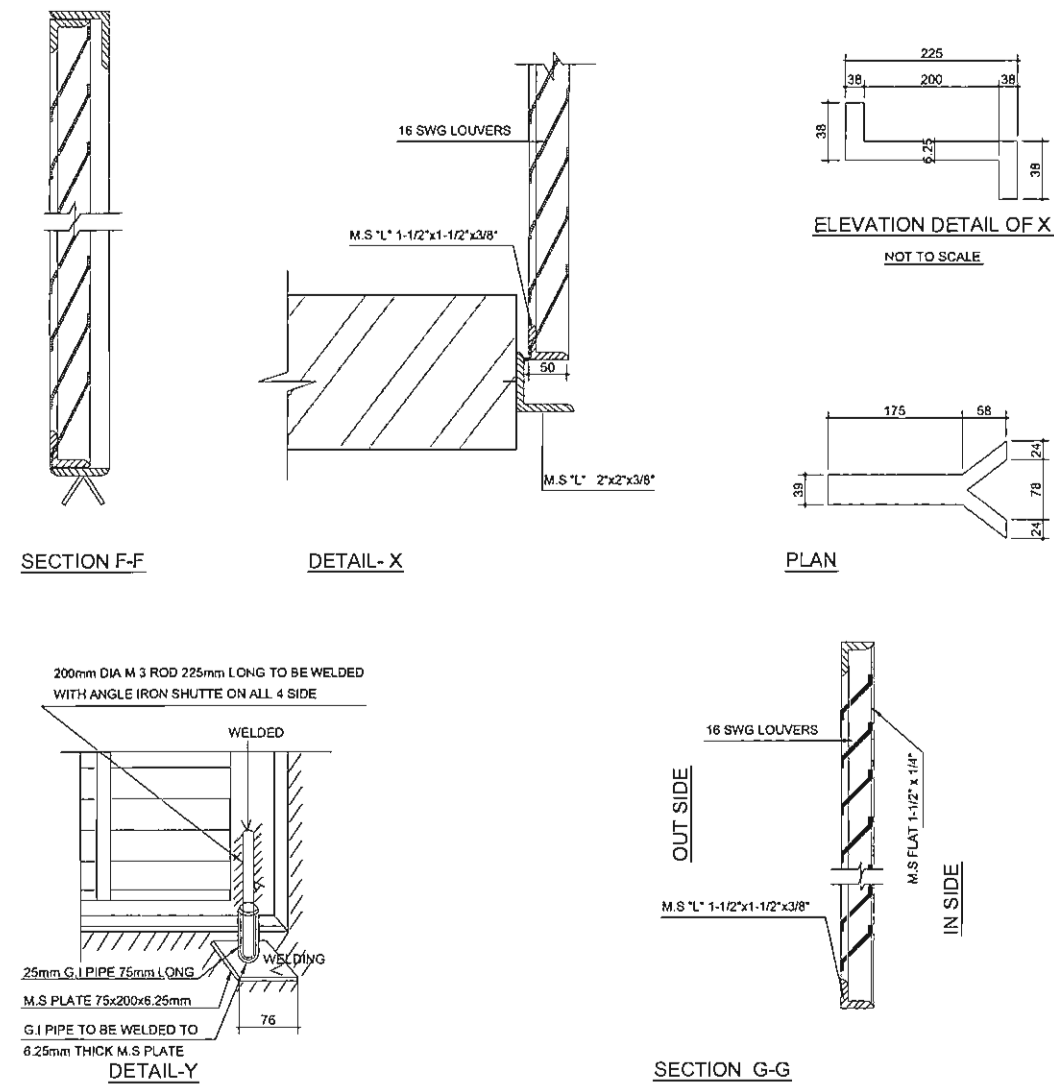
Drawing No

EA-660-MST-101



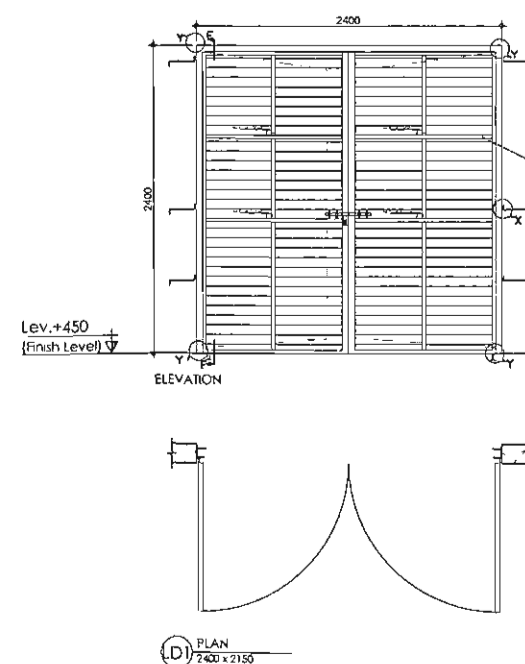
DETAIL SECTION RAIN WATER PIPE

SCALE: 1:10



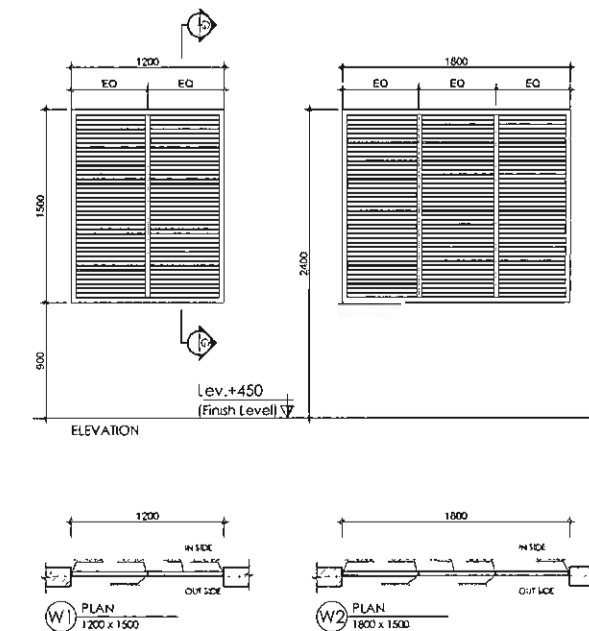
DETAIL OF LOUVERED DOOR / WINDOW

SCALE: 1:5



DETAIL OF LD1

SCALE: 1:30



DETAIL OF W 1 & W2

SCALE: 1:30

SPECIAL
ECONOMIC
ZONE
KHAIRPUR

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KHAIRPUR SPECIAL
ECONOMIC ZONE (KSEZ)
DISTRICT KHAIRPUR

Consultant Architect



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REVISIONS

Mark	Date	Description	Sig
01	12.15.15	DOORS & WINDOWS SIZES REV	

Date of Issue: DECEMBER - 2015
Issued To: CLIENT
Issued For: TENDER

ARCHITECTURAL

Building Name
MAIN SUBSTATION

Drawing Title
DETAILS

Designed: RIAZ
Checked: N.K.
Approved: N.K.
Date: DEC 2015
Scale / Sheet: AS SHOWN

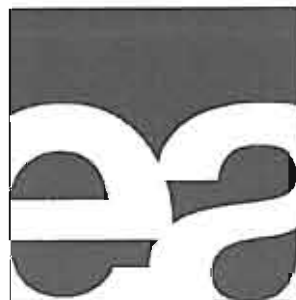
Project Code: 660
Drawing No: 01
EA-660-MST-102

