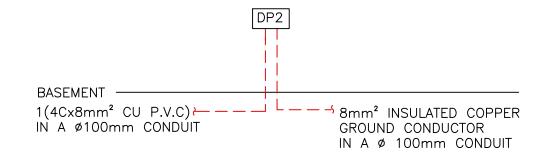


DATE REVISION No 0 05.05.2014 ISSUED FOR TENDER PURPOSE ONLY

i						BASEN	MENT P	OWER	DIS	TRIB	UTION	PANEL	BOAR	.D							
30KA ISC / 0.5 SEC																FEED : TOP					
RECESSED MOUNTED NEMA ENCLOSURE								40 AM	PΜ	AIN	BREAK	ER									
380Y / 220 VOLTS, 3 PH <i>F</i>	380Y / 220 VOLTS, 3 PHASE, 4 WIRE															MOUNT	ING: R	ECESSED			
50Hz PANEL BOARD																LOCATION	ON:W	ALL MOUNTED			
										•	,										
WIRE & CONDUIT	GND WIRE	LOAD DESCRITPTION	А	В	С	AMP	POLE	CKT	А	В	с ск	г роі	E A	.MP	А	В	С	LOAD DESCRITPTION	GND WIRE	WIRE & CONDUIT	
2(1Cx2.5mm²) Ø 25mm	2.5mm ²	LIGHTING	500			16	1	1			2	1		16	500			LIGHTING	2.5mm²	2(1Cx2.5mm²) Ø 25mm	
2(1Cx2.5mm²) Ø 25mm	2.5mm ²	LIGHTING		500		16	1	3			4	1		16		500		LIGHTING	2.5mm²	2(1Cx2.5mm²) Ø 25mm	
2(1Cx4mm²) Ø 25mm	4mm²	POWER RECEPTACLE			1000	20	1	5			6	1		20			1000	POWER RECEPTACLE	4mm²	2(1Cx4mm²) Ø 25mm	
2(1Cx4mm²) Ø 25mm	4mm²	POWER RECEPTACLE	1000			20	1	7			8	1		10	400			EXHAUST FAN	2.5mm ²	2(1Cx2.5mm²) Ø 25mm	
2(1Cx2.5mm²) Ø 25mm	2.5mm ²	EXHAUST FAN		500		10	1	9			10	1		20		1000		POWER RECEPTACLE	4mm²	2(1Cx4mm²) Ø 25mm	
2(1Cx2.5mm²) Ø 25mm	2.5mm ²	EXHAUST FAN			400	10	1	11			12	1		10			-	SPARE	-	_	
_	_	SPARE	_			16	1	13			14	1		20	- [SPARE		_	
SUI	B - TOTAL		1500	1000	1400							•			900	1500	500 1000 SUB - TOTAL				

	VA	AMP
Total Phase A	2400	10.90909091
Total Phase B	2500	11.36363636
Total Phase C	2400	10.90909091
Total Connected Load	7.3	KVA
Demond Factor		0.9
Demond Factor Load	6.57	KVA
25% Futur Load	1.6425	KVA
Total Load	8.2125	KVA
Total Ampere	12.713	AMP

