

PROJECT OFFICE
KHAIRPUR SPECIAL ECONOMIC ZONE (KSEZ)
DISTRICT KHAIRPUR

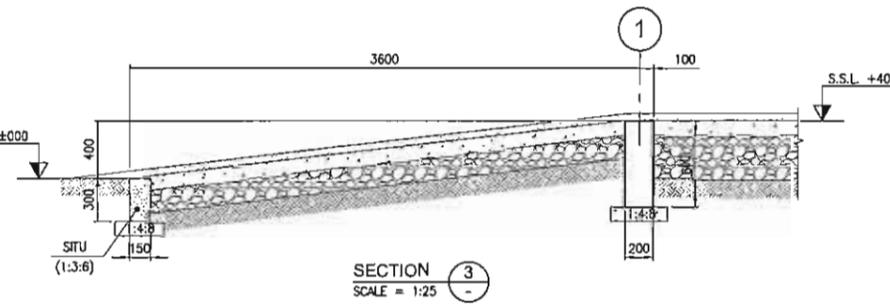
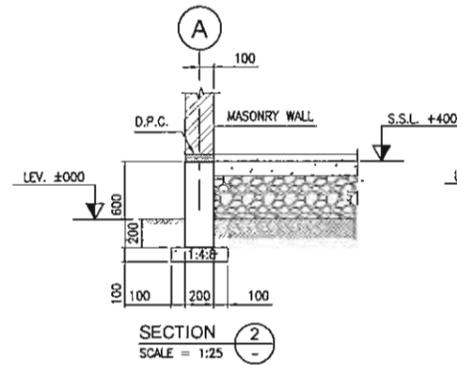
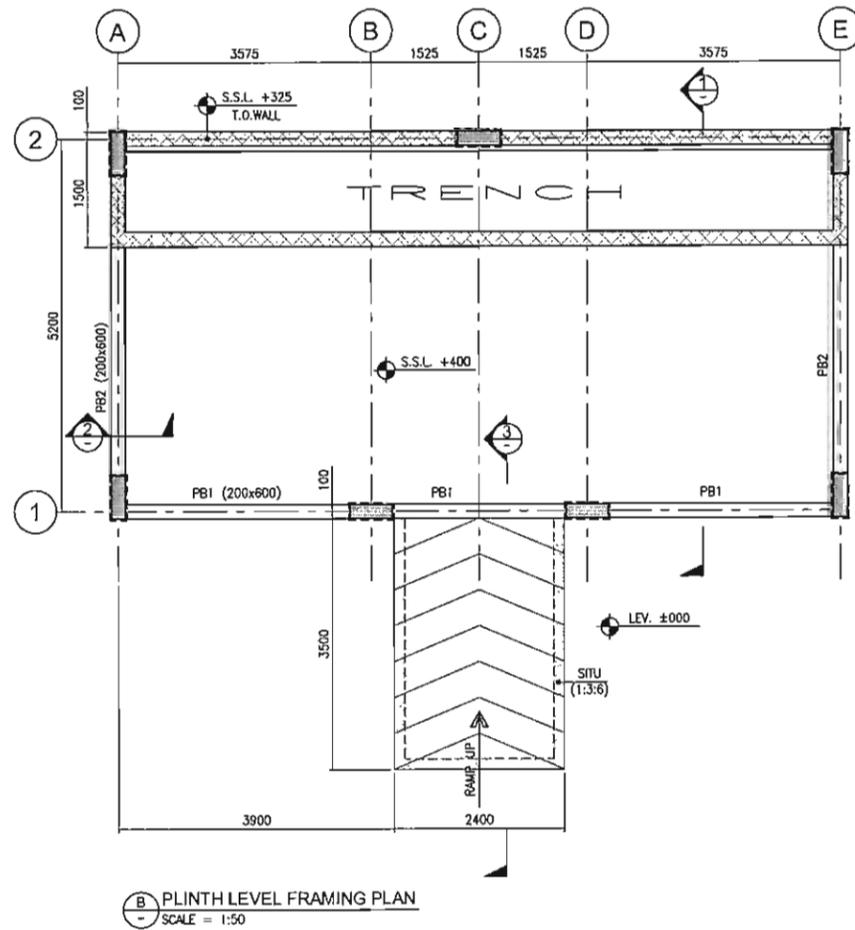
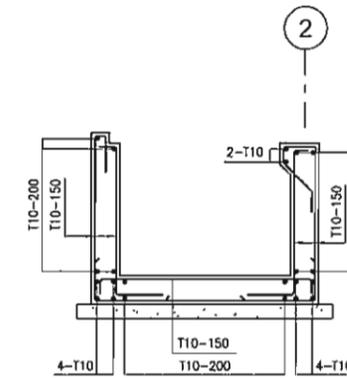
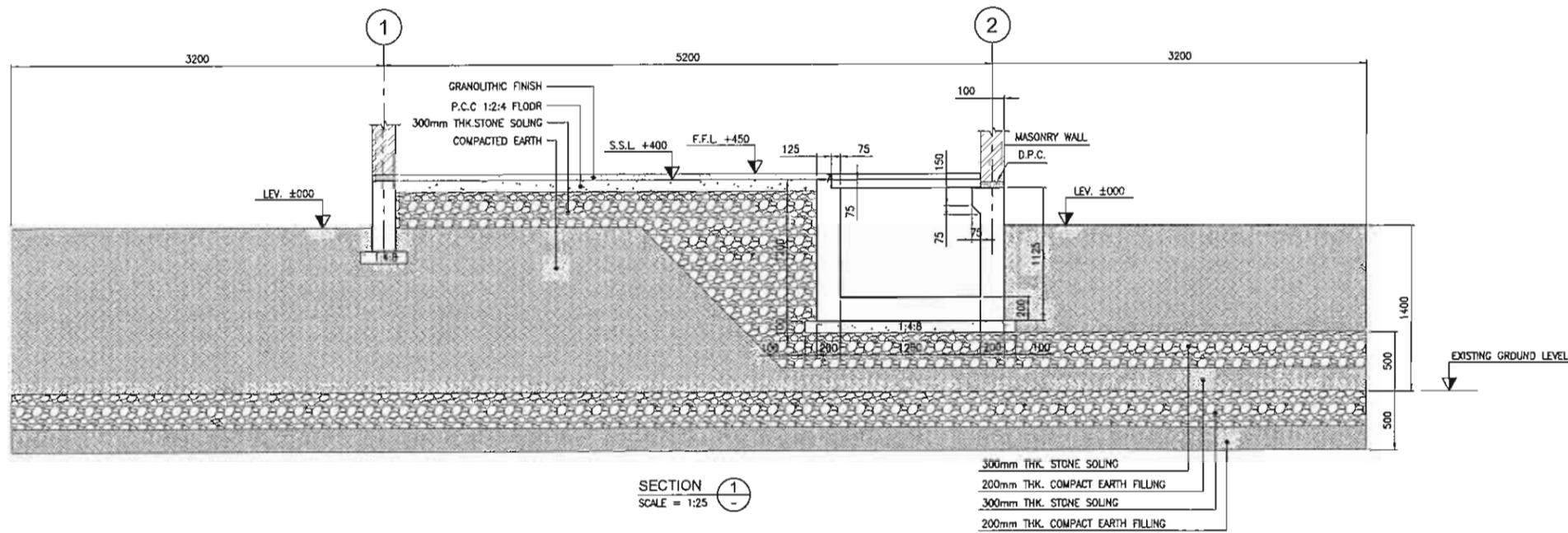
CONSTRUCTION OF
MAIN SUBSTATION