**PROJECT OFFICE
KHAIRPUR SPECIAL ECONOMIC ZONE
DISTRICT KHAIRPUR**

MAIN SUBSTATION

**TENDER DRAWINGS
(ELECTRICAL)**

FEBRUARY. - 2016



EA Consulting Pvt Ltd

AL - 9, 15th Lane, off Khayaban - e - Hilal, Phase 7,
Defence Housing Authority, Karachi. , 75500-Pakistan
Phone No.+92 21 5841821-4. Fax No.+92 21 5841825
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S.#	DRAWING NO.	DRAWING TITLE
01	EA-660-E-00	LIST OF DRAWINGS
02	EA-660-E-01	LEGEND, & EARTHING INSTALLTION DETAILS
03	EA-660-E-02	MV SINGLE LINE DIAGRAM DISTRIBUTION SCHEME BETWEEN SUB STATION TO SUB STATION
04	EA-660-E-03	MV PANEL ARRANGEMENT ,TRENCH DETAIL,LIGHTING & POWER PLAN
05	EA-660-E-04	MV CABLE ROUTING LAYOUT FROM MAIN SUB STATION TO SUB STATION NO1,2,3,4
06	EA-660-E-05	LV CABLE ROUTING LAYOUT FROM TRAFO -2 TO MAIN SUB STATION

Project
SPECIAL
ECONOMIC
ZONE
KHAIRPUR

Client
CITY DISTRICT
GOVERNMENT
KHAIRPUR

Consultant Architect .