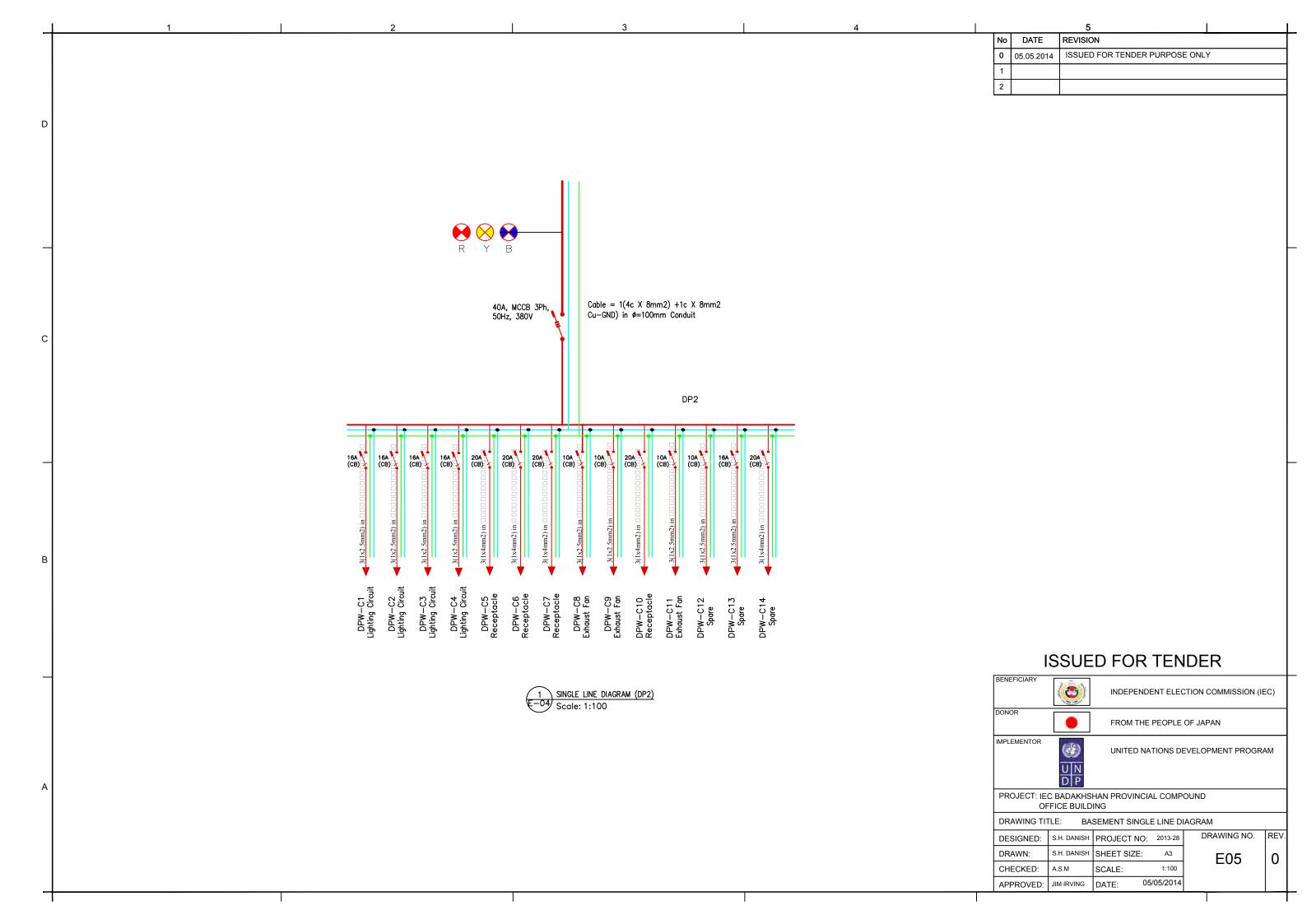
DP2 PANEL SCHEDULE E04 SCALE NTS

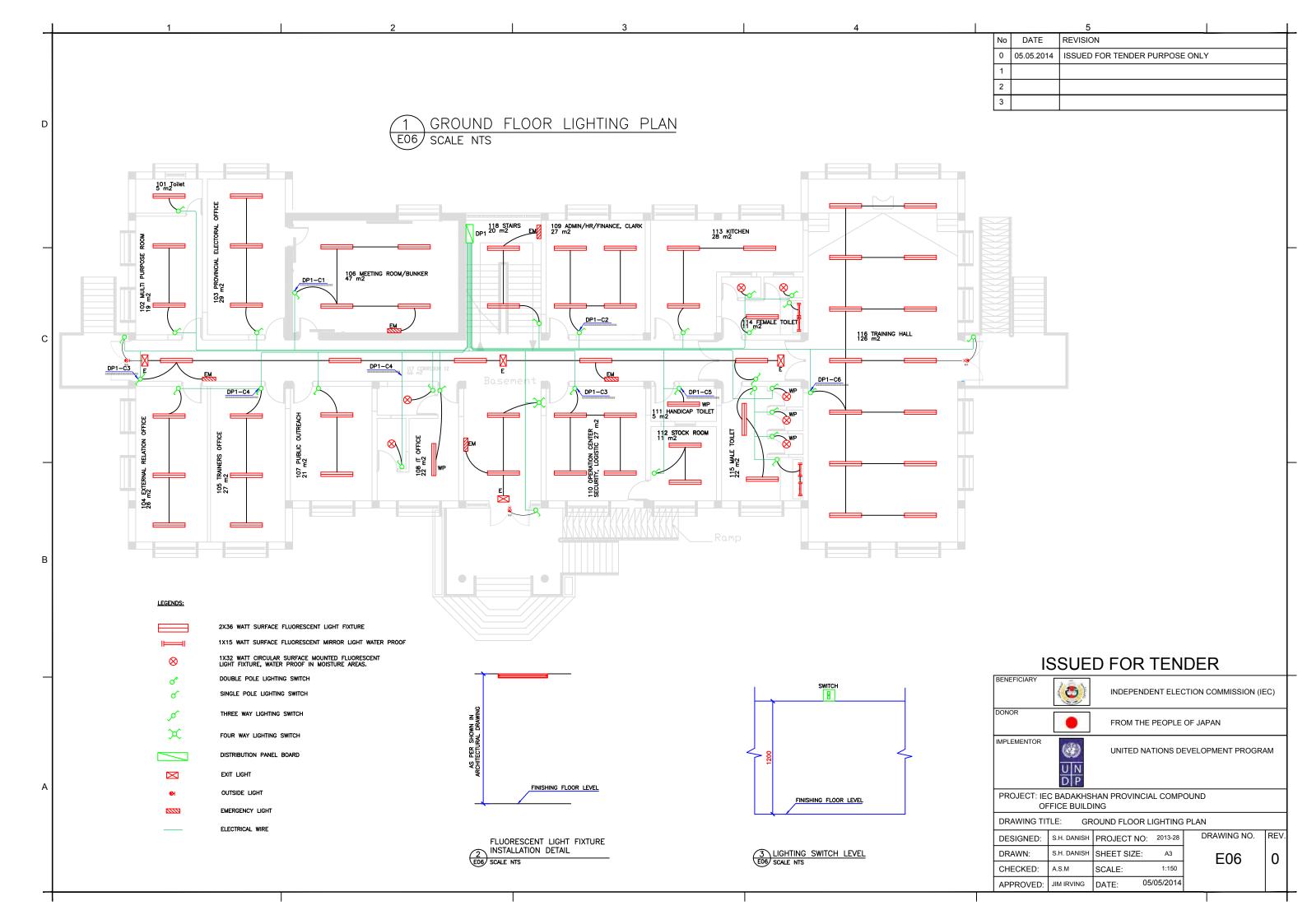


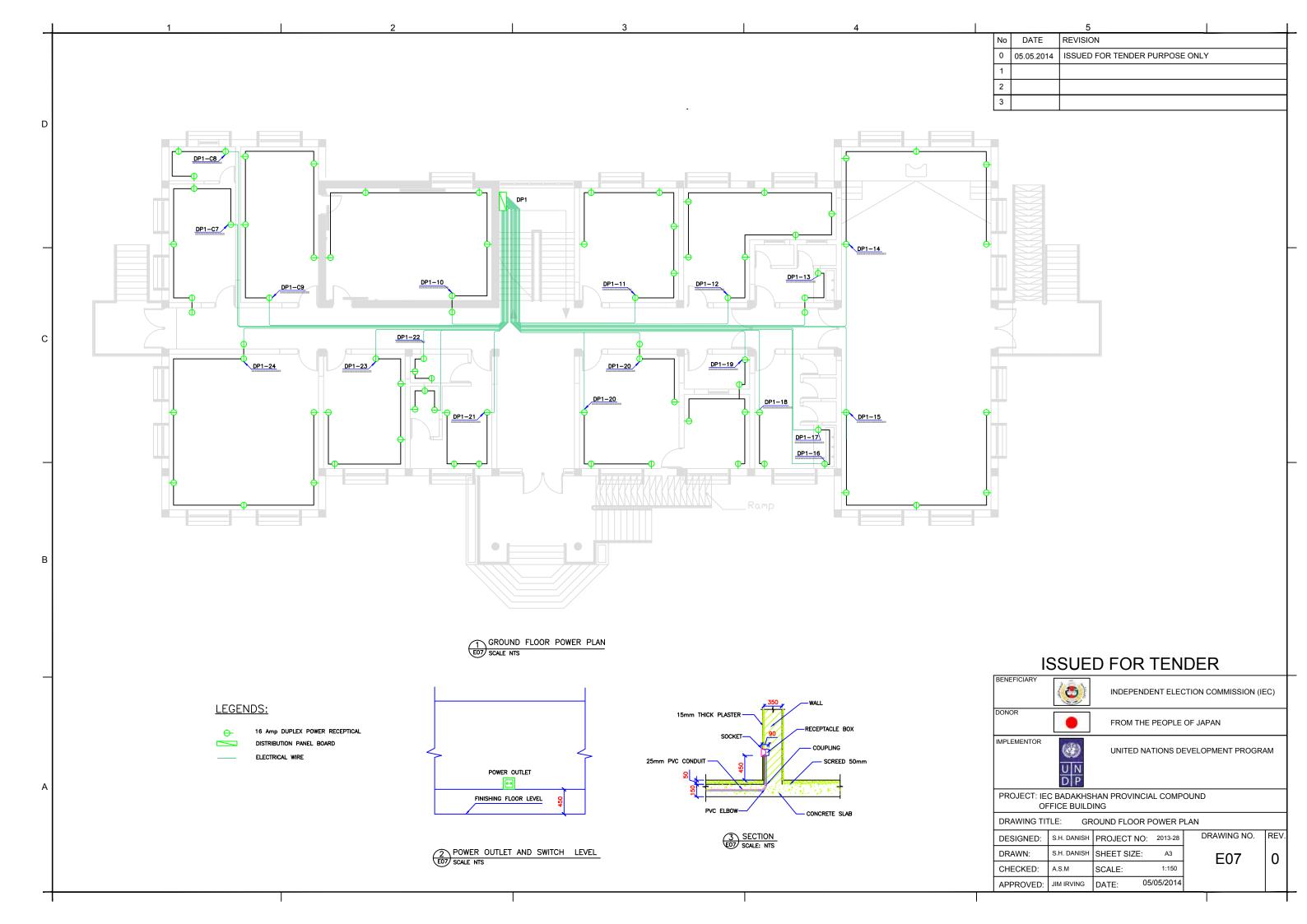
POWER RISE DIAGRAM SCALE NTS

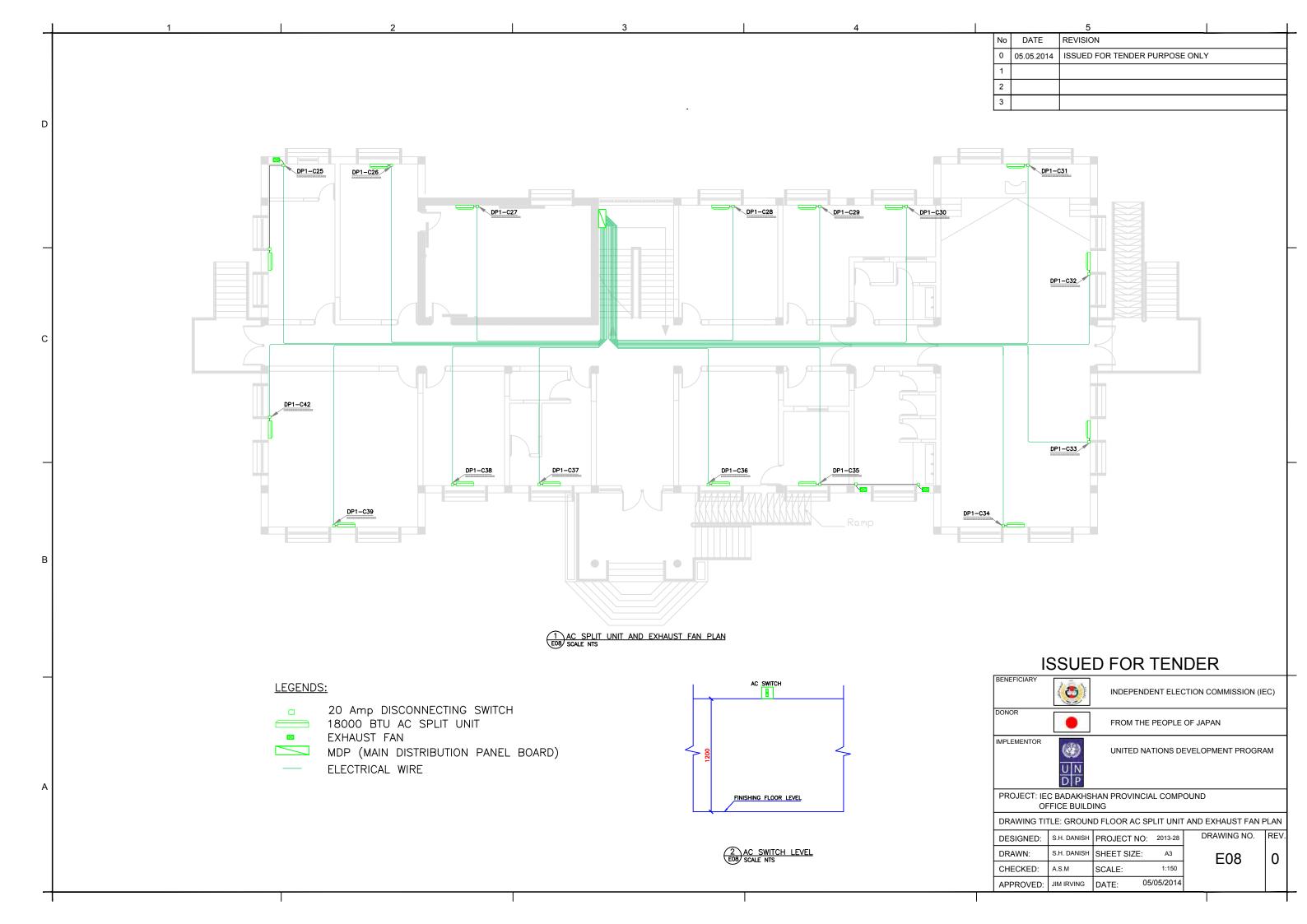
ISSUED FOR TENDER











						GROUN	ND FLOO	R POW	/ER 0	DISTI	RIBU	MION F	ANELE	BOARD						
30KA ISC / 0.5 SEC							FEED : TOP													
RECESSED MOUNTED NEMA ENCLOSURE						120 AMP MAIN BREAKER														
380Y / 220 VOLTS, 3 PHASE, 4 WIRE						MOUNTING: RECESSED														
50Hz PANEL BOARD						LOCATION: WALL MOUNTED														
WIRE & CONDUIT	GND WIRE	LOAD DESCRITPTION	А	В	С	AMP	POLE	СКТ	Α	В	c	СКТ	POLE	AMP	Δ	В	С	LOAD DESCRITPTION	GND	WIRE & CONDUIT
WIKE & COMDON	GIND WINE	LOAD DESCRIPTION	_ A	В	٦	Alvir	POLE	CNI	A	В	L	CKI	PULE	AIVIP	_ A	В	C	LOAD DESCRIPTION	WIRE	WIKE & CONDOIT
2(1Cx2.5mm²) Ø 25mm	2.5mm²	LIGHTING	900			16	1	1				2	1	16	900			LIGHTING	2.5mm²	2(1Cx2.5mm²) Ø 25mm
2(1Cx2.5mm²) Ø 25mm	2.5mm²	LIGHTING		1100		16	1	3				4	1	16		800		LIGHTING	2.5mm²	2(1Cx2.5mm²) Ø 25mm