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



Project:
SPECIAL ECONOMIC ZONE KHAIRPUR

Consultant Architect:
EA Consulting Pvt Ltd
Head Office: L-9, 15th Lane, Khayaban-e-Hilal Phase T, Defence Housing Authority, Karachi, 75500 - Pakistan
Phone No. 111-111-5041 Fax No. 594-1925
Email: info@eaconsult.com | www.eaconsult.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.
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:
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:	660	Rev.:
		0

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

Project:
SPECIAL ECONOMIC ZONE KHAIRPUR

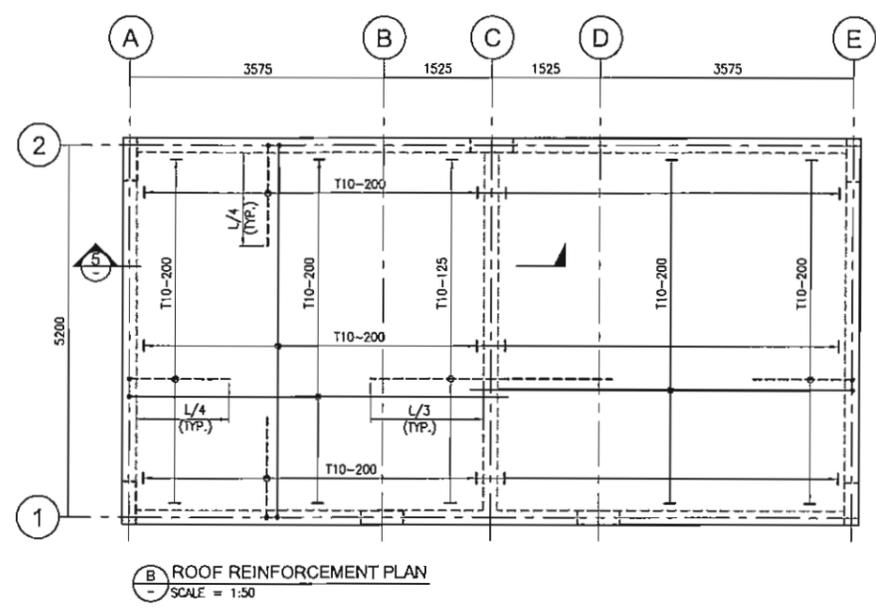
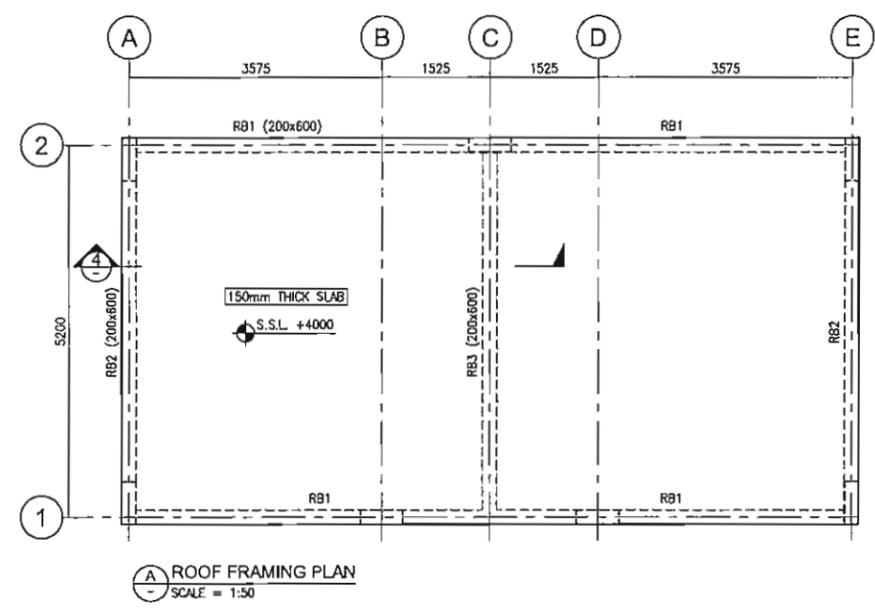
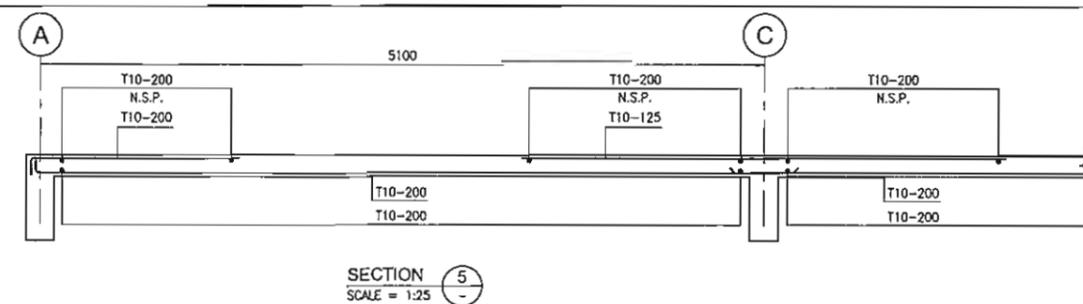
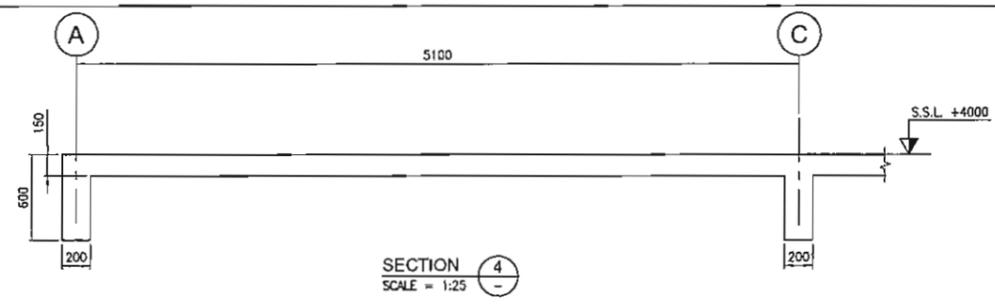
Consultant Architect:
EA Consulting Pvt Ltd
Head Office: AL-9, 15th Lane, Khayaban-e-Hal, Phase 7, Defence Housing Authority, Karachi, 75300 - Pakistan
Phone No. 111-111-554, Fax No. 594-1525
Email: info@ea-world.com | www.ea-world.com