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Email info@eaworld.com | www.eaworld.com

on	FEB 2016	ISSUED FOR TENDER	J I S
Mark	Date	Description	Sig

Date of Issue	DECEMBER - 2015
Issued To	CLIENT
Issued For	TENDER

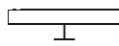







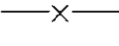



ELECTRICAL

TENDER

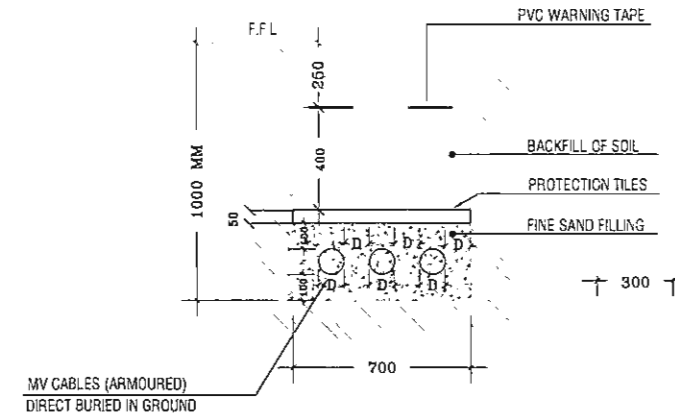
Building Name
MAIN SUB STATION

Drawing Title
LIST OF DRAWINGS

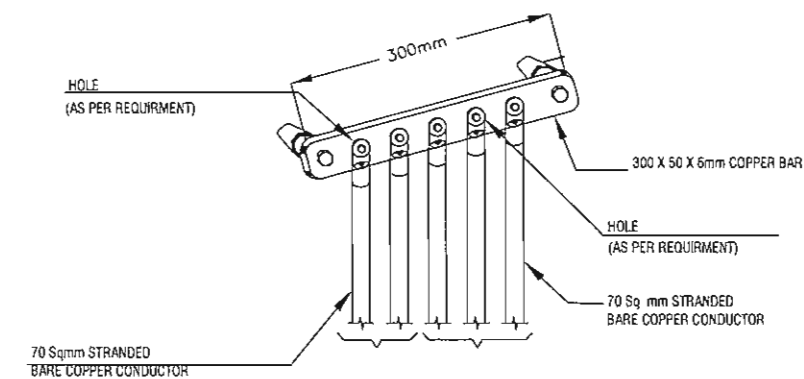
Designed	FI	Checked	FI	Approved	J I S
Drawn	V W	Date	DEC 2015	Scale / Sheet	1:50 @ A1
Project Code	660	Rev	00		
Drawing No	EA-660-E-00				

S.No.	NORMAL SYMBOL	DESCRIPTION	LAMP	MOUNTING
1		FLUORESCENT LIGHT FIXTURE (PHILIPS TMS OR EQUIVALENT)	2 x 28W T5 COLOR 84	SURFACE / WALL
2		BULK HEAD OUTDOOR LIGHT FIXTURE (IP65)	1 x 11W CFL LAMP	SURFACE / WALL
3		LIGHTING SWITCH (N GANG)		1200mm-FFL
4		15A SWITCH SOCKET OUTLET		450mm-FFL
5		DISTRIBUTION BOARD		1200mm-FFL
6		INDICATION LAMPS		
7		EXHAUST FAN		
8		SP MCB		
9		TP MCCB		
10		EARTH CONNECTING POINT		
11		EARTH PIT WITH PLATE TYPE EARTH ELECTRODE		
12		EARTH PIT WITH ROD TYPE EARTH ELECTRODE		