2(1Cx2.5mm²) Ø 25mm	2.5mm²	LIGHTING			800	16	1	5				6	1	16			900	LIGHTING	2.5mm²	2(1Cx2.5mm²) Ø 25mm
2(1Cx4mm²) Ø 25mm	4mm²	POWER RECEPTACLE	1100			20	1	7				8	1	20	650			POWER RECEPTACLE	4mm²	2(1Cx4mm²) Ø 25mm
2(1Cx4mm²) Ø 25mm	4mm²	POWER RECEPTACLE		1100		20	1	9				10	1	20		1350		POWER RECEPTACLE	4mm²	2(1Cx4mm²) Ø 25mm
2(1Cx4mm²) Ø 25mm	4mm²	POWER RECEPTACLE			1350	20	1	11				12	1	20			1550	POWER RECEPTACLE	4mm²	2(1Cx4mm²) Ø 25mm
2(1Cx4mm²) Ø 25mm	4mm²	POWER RECEPTACLE	650			20	1	13				14	1	20	1100			POWER RECEPTACLE	4mm²	2(1Cx4mm²) Ø 25mm
2(1Cx4mm²) Ø 25mm	4mm²	POWER RECEPTACLE		1100		20	1	15				16	1	25		1500		HEATER	6mm²	2(1Cx6mm²) Ø 25mm
2(1Cx6mm²) Ø 25mm	6mm²	BOILER			1500	25	1	17				18	1	20			450	POWER RECEPTACLE	4mm²	2(1Cx4mm²) Ø 25mm
2(1Cx4mm²) Ø 25mm	4mm²	POWER RECEPTACLE	1100			20	1	19				20	1	20	1350			POWER RECEPTACLE	4mm²	2(1Cx4mm²) Ø 25mm
2(1Cx4mm²) Ø 25mm	4mm²	POWER RECEPTACLE		900		20	1	21				22	1	20		1350		POWER RECEPTACLE	4mm²	2(1Cx4mm²) Ø 25mm
2(1Cx4mm²) Ø 25mm	4mm²	POWER RECEPTACLE			1100	20	1	23				24	1	20			1350	POWER RECEPTACLE	4mm ²	2(1Cx4mm²) Ø 25mm