Client:
CITY DISTRICT GOVERNMENT KHAIRPUR

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

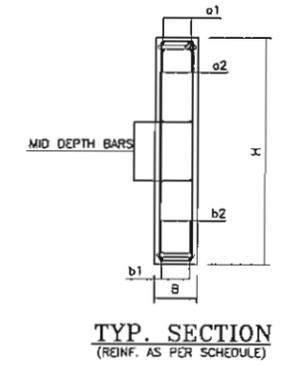
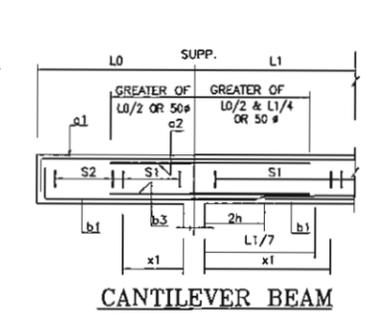
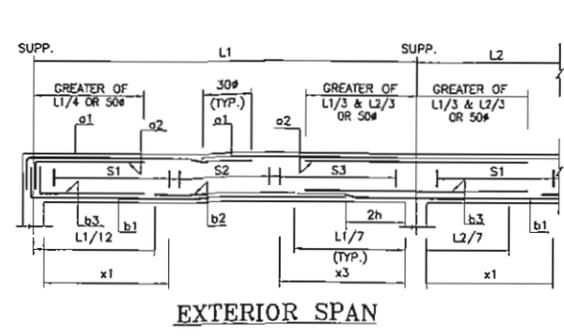
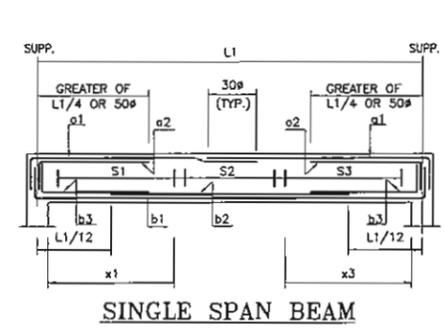
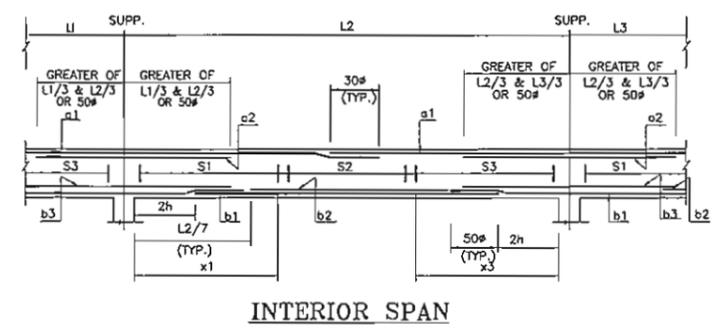
STRUCTURAL
Status: **TENDER**
Building Name: **MAIN SUBSTATION**

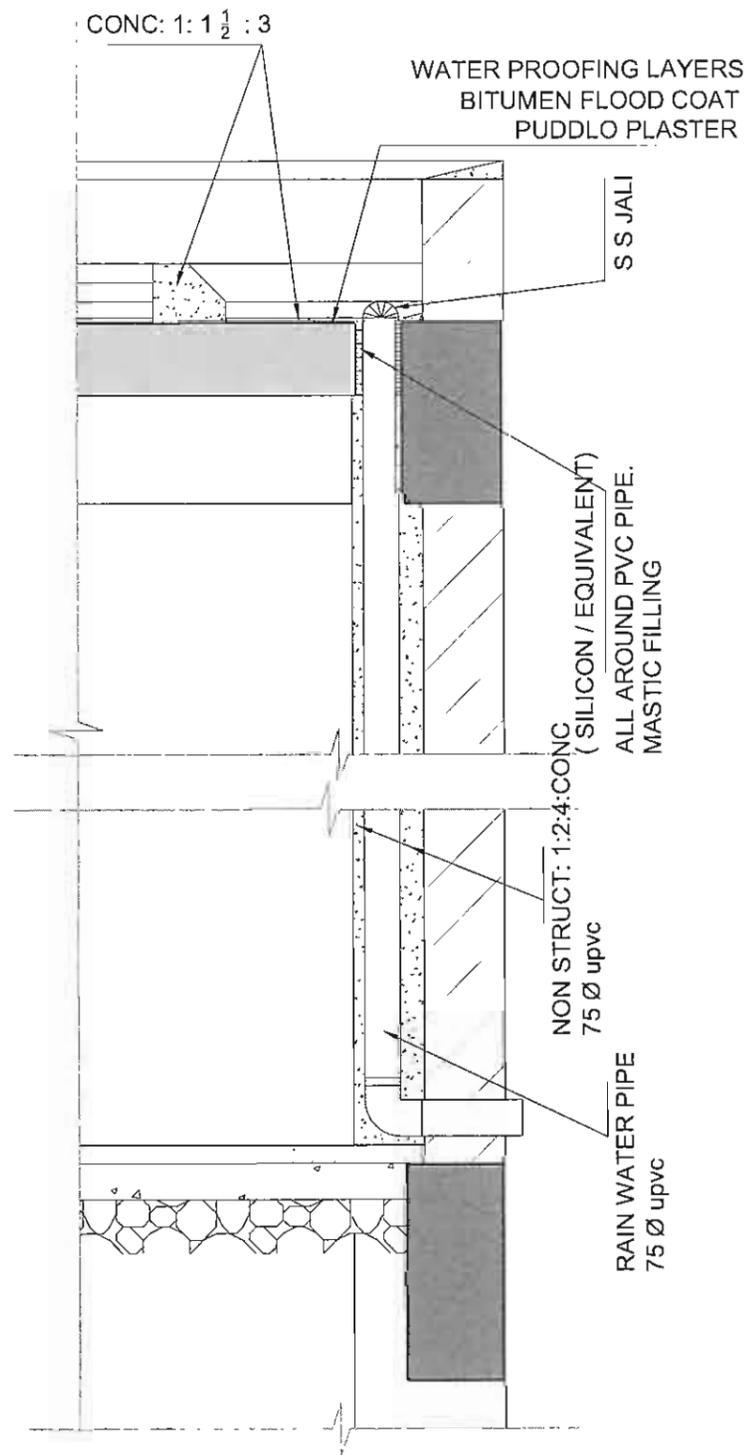
Drawing Title:
ROOF FRAMING & REINFORCEMENT PLAN AND SECTION / BEAM SCHEDULE
Designed: A.K. Checked: K.M. Approved: M.S.
Drawn: A.A.G. Date: DEC.2015 Scale / Sheet: AS SHOWN
Project Code: 660 Rev.: 0
Drawing No.: **EA-660-MST-S-0102**