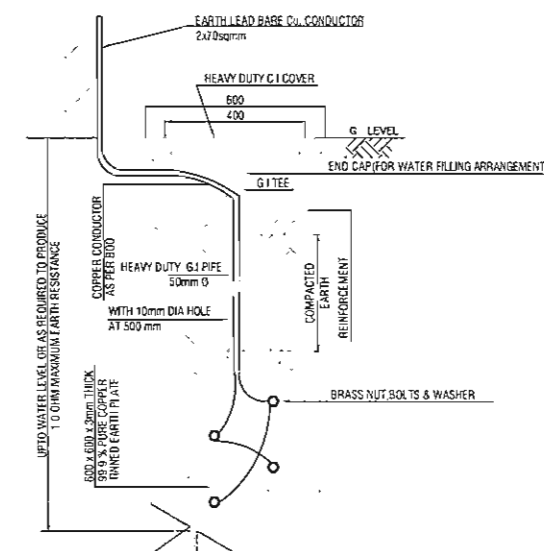
LEGEND



MV CABLE UNDER GROUND INSTALLATION DETAIL



EARTH CONNECTING POINT



EARTHING CU PLATE DETAIL

Project

SPECIAL
ECONOMIC
ZONE
KHAIRPUR

Client

CITY DISTRICT
GOVERNMENT
KHAIRPUR

Consultant Architect



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Defence Housing Authority, Karachi-75500 Pakistan
Phone No. 111-111-3584 Fax No. 554-1925
Email info@ea-world.com | www.ea-world.com