2(1Cx6mm²) Ø 25mm	6mm²	AC SPLIT UNIT	1500			25	1	25				26	1	25	1500			AC SPLIT UNIT	6mm²	2(1Cx6mm²) Ø 25mm
2(1Cx6mm²) Ø 25mm	6mm²	AC SPLIT UNIT		1500		25	1	27				28	1	25		1500		AC SPLIT UNIT	6mm²	2(1Cx6mm²) Ø 25mm
2(1Cx6mm²) Ø 25mm	6mm²	AC SPLIT UNIT			1500	25	1	29				30	1	25			1500	AC SPLIT UNIT	6mm²	2(1Cx6mm²) Ø 25mm
2(1Cx6mm²) Ø 25mm	6mm²	AC SPLIT UNIT	1500			25	1	31				32	1	25	1500			AC SPLIT UNIT	6mm²	2(1Cx6mm²) Ø 25mm
2(1Cx6mm²) Ø 25mm	6mm²	AC SPLIT UNIT		1500		25	1	33				34	1	25		1500		AC SPLIT UNIT	6mm²	2(1Cx6mm²) Ø 25mm
2(1Cx6mm²) Ø 25mm	6mm²	AC SPLIT UNIT			1500	25	1	35				36	1	25			1500	AC SPLIT UNIT	6mm²	2(1Cx6mm²) Ø 25mm
2(1Cx6mm²) Ø 25mm	6mm²	AC SPLIT UNIT	1500			25	1	37				38	1	25	1500			AC SPLIT UNIT	6mm²	2(1Cx6mm²) Ø 25mm
2(1Cx6mm²) Ø 25mm	6mm²	AC SPLIT UNIT		1500		25	1	39				40	1	25		_		SPARE	6mm²	2(1Cx6mm²) Ø 25mm
2(1Cx4mm²) Ø 25mm	4mm²	SPARE			_	20	1	41				42	1	25			1500	AC SPLIT UNIT	6mm²	2(1Cx6mm²) Ø 25mm
	SUB - TOTA	L	8250	8700	7750		8500 8000 8750 SUB - TOTAL													
		VA	AN	ИP																