SCHEDULE OF BEAMS

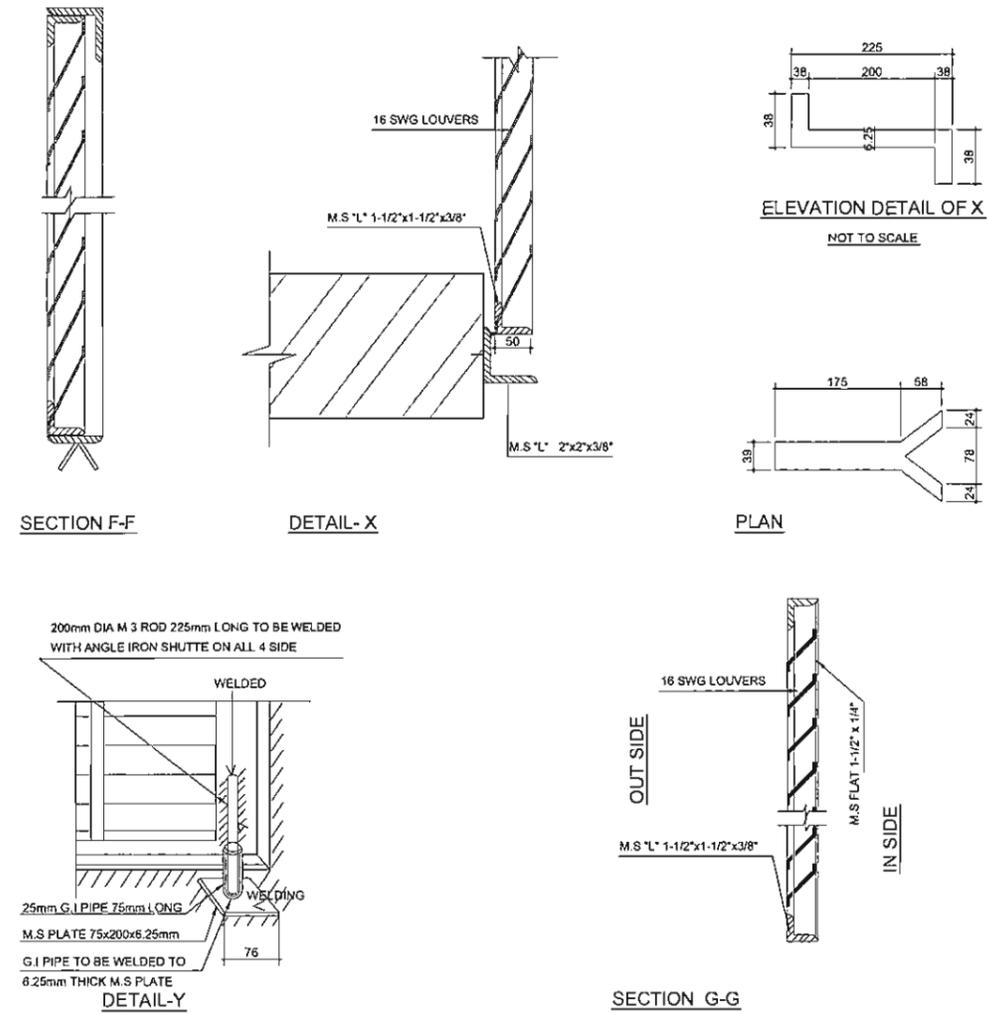
S.NO	MARK	SIZE		TOP REINFORCEMENT (SUPPORTS)				BOTTOM REINFORCEMENT (SPAN)				STIRRUP (ALL T10 UNLESS SPECIFIED)			MID DEPTH REINF. (EF)	REMARKS
		B	H	a1	a2	a1	a2	b1	b2	b3 (LEFT)	b3 (RIGHT)	s1(x1)	s2	s3(x3)		
PLINTH BEAM																
1	PB1	200	600	2-T16	2-T12	2-T16	2-T12	2-T16	-	-	-	100	200	100		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





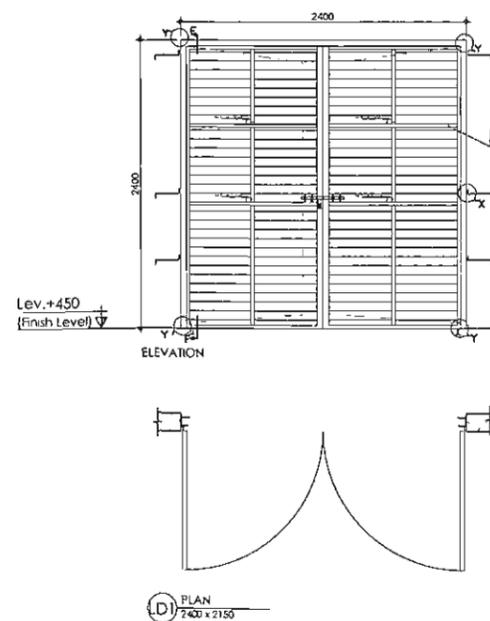
DETAIL SECTION RAIN WATER PIPE

SCALE: 1:10



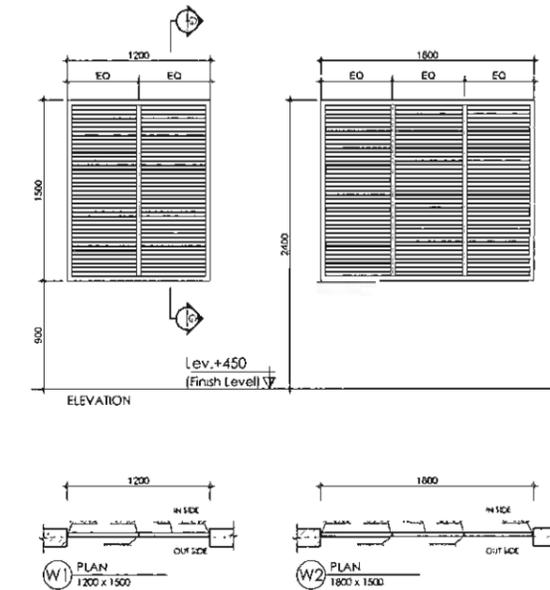
DETAIL OF LOUVERED DOOR / WINDOW

SCALE: 1:5



DETAIL OF LD1

SCALE: 1:30



DETAIL OF W 1 & W2

SCALE: 1:30

Project
SPECIAL
ECONOMIC
ZONE
KHAIRPUR

Client
PROJECT OFFICE
KHAIRPUR SPECIAL
ECONOMIC ZONE (KSEZ)
DISTRICT KHAIRPUR

Consultant Architect

EA Consulting (Pvt.) Limited
Formerly Engineering Associates
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Mark	Date	Description	Sig
REVISIONS			
Date of Issue	DECEMBER - 2015		
Issued To	CLIENT		
Issued For	TENDER		

ARCHITECTURAL

Building Name
MAIN SUBSTATION

Drawing Title
DETAILS

Designed	Checked	Approved
RIAZ	N.K.	N.K.
Drawn	Date	Scale / Sheet
F.A.	DEC 2015	AS SHOWN
Project Code	660	01
Drawing No	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,
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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 .