Mark	Date	Description	Sig
00	FEB 2015	ISSUED FOR TENDER	J.I.S
REVISIONS			

Date of Issue	DECEMBER - 2015
Issued To	CLIENT
Issued For	TENDER

ELECTRICAL

TENDER

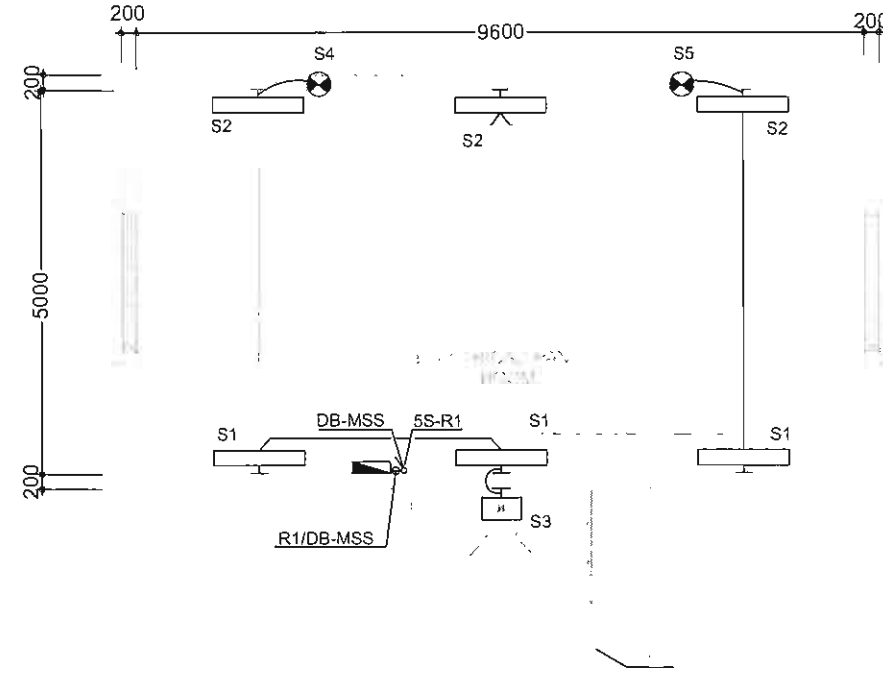
Building Name

MAIN SUB STATION

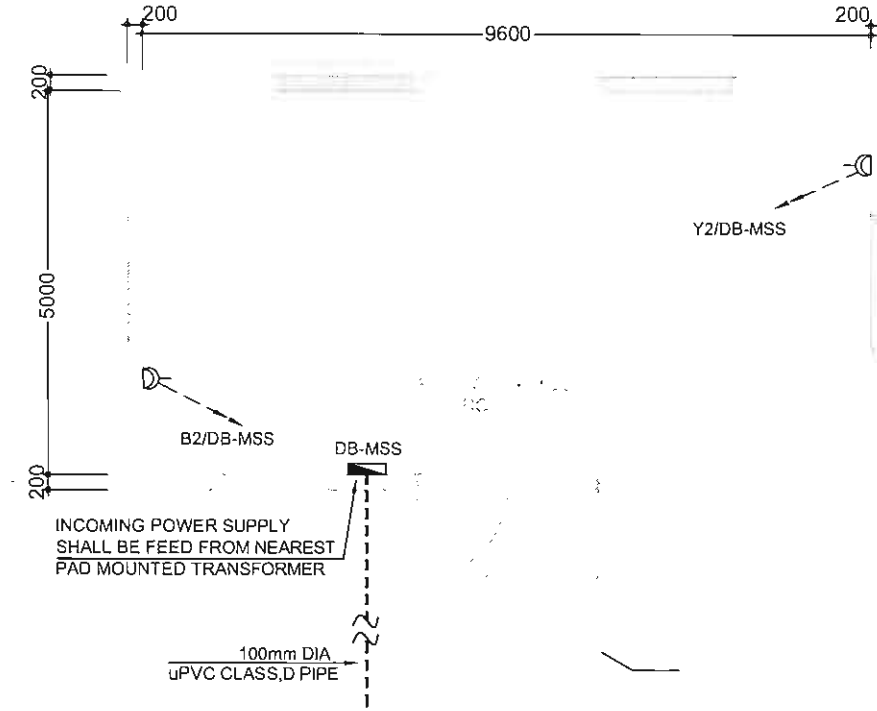
Drawing Title

LEGEND & EARTHING
INSTALLATION DETAILS

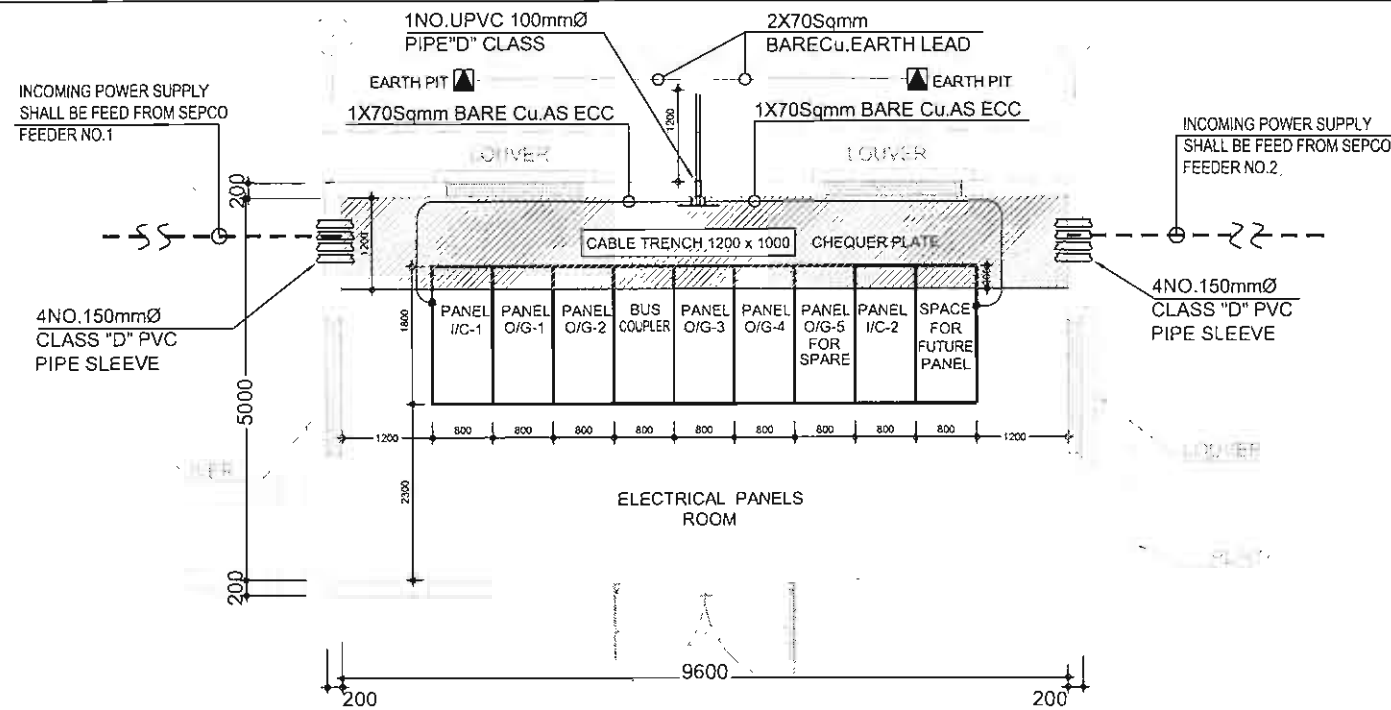
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M.W.	DEC 2015	N.T.S @ A+
Project Code	Rev	
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Drawing No	EA-660-E-01	