16750 76.13636364

16700 75.90909091

75

KVA

0.9

KVA

KVA

KVA

AMP

16500

49.95

44.955

11.239

56.194

86.987

1 DP1 PANEL SCHEDULE E09 SCALE NTS

Total Phase A

Total Phase B

Total Phase C

Demond Factor

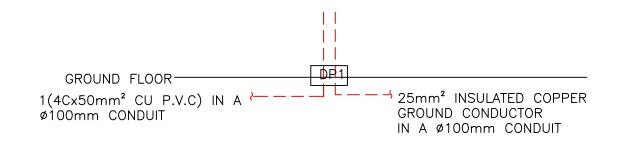
25% Futur Load

Total Load

Total Ampere

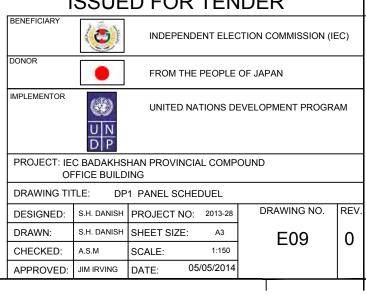
Total Connected Load

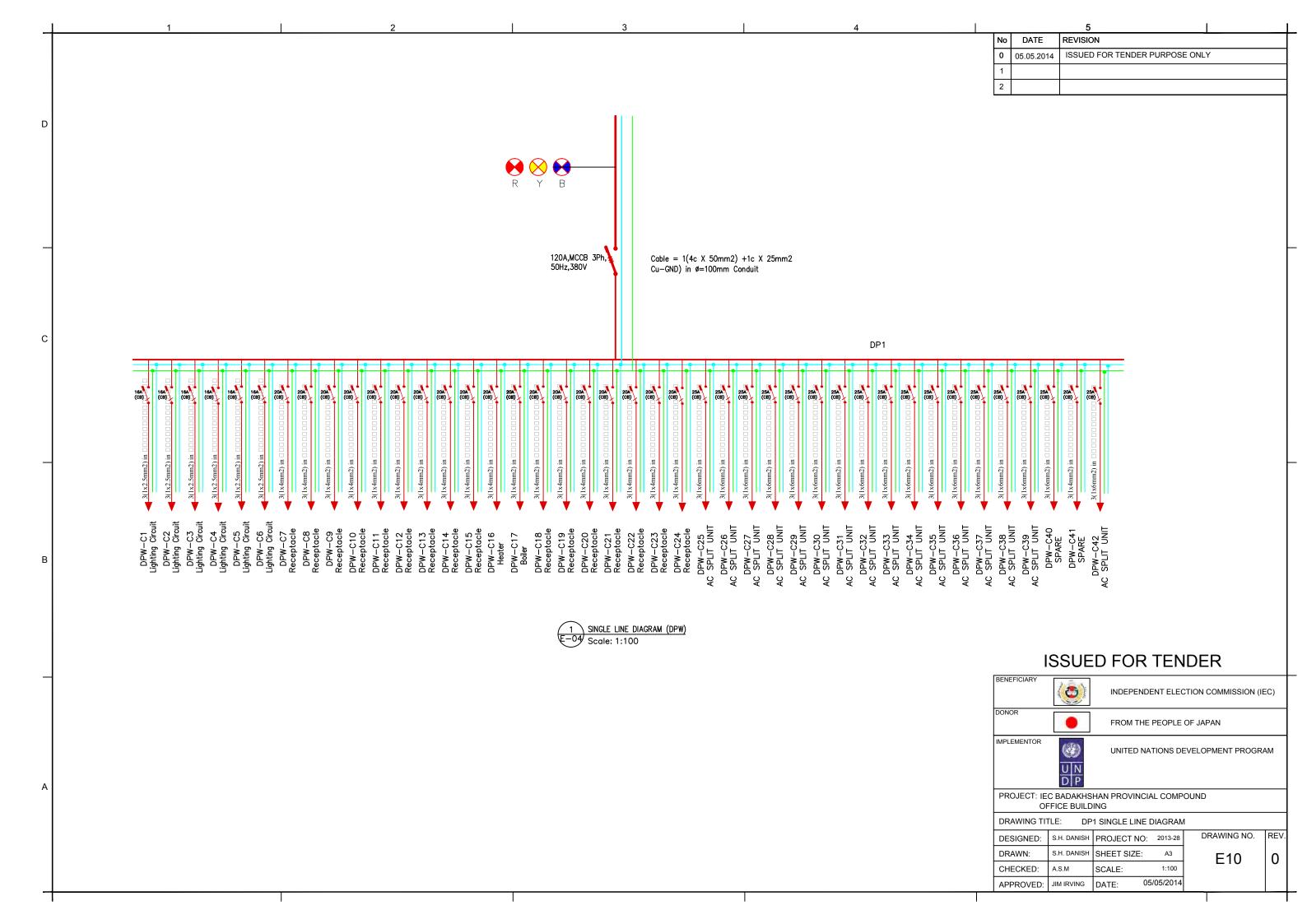
Demond Factor Load

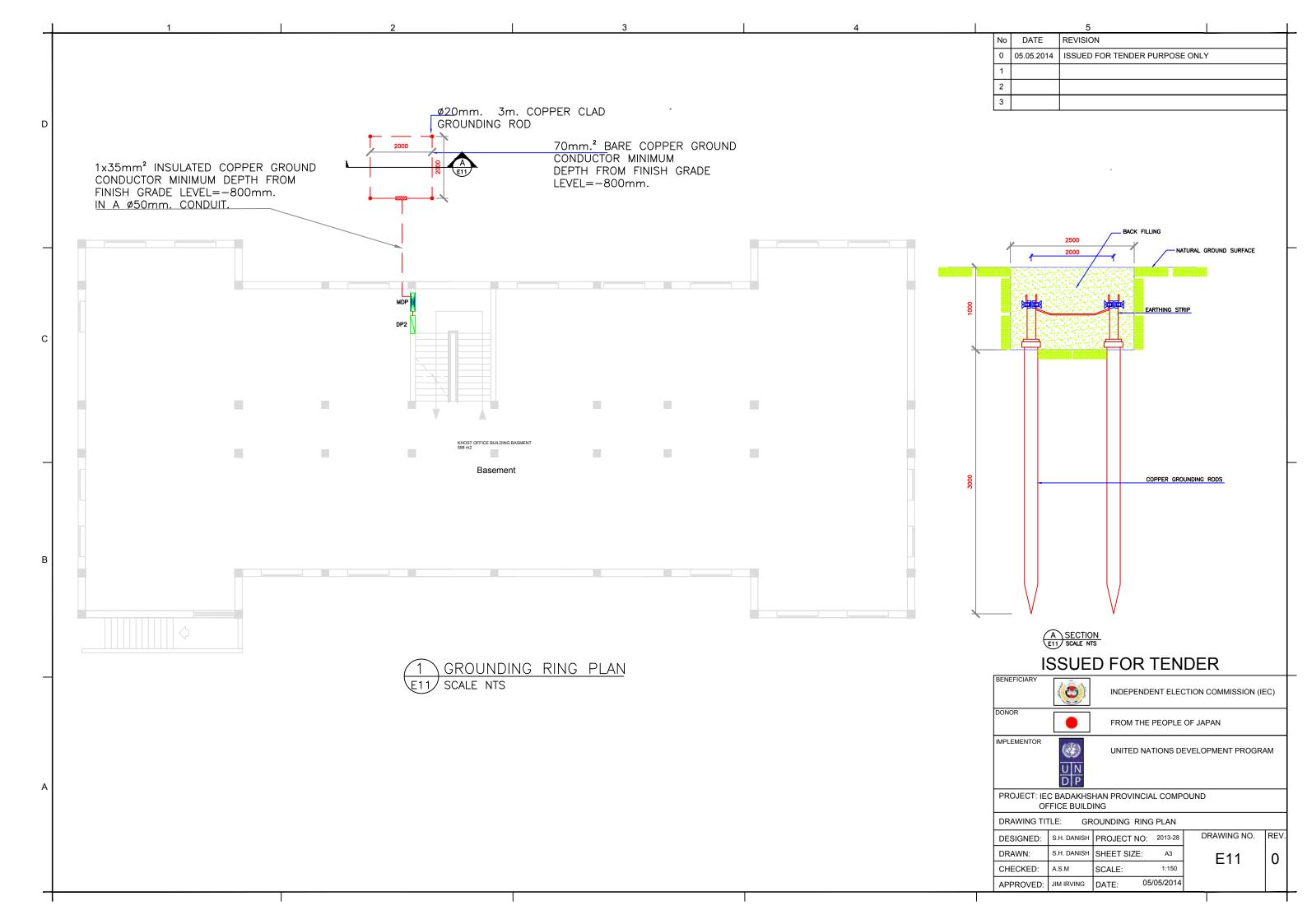


2 POWER RISE DIAGRAM E09 SCALE NTS

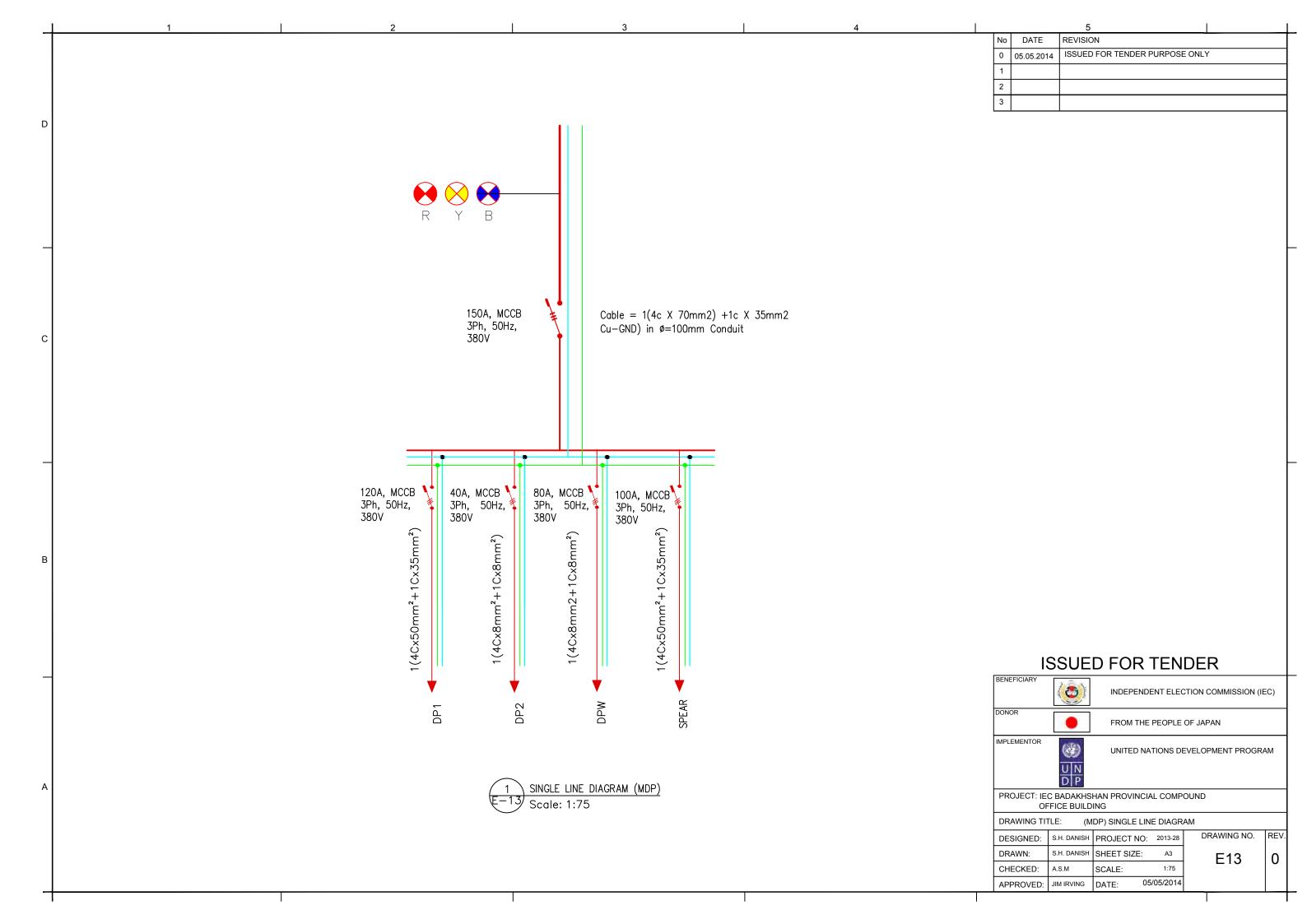
ISSUED FOR TENDER

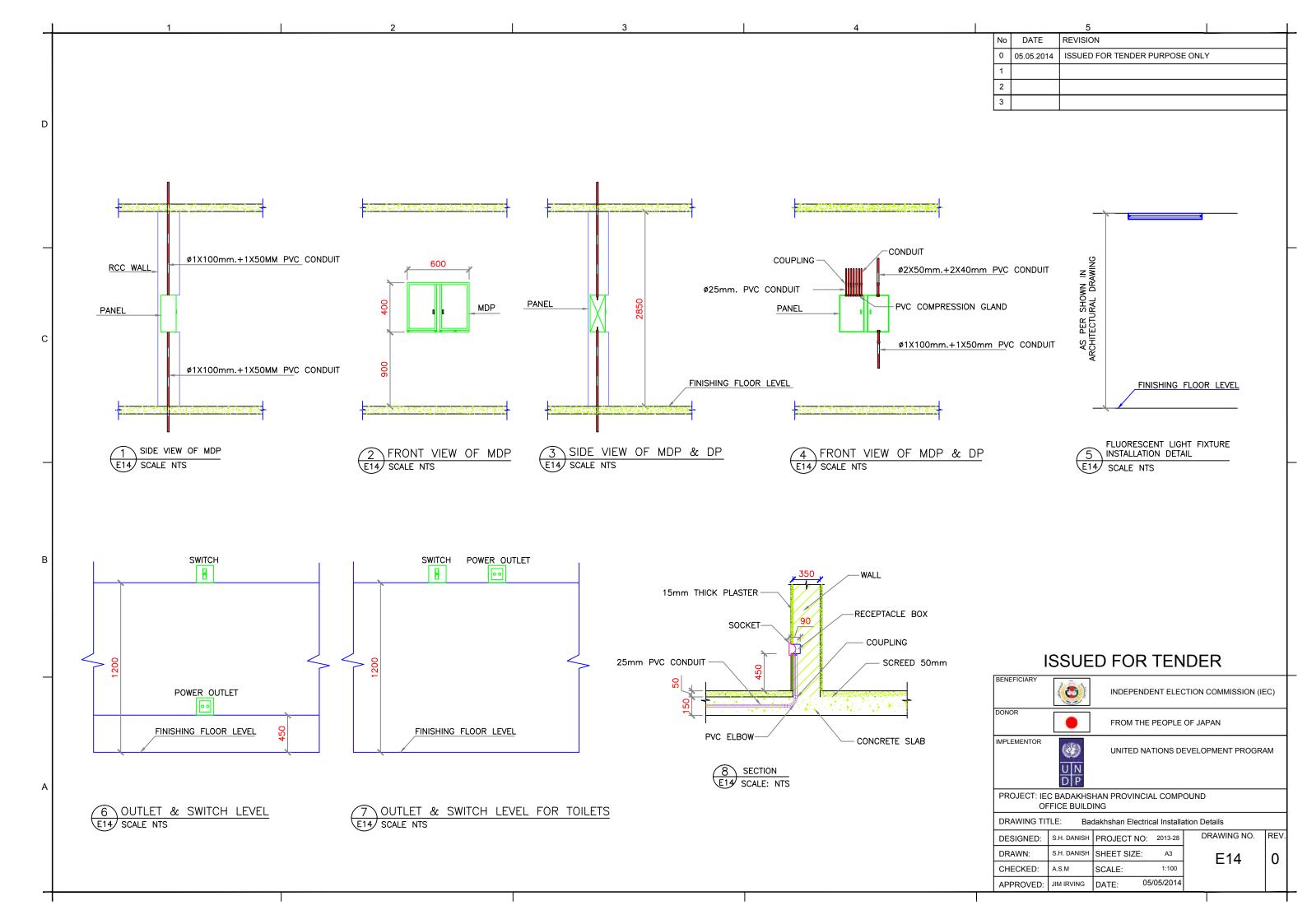






																		REVISION ISSUED FOR TENDER PURPOSI	E ONLY	
																1				
																2				
						MA	AIN DIS	RIBUTIO	N PANEL	BOARD										
30KA ISC / 0.5 SEC													FEED		: TOP					
RECESSED MOUNTED NE 380Y / 220 VOLTS, 3 PHA		JRE		!			1:	MA 0	IAIN BREA	AKER			MOUI	JNTING : RI	FORCED					
50Hz PANEL BOARD	.3E, 4 WIILE														ALL MOUNTED					
WIRE & CONDUIT	GND WIRE	LOAD DESCRITPTION	A 16750	В	С	AMP	POLE	CKT A	в с с		LE AMI		A B	С	LOAD DESCRITP	NOIT	GND WIRE	WIRE & CONDUIT		
1(4Cx50mm²) Ø 100mm	25mm²	DP1	16750	16700	+	120	3	3		2 4 3	3 40	_	2400 2500	1	DP2		8mm²	1(4Cx8mm²) Ø 100mm		
		- · -			16500			5		6	´ <u> </u>	Ľ		2400	†					
77 # 400			3500	'		_	 	7		8			-					<u> </u>		
1(4Cx8mm²) Ø 100mm	8mm²	DPW		3600	2550	80	3	9		10 3	3 100	ю -	 -	<u> </u>	SPEAR		-	-		
<u> </u>	SUB - TOTAL		20250	20300	3550 20050			11		12		+	2400 2500				B - TOTAL	1		
													2700	<u> </u>		-				
			VA	AM																
Total Phase A Total Phase B			22650 22800	102.954 103.636																
Total Phase C			22450	102.045																
Total Connected Load			67.9	KV	/A															
Demond Factor				0.9																
Demond Factor Load 25% Futur Load			61.11 15.2775	KV/																
2J/01 atai 2004			15.2775																	
Total Load			76.3875	KV	/A															
1				-																
Total Ampere			118.2469	AM		~														
GROUND DP2	FLOOR	DP1 MDP	<u>(1</u>	•	PANEL	SCHE	<u>EDULE</u>			[MDP									
GROUND	FLOOR		<u>(1</u>	MDP	PANEL	SCHE				[MDP 							SUED FOR TEN	IDER	