EA Consulting (Pvt.) Limited
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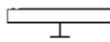
ELECTRICAL

TENDER

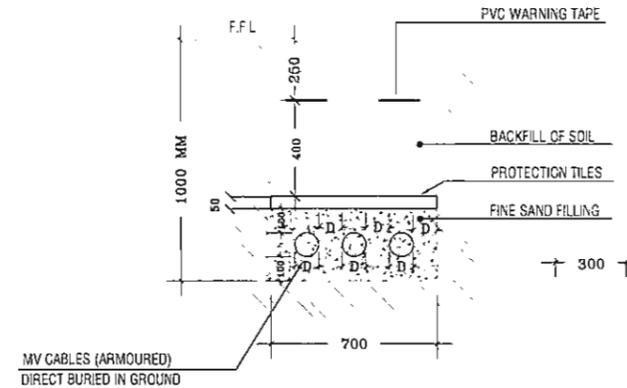
Building Name
MAIN SUB STATION

Drawing Title
LIST OF DRAWINGS

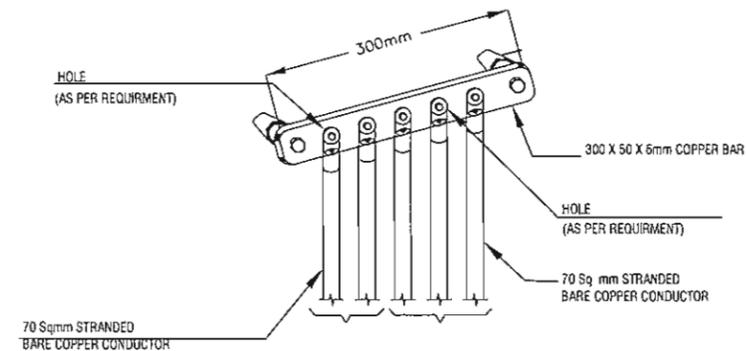
Designed	Checked	Approved
FI	FI	JIS
Drawn	Date	Scale / Sheet
MW	DEC 2015	: 50 @ A1
Project Code	660	Rev 00
Drawing No	EA-660-E-00	

S.No.	NORMAL SYMBOL	DESCRIPTION	LAMP	MOUNTING
1		FLUORESCENT LIGHT FIXTURE (PHILIPS TMS DR 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		

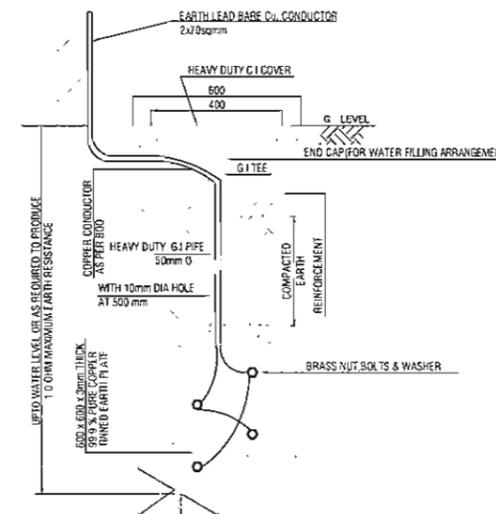
LEGEND



MV CABLE UNDER GROUND INSTALLATION DETAIL



EARTH CONNECTING POINT



EARTHING CU PLATE DETAIL

SPECIAL ECONOMIC ZONE KHAIRPUR

CITY DISTRICT GOVERNMENT KHAIRPUR

Consultant Architect

EA Consulting (Pvt.) Limited
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00	FEB 2015	ISSUED FOR TENDER	J.S

REVISIONS

Date of Issue	DECEMBER - 2015
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Issued For	TENDER

ELECTRICAL

TENDER

Building Name
MAIN SUB STATION

Drawing Title
LEGEND & EARTHING INSTALLATION DETAILS

Designed	Checked	Approved
FI	FI	J.S
Drawn	Date	Scale / Sheet
M.W	DEC 2015	N.T.S @ A*
Project Code	Rev	
	660	00
Drawing No	EA-660-E-01	

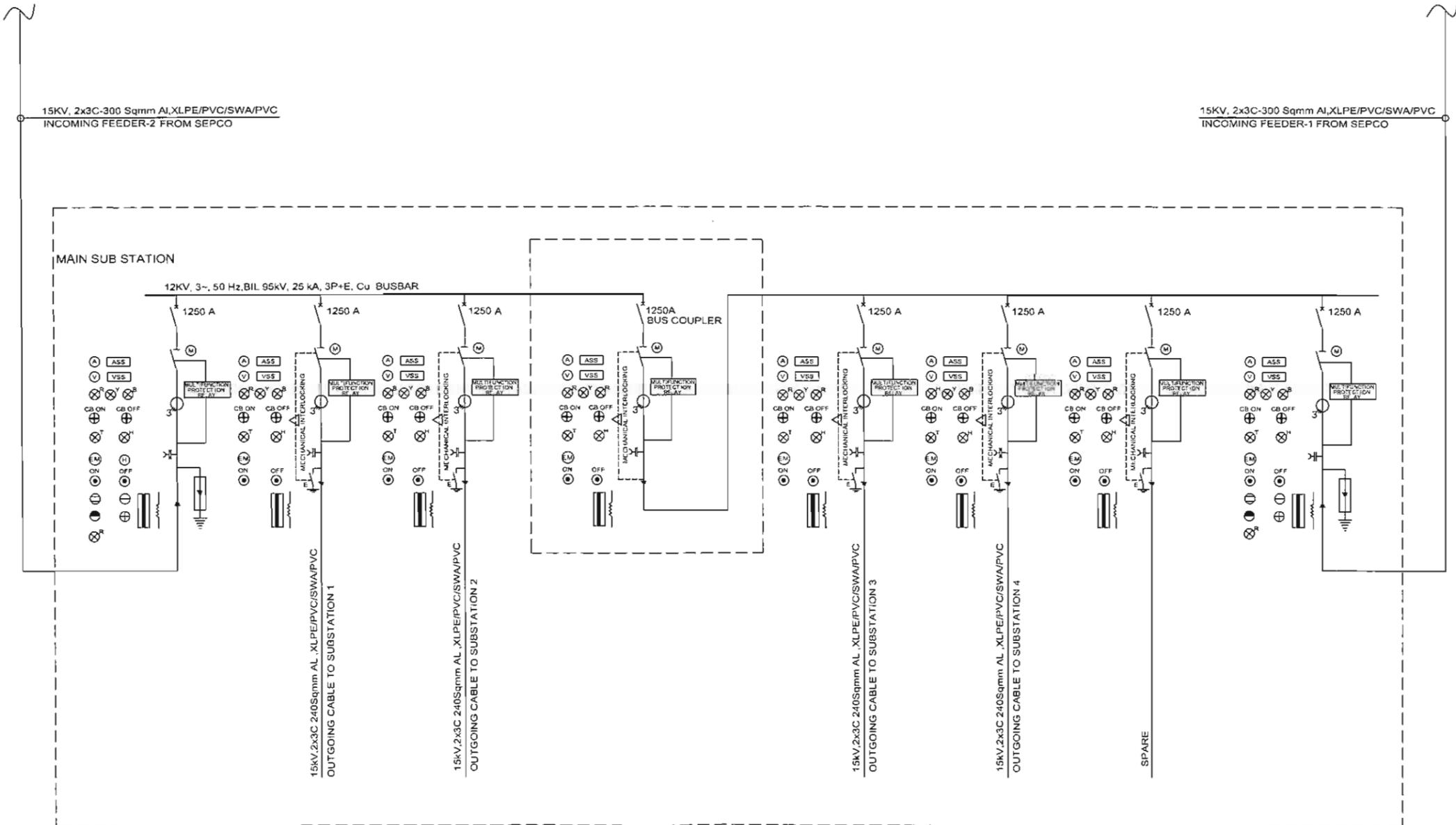
Project
SPECIAL ECONOMIC ZONE KHAIRPUR

Client
CITY DISTRICT GOVERNMENT KHAIRPUR

Consultant Architect
EA Consulting (Pvt.) Limited
Formerly Engineering Associates
Head Office AL-9, 15th Lane, Khayaban-e-Hal Phase 7, Defence Housing Authority, Karachi, 75500 - Pakistan
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Email info@eaworld.com | www.eaworld.com