LIGHTING PLAN

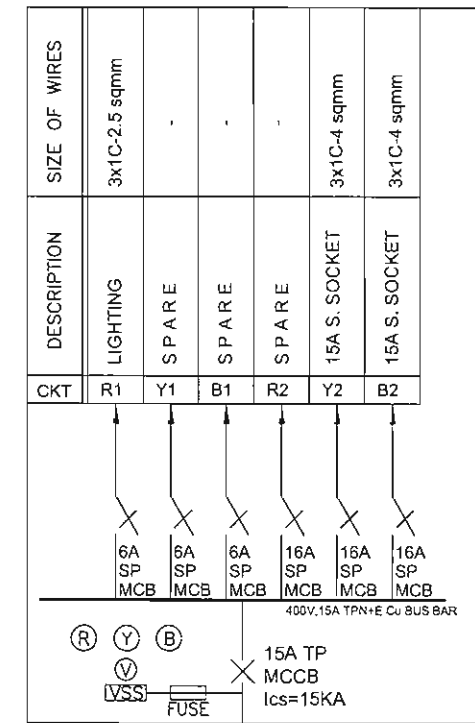


SMALL POWER PLAN



NOTE:
EARTH PIT WILL BE ADDED TO
GET RESULT LESS THAN 1 OHM

ELECTRICAL PANEL ARRANGEMENT AND TRENCH DETAIL



SINGEL LINE DIAGRAM DB MAIN SUBSTATION

Project
SPECIAL
ECONOMIC
ZONE
KHAIRPUR

Client
CITY DISTRICT
GOVERNMENT
KHAIRPUR

Consultant Architect

EA Consulting (Pvt.) Limited
Formerly Engineering Associates
Head Office AL-5 15th Lane Khayaban-e-Haq Phase 7
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Phone No 111-111-584 Fax No 594-1825
Email info@eaworld.com www.eaworld.com

Rev	Date	Description	Sig
01	FEB 2016	ISSUED FOR TENDER	JIS

Date of Issue	DECEMBER - 2015
Issued To	CLIENT
Issued For	TENDER

ELECTRICAL

TENDER

Building Name
MAIN SUB STATION

Drawing Title
MV PANEL ARRANGEMENT,
TRENCH DETAIL,
LIGHTING & POWER PLAN

Designed	Checked	Approved
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Drawn	Date	Scale / Sheet
M W	DEC 2015	1:50 @ A1
Project Code	660	Rev 00
Drawing No	EA-660-E-03	

Project

SPECIAL
ECONOMIC
ZONE
KHAIRPUR

Client

CITY DISTRICT
GOVERNMENT
KHAIRPUR

Consultant



EA Consulting (Pvt.) Limited
Formerly Engineering Associates
Head Office AL-2, 15th Lane, Khayaban-e-Hisab Phase 7,
Defence Housing Authority, Karachi - 75500 - Pakistan
Phone No. 111-111-5541, Fax No. 584-1825
Email info@ea-world.com, www.ea-world.com

SYMBOLS	DESCRIPTION
	S/S SUBSTATION
	15KV/1X3C/240 SQMM ALXLPE/PVC/SWA/PVC
	2ND. MV CABLE RUN DIRECTLY BURIED
	2ND. MV CABLE RUN IN EXISTING ROAD CROSSING SLEEVES

NO	DATE	DESCRIPTION	SIG
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Date of Issue	DECEMBER - 2015
Issued To	CLIENT
Issued For	TENDER