GROUND	FLOOR	MDP 1(4Cx70mm² + 1X	1 E12	MDP 2 SCALE N	PANEL	1(40	BASI Cx70mm	:MENT —	5mm² CU		MDP 	 	35mm² INSU	ULATED CC	OPPER	BENEFICI	IARY	2		
GROUND DP2	FLOOR	MDP	1 E12	MDP 2 SCALE N	PANEL	1(40	BASI Cx70mm	:MENT —	ōmm² CU: i CONDUIT		MDP 	G	35mm² INSL GROUND CO IN A Ø50mn	ONDUCTOR		BENEFICI	IARY	6.4		
GROUND	FLOOR	MDP 1(4Cx70mm² + 1X	1 E12	MDP 2 SCALE N	PANEL	1(40	BASI Cx70mm	:MENT —	ōmm² CU: i CONDUIT		MDP 	G	GROUND CO	ONDUCTOR		DONOR	IARY	INDEPENDENT ELEC	CTION COMM	
GROUND DP2	FLOOR	MDP 1(4Cx70mm² + 1X	1 E12	MDP 2 SCALE N	PANEL NTS	1(4C P.V.0	BASI Cx70mm .C) IN A	:MENT —	ōmm² CU		MDP 	G	GROUND CO	ONDUCTOR			ENTOR	INDEPENDENT ELECTOR FROM THE PEOPLE UNITED NATIONS DE	CTION COMM	
GROUND DP2	FLOOR	MDP 1(4Cx70mm² + 1X	X35mm ² CU mm CONDUIT	MDP 2 SCALE N	PANEL NTS	1(4C P.V.C	BASI Cx70mm .C) IN A	:MENT —	ōmm² CU:		MDP 	G	GROUND CO	ONDUCTOR		DONOR	ENTOR ECT: IEC BAL OFFICE	FROM THE PEOPLE UNITED NATIONS DE DAKHSHAN PROVINCIAL COMPE	OF JAPAN	
GROUND DP2	FLOOR	MDP 1(4Cx70mm² + 1X	X35mm ² CU mm CONDUIT	MDP 2 SCALE N	PANEL NTS	1(4C P.V.C	BASI Cx70mm .C) IN A	:MENT —	ōmm² CUi i CONDUIT		MDP 	G	GROUND CO	ONDUCTOR		DONOR IMPLEMENT PROJE DRAWII	ENTOR ECT: IEC BAL OFFICE ING TITLE:	FROM THE PEOPLE UNITED NATIONS DE DAKHSHAN PROVINCIAL COMPE BUILDING MDP PANEL SCHEDULE	OF JAPAN EVELOPMEN OUND	
GROUND DP2	FLOOR	MDP 1(4Cx70mm² + 1X	X35mm ² CU mm CONDUIT	MDP 2 SCALE N	PANEL NTS	1(4C P.V.C	BASI Cx70mm .C) IN A	:MENT —	ōmm² CUi i CONDUIT		MDP 	G	GROUND CO	ONDUCTOR		DONOR IMPLEMENT PROJE DRAWII DESIGN	ENTOR ECT: IEC BAI OFFICE ING TITLE: NED: S.H. I	INDEPENDENT ELECTORY FROM THE PEOPLE UNITED NATIONS DE DAKHSHAN PROVINCIAL COMPLE E BUILDING MDP PANEL SCHEDULE DANISH PROJECT NO: 2013-28	OF JAPAN EVELOPMEN OUND	
GROUND DP2	FLOOR	MDP 1(4Cx70mm² + 1X	X35mm ² CU mm CONDUIT	MDP 2 SCALE N	PANEL NTS	1(4C P.V.C	BASI Cx70mm .C) IN A	:MENT —	ōmm² CU		MDP 	G	GROUND CO	ONDUCTOR		DONOR IMPLEMENT PROJE DRAWII	ENTOR ECT: IEC BAL OFFICE ING TITLE: NED: S.H. I	FROM THE PEOPLE UNITED NATIONS DE UNITED NATIONS DE DAKHSHAN PROVINCIAL COMPO E BUILDING MDP PANEL SCHEDULE DANISH PROJECT NO: 2013-28 DANISH SHEET SIZE: A3	OF JAPAN	