LEGEND

SYMBOLS	DESCRIPTION
	12KV VACUUM CIRCUIT BREAKER (VCB), BIL 95KV, 25KA FOR 3 SEC
	SURGE ARRESTER
	EARTHING SWITCH
	3Nos. CURRENT TRANSFORMERS WITH SHORT LINKS (2-CORE) 800-400/5/5A
	3Nos. POTENTIAL TRANSFORMER (11000/√3/110/√3 V)
	VOLT METER (0-15KV)
	VOLT METER SELECTOR SWITCH (4 POSITION)
	AMPERE METER
	AMPERE METER SELECTOR SWITCH (4 POSITION)
	ENERGY METER (KWH / KVARH) WITH MDI, P.F ETC
	PUSH BUTTONS ON AND OFF ELECTRICAL CIRCUIT BREAKER
	INDICATION LAMP FOR PHASES R, RED, Y, YELLOW, B, BLUE
	INDICATION LAMP FOR VCB ON AND OFF
	CIRCUIT BREAKER TRIP INDICATION LAMP T-AMBER
	HEATER 'ON' INDICATION LAMP (BLUE)
	HOOTER
	O/C, S/C, E/F RELAY WITH TEST BLOCK
	PUSH BUTTON ALARM ACKNOWLEDGEMENT
	PUSH BUTTON LOCK OUT RESET
	PUSH BUTTON HOOTER MUTE
	ANTI CONDENSATION HEATER WITH THERMOSTAT
	MOTORIZED (VCB)
	PANEL LIGHT WITH LIMIT SWITCH
	PUSH BUTTON LAMP TEST
	FAULT INDICATION LAMP (RED)



NO.	DATE	DESCRIPTION	SIG.
01	FEB 2016	ISSUED FOR TENDER	JIS

REVISIONS

Date of Issue	DECEMBER - 2015
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Issued For	TENDER