ELECTRICAL

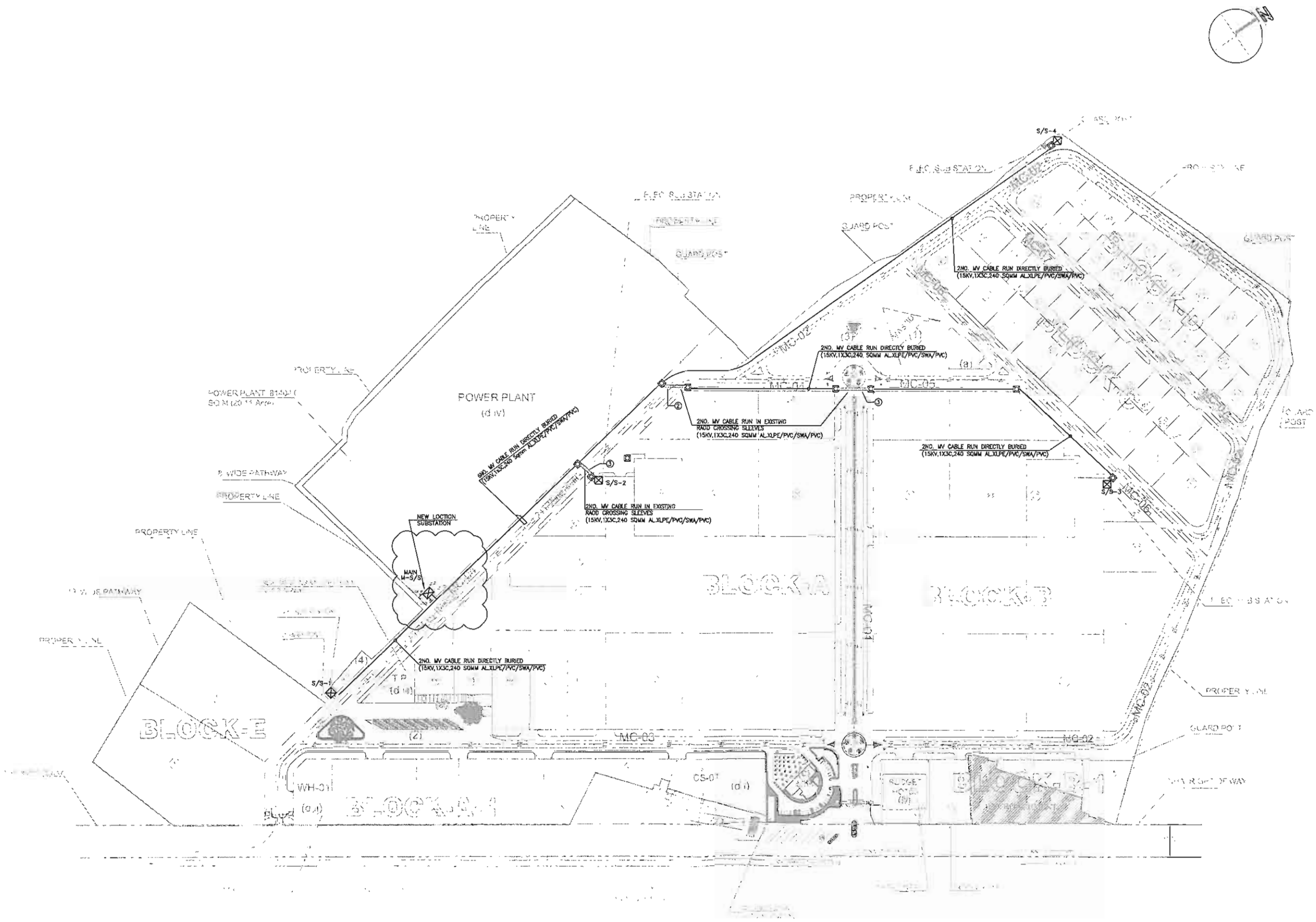
TENDER

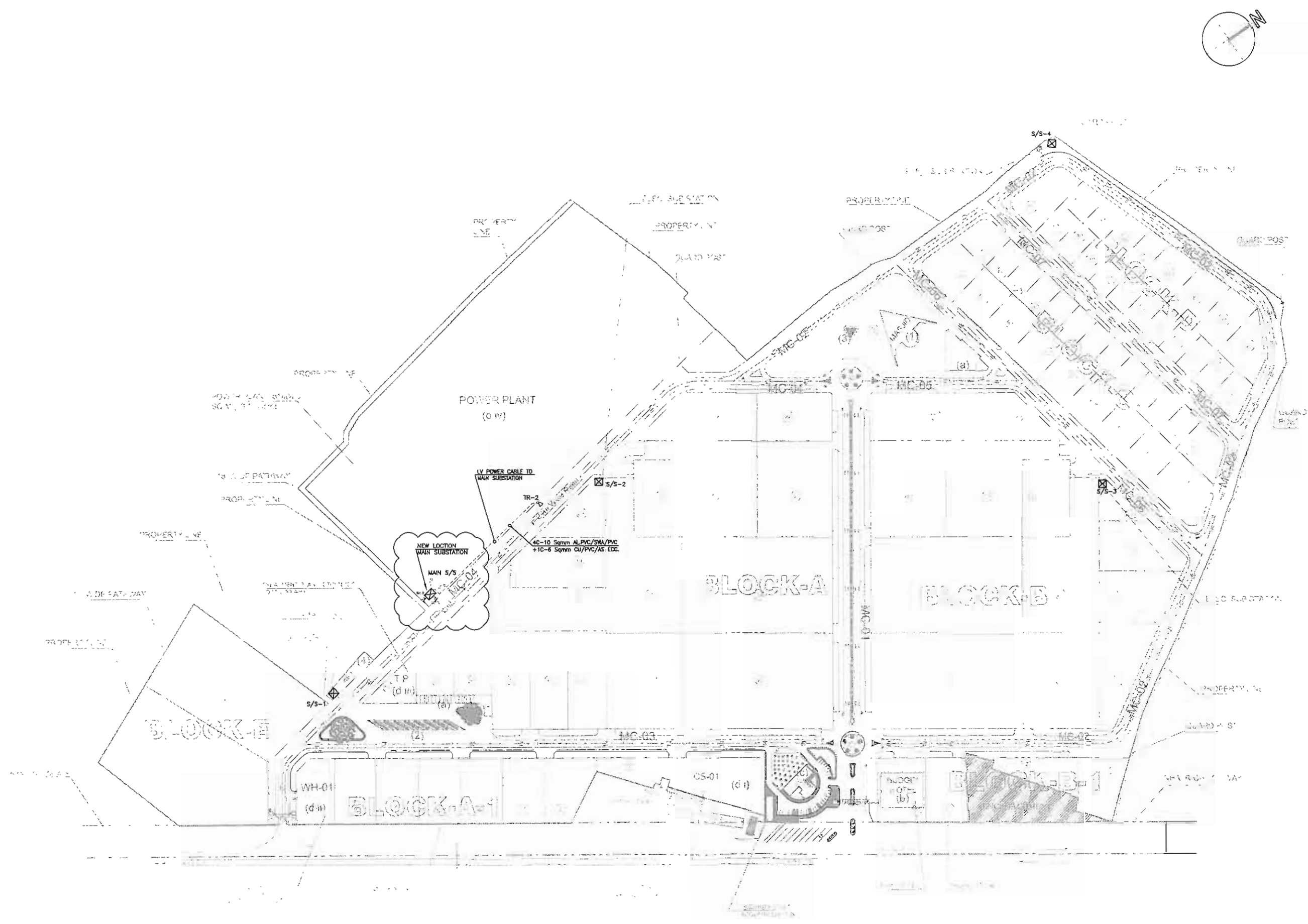
Building Name
MAIN SUB STATION

Drawing Title
MV CABLE
ROUTING LAYOUT FROM
MAIN SUB STATION TO
SUB STATION NO.1,2,3,4

Designed	Checked	Approved	J.I.S
F.I	F.I	F.I	J.I.S
Drawn	Date	Scale / Sheet	
M.W	DEC 2015	1:2000 @ A1	
Project Code	660	Rev	00
Drawing No			

EA-660-E-04





SPECIAL
ECONOMIC
ZONE
KHAIRPUR

CITY DISTRICT
GOVERNMENT
KHAIRPUR

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SYMBOL	DESCRIPTION
	SUBSTATION
	LV CABLE

Date	Description	Sig
00 FEB 2016	ISSUED FOR TENDER	JIS

Date of Issue	DECEMBER - 2015
Issued To	CLIENT
Issued For	TENDER

ELECTRICAL

TENDER

Building Name
MAIN SUB STATION

Drawing Title
LV CABLE
ROUTING LAYOUT FROM
TRAFO-2 TO MAIN
SUB STATION

Designed	Checked	Approved
FI	FI	JIS
Drawn	Date	Scale / Sheet
MW	DEC 2015	1:2000 @ A1
Project Code	Rev	
	660	00
Drawing No	EA-660-E-05	