REVISION DATE RC WORKS STRUCTURAL STEELWORK ISSUED FOR TENDER PURPOSE ONLY GENERAL 1.) Contractor shall submit shop drawings for approval prior to fabrication. 1.1) All structural key plans and details are to be read in conjuction with the relevant architectural drawings , specifications , bills of quantities and all other relevant documents. Discrepancies must be reported immediately to the Engineer. 2.) Erection and fabrication of structural steelworks shall in general be carried out in accordance with AC12003, IBC, 2 3.) Unless otherwise specified all bolts shall be black bolts. 1.2) The contractor shall work from figured dimensions only. 3 4.) All bolts and nuts shall comply with AISC 1.3) The contractor shall check and verify all dimensions on site before commencement of works and any discrepancies shall be reported to the Engineer before execution. The length of hold down bolts indicated on the respective drawings refer to the penetration depth only. D NOTES 1.4) All concrete sizes and levels are for structural elements unless otherwise noted. 6.) The use of high strength friction grip bolts and associated nuts and washers shall comply with AISC and shall be in accordance with AISC. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. 1.5) All openings for piping and conveyance shall be formed in position before the casting of concrete. DO NOT SCALE DRAWINGS.
VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCEMENT OF WORK. All metal arc welding shall be done in accordance with AISC Electrodes used shall comply with AISC. ALL DRAWINGS SHALL BE READ IN CONJUNCTION WITH SPECIFICATIONS 1.6) No holes or chases are permitted in the concrete members unless other than as detailed or unless approved by the engineer. AND SCHEDULES Unless otherwise specified , all open ends of hollow sections are to be covered with 6mm thick mild steel plate welded all round. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH LOCAL LAWS 1.7) Construction joints shall be located to the approval of the Engineers. AND UNDP SPECIFICATIONS.