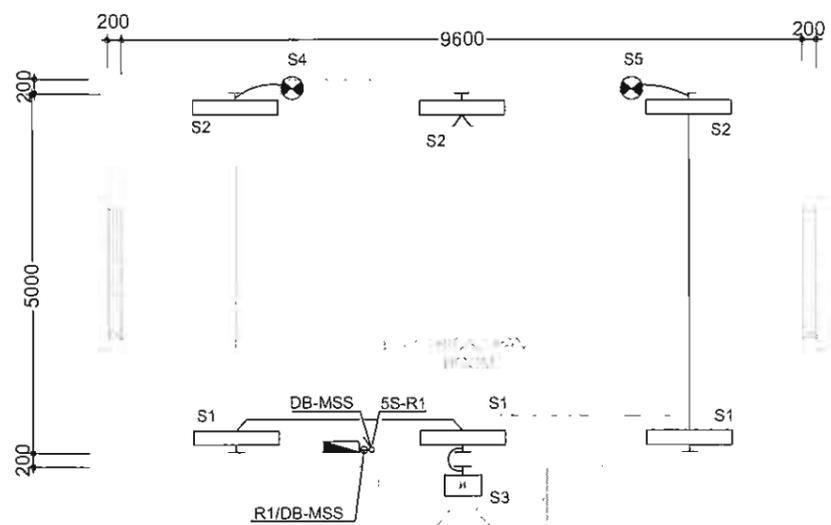
ELECTRICAL

Status
TENDER

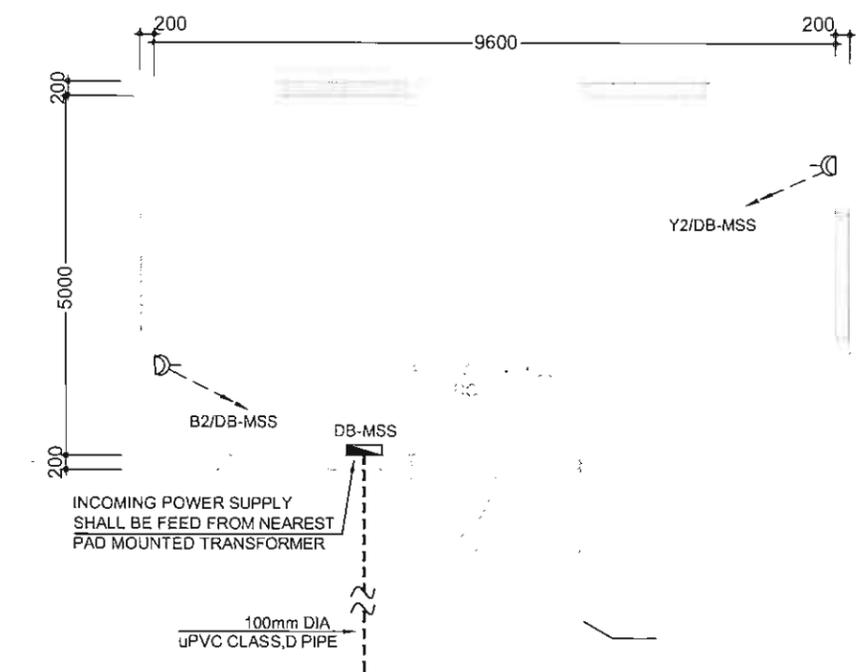
Building Name
MAIN SUB STATION

Drawing Title
MV SINGLE LINE DIAGRAM DISTRIBUTION SCHEME BETWEEN SUB STATION TO SUB STATION

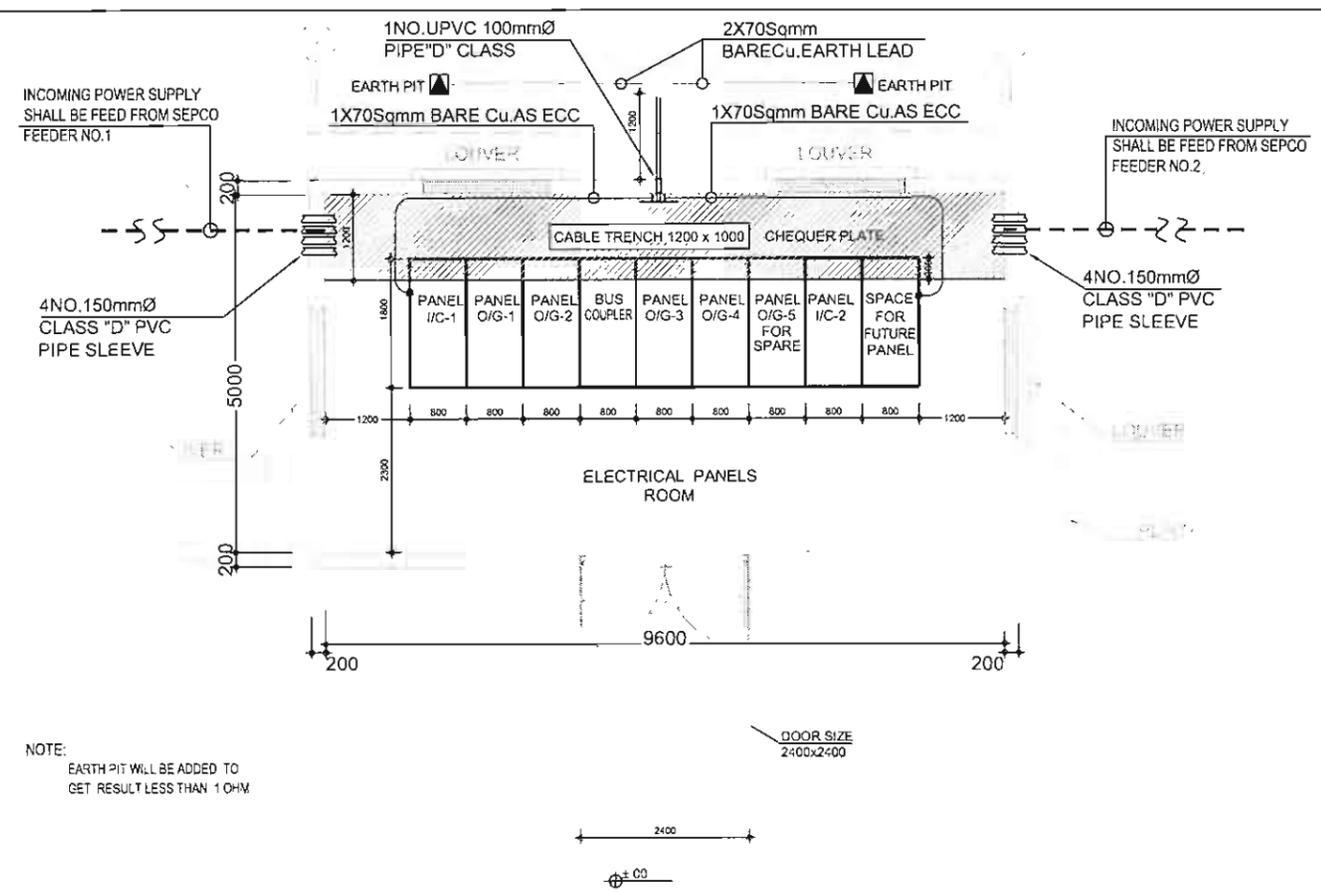
Designed	Checked	Approved
F.I.	F.I.	J.I.S.
M.W.	DEC 29 15	N.T.S.
Project Code	660	Rev 00
Drawing No	EA-660-E-02	



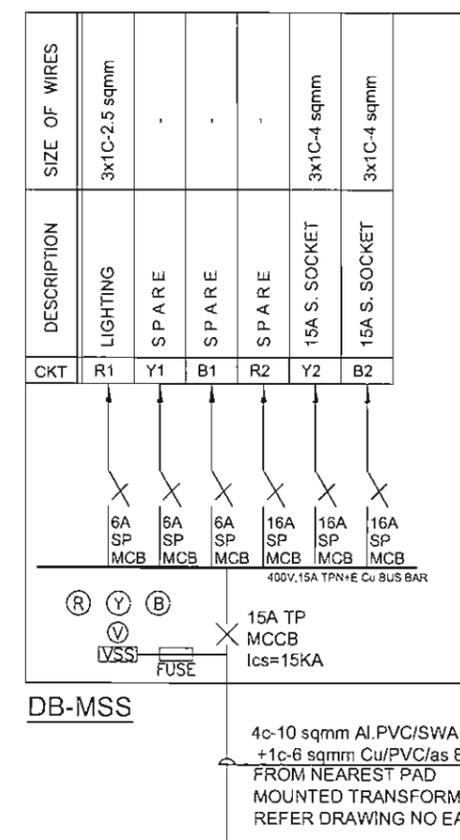
LIGHTING PLAN



SMALL POWER PLAN



ELECTRICAL PANEL ARRANGEMENT AND TRENCH DETAIL



SINGEL LINE DIAGRAM DB MAIN SUBSTATION

Project
SPECIAL ECONOMIC ZONE
KHAIRPUR

Client
CITY DISTRICT GOVERNMENT
KHAIRPUR

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Rev	Date	Description	By
01	FEB 2016	ISSUED FOR TENDER	JIS

Date of Issue	DECEMBER - 2015
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ELECTRICAL
TENDER
Building Name
MAIN SUB STATION

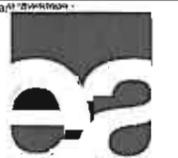
Drawing Title
MV PANEL ARRANGEMENT, TRENCH DETAIL, LIGHTING & POWER PLAN

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

Project
**SPECIAL ECONOMIC ZONE
 KHAIRPUR**

Client
**CITY DISTRICT GOVERNMENT
 KHAIRPUR**

Consultant



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 Formerly Engineering Associates
 Head Office AL-2, 55th Lane, Khayaban-e-Ist, Phase 7,
 Defence Housing Authority, Karachi 75500 - Pakistan
 Phone No 111-111-554, Fax No 584-1825
 Email info@eaworld.com | www.eaworld.com

LEGEND

SYMBOL	DESCRIPTION
	S/S SUBSTATION
	15KV, 1X3C, 240 SQMM ALXLPE/PVC/SWA/PVC CABLE RUN DIRECTLY BURIED (1000 PHASE TRINER)
	2ND. MV CABLE RUN IN EXISTING ROAD CROSSING SLEEVES (15KV, 1X3C, 240 SQMM ALXLPE/PVC/SWA/PVC)
	2ND. MV CABLE RUN IN EXISTING ROAD CROSSING SLEEVES (15KV, 1X3C, 240 SQMM ALXLPE/PVC/SWA/PVC)
	2ND. MV CABLE RUN IN EXISTING ROAD CROSSING SLEEVES (15KV, 1X3C, 240 SQMM ALXLPE/PVC/SWA/PVC)