ANY DISCREPANCIES SHALL BE REPORTED TO UNDP ENGINEERS. 9.) Ends of Columns, rafters and all plate edges shall be cut clean and square to ensure good 1.8) Any damage caused to any civil / structural work shall be reinstated to its original condition with no cost implication to the client. 10.) All fillet welds are to be 6mm thick continuous unless otherwise specified. 11.) All base plates shall be set on 25mm minimun high strength non-shrink grout. 2. REINFORCEMEINT 12.) All dirt, grit, oil, rust and mill scales are to be removed before any coat of paint can be 2.1) Unless otherwise specified, all steel reinforcement bars and welded steel fabric reinforcements (WSFR) shall comply with the requirements of ACI. 13.) All structural steelwork shall be sand blasted, painted with 1 coat of an approved rust-inhibitive primer, 1 coat of an approved undercoat and 2 finishing coats of approved epoxy paint. STANDARD TRIMMING DETAILS FOR STRUCTURAL OPENING 14.) Consideration shall be given to the stability and safety of steel framework during erection. The contractor shall ensure that the structure is not subject to excessive deflection or stress 2.2) 'ø' denotes mild steel of yield strength = 220 N/mm2.
'N' denotes minimum Ribbed detormed steel bars of yield strength = 420 N/mm2. Diameter of trimmer bars shall be similar to bigger reinforcing bars of the structure which the opening is formed. No trimmer bars are required for openings not greater than 200mm wide , but no reinforcing bars shall be cut , reinforcing bars shall be adjusted in position to avoid openings. 15.) Structural steel members which are to be encased in concrete shall be left unpainted and shall be clean and free from loose rust and scales at the time of concreting. 3.) Unless otherwise shown in the drawings , trimming bars details for the different size openings 16.) All galvanised structural steelwork shall be hot-dipped galvanised with a minimum coating mass of 450 gm/m2. The galvanised coating on all steel members shall conform to the 2.3) Concrete cover to outermost reinforcement, including links, shall be as follows: (a) 200mm<max, dimension of opening (L)<500mm (b) 500mm<max, dimension of opening (L)<1000mm Structural In contact Elements with ground 17.) All other precautions for cleaning and rust preventions of structural steel as mentioned in specifications and/or Architectural drawing shall be done as deemed necessary by the Engineer Slabs 50 45ø 200<L<500 25 75 (Top) Top &Bottom cover 40mm for all beams 75 (Side & Bot.) Columns 50 DESIGN BRIEF Footing 75 75 2.4) All reinforcement are to be firmly supported on approved chairs or concrete blocks generally at not greater than 750mm centres both ways. Where longitudinal reinforcement are placed in 2 layers or more, spacer bars of 25mm diameter or the diameter of the longitudinal, whichever is larger, are to be provided at 1500mm intervals to separate the layers. Notes on replacement bars : a) Trimmer bars shall be not less than the Nos. of bars cut by opening. 2.5) Welding of reinforcement will not be permitted without the approval of the Engineer. b) Minimum 2 Nos each and bar diameter (9) shall be equal to the greatest diameter of the bars cut by the opening but not less than 2N12 top & bottom. 2.6) All Bars shall be cut and bent to conform to IBC, ACI Material Density Eartauake Factors c) Both perpendicular and diagonal trimming bars shall be provided as shown above and on each face of the structure. Unless otherwise shown in the drawings, the minimun lap length for reinforcement in concrete G25 shall be provided as tabulated : 25kN/m3 1,25(Table 1604.6 IBC 2006 25kN/m3 Mass concrete Site geology and soil type D The mapped spectral accerations for short period The mapped spectral accerations for 1-Sec **NOTATIONS** Brick Masonary 20.4kN/m3 Bar size 6 10 12 16 18 20 Ss= 1.28 22.8kN/m3 S1= 0.51 CMU Wall N = high yield steel - 610 733 1000 1099 1222 Fa= 1.048g(Table 1613.5.3-1 Mortar/Plaster 20.4kN/m3 EGL - Existing Ground Level ø = mild steel 366 - -GFL - Ground Floor Level Floor Finish 19kN/m3 Site coefficients Fv= 1.5g(Table 1613.5.3-2) FFL - Finish Floor Level 23.6kN/m3 Structural Behavior Factor R 8 (Both Direction) Ceramic Tiles All bars at the ends of the beams where the beam is no more continuous shall be anchored either straight or bent (depending on the width of the support) as shown below. These shall not be used in cantilevered beams or slabs. The actual design drawing shall be B/W - Both Ways 23.6kN/m3 Roof Cladding B - Bottom (B1 Bottom Layer 1) 7kN/m3 (B2 Bottom Layer 2) Wind Loading T - Top (T1 Top Layer 1) Imposed Load Bar Size A B С (T2 Top Layer 2) 1kN/m2-Kabul hydrologi Snow Load Dead Loads C/C - Center to center N32 1100 - 900 _ В _ N20-25-100T High Yield Steel 20mm Diameter Bar Mark 25 at 100mm Centers on Top Wind load equation (ASCE 05 7 6-2) 8.8kN/m2 N25 850 -700 B-С 1 (ASCE 05 7 13.1.3) R1001 200X750 Importance Factor I N20 700 - 550 CMU Wall-200mm 4.4kN/m2 ISSUED FOR TENDER N16 550 450 450 Lamda 1.78 Figure 6-2 ASCE 7 05 5.1kN/m2 Brick Masonary-250mr Depth of beam BENEFICIARY Face of N12 400 400 400 Topografic Factor Kzt 1 figure 6-3 ASCE 7 05 3.06kN/m2 -Width of beam Beam ID INDEPENDENT ELECTION COMMISSION (IEC) N10 - 300 wind pressure for exposure Snow Load 1kN/m2 N10/100 I A : Top bars B : Anti-crack bars IBC 2006 Table 1607.1 Imposed Loads DONOR

1.92kN/m2

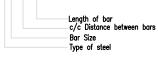
2.6) Crack control bars are to be provided up to 2/3 of beam in tension zone when beam depth greater than or equal to 750mm , unless otherwise shown. (Refer relevant drawings for bar size / spacing.)

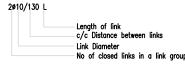
CONCRETE

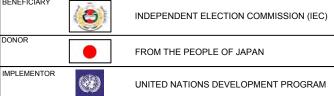
3.1) All the concrete types specified here in are designated concrete as per ACI-318

G-25 -Grade 25 with 28 day cube character strength of 250 Kg/cm/ G-15 -Grade 15 with 28 day cube character strength of 150 Kg/cm/

- 3.2) Unless otherwise specified , all reinforced concrete mix to be of grade 25 and all mass concrete to be of grade 25.
- 3.3) Unless otherwise specified , a layer of 50mm thick grade 15 concrete to be provided below all reinforced concrete structures in contact with the ground.
- 3.4) Unless otherwise specified, all lean concrete mix to be of grade 15.
- 3.5) All concrete strengths are 28 days cube strength.







UN

PROJECT: IEC BADAKHSHAN PROVINCIAL COMPOUND OFFICE BUILDING

GENERAL NOTES

DESIGNED:	AH.KHALID	PROJECT NO): 2013-28
DRAWN:	AH.KHALID	SHEET SIZE:	A3
CHECKED:	A.S.M	SCALE:	1:1
APPROVED:	JIM IRVING	DATE:	05.11.2014

DRAWING TITLE:

DRAWING NO. REV SC00 0