No	Date	Description	Sig
01	FEB-2015	ISSUED FOR TENDER	J.I.S

REVISIONS

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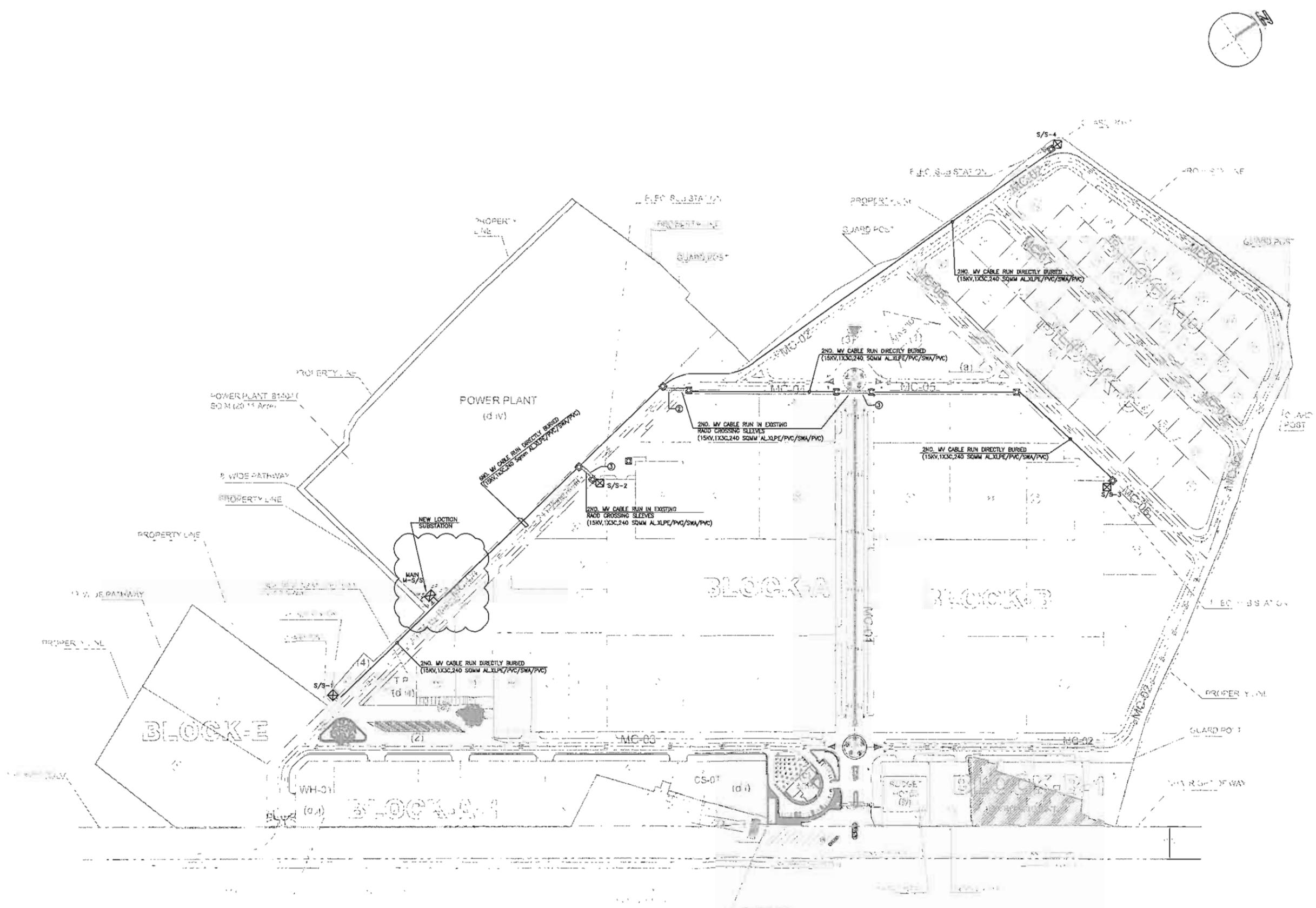
ELECTRICAL

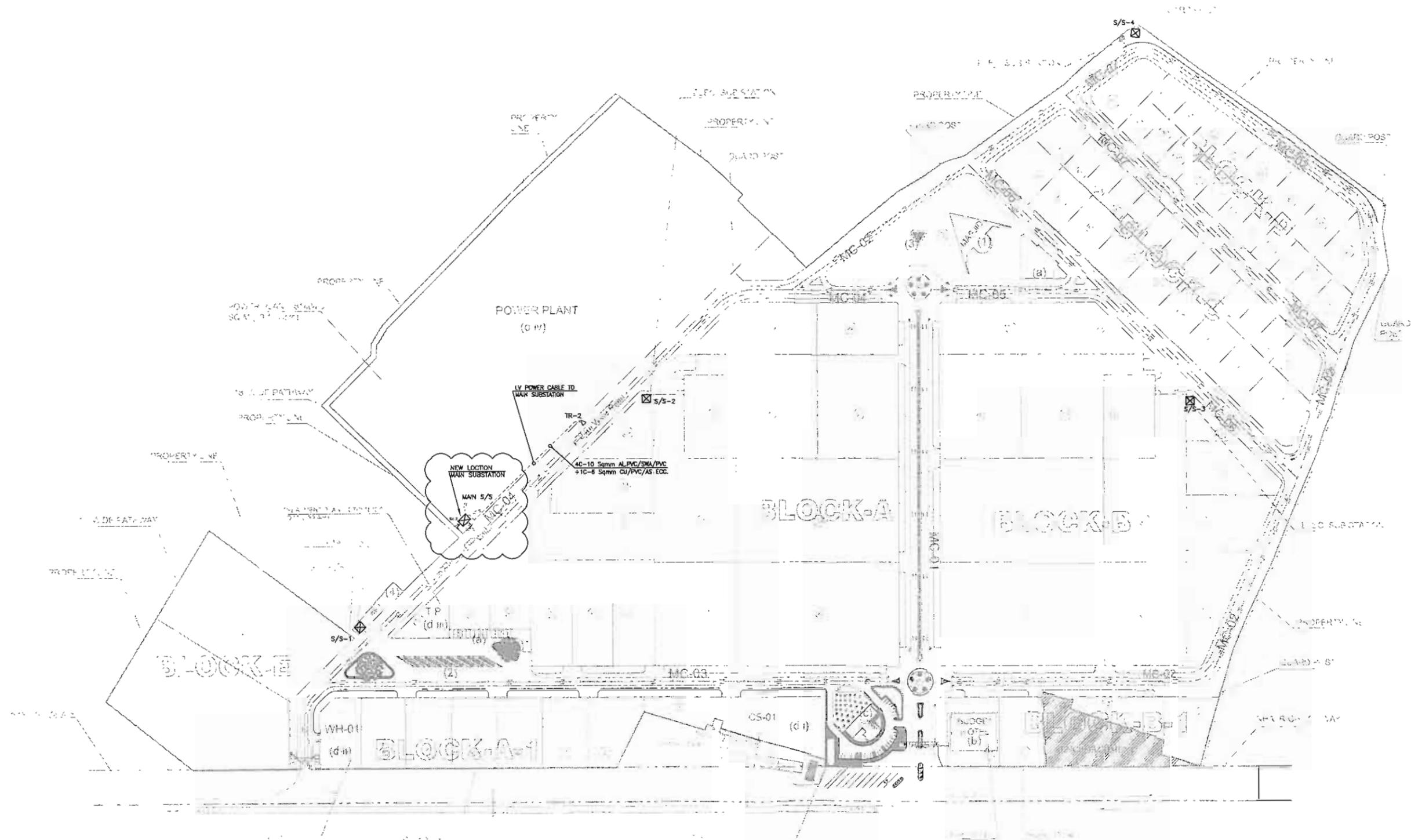
TENDER

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
F.I	F.I	J.I.S
Drawn	Date	Scale / Sheet
M.W	DEC 2015	1:2000 @ A1
Project Code	Rev	
	660	00
Drawing No	EA-660-E-04	





Project
SPECIAL ECONOMIC ZONE KHAIRPUR

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CITY DISTRICT GOVERNMENT KHAIRPUR

Consultant: Architect



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

LEGEND

SYMBOLS	DESCRIPTION
☒ S/S	SUBSTATION
▽	TRAFO WITH MOUNTED TRANSFORMER COVERED IN PREVIOUS PACKAGE / UNDER DRAWING
----	LV CABLE

Date	Description	Signature
00 FEB 2016	ISSUED FOR TENDER	JIS

Date of Issue	DECEMBER - 2015
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Issued For	TENDER

ELECTRICAL

TENDER

Building Name
MAIN SUB STATION

Drawing Title
LV CABLE ROUTING LAYOUT FROM TRAF0-2 TO MAIN SUB STATION

